Full wwPDB X-ray Structure Validation Report ⓘ

Mar 9, 2026 – 10:59 AM UTC

PDB ID	:	4V6C / pdb_00004v6c
Title	:	Crystal structure of the E. coli 70S ribosome in an intermediate state of ratcheting
Authors	:	Zhang, W.; Dunkle, J.A.; Cate, J.H.D.
Deposited on	:	2009-06-27
Resolution	:	3.19 Å(reported)

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

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

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

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

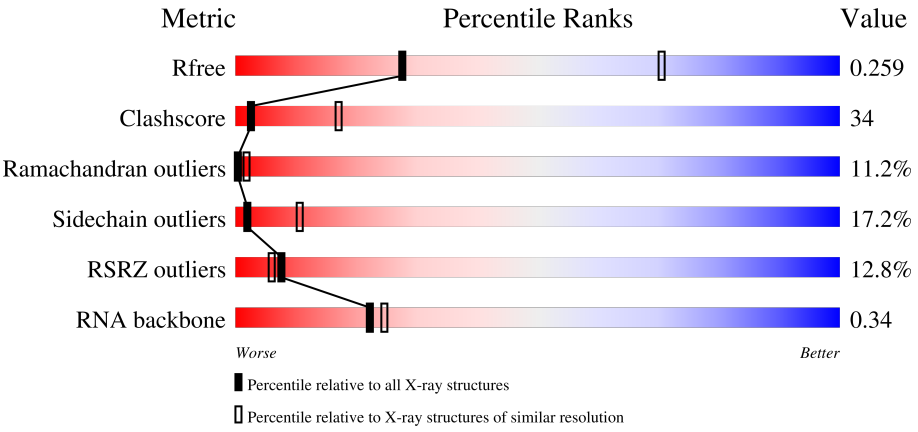
MolProbity	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
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 3.19 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	1466 (3.20-3.20)
Clashscore	190562	1573 (3.20-3.20)
Ramachandran outliers	187476	1548 (3.20-3.20)
Sidechain outliers	187428	1547 (3.20-3.20)
RSRZ outliers	180081	1466 (3.20-3.20)
RNA backbone	3983	1222 (3.50-2.90)

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	AB	241	7% 17% 50% 22% · 10%
1	CB	241	9% 22% 54% 14% 10%
2	AC	233	2% 33% 41% 12% · 12%
2	CC	233	8% 34% 41% 13% 12%

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Mol	Chain	Length	Quality of chain
3	AD	206	6% 31% 50% 17%
3	CD	206	5% 34% 44% 18%
4	AE	167	% 31% 41% 16% 10%
4	CE	167	4% 30% 44% 14% 10%
5	AF	135	3% 29% 33% 10% 26%
5	CF	135	6% 23% 38% 12% 26%
6	AG	179	4% 31% 45% 8% 16%
6	CG	179	29% 24% 46% 12% 16%
7	AH	130	2% 38% 48% 13%
7	CH	130	4% 33% 53% 12%
8	AI	130	10% 37% 45% 14%
8	CI	130	35% 25% 55% 15%
9	AJ	103	4% 24% 50% 19% 5%
9	CJ	103	42% 22% 51% 19% 5%
10	AK	129	2% 39% 37% 12% 9%
10	CK	129	7% 36% 40% 15% 9%
11	AL	124	5% 40% 39% 18%
11	CL	124	6% 32% 52% 15%
12	AM	118	5% 36% 53% 8%
12	CM	118	55% 21% 62% 11%
13	AN	101	9% 29% 53% 12% 5%
13	CN	101	26% 29% 55% 9% 6%
14	AO	89	% 38% 54% 6%
14	CO	89	13% 47% 45% 6%
15	AP	82	2% 41% 43% 13%

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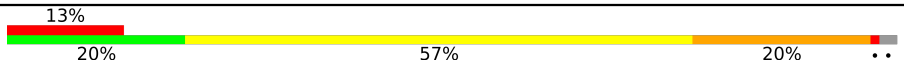
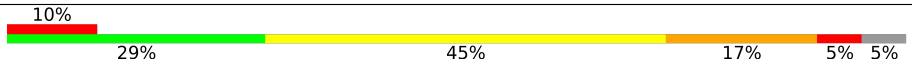
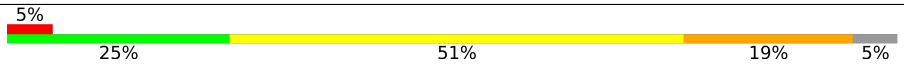
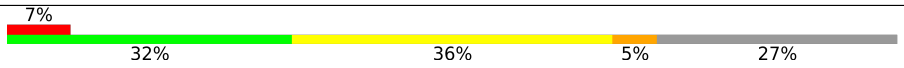
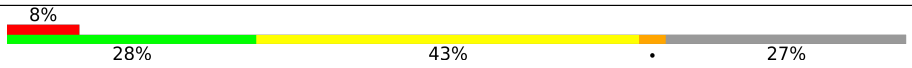
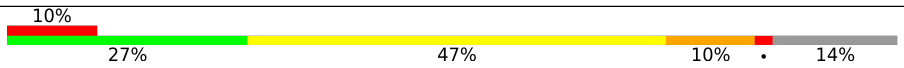
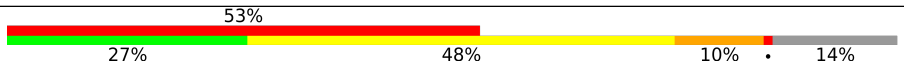
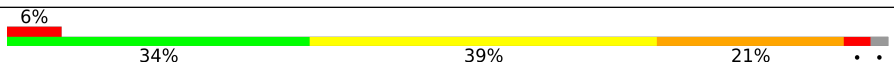
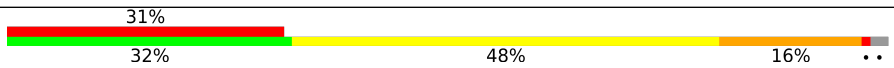
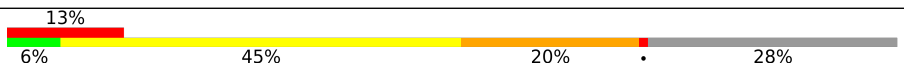
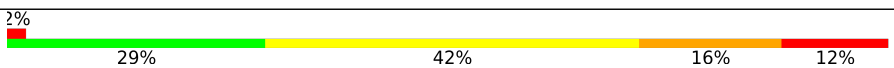
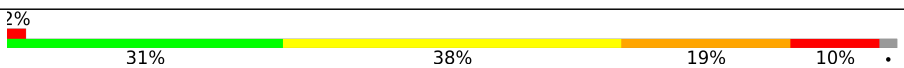
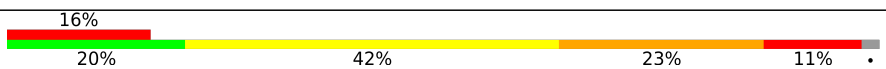
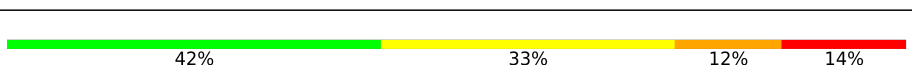
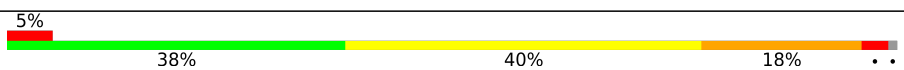
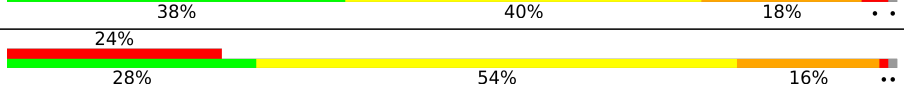
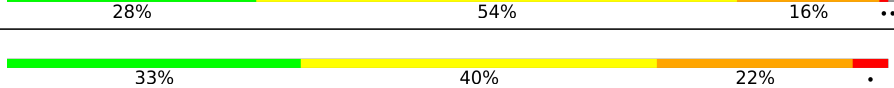
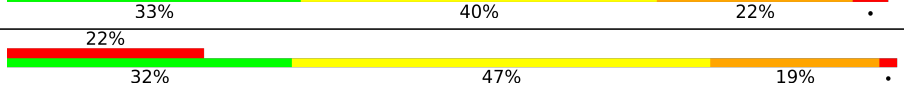
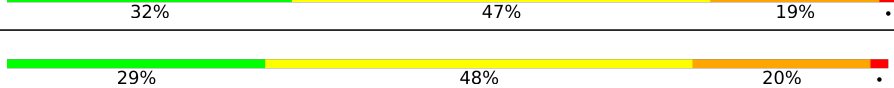
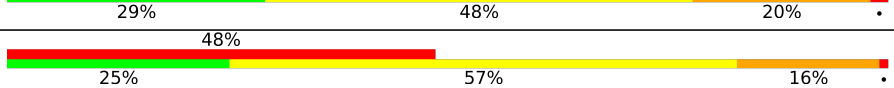
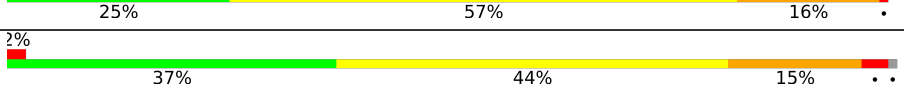
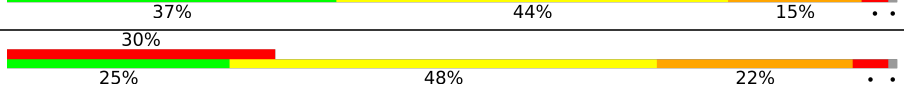
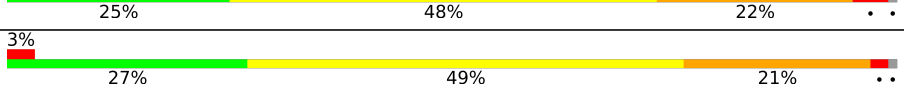
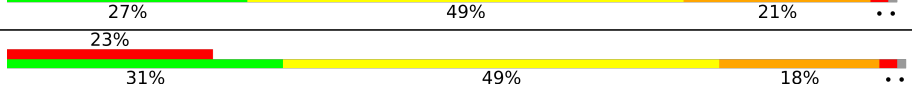
Mol	Chain	Length	Quality of chain
15	CP	82	
16	AQ	84	
16	CQ	84	
17	AR	75	
17	CR	75	
18	AS	92	
18	CS	92	
19	AT	87	
19	CT	87	
20	AU	71	
20	CU	71	
21	AA	1533	
22	BA	2903	
22	DA	2903	
23	BB	118	
24	BC	273	
24	DC	273	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	179	
27	DF	179	
28	BG	177	
28	DG	177	

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Mol	Chain	Length	Quality of chain
29	BH	149	32% 32% 43% 20% 5%
29	DH	149	34% 32% 52% 14%
30	BI	142	54% 31% 51% 15%
30	DI	142	44% 35% 51% 13%
31	BJ	142	4% 27% 49% 19% 6%
31	DJ	142	20% 28% 53% 17%
32	BK	123	2% 25% 48% 23%
32	DK	123	8% 21% 50% 26%
33	BL	144	% 36% 38% 23%
33	DL	144	53% 33% 47% 16%
34	BM	136	32% 46% 18%
34	DM	136	16% 35% 47% 17%
35	BN	127	40% 39% 13% 6%
35	DN	127	39% 24% 50% 20% 6%
36	BO	117	3% 32% 46% 19%
36	DO	117	32% 33% 56% 9%
37	BP	115	2% 29% 41% 25%
37	DP	115	12% 25% 57% 17%
38	BQ	118	3% 37% 47% 14%
38	DQ	118	39% 31% 47% 21%
39	BR	103	3% 30% 47% 22%
39	DR	103	38% 31% 52% 16%
40	BS	110	44% 35% 17%
40	DS	110	29% 30% 53% 16%
41	BT	100	5% 23% 41% 25% 7%

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Mol	Chain	Length	Quality of chain
41	DT	100	69% 19% 58% 12% 7%
42	BU	104	2% 25% 49% 19% 5%
42	DU	104	61% 28% 42% 24%
43	BV	94	41% 45% 14%
43	DV	94	11% 30% 57% 12%
44	BW	85	7% 15% 35% 36% 6% 7%
44	DW	85	44% 25% 44% 20% 5% 7%
45	BX	78	23% 55% 19%
45	DX	78	49% 17% 69% 12%
46	BY	63	8% 33% 41% 17% 8%
46	DY	63	68% 30% 56% 14%
47	BZ	59	36% 34% 25%
47	DZ	59	34% 29% 49% 20%
48	B0	57	56% 28% 14%
48	D0	57	25% 32% 49% 16%
49	B1	55	24% 45% 16% 5% 9%
49	D1	55	25% 35% 51% 5% 9%
50	B2	46	4% 41% 39% 20%
50	D2	46	65% 37% 50% 13%
51	B3	65	52% 31% 11% 5%
51	D3	65	63% 34% 51% 12%
52	B4	38	32% 55% 8% 5%
52	D4	38	71% 45% 32% 24%
53	CA	1530	8% 24% 43% 22% 11%
54	DB	117	5% 32% 38% 19% 11%

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
55	MG	BA	3132	-	-	-	X
55	MG	DA	3013	-	-	-	X
55	MG	DA	3058	-	-	-	X
55	MG	DA	3063	-	-	-	X
55	MG	DA	3064	-	-	-	X
55	MG	DA	3075	-	-	-	X
55	MG	DA	3129	-	-	-	X

2 Entry composition (i)

There are 57 unique types of molecules in this entry. The entry contains 284450 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 protein called 30S ribosomal protein S2.

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
6	CG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 20 is a protein called 30S ribosomal protein S21.

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

- Molecule 21 is a RNA chain called 16S rRNA.

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

- 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			
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
			2082	1288	423	364	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	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
			1410	899	249	256	6			
27	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	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
			938	587	180	165	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	DK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	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			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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			

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

- 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 RNA chain called 5S rRNA.

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

- Molecule 55 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	43	Total	Mg	0	0
			43	43		
55	BA	137	Total	Mg	0	0
			137	137		
55	BB	4	Total	Mg	0	0
			4	4		
55	CA	42	Total	Mg	0	0
			42	42		
55	DA	135	Total	Mg	0	0
			135	135		
55	DB	1	Total	Mg	0	0
			1	1		
55	DJ	1	Total	Mg	0	0
			1	1		

- Molecule 56 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AE	1	Total	O	0	0
			1	1		
57	AL	3	Total	O	0	0
			3	3		
57	AN	6	Total	O	0	0
			6	6		
57	AT	2	Total	O	0	0
			2	2		
57	AU	1	Total	O	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AA	195	Total O 195 195	0	0
57	BA	610	Total O 610 610	0	0
57	BB	20	Total O 20 20	0	0
57	BC	10	Total O 10 10	0	0
57	BD	2	Total O 2 2	0	0
57	BL	4	Total O 4 4	0	0
57	BN	3	Total O 3 3	0	0
57	BQ	1	Total O 1 1	0	0
57	BT	2	Total O 2 2	0	0
57	B0	1	Total O 1 1	0	0
57	B2	1	Total O 1 1	0	0
57	B3	3	Total O 3 3	0	0
57	B4	3	Total O 3 3	0	0
57	CE	5	Total O 5 5	0	0
57	CI	1	Total O 1 1	0	0
57	CL	1	Total O 1 1	0	0
57	CN	3	Total O 3 3	0	0
57	CT	3	Total O 3 3	0	0
57	CU	2	Total O 2 2	0	0
57	CA	192	Total O 192 192	0	0
57	DA	599	Total O 599 599	0	0

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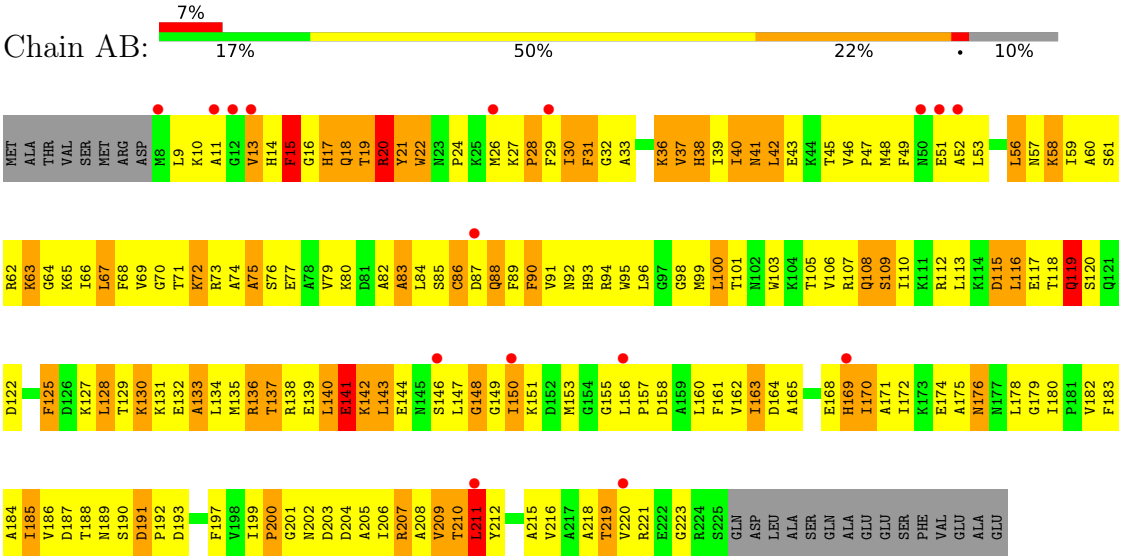
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	DB	4	Total O 4 4	0	0
57	DC	13	Total O 13 13	0	0
57	DD	4	Total O 4 4	0	0
57	DE	3	Total O 3 3	0	0
57	DJ	3	Total O 3 3	0	0
57	DL	5	Total O 5 5	0	0
57	DN	2	Total O 2 2	0	0
57	DT	2	Total O 2 2	0	0
57	DU	1	Total O 1 1	0	0
57	DV	1	Total O 1 1	0	0
57	D2	1	Total O 1 1	0	0
57	D3	1	Total O 1 1	0	0
57	D4	4	Total O 4 4	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.

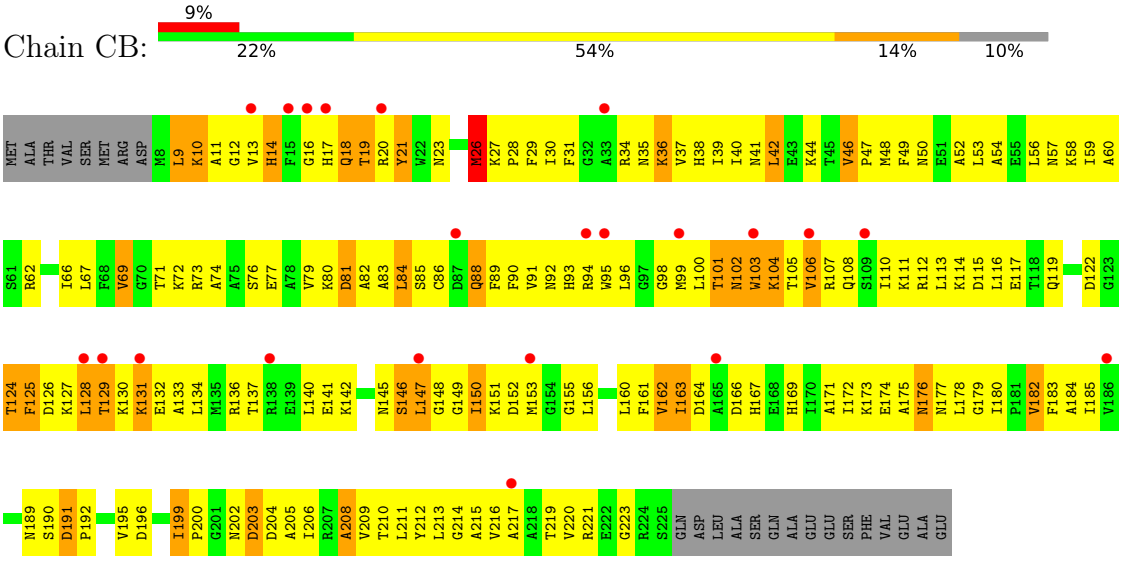
• Molecule 1: 30S ribosomal protein S2

Chain AB:



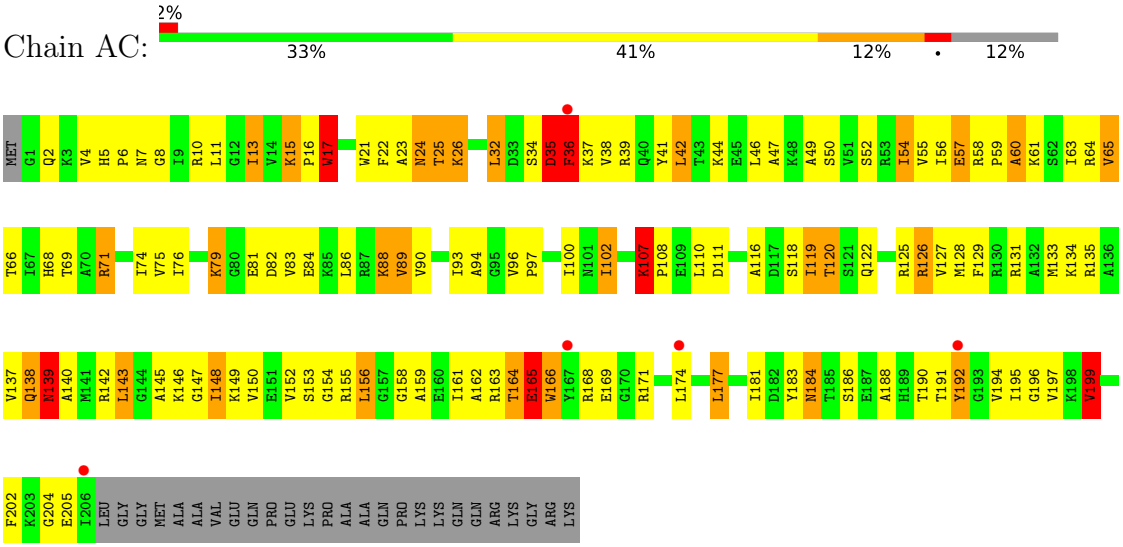
• Molecule 1: 30S ribosomal protein S2

Chain CB:



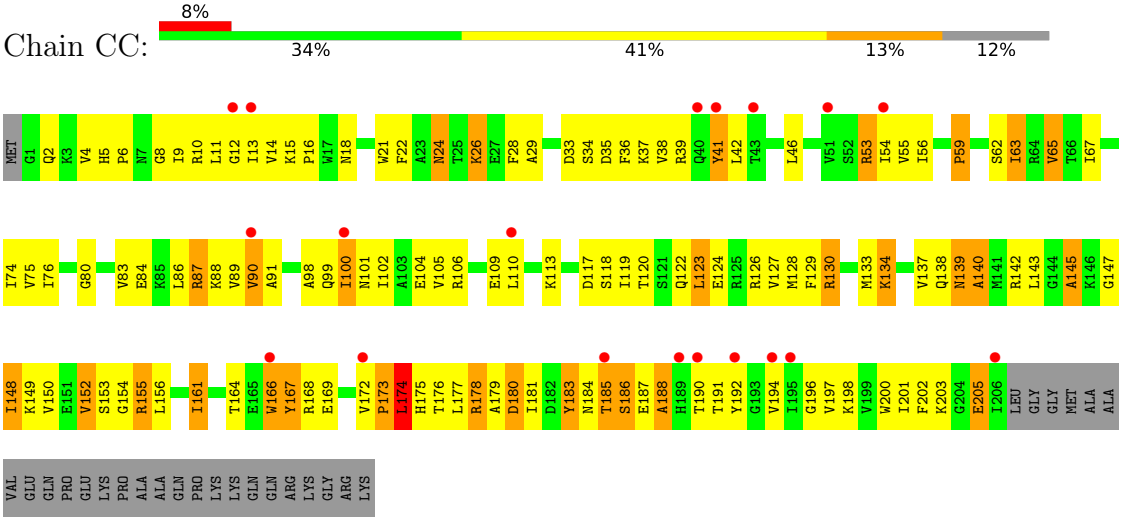
• Molecule 2: 30S ribosomal protein S3

Chain AC:



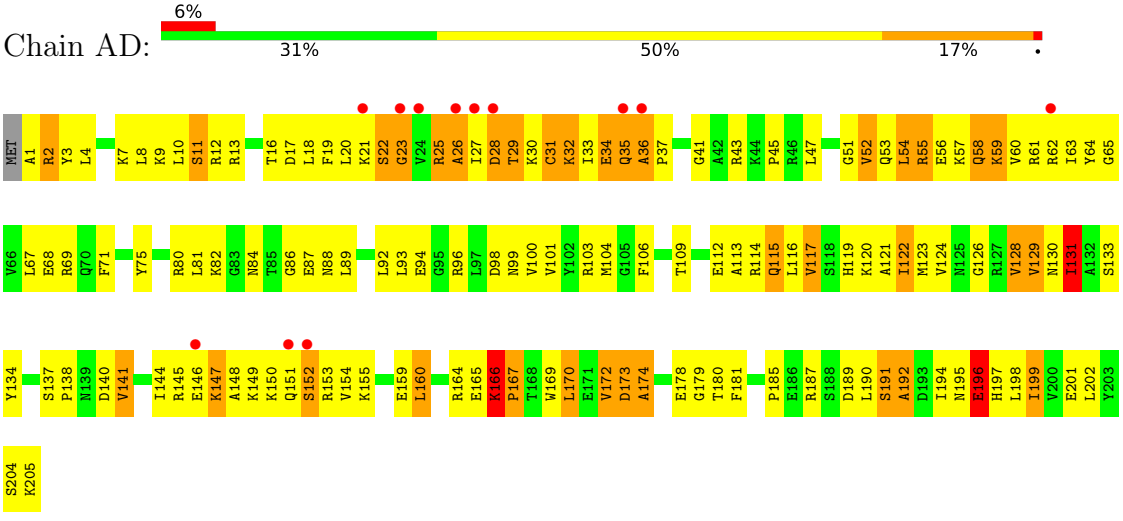
• Molecule 2: 30S ribosomal protein S3

Chain CC:



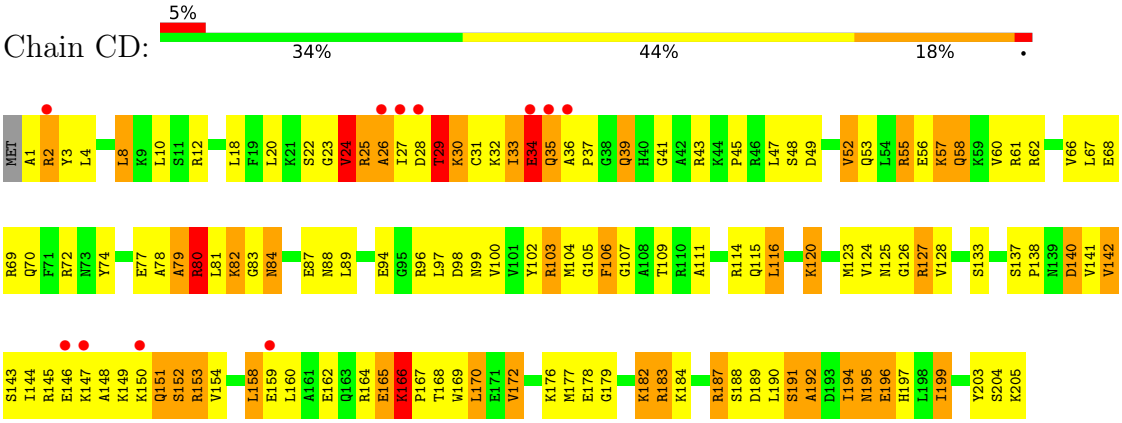
• Molecule 3: 30S ribosomal protein S4

Chain AD:



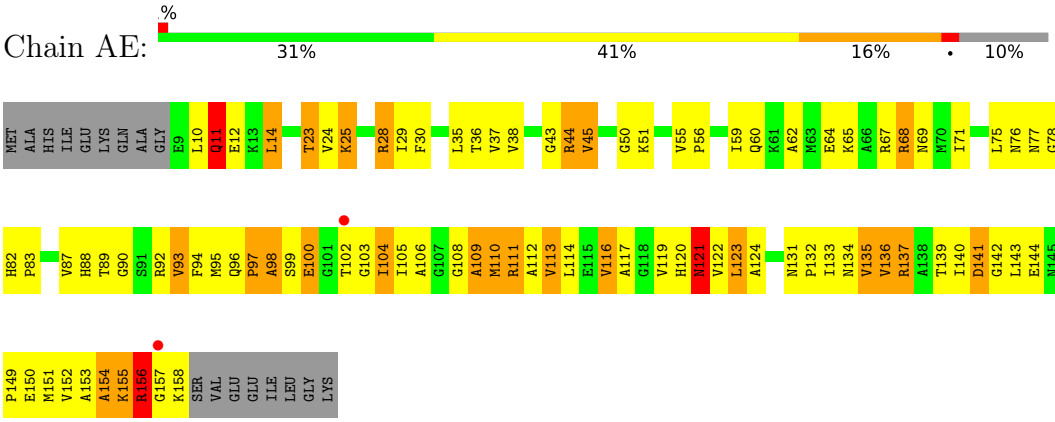
• Molecule 3: 30S ribosomal protein S4

Chain CD:



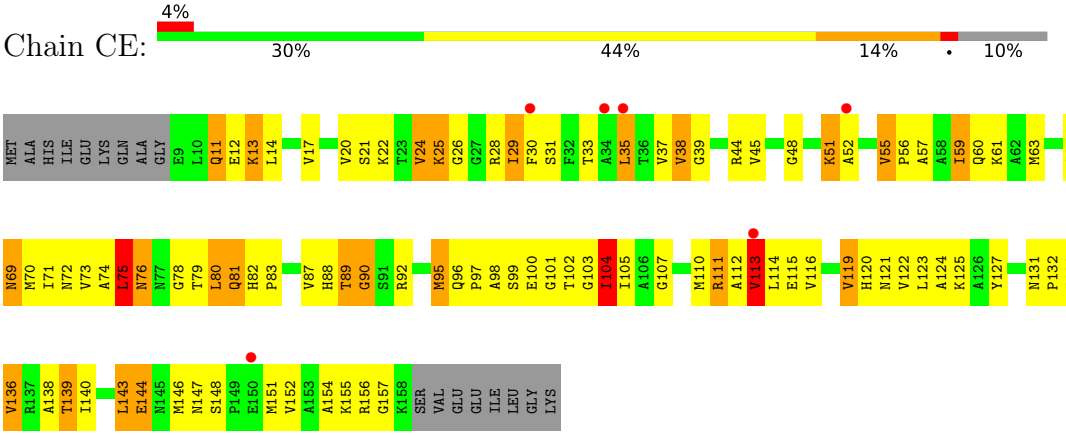
• Molecule 4: 30S ribosomal protein S5

Chain AE:



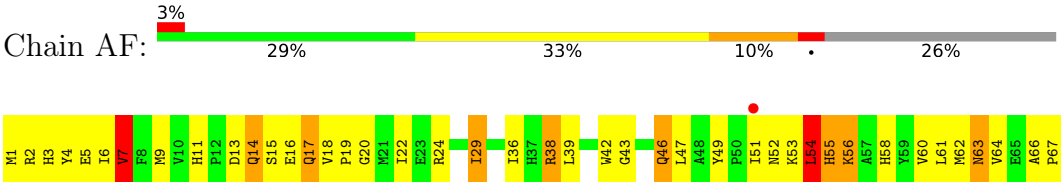
• Molecule 4: 30S ribosomal protein S5

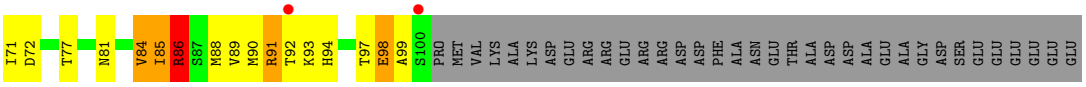
Chain CE:



• Molecule 5: 30S ribosomal protein S6

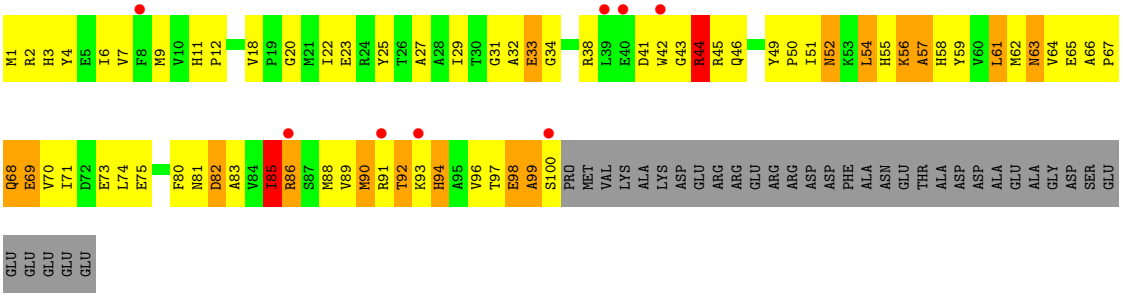
Chain AF:





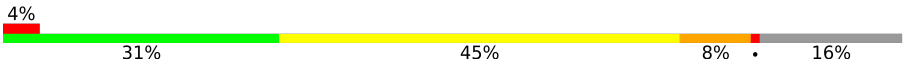
• Molecule 5: 30S ribosomal protein S6

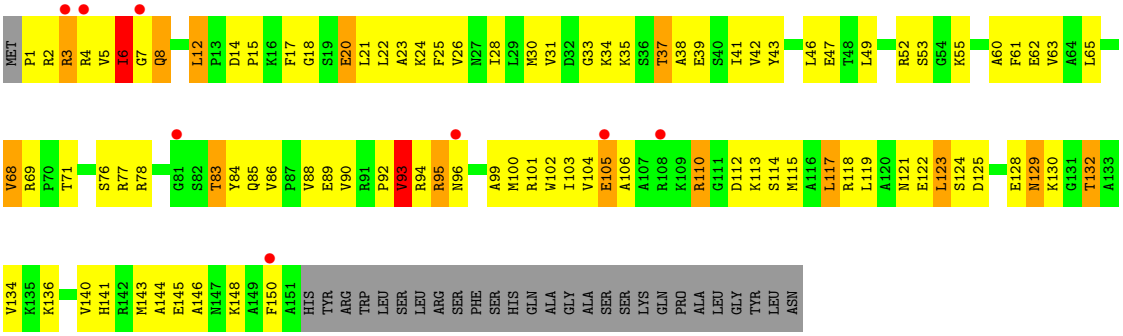
Chain CF:



• Molecule 6: 30S ribosomal protein S7

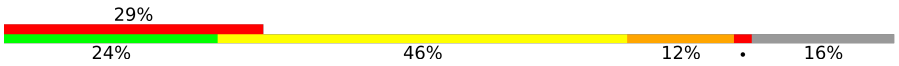
Chain AG:

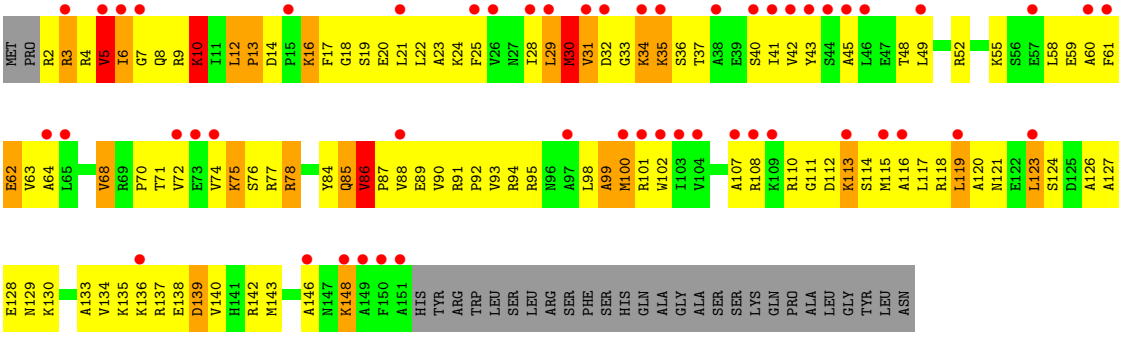




• Molecule 6: 30S ribosomal protein S7

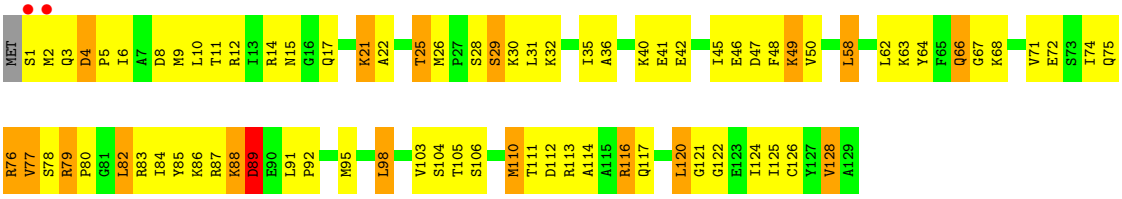
Chain CG:





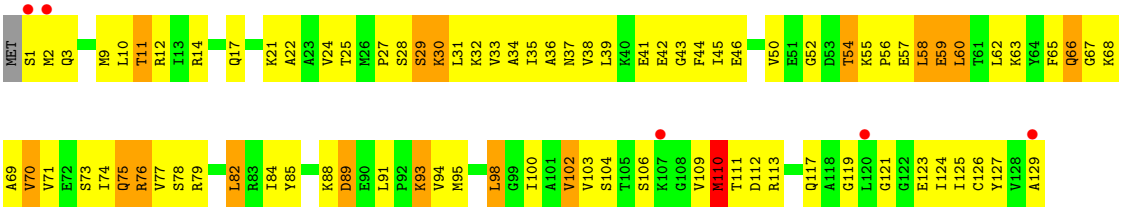
• Molecule 7: 30S ribosomal protein S8

Chain AH:



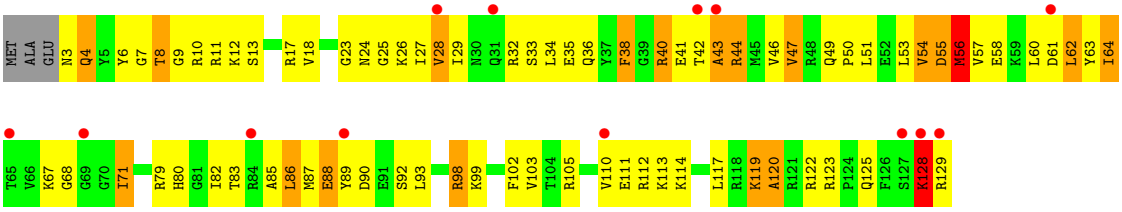
• Molecule 7: 30S ribosomal protein S8

Chain CH:



• Molecule 8: 30S ribosomal protein S9

Chain AI:



• Molecule 8: 30S ribosomal protein S9

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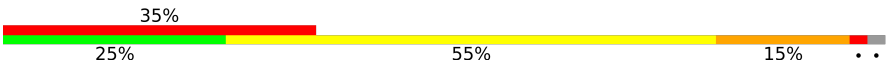
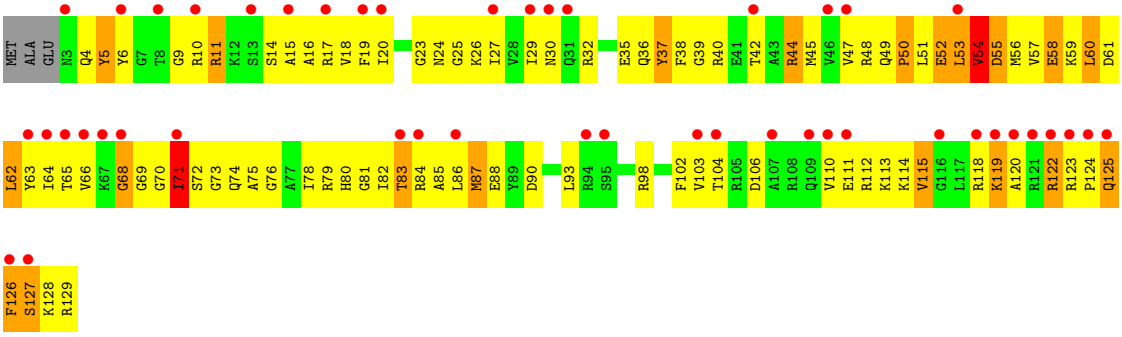
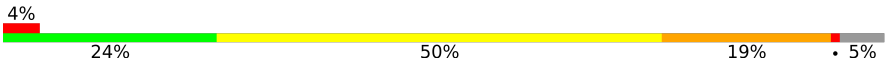
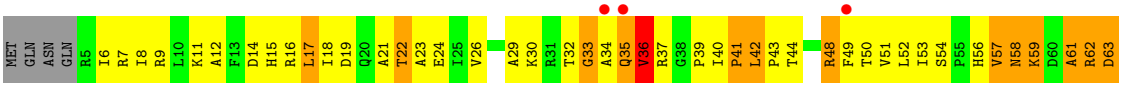


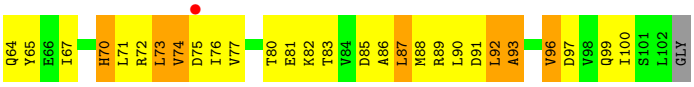


• Molecule 9: 30S ribosomal protein S10

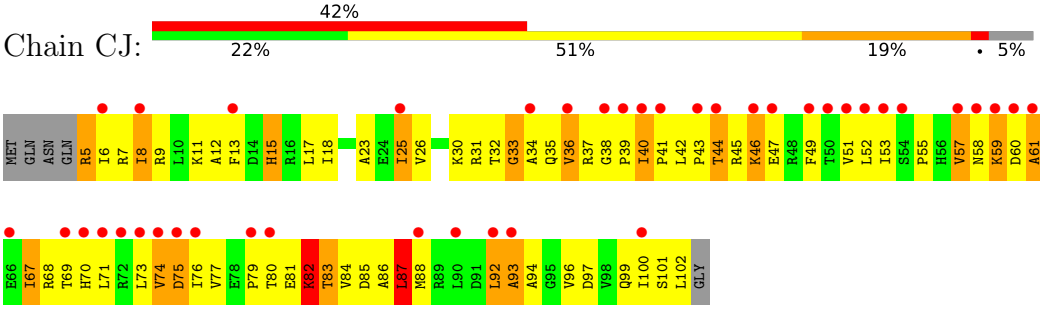
Chain AJ:



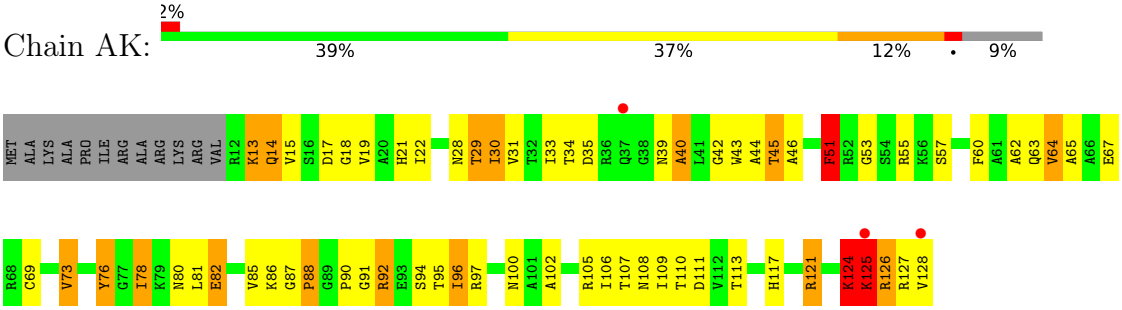




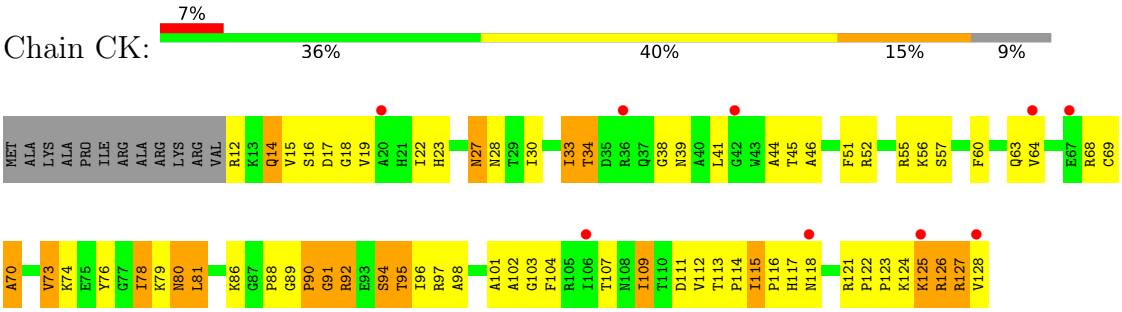
• Molecule 9: 30S ribosomal protein S10



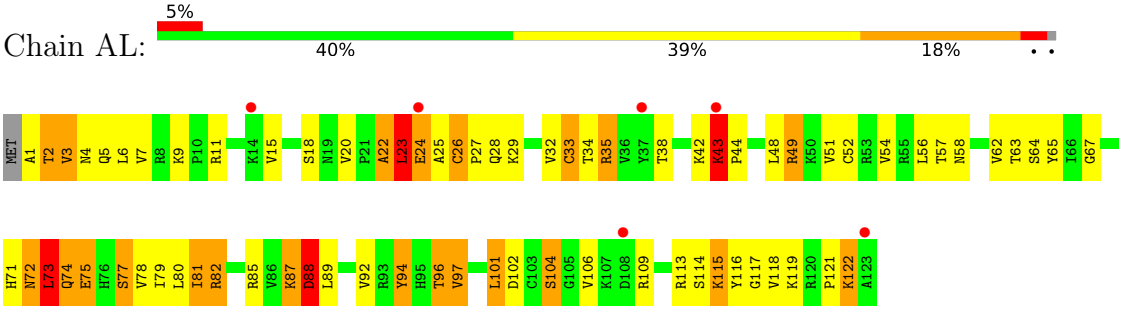
• Molecule 10: 30S ribosomal protein S11



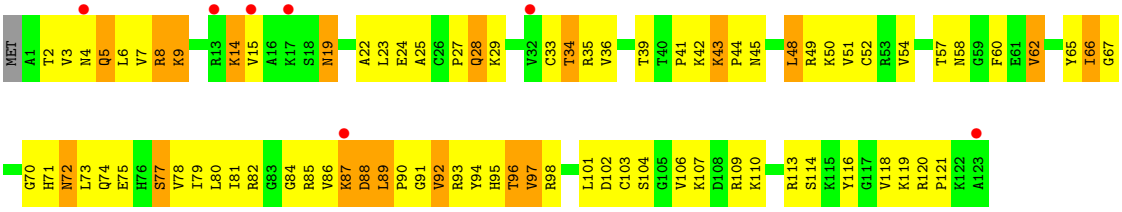
• Molecule 10: 30S ribosomal protein S11



• Molecule 11: 30S ribosomal protein S12



• Molecule 11: 30S ribosomal protein S12

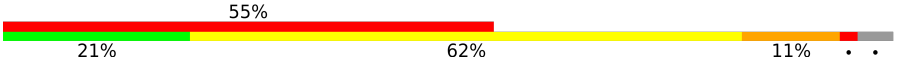


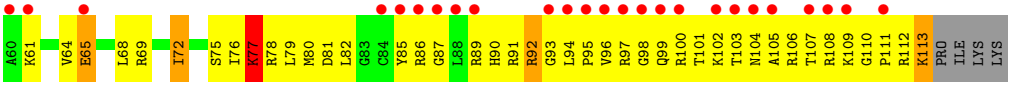
• Molecule 12: 30S ribosomal protein S13

Chain AM:

• Molecule 12: 30S ribosomal protein S13

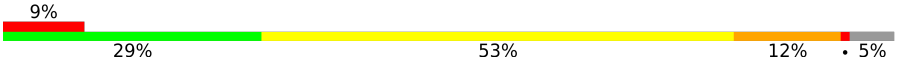
Chain CM:

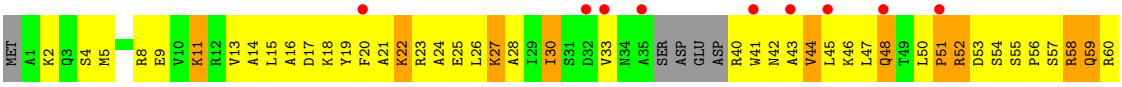




• Molecule 13: 30S ribosomal protein S14

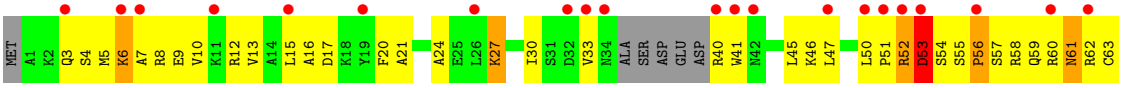
Chain AN:

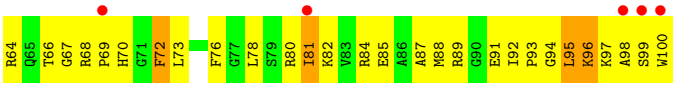




• Molecule 13: 30S ribosomal protein S14

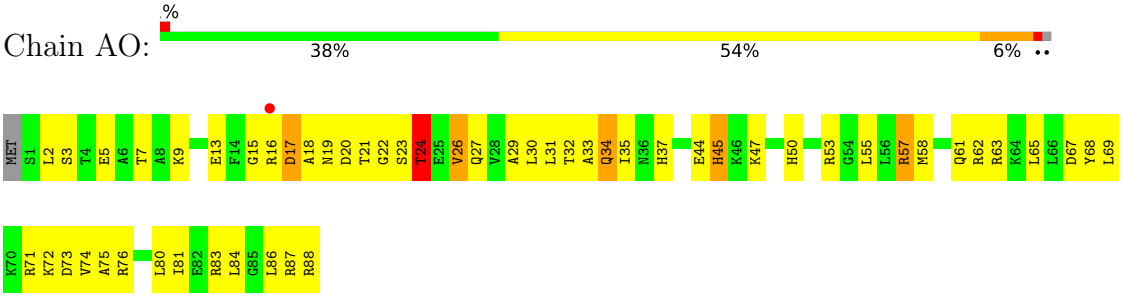
Chain CN:





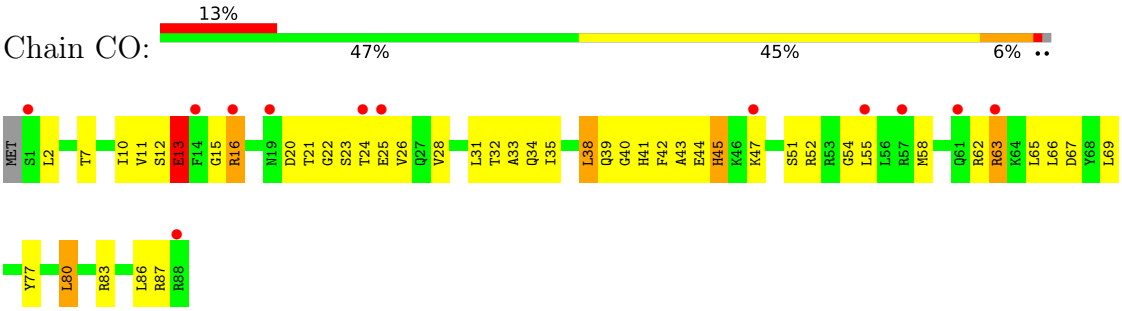
• Molecule 14: 30S ribosomal protein S15

Chain AO:



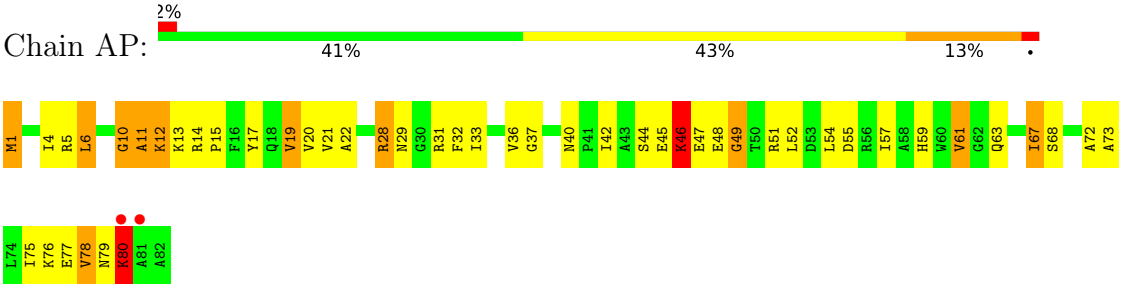
• Molecule 14: 30S ribosomal protein S15

Chain CO:



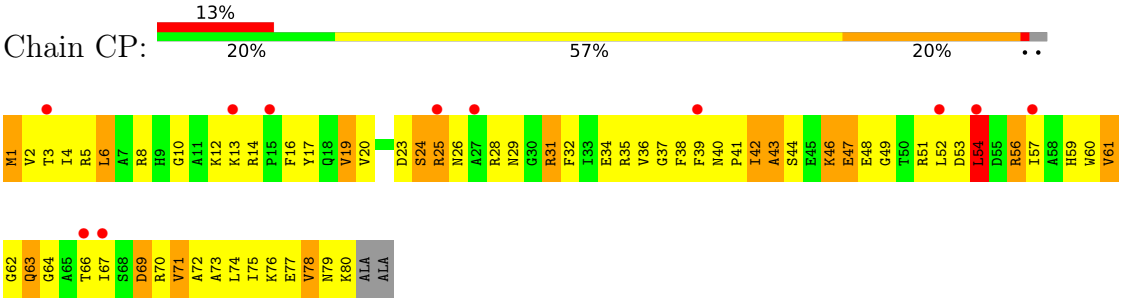
• Molecule 15: 30S ribosomal protein S16

Chain AP:



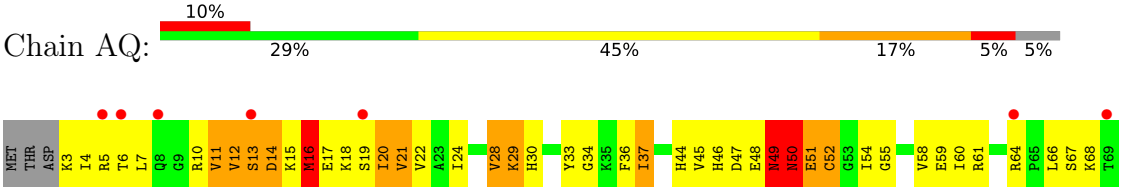
• Molecule 15: 30S ribosomal protein S16

Chain CP:



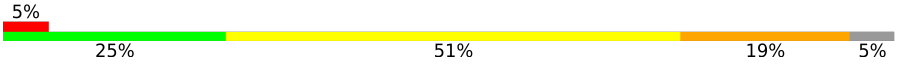
• Molecule 16: 30S ribosomal protein S17

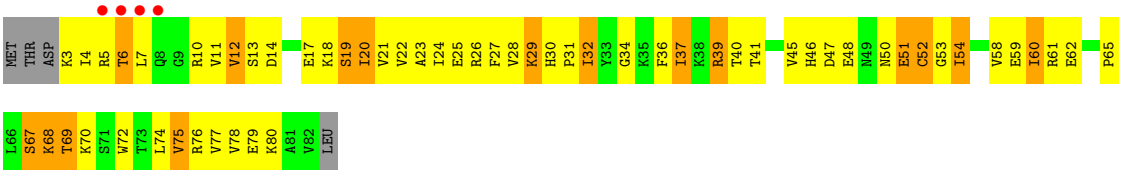
Chain AQ:



• Molecule 16: 30S ribosomal protein S17

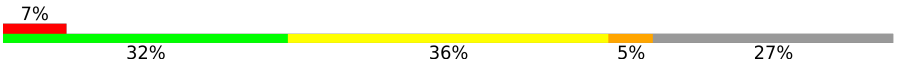
Chain CQ:

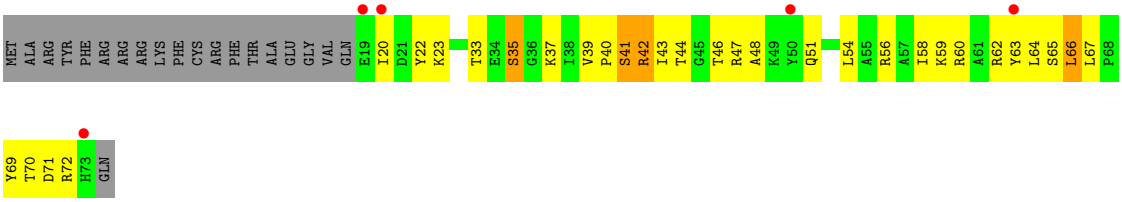




• Molecule 17: 30S ribosomal protein S18

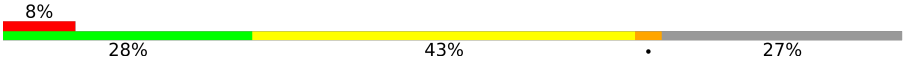
Chain AR:

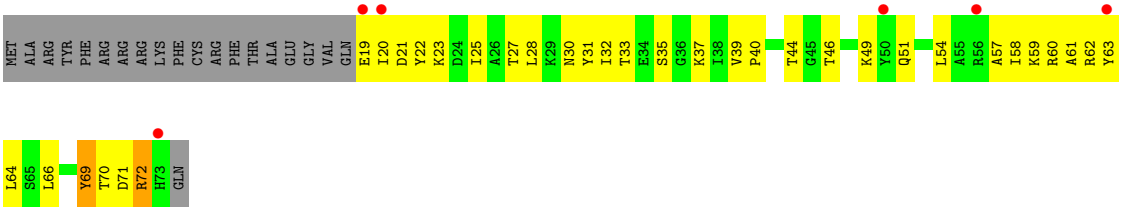




• Molecule 17: 30S ribosomal protein S18

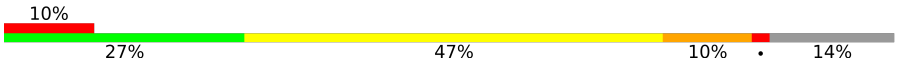
Chain CR:

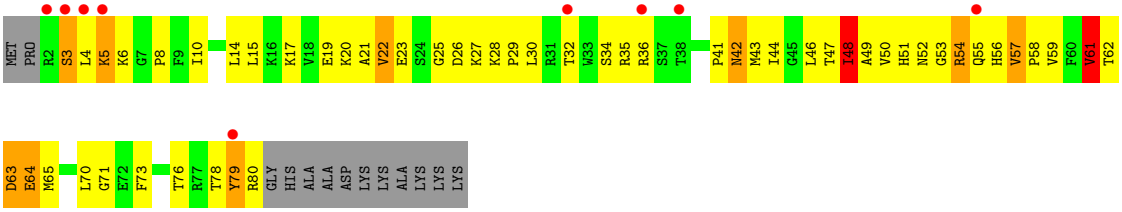




• Molecule 18: 30S ribosomal protein S19

Chain AS:





• Molecule 18: 30S ribosomal protein S19

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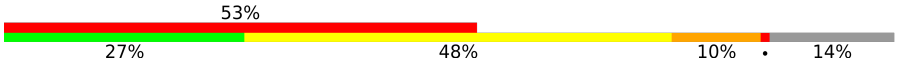
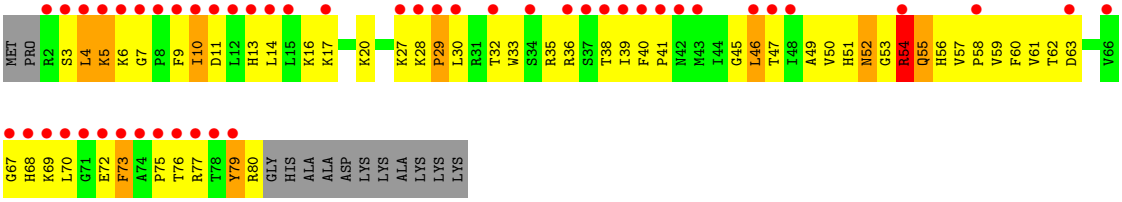
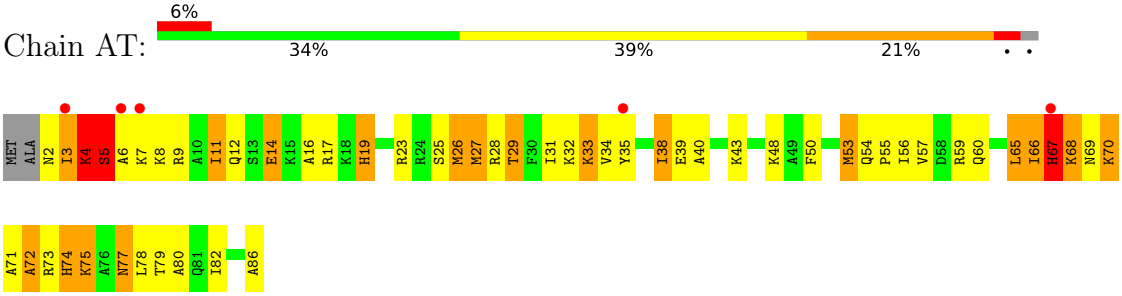
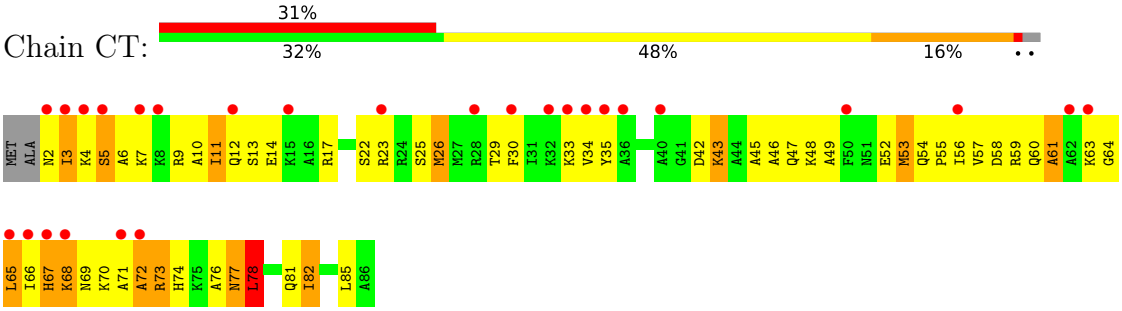




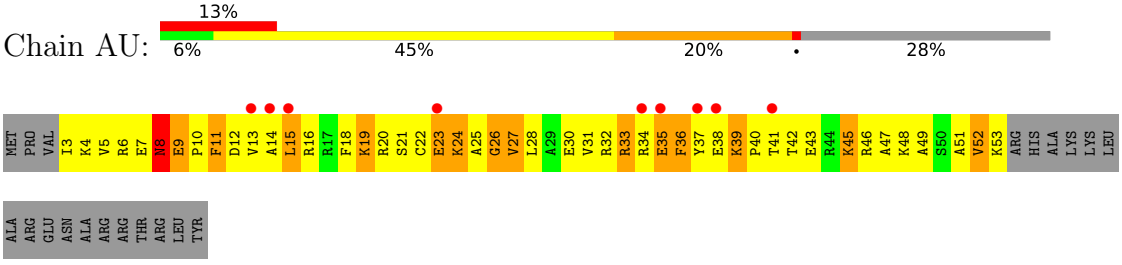
• Molecule 19: 30S ribosomal protein S20



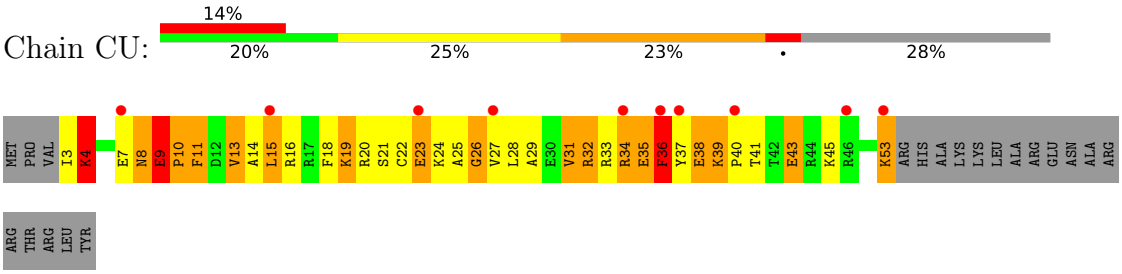
• Molecule 19: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S21

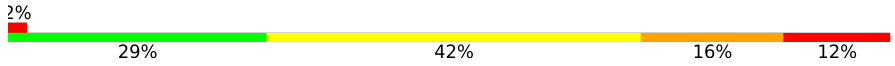


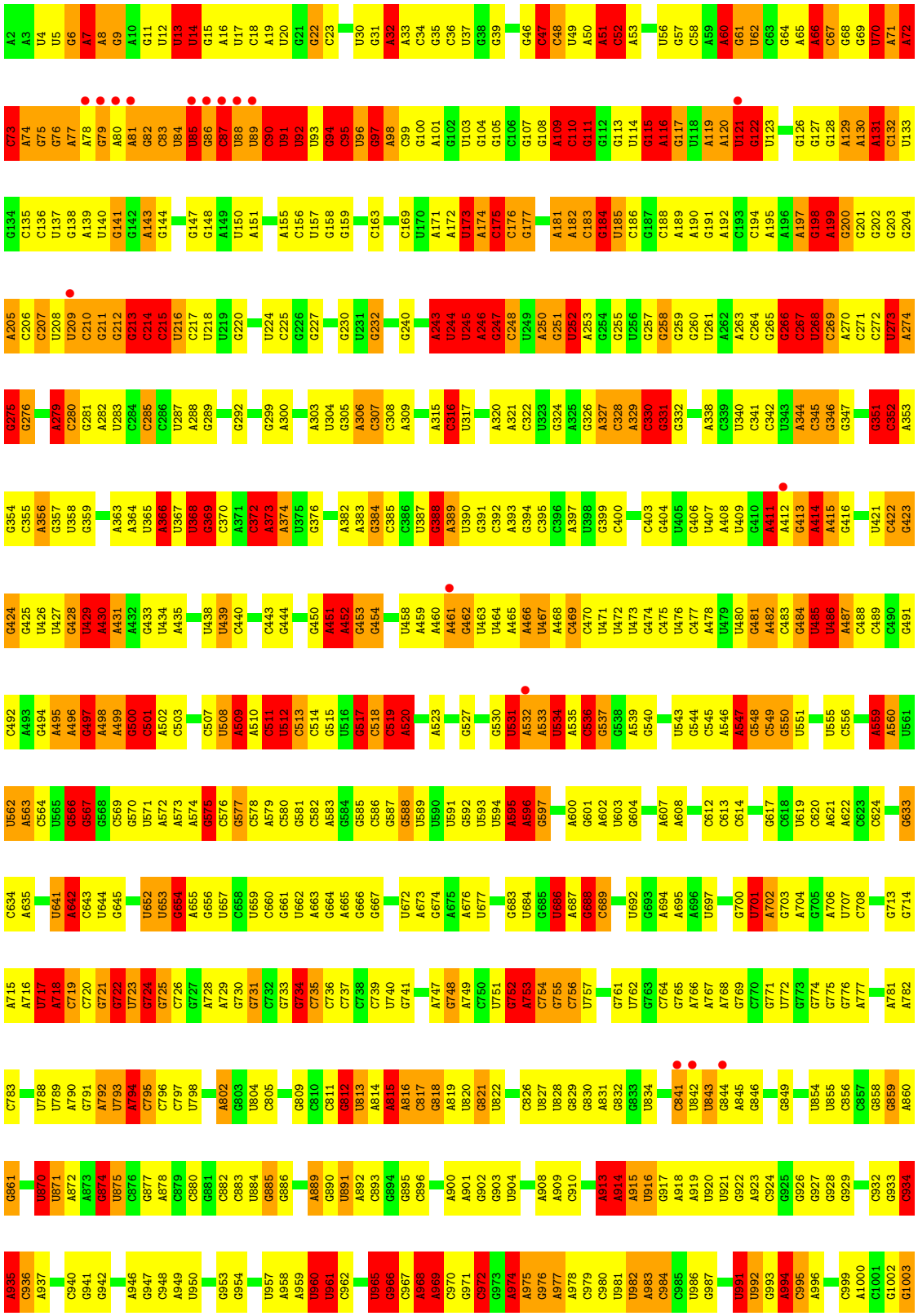
• Molecule 20: 30S ribosomal protein S21

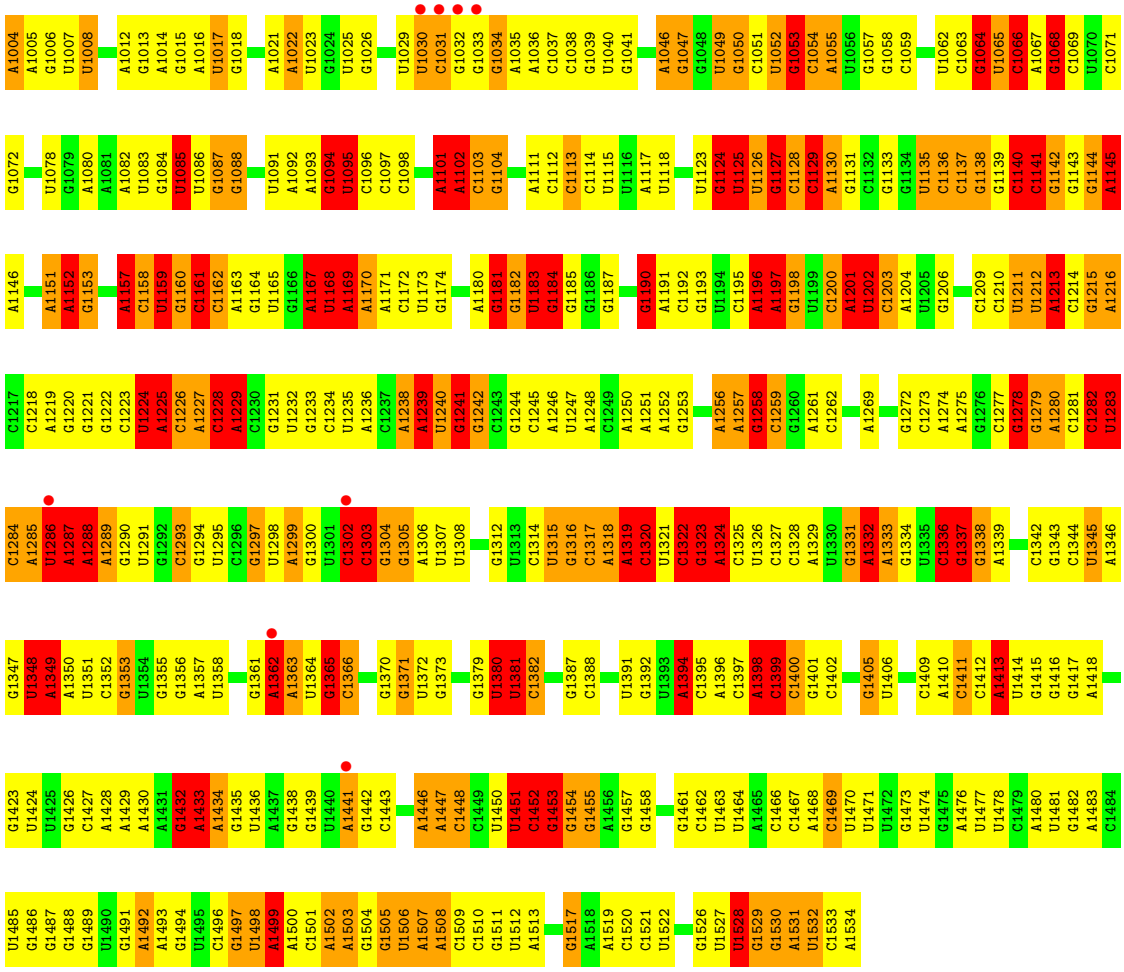


• Molecule 21: 16S rRNA

Chain AA:

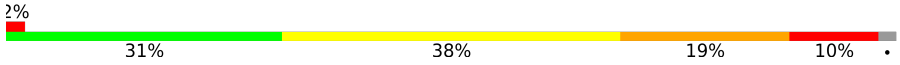


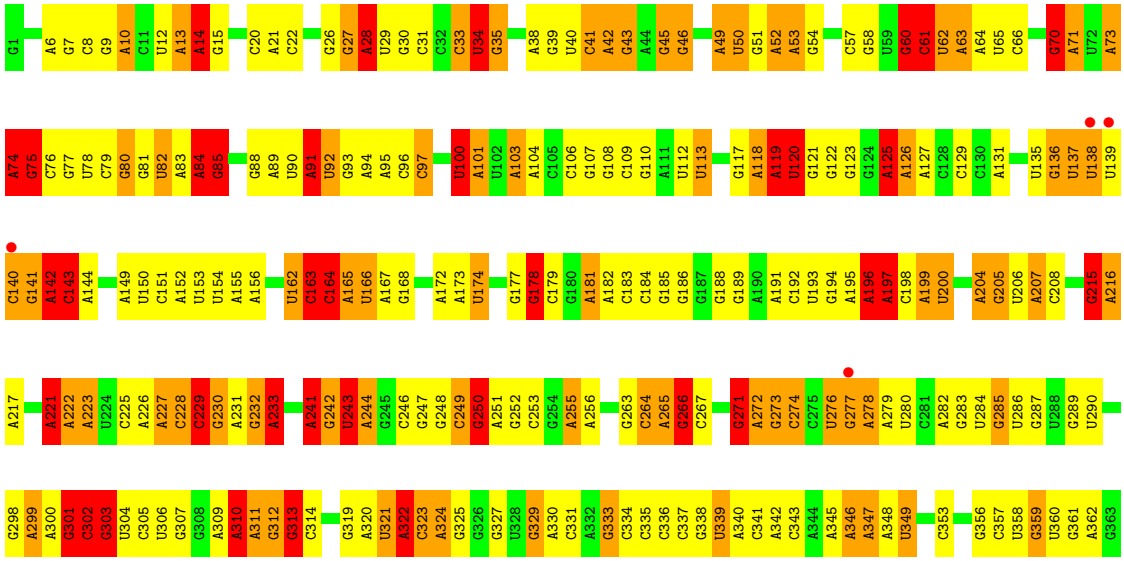


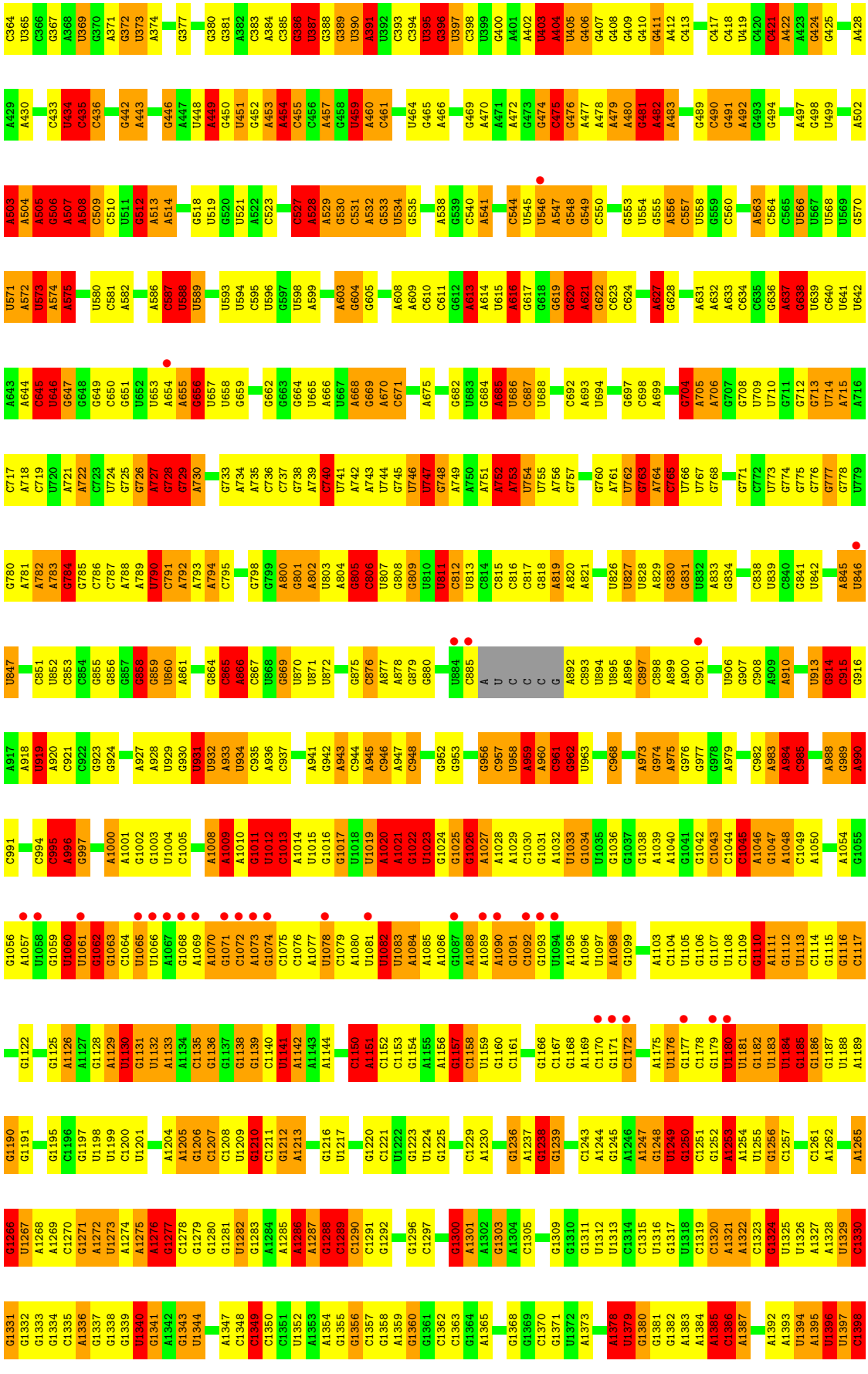


• Molecule 22: 23S rRNA

Chain BA:



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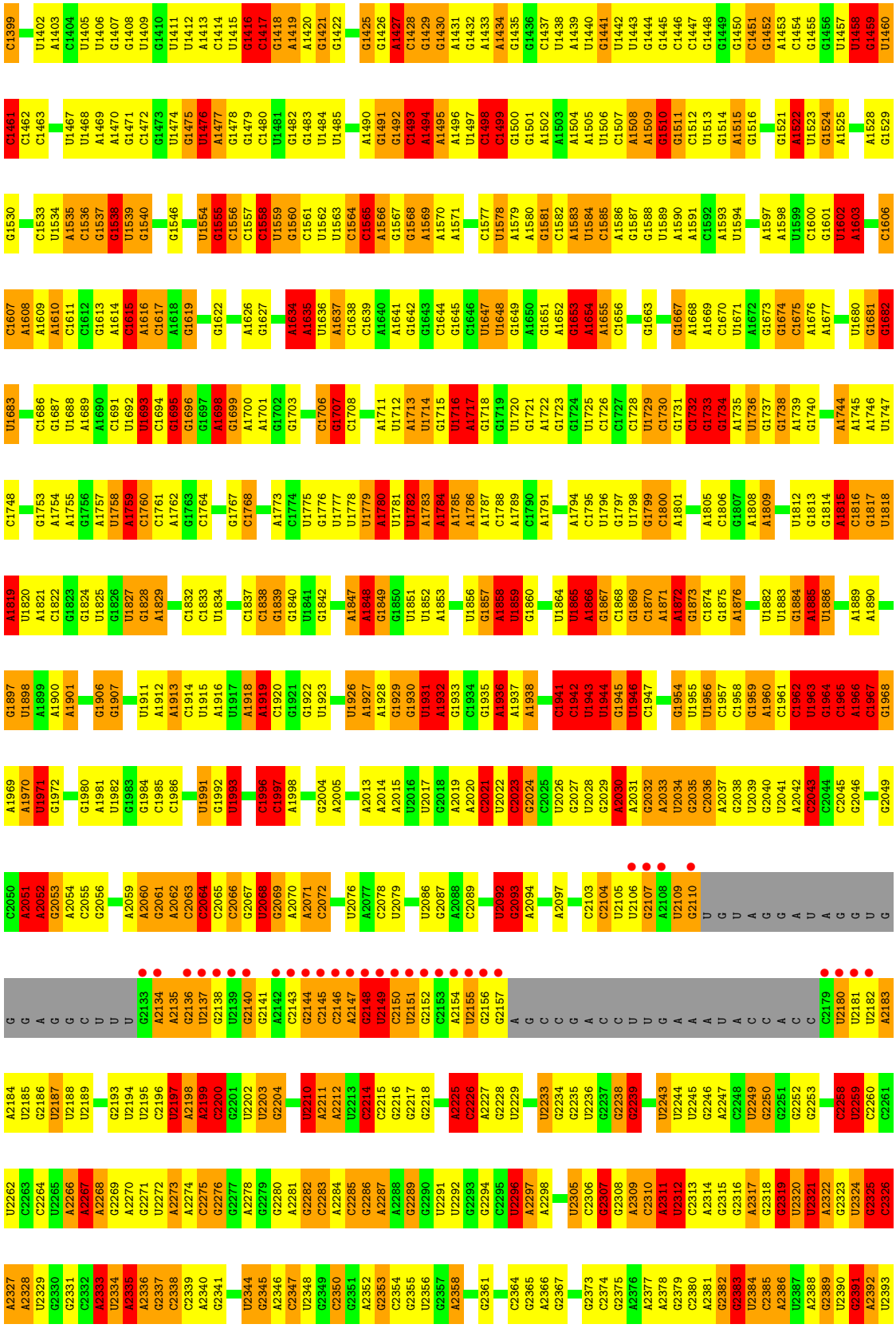
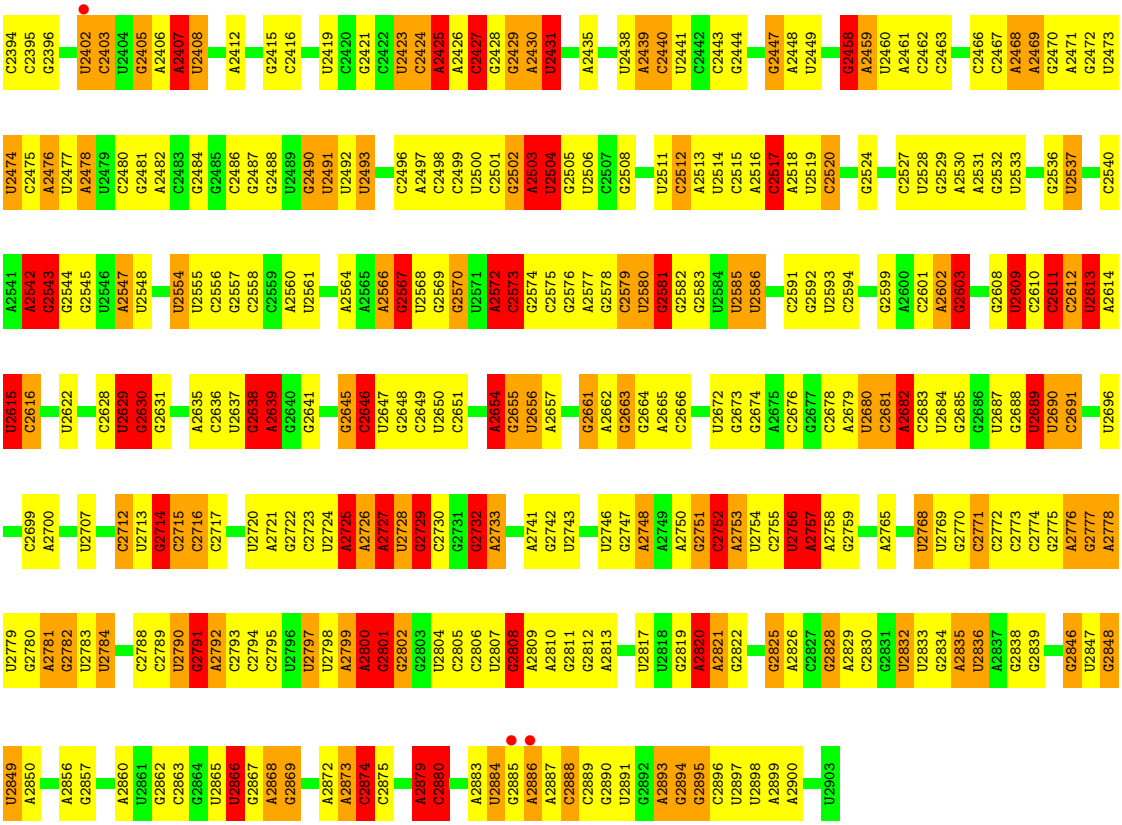
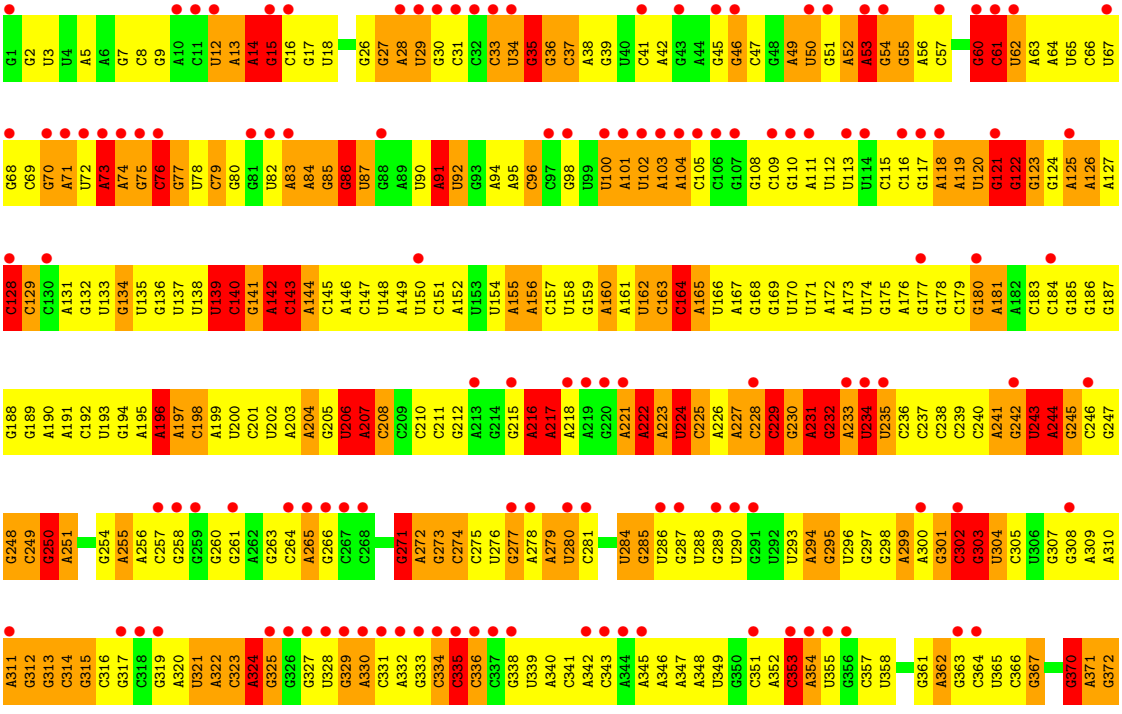
WORLDWIDE PDB PROTEIN DATA BANK

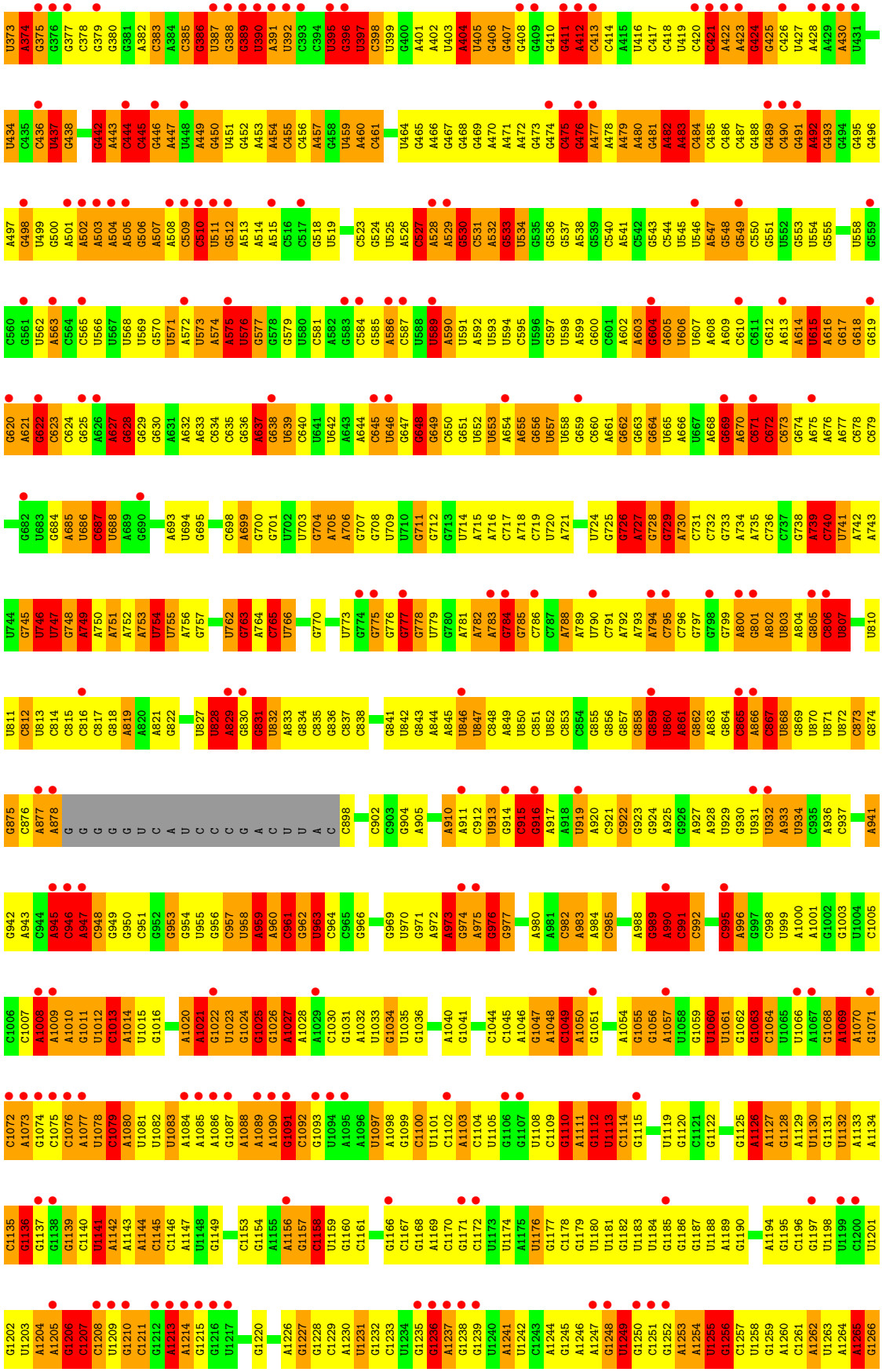


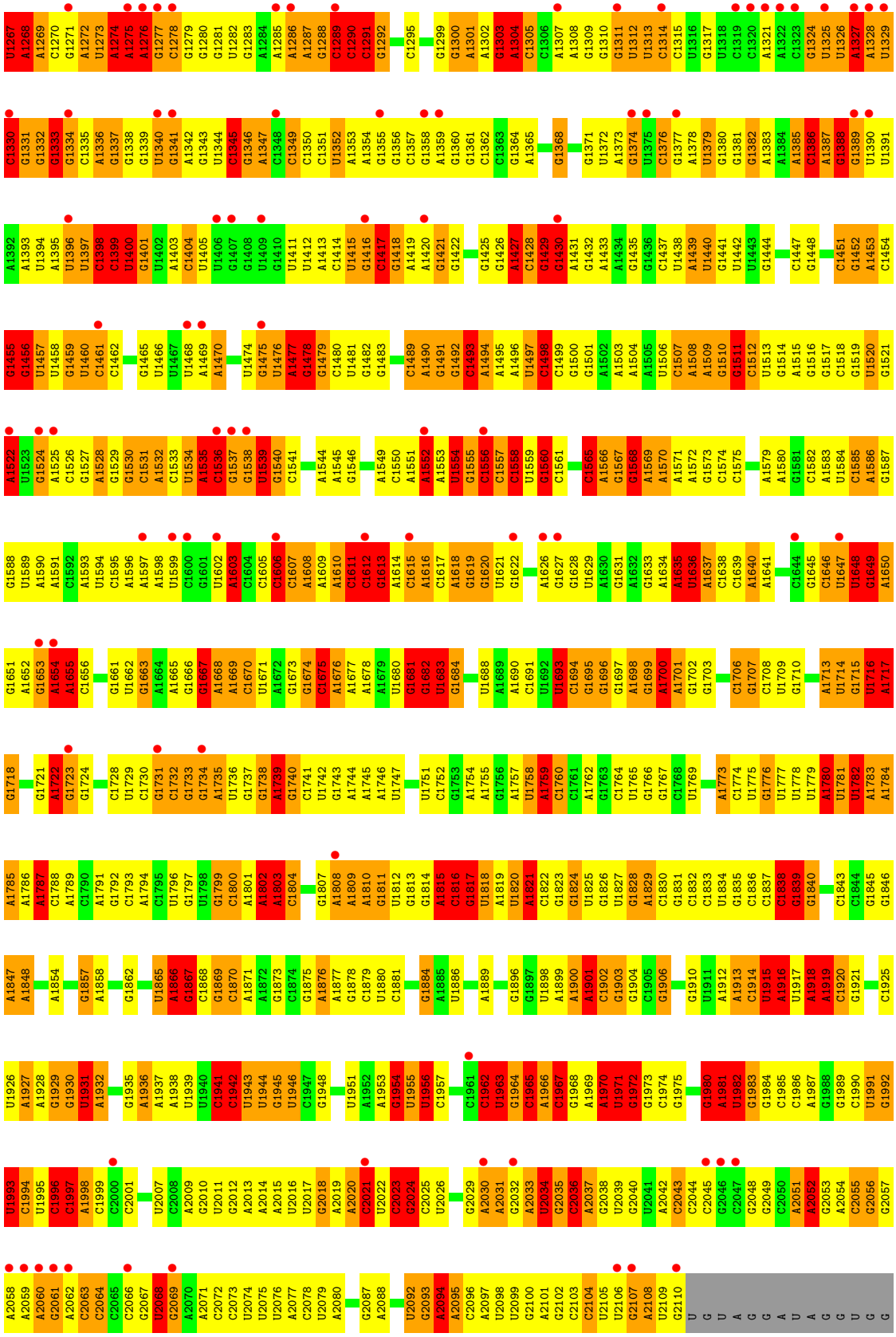


• Molecule 22: 23S rRNA

Chain DA:



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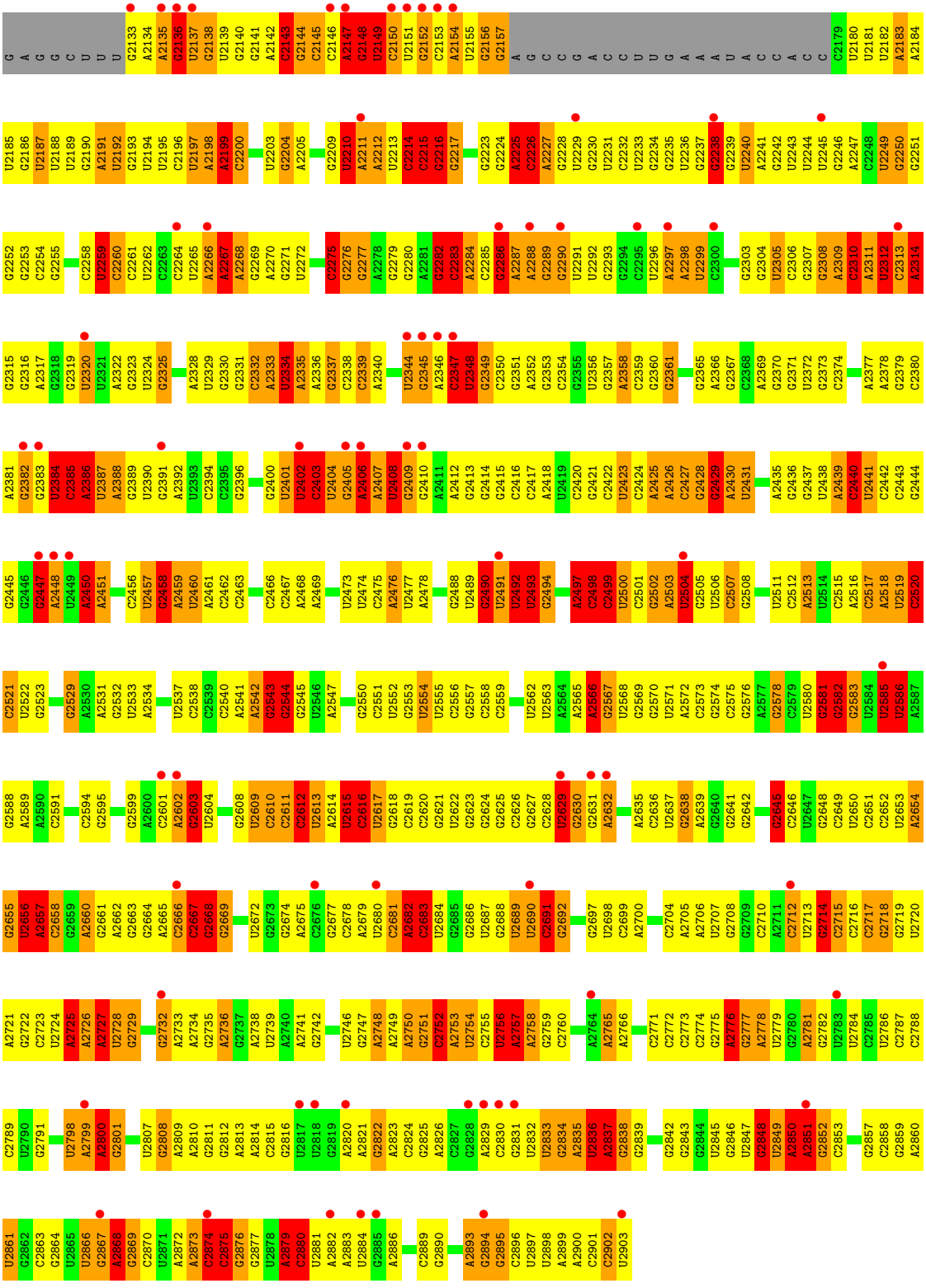
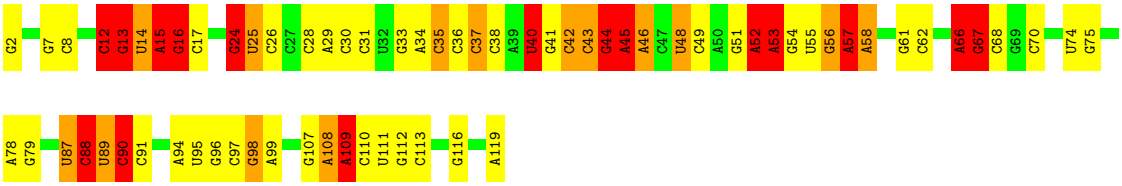
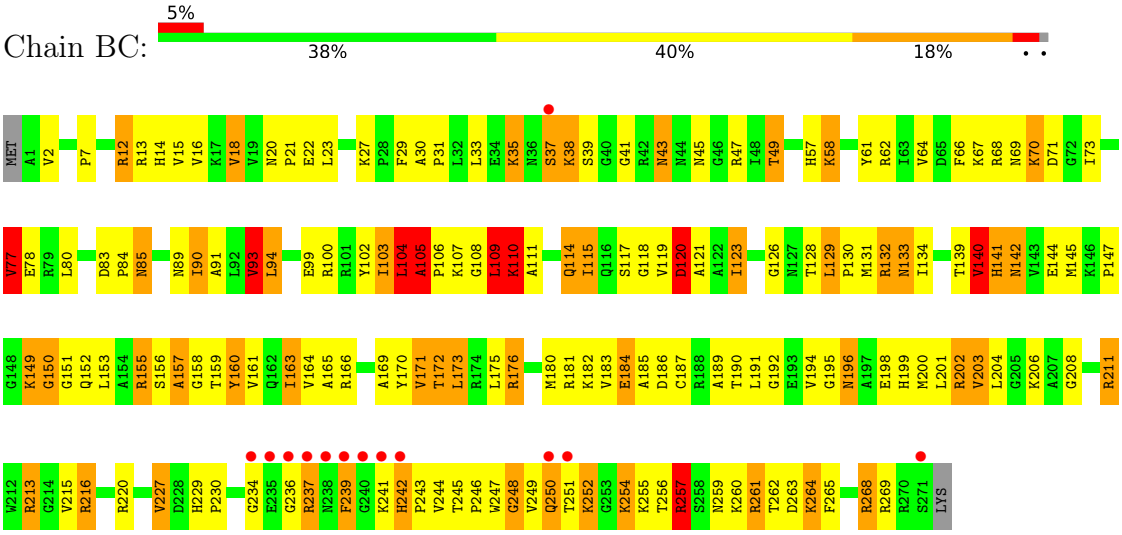


• Molecule 23: 5S rRNA

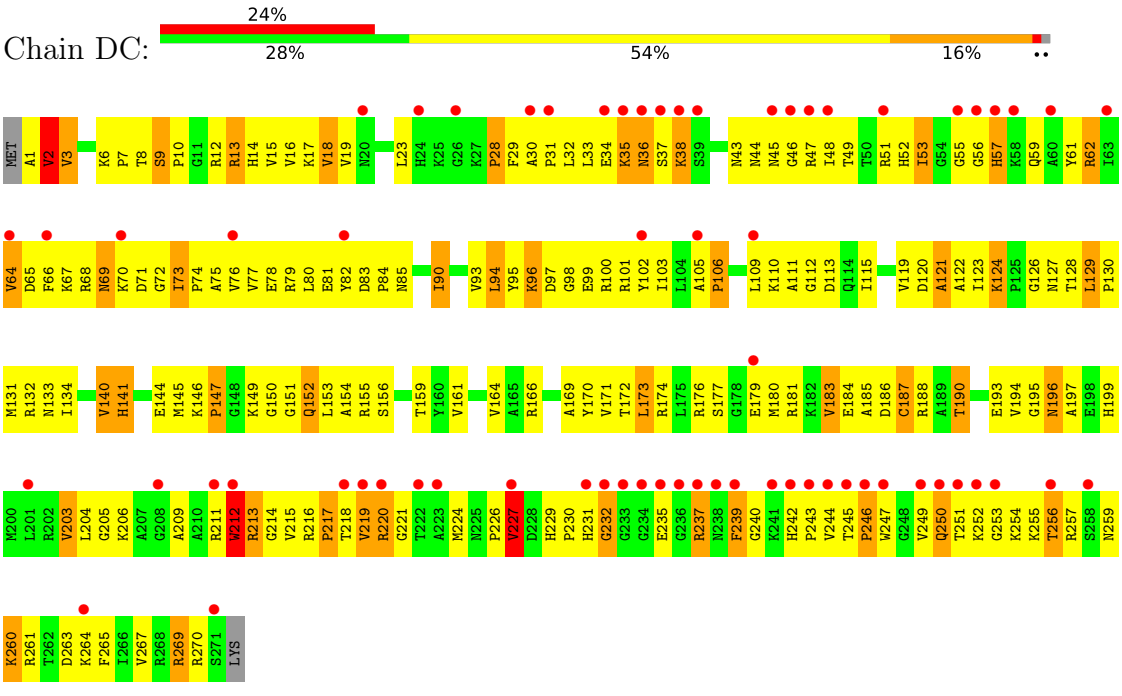
Chain BB:



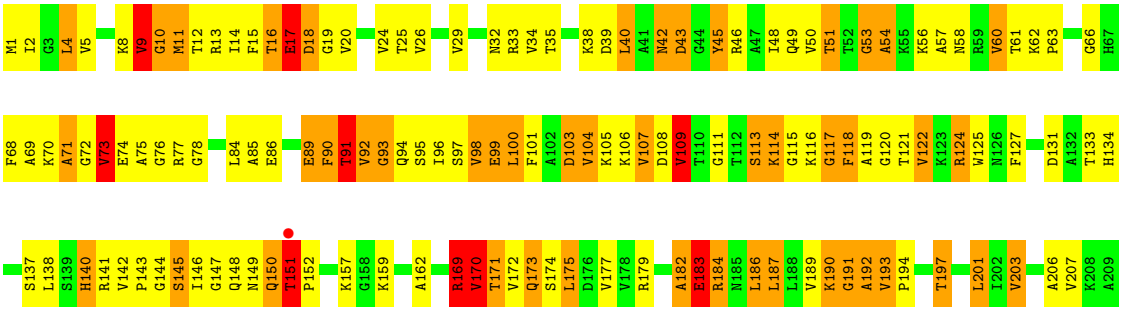
• Molecule 24: 50S ribosomal protein L2



• Molecule 24: 50S ribosomal protein L2

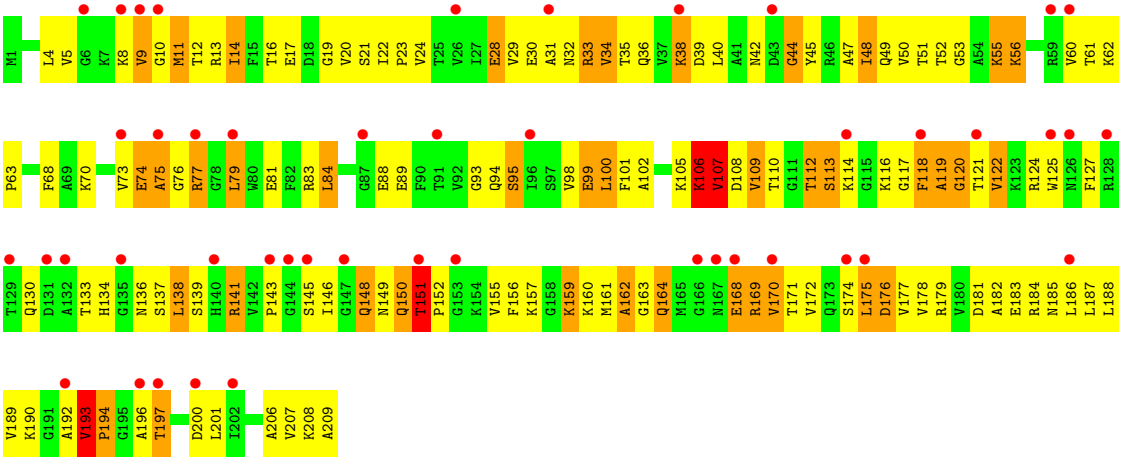


• Molecule 25: 50S ribosomal protein L3



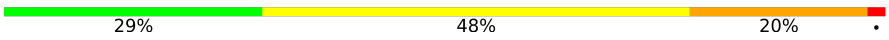
• Molecule 25: 50S ribosomal protein L3

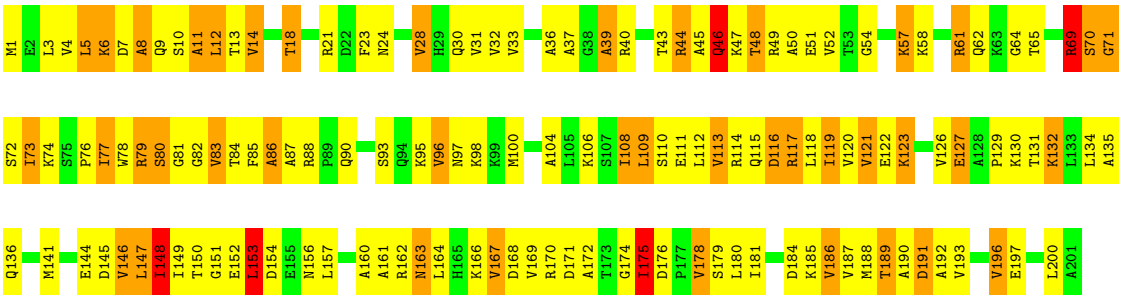
Chain DD:



• Molecule 26: 50S ribosomal protein L4

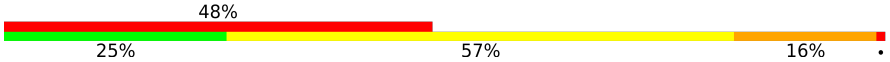
Chain BE:

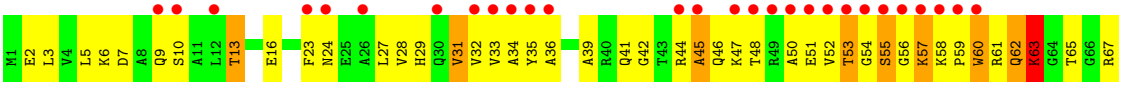


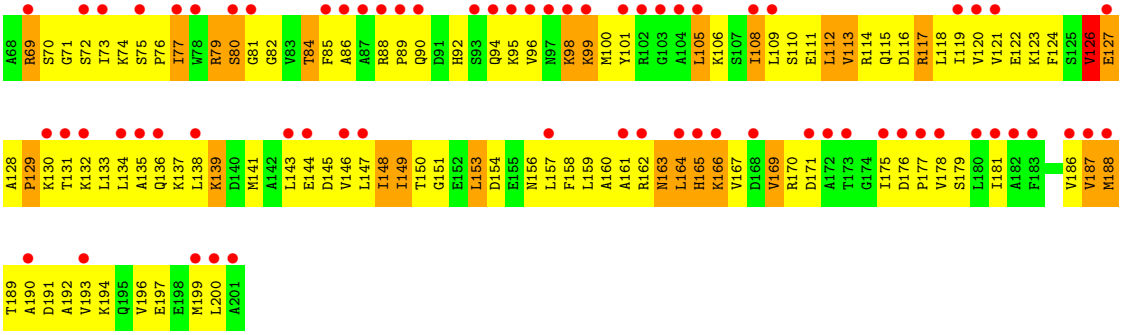


• Molecule 26: 50S ribosomal protein L4

Chain DE:

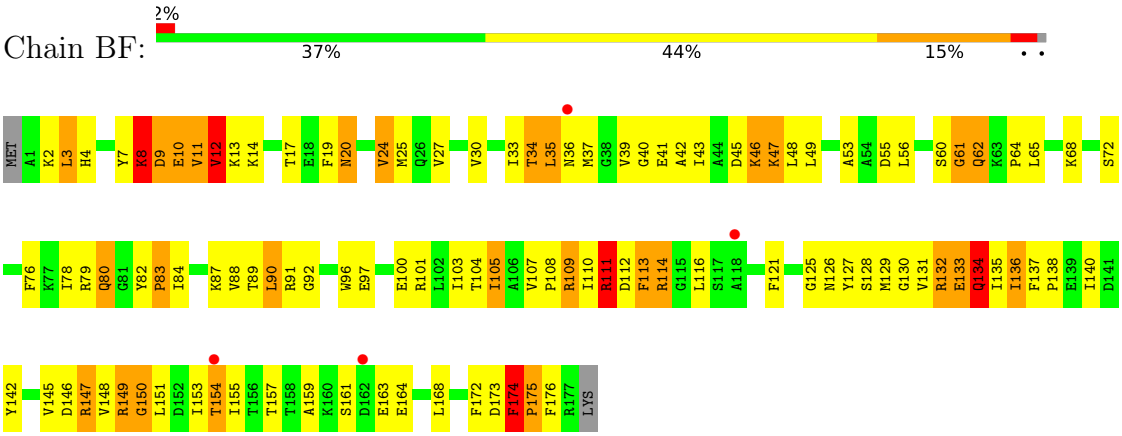






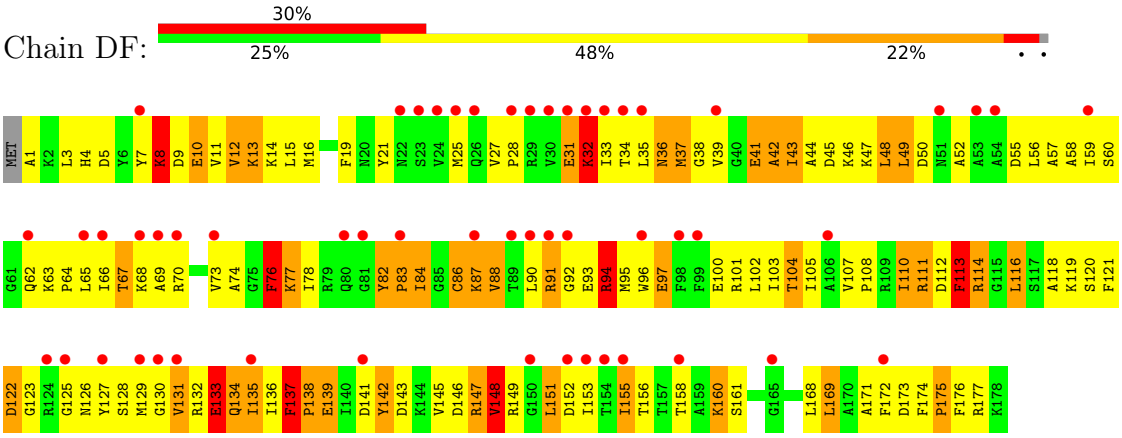
• Molecule 27: 50S ribosomal protein L5

Chain BF:



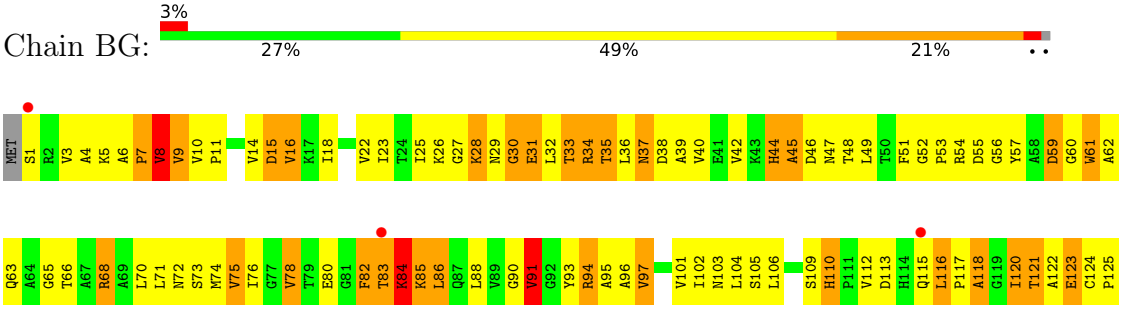
• Molecule 27: 50S ribosomal protein L5

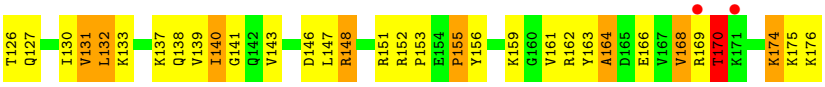
Chain DF:



• Molecule 28: 50S ribosomal protein L6

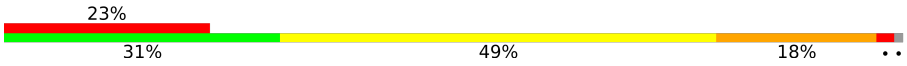
Chain BG:

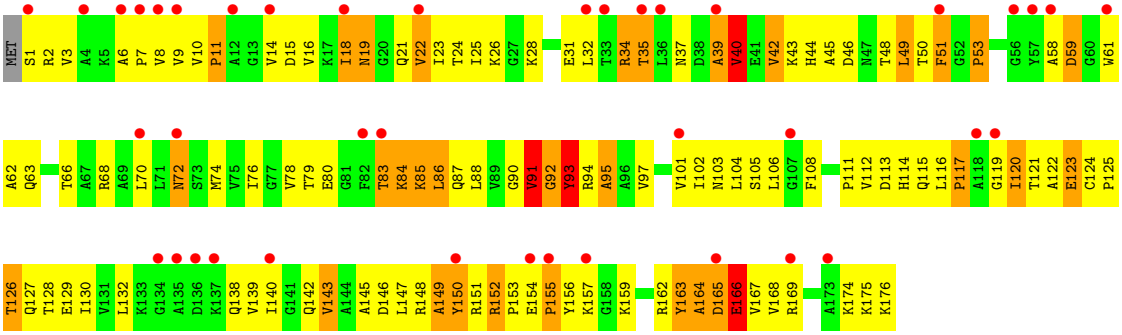




• Molecule 28: 50S ribosomal protein L6

Chain DG:





• Molecule 29: 50S ribosomal protein L9

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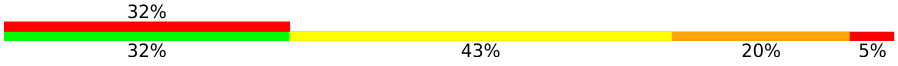

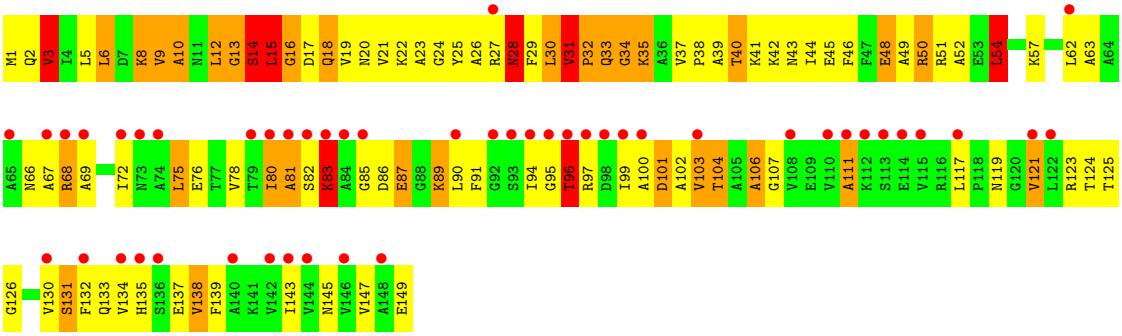

• Molecule 29: 50S ribosomal protein L9

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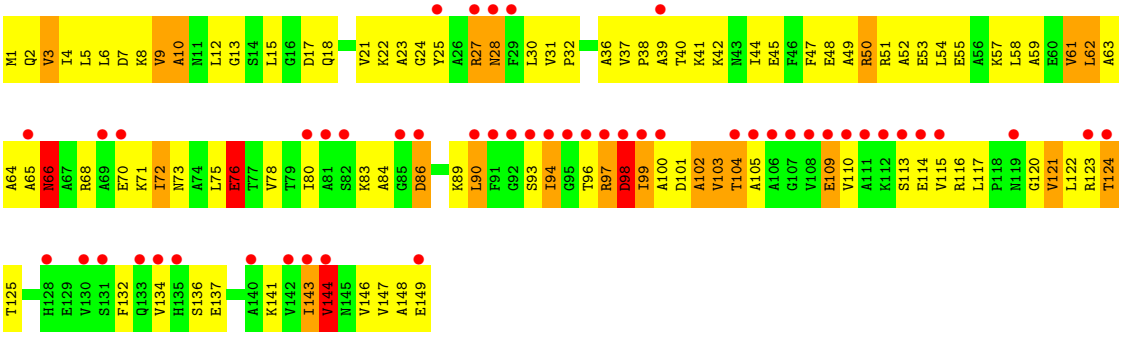
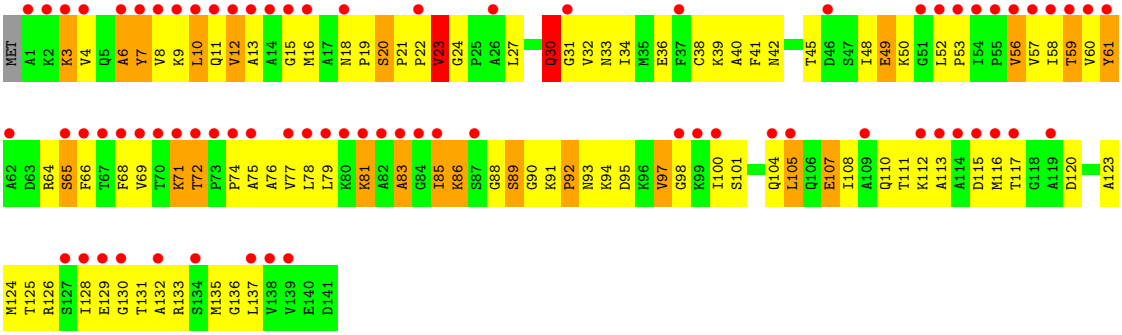
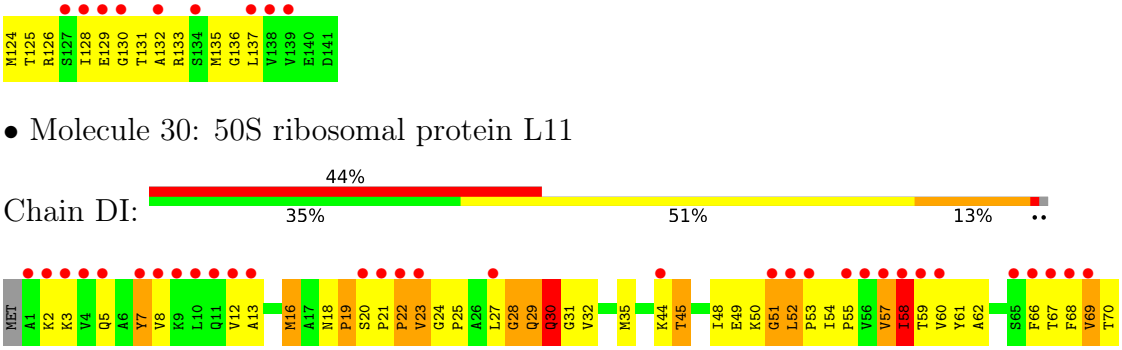


• Molecule 30: 50S ribosomal protein L11

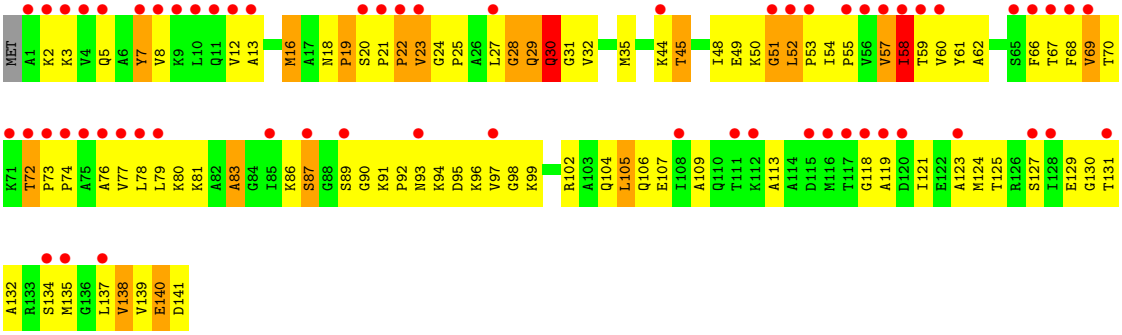
Chain BI:





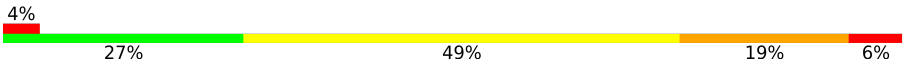
• Molecule 30: 50S ribosomal protein L11

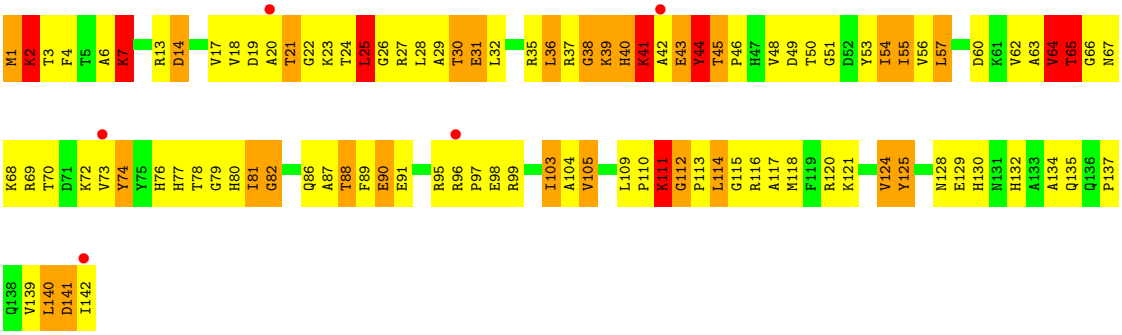
Chain DI:



• Molecule 31: 50S ribosomal protein L13

Chain BJ:





• Molecule 31: 50S ribosomal protein L13

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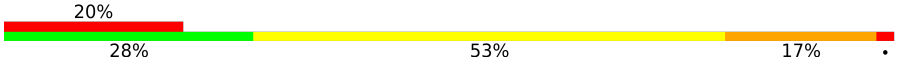
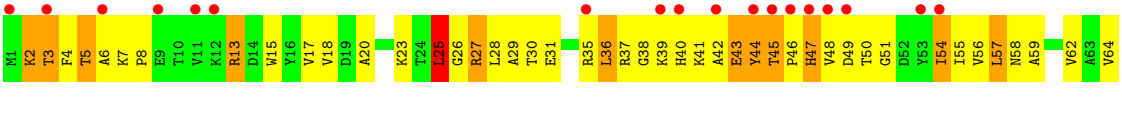
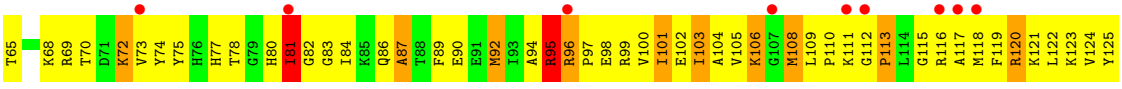
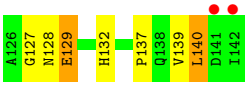


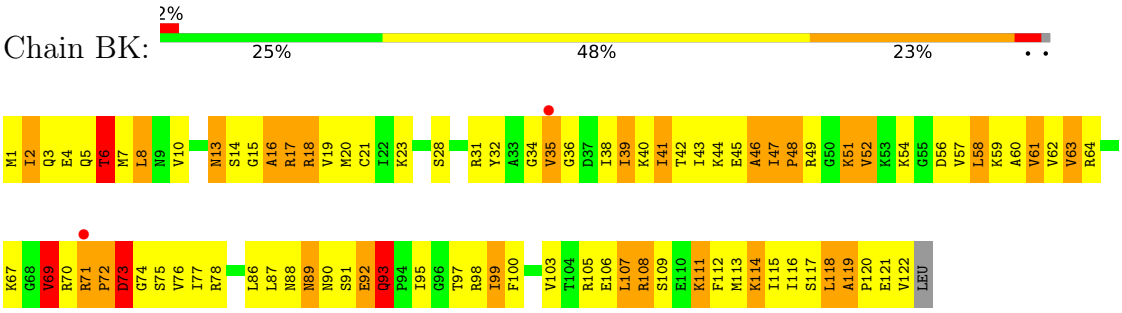






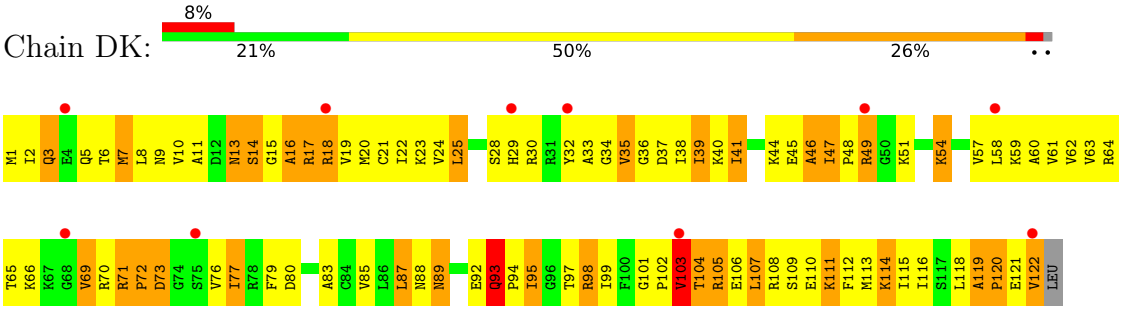
• Molecule 32: 50S ribosomal protein L14

Chain BK:



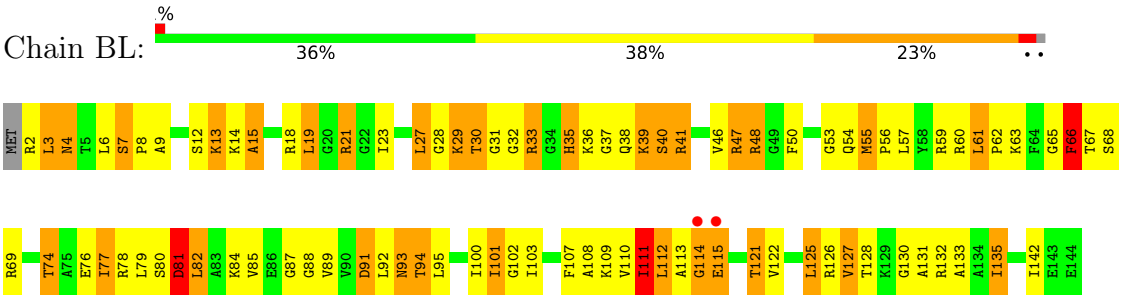
• Molecule 32: 50S ribosomal protein L14

Chain DK:



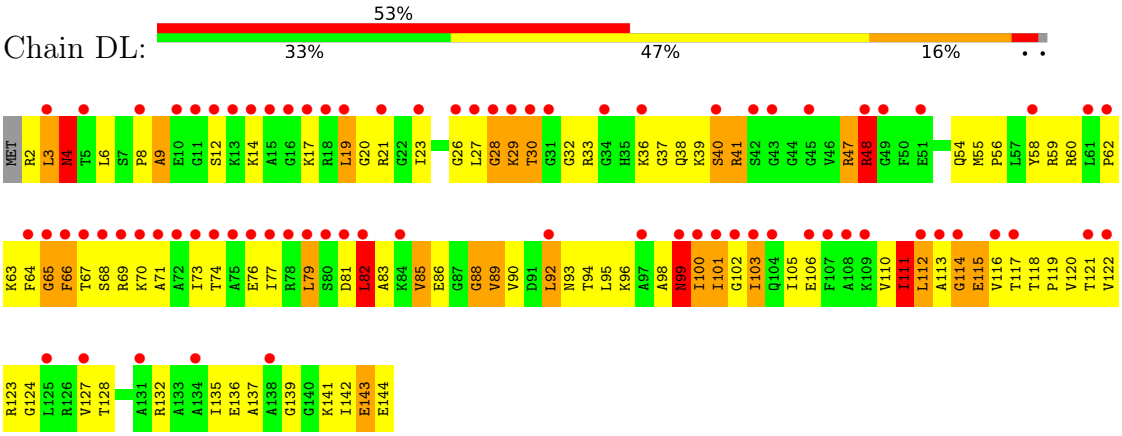
• Molecule 33: 50S ribosomal protein L15

Chain BL:



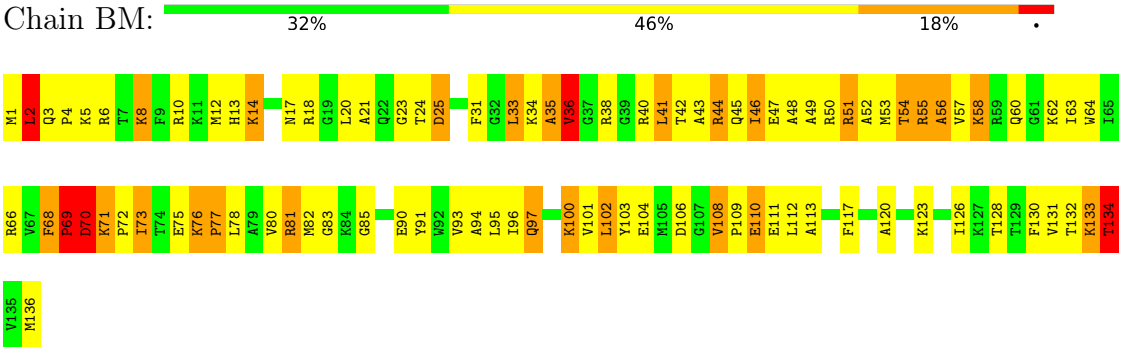
• Molecule 33: 50S ribosomal protein L15

Chain DL:



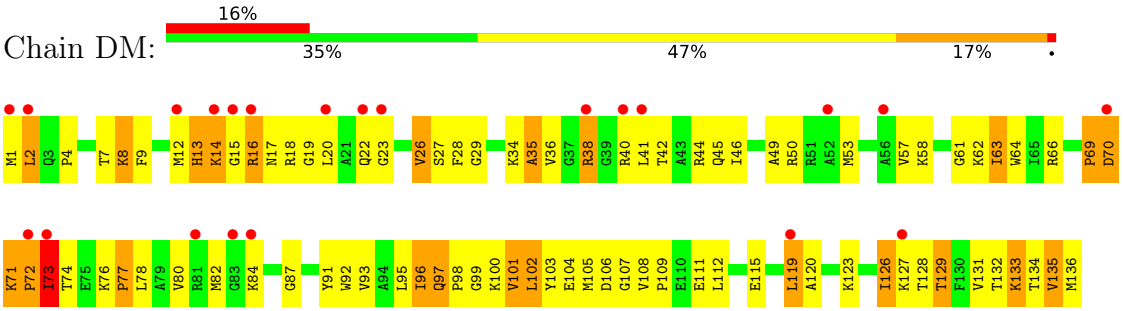
• Molecule 34: 50S ribosomal protein L16

Chain BM:



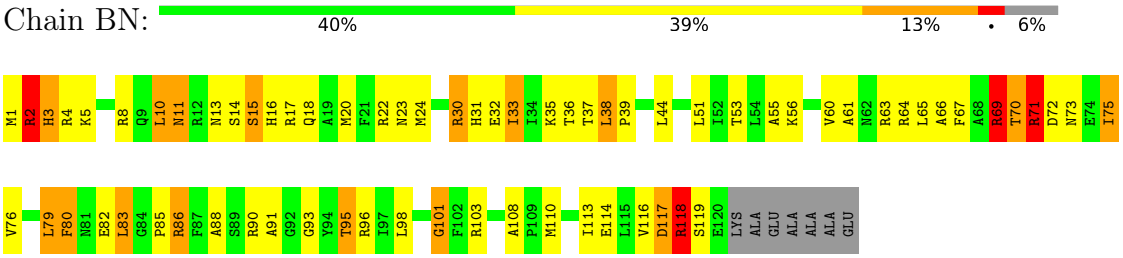
• Molecule 34: 50S ribosomal protein L16

Chain DM:



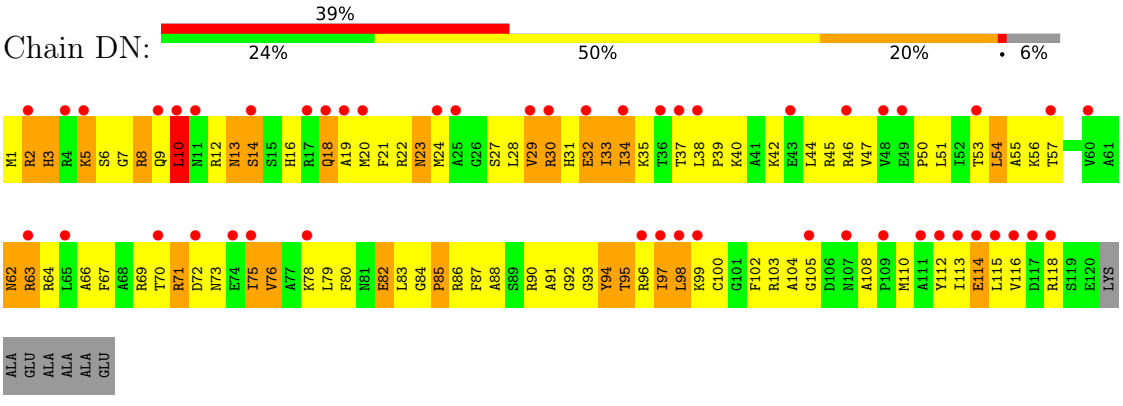
• Molecule 35: 50S ribosomal protein L17

Chain BN:



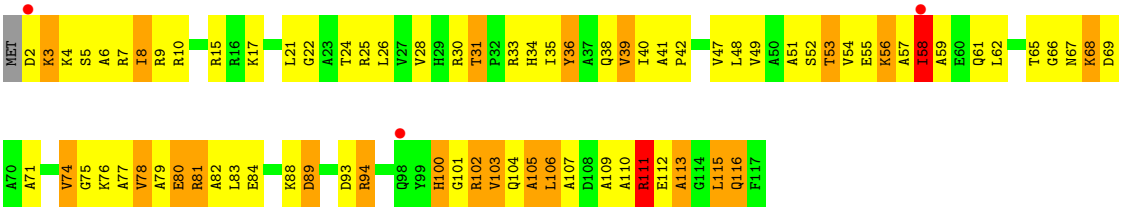
• Molecule 35: 50S ribosomal protein L17

Chain DN:

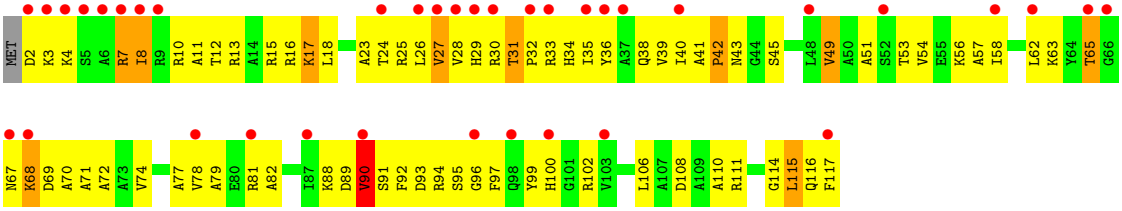


• Molecule 36: 50S ribosomal protein L18

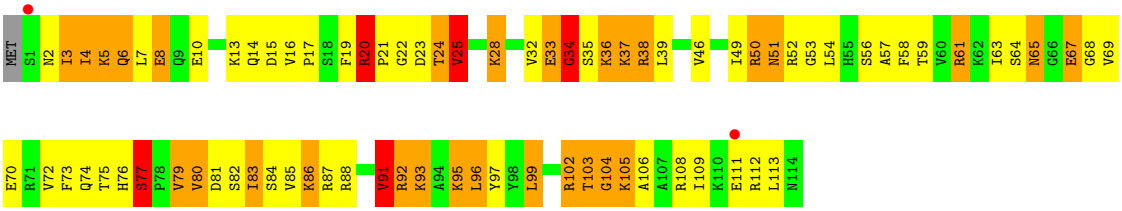
Chain BO:



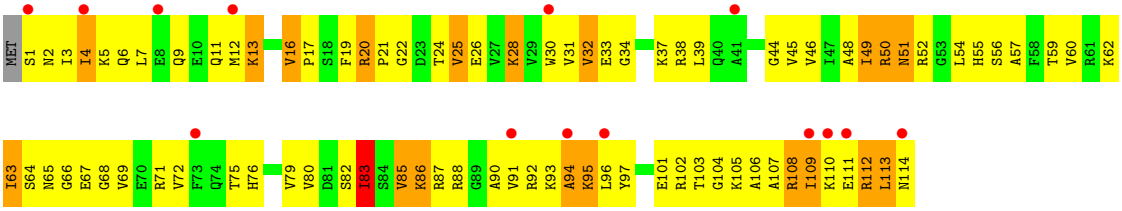
• Molecule 36: 50S ribosomal protein L18



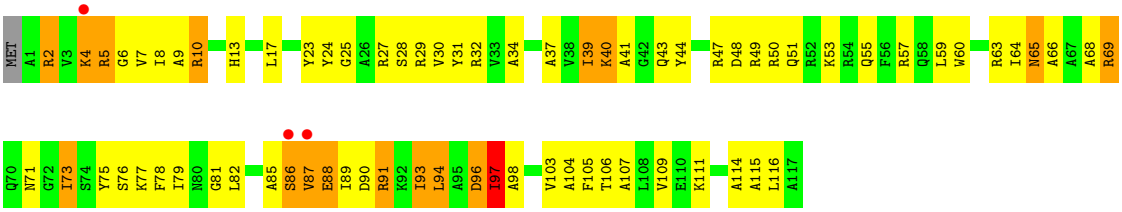
• Molecule 37: 50S ribosomal protein L19



• Molecule 37: 50S ribosomal protein L19

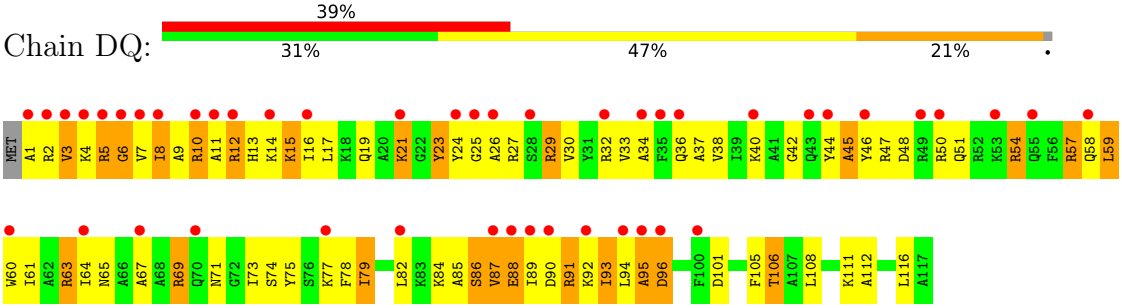


• Molecule 38: 50S ribosomal protein L20



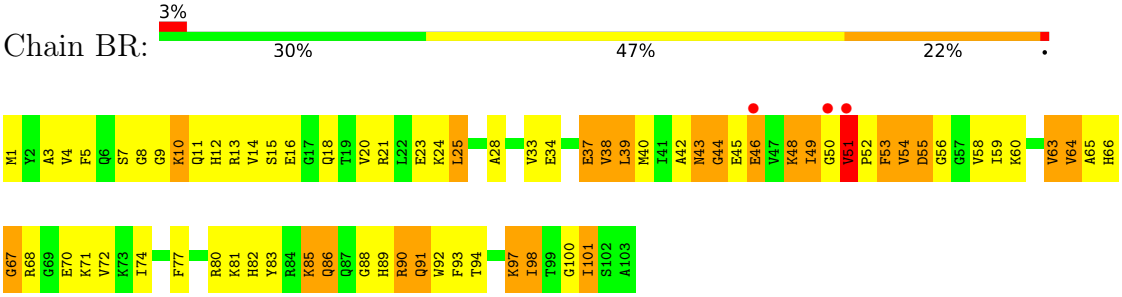
• Molecule 38: 50S ribosomal protein L20

Chain DQ:



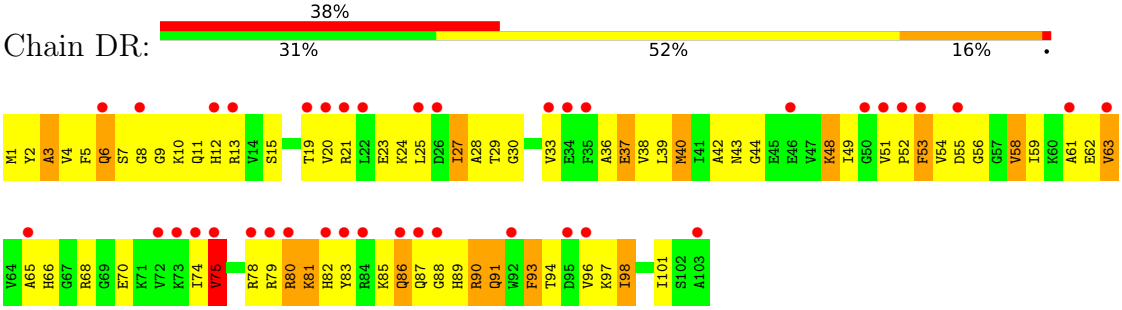
• Molecule 39: 50S ribosomal protein L21

Chain BR:



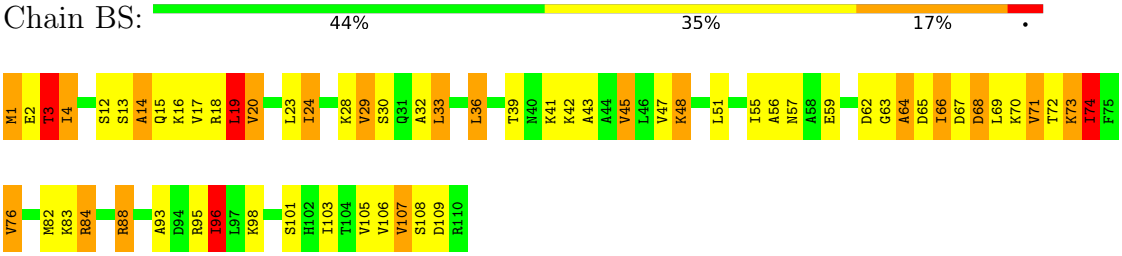
• Molecule 39: 50S ribosomal protein L21

Chain DR:



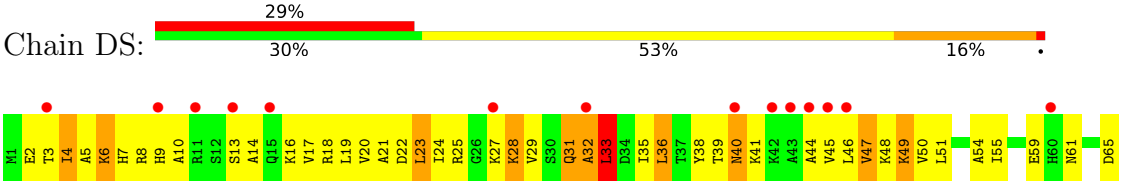
• Molecule 40: 50S ribosomal protein L22

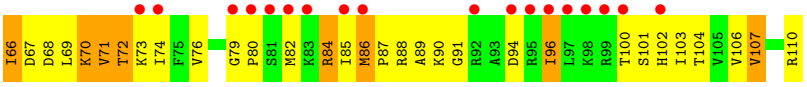
Chain BS:



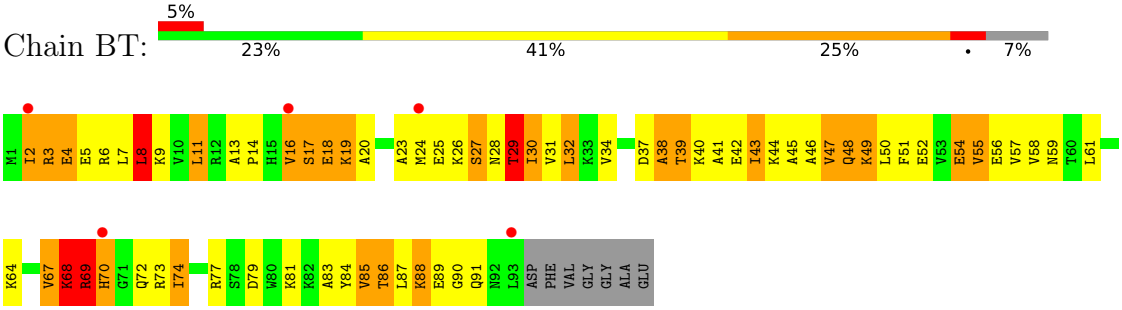
• Molecule 40: 50S ribosomal protein L22

Chain DS:

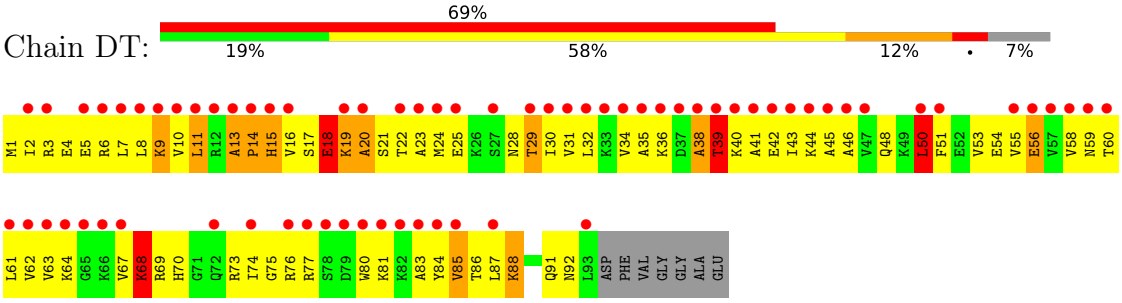




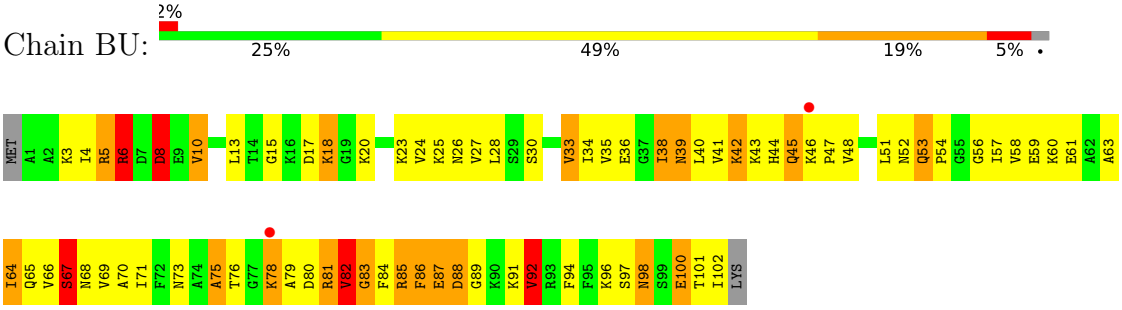
• Molecule 41: 50S ribosomal protein L23



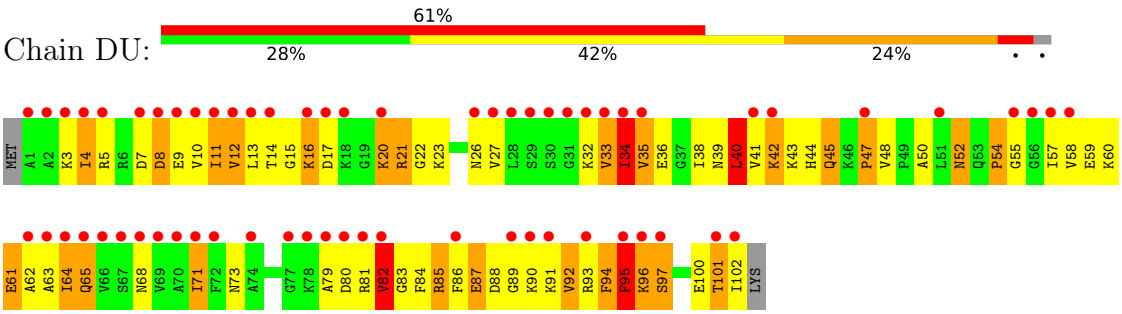
• Molecule 41: 50S ribosomal protein L23



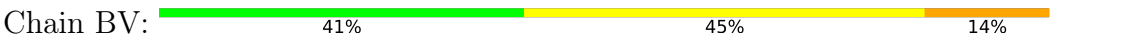
• Molecule 42: 50S ribosomal protein L24

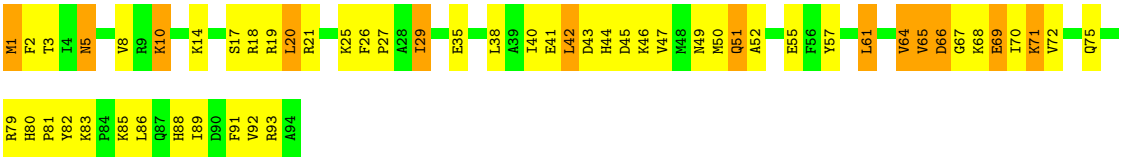


• Molecule 42: 50S ribosomal protein L24



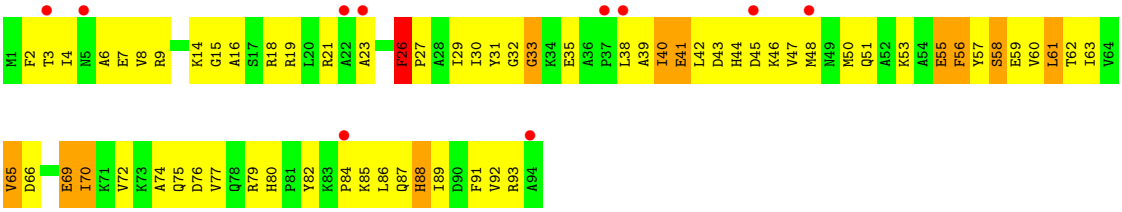
• Molecule 43: 50S ribosomal protein L25





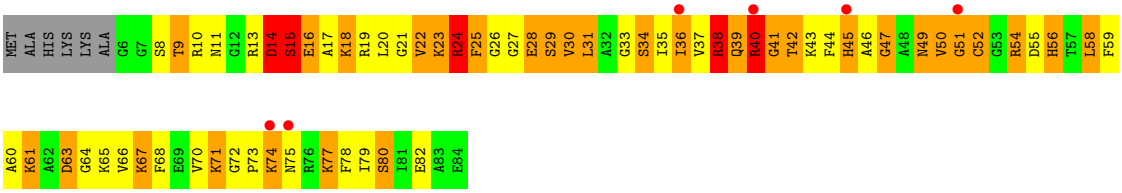
• Molecule 43: 50S ribosomal protein L25

Chain DV:



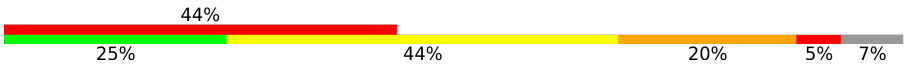
• Molecule 44: 50S ribosomal protein L27

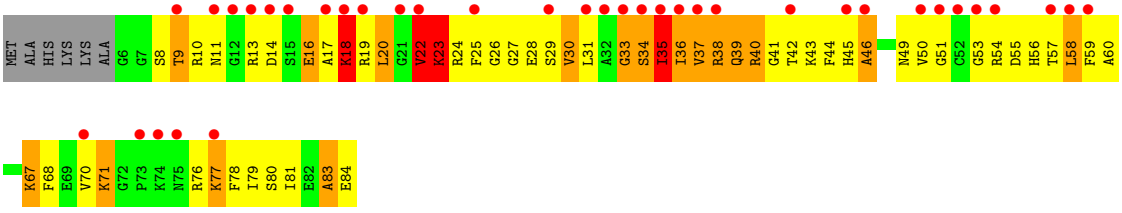
Chain BW:



• Molecule 44: 50S ribosomal protein L27

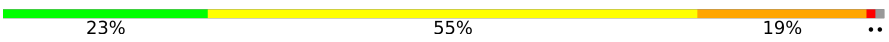
Chain DW:

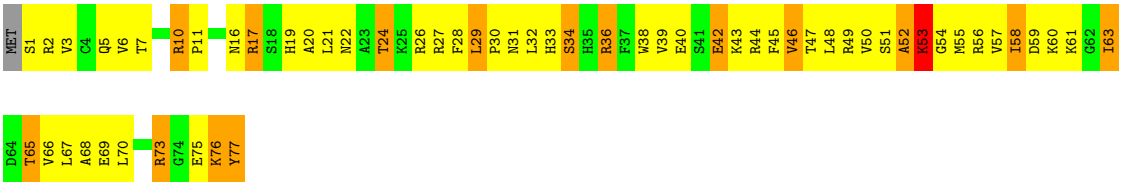




• Molecule 45: 50S ribosomal protein L28

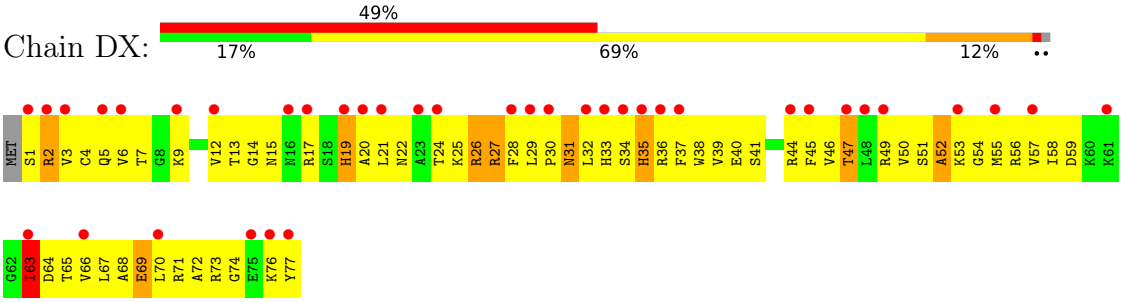
Chain BX:





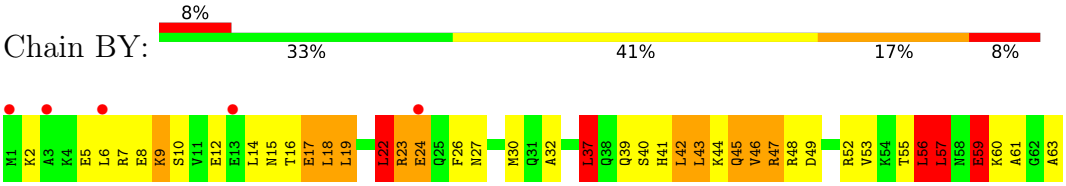
• Molecule 45: 50S ribosomal protein L28

Chain DX:



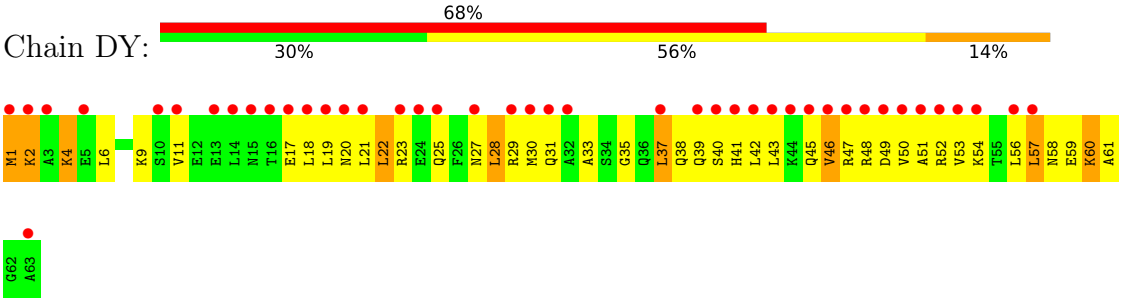
• Molecule 46: 50S ribosomal protein L29

Chain BY:



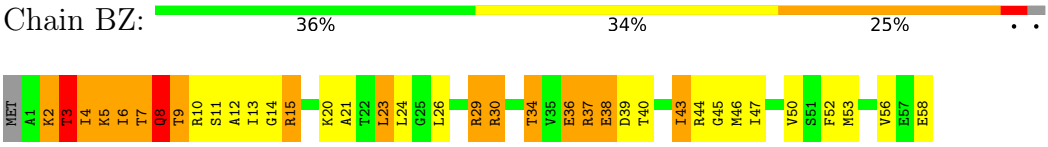
• Molecule 46: 50S ribosomal protein L29

Chain DY:



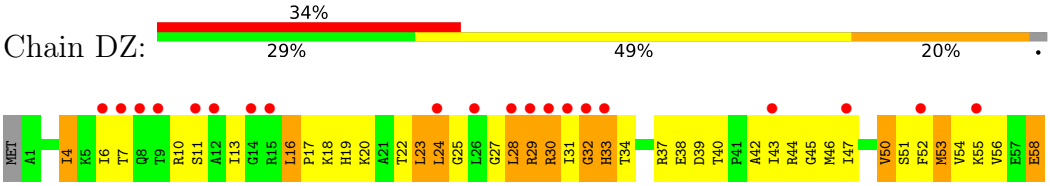
• Molecule 47: 50S ribosomal protein L30

Chain BZ:



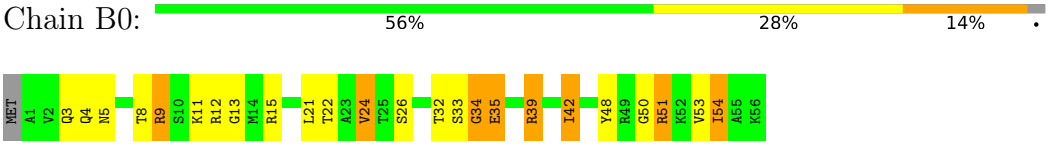
• Molecule 47: 50S ribosomal protein L30

Chain DZ:



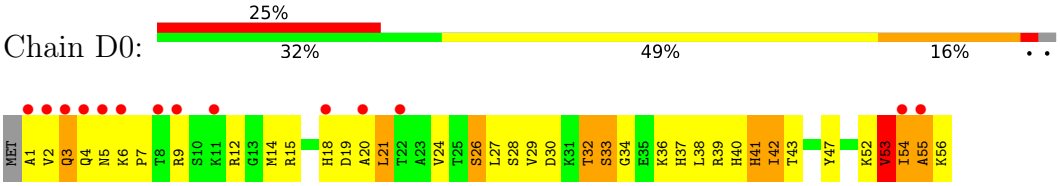
• Molecule 48: 50S ribosomal protein L32

Chain B0:



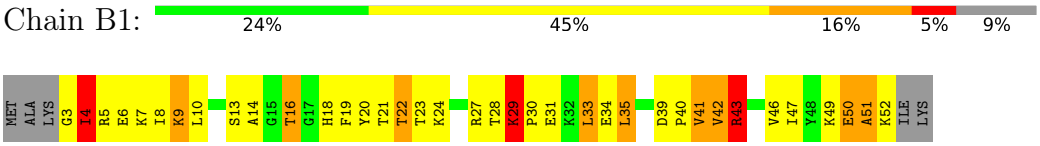
• Molecule 48: 50S ribosomal protein L32

Chain D0:



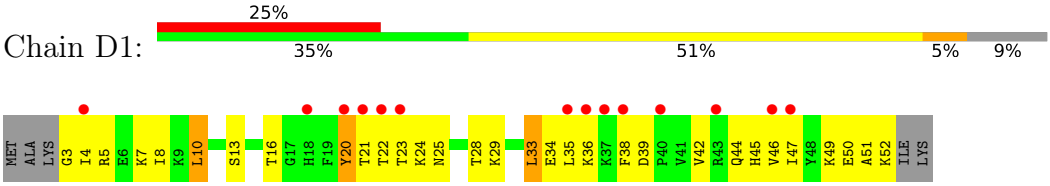
• Molecule 49: 50S ribosomal protein L33

Chain B1:



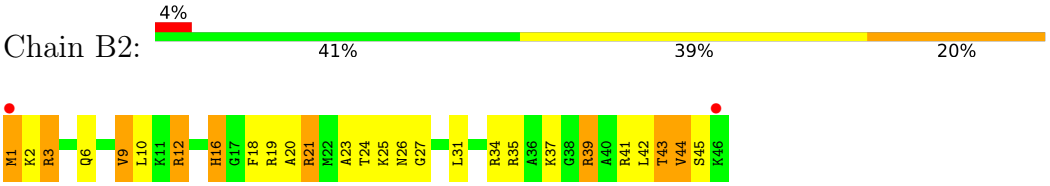
• Molecule 49: 50S ribosomal protein L33

Chain D1:



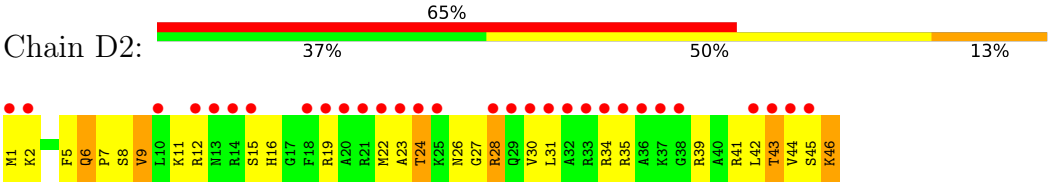
• Molecule 50: 50S ribosomal protein L34

Chain B2:



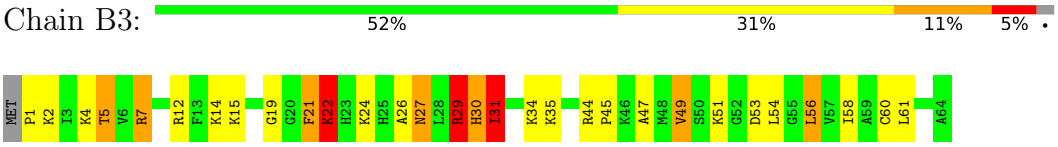
• Molecule 50: 50S ribosomal protein L34

Chain D2:



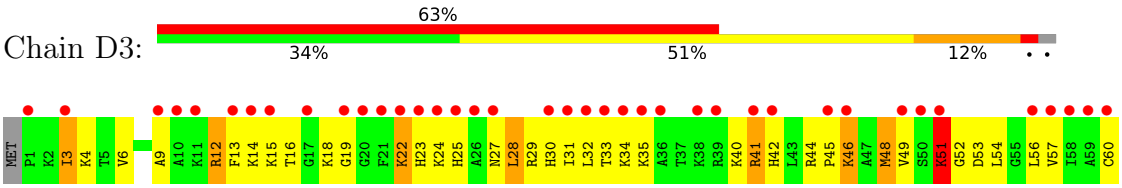
• Molecule 51: 50S ribosomal protein L35

Chain B3:



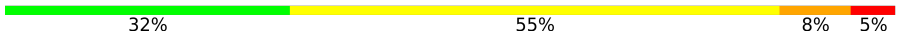
• Molecule 51: 50S ribosomal protein L35

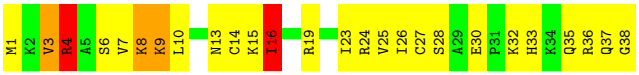
Chain D3:



• Molecule 52: 50S ribosomal protein L36

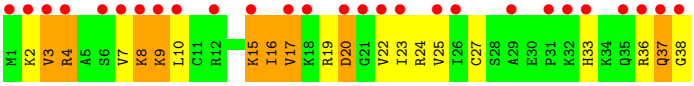
Chain B4:





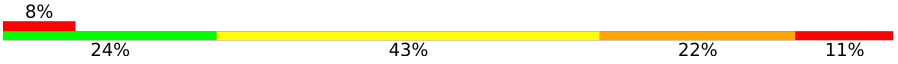
• Molecule 52: 50S ribosomal protein L36

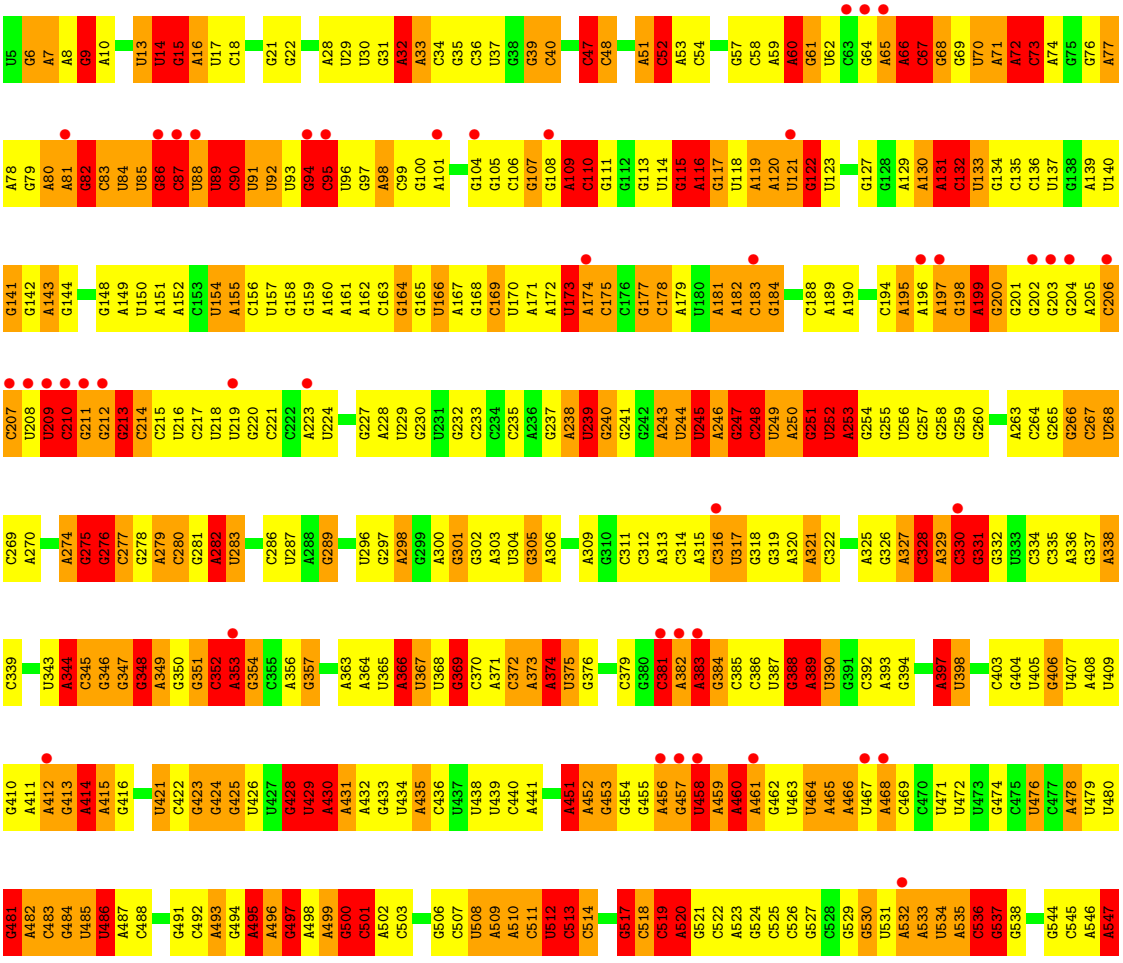
Chain D4:

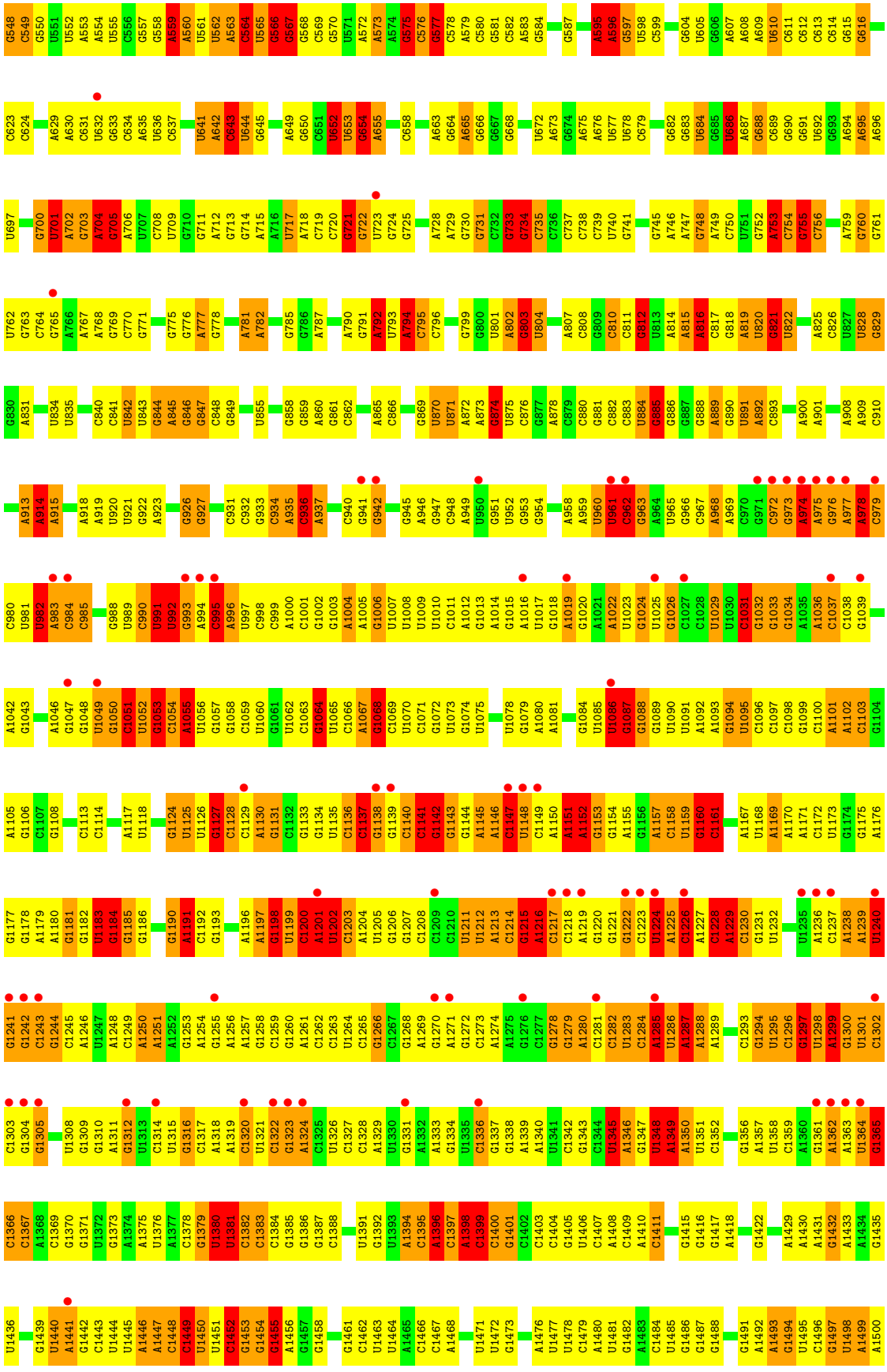


• Molecule 53: 16S rRNA

Chain CA:

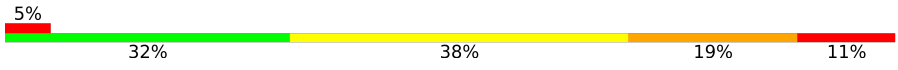


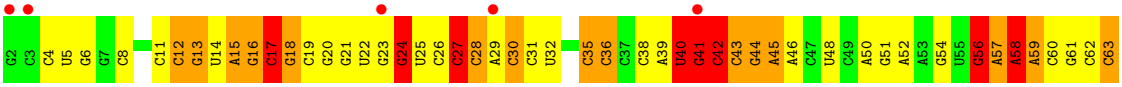


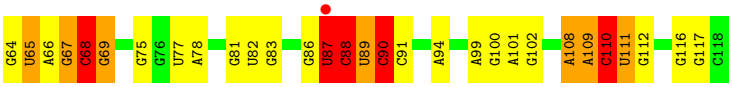


• Molecule 54: 5S rRNA

Chain DB:







4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	211.89Å 434.93Å 622.92Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.88 – 3.19 39.88 – 3.19	Depositor EDS
% Data completeness (in resolution range)	95.8 (39.88-3.19) 95.8 (39.88-3.19)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.53 (at 3.18Å)	Xtriage
Refinement program	PHENIX, PHENIX (phenix.refine)	Depositor
R, R_{free}	0.195 , 0.252 0.207 , 0.259	Depositor DCC
R_{free} test set	18197 reflections (2.01%)	wwPDB-VP
Wilson B-factor (Å^2)	63.6	Xtriage
Anisotropy	0.258	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.24 , 76.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.48$, $< L^2 > = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.93	EDS
Total number of atoms	284450	wwPDB-VP
Average B, all atoms (Å^2)	98.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.53% 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: ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	AB	0.38	0/1735	0.81	5/2338 (0.2%)
1	CB	0.35	0/1735	0.85	4/2338 (0.2%)
2	AC	0.38	0/1651	0.89	9/2225 (0.4%)
2	CC	0.33	0/1651	0.77	0/2225
3	AD	0.39	0/1665	0.83	3/2227 (0.1%)
3	CD	0.49	0/1665	0.90	3/2227 (0.1%)
4	AE	0.47	0/1118	0.94	2/1504 (0.1%)
4	CE	0.43	0/1118	0.88	1/1504 (0.1%)
5	AF	0.42	0/835	0.78	1/1128 (0.1%)
5	CF	0.36	0/835	0.79	0/1128
6	AG	0.36	0/1195	0.80	0/1602
6	CG	0.34	0/1187	0.84	3/1591 (0.2%)
7	AH	0.42	0/989	0.90	3/1326 (0.2%)
7	CH	0.37	0/989	0.84	2/1326 (0.2%)
8	AI	0.33	0/1034	0.77	0/1375
8	CI	0.31	0/1034	0.76	0/1375
9	AJ	0.39	0/796	0.83	2/1077 (0.2%)
9	CJ	0.33	0/796	0.87	4/1077 (0.4%)
10	AK	0.42	0/893	0.99	3/1205 (0.2%)
10	CK	0.35	0/893	0.87	5/1205 (0.4%)
11	AL	0.52	0/969	1.01	2/1300 (0.2%)
11	CL	0.40	0/969	0.94	3/1300 (0.2%)
12	AM	0.36	0/892	0.82	0/1193
12	CM	0.26	0/884	0.68	0/1181
13	AN	0.40	0/785	0.84	3/1043 (0.3%)
13	CN	0.28	0/780	0.77	0/1036
14	AO	0.40	0/722	0.76	0/964
14	CO	0.34	0/722	0.72	0/964
15	AP	0.39	0/659	0.89	2/884 (0.2%)
15	CP	0.40	0/648	0.81	3/870 (0.3%)
16	AQ	0.46	0/657	0.85	0/881
16	CQ	0.42	0/657	0.85	0/881

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\#\|Z\| > 5$	RMSZ	$\#\|Z\| > 5$
17	AR	0.38	0/462	0.83	1/621 (0.2%)
17	CR	0.37	0/462	0.82	0/621
18	AS	0.35	0/652	0.80	0/877
18	CS	0.27	0/652	0.84	0/877
19	AT	0.42	0/671	0.93	3/888 (0.3%)
19	CT	0.35	0/671	0.87	3/888 (0.3%)
20	AU	0.46	0/430	0.89	2/570 (0.4%)
20	CU	0.44	0/430	0.92	0/570
21	AA	0.34	0/36834	1.01	297/57462 (0.5%)
22	BA	0.45	2/68626 (0.0%)	1.13	695/107056 (0.6%)
22	DA	0.33	0/68314	0.98	471/106569 (0.4%)
23	BB	0.42	0/2828	1.11	28/4410 (0.6%)
24	BC	0.57	0/2121	1.07	12/2852 (0.4%)
24	DC	0.41	0/2121	0.92	3/2852 (0.1%)
25	BD	0.69	0/1586	1.09	5/2134 (0.2%)
25	DD	0.39	0/1586	0.91	5/2134 (0.2%)
26	BE	0.56	0/1571	0.98	6/2113 (0.3%)
26	DE	0.34	0/1571	0.81	1/2113 (0.0%)
27	BF	0.43	0/1434	0.90	6/1926 (0.3%)
27	DF	0.31	0/1444	0.80	2/1937 (0.1%)
28	BG	0.52	0/1343	0.99	6/1816 (0.3%)
28	DG	0.33	0/1343	0.83	0/1816
29	BH	0.44	0/1122	0.81	1/1515 (0.1%)
29	DH	0.39	0/1122	0.77	0/1515
30	BI	0.35	0/1046	0.88	4/1410 (0.3%)
30	DI	0.32	0/1046	0.81	1/1410 (0.1%)
31	BJ	0.74	1/1152 (0.1%)	1.28	20/1551 (1.3%)
31	DJ	0.37	0/1152	0.88	2/1551 (0.1%)
32	BK	0.64	0/947	1.05	1/1268 (0.1%)
32	DK	0.42	0/947	0.93	4/1268 (0.3%)
33	BL	0.59	0/1054	1.12	5/1403 (0.4%)
33	DL	0.35	0/1054	0.79	0/1403
34	BM	0.66	0/1093	1.13	9/1460 (0.6%)
34	DM	0.34	0/1093	0.81	2/1460 (0.1%)
35	BN	0.65	0/973	0.98	2/1301 (0.2%)
35	DN	0.38	0/973	0.83	1/1301 (0.1%)
36	BO	0.57	0/902	0.97	3/1209 (0.2%)
36	DO	0.30	0/902	0.76	0/1209
37	BP	0.60	0/929	1.05	6/1242 (0.5%)
37	DP	0.37	0/929	0.87	4/1242 (0.3%)
38	BQ	0.73	0/960	1.05	3/1278 (0.2%)
38	DQ	0.37	0/960	0.80	2/1278 (0.2%)
39	BR	0.68	0/829	1.09	8/1107 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
39	DR	0.34	0/829	0.74	0/1107
40	BS	0.74	0/864	1.00	2/1156 (0.2%)
40	DS	0.40	0/864	0.82	0/1156
41	BT	0.62	0/744	1.06	2/994 (0.2%)
41	DT	0.32	0/744	0.80	2/994 (0.2%)
42	BU	0.54	0/787	1.11	6/1051 (0.6%)
42	DU	0.36	0/787	0.87	1/1051 (0.1%)
43	BV	0.55	0/766	0.87	0/1025
43	DV	0.33	0/766	0.75	2/1025 (0.2%)
44	BW	0.75	0/603	1.17	4/797 (0.5%)
44	DW	0.33	0/603	0.75	0/797
45	BX	0.56	0/635	1.01	4/848 (0.5%)
45	DX	0.35	0/635	0.91	3/848 (0.4%)
46	BY	0.46	0/510	0.98	4/677 (0.6%)
46	DY	0.27	0/510	0.76	1/677 (0.1%)
47	BZ	0.75	0/453	1.05	1/605 (0.2%)
47	DZ	0.36	0/453	0.77	1/605 (0.2%)
48	B0	0.61	0/450	0.97	1/599 (0.2%)
48	D0	0.34	0/450	0.85	0/599
49	B1	0.51	0/416	1.04	3/554 (0.5%)
49	D1	0.36	0/416	0.79	0/554
50	B2	0.62	0/380	1.11	3/498 (0.6%)
50	D2	0.38	0/380	0.98	3/498 (0.6%)
51	B3	0.60	0/513	1.00	1/676 (0.1%)
51	D3	0.37	0/513	0.79	0/676
52	B4	0.83	1/303 (0.3%)	1.19	1/397 (0.3%)
52	D4	0.40	0/303	0.74	0/397
53	CA	0.32	0/36762	0.96	248/57350 (0.4%)
54	DB	0.30	0/2803	0.91	23/4371 (0.5%)
All	All	0.40	4/306737 (0.0%)	1.00	2003/458565 (0.4%)

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
32	BK	0	1
35	BN	0	1
51	B3	0	1
All	All	0	4

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	2676	C	C1'-N1	-5.32	1.40	1.48
31	BJ	43	GLU	CA-C	-5.05	1.46	1.52
52	B4	3	VAL	CA-CB	-5.05	1.49	1.55
22	BA	339	U	C1'-N1	5.04	1.56	1.48

All (2003) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	302	C	N1-C1'-C2'	-12.93	92.60	112.00
42	BU	82	VAL	N-CA-C	12.03	121.65	111.90
22	BA	805	G	P-O3'-C3'	11.77	137.85	120.20
21	AA	119	A	P-O3'-C3'	11.58	137.57	120.20
22	BA	961	C	P-O3'-C3'	11.33	137.20	120.20
22	DA	2283	C	N1-C1'-C2'	-10.87	95.70	112.00
22	DA	1782	U	P-O3'-C3'	-10.77	104.04	120.20
22	BA	1330	C	N1-C1'-C2'	-10.68	95.98	112.00
22	BA	1997	C	N1-C1'-C2'	-10.66	96.01	112.00
53	CA	328	C	P-O3'-C3'	10.53	135.99	120.20
53	CA	14	U	N1-C1'-C2'	-10.50	96.25	112.00
54	DB	68	C	N1-C1'-C2'	-10.45	96.32	112.00
53	CA	891	U	N1-C1'-C2'	-10.35	96.48	112.00
22	DA	76	C	N1-C1'-C2'	-10.26	96.61	112.00
22	DA	740	C	N1-C1'-C2'	-10.16	96.76	112.00
22	BA	1021	A	P-O3'-C3'	-10.13	105.00	120.20
53	CA	132	C	N1-C1'-C2'	-10.07	96.90	112.00
22	BA	1023	U	N1-C1'-C2'	-10.02	96.98	112.00
22	BA	229	C	N1-C1'-C2'	-9.97	97.04	112.00
22	BA	204	A	P-O3'-C3'	9.96	135.14	120.20
22	BA	1635	A	P-O3'-C3'	-9.96	105.26	120.20
22	DA	2023	C	N1-C1'-C2'	-9.93	97.11	112.00
39	BR	9	GLY	N-CA-C	-9.92	101.15	115.64
53	CA	1086	U	N1-C1'-C2'	-9.89	97.16	112.00
22	BA	2645	G	P-O3'-C3'	9.80	134.90	120.20
22	BA	481	G	P-O3'-C3'	9.76	134.85	120.20
22	BA	2447	G	P-O3'-C3'	9.71	134.76	120.20
22	DA	1681	G	P-O3'-C3'	9.69	134.74	120.20
22	DA	1023	U	N1-C1'-C2'	-9.68	97.48	112.00
22	BA	2283	C	N1-C1'-C2'	-9.67	97.49	112.00
21	AA	66	A	P-O3'-C3'	-9.66	105.71	120.20
53	CA	1283	U	N1-C1'-C2'	-9.64	97.53	112.00
21	AA	52	C	N1-C1'-C2'	-9.64	97.54	112.00
22	BA	2800	A	P-O3'-C3'	9.61	134.61	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	92	U	N1-C1'-C2'	-9.58	97.62	112.00
22	BA	531	C	P-O3'-C3'	9.57	134.56	120.20
22	BA	1130	U	P-O3'-C3'	9.55	134.53	120.20
22	BA	2800	A	O3'-P-O5'	-9.49	89.76	104.00
22	BA	783	A	P-O3'-C3'	-9.49	105.97	120.20
22	DA	1997	C	N1-C1'-C2'	-9.48	97.78	112.00
22	BA	957	C	P-O3'-C3'	9.45	134.38	120.20
22	BA	2425	A	P-O3'-C3'	9.45	134.37	120.20
22	BA	1603	A	P-O3'-C3'	-9.41	106.08	120.20
25	BD	151	THR	CA-C-N	-9.41	108.93	119.28
25	BD	151	THR	C-N-CA	-9.41	108.93	119.28
22	BA	2848	G	P-O3'-C3'	9.37	134.25	120.20
22	BA	1112	G	P-O3'-C3'	-9.34	106.19	120.20
22	BA	1151	A	P-O3'-C3'	-9.32	106.22	120.20
22	DA	2615	U	N1-C1'-C2'	-9.31	98.03	112.00
22	BA	2239	G	P-O5'-C5'	-9.31	106.94	120.90
22	BA	790	U	N1-C1'-C2'	-9.28	98.08	112.00
21	AA	1202	U	N1-C1'-C2'	-9.26	98.12	112.00
22	DA	961	C	P-O3'-C3'	9.25	134.08	120.20
22	BA	227	A	P-O3'-C3'	9.23	134.04	120.20
22	DA	335	C	N1-C1'-C2'	-9.17	98.25	112.00
22	BA	627	A	P-O3'-C3'	9.16	133.94	120.20
22	DA	2586	U	N1-C1'-C2'	-9.13	98.31	112.00
22	BA	2835	A	P-O3'-C3'	9.09	133.84	120.20
54	DB	110	C	N1-C1'-C2'	-9.08	98.38	112.00
22	DA	61	C	N1-C1'-C2'	-9.05	98.42	112.00
22	BA	2347	C	N1-C1'-C2'	-9.04	98.44	112.00
53	CA	512	U	N1-C1'-C2'	-9.04	98.44	112.00
22	DA	1611	C	N1-C1'-C2'	-9.04	98.44	112.00
21	AA	972	C	N1-C1'-C2'	-9.02	98.47	112.00
53	CA	1202	U	N1-C1'-C2'	-9.00	98.50	112.00
53	CA	1383	C	N1-C1'-C2'	-9.00	98.50	112.00
22	DA	2499	C	P-O3'-C3'	-8.97	106.75	120.20
22	BA	221	A	P-O3'-C3'	8.96	133.64	120.20
22	DA	765	C	N1-C1'-C2'	-8.96	98.57	112.00
22	BA	858	G	P-O3'-C3'	8.95	133.62	120.20
22	BA	1615	C	P-O3'-C3'	8.94	133.62	120.20
22	DA	86	G	P-O3'-C3'	-8.94	106.79	120.20
22	BA	2035	G	P-O3'-C3'	8.93	133.60	120.20
22	BA	2517	C	P-O3'-C3'	8.91	133.57	120.20
22	DA	991	C	N1-C1'-C2'	-8.91	98.64	112.00
21	AA	512	U	N1-C1'-C2'	-8.90	98.64	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1267	U	N1-C1'-C2'	-8.89	98.66	112.00
22	BA	1461	C	N1-C1'-C2'	-8.88	98.69	112.00
22	BA	2752	C	N1-C1'-C2'	-8.87	98.70	112.00
6	CG	86	VAL	CA-C-N	8.85	128.90	119.78
6	CG	86	VAL	C-N-CA	8.85	128.90	119.78
22	BA	2573	C	N1-C1'-C2'	-8.85	98.72	112.00
22	DA	2440	C	N1-C1'-C2'	-8.84	98.74	112.00
22	BA	2023	C	N1-C1'-C2'	-8.82	98.77	112.00
22	DA	1536	C	P-O3'-C3'	8.82	133.43	120.20
22	BA	2068	U	N1-C1'-C2'	-8.82	98.77	112.00
27	BF	62	GLN	N-CA-C	8.81	119.88	108.34
22	DA	2504	U	N1-C1'-C2'	-8.80	98.79	112.00
22	BA	61	C	P-O3'-C3'	-8.80	107.00	120.20
31	BJ	43	GLU	N-CA-C	-8.79	100.30	111.02
22	BA	704	G	P-O3'-C3'	8.78	133.37	120.20
22	BA	1185	G	P-O3'-C3'	-8.77	107.05	120.20
22	BA	1993	U	N1-C1'-C2'	-8.76	98.86	112.00
21	AA	1303	C	N1-C1'-C2'	-8.75	98.87	112.00
54	DB	90	C	N1-C1'-C2'	-8.73	98.90	112.00
22	BA	1815	A	P-O3'-C3'	8.73	133.29	120.20
53	CA	1396	A	P-O3'-C3'	8.72	133.29	120.20
19	AT	7	LYS	N-CA-C	-8.72	102.77	113.50
21	AA	422	C	P-O3'-C3'	8.69	133.23	120.20
53	CA	109	A	P-O3'-C3'	8.69	133.24	120.20
22	BA	1009	A	P-O3'-C3'	-8.69	107.17	120.20
53	CA	330	C	N1-C1'-C2'	-8.68	98.98	112.00
21	AA	1224	U	P-O3'-C3'	8.68	133.21	120.20
22	BA	790	U	P-O3'-C3'	-8.67	107.19	120.20
22	BA	449	A	P-O3'-C3'	-8.67	107.20	120.20
53	CA	66	A	P-O3'-C3'	-8.66	107.20	120.20
53	CA	352	C	N1-C1'-C2'	-8.66	99.01	112.00
21	AA	7	A	P-O3'-C3'	8.66	133.19	120.20
22	BA	2051	A	P-O3'-C3'	8.65	133.18	120.20
22	BA	2820	A	O3'-P-O5'	-8.64	91.04	104.00
22	DA	2498	C	N1-C1'-C2'	-8.63	99.05	112.00
22	BA	728	G	P-O3'-C3'	8.63	133.15	120.20
22	BA	61	C	N1-C1'-C2'	-8.63	99.06	112.00
22	BA	2210	U	P-O3'-C3'	8.62	133.14	120.20
53	CA	344	A	P-O3'-C3'	8.62	133.13	120.20
22	BA	2893	A	P-O3'-C3'	8.60	133.10	120.20
22	BA	443	A	P-O5'-C5'	-8.60	108.01	120.90
22	BA	2424	C	P-O3'-C3'	-8.58	107.33	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	249	C	N1-C1'-C2'	8.57	126.86	114.00
21	AA	1336	C	P-O3'-C3'	8.56	133.04	120.20
22	DA	946	C	N1-C1'-C2'	-8.51	99.23	112.00
53	CA	992	U	P-O3'-C3'	8.50	132.95	120.20
22	BA	2691	C	N1-C1'-C2'	-8.50	99.26	112.00
22	DA	2063	C	N1-C1'-C2'	-8.49	99.27	112.00
23	BB	15	A	P-O5'-C5'	-8.48	108.17	120.90
53	CA	428	G	P-O3'-C3'	8.48	132.93	120.20
22	DA	1967	C	N1-C1'-C2'	-8.47	99.30	112.00
22	DA	859	G	P-O3'-C3'	8.46	132.89	120.20
22	DA	1918	A	P-O3'-C3'	8.45	132.88	120.20
22	BA	1247	A	P-O3'-C3'	8.45	132.87	120.20
22	DA	2402	U	N1-C1'-C2'	-8.44	99.34	112.00
22	DA	1049	C	N1-C1'-C2'	-8.44	99.34	112.00
22	BA	784	G	P-O3'-C3'	8.43	132.84	120.20
21	AA	1141	C	N1-C1'-C2'	-8.42	99.37	112.00
53	CA	245	U	N1-C1'-C2'	-8.42	99.37	112.00
22	BA	143	C	N1-C1'-C2'	-8.42	99.37	112.00
22	BA	2611	C	N1-C1'-C2'	-8.41	99.39	112.00
22	DA	2880	C	N1-C1'-C2'	-8.41	99.39	112.00
22	DA	1289	C	N1-C1'-C2'	-8.40	99.40	112.00
21	AA	267	C	N1-C1'-C2'	-8.39	99.42	112.00
22	DA	2586	U	P-O3'-C3'	-8.39	107.61	120.20
21	AA	87	C	N1-C1'-C2'	-8.39	99.42	112.00
22	BA	301	G	P-O3'-C3'	8.38	132.77	120.20
23	BB	57	A	P-O3'-C3'	-8.38	107.63	120.20
21	AA	1528	U	P-O3'-C3'	8.38	132.77	120.20
22	BA	403	U	P-O3'-C3'	8.37	132.75	120.20
21	AA	501	C	N1-C1'-C2'	-8.36	99.47	112.00
22	BA	373	U	N1-C1'-C2'	-8.35	99.48	112.00
22	DA	2611	C	N1-C1'-C2'	-8.35	99.48	112.00
22	DA	860	U	N1-C1'-C2'	-8.34	99.49	112.00
22	DA	1249	U	N1-C1'-C2'	-8.34	99.49	112.00
21	AA	642	A	P-O3'-C3'	-8.33	107.70	120.20
22	BA	1378	A	P-O3'-C3'	8.33	132.70	120.20
22	BA	1901	A	P-O3'-C3'	-8.31	107.73	120.20
22	BA	2801	G	P-O5'-C5'	-8.31	108.43	120.90
22	DA	2499	C	N1-C1'-C2'	-8.31	99.54	112.00
22	DA	763	G	P-O3'-C3'	-8.30	107.75	120.20
22	BA	200	U	P-O5'-C5'	-8.30	108.46	120.90
22	BA	2808	G	P-O3'-C3'	8.29	132.64	120.20
21	AA	753	A	P-O3'-C3'	8.27	132.61	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	2458	G	P-O3'-C3'	8.27	132.60	120.20
22	DA	726	G	P-O3'-C3'	8.26	132.59	120.20
22	BA	914	G	P-O3'-C3'	-8.26	107.81	120.20
22	BA	1653	G	P-O3'-C3'	8.25	132.58	120.20
22	BA	92	U	P-O3'-C3'	-8.25	107.82	120.20
23	BB	16	G	P-O3'-C3'	-8.24	107.83	120.20
22	BA	2879	A	P-O3'-C3'	8.23	132.55	120.20
53	CA	240	G	P-O3'-C3'	-8.23	107.86	120.20
22	BA	2646	C	N1-C1'-C2'	-8.21	99.69	112.00
21	AA	547	A	P-O3'-C3'	8.20	132.50	120.20
22	DA	128	C	N1-C1'-C2'	-8.19	99.71	112.00
22	DA	1386	C	N1-C1'-C2'	-8.20	99.71	112.00
22	BA	1758	U	P-O3'-C3'	8.19	132.48	120.20
22	BA	435	C	N1-C1'-C2'	-8.18	99.72	112.00
22	BA	404	A	P-O3'-C3'	8.18	132.47	120.20
22	DA	916	G	P-O3'-C3'	-8.18	107.94	120.20
22	BA	1931	U	N1-C1'-C2'	-8.17	99.75	112.00
53	CA	248	C	N1-C1'-C2'	-8.17	99.75	112.00
21	AA	960	U	P-O3'-C3'	8.16	132.44	120.20
22	BA	2490	G	P-O3'-C3'	8.14	132.42	120.20
22	BA	1288	G	P-O3'-C3'	8.13	132.40	120.20
22	BA	2504	U	N1-C1'-C2'	-8.13	99.80	112.00
22	BA	2756	U	P-O3'-C3'	8.13	132.40	120.20
22	BA	119	A	O3'-P-O5'	8.12	116.18	104.00
21	AA	111	G	P-O3'-C3'	-8.12	108.03	120.20
31	BJ	42	ALA	N-CA-C	-8.11	100.50	110.88
22	DA	60	G	P-O3'-C3'	8.11	132.37	120.20
22	BA	1965	C	P-O3'-C3'	-8.09	108.06	120.20
22	DA	2214	C	N1-C1'-C2'	-8.09	99.87	112.00
21	AA	500	G	P-O3'-C3'	-8.09	108.07	120.20
19	AT	66	ILE	N-CA-C	-8.08	104.99	112.43
22	BA	1615	C	O3'-P-O5'	-8.08	91.87	104.00
22	DA	2616	C	N1-C1'-C2'	-8.08	99.88	112.00
22	DA	1782	U	N1-C1'-C2'	-8.08	99.89	112.00
22	BA	2333	A	P-O3'-C3'	8.06	132.30	120.20
22	BA	1499	C	N1-C1'-C2'	-8.06	99.91	112.00
22	DA	2492	U	N1-C1'-C2'	-8.06	99.91	112.00
22	BA	1273	U	P-O5'-C5'	-8.05	108.83	120.90
22	BA	2501	C	N1-C1'-C2'	8.04	124.06	112.00
22	BA	1967	C	N1-C1'-C2'	-8.04	99.94	112.00
22	DA	2429	G	P-O3'-C3'	-8.04	108.14	120.20
22	BA	621	A	P-O3'-C3'	-8.02	108.17	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1013	C	N1-C1'-C2'	-8.00	99.99	112.00
22	BA	1941	C	N1-C1'-C2'	-8.00	99.99	112.00
53	CA	936	C	N1-C1'-C2'	-7.99	100.01	112.00
22	BA	390	U	P-O3'-C3'	7.98	132.18	120.20
54	DB	17	C	N1-C1'-C2'	-7.97	100.04	112.00
22	DA	1667	G	P-O3'-C3'	7.97	132.15	120.20
21	AA	1064	G	P-O3'-C3'	7.97	132.15	120.20
53	CA	486	U	P-O3'-C3'	-7.96	108.25	120.20
22	BA	119	A	P-O3'-C3'	7.96	132.14	120.20
22	DA	2068	U	N1-C1'-C2'	-7.96	100.06	112.00
22	BA	1332	G	P-O3'-C3'	7.95	132.13	120.20
22	BA	2226	C	P-O5'-C5'	-7.95	108.97	120.90
21	AA	373	A	P-O3'-C3'	-7.95	108.28	120.20
53	CA	348	G	P-O3'-C3'	-7.94	108.29	120.20
53	CA	1528	U	P-O3'-C3'	7.92	132.09	120.20
22	BA	1272	A	P-O3'-C3'	7.91	132.07	120.20
53	CA	110	C	P-O3'-C3'	-7.91	108.33	120.20
21	AA	1053	G	P-O3'-C3'	7.91	132.06	120.20
25	BD	117	GLY	N-CA-C	7.88	124.50	114.25
53	CA	1449	C	N1-C1'-C2'	-7.88	100.18	112.00
21	AA	1283	U	N1-C1'-C2'	-7.87	100.19	112.00
26	BE	39	ALA	N-CA-C	-7.87	103.66	113.18
22	BA	1034	G	P-O5'-C5'	-7.87	109.09	120.90
21	AA	889	A	P-O3'-C3'	7.87	132.00	120.20
22	DA	1655	A	P-O3'-C3'	-7.87	108.40	120.20
22	BA	178	G	P-O3'-C3'	-7.87	108.40	120.20
22	BA	2573	C	P-O3'-C3'	-7.86	108.41	120.20
22	DA	217	A	P-O3'-C3'	-7.86	108.41	120.20
24	DC	56	GLY	N-CA-C	7.86	118.90	111.67
22	BA	2712	C	P-O3'-C3'	7.84	131.96	120.20
22	DA	2403	C	N1-C1'-C2'	-7.82	100.27	112.00
21	AA	1398	A	P-O3'-C3'	-7.82	108.47	120.20
53	CA	520	A	P-O3'-C3'	-7.82	108.48	120.20
22	BA	687	C	N1-C1'-C2'	-7.81	100.29	112.00
22	BA	1008	A	P-O3'-C3'	7.80	131.91	120.20
22	BA	1675	C	N1-C1'-C2'	-7.80	100.31	112.00
22	BA	1555	G	P-O3'-C3'	-7.79	108.51	120.20
22	BA	503	A	P-O3'-C3'	7.79	131.88	120.20
22	DA	933	A	P-O3'-C3'	-7.79	108.52	120.20
22	DA	243	U	N1-C1'-C2'	-7.77	100.34	112.00
21	AA	1068	G	P-O3'-C3'	-7.77	108.55	120.20
22	BA	2021	C	O3'-P-O5'	-7.77	92.35	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1196	A	P-O3'-C3'	7.77	131.85	120.20
22	DA	2226	C	N1-C1'-C2'	-7.77	100.35	112.00
53	CA	73	C	N1-C1'-C2'	-7.76	100.36	112.00
53	CA	577	G	P-O3'-C3'	-7.75	108.57	120.20
21	AA	1228	C	N1-C1'-C2'	-7.74	100.38	112.00
31	BJ	64	VAL	N-CA-C	7.74	117.73	111.62
22	BA	250	G	P-O3'-C3'	-7.74	108.60	120.20
22	BA	2225	A	P-O3'-C3'	7.74	131.80	120.20
22	DA	2497	A	P-O3'-C3'	7.74	131.80	120.20
22	DA	622	G	P-O3'-C3'	-7.73	108.60	120.20
22	BA	2756	U	N1-C1'-C2'	7.73	125.60	114.00
22	BA	1865	U	N1-C1'-C2'	7.73	125.59	114.00
22	BA	1289	C	P-O5'-C5'	-7.73	109.31	120.90
21	AA	175	C	N1-C1'-C2'	-7.72	100.43	112.00
22	BA	313	G	P-O3'-C3'	-7.71	108.63	120.20
46	BY	59	GLU	N-CA-C	-7.71	105.03	114.75
53	CA	536	C	P-O3'-C3'	-7.71	108.63	120.20
21	AA	575	G	P-O3'-C3'	7.71	131.77	120.20
22	DA	234	U	N1-C1'-C2'	-7.71	100.43	112.00
22	BA	2542	A	P-O3'-C3'	7.71	131.76	120.20
22	BA	1045	C	P-O3'-C3'	7.70	131.75	120.20
22	BA	2200	C	P-O3'-C3'	-7.70	108.64	120.20
53	CA	32	A	P-O3'-C3'	-7.70	108.64	120.20
50	D2	6	GLN	CA-C-N	7.70	127.75	119.89
50	D2	6	GLN	C-N-CA	7.70	127.75	119.89
22	BA	2424	C	N1-C1'-C2'	-7.69	100.46	112.00
53	CA	816	A	P-O3'-C3'	-7.69	108.66	120.20
21	AA	13	U	P-O3'-C3'	7.68	131.72	120.20
21	AA	641	U	P-O3'-C3'	7.68	131.72	120.20
22	BA	1126	A	P-O3'-C3'	7.68	131.72	120.20
22	BA	1962	C	P-O3'-C3'	7.68	131.71	120.20
21	AA	1399	C	P-O3'-C3'	7.67	131.71	120.20
21	AA	1087	G	P-O3'-C3'	-7.67	108.70	120.20
22	BA	1971	U	N1-C1'-C2'	-7.67	100.50	112.00
23	BB	90	C	N1-C1'-C2'	-7.66	100.51	112.00
22	DA	1675	C	N1-C1'-C2'	-7.66	100.51	112.00
22	DA	2334	U	N1-C1'-C2'	7.66	125.49	114.00
22	DA	2752	C	N1-C1'-C2'	-7.66	100.51	112.00
22	BA	961	C	O3'-P-O5'	-7.66	92.51	104.00
22	BA	243	U	N1-C1'-C2'	-7.66	100.51	112.00
22	BA	2497	A	P-O3'-C3'	7.66	131.69	120.20
22	DA	1816	C	N1-C1'-C2'	-7.64	100.54	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1963	U	N1-C1'-C2'	-7.64	100.54	112.00
21	AA	1125	U	P-O3'-C3'	7.64	131.65	120.20
22	BA	1942	C	P-O3'-C3'	-7.63	108.75	120.20
22	BA	2727	A	P-O3'-C3'	-7.63	108.76	120.20
22	DA	2450	A	P-O3'-C3'	-7.63	108.76	120.20
53	CA	792	A	P-O3'-C3'	7.63	131.64	120.20
22	BA	14	A	P-O3'-C3'	-7.62	108.76	120.20
22	BA	1954	G	P-O3'-C3'	7.62	131.63	120.20
22	BA	2312	U	P-O3'-C3'	-7.62	108.77	120.20
22	BA	2239	G	P-O3'-C3'	-7.62	108.78	120.20
21	AA	1348	U	N1-C1'-C2'	-7.61	100.58	112.00
53	CA	721	G	P-O3'-C3'	7.61	131.62	120.20
22	BA	2423	U	P-O3'-C3'	7.61	131.61	120.20
22	DA	777	G	P-O3'-C3'	-7.60	108.81	120.20
21	AA	969	A	P-O3'-C3'	-7.59	108.81	120.20
22	DA	1612	C	N1-C1'-C2'	-7.59	100.61	112.00
22	DA	2875	C	N1-C1'-C2'	-7.59	100.61	112.00
42	BU	84	PHE	N-CA-C	7.59	120.45	109.14
22	BA	2458	G	P-O3'-C3'	7.59	131.58	120.20
23	BB	67	G	P-O5'-C5'	-7.59	109.52	120.90
53	CA	559	A	P-O3'-C3'	7.58	131.57	120.20
21	AA	1190	G	P-O3'-C3'	7.58	131.56	120.20
22	DA	2493	U	P-O3'-C3'	-7.57	108.84	120.20
22	DA	2520	C	N1-C1'-C2'	-7.57	100.65	112.00
53	CA	753	A	P-O3'-C3'	7.57	131.55	120.20
31	BJ	7	LYS	CA-C-N	7.56	129.29	119.84
31	BJ	7	LYS	C-N-CA	7.56	129.29	119.84
53	CA	316	C	N1-C1'-C2'	-7.56	100.66	112.00
22	DA	206	U	N1-C1'-C2'	-7.55	100.68	112.00
22	BA	2682	A	P-O5'-C5'	-7.54	109.58	120.90
22	DA	2874	C	N1-C1'-C2'	-7.53	100.70	112.00
22	BA	2266	A	P-O3'-C3'	7.53	131.49	120.20
53	CA	1147	C	N1-C1'-C2'	-7.53	100.71	112.00
23	BB	25	U	P-O3'-C3'	-7.52	108.93	120.20
22	BA	1654	A	P-O3'-C3'	-7.51	108.94	120.20
53	CA	509	A	P-O3'-C3'	-7.50	108.95	120.20
32	DK	47	ILE	CA-C-N	7.50	129.21	119.84
32	DK	47	ILE	C-N-CA	7.50	129.21	119.84
22	DA	1498	C	N1-C1'-C2'	-7.49	100.76	112.00
22	DA	407	G	P-O3'-C3'	-7.49	108.97	120.20
53	CA	1068	G	P-O3'-C3'	-7.49	108.97	120.20
37	DP	16	VAL	CA-C-N	7.49	127.93	120.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DP	16	VAL	C-N-CA	7.49	127.93	120.52
21	AA	1225	A	P-O5'-C5'	-7.48	109.67	120.90
22	BA	2382	G	P-O3'-C3'	7.48	131.42	120.20
22	DA	2348	U	N1-C1'-C2'	-7.48	100.78	112.00
22	BA	241	A	P-O3'-C3'	7.46	131.40	120.20
22	DA	1956	U	N1-C1'-C2'	-7.46	100.80	112.00
23	BB	42	C	P-O3'-C3'	-7.46	109.01	120.20
22	BA	740	C	N1-C1'-C2'	-7.46	100.81	112.00
22	DA	2225	A	P-O3'-C3'	7.45	131.38	120.20
34	BM	71	LYS	CA-C-N	7.44	129.14	119.84
34	BM	71	LYS	C-N-CA	7.44	129.14	119.84
53	CA	239	U	P-O3'-C3'	-7.44	109.04	120.20
22	DA	224	U	N1-C1'-C2'	-7.43	100.85	112.00
54	DB	88	C	P-O3'-C3'	7.43	131.35	120.20
22	BA	1144	A	P-O3'-C3'	-7.42	109.06	120.20
22	DA	164	C	N1-C1'-C2'	-7.42	100.86	112.00
53	CA	962	C	N1-C1'-C2'	-7.40	100.90	112.00
22	BA	1210	G	P-O3'-C3'	7.40	131.29	120.20
22	BA	2615	U	P-O3'-C3'	-7.40	109.11	120.20
22	DA	15	G	P-O3'-C3'	-7.40	109.11	120.20
22	DA	1815	A	P-O3'-C3'	7.40	131.29	120.20
21	AA	184	G	P-O3'-C3'	-7.39	109.11	120.20
22	DA	1682	G	P-O3'-C3'	-7.39	109.11	120.20
22	BA	865	C	P-O3'-C3'	7.39	131.28	120.20
22	DA	2691	C	N1-C1'-C2'	-7.38	100.93	112.00
21	AA	1095	U	N1-C1'-C2'	-7.38	100.93	112.00
53	CA	252	U	N1-C1'-C2'	-7.37	100.94	112.00
22	BA	1626	A	P-O3'-C3'	7.37	131.26	120.20
22	BA	1427	A	P-O3'-C3'	7.36	131.24	120.20
22	DA	1972	G	P-O3'-C3'	-7.36	109.17	120.20
21	AA	1184	G	P-O3'-C3'	-7.35	109.17	120.20
44	BW	38	ARG	N-CA-C	-7.35	101.36	111.28
22	BA	1965	C	N1-C1'-C2'	-7.35	100.98	112.00
41	BT	85	VAL	N-CA-C	7.34	118.29	112.12
53	CA	961	U	N1-C1'-C2'	-7.34	100.99	112.00
22	BA	1648	U	P-O3'-C3'	-7.34	109.19	120.20
22	BA	1963	U	P-O3'-C3'	-7.34	109.19	120.20
22	BA	1013	C	P-O3'-C3'	-7.33	109.20	120.20
22	DA	1417	C	N1-C1'-C2'	-7.33	101.00	112.00
21	AA	1167	A	P-O3'-C3'	7.33	131.19	120.20
22	DA	576	U	N1-C1'-C2'	-7.33	101.01	112.00
22	DA	1207	C	P-O3'-C3'	-7.33	109.21	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	813	U	P-O5'-C5'	-7.32	109.92	120.90
22	BA	1707	G	P-O3'-C3'	-7.32	109.22	120.20
22	BA	637	A	P-O3'-C3'	7.31	131.17	120.20
22	BA	958	U	P-O5'-C5'	-7.31	109.93	120.90
22	DA	2581	G	P-O3'-C3'	7.31	131.17	120.20
22	BA	2520	C	P-O3'-C3'	-7.30	109.24	120.20
53	CA	717	U	N1-C1'-C2'	7.30	122.96	112.00
22	DA	2283	C	P-O3'-C3'	-7.30	109.25	120.20
22	BA	995	C	O4'-C1'-N1	-7.29	97.26	108.20
21	AA	110	C	N1-C1'-C2'	-7.29	101.07	112.00
22	BA	1560	G	P-O3'-C3'	-7.29	109.27	120.20
22	DA	2645	G	P-O3'-C3'	7.28	131.12	120.20
53	CA	501	C	N1-C1'-C2'	-7.28	101.08	112.00
22	BA	1675	C	P-O3'-C3'	-7.28	109.28	120.20
22	BA	35	G	P-O5'-C5'	-7.28	109.99	120.90
53	CA	1398	A	P-O3'-C3'	-7.27	109.30	120.20
22	DA	1941	C	N1-C1'-C2'	-7.27	101.09	112.00
22	BA	125	A	O3'-P-O5'	-7.26	93.12	104.00
22	BA	1759	A	P-O3'-C3'	-7.25	109.32	120.20
22	BA	531	C	N1-C1'-C2'	7.25	124.88	114.00
28	BG	82	PHE	N-CA-C	7.25	121.48	109.95
22	DA	527	C	P-O3'-C3'	7.24	131.06	120.20
21	AA	1320	C	N1-C1'-C2'	-7.24	101.14	112.00
53	CA	381	C	N1-C1'-C2'	7.24	122.85	112.00
22	DA	1996	C	P-O3'-C3'	7.23	131.04	120.20
53	CA	575	G	P-O3'-C3'	7.23	131.04	120.20
22	BA	1266	G	P-O3'-C3'	7.22	131.03	120.20
53	CA	874	G	P-O3'-C3'	-7.22	109.37	120.20
22	BA	166	U	P-O3'-C3'	-7.22	109.38	120.20
22	BA	2791	G	P-O3'-C3'	-7.21	109.38	120.20
22	DA	1982	U	N1-C1'-C2'	-7.21	101.18	112.00
53	CA	122	G	P-O3'-C3'	-7.21	109.38	120.20
22	DA	222	A	P-O3'-C3'	7.21	131.02	120.20
22	BA	1780	A	P-O3'-C3'	7.21	131.01	120.20
21	AA	512	U	P-O3'-C3'	-7.21	109.39	120.20
54	DB	27	C	N1-C1'-C2'	-7.21	101.19	112.00
21	AA	1452	C	P-O3'-C3'	7.20	131.00	120.20
22	DA	224	U	P-O3'-C3'	-7.20	109.40	120.20
53	CA	374	A	P-O3'-C3'	-7.19	109.41	120.20
22	BA	103	A	P-O3'-C3'	-7.19	109.41	120.20
23	BB	88	C	O4'-C1'-N1	-7.19	97.42	108.20
22	DA	2428	G	P-O3'-C3'	-7.19	109.42	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1558	C	P-O3'-C3'	7.18	130.98	120.20
21	AA	14	U	P-O5'-C5'	-7.18	110.13	120.90
22	DA	531	C	P-O3'-C3'	7.17	130.96	120.20
21	AA	451	A	P-O3'-C3'	7.17	130.95	120.20
22	BA	454	A	O3'-P-O5'	-7.16	93.26	104.00
22	BA	1859	U	N1-C1'-C2'	-7.16	101.26	112.00
22	BA	1848	A	P-O3'-C3'	-7.16	109.46	120.20
21	AA	891	U	P-O5'-C5'	-7.15	110.17	120.90
22	BA	506	G	P-O3'-C3'	7.15	130.93	120.20
53	CA	1141	C	N1-C1'-C2'	-7.15	101.28	112.00
22	DA	1013	C	N1-C1'-C2'	-7.14	101.28	112.00
21	AA	821	G	P-O3'-C3'	-7.14	109.49	120.20
22	BA	2776	A	P-O3'-C3'	7.14	130.91	120.20
22	BA	1971	U	O3'-P-O5'	-7.13	93.30	104.00
53	CA	564	C	N1-C1'-C2'	-7.13	101.30	112.00
31	BJ	72	LYS	N-CA-C	7.13	119.73	110.53
22	BA	2030	A	P-O3'-C3'	7.13	130.90	120.20
22	BA	783	A	N9-C1'-C2'	-7.13	101.31	112.00
22	BA	1819	A	P-O3'-C3'	7.12	130.88	120.20
21	AA	85	U	P-O3'-C3'	7.12	130.87	120.20
23	BB	52	A	P-O3'-C3'	7.11	130.87	120.20
22	BA	2319	G	P-O3'-C3'	7.11	130.87	120.20
22	BA	2258	C	P-O3'-C3'	7.11	130.86	120.20
22	BA	249	C	P-O3'-C3'	7.08	130.83	120.20
22	BA	2689	U	P-O3'-C3'	7.08	130.82	120.20
53	CA	1401	G	P-O3'-C3'	-7.08	109.58	120.20
22	BA	2609	U	O4'-C1'-N1	7.08	118.82	108.20
21	AA	1157	A	P-O3'-C3'	7.07	130.80	120.20
24	BC	93	VAL	N-CA-C	7.07	118.06	112.12
22	BA	84	A	P-O3'-C3'	7.06	130.79	120.20
22	BA	2849	U	P-O5'-C5'	-7.06	110.31	120.90
23	BB	12	C	P-O3'-C3'	7.06	130.78	120.20
22	DA	672	C	N1-C1'-C2'	-7.05	101.42	112.00
53	CA	1200	C	P-O3'-C3'	7.05	130.78	120.20
32	BK	2	ILE	N-CA-C	7.05	118.00	111.45
22	DA	2603	G	P-O3'-C3'	-7.04	109.63	120.20
22	DA	1493	C	N1-C1'-C2'	7.04	122.56	112.00
21	AA	173	U	P-O3'-C3'	7.04	130.76	120.20
22	DA	2347	C	N1-C1'-C2'	-7.04	101.45	112.00
2	AC	107	LYS	CA-C-N	7.03	126.64	119.19
2	AC	107	LYS	C-N-CA	7.03	126.64	119.19
22	DA	2034	U	P-O3'-C3'	-7.03	109.66	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	BC	242	HIS	CA-C-N	7.03	128.63	119.84
24	BC	242	HIS	C-N-CA	7.03	128.63	119.84
53	CA	701	U	P-O3'-C3'	7.03	130.74	120.20
53	CA	388	G	O3'-P-O5'	-7.02	93.47	104.00
22	DA	2848	G	P-O3'-C3'	7.02	130.73	120.20
22	BA	120	U	P-O5'-C5'	-7.01	110.38	120.90
21	AA	122	G	P-O3'-C3'	-7.01	109.69	120.20
22	DA	1207	C	N1-C1'-C2'	-7.01	101.48	112.00
34	BM	68	PHE	CA-C-N	7.01	128.60	119.84
34	BM	68	PHE	C-N-CA	7.01	128.60	119.84
22	BA	2729	G	P-O3'-C3'	-7.00	109.69	120.20
53	CA	547	A	P-O3'-C3'	7.00	130.71	120.20
21	AA	1507	A	P-O3'-C3'	-6.99	109.71	120.20
22	BA	811	U	P-O3'-C3'	6.99	130.69	120.20
53	CA	481	G	P-O3'-C3'	6.99	130.68	120.20
38	BQ	41	ALA	N-CA-C	-6.99	103.59	111.07
22	DA	444	C	N1-C1'-C2'	-6.99	101.52	112.00
22	DA	2249	U	P-O3'-C3'	6.99	130.68	120.20
22	BA	2498	C	N1-C1'-C2'	-6.98	101.53	112.00
21	AA	352	C	N1-C1'-C2'	-6.98	101.53	112.00
53	CA	564	C	P-O3'-C3'	-6.98	109.74	120.20
22	DA	2874	C	P-O3'-C3'	-6.97	109.75	120.20
22	BA	812	C	N1-C1'-C2'	-6.97	101.55	112.00
22	BA	49	A	P-O3'-C3'	6.96	130.65	120.20
38	BQ	97	ILE	N-CA-C	-6.96	102.34	111.05
22	DA	2314	A	P-O3'-C3'	-6.96	109.75	120.20
21	AA	1332	A	P-O3'-C3'	-6.96	109.76	120.20
22	BA	2581	G	P-O3'-C3'	6.96	130.63	120.20
53	CA	1051	C	N1-C1'-C2'	-6.96	101.57	112.00
22	BA	386	G	P-O3'-C3'	6.95	130.63	120.20
9	CJ	8	ILE	N-CA-C	6.95	113.65	106.21
21	AA	966	G	P-O3'-C3'	-6.95	109.77	120.20
22	BA	164	C	N1-C1'-C2'	-6.95	101.58	112.00
22	BA	2613	U	P-O3'-C3'	6.95	130.62	120.20
21	AA	330	C	N1-C1'-C2'	-6.95	101.58	112.00
22	BA	2289	G	P-O3'-C3'	-6.94	109.78	120.20
22	BA	2214	C	N1-C1'-C2'	-6.94	101.60	112.00
21	AA	369	G	P-O3'-C3'	-6.93	109.80	120.20
22	DA	2490	G	P-O3'-C3'	6.93	130.60	120.20
21	AA	1201	A	P-O3'-C3'	6.92	130.58	120.20
21	AA	1282	C	N1-C1'-C2'	-6.92	101.62	112.00
22	BA	1213	A	P-O5'-C5'	-6.92	110.52	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1201	U	P-O5'-C5'	-6.91	110.53	120.90
22	BA	2503	A	P-O3'-C3'	6.91	130.57	120.20
35	BN	69	ARG	N-CA-C	-6.91	100.58	110.59
22	BA	1522	A	P-O3'-C3'	6.90	130.55	120.20
22	DA	2310	C	N1-C1'-C2'	-6.90	101.65	112.00
22	BA	2603	G	P-O3'-C3'	-6.90	109.85	120.20
22	DA	1758	U	N1-C1'-C2'	6.90	124.35	114.00
22	BA	995	C	P-O3'-C3'	6.89	130.54	120.20
21	AA	961	U	N1-C1'-C2'	-6.89	101.66	112.00
23	BB	67	G	P-O3'-C3'	-6.89	109.87	120.20
53	CA	537	G	P-O3'-C3'	-6.89	109.86	120.20
22	BA	2732	G	P-O3'-C3'	6.89	130.53	120.20
22	DA	2566	A	P-O3'-C3'	6.89	130.53	120.20
22	BA	669	G	P-O3'-C3'	6.88	130.53	120.20
22	BA	906	U	P-O5'-C5'	-6.88	110.57	120.90
22	DA	424	G	P-O3'-C3'	-6.88	109.87	120.20
22	BA	2609	U	P-O3'-C3'	6.88	130.52	120.20
21	AA	1322	C	P-O3'-C3'	6.88	130.51	120.20
21	AA	704	A	P-O3'-C3'	-6.87	109.89	120.20
22	DA	807	U	N1-C1'-C2'	-6.87	101.69	112.00
22	BA	266	G	P-O3'-C3'	-6.87	109.90	120.20
22	BA	1060	U	N1-C1'-C2'	6.87	122.30	112.00
21	AA	816	A	P-O3'-C3'	-6.86	109.91	120.20
22	BA	1033	U	P-O3'-C3'	6.86	130.49	120.20
4	AE	111	ARG	N-CA-C	-6.86	104.59	114.12
22	DA	1931	U	P-O3'-C3'	-6.86	109.92	120.20
22	DA	1556	C	N1-C1'-C2'	-6.85	101.73	112.00
21	AA	85	U	N1-C1'-C2'	6.84	124.26	114.00
22	BA	126	A	P-O5'-C5'	-6.84	110.64	120.90
22	BA	620	G	P-O3'-C3'	6.84	130.46	120.20
49	B1	29	LYS	CA-C-N	6.84	126.44	119.19
49	B1	29	LYS	C-N-CA	6.84	126.44	119.19
21	AA	115	G	P-O3'-C3'	6.83	130.45	120.20
22	BA	1716	U	N1-C1'-C2'	-6.83	101.76	112.00
22	DA	1648	U	N1-C1'-C2'	-6.83	101.76	112.00
53	CA	1383	C	P-O3'-C3'	-6.82	109.97	120.20
22	DA	2612	C	N1-C1'-C2'	-6.82	101.77	112.00
21	AA	1451	U	N1-C1'-C2'	6.81	122.22	112.00
22	BA	1300	G	P-O3'-C3'	6.81	130.41	120.20
22	BA	685	A	P-O3'-C3'	6.80	130.40	120.20
22	BA	646	U	N1-C1'-C2'	-6.80	101.80	112.00
53	CA	1215	G	P-O3'-C3'	-6.80	110.00	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1034	G	P-O3'-C3'	-6.80	110.00	120.20
22	BA	1340	U	O3'-P-O5'	-6.79	93.81	104.00
21	AA	1401	G	P-O3'-C3'	-6.79	110.02	120.20
22	BA	2682	A	P-O3'-C3'	-6.79	110.02	120.20
22	DA	2668	G	P-O3'-C3'	-6.79	110.02	120.20
22	BA	2639	A	P-O5'-C5'	-6.78	110.73	120.90
22	DA	672	C	P-O3'-C3'	-6.78	110.03	120.20
22	BA	1022	G	P-O3'-C3'	6.78	130.37	120.20
22	BA	2238	G	P-O3'-C3'	6.78	130.37	120.20
23	BB	108	A	P-O3'-C3'	6.77	130.35	120.20
53	CA	210	C	N1-C1'-C2'	6.77	122.15	112.00
22	BA	1682	G	P-O3'-C3'	-6.76	110.06	120.20
22	BA	434	U	P-O3'-C3'	6.76	130.34	120.20
21	AA	275	G	P-O3'-C3'	-6.75	110.07	120.20
21	AA	388	G	P-O3'-C3'	6.75	130.32	120.20
25	DD	193	VAL	CA-C-N	6.75	128.28	119.84
25	DD	193	VAL	C-N-CA	6.75	128.28	119.84
21	AA	51	A	P-O3'-C3'	6.75	130.32	120.20
22	DA	957	C	P-O3'-C3'	6.74	130.31	120.20
22	BA	2537	U	P-O5'-C5'	-6.74	110.79	120.90
42	BU	75	ALA	N-CA-C	-6.74	104.94	113.43
53	CA	460	A	P-O3'-C3'	-6.74	110.09	120.20
53	CA	388	G	P-O3'-C3'	6.74	130.30	120.20
21	AA	1228	C	P-O3'-C3'	-6.73	110.10	120.20
22	BA	662	G	P-O3'-C3'	-6.73	110.10	120.20
22	BA	1779	U	P-O5'-C5'	-6.73	110.80	120.90
22	BA	531	C	O4'-C1'-N1	-6.72	98.11	108.20
21	AA	486	U	P-O5'-C5'	-6.72	110.82	120.90
33	BL	40	SER	N-CA-C	-6.72	99.32	109.60
22	BA	271	G	P-O3'-C3'	6.72	130.28	120.20
31	BJ	27	ARG	N-CA-C	-6.72	104.10	112.90
22	DA	575	A	P-O3'-C3'	-6.72	110.12	120.20
22	BA	2385	C	N1-C1'-C2'	-6.72	101.92	112.00
53	CA	1224	U	P-O3'-C3'	6.71	130.27	120.20
22	BA	2488	G	P-O5'-C5'	-6.71	110.83	120.90
22	DA	915	C	N1-C1'-C2'	-6.71	101.93	112.00
22	DA	53	A	P-O3'-C3'	-6.71	110.14	120.20
13	AN	90	GLY	N-CA-C	-6.71	105.50	111.67
22	DA	250	G	P-O3'-C3'	-6.70	110.15	120.20
22	BA	2543	G	P-O5'-C5'	-6.70	110.86	120.90
22	DA	1865	U	N1-C1'-C2'	6.70	122.04	112.00
22	BA	73	A	P-O5'-C5'	-6.69	110.86	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1158	C	N1-C1'-C2'	-6.69	101.96	112.00
22	DA	829	A	P-O3'-C3'	6.69	130.23	120.20
22	BA	1859	U	P-O3'-C3'	-6.68	110.17	120.20
22	DA	1136	G	P-O3'-C3'	-6.67	110.19	120.20
22	DA	1683	U	N1-C1'-C2'	-6.67	101.99	112.00
53	CA	486	U	P-O5'-C5'	-6.67	110.90	120.90
22	BA	1499	C	P-O3'-C3'	-6.67	110.20	120.20
53	CA	60	A	P-O3'-C3'	6.67	130.20	120.20
22	BA	377	G	P-O3'-C3'	-6.66	110.21	120.20
22	BA	2458	G	O3'-P-O5'	-6.66	94.02	104.00
22	BA	2725	A	P-O3'-C3'	6.65	130.18	120.20
22	BA	1734	G	P-O3'-C3'	-6.65	110.22	120.20
3	CD	166	LYS	CA-C-N	6.65	126.67	119.89
3	CD	166	LYS	C-N-CA	6.65	126.67	119.89
22	BA	475	C	N1-C1'-C2'	-6.65	102.03	112.00
22	BA	752	A	P-O3'-C3'	6.65	130.17	120.20
53	CA	1381	U	N1-C1'-C2'	-6.65	102.03	112.00
53	CA	369	G	P-O3'-C3'	-6.64	110.23	120.20
22	BA	1141	U	P-O3'-C3'	6.64	130.16	120.20
22	DA	91	A	P-O3'-C3'	6.64	130.16	120.20
21	AA	812	G	O3'-P-O5'	-6.64	94.04	104.00
22	BA	1964	G	P-O3'-C3'	6.64	130.16	120.20
21	AA	266	G	O3'-P-O5'	6.64	113.95	104.00
22	DA	867	C	N1-C1'-C2'	-6.64	102.04	112.00
22	BA	474	G	P-O3'-C3'	6.63	130.15	120.20
23	BB	66	A	P-O3'-C3'	6.63	130.15	120.20
22	BA	1288	G	P-O5'-C5'	6.63	130.84	120.90
22	DA	162	U	P-O3'-C3'	6.63	130.15	120.20
22	BA	919	U	C2-N1-C1'	6.62	137.55	117.70
22	BA	645	C	P-O3'-C3'	6.61	130.12	120.20
22	BA	2200	C	N1-C1'-C2'	-6.61	102.08	112.00
22	BA	1034	G	P-O3'-C3'	-6.61	110.28	120.20
22	DA	1980	G	P-O3'-C3'	6.61	130.12	120.20
53	CA	89	U	N1-C1'-C2'	-6.61	102.09	112.00
21	AA	306	A	P-O3'-C3'	-6.61	110.29	120.20
22	BA	215	G	P-O3'-C3'	6.60	130.10	120.20
21	AA	812	G	P-O3'-C3'	6.59	130.09	120.20
22	DA	231	A	P-O3'-C3'	-6.59	110.32	120.20
22	DA	2024	G	P-O3'-C3'	-6.59	110.31	120.20
22	DA	122	G	P-O3'-C3'	-6.59	110.32	120.20
53	CA	1452	C	P-O3'-C3'	6.58	130.07	120.20
53	CA	733	G	P-O3'-C3'	6.58	130.06	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	DD	151	THR	CA-C-N	-6.57	111.63	119.84
25	DD	151	THR	C-N-CA	-6.57	111.63	119.84
21	AA	1055	A	P-O3'-C3'	-6.56	110.36	120.20
22	BA	60	G	P-O3'-C3'	6.56	130.04	120.20
21	AA	1394	A	P-O3'-C3'	6.56	130.04	120.20
22	DA	1291	C	N1-C1'-C2'	-6.56	102.16	112.00
22	BA	2199	A	P-O3'-C3'	-6.55	110.37	120.20
21	AA	1433	A	P-O3'-C3'	-6.55	110.37	120.20
53	CA	1381	U	P-O3'-C3'	-6.55	110.37	120.20
35	BN	79	LEU	N-CA-C	-6.55	101.01	110.24
22	DA	861	A	P-O3'-C3'	-6.55	110.38	120.20
22	DA	2629	U	P-O3'-C3'	6.55	130.02	120.20
53	CA	275	G	P-O3'-C3'	-6.55	110.38	120.20
22	DA	1565	C	P-O3'-C3'	6.54	130.02	120.20
22	DA	271	G	P-O3'-C3'	6.54	130.02	120.20
21	AA	724	G	P-O3'-C3'	-6.54	110.39	120.20
22	BA	1417	C	N1-C1'-C2'	-6.54	102.19	112.00
53	CA	1152	A	P-O3'-C3'	-6.54	110.39	120.20
21	AA	968	A	P-O3'-C3'	6.54	130.01	120.20
22	DA	2850	A	P-O3'-C3'	-6.54	110.39	120.20
22	BA	233	A	P-O3'-C3'	-6.54	110.40	120.20
31	BJ	96	ARG	CA-C-N	6.54	126.47	119.28
31	BJ	96	ARG	C-N-CA	6.54	126.47	119.28
53	CA	1055	A	P-O3'-C3'	-6.53	110.41	120.20
22	DA	2210	U	O3'-P-O5'	6.53	113.79	104.00
21	AA	913	A	P-O3'-C3'	6.52	129.99	120.20
21	AA	577	G	P-O3'-C3'	-6.52	110.42	120.20
21	AA	991	U	P-O3'-C3'	6.52	129.98	120.20
22	BA	1498	C	N1-C1'-C2'	-6.52	102.22	112.00
21	AA	536	C	N1-C1'-C2'	-6.52	102.22	112.00
22	BA	2691	C	P-O5'-C5'	-6.52	111.12	120.90
53	CA	643	C	N1-C1'-C2'	-6.52	102.22	112.00
22	DA	589	U	N1-C1'-C2'	-6.52	102.22	112.00
22	BA	1615	C	O4'-C1'-N1	6.52	117.97	108.20
22	BA	422	A	P-O3'-C3'	-6.51	110.43	120.20
53	CA	253	A	P-O3'-C3'	-6.51	110.43	120.20
21	AA	531	U	P-O3'-C3'	6.51	129.97	120.20
22	BA	2226	C	N1-C1'-C2'	-6.51	102.23	112.00
22	DA	1013	C	P-O3'-C3'	-6.51	110.43	120.20
31	BJ	112	GLY	CA-C-N	6.51	127.97	119.84
31	BJ	112	GLY	C-N-CA	6.51	127.97	119.84
22	DA	437	U	N1-C1'-C2'	-6.51	102.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1739	A	P-O3'-C3'	-6.51	110.44	120.20
22	DA	2501	C	N1-C1'-C2'	6.51	121.76	112.00
22	DA	302	C	N1-C1'-C2'	-6.50	102.25	112.00
21	AA	94	G	P-O3'-C3'	6.50	129.95	120.20
22	DA	2727	A	P-O3'-C3'	-6.50	110.45	120.20
21	AA	175	C	P-O3'-C3'	-6.50	110.45	120.20
22	BA	395	U	N1-C1'-C2'	6.50	123.75	114.00
22	BA	2383	G	P-O3'-C3'	-6.50	110.45	120.20
21	AA	717	U	N1-C1'-C2'	6.50	123.75	114.00
22	DA	806	C	N1-C1'-C2'	-6.50	102.26	112.00
22	BA	1379	U	P-O3'-C3'	-6.49	110.46	120.20
21	AA	109	A	P-O3'-C3'	6.49	129.94	120.20
53	CA	962	C	P-O3'-C3'	-6.49	110.47	120.20
22	BA	34	U	P-O3'-C3'	6.49	129.93	120.20
22	BA	794	A	P-O3'-C3'	-6.49	110.47	120.20
44	BW	24	ARG	N-CA-C	-6.48	101.94	110.43
22	BA	196	A	P-O3'-C3'	6.48	129.92	120.20
22	BA	1282	U	P-O5'-C5'	-6.48	111.19	120.90
22	BA	2880	C	P-O5'-C5'	-6.48	111.19	120.90
22	DA	1539	U	N1-C1'-C2'	-6.48	102.28	112.00
22	BA	2296	U	P-O3'-C3'	6.47	129.91	120.20
53	CA	1228	C	N1-C1'-C2'	-6.47	102.29	112.00
53	CA	1499	A	P-O3'-C3'	-6.47	110.49	120.20
22	DA	1954	G	P-O3'-C3'	6.47	129.91	120.20
22	DA	2757	A	P-O3'-C3'	-6.47	110.49	120.20
22	DA	2061	G	P-O3'-C3'	6.47	129.91	120.20
54	DB	17	C	O4'-C1'-N1	6.47	118.21	108.50
22	BA	1996	C	P-O3'-C3'	6.47	129.90	120.20
53	CA	331	G	P-O3'-C3'	-6.47	110.50	120.20
22	DA	2312	U	P-O3'-C3'	-6.47	110.50	120.20
22	BA	2071	A	O3'-P-O5'	-6.46	94.30	104.00
22	DA	1613	G	P-O3'-C3'	-6.46	110.50	120.20
54	DB	87	U	P-O3'-C3'	6.46	129.89	120.20
22	BA	2715	C	P-O3'-C3'	-6.46	110.51	120.20
22	DA	1430	G	P-O3'-C3'	-6.46	110.51	120.20
53	CA	1201	A	P-O3'-C3'	6.46	129.89	120.20
22	BA	527	C	P-O3'-C3'	6.45	129.88	120.20
53	CA	184	G	P-O3'-C3'	-6.45	110.52	120.20
22	BA	1324	G	P-O3'-C3'	6.45	129.88	120.20
22	BA	2547	A	P-O5'-C5'	-6.45	111.23	120.90
53	CA	1297	G	P-O3'-C3'	6.45	129.87	120.20
22	BA	1732	C	P-O3'-C3'	6.45	129.87	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2285	C	P-O5'-C5'	-6.45	111.23	120.90
21	AA	1066	C	P-O3'-C3'	-6.44	110.53	120.20
22	BA	1768	C	P-O5'-C5'	-6.44	111.24	120.90
22	DA	2251	G	P-O3'-C3'	-6.43	110.55	120.20
22	BA	805	G	P-O5'-C5'	-6.43	111.25	120.90
21	AA	95	C	P-O3'-C3'	-6.43	110.56	120.20
22	BA	2504	U	P-O3'-C3'	-6.43	110.56	120.20
37	BP	77	SER	CA-C-N	6.43	126.92	119.47
37	BP	77	SER	C-N-CA	6.43	126.92	119.47
21	AA	1324	A	P-O3'-C3'	-6.42	110.56	120.20
53	CA	513	C	N1-C1'-C2'	-6.42	102.37	112.00
21	AA	960	U	N1-C1'-C2'	6.42	123.63	114.00
22	DA	2544	G	P-O3'-C3'	-6.42	110.57	120.20
21	AA	1302	C	N1-C1'-C2'	-6.41	102.38	112.00
22	BA	1654	A	N9-C1'-C2'	-6.41	102.38	112.00
22	BA	1239	G	O3'-P-O5'	-6.41	94.39	104.00
22	BA	1980	G	P-O3'-C3'	6.41	129.81	120.20
22	BA	310	A	P-O3'-C3'	6.41	129.81	120.20
22	DA	747	U	N1-C1'-C2'	-6.41	102.39	112.00
22	BA	996	A	P-O3'-C3'	-6.40	110.60	120.20
53	CA	1348	U	N1-C1'-C2'	-6.40	102.41	112.00
21	AA	1349	A	P-O3'-C3'	-6.40	110.61	120.20
50	B2	6	GLN	CA-C-N	6.39	126.36	119.78
50	B2	6	GLN	C-N-CA	6.39	126.36	119.78
21	AA	1229	A	P-O3'-C3'	-6.39	110.62	120.20
45	BX	52	ALA	N-CA-C	-6.39	101.94	110.24
37	DP	49	ILE	N-CA-C	6.38	117.05	108.11
22	BA	1398	C	N1-C1'-C2'	-6.38	102.43	112.00
22	BA	2846	G	P-O5'-C5'	-6.38	111.33	120.90
22	BA	1281	G	O3'-P-O5'	-6.38	94.43	104.00
46	BY	16	THR	N-CA-C	-6.38	104.25	111.07
22	BA	2832	U	O3'-P-O5'	-6.37	94.44	104.00
21	AA	47	C	O3'-P-O5'	6.37	113.55	104.00
21	AA	430	A	P-O3'-C3'	-6.37	110.65	120.20
22	BA	1971	U	P-O3'-C3'	-6.37	110.65	120.20
22	DA	991	C	P-O3'-C3'	-6.36	110.66	120.20
53	CA	643	C	P-O3'-C3'	-6.36	110.66	120.20
53	CA	995	C	P-O3'-C3'	-6.36	110.66	120.20
53	CA	1283	U	P-O3'-C3'	-6.36	110.66	120.20
22	DA	1047	G	P-O3'-C3'	6.36	129.74	120.20
21	AA	344	A	P-O3'-C3'	6.35	129.73	120.20
22	DA	2143	C	P-O3'-C3'	6.35	129.73	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	645	C	N1-C1'-C2'	6.35	123.52	114.00
22	DA	1636	U	P-O3'-C3'	-6.35	110.68	120.20
21	AA	974	A	P-O3'-C3'	6.35	129.72	120.20
22	BA	566	U	P-O5'-C5'	-6.34	111.38	120.90
22	BA	1398	C	P-O3'-C3'	-6.34	110.69	120.20
21	AA	1286	U	N1-C1'-C2'	6.34	121.51	112.00
22	BA	322	A	P-O5'-C5'	-6.33	111.40	120.90
21	AA	279	A	P-O3'-C3'	6.33	129.70	120.20
22	BA	164	C	P-O3'-C3'	-6.33	110.70	120.20
22	BA	2021	C	P-O3'-C3'	6.33	129.69	120.20
22	DA	1560	G	P-O3'-C3'	-6.33	110.71	120.20
22	BA	1564	C	N1-C1'-C2'	6.33	121.49	112.00
1	CB	180	ILE	N-CA-C	6.33	115.15	108.95
22	BA	2045	C	P-O3'-C3'	-6.32	110.72	120.20
53	CA	458	U	N1-C1'-C2'	6.32	121.48	112.00
22	DA	2147	A	P-O3'-C3'	-6.32	110.71	120.20
53	CA	1507	A	P-O3'-C3'	-6.32	110.72	120.20
22	BA	2249	U	O3'-P-O5'	-6.32	94.52	104.00
28	BG	56	GLY	N-CA-C	-6.32	107.56	115.08
53	CA	1161	C	P-O3'-C3'	-6.32	110.72	120.20
22	DA	2402	U	P-O3'-C3'	-6.32	110.72	120.20
22	BA	1329	U	P-O3'-C3'	6.31	129.67	120.20
22	DA	831	G	P-O3'-C3'	-6.31	110.73	120.20
45	DX	19	HIS	N-CA-C	-6.31	102.65	110.41
53	CA	1380	U	P-O3'-C3'	6.31	129.66	120.20
22	BA	2635	A	P-O5'-C5'	-6.31	111.44	120.90
22	BA	1379	U	N1-C1'-C2'	-6.30	102.55	112.00
36	BO	105	ALA	N-CA-C	-6.30	102.20	110.33
22	DA	671	C	N1-C1'-C2'	-6.30	104.55	114.00
22	DA	1919	A	P-O3'-C3'	-6.29	110.76	120.20
22	BA	2307	G	P-O3'-C3'	6.29	129.64	120.20
34	DM	71	LYS	CA-C-N	6.29	127.71	119.84
34	DM	71	LYS	C-N-CA	6.29	127.71	119.84
21	AA	794	A	P-O3'-C3'	-6.29	110.76	120.20
21	AA	1159	U	P-O3'-C3'	6.29	129.63	120.20
22	BA	1758	U	N1-C1'-C2'	6.29	123.44	114.00
22	BA	2874	C	N1-C1'-C2'	-6.29	102.56	112.00
22	DA	1780	A	P-O3'-C3'	6.29	129.63	120.20
21	AA	282	A	P-O3'-C3'	-6.29	110.77	120.20
22	BA	2060	A	P-O3'-C3'	6.29	129.63	120.20
22	BA	391	A	P-O3'-C3'	-6.29	110.77	120.20
21	AA	1258	G	P-O3'-C3'	-6.29	110.77	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1698	A	P-O3'-C3'	6.28	129.62	120.20
39	BR	44	GLY	N-CA-C	-6.28	104.95	113.37
11	CL	89	LEU	CA-C-N	6.28	126.61	119.83
11	CL	89	LEU	C-N-CA	6.28	126.61	119.83
21	AA	654	G	P-O3'-C3'	-6.28	110.78	120.20
22	BA	396	G	P-O3'-C3'	-6.26	110.80	120.20
1	CB	104	LYS	N-CA-C	-6.26	104.50	111.71
22	DA	807	U	P-O3'-C3'	-6.26	110.81	120.20
22	BA	1249	U	N1-C1'-C2'	-6.26	102.61	112.00
22	BA	1693	U	N1-C1'-C2'	6.26	123.38	114.00
22	DA	1965	C	N1-C1'-C2'	-6.25	102.62	112.00
21	AA	517	G	P-O3'-C3'	6.25	129.58	120.20
22	DA	533	G	P-O3'-C3'	-6.25	110.83	120.20
22	DA	1398	C	P-O3'-C3'	-6.25	110.83	120.20
21	AA	566	G	P-O3'-C3'	6.24	129.56	120.20
21	AA	1498	U	P-O3'-C3'	6.24	129.57	120.20
22	DA	1817	G	P-O3'-C3'	-6.24	110.83	120.20
54	DB	90	C	P-O3'-C3'	-6.24	110.83	120.20
22	BA	671	C	P-O5'-C5'	-6.24	111.54	120.90
22	BA	2517	C	O4'-C1'-N1	6.24	117.56	108.20
23	BB	44	G	P-O3'-C3'	6.24	129.56	120.20
22	BA	2194	U	P-O3'-C3'	-6.24	110.85	120.20
21	AA	1181	G	P-O3'-C3'	6.23	129.55	120.20
45	DX	55	MET	N-CA-C	-6.23	105.69	113.55
53	CA	566	G	P-O3'-C3'	6.23	129.55	120.20
22	BA	442	G	P-O3'-C3'	6.23	129.55	120.20
22	BA	74	A	P-O3'-C3'	6.23	129.54	120.20
22	BA	1265	A	P-O3'-C3'	6.22	129.54	120.20
7	CH	44	PHE	N-CA-C	-6.22	105.36	114.39
10	CK	125	LYS	N-CA-C	6.22	117.77	108.31
24	BC	58	LYS	N-CA-C	6.22	118.99	111.40
22	DA	530	G	P-O3'-C3'	-6.22	110.87	120.20
11	AL	23	LEU	N-CA-C	6.21	124.03	110.80
22	BA	1943	U	O3'-P-O5'	6.21	113.31	104.00
22	BA	960	A	O3'-P-O5'	-6.21	94.69	104.00
22	BA	142	A	P-O3'-C3'	-6.20	110.89	120.20
22	BA	482	A	P-O3'-C3'	-6.20	110.90	120.20
53	CA	116	A	P-O3'-C3'	-6.20	110.90	120.20
22	BA	746	U	N1-C1'-C2'	6.20	123.30	114.00
22	DA	1330	C	N1-C1'-C2'	-6.20	104.71	114.00
22	DA	1511	G	P-O3'-C3'	-6.19	110.91	120.20
21	AA	966	G	P-O5'-C5'	-6.19	111.61	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2817	U	P-O5'-C5'	-6.19	111.61	120.90
22	DA	229	C	N1-C1'-C2'	-6.19	102.72	112.00
22	BA	1008	A	O3'-P-O5'	6.18	113.28	104.00
53	CA	497	G	P-O3'-C3'	-6.18	110.93	120.20
22	DA	1304	A	P-O3'-C3'	-6.18	110.93	120.20
22	BA	2312	U	N1-C1'-C2'	-6.18	102.73	112.00
22	BA	729	G	P-O5'-C5'	-6.18	111.63	120.90
22	BA	2321	U	P-O3'-C3'	-6.18	110.93	120.20
21	AA	1432	G	P-O3'-C3'	6.17	129.46	120.20
22	BA	1839	G	P-O5'-C5'	-6.17	111.64	120.90
22	BA	1966	A	P-O5'-C5'	-6.17	111.64	120.90
21	AA	266	G	P-O3'-C3'	6.17	129.46	120.20
30	BI	94	LYS	N-CA-C	-6.17	105.54	114.12
53	CA	1282	C	P-O3'-C3'	-6.17	110.94	120.20
21	AA	870	U	P-O3'-C3'	6.17	129.45	120.20
22	BA	528	A	P-O3'-C3'	-6.17	110.95	120.20
22	BA	1619	G	P-O3'-C3'	-6.17	110.95	120.20
22	DA	2334	U	P-O3'-C3'	6.16	129.44	120.20
22	BA	2311	A	P-O5'-C5'	-6.16	111.67	120.90
22	BA	2830	C	P-O5'-C5'	-6.16	111.67	120.90
21	AA	119	A	O3'-P-O5'	6.15	113.23	104.00
21	AA	452	A	P-O3'-C3'	-6.15	110.97	120.20
22	BA	1568	G	P-O3'-C3'	-6.15	110.97	120.20
21	AA	934	C	P-O3'-C3'	6.15	129.42	120.20
22	BA	1289	C	P-O3'-C3'	-6.14	110.98	120.20
22	DA	2406	A	P-O3'-C3'	6.14	129.42	120.20
22	BA	573	U	P-O3'-C3'	6.14	129.41	120.20
53	CA	995	C	N1-C1'-C2'	-6.14	102.79	112.00
22	BA	28	A	P-O5'-C5'	-6.14	111.69	120.90
21	AA	534	U	P-O3'-C3'	-6.14	110.99	120.20
22	BA	1417	C	P-O3'-C3'	-6.13	111.00	120.20
22	DA	1635	A	P-O5'-C5'	-6.13	111.70	120.90
22	BA	2440	C	C2'-C3'-O3'	-6.13	104.50	113.70
22	BA	2654	A	P-O3'-C3'	6.13	129.40	120.20
53	CA	794	A	P-O3'-C3'	-6.13	111.00	120.20
25	DD	113	SER	N-CA-C	6.13	117.60	107.73
53	CA	9	G	P-O3'-C3'	-6.13	111.00	120.20
22	BA	2259	U	N1-C1'-C2'	-6.13	102.81	112.00
27	BF	174	PHE	CA-C-N	6.13	127.50	119.84
27	BF	174	PHE	C-N-CA	6.13	127.50	119.84
22	DA	1942	C	N1-C1'-C2'	-6.12	102.81	112.00
53	CA	87	C	N1-C1'-C2'	-6.12	102.82	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
53	CA	110	C	N1-C1'-C2'	-6.12	102.82	112.00
53	CA	132	C	O4'-C1'-N1	6.12	117.67	108.50
22	BA	915	C	N1-C1'-C2'	-6.11	102.83	112.00
22	DA	1265	A	P-O3'-C3'	6.11	129.37	120.20
53	CA	1053	G	P-O3'-C3'	6.11	129.36	120.20
22	DA	527	C	N1-C1'-C2'	6.11	123.16	114.00
22	DA	1345	C	N1-C1'-C2'	-6.11	102.84	112.00
26	BE	36	ALA	N-CA-C	-6.10	104.74	111.82
53	CA	131	A	P-O3'-C3'	-6.10	111.05	120.20
21	AA	891	U	N1-C1'-C2'	-6.10	102.85	112.00
22	BA	2321	U	N1-C1'-C2'	-6.10	102.86	112.00
22	BA	2866	U	P-O3'-C3'	6.09	129.34	120.20
22	BA	1693	U	P-O3'-C3'	6.08	129.32	120.20
22	BA	1946	U	P-O5'-C5'	-6.08	111.78	120.90
22	BA	1932	A	P-O5'-C5'	-6.08	111.78	120.90
22	DA	2447	G	P-O3'-C3'	6.08	129.32	120.20
22	DA	976	G	P-O3'-C3'	-6.08	111.08	120.20
22	BA	34	U	O3'-P-O5'	-6.08	94.88	104.00
53	CA	451	A	P-O3'-C3'	6.08	129.31	120.20
22	BA	2423	U	N1-C1'-C2'	6.07	121.11	112.00
21	AA	1452	C	N1-C1'-C2'	6.07	123.11	114.00
21	AA	173	U	N1-C1'-C2'	6.07	123.10	114.00
22	BA	860	U	N1-C1'-C2'	-6.07	102.90	112.00
22	BA	1280	G	O3'-P-O5'	-6.07	94.90	104.00
21	AA	641	U	N1-C1'-C2'	6.07	123.10	114.00
22	BA	2459	A	P-O3'-C3'	-6.07	111.10	120.20
2	AC	15	LYS	CA-C-N	6.06	127.42	119.84
2	AC	15	LYS	C-N-CA	6.06	127.42	119.84
22	BA	1356	G	P-O5'-C5'	-6.06	111.81	120.90
53	CA	755	G	P-O3'-C3'	-6.06	111.11	120.20
53	CA	1395	C	N1-C1'-C2'	-6.06	102.91	112.00
22	DA	421	C	P-O3'-C3'	6.06	129.29	120.20
22	DA	1962	C	P-O3'-C3'	6.06	129.29	120.20
22	DA	2259	U	N1-C1'-C2'	-6.06	102.91	112.00
22	BA	91	A	P-O3'-C3'	6.06	129.28	120.20
21	AA	595	A	P-O3'-C3'	6.05	129.28	120.20
22	BA	1000	A	P-O5'-C5'	-6.05	111.82	120.90
21	AA	1323	G	P-O3'-C3'	-6.05	111.12	120.20
22	BA	303	G	P-O3'-C3'	-6.05	111.12	120.20
22	BA	1048	A	P-O3'-C3'	-6.05	111.13	120.20
22	DA	421	C	N1-C1'-C2'	6.05	121.07	112.00
21	AA	752	G	P-O3'-C3'	6.04	129.26	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1200	C	P-O3'-C3'	6.04	129.26	120.20
22	BA	397	U	O3'-P-O5'	-6.04	94.94	104.00
22	BA	2427	C	P-O5'-C5'	-6.04	111.84	120.90
22	BA	2572	A	P-O3'-C3'	6.04	129.26	120.20
23	BB	40	U	P-O3'-C3'	6.03	129.25	120.20
47	BZ	8	GLN	N-CA-C	6.03	119.83	112.23
21	AA	169	C	O4'-C1'-N1	6.03	117.55	108.50
22	BA	753	A	P-O5'-C5'	-6.03	111.85	120.90
22	BA	2540	C	P-O5'-C5'	-6.03	111.86	120.90
53	CA	1161	C	N1-C1'-C2'	-6.03	102.95	112.00
21	AA	331	G	P-O3'-C3'	-6.03	111.16	120.20
22	BA	2259	U	P-O5'-C5'	-6.03	111.86	120.90
53	CA	1502	A	P-O3'-C3'	6.03	129.24	120.20
22	BA	406	G	P-O3'-C3'	-6.02	111.16	120.20
45	BX	54	GLY	N-CA-C	-6.02	105.35	112.64
22	BA	2629	U	P-O3'-C3'	6.02	129.24	120.20
46	BY	45	GLN	N-CA-C	-6.02	102.54	110.43
54	DB	68	C	O4'-C1'-N1	6.02	117.53	108.50
22	DA	121	G	P-O3'-C3'	-6.02	111.17	120.20
22	DA	1141	U	P-O3'-C3'	6.02	129.23	120.20
21	AA	1499	A	P-O5'-C5'	-6.02	111.88	120.90
22	BA	2498	C	P-O3'-C3'	-6.01	111.18	120.20
22	DA	2656	U	N1-C1'-C2'	-6.01	102.98	112.00
21	AA	9	G	P-O3'-C3'	-6.01	111.18	120.20
22	BA	1396	U	O3'-P-O5'	-6.01	94.98	104.00
22	BA	2325	G	P-O3'-C3'	-6.01	111.18	120.20
22	BA	490	C	P-O5'-C5'	-6.01	111.89	120.90
22	DA	1554	U	P-O3'-C3'	6.01	129.21	120.20
42	DU	16	LYS	CB-CA-C	-6.01	109.63	116.54
22	BA	1941	C	P-O3'-C3'	-6.00	111.19	120.20
53	CA	1212	U	N1-C1'-C2'	6.00	121.00	112.00
53	CA	247	G	P-O3'-C3'	-6.00	111.20	120.20
21	AA	559	A	P-O3'-C3'	6.00	129.20	120.20
21	AA	1380	U	P-O3'-C3'	6.00	129.19	120.20
22	BA	1324	G	O4'-C1'-N9	6.00	117.20	108.20
22	BA	1524	G	P-O3'-C3'	-5.99	111.21	120.20
22	BA	163	C	N1-C1'-C2'	-5.99	105.02	114.00
22	BA	2836	U	N1-C1'-C2'	-5.98	103.03	112.00
22	DA	739	A	P-O3'-C3'	5.98	129.18	120.20
22	DA	1967	C	P-O3'-C3'	-5.98	111.22	120.20
22	DA	2238	G	P-O3'-C3'	5.98	129.17	120.20
22	BA	1136	G	P-O5'-C5'	-5.98	111.93	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	727	A	P-O3'-C3'	-5.98	111.23	120.20
22	BA	2072	C	P-O3'-C3'	-5.98	111.24	120.20
21	AA	722	G	P-O3'-C3'	-5.97	111.24	120.20
22	BA	2326	C	P-O3'-C3'	5.97	129.16	120.20
53	CA	132	C	P-O3'-C3'	-5.97	111.24	120.20
22	BA	2267	A	P-O5'-C5'	-5.97	111.95	120.90
22	DA	1867	G	P-O3'-C3'	-5.97	111.25	120.20
53	CA	276	G	P-O3'-C3'	-5.97	111.25	120.20
22	BA	2469	A	P-O3'-C3'	-5.97	111.25	120.20
22	BA	2689	U	N1-C1'-C2'	5.97	122.95	114.00
3	AD	166	LYS	CA-C-N	5.96	127.30	119.84
3	AD	166	LYS	C-N-CA	5.96	127.30	119.84
53	CA	429	U	P-O3'-C3'	5.96	129.15	120.20
22	DA	2585	U	P-O3'-C3'	5.96	129.15	120.20
21	AA	1345	U	P-O3'-C3'	5.96	129.14	120.20
22	BA	100	U	P-O3'-C3'	5.96	129.14	120.20
22	BA	2210	U	O3'-P-O5'	5.96	112.94	104.00
22	BA	1959	G	P-O5'-C5'	-5.96	111.97	120.90
53	CA	704	A	P-O3'-C3'	-5.96	111.27	120.20
22	DA	2149	U	N1-C1'-C2'	-5.95	103.07	112.00
21	AA	1127	G	P-O3'-C3'	-5.95	111.27	120.20
22	BA	588	U	N1-C1'-C2'	-5.95	103.08	112.00
22	BA	454	A	P-O3'-C3'	5.95	129.12	120.20
22	BA	741	U	P-O5'-C5'	-5.95	111.98	120.90
53	CA	802	A	P-O3'-C3'	5.95	129.12	120.20
21	AA	511	C	P-O3'-C3'	5.94	129.11	120.20
22	BA	2894	G	P-O3'-C3'	-5.94	111.29	120.20
53	CA	107	G	P-O3'-C3'	-5.94	111.29	120.20
54	DB	56	G	P-O3'-C3'	5.94	129.10	120.20
22	BA	2681	C	O4'-C1'-N1	5.93	117.10	108.20
22	DA	411	G	P-O3'-C3'	5.93	129.10	120.20
22	BA	1416	G	P-O3'-C3'	5.93	129.10	120.20
22	BA	2714	G	P-O5'-C5'	-5.93	112.00	120.90
34	BM	44	ARG	N-CA-C	-5.93	104.82	111.28
53	CA	821	G	P-O3'-C3'	-5.93	111.31	120.20
53	CA	1345	U	O4'-C1'-N1	5.93	117.09	108.20
22	DA	434	U	N1-C1'-C2'	5.93	120.89	112.00
22	DA	1981	A	P-O5'-C5'	-5.93	112.01	120.90
53	CA	884	U	P-O3'-C3'	5.93	129.09	120.20
53	CA	1498	U	P-O3'-C3'	5.93	129.09	120.20
53	CA	238	A	P-O3'-C3'	5.92	129.09	120.20
22	DA	806	C	P-O3'-C3'	-5.92	111.31	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
46	DY	60	LYS	N-CA-C	-5.92	106.69	112.97
21	AA	389	A	P-O3'-C3'	-5.92	111.32	120.20
22	DA	2259	U	P-O3'-C3'	-5.92	111.32	120.20
15	AP	40	ASN	CA-C-N	5.92	126.03	119.87
15	AP	40	ASN	C-N-CA	5.92	126.03	119.87
22	BA	1565	C	P-O3'-C3'	5.91	129.07	120.20
21	AA	47	C	P-O3'-C3'	5.91	129.06	120.20
53	CA	397	A	P-O5'-C5'	-5.91	112.03	120.90
21	AA	519	C	P-O3'-C3'	-5.91	111.34	120.20
22	BA	1681	G	P-O3'-C3'	5.90	129.05	120.20
22	BA	1695	G	P-O5'-C5'	-5.90	112.05	120.90
36	BO	102	ARG	N-CA-C	-5.90	106.04	113.18
53	CA	500	G	P-O3'-C3'	-5.90	111.35	120.20
22	DA	1456	G	P-O3'-C3'	-5.89	111.36	120.20
25	BD	10	GLY	N-CA-C	5.89	127.15	113.18
22	BA	2380	C	P-O5'-C5'	-5.89	112.06	120.90
9	CJ	88	MET	N-CA-C	-5.89	104.94	111.71
53	CA	1455	G	P-O3'-C3'	-5.89	111.36	120.20
22	BA	913	U	P-O3'-C3'	5.89	129.03	120.20
22	BA	2197	U	P-O3'-C3'	5.89	129.03	120.20
22	BA	962	G	P-O5'-C5'	-5.88	112.07	120.90
21	AA	1413	A	P-O3'-C3'	-5.88	111.38	120.20
22	BA	14	A	P-O5'-C5'	-5.88	112.08	120.90
21	AA	73	C	N1-C1'-C2'	-5.88	103.18	112.00
22	BA	1494	A	P-O5'-C5'	-5.88	112.09	120.90
22	BA	2052	A	P-O5'-C5'	-5.87	112.09	120.90
22	BA	1370	C	P-O3'-C3'	5.87	129.01	120.20
22	BA	995	C	N1-C1'-C2'	5.87	122.80	114.00
42	BU	100	GLU	N-CA-C	5.87	118.63	111.82
21	AA	32	A	P-O3'-C3'	-5.87	111.40	120.20
22	BA	1311	G	P-O3'-C3'	5.87	129.00	120.20
22	DA	669	G	P-O3'-C3'	5.87	129.00	120.20
22	BA	386	G	O3'-P-O5'	-5.86	95.20	104.00
37	BP	91	VAL	N-CA-C	5.86	121.53	109.34
21	AA	686	U	P-O3'-C3'	5.86	128.99	120.20
22	DA	1008	A	P-O3'-C3'	5.86	128.99	120.20
22	BA	2757	A	P-O3'-C3'	-5.86	111.41	120.20
22	BA	1280	G	P-O5'-C5'	-5.86	112.11	120.90
22	DA	397	U	P-O3'-C3'	-5.86	111.42	120.20
21	AA	411	A	P-O3'-C3'	5.86	128.98	120.20
22	BA	2880	C	P-O3'-C3'	-5.86	111.42	120.20
22	DA	958	U	P-O3'-C3'	-5.86	111.42	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	1169	A	P-O3'-C3'	-5.85	111.42	120.20
21	AA	1183	U	N1-C1'-C2'	-5.85	103.22	112.00
22	BA	1963	U	N1-C1'-C2'	-5.85	103.22	112.00
53	CA	992	U	N1-C1'-C2'	5.85	122.78	114.00
22	BA	1606	C	P-O3'-C3'	5.85	128.97	120.20
22	BA	2512	C	O3'-P-O5'	-5.85	95.23	104.00
53	CA	1299	A	P-O3'-C3'	-5.85	111.43	120.20
22	DA	1477	A	P-O3'-C3'	-5.85	111.42	120.20
21	AA	1283	U	P-O3'-C3'	-5.85	111.43	120.20
53	CA	282	A	P-O3'-C3'	-5.85	111.43	120.20
22	DA	1213	A	P-O3'-C3'	-5.84	111.44	120.20
21	AA	815	A	P-O3'-C3'	5.84	128.96	120.20
22	DA	1568	G	P-O3'-C3'	-5.84	111.44	120.20
21	AA	60	A	P-O3'-C3'	5.83	128.95	120.20
21	AA	536	C	P-O3'-C3'	-5.83	111.45	120.20
22	BA	2570	G	P-O3'-C3'	-5.83	111.45	120.20
22	BA	653	U	P-O3'-C3'	5.83	128.95	120.20
22	BA	753	A	P-O3'-C3'	-5.83	111.45	120.20
53	CA	239	U	N1-C1'-C2'	-5.83	103.26	112.00
22	DA	2210	U	P-O3'-C3'	5.83	128.94	120.20
21	AA	245	U	N1-C1'-C2'	-5.83	103.26	112.00
22	BA	301	G	O3'-P-O5'	5.83	112.74	104.00
22	BA	398	C	P-O5'-C5'	-5.83	112.16	120.90
21	AA	70	U	N1-C1'-C2'	5.82	120.74	112.00
22	BA	1783	A	P-O3'-C3'	-5.82	111.47	120.20
53	CA	495	A	P-O3'-C3'	5.82	128.94	120.20
22	DA	2386	A	P-O3'-C3'	-5.82	111.47	120.20
32	DK	93	GLN	CA-C-N	5.82	127.12	119.84
32	DK	93	GLN	C-N-CA	5.82	127.12	119.84
22	BA	129	C	P-O3'-C3'	-5.82	111.47	120.20
22	BA	2258	C	O3'-P-O5'	-5.82	95.27	104.00
22	DA	1427	A	P-O3'-C3'	5.82	128.93	120.20
21	AA	813	U	P-O3'-C3'	-5.82	111.47	120.20
22	DA	2836	U	P-O3'-C3'	-5.82	111.47	120.20
22	DA	386	G	P-O3'-C3'	5.81	128.92	120.20
53	CA	596	A	P-O3'-C3'	-5.81	111.49	120.20
34	BM	58	LYS	CB-CA-C	-5.81	109.33	117.23
21	AA	1094	G	P-O3'-C3'	5.81	128.91	120.20
22	BA	2490	G	O3'-P-O5'	5.80	112.71	104.00
22	DA	1606	C	P-O3'-C3'	5.80	128.91	120.20
21	AA	1161	C	N1-C1'-C2'	-5.80	103.30	112.00
22	BA	2801	G	P-O3'-C3'	-5.80	111.50	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	449	A	P-O5'-C5'	-5.80	112.20	120.90
22	BA	481	G	O3'-P-O5'	-5.80	95.30	104.00
22	BA	1538	G	P-O3'-C3'	-5.80	111.50	120.20
22	BA	1956	U	P-O5'-C5'	-5.80	112.20	120.90
22	BA	2797	U	N1-C1'-C2'	5.80	122.70	114.00
22	BA	1326	U	N1-C1'-C2'	-5.79	103.31	112.00
22	BA	2324	U	C2'-C3'-O3'	5.79	118.19	109.50
22	BA	85	G	P-O3'-C3'	-5.79	111.51	120.20
22	DA	1023	U	P-O3'-C3'	-5.79	111.52	120.20
22	DA	1119	U	O4'-C1'-N1	5.79	117.18	108.50
22	DA	2611	C	P-O3'-C3'	-5.79	111.52	120.20
22	DA	1636	U	N1-C1'-C2'	-5.78	103.32	112.00
22	DA	2683	C	P-O3'-C3'	-5.78	111.53	120.20
22	BA	1638	C	P-O5'-C5'	-5.78	112.23	120.90
53	CA	95	C	N1-C1'-C2'	-5.78	103.33	112.00
22	DA	1522	A	P-O3'-C3'	5.78	128.87	120.20
21	AA	485	U	P-O3'-C3'	5.78	128.87	120.20
22	DA	73	A	P-O3'-C3'	-5.78	111.53	120.20
22	DA	196	A	P-O3'-C3'	5.78	128.87	120.20
22	BA	628	G	P-O3'-C3'	-5.78	111.53	120.20
21	AA	1168	U	P-O3'-C3'	5.77	128.86	120.20
22	BA	866	A	P-O3'-C3'	-5.77	111.54	120.20
22	BA	811	U	O4'-C1'-N1	5.77	116.86	108.20
22	BA	1286	A	P-O3'-C3'	5.77	128.86	120.20
21	AA	267	C	P-O5'-C5'	-5.77	112.24	120.90
22	BA	1524	G	P-O5'-C5'	-5.77	112.24	120.90
22	BA	656	G	P-O5'-C5'	-5.77	112.24	120.90
22	BA	75	G	P-O3'-C3'	-5.77	111.55	120.20
6	CG	86	VAL	N-CA-C	5.77	113.58	107.76
22	DA	1717	A	P-O3'-C3'	-5.77	111.55	120.20
22	DA	531	C	O3'-P-O5'	-5.76	95.35	104.00
21	AA	1213	A	P-O3'-C3'	5.76	128.84	120.20
22	DA	1274	A	P-O3'-C3'	-5.76	111.56	120.20
22	BA	1301	A	P-O5'-C5'	-5.76	112.26	120.90
22	DA	1759	A	P-O3'-C3'	-5.76	111.56	120.20
22	BA	587	C	N1-C1'-C2'	5.76	122.63	114.00
54	DB	40	U	N1-C1'-C2'	5.76	122.64	114.00
22	BA	2567	G	P-O3'-C3'	-5.75	111.57	120.20
21	AA	14	U	P-O3'-C3'	-5.75	111.57	120.20
22	BA	1828	G	P-O3'-C3'	5.75	128.83	120.20
9	CJ	40	ILE	CA-C-N	5.75	127.03	119.84
9	CJ	40	ILE	C-N-CA	5.75	127.03	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	492	A	P-O3'-C3'	-5.75	111.57	120.20
21	AA	1129	C	N1-C1'-C2'	5.75	122.63	114.00
42	BU	96	LYS	N-CA-C	-5.75	103.06	110.19
21	AA	596	A	P-O5'-C5'	-5.75	112.28	120.90
21	AA	718	A	P-O3'-C3'	-5.75	111.58	120.20
22	BA	1816	C	P-O3'-C3'	-5.75	111.58	120.20
23	BB	75	G	P-O5'-C5'	-5.75	112.28	120.90
21	AA	366	A	P-O3'-C3'	5.75	128.82	120.20
22	DA	2023	C	P-O3'-C3'	-5.75	111.58	120.20
22	DA	2267	A	N9-C1'-C2'	-5.75	103.38	112.00
21	AA	1381	U	P-O5'-C5'	-5.74	112.28	120.90
22	BA	985	C	P-O5'-C5'	-5.74	112.28	120.90
22	BA	1476	U	C2'-C3'-O3'	-5.74	105.09	113.70
22	DA	2656	U	P-O3'-C3'	-5.74	111.59	120.20
22	DA	1615	C	P-O3'-C3'	5.74	128.81	120.20
22	DA	2879	A	P-O3'-C3'	5.74	128.81	120.20
4	CE	78	GLY	N-CA-C	-5.74	107.34	115.43
22	DA	2199	A	P-O3'-C3'	-5.74	111.60	120.20
22	BA	2630	G	P-O3'-C3'	-5.73	111.60	120.20
22	BA	2092	U	P-O3'-C3'	5.73	128.80	120.20
22	BA	557	C	P-O5'-C5'	-5.73	112.31	120.90
22	BA	1020	A	P-O3'-C3'	5.73	128.79	120.20
22	DA	1838	C	P-O3'-C3'	5.72	128.78	120.20
22	DA	754	U	N1-C1'-C2'	-5.72	103.42	112.00
22	DA	2572	A	P-O3'-C3'	5.72	128.78	120.20
41	DT	13	ALA	N-CA-C	5.72	113.37	108.22
31	BJ	41	LYS	N-CA-C	5.72	122.98	110.80
22	DA	1733	G	P-O3'-C3'	-5.71	111.63	120.20
22	DA	1027	A	P-O3'-C3'	-5.71	111.63	120.20
26	BE	117	ARG	N-CA-C	-5.71	105.97	113.17
22	DA	1654	A	C3'-C2'-C1'	5.71	107.01	101.30
21	AA	1502	A	P-O3'-C3'	5.71	128.76	120.20
22	BA	221	A	O3'-P-O5'	5.71	112.56	104.00
53	CA	508	U	P-O3'-C3'	5.71	128.76	120.20
22	DA	2493	U	N1-C1'-C2'	-5.71	103.44	112.00
22	DA	913	U	P-O3'-C3'	5.70	128.75	120.20
21	AA	268	U	N1-C1'-C2'	-5.70	103.45	112.00
21	AA	1055	A	P-O5'-C5'	-5.70	112.35	120.90
22	BA	2832	U	P-O3'-C3'	5.70	128.75	120.20
53	CA	734	G	P-O3'-C3'	-5.70	111.65	120.20
22	BA	1647	U	O4'-C1'-N1	5.70	116.75	108.20
22	BA	200	U	N1-C1'-C2'	-5.70	103.45	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1333	G	P-O3'-C3'	-5.70	111.65	120.20
22	DA	1615	C	N1-C1'-C2'	5.70	122.55	114.00
2	AC	184	ASN	N-CA-C	5.70	116.89	108.86
21	AA	1152	A	P-O3'-C3'	-5.70	111.66	120.20
22	BA	1493	C	P-O3'-C3'	5.70	128.74	120.20
22	BA	968	C	O3'-P-O5'	-5.69	95.47	104.00
53	CA	72	A	P-O3'-C3'	-5.69	111.67	120.20
22	DA	335	C	P-O3'-C3'	-5.69	111.67	120.20
22	BA	162	U	P-O3'-C3'	5.69	128.73	120.20
22	DA	2543	G	P-O3'-C3'	-5.68	111.67	120.20
22	BA	2149	U	N1-C1'-C2'	-5.68	103.48	112.00
22	BA	2210	U	N1-C1'-C2'	5.68	122.52	114.00
7	AH	4	ASP	CA-C-N	5.68	125.04	118.85
7	AH	4	ASP	C-N-CA	5.68	125.04	118.85
22	BA	2566	A	P-O3'-C3'	5.68	128.72	120.20
22	BA	2346	A	P-O3'-C3'	5.68	128.72	120.20
53	CA	94	G	P-O3'-C3'	5.68	128.72	120.20
2	AC	204	GLY	N-CA-C	5.67	126.63	113.18
53	CA	686	U	N1-C1'-C2'	5.67	122.51	114.00
21	AA	91	U	C3'-C2'-C1'	5.67	106.97	101.30
31	BJ	25	LEU	CA-C-N	-5.67	116.73	123.08
31	BJ	25	LEU	C-N-CA	-5.67	116.73	123.08
21	AA	90	C	N1-C1'-C2'	-5.67	103.49	112.00
22	BA	620	G	O3'-P-O5'	5.67	112.51	104.00
22	BA	1717	A	P-O3'-C3'	-5.67	111.69	120.20
22	DA	510	C	N1-C1'-C2'	-5.67	103.50	112.00
22	BA	512	G	O4'-C1'-N9	5.67	116.70	108.20
21	AA	520	A	P-O3'-C3'	-5.67	111.70	120.20
21	AA	1124	G	P-O3'-C3'	5.67	128.70	120.20
54	DB	68	C	P-O3'-C3'	-5.67	111.70	120.20
22	BA	512	G	P-O3'-C3'	5.66	128.69	120.20
22	BA	1183	U	O3'-P-O5'	-5.66	95.51	104.00
53	CA	974	A	P-O3'-C3'	5.66	128.69	120.20
22	BA	2656	U	N1-C1'-C2'	-5.65	103.52	112.00
1	CB	199	ILE	CA-C-N	5.65	126.91	119.84
1	CB	199	ILE	C-N-CA	5.65	126.91	119.84
22	BA	1026	G	P-O3'-C3'	-5.65	111.72	120.20
22	BA	1180	U	N1-C1'-C2'	5.65	122.47	114.00
22	DA	1475	G	P-O3'-C3'	5.65	128.68	120.20
22	DA	1931	U	N1-C1'-C2'	-5.65	103.52	112.00
22	BA	728	G	O3'-P-O5'	-5.65	95.53	104.00
22	BA	2052	A	N9-C1'-C2'	-5.64	103.53	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1956	U	N1-C1'-C2'	-5.64	103.54	112.00
22	BA	1654	A	C3'-C2'-C1'	5.64	106.94	101.30
22	BA	1943	U	P-O3'-C3'	5.64	128.66	120.20
22	DA	1275	A	P-O3'-C3'	5.64	128.66	120.20
21	AA	267	C	C3'-C2'-C1'	5.64	106.94	101.30
22	BA	2613	U	O4'-C1'-N1	5.64	116.66	108.20
22	DA	1700	A	C3'-C2'-C1'	5.63	106.94	101.30
22	DA	1971	U	N1-C1'-C2'	-5.63	103.55	112.00
21	AA	1365	G	P-O3'-C3'	-5.63	111.75	120.20
50	D2	9	VAL	N-CA-C	5.63	117.04	110.62
45	DX	52	ALA	N-CA-C	-5.63	102.69	110.35
22	DA	2286	G	P-O3'-C3'	5.63	128.64	120.20
22	DA	1020	A	P-O3'-C3'	5.63	128.64	120.20
22	BA	812	C	P-O3'-C3'	-5.62	111.76	120.20
22	DA	1476	U	O4'-C1'-N1	5.62	116.93	108.50
24	BC	184	GLU	N-CA-C	5.62	119.61	112.87
21	AA	509	A	P-O5'-C5'	-5.62	112.47	120.90
21	AA	282	A	P-O5'-C5'	-5.62	112.47	120.90
53	CA	1191	A	P-O3'-C3'	-5.62	111.78	120.20
22	BA	671	C	N1-C1'-C2'	-5.62	103.58	112.00
53	CA	885	G	P-O3'-C3'	-5.62	111.78	120.20
22	DA	510	C	P-O3'-C3'	-5.62	111.78	120.20
22	BA	2809	A	P-O3'-C3'	-5.61	111.78	120.20
27	BF	137	PHE	CA-C-N	5.61	125.45	119.28
27	BF	137	PHE	C-N-CA	5.61	125.45	119.28
22	BA	2756	U	O3'-P-O5'	5.61	112.42	104.00
22	DA	2498	C	P-O3'-C3'	-5.61	111.78	120.20
54	DB	40	U	P-O3'-C3'	5.61	128.61	120.20
22	BA	339	U	N1-C1'-C2'	5.61	120.41	112.00
22	DA	754	U	P-O3'-C3'	-5.61	111.79	120.20
22	DA	958	U	N1-C1'-C2'	-5.61	103.59	112.00
53	CA	1397	C	N1-C1'-C2'	-5.61	103.59	112.00
22	DA	1396	U	N1-C1'-C2'	5.61	120.41	112.00
21	AA	1337	G	P-O3'-C3'	-5.60	111.79	120.20
53	CA	991	U	N1-C1'-C2'	5.60	120.41	112.00
22	DA	990	A	P-O3'-C3'	-5.60	111.79	120.20
22	DA	2282	G	P-O3'-C3'	5.60	128.61	120.20
21	AA	316	C	N1-C1'-C2'	-5.60	103.59	112.00
22	BA	990	A	P-O3'-C3'	-5.60	111.80	120.20
45	BX	28	PHE	N-CA-C	-5.60	100.57	109.76
21	AA	1348	U	P-O3'-C3'	-5.60	111.80	120.20
22	DA	1478	G	P-O3'-C3'	-5.60	111.80	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1965	C	P-O5'-C5'	-5.60	112.50	120.90
21	AA	74	A	P-O3'-C3'	-5.60	111.80	120.20
28	BG	152	ARG	CA-C-N	5.60	126.84	119.84
28	BG	152	ARG	C-N-CA	5.60	126.84	119.84
21	AA	984	C	N1-C1'-C2'	-5.59	103.61	112.00
22	DA	2868	A	P-O3'-C3'	-5.59	111.81	120.20
21	AA	874	G	P-O5'-C5'	-5.59	112.51	120.90
22	BA	1273	U	P-O3'-C3'	-5.59	111.81	120.20
53	CA	595	A	P-O3'-C3'	5.59	128.59	120.20
22	BA	1062	G	C3'-C2'-C1'	5.59	106.89	101.30
53	CA	414	A	P-O3'-C3'	-5.59	111.81	120.20
21	AA	330	C	P-O3'-C3'	-5.59	111.82	120.20
22	BA	299	A	N9-C1'-C2'	5.59	120.38	112.00
53	CA	213	G	P-O3'-C3'	-5.59	111.82	120.20
22	BA	70	G	P-O3'-C3'	5.58	128.58	120.20
22	BA	984	A	O3'-P-O5'	5.58	112.38	104.00
22	DA	1963	U	P-O3'-C3'	-5.58	111.82	120.20
22	BA	313	G	P-O5'-C5'	-5.58	112.53	120.90
33	BL	7	SER	CA-C-N	5.58	125.55	120.03
33	BL	7	SER	C-N-CA	5.58	125.55	120.03
53	CA	52	C	N1-C1'-C2'	-5.58	103.63	112.00
53	CA	705	G	P-O3'-C3'	-5.58	111.83	120.20
22	DA	1498	C	P-O3'-C3'	-5.58	111.83	120.20
1	AB	83	ALA	N-CA-C	-5.58	105.97	112.89
22	BA	1732	C	N1-C1'-C2'	5.58	122.37	114.00
44	BW	63	ASP	N-CA-C	5.58	118.56	110.42
22	DA	1455	G	P-O3'-C3'	-5.58	111.83	120.20
22	BA	61	C	P-O5'-C5'	-5.58	112.54	120.90
22	DA	2497	A	O3'-P-O5'	5.58	112.36	104.00
21	AA	1362	A	P-O3'-C3'	5.57	128.56	120.20
22	DA	206	U	P-O3'-C3'	-5.57	111.84	120.20
15	CP	61	VAL	N-CA-C	-5.57	104.51	110.36
22	BA	1816	C	N1-C1'-C2'	-5.57	103.65	112.00
22	DA	1839	G	P-O3'-C3'	-5.57	111.85	120.20
53	CA	513	C	C3'-C2'-C1'	5.57	106.87	101.30
22	DA	1916	A	P-O3'-C3'	-5.57	111.85	120.20
53	CA	641	U	P-O3'-C3'	5.56	128.55	120.20
21	AA	214	C	N1-C1'-C2'	-5.56	103.66	112.00
22	BA	1651	G	O3'-P-O5'	-5.56	95.66	104.00
53	CA	1282	C	N1-C1'-C2'	-5.56	103.66	112.00
31	DJ	42	ALA	N-CA-C	-5.56	102.08	110.70
22	BA	1326	U	P-O3'-C3'	-5.56	111.86	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	2609	U	N1-C1'-C2'	5.56	122.33	114.00
21	AA	81	A	P-O3'-C3'	5.55	128.53	120.20
22	BA	1019	U	N1-C1'-C2'	5.55	120.33	112.00
22	BA	1602	U	P-O3'-C3'	5.55	128.53	120.20
22	BA	2752	C	P-O3'-C3'	-5.55	111.87	120.20
53	CA	1399	C	P-O3'-C3'	5.55	128.53	120.20
22	DA	1993	U	P-O3'-C3'	-5.55	111.87	120.20
39	BR	51	VAL	CA-C-N	-5.55	114.26	120.14
39	BR	51	VAL	C-N-CA	-5.55	114.26	120.14
22	BA	2391	G	P-O3'-C3'	5.55	128.52	120.20
22	DA	1417	C	P-O3'-C3'	-5.54	111.88	120.20
22	DA	2458	G	O4'-C1'-N9	5.54	116.52	108.20
22	BA	1634	A	P-O3'-C3'	5.54	128.51	120.20
39	BR	92	TRP	N-CA-C	5.54	117.23	110.41
22	DA	1069	A	O3'-P-O5'	5.54	112.31	104.00
22	BA	919	U	O4'-C1'-C2'	-5.54	102.06	107.60
22	DA	1993	U	N1-C1'-C2'	-5.54	103.69	112.00
22	DA	1255	U	N1-C1'-C2'	-5.54	103.69	112.00
21	AA	91	U	N1-C1'-C2'	-5.54	103.69	112.00
21	AA	935	A	P-O3'-C3'	-5.54	111.89	120.20
22	DA	865	C	P-O3'-C3'	5.54	128.51	120.20
22	BA	1784	A	P-O3'-C3'	5.54	128.50	120.20
53	CA	381	C	P-O3'-C3'	5.54	128.50	120.20
22	BA	505	A	P-O3'-C3'	-5.54	111.90	120.20
22	DA	1290	C	N1-C1'-C2'	-5.54	103.70	112.00
21	AA	213	G	C3'-C2'-C1'	5.53	106.83	101.30
21	AA	244	U	P-O5'-C5'	-5.53	112.60	120.90
53	CA	210	C	P-O3'-C3'	5.53	128.50	120.20
22	BA	2836	U	P-O3'-C3'	-5.53	111.90	120.20
22	DA	615	U	N1-C1'-C2'	5.53	122.30	114.00
21	AA	1161	C	P-O3'-C3'	-5.53	111.90	120.20
22	BA	1033	U	O4'-C1'-N1	5.53	116.49	108.20
21	AA	84	U	N1-C1'-C2'	5.53	120.29	112.00
22	BA	1249	U	P-O5'-C5'	-5.53	112.61	120.90
22	BA	2687	U	N1-C1'-C2'	5.53	120.29	112.00
24	BC	163	ILE	CB-CA-C	-5.53	104.62	111.08
53	CA	47	C	P-O3'-C3'	5.53	128.49	120.20
22	DA	2582	G	P-O3'-C3'	-5.53	111.91	120.20
22	BA	616	A	P-O3'-C3'	-5.52	111.92	120.20
22	DA	1460	U	P-O3'-C3'	5.52	128.48	120.20
21	AA	1278	G	P-O3'-C3'	5.52	128.48	120.20
22	BA	1733	G	P-O3'-C3'	-5.52	111.92	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1272	A	P-O3'-C3'	5.52	128.48	120.20
53	CA	1142	G	P-O3'-C3'	-5.52	111.92	120.20
53	CA	1349	A	P-O3'-C3'	-5.52	111.92	120.20
22	DA	476	G	P-O3'-C3'	-5.52	111.93	120.20
22	BA	739	A	P-O3'-C3'	5.51	128.47	120.20
22	BA	1386	C	P-O3'-C3'	-5.51	111.93	120.20
23	BB	109	A	P-O3'-C3'	-5.51	111.93	120.20
21	AA	247	G	P-O3'-C3'	-5.51	111.94	120.20
19	CT	78	LEU	N-CA-C	-5.51	106.49	113.43
54	DB	88	C	N1-C1'-C2'	5.51	122.26	114.00
21	AA	1212	U	N1-C1'-C2'	5.51	120.26	112.00
53	CA	1285	A	P-O3'-C3'	5.50	128.46	120.20
21	AA	1053	G	O3'-P-O5'	-5.50	95.75	104.00
54	DB	41	G	P-O3'-C3'	-5.50	111.94	120.20
22	BA	1082	U	O4'-C1'-N1	5.50	116.75	108.50
53	CA	1397	C	P-O3'-C3'	-5.50	111.95	120.20
22	DA	1268	A	C3'-C2'-C1'	5.50	106.80	101.30
53	CA	1087	G	P-O3'-C3'	-5.50	111.95	120.20
22	DA	2052	A	P-O3'-C3'	-5.50	111.95	120.20
22	BA	1865	U	P-O3'-C3'	5.50	128.44	120.20
23	BB	24	G	P-O3'-C3'	5.50	128.44	120.20
21	AA	686	U	N1-C1'-C2'	5.49	122.24	114.00
22	BA	531	C	O3'-P-O5'	-5.49	95.76	104.00
53	CA	1216	A	P-O3'-C3'	-5.49	111.96	120.20
22	BA	2638	G	P-O3'-C3'	5.49	128.44	120.20
21	AA	567	G	C2'-C3'-O3'	-5.49	105.47	113.70
21	AA	717	U	P-O3'-C3'	5.49	128.43	120.20
1	AB	191	ASP	CA-C-N	5.48	125.15	119.56
1	AB	191	ASP	C-N-CA	5.48	125.15	119.56
22	BA	1611	C	P-O5'-C5'	-5.48	112.68	120.90
22	BA	2768	U	P-O3'-C3'	-5.48	111.98	120.20
22	DA	2275	C	N1-C1'-C2'	5.48	122.22	114.00
21	AA	429	U	P-O3'-C3'	5.48	128.42	120.20
22	BA	2353	G	P-O5'-C5'	-5.48	112.68	120.90
53	CA	15	G	P-O3'-C3'	-5.48	111.98	120.20
21	AA	701	U	P-O3'-C3'	5.48	128.42	120.20
22	BA	729	G	P-O3'-C3'	-5.48	111.98	120.20
22	BA	831	G	P-O5'-C5'	-5.48	112.68	120.90
22	BA	1303	G	P-O3'-C3'	-5.48	111.98	120.20
21	AA	403	C	P-O3'-C3'	-5.47	111.99	120.20
22	BA	2681	C	P-O3'-C3'	5.47	128.41	120.20
22	DA	2638	G	P-O3'-C3'	5.47	128.41	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1838	C	O4'-C1'-N1	5.47	116.40	108.20
21	AA	1224	U	N1-C1'-C2'	5.47	122.20	114.00
22	BA	1969	A	P-O5'-C5'	-5.46	112.70	120.90
22	DA	483	A	P-O3'-C3'	-5.46	112.00	120.20
22	DA	1603	A	P-O3'-C3'	-5.46	112.00	120.20
22	BA	197	A	P-O3'-C3'	-5.46	112.01	120.20
39	BR	90	ARG	N-CA-C	5.46	119.44	112.12
21	AA	509	A	P-O3'-C3'	-5.46	112.01	120.20
21	AA	1202	U	C3'-C2'-C1'	5.46	106.76	101.30
22	DA	234	U	P-O3'-C3'	-5.46	112.01	120.20
22	DA	1683	U	P-O3'-C3'	-5.46	112.02	120.20
53	CA	1183	U	N1-C1'-C2'	-5.46	105.82	114.00
22	DA	389	G	P-O3'-C3'	-5.45	112.02	120.20
22	BA	798	G	P-O5'-C5'	-5.45	112.73	120.90
34	BM	63	ILE	N-CA-C	5.45	115.83	107.77
23	BB	48	U	P-O5'-C5'	-5.45	112.73	120.90
22	BA	858	G	P-O5'-C5'	-5.45	112.73	120.90
24	BC	216	ARG	CA-C-N	5.44	125.37	119.76
24	BC	216	ARG	C-N-CA	5.44	125.37	119.76
22	BA	1809	A	P-O3'-C3'	-5.44	112.04	120.20
22	DA	828	U	N1-C1'-C2'	5.44	120.17	112.00
54	DB	24	G	P-O3'-C3'	5.44	128.37	120.20
21	AA	994	A	P-O3'-C3'	-5.44	112.04	120.20
22	DA	2612	C	P-O3'-C3'	-5.44	112.04	120.20
23	BB	90	C	P-O3'-C3'	-5.44	112.05	120.20
22	DA	1942	C	P-O3'-C3'	-5.44	112.04	120.20
35	DN	23	ASN	N-CA-C	-5.44	107.66	114.56
21	AA	92	U	N1-C1'-C2'	5.43	120.15	112.00
22	DA	2384	U	N1-C1'-C2'	5.43	122.15	114.00
21	AA	414	A	P-O3'-C3'	-5.43	112.05	120.20
21	AA	1224	U	O4'-C1'-N1	5.43	116.35	108.20
19	CT	5	SER	N-CA-C	-5.43	106.24	112.92
53	CA	559	A	O3'-P-O5'	5.43	112.14	104.00
22	DA	2615	U	P-O3'-C3'	-5.43	112.05	120.20
22	BA	229	C	C3'-C2'-C1'	5.43	106.73	101.30
22	BA	2072	C	O3'-P-O5'	-5.43	95.86	104.00
53	CA	1160	G	P-O3'-C3'	-5.43	112.06	120.20
22	DA	139	U	N1-C1'-C2'	5.43	120.14	112.00
22	DA	164	C	P-O3'-C3'	-5.43	112.06	120.20
13	AN	55	SER	CA-C-N	5.42	125.07	119.05
13	AN	55	SER	C-N-CA	5.42	125.07	119.05
22	BA	1838	C	P-O3'-C3'	5.42	128.34	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
54	DB	87	U	N1-C1'-C2'	5.42	120.14	112.00
22	DA	1915	U	N1-C1'-C2'	-5.42	103.87	112.00
22	BA	752	A	P-O5'-C5'	-5.42	112.78	120.90
23	BB	66	A	O3'-P-O5'	5.42	112.12	104.00
41	BT	29	THR	N-CA-C	5.42	122.34	110.80
53	CA	183	C	O4'-C1'-N1	5.42	116.32	108.20
53	CA	1336	C	N1-C1'-C2'	5.42	120.12	112.00
22	DA	374	A	C3'-C2'-C1'	5.42	106.72	101.30
22	DA	2800	A	C3'-C2'-C1'	5.42	106.72	101.30
22	DA	2667	C	N1-C1'-C2'	-5.41	103.88	112.00
22	BA	2519	U	O3'-P-O5'	-5.41	95.88	104.00
15	CP	14	ARG	CA-C-N	5.41	125.39	120.03
15	CP	14	ARG	C-N-CA	5.41	125.39	120.03
22	DA	207	A	P-O3'-C3'	-5.41	112.08	120.20
22	BA	1144	A	P-O5'-C5'	-5.41	112.79	120.90
22	BA	1276	A	P-O3'-C3'	-5.41	112.09	120.20
53	CA	914	A	C3'-C2'-C1'	5.41	106.71	101.30
21	AA	1224	U	P-O5'-C5'	5.41	129.01	120.90
22	BA	860	U	C3'-C2'-C1'	5.41	106.71	101.30
22	BA	2759	G	O3'-P-O5'	-5.41	95.89	104.00
50	B2	43	THR	N-CA-C	5.41	120.78	114.62
22	DA	646	U	N1-C1'-C2'	5.41	120.11	112.00
22	BA	2335	A	C3'-C2'-C1'	5.40	106.70	101.30
21	AA	961	U	P-O3'-C3'	-5.40	112.10	120.20
22	BA	948	C	P-O5'-C5'	-5.40	112.80	120.90
53	CA	95	C	P-O3'-C3'	-5.40	112.10	120.20
53	CA	652	U	P-O3'-C3'	5.40	128.30	120.20
22	BA	1011	G	P-O3'-C3'	5.40	128.30	120.20
22	BA	1695	G	P-O3'-C3'	-5.40	112.10	120.20
53	CA	430	A	P-O3'-C3'	-5.40	112.11	120.20
22	DA	2276	G	P-O3'-C3'	-5.40	112.11	120.20
21	AA	422	C	N1-C1'-C2'	5.39	122.09	114.00
21	AA	1101	A	P-O3'-C3'	5.39	128.29	120.20
22	BA	2064	C	O3'-P-O5'	-5.39	95.91	104.00
22	BA	2407	A	P-O3'-C3'	-5.39	112.11	120.20
53	CA	1184	G	P-O3'-C3'	-5.39	112.11	120.20
22	DA	475	C	P-O5'-C5'	-5.39	112.81	120.90
53	CA	251	G	P-O3'-C3'	5.39	128.28	120.20
53	CA	486	U	N1-C1'-C2'	-5.39	103.92	112.00
22	DA	244	A	C3'-C2'-C1'	5.39	106.69	101.30
53	CA	276	G	C3'-C2'-C1'	5.39	106.69	101.30
21	AA	935	A	N9-C1'-C2'	-5.39	103.92	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2312	U	P-O5'-C5'	-5.39	112.82	120.90
21	AA	1145	A	P-O3'-C3'	5.38	128.28	120.20
22	DA	995	C	N1-C1'-C2'	5.38	120.08	112.00
22	DA	1556	C	P-O3'-C3'	-5.38	112.12	120.20
22	DA	14	A	C3'-C2'-C1'	5.38	106.68	101.30
22	BA	2784	U	P-O5'-C5'	-5.38	112.83	120.90
53	CA	13	U	P-O3'-C3'	5.38	128.27	120.20
22	DA	232	G	P-O3'-C3'	5.38	128.27	120.20
21	AA	1336	C	C2'-C3'-O3'	5.38	117.56	109.50
22	DA	1060	U	N1-C1'-C2'	5.38	122.06	114.00
22	BA	369	U	N1-C1'-C2'	5.37	122.06	114.00
22	BA	2680	U	N1-C1'-C2'	5.37	120.06	112.00
22	DA	143	C	N1-C1'-C2'	-5.37	103.94	112.00
22	BA	1700	A	P-O3'-C3'	-5.37	112.14	120.20
22	DA	404	A	P-O3'-C3'	5.37	128.26	120.20
22	DA	2725	A	P-O3'-C3'	5.37	128.26	120.20
22	BA	1036	G	P-O5'-C5'	-5.37	112.85	120.90
21	AA	1211	U	N1-C1'-C2'	5.37	120.05	112.00
22	BA	121	G	P-O3'-C3'	-5.37	112.15	120.20
22	BA	1919	A	C2'-C3'-O3'	-5.37	105.65	113.70
38	DQ	95	ALA	N-CA-C	-5.37	104.31	111.87
22	DA	1388	G	P-O3'-C3'	-5.36	112.15	120.20
22	BA	97	C	O3'-P-O5'	-5.36	95.96	104.00
22	BA	1936	A	P-O3'-C3'	5.36	128.24	120.20
22	DA	2347	C	P-O3'-C3'	-5.36	112.16	120.20
22	DA	2403	C	P-O3'-C3'	-5.36	112.16	120.20
21	AA	273	U	O3'-P-O5'	-5.36	95.96	104.00
22	BA	802	A	P-O3'-C3'	-5.36	112.17	120.20
22	DA	445	C	N1-C1'-C2'	-5.36	103.96	112.00
22	DA	1982	U	P-O3'-C3'	-5.36	112.16	120.20
21	AA	1140	C	O4'-C1'-N1	5.36	116.53	108.50
53	CA	992	U	C2'-C3'-O3'	5.36	117.53	109.50
22	BA	740	C	P-O3'-C3'	-5.35	112.17	120.20
21	AA	914	A	C3'-C2'-C1'	5.35	106.65	101.30
5	AF	17	GLN	N-CA-C	-5.35	106.78	113.15
22	BA	33	C	P-O3'-C3'	5.35	128.23	120.20
21	AA	972	C	P-O3'-C3'	-5.35	112.18	120.20
22	DA	1256	G	P-O3'-C3'	-5.35	112.18	120.20
54	DB	58	A	C3'-C2'-C1'	5.35	106.65	101.30
22	BA	271	G	O3'-P-O5'	5.35	112.02	104.00
53	CA	889	A	P-O3'-C3'	5.35	128.22	120.20
22	DA	353	C	P-O3'-C3'	5.35	128.22	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1079	C	N1-C1'-C2'	-5.35	103.98	112.00
22	BA	959	A	O3'-P-O5'	-5.34	95.98	104.00
22	BA	1431	A	P-O5'-C5'	-5.34	112.88	120.90
53	CA	654	G	C3'-C2'-C1'	5.34	106.64	101.30
22	DA	370	G	P-O3'-C3'	5.34	128.22	120.20
22	DA	1063	G	P-O3'-C3'	-5.34	112.19	120.20
22	DA	2714	G	P-O3'-C3'	-5.34	112.19	120.20
21	AA	70	U	P-O3'-C3'	5.34	128.21	120.20
21	AA	1303	C	P-O3'-C3'	-5.34	112.19	120.20
26	BE	88	ARG	N-CA-C	-5.34	102.25	110.58
31	BJ	82	GLY	N-CA-C	-5.34	100.53	113.18
22	DA	947	A	C3'-C2'-C1'	5.34	106.64	101.30
22	BA	975	A	P-O5'-C5'	-5.34	112.90	120.90
22	DA	1558	C	P-O3'-C3'	5.34	128.20	120.20
22	DA	2382	G	P-O3'-C3'	5.34	128.20	120.20
22	BA	396	G	P-O5'-C5'	-5.33	112.90	120.90
22	BA	1340	U	C4'-C3'-C2'	5.33	107.93	102.60
22	BA	1129	A	C3'-C2'-C1'	5.33	106.63	101.30
22	BA	2431	U	P-O5'-C5'	-5.33	112.90	120.90
22	DA	2036	C	C3'-C2'-C1'	5.33	106.63	101.30
22	DA	2148	G	P-O3'-C3'	-5.33	112.20	120.20
31	DJ	27	ARG	N-CA-C	-5.33	106.62	113.23
21	AA	1297	G	P-O3'-C3'	5.33	128.19	120.20
53	CA	109	A	O3'-P-O5'	-5.33	96.00	104.00
22	DA	687	C	N1-C1'-C2'	-5.33	104.01	112.00
53	CA	1064	G	P-O3'-C3'	5.32	128.19	120.20
53	CA	70	U	P-O3'-C3'	5.32	128.18	120.20
53	CA	1395	C	P-O3'-C3'	-5.32	112.22	120.20
22	DA	442	G	P-O3'-C3'	5.32	128.18	120.20
22	DA	1971	U	P-O3'-C3'	-5.32	112.22	120.20
22	DA	2333	A	P-O3'-C3'	5.32	128.18	120.20
22	DA	2408	U	N1-C1'-C2'	-5.32	104.02	112.00
21	AA	116	A	P-O5'-C5'	-5.32	112.92	120.90
21	AA	1453	G	P-O3'-C3'	-5.32	112.22	120.20
22	BA	453	A	O3'-P-O5'	-5.32	96.02	104.00
53	CA	389	A	P-O3'-C3'	-5.32	112.22	120.20
22	DA	1400	U	C3'-C2'-C1'	5.32	106.62	101.30
22	BA	613	A	P-O3'-C3'	5.32	128.18	120.20
22	BA	1250	G	P-O3'-C3'	5.32	128.17	120.20
53	CA	67	C	N1-C1'-C2'	-5.32	106.03	114.00
22	BA	1110	G	P-O3'-C3'	5.31	128.17	120.20
22	BA	390	U	N1-C1'-C2'	5.31	121.97	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
44	BW	21	GLY	N-CA-C	-5.31	104.47	112.60
11	AL	115	LYS	N-CA-C	-5.31	102.62	110.48
22	BA	1634	A	C4'-C3'-C2'	5.31	107.91	102.60
22	BA	1476	U	C3'-C2'-C1'	5.31	106.61	101.30
40	BS	19	LEU	N-CA-C	-5.31	99.49	110.80
22	DA	648	G	P-O3'-C3'	-5.31	112.23	120.20
22	BA	1072	C	N1-C1'-C2'	-5.31	104.04	112.00
38	BQ	24	TYR	N-CA-C	5.31	118.33	110.48
22	BA	1944	U	P-O5'-C5'	-5.30	112.94	120.90
22	BA	2797	U	P-O3'-C3'	5.30	128.16	120.20
53	CA	517	G	P-O3'-C3'	5.30	128.16	120.20
53	CA	803	G	C3'-C2'-C1'	5.30	106.61	101.30
22	BA	1637	A	P-O5'-C5'	-5.30	112.95	120.90
22	BA	1943	U	C4'-C3'-C2'	5.30	107.90	102.60
33	BL	77	ILE	N-CA-C	5.30	114.42	106.42
22	DA	1535	A	P-O3'-C3'	5.30	128.15	120.20
24	DC	73	ILE	CA-C-N	5.30	126.13	119.98
24	DC	73	ILE	C-N-CA	5.30	126.13	119.98
53	CA	366	A	P-O3'-C3'	5.30	128.15	120.20
53	CA	978	A	P-O3'-C3'	-5.30	112.25	120.20
22	DA	2756	U	O3'-P-O5'	5.30	111.95	104.00
53	CA	1147	C	P-O3'-C3'	-5.30	112.25	120.20
22	BA	1706	C	O4'-C1'-N1	5.30	116.15	108.20
21	AA	72	A	P-O3'-C3'	-5.29	112.26	120.20
22	BA	1617	C	P-O5'-C5'	-5.29	112.96	120.90
26	BE	57	LYS	N-CA-C	5.29	117.99	110.10
22	BA	389	G	O3'-P-O5'	-5.29	96.06	104.00
21	AA	1125	U	O3'-P-O5'	5.29	111.94	104.00
22	BA	1872	A	C3'-C2'-C1'	5.29	106.59	101.30
22	BA	2756	U	C4'-C3'-C2'	5.29	107.89	102.60
22	DA	140	C	N1-C1'-C2'	5.29	119.94	112.00
22	BA	1350	C	P-O3'-C3'	-5.29	112.27	120.20
21	AA	1241	G	P-O3'-C3'	-5.29	112.27	120.20
22	BA	1667	G	P-O3'-C3'	5.29	128.13	120.20
22	BA	2656	U	P-O3'-C3'	-5.29	112.27	120.20
53	CA	914	A	P-O3'-C3'	-5.29	112.27	120.20
22	DA	1693	U	N1-C1'-C2'	5.29	121.93	114.00
22	DA	2215	C	N1-C1'-C2'	-5.29	106.07	114.00
22	DA	627	A	P-O3'-C3'	5.28	128.13	120.20
7	AH	89	ASP	N-CA-C	-5.28	105.69	111.82
22	BA	459	U	C3'-C2'-C1'	5.28	106.58	101.30
22	DA	2492	U	C3'-C2'-C1'	5.28	106.58	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	DP	16	VAL	N-CA-C	5.28	114.12	108.95
22	BA	1394	U	O4'-C1'-N1	-5.28	100.58	108.50
22	BA	113	U	P-O5'-C5'	-5.28	112.98	120.90
22	BA	2440	C	C3'-C2'-C1'	5.28	106.58	101.30
53	CA	1160	G	C3'-C2'-C1'	5.28	106.58	101.30
22	DA	527	C	C2'-C3'-O3'	5.28	117.42	109.50
22	DA	963	U	N1-C1'-C2'	-5.28	104.08	112.00
21	AA	232	G	O3'-P-O5'	-5.28	96.09	104.00
22	BA	1498	C	P-O3'-C3'	-5.28	112.29	120.20
23	BB	53	A	P-O5'-C5'	-5.28	112.99	120.90
22	BA	2866	U	O4'-C1'-N1	5.27	116.11	108.20
22	DA	1025	G	P-O3'-C3'	5.27	128.11	120.20
21	AA	252	U	N1-C1'-C2'	-5.27	104.09	112.00
21	AA	1239	A	P-O3'-C3'	5.27	128.11	120.20
21	AA	1282	C	C3'-C2'-C1'	5.27	106.57	101.30
10	AK	121	ARG	CA-C-N	5.27	123.51	119.66
10	AK	121	ARG	C-N-CA	5.27	123.51	119.66
22	BA	1782	U	P-O3'-C3'	-5.27	112.30	120.20
22	DA	1716	U	N1-C1'-C2'	-5.27	104.09	112.00
22	DA	1965	C	P-O3'-C3'	-5.27	112.30	120.20
22	DA	216	A	P-O3'-C3'	-5.27	112.30	120.20
22	DA	1993	U	C3'-C2'-C1'	5.27	106.57	101.30
22	DA	2756	U	N1-C1'-C2'	5.27	121.90	114.00
22	BA	2828	G	P-O3'-C3'	-5.26	112.30	120.20
22	BA	2888	C	P-O3'-C3'	-5.26	112.30	120.20
22	DA	1236	G	P-O3'-C3'	5.26	128.10	120.20
22	DA	2875	C	P-O3'-C3'	-5.26	112.31	120.20
22	BA	638	G	P-O3'-C3'	-5.26	112.31	120.20
22	DA	765	C	C3'-C2'-C1'	5.26	106.56	101.30
43	DV	26	PHE	CA-C-N	5.26	125.47	120.31
43	DV	26	PHE	C-N-CA	5.26	125.47	120.31
22	DA	1206	G	P-O3'-C3'	-5.26	112.31	120.20
21	AA	215	C	C3'-C2'-C1'	5.26	106.56	101.30
22	BA	1459	G	P-O3'-C3'	-5.26	112.32	120.20
22	BA	1653	G	O3'-P-O5'	5.26	111.89	104.00
42	BU	78	LYS	N-CA-C	5.26	115.99	108.74
3	CD	153	ARG	N-CA-C	5.26	116.69	111.07
22	BA	2034	U	P-O3'-C3'	-5.25	112.32	120.20
21	AA	1319	A	P-O3'-C3'	5.25	128.08	120.20
22	BA	1182	G	P-O3'-C3'	-5.25	112.32	120.20
31	BJ	38	GLY	N-CA-C	-5.25	108.37	115.36
19	CT	33	LYS	N-CA-C	-5.25	105.61	112.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2896	C	P-O5'-C5'	-5.25	113.02	120.90
41	DT	85	VAL	N-CA-C	5.25	115.46	110.42
24	BC	105	ALA	CA-C-N	5.25	125.99	120.11
24	BC	105	ALA	C-N-CA	5.25	125.99	120.11
21	AA	1095	U	P-O3'-C3'	-5.25	112.33	120.20
21	AA	1287	A	C3'-C2'-C1'	5.25	106.55	101.30
53	CA	1440	U	P-O3'-C3'	5.25	128.07	120.20
21	AA	891	U	P-O3'-C3'	-5.25	112.33	120.20
53	CA	403	C	P-O3'-C3'	-5.25	112.33	120.20
2	AC	71	ARG	CA-C-N	5.24	125.05	119.28
2	AC	71	ARG	C-N-CA	5.24	125.05	119.28
22	BA	665	U	P-O5'-C5'	-5.24	113.03	120.90
22	BA	2493	U	P-O3'-C3'	-5.24	112.33	120.20
53	CA	480	U	N1-C1'-C2'	5.24	119.87	112.00
22	BA	806	C	P-O5'-C5'	-5.24	113.04	120.90
22	BA	2089	C	P-O3'-C3'	-5.24	112.34	120.20
53	CA	1296	C	N1-C1'-C2'	5.24	119.86	112.00
22	BA	508	A	P-O3'-C3'	-5.24	112.34	120.20
23	BB	29	A	O3'-P-O5'	-5.24	96.14	104.00
22	DA	234	U	P-O5'-C5'	5.24	128.75	120.90
22	DA	353	C	N1-C1'-C2'	5.24	119.85	112.00
22	DA	961	C	N1-C1'-C2'	5.24	121.85	114.00
22	DA	2023	C	O4'-C1'-N1	5.24	116.35	108.50
22	BA	421	C	P-O3'-C3'	5.23	128.05	120.20
22	BA	1530	G	O3'-P-O5'	-5.23	96.15	104.00
37	BP	34	GLY	N-CA-C	-5.23	100.78	113.18
22	DA	973	A	P-O3'-C3'	5.23	128.05	120.20
22	BA	1150	C	P-O5'-C5'	-5.23	113.05	120.90
53	CA	209	U	P-O3'-C3'	5.23	128.05	120.20
21	AA	1405	G	P-O5'-C5'	-5.23	113.06	120.90
39	BR	86	GLN	CB-CG-CD	5.23	121.49	112.60
22	BA	1691	C	P-O5'-C5'	-5.23	113.06	120.90
22	DA	1552	A	O4'-C1'-N9	5.23	116.34	108.50
21	AA	753	A	O3'-P-O5'	5.22	111.84	104.00
22	BA	846	U	N1-C1'-C2'	5.22	119.84	112.00
21	AA	1288	A	P-O3'-C3'	-5.22	112.37	120.20
53	CA	982	U	P-O3'-C3'	5.22	128.03	120.20
22	BA	1012	U	O4'-C1'-N1	5.22	116.03	108.20
53	CA	1303	C	N1-C1'-C2'	5.22	119.83	112.00
21	AA	567	G	C3'-C2'-C1'	5.22	106.52	101.30
21	AA	1102	A	P-O3'-C3'	-5.22	112.37	120.20
22	BA	41	C	P-O5'-C5'	-5.22	113.08	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	763	G	P-O3'-C3'	-5.22	112.38	120.20
53	CA	73	C	P-O3'-C3'	-5.22	112.38	120.20
46	BY	56	LEU	N-CA-C	-5.21	102.67	110.23
22	DA	807	U	O4'-C1'-N1	5.21	116.32	108.50
22	DA	1158	C	C3'-C2'-C1'	5.21	106.52	101.30
22	DA	1866	A	P-O3'-C3'	-5.21	112.38	120.20
21	AA	1085	U	N1-C1'-C2'	5.21	121.82	114.00
22	BA	2282	G	P-O3'-C3'	5.21	128.02	120.20
53	CA	534	U	N1-C1'-C2'	-5.21	104.18	112.00
22	BA	2344	U	N1-C1'-C2'	5.21	121.81	114.00
21	AA	243	A	P-O3'-C3'	5.21	128.01	120.20
22	BA	1510	G	P-O3'-C3'	-5.21	112.39	120.20
23	BB	90	C	O3'-P-O5'	-5.21	96.19	104.00
22	BA	2524	G	P-O3'-C3'	-5.21	112.39	120.20
22	BA	2635	A	O3'-P-O5'	-5.21	96.19	104.00
48	B0	24	VAL	N-CA-C	5.21	115.31	110.42
22	BA	2267	A	C3'-C2'-C1'	5.20	106.50	101.30
22	DA	2683	C	N1-C1'-C2'	-5.20	104.19	112.00
21	AA	414	A	C3'-C2'-C1'	5.20	106.50	101.30
36	BO	53	THR	N-CA-C	-5.20	106.62	113.17
22	DA	989	G	P-O3'-C3'	5.20	128.00	120.20
22	BA	1277	G	P-O5'-C5'	-5.20	113.10	120.90
22	BA	2579	C	P-O3'-C3'	-5.20	112.40	120.20
22	DA	324	A	P-O3'-C3'	-5.20	112.40	120.20
22	DA	1327	A	C3'-C2'-C1'	5.20	106.50	101.30
22	DA	2667	C	P-O3'-C3'	-5.20	112.40	120.20
10	AK	92	ARG	N-CA-C	-5.20	106.44	112.89
21	AA	246	A	P-O3'-C3'	5.20	128.00	120.20
22	BA	1761	C	N1-C1'-C2'	5.20	119.79	112.00
7	CH	110	MET	N-CA-C	5.20	115.10	108.24
53	CA	82	G	C3'-C2'-C1'	5.20	106.50	101.30
22	DA	1303	G	P-O3'-C3'	-5.20	112.41	120.20
22	DA	303	G	C3'-C2'-C1'	5.19	106.49	101.30
21	AA	372	C	P-O3'-C3'	5.19	127.99	120.20
22	BA	2036	C	N1-C1'-C2'	-5.19	104.21	112.00
22	BA	2066	C	P-O5'-C5'	-5.19	113.11	120.90
22	DA	2880	C	C3'-C2'-C1'	5.19	106.49	101.30
47	DZ	33	HIS	N-CA-C	-5.19	106.64	112.87
26	DE	169	VAL	N-CA-C	5.19	113.85	106.53
22	BA	984	A	N9-C1'-C2'	-5.19	104.22	112.00
22	BA	1866	A	P-O3'-C3'	-5.19	112.42	120.20
22	DA	1558	C	N1-C1'-C2'	5.19	121.78	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	AA	935	A	C3'-C2'-C1'	5.19	106.49	101.30
53	CA	870	U	P-O3'-C3'	5.19	127.98	120.20
22	BA	1236	G	P-O3'-C3'	5.19	127.98	120.20
28	BG	52	GLY	CA-C-N	5.19	126.32	119.84
28	BG	52	GLY	C-N-CA	5.19	126.32	119.84
22	BA	786	C	P-O5'-C5'	-5.18	113.12	120.90
22	BA	1458	U	P-O3'-C3'	5.18	127.98	120.20
22	DA	727	A	C3'-C2'-C1'	5.18	106.48	101.30
34	BM	76	LYS	CA-C-N	5.18	126.32	119.84
34	BM	76	LYS	C-N-CA	5.18	126.32	119.84
22	BA	931	U	P-O3'-C3'	5.18	127.97	120.20
53	CA	1031	C	P-O3'-C3'	5.18	127.97	120.20
22	DA	860	U	P-O3'-C3'	-5.18	112.43	120.20
22	DA	482	A	P-O3'-C3'	-5.18	112.43	120.20
21	AA	688	G	N9-C1'-C2'	-5.18	104.24	112.00
22	BA	451	U	O4'-C1'-N1	5.18	116.26	108.50
22	BA	763	G	C3'-C2'-C1'	5.18	106.48	101.30
22	DA	142	A	C3'-C2'-C1'	5.17	106.47	101.30
31	BJ	124	VAL	N-CA-C	5.17	120.10	109.34
54	DB	27	C	C3'-C2'-C1'	5.17	106.47	101.30
21	AA	122	G	N9-C1'-C2'	-5.17	104.24	112.00
53	CA	169	C	O4'-C1'-N1	5.17	116.26	108.50
22	DA	2836	U	N1-C1'-C2'	-5.17	104.24	112.00
22	BA	664	G	P-O5'-C5'	-5.17	113.14	120.90
22	BA	1362	C	P-O5'-C5'	-5.17	113.14	120.90
21	AA	121	U	N1-C1'-C2'	-5.17	104.25	112.00
21	AA	1451	U	P-O3'-C3'	5.17	127.95	120.20
22	BA	2431	U	N1-C1'-C2'	-5.17	104.25	112.00
51	B3	21	PHE	N-CA-C	5.17	121.81	110.80
22	BA	1349	C	P-O5'-C5'	-5.17	113.15	120.90
23	BB	40	U	O4'-C1'-N1	5.17	115.95	108.20
21	AA	199	A	C3'-C2'-C1'	5.16	106.46	101.30
21	AA	688	G	P-O3'-C3'	-5.16	112.45	120.20
22	DA	1803	A	P-O3'-C3'	-5.16	112.45	120.20
22	DA	2682	A	P-O3'-C3'	-5.16	112.45	120.20
22	BA	2283	C	C2'-C3'-O3'	-5.16	105.96	113.70
22	BA	2601	C	N1-C1'-C2'	5.16	119.74	112.00
21	AA	368	U	C3'-C2'-C1'	5.16	106.46	101.30
22	BA	1858	A	C3'-C2'-C1'	5.16	106.46	101.30
22	BA	2093	G	N9-C1'-C2'	-5.16	104.26	112.00
27	BF	12	VAL	N-CA-C	-5.16	105.47	110.42
22	DA	604	G	P-O3'-C3'	-5.16	112.46	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1112	G	C3'-C2'-C1'	5.16	106.46	101.30
22	DA	1802	A	P-O3'-C3'	-5.16	112.46	120.20
22	DA	1803	A	C3'-C2'-C1'	5.16	106.46	101.30
22	BA	461	C	O3'-P-O5'	-5.16	96.26	104.00
53	CA	1530	G	P-O3'-C3'	-5.16	112.46	120.20
23	BB	13	G	P-O3'-C3'	-5.16	112.47	120.20
53	CA	519	C	N1-C1'-C2'	-5.16	104.27	112.00
22	DA	1552	A	P-O5'-C5'	-5.16	113.17	120.90
22	BA	575	A	C2'-C3'-O3'	-5.15	105.97	113.70
22	BA	1782	U	N1-C1'-C2'	-5.15	104.27	112.00
53	CA	1151	A	P-O3'-C3'	5.15	127.93	120.20
22	BA	787	C	P-O5'-C5'	-5.15	113.17	120.90
22	BA	1703	G	O3'-P-O5'	-5.15	96.27	104.00
53	CA	501	C	C2'-C3'-O3'	-5.15	105.97	113.70
22	DA	1110	G	P-O3'-C3'	5.15	127.93	120.20
22	DA	1901	A	C3'-C2'-C1'	5.15	106.45	101.30
22	DA	1091	G	C3'-C2'-C1'	5.15	106.45	101.30
54	DB	42	C	P-O3'-C3'	-5.15	112.47	120.20
21	AA	486	U	P-O3'-C3'	-5.15	112.48	120.20
22	BA	2419	U	P-O5'-C5'	-5.15	113.18	120.90
21	AA	94	G	O3'-P-O5'	5.15	111.72	104.00
22	BA	961	C	O4'-C1'-N1	5.15	115.92	108.20
53	CA	14	U	C3'-C2'-C1'	5.15	106.45	101.30
22	DA	2021	C	P-O3'-C3'	5.15	127.92	120.20
22	BA	1932	A	P-O3'-C3'	-5.15	112.48	120.20
53	CA	567	G	C3'-C2'-C1'	5.15	106.45	101.30
22	DA	729	G	P-O3'-C3'	-5.14	112.48	120.20
22	DA	746	U	N1-C1'-C2'	5.14	121.72	114.00
22	DA	1970	A	P-O3'-C3'	5.14	127.92	120.20
22	BA	2449	U	O4'-C1'-N1	-5.14	100.49	108.20
53	CA	353	A	C3'-C2'-C1'	5.14	106.44	101.30
53	CA	1229	A	C3'-C2'-C1'	5.14	106.44	101.30
22	DA	1049	C	P-O3'-C3'	-5.14	112.49	120.20
30	BI	72	THR	CA-C-N	5.14	125.67	120.38
30	BI	72	THR	C-N-CA	5.14	125.67	120.38
22	BA	2260	C	P-O5'-C5'	-5.14	113.19	120.90
22	BA	475	C	C3'-C2'-C1'	5.14	106.44	101.30
22	DA	2851	A	C3'-C2'-C1'	5.14	106.44	101.30
21	AA	519	C	N1-C1'-C2'	-5.14	104.30	112.00
22	BA	174	U	P-O3'-C3'	-5.14	112.50	120.20
22	DA	35	G	C3'-C2'-C1'	5.14	106.44	101.30
22	DA	1821	A	P-O3'-C3'	-5.14	112.50	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	2520	C	P-O3'-C3'	-5.14	112.50	120.20
38	DQ	96	ASP	N-CA-C	-5.14	106.96	113.18
22	DA	2837	A	P-O3'-C3'	-5.13	112.50	120.20
19	AT	70	LYS	N-CA-C	-5.13	105.38	111.69
22	BA	1157	G	C3'-C2'-C1'	5.13	106.43	101.30
21	AA	816	A	C3'-C2'-C1'	5.13	106.43	101.30
22	DA	2216	G	C3'-C2'-C1'	5.13	106.43	101.30
22	DA	2440	C	C3'-C2'-C1'	5.13	106.43	101.30
54	DB	17	C	C3'-C2'-C1'	5.13	106.43	101.30
21	AA	247	G	N9-C1'-C2'	-5.13	104.31	112.00
22	BA	373	U	P-O3'-C3'	-5.13	112.51	120.20
22	BA	860	U	P-O3'-C3'	-5.13	112.51	120.20
22	BA	1635	A	P-O5'-C5'	-5.13	113.21	120.90
53	CA	1240	U	N1-C1'-C2'	5.13	119.69	112.00
22	DA	740	C	C3'-C2'-C1'	5.13	106.43	101.30
21	AA	497	G	C3'-C2'-C1'	5.12	106.42	101.30
53	CA	316	C	P-O3'-C3'	-5.12	112.52	120.20
23	BB	45	A	P-O3'-C3'	-5.12	112.52	120.20
53	CA	1211	U	P-O3'-C3'	5.12	127.88	120.20
22	DA	959	A	P-O3'-C3'	-5.12	112.52	120.20
22	BA	2580	U	P-O3'-C3'	5.12	127.88	120.20
22	DA	1722	A	P-O3'-C3'	-5.12	112.52	120.20
10	CK	109	ILE	N-CA-C	5.12	114.11	106.85
21	AA	1522	U	P-O5'-C5'	-5.11	113.23	120.90
22	BA	752	A	N9-C1'-C2'	5.11	121.67	114.00
53	CA	86	G	P-O3'-C3'	5.11	127.87	120.20
23	BB	87	U	P-O3'-C3'	5.11	127.87	120.20
53	CA	701	U	N1-C1'-C2'	5.11	119.66	112.00
22	BA	435	C	P-O5'-C5'	-5.11	113.24	120.90
22	BA	1329	U	N1-C1'-C2'	5.11	121.66	114.00
39	BR	67	GLY	N-CA-C	5.11	117.48	110.69
22	DA	229	C	P-O3'-C3'	-5.11	112.54	120.20
22	DA	395	U	N1-C1'-C2'	5.11	121.66	114.00
21	AA	733	G	O3'-P-O5'	-5.11	96.34	104.00
22	BA	2390	U	P-O5'-C5'	-5.11	113.24	120.90
10	CK	89	GLY	CA-C-N	5.11	126.22	119.84
10	CK	89	GLY	C-N-CA	5.11	126.22	119.84
22	DA	1126	A	P-O3'-C3'	5.11	127.86	120.20
22	DA	859	G	C2'-C3'-O3'	5.10	117.16	109.50
22	DA	2776	A	O3'-P-O5'	5.10	111.66	104.00
21	AA	960	U	O3'-P-O5'	-5.10	96.35	104.00
22	BA	588	U	P-O5'-C5'	-5.10	113.25	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	809	G	P-O5'-C5'	-5.10	113.25	120.90
53	CA	1226	C	N1-C1'-C2'	5.10	121.65	114.00
22	DA	1649	G	C3'-C2'-C1'	5.10	106.40	101.30
22	DA	2036	C	N1-C1'-C2'	-5.10	104.34	112.00
22	DA	1606	C	N1-C1'-C2'	5.10	119.65	112.00
21	AA	245	U	P-O3'-C3'	-5.10	112.55	120.20
22	BA	1385	A	P-O3'-C3'	5.10	127.85	120.20
21	AA	131	A	P-O3'-C3'	-5.10	112.55	120.20
22	BA	199	A	P-O3'-C3'	5.10	127.85	120.20
22	BA	507	A	P-O3'-C3'	-5.10	112.55	120.20
53	CA	1198	G	C3'-C2'-C1'	5.10	106.40	101.30
22	DA	1429	G	P-O3'-C3'	-5.10	112.55	120.20
22	DA	2391	G	P-O3'-C3'	5.10	127.84	120.20
22	DA	2616	C	P-O3'-C3'	-5.10	112.55	120.20
22	DA	445	C	C3'-C2'-C1'	5.10	106.40	101.30
22	DA	2136	G	C3'-C2'-C1'	5.10	106.40	101.30
22	BA	387	U	P-O5'-C5'	-5.09	113.26	120.90
53	CA	248	C	P-O3'-C3'	-5.09	112.56	120.20
22	BA	2258	C	C4'-C3'-C2'	5.09	107.69	102.60
22	BA	956	G	N9-C1'-C2'	-5.09	104.36	112.00
22	BA	1885	A	P-O3'-C3'	-5.09	112.56	120.20
22	BA	2383	G	P-O5'-C5'	-5.09	113.26	120.90
22	DA	390	U	N1-C1'-C2'	5.09	121.64	114.00
22	BA	1554	U	C4'-C3'-C2'	5.09	107.69	102.60
53	CA	90	C	N1-C1'-C2'	-5.09	104.37	112.00
22	DA	2094	A	C3'-C2'-C1'	5.09	106.39	101.30
22	DA	2498	C	C3'-C2'-C1'	5.09	106.39	101.30
53	CA	891	U	C3'-C2'-C1'	5.09	106.39	101.30
53	CA	734	G	C3'-C2'-C1'	5.09	106.39	101.30
22	BA	646	U	O3'-P-O5'	5.08	111.63	104.00
22	DA	945	A	P-O3'-C3'	5.08	127.82	120.20
22	BA	1021	A	C4'-C3'-C2'	5.08	107.68	102.60
53	CA	421	U	P-O3'-C3'	5.08	127.82	120.20
21	AA	14	U	N1-C1'-C2'	-5.08	104.38	112.00
22	DA	1274	A	C3'-C2'-C1'	5.08	106.38	101.30
22	BA	1663	G	O3'-P-O5'	-5.08	96.39	104.00
33	BL	35	HIS	N-CA-C	5.08	116.90	108.02
22	DA	2657	A	C3'-C2'-C1'	5.08	106.38	101.30
1	AB	137	THR	N-CA-C	-5.07	106.60	112.89
20	AU	31	VAL	N-CA-C	5.07	111.64	106.21
22	BA	1238	G	P-O3'-C3'	-5.07	112.59	120.20
22	BA	1707	G	P-O5'-C5'	-5.07	113.29	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	DA	1717	A	C3'-C2'-C1'	5.07	106.37	101.30
22	DA	2348	U	C3'-C2'-C1'	5.07	106.37	101.30
53	CA	1141	C	P-O3'-C3'	-5.07	112.59	120.20
22	DA	784	G	P-O3'-C3'	5.07	127.81	120.20
30	DI	105	LEU	N-CA-C	-5.07	106.87	113.16
17	AR	66	LEU	N-CA-C	-5.07	107.23	113.41
22	BA	1837	C	P-O5'-C5'	-5.07	113.30	120.90
53	CA	383	A	C3'-C2'-C1'	5.07	106.37	101.30
21	AA	734	G	P-O3'-C3'	-5.07	112.60	120.20
21	AA	1066	C	N1-C1'-C2'	-5.07	104.40	112.00
22	BA	2333	A	P-O5'-C5'	5.07	128.50	120.90
21	AA	965	U	P-O3'-C3'	5.06	127.79	120.20
22	BA	2070	A	P-O5'-C5'	-5.06	113.31	120.90
52	B4	28	SER	N-CA-C	-5.06	107.10	113.28
22	DA	946	C	P-O3'-C3'	-5.06	112.61	120.20
22	BA	302	C	C3'-C2'-C1'	5.06	106.36	101.30
4	AE	141	ASP	N-CA-C	-5.06	106.94	113.01
22	DA	1838	C	N1-C1'-C2'	5.06	121.59	114.00
21	AA	1167	A	O3'-P-O5'	5.06	111.58	104.00
21	AA	1197	A	P-O3'-C3'	-5.06	112.61	120.20
22	BA	1667	G	P-O5'-C5'	5.06	128.49	120.90
24	BC	186	ASP	N-CA-C	-5.06	106.39	113.37
22	DA	2226	C	P-O3'-C3'	-5.06	112.61	120.20
53	CA	1160	G	N9-C1'-C2'	-5.06	104.42	112.00
49	B1	22	THR	N-CA-C	5.05	115.20	108.23
22	DA	1021	A	C3'-C2'-C1'	5.05	106.36	101.30
21	AA	173	U	O4'-C1'-N1	5.05	115.78	108.20
22	DA	749	A	P-O3'-C3'	-5.05	112.62	120.20
1	AB	109	SER	N-CA-C	-5.05	105.86	112.23
22	BA	771	G	P-O5'-C5'	-5.05	113.32	120.90
22	BA	2249	U	C4'-C3'-C2'	5.05	107.65	102.60
31	BJ	141	ASP	N-CA-C	5.05	121.56	110.80
53	CA	1498	U	P-O5'-C5'	5.05	128.48	120.90
22	DA	637	A	P-O3'-C3'	5.05	127.78	120.20
22	DA	1980	G	O3'-P-O5'	-5.05	96.42	104.00
54	DB	110	C	P-O3'-C3'	-5.05	112.62	120.20
22	BA	1253	A	P-O5'-C5'	5.05	128.47	120.90
22	BA	2052	A	C2'-C3'-O3'	-5.05	106.13	113.70
25	BD	109	VAL	N-CA-C	5.05	119.84	109.34
53	CA	347	G	P-O3'-C3'	-5.05	112.63	120.20
27	DF	137	PHE	CA-C-N	5.05	126.15	119.84
27	DF	137	PHE	C-N-CA	5.05	126.15	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	2069	G	P-O5'-C5'	-5.05	113.33	120.90
21	AA	97	G	P-O3'-C3'	-5.05	112.63	120.20
53	CA	1505	G	C3'-C2'-C1'	5.05	106.35	101.30
22	DA	2226	C	C3'-C2'-C1'	5.05	106.35	101.30
21	AA	1381	U	C3'-C2'-C1'	5.04	106.34	101.30
53	CA	520	A	C3'-C2'-C1'	5.04	106.34	101.30
22	BA	962	G	P-O3'-C3'	-5.04	112.63	120.20
24	BC	140	VAL	N-CA-C	5.04	119.83	109.34
10	CK	125	LYS	CB-CA-C	-5.04	110.74	116.54
22	DA	1787	A	P-O3'-C3'	-5.04	112.63	120.20
22	BA	333	G	P-O5'-C5'	-5.04	113.34	120.90
22	DA	412	A	C3'-C2'-C1'	5.04	106.34	101.30
22	DA	1206	G	C3'-C2'-C1'	5.04	106.34	101.30
37	BP	25	VAL	N-CA-C	5.04	119.82	109.34
20	AU	20	ARG	N-CA-C	-5.04	106.91	113.16
21	AA	198	G	C3'-C2'-C1'	5.04	106.34	101.30
21	AA	916	U	P-O5'-C5'	-5.04	113.34	120.90
22	DA	628	G	C3'-C2'-C1'	5.04	106.34	101.30
22	DA	1276	A	P-O3'-C3'	-5.04	112.64	120.20
22	DA	2216	G	P-O3'-C3'	-5.04	112.64	120.20
21	AA	215	C	N1-C1'-C2'	-5.04	104.44	112.00
22	DA	396	G	N9-C1'-C2'	-5.04	104.44	112.00
22	DA	1954	G	C2'-C3'-O3'	5.04	117.06	109.50
22	DA	576	U	C3'-C2'-C1'	5.04	106.33	101.30
22	BA	747	U	C3'-C2'-C1'	5.03	106.33	101.30
22	BA	2148	G	C3'-C2'-C1'	5.03	106.33	101.30
21	AA	110	C	C3'-C2'-C1'	5.03	106.33	101.30
22	BA	765	C	P-O3'-C3'	-5.03	112.65	120.20
22	BA	1806	C	P-O3'-C3'	-5.03	112.65	120.20
22	BA	2322	A	P-O3'-C3'	-5.03	112.66	120.20
53	CA	704	A	C3'-C2'-C1'	5.03	106.33	101.30
22	DA	2385	C	N1-C1'-C2'	-5.03	104.45	112.00
11	CL	74	GLN	CB-CA-C	-5.03	109.83	117.07
22	DA	1675	C	C3'-C2'-C1'	5.03	106.33	101.30
30	BI	56	VAL	N-CA-C	5.03	113.83	107.70
21	AA	1401	G	P-O5'-C5'	-5.03	113.36	120.90
22	DA	2214	C	P-O3'-C3'	-5.03	112.66	120.20
21	AA	934	C	O4'-C1'-N1	5.02	115.74	108.20
22	BA	1184	U	P-O5'-C5'	-5.02	113.36	120.90
21	AA	198	G	P-O3'-C3'	-5.02	112.67	120.20
53	CA	199	A	C3'-C2'-C1'	5.02	106.32	101.30
53	CA	1365	G	C3'-C2'-C1'	5.02	106.32	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	BA	1116	G	P-O5'-C5'	-5.02	113.37	120.90
53	CA	534	U	P-O3'-C3'	-5.02	112.67	120.20
22	DA	1274	A	N9-C1'-C2'	-5.02	104.47	112.00
53	CA	173	U	P-O3'-C3'	5.02	127.73	120.20
22	DA	1291	C	C3'-C2'-C1'	5.02	106.32	101.30
2	AC	199	VAL	N-CA-C	5.02	115.50	108.17
31	BJ	63	ALA	CA-C-N	-5.02	117.84	123.16
31	BJ	63	ALA	C-N-CA	-5.02	117.84	123.16
53	CA	115	G	P-O3'-C3'	5.02	127.73	120.20
22	DA	1113	U	P-O3'-C3'	-5.02	112.67	120.20
22	BA	1816	C	C3'-C2'-C1'	5.02	106.32	101.30
22	BA	2043	C	O4'-C1'-N1	-5.01	100.98	108.50
22	DA	1399	C	P-O3'-C3'	-5.01	112.68	120.20
21	AA	351	G	O4'-C1'-N9	5.01	115.72	108.20
21	AA	1489	G	P-O5'-C5'	-5.01	113.38	120.90
22	BA	2622	U	P-O5'-C5'	-5.01	113.38	120.90
29	BH	48	GLU	N-CA-C	-5.01	108.19	114.56
9	AJ	54	SER	CA-C-N	5.01	124.61	119.05
9	AJ	54	SER	C-N-CA	5.01	124.61	119.05
22	BA	2808	G	O3'-P-O5'	-5.01	96.48	104.00
53	CA	812	G	P-O3'-C3'	5.01	127.72	120.20
53	CA	965	U	N1-C1'-C2'	5.01	119.52	112.00
22	BA	943	A	P-O5'-C5'	-5.01	113.39	120.90
37	BP	102	ARG	N-CA-C	5.01	121.47	110.80
53	CA	1287	A	C3'-C2'-C1'	5.01	106.31	101.30
3	AD	199	ILE	N-CA-C	-5.01	107.50	111.81
21	AA	596	A	C3'-C2'-C1'	5.01	106.31	101.30
22	BA	2347	C	C3'-C2'-C1'	5.01	106.31	101.30
40	BS	20	VAL	CB-CA-C	-5.01	105.46	112.02
53	CA	1127	G	C3'-C2'-C1'	5.01	106.31	101.30
22	DA	1648	U	P-O3'-C3'	-5.00	112.69	120.20
22	DA	2895	G	P-O3'-C3'	-5.00	112.69	120.20
22	BA	1038	G	P-O5'-C5'	-5.00	113.40	120.90
53	CA	1137	C	N1-C1'-C2'	5.00	119.50	112.00
22	BA	1931	U	C3'-C2'-C1'	5.00	106.30	101.30
26	BE	46	GLN	N-CA-C	5.00	121.45	110.80
45	BX	19	HIS	N-CA-C	-5.00	105.72	111.07

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
51	B3	29	ARG	Peptide
25	BD	9	VAL	Peptide
32	BK	15	GLY	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	AB	1704	0	1732	239	0
1	CB	1704	0	1732	182	0
2	AC	1624	0	1699	122	0
2	CC	1624	0	1699	147	0
3	AD	1643	0	1710	164	0
3	CD	1643	0	1710	158	0
4	AE	1105	0	1148	145	0
4	CE	1105	0	1148	111	0
5	AF	817	0	808	80	0
5	CF	817	0	808	71	0
6	AG	1181	0	1240	90	0
6	CG	1174	0	1230	139	0
7	AH	979	0	1034	87	0
7	CH	979	0	1034	91	0
8	AI	1022	0	1070	86	0
8	CI	1022	0	1070	105	0
9	AJ	786	0	828	77	0
9	CJ	786	0	828	100	0
10	AK	877	0	887	93	0
10	CK	877	0	887	80	0
11	AL	955	0	1019	91	0
11	CL	955	0	1019	95	0
12	AM	883	0	944	77	0
12	CM	876	0	937	111	0
13	AN	774	0	827	80	0
13	CN	769	0	822	84	0
14	AO	714	0	737	62	0
14	CO	714	0	737	38	0
15	AP	649	0	666	54	0
15	CP	638	0	656	72	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
16	AQ	648	0	691	77	0
16	CQ	648	0	691	59	0
17	AR	455	0	478	30	0
17	CR	455	0	478	37	0
18	AS	637	0	665	57	0
18	CS	637	0	665	78	0
19	AT	665	0	714	76	0
19	CT	665	0	714	57	0
20	AU	425	0	449	92	0
20	CU	425	0	449	80	0
21	AA	32895	0	16553	1203	0
22	BA	61274	0	30819	1934	0
22	DA	60995	0	30679	3187	0
23	BB	2529	0	1281	65	0
24	BC	2082	0	2157	213	0
24	DC	2082	0	2157	228	0
25	BD	1565	0	1616	189	0
25	DD	1565	0	1616	185	0
26	BE	1552	0	1619	138	0
26	DE	1552	0	1619	182	0
27	BF	1410	0	1447	129	0
27	DF	1420	0	1460	180	0
28	BG	1323	0	1374	176	0
28	DG	1323	0	1374	142	0
29	BH	1111	0	1148	115	0
29	DH	1111	0	1148	109	0
30	BI	1032	0	1088	114	0
30	DI	1032	0	1088	84	0
31	BJ	1129	0	1162	163	0
31	DJ	1129	0	1162	145	0
32	BK	938	0	1012	105	0
32	DK	938	0	1012	116	0
33	BL	1045	0	1117	124	0
33	DL	1045	0	1117	118	0
34	BM	1074	0	1157	113	0
34	DM	1074	0	1157	102	0
35	BN	960	0	1000	86	0
35	DN	960	0	1000	127	0
36	BO	892	0	923	74	0
36	DO	892	0	923	78	0
37	BP	917	0	965	137	0
37	DP	917	0	965	114	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	BQ	947	0	1022	127	0
38	DQ	947	0	1022	136	0
39	BR	816	0	839	97	0
39	DR	816	0	839	94	0
40	BS	857	0	922	71	0
40	DS	857	0	922	82	0
41	BT	738	0	807	124	0
41	DT	738	0	807	105	0
42	BU	779	0	834	62	0
42	DU	779	0	834	89	0
43	BV	753	0	780	53	0
43	DV	753	0	780	70	0
44	BW	596	0	610	196	0
44	DW	596	0	610	115	0
45	BX	625	0	655	64	0
45	DX	625	0	655	67	0
46	BY	509	0	543	57	0
46	DY	509	0	543	66	0
47	BZ	449	0	491	39	0
47	DZ	449	0	491	47	0
48	B0	444	0	461	22	0
48	D0	444	0	461	54	0
49	B1	409	0	440	46	0
49	D1	409	0	440	31	0
50	B2	377	0	418	30	0
50	D2	377	0	418	45	0
51	B3	504	0	574	41	0
51	D3	504	0	574	57	0
52	B4	302	0	340	32	0
52	D4	302	0	340	28	0
53	CA	32831	0	16521	1455	0
54	DB	2507	0	1270	122	0
55	AA	43	0	0	0	0
55	BA	137	0	0	0	0
55	BB	4	0	0	0	0
55	CA	42	0	0	0	0
55	DA	135	0	0	0	0
55	DB	1	0	0	0	0
55	DJ	1	0	0	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	195	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	AE	1	0	0	0	0
57	AL	3	0	0	0	0
57	AN	6	0	0	0	0
57	AT	2	0	0	0	0
57	AU	1	0	0	0	0
57	B0	1	0	0	0	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0
57	B4	3	0	0	0	0
57	BA	610	0	0	24	0
57	BB	20	0	0	1	0
57	BC	10	0	0	0	0
57	BD	2	0	0	1	0
57	BL	4	0	0	1	0
57	BN	3	0	0	0	0
57	BQ	1	0	0	0	0
57	BT	2	0	0	1	0
57	CA	192	0	0	8	0
57	CE	5	0	0	0	0
57	CI	1	0	0	0	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	3	0	0	0	0
57	CU	2	0	0	0	0
57	D2	1	0	0	1	0
57	D3	1	0	0	0	0
57	D4	4	0	0	0	0
57	DA	599	0	0	9	0
57	DB	4	0	0	0	0
57	DC	13	0	0	1	0
57	DD	4	0	0	0	0
57	DE	3	0	0	0	0
57	DJ	3	0	0	0	0
57	DL	5	0	0	0	0
57	DN	2	0	0	2	0
57	DT	2	0	0	1	0
57	DU	1	0	0	0	0
57	DV	1	0	0	0	0
All	All	284450	0	190838	16279	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 34.

All (16279) 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)
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.49	1.26
22:DA:1439:A:C2	22:DA:1552:A:C6	2.32	1.17
22:DA:1439:A:N1	22:DA:1552:A:C5	2.12	1.17
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.19	1.16
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.44	1.16
54:DB:58:A:H2'	54:DB:59:A:C8	1.80	1.16
22:DA:197:A:H62	22:DA:2430:A:H2'	1.02	1.15
21:AA:338:A:N1	21:AA:351:G:O6	1.78	1.15
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.29	1.14
3:CD:2:ARG:NH2	3:CD:114:ARG:HD3	1.60	1.14
44:DW:40:ARG:HH11	44:DW:40:ARG:HG2	1.01	1.14
11:AL:49:ARG:HH11	11:AL:49:ARG:HG2	1.11	1.14
19:AT:43:LYS:HB3	19:AT:86:ALA:HB1	1.30	1.14
7:AH:1:SER:HB2	21:AA:877:G:H21	1.10	1.14
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.30	1.13
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.13	1.13
8:AI:98:ARG:HG2	8:AI:103:VAL:HG21	1.26	1.13
19:AT:27:MET:HE1	19:AT:57:VAL:HG22	1.26	1.13
14:AO:63:ARG:HG2	14:AO:87:ARG:HH12	1.00	1.12
38:BQ:69:ARG:HH21	38:BQ:69:ARG:HB2	1.05	1.12
25:BD:99:GLU:HG3	25:BD:100:LEU:H	1.14	1.11
54:DB:112:G:H21	36:DO:45:SER:HA	1.09	1.11
5:AF:16:GLU:HG2	3:CD:191:SER:HB2	1.22	1.11
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.31	1.11
22:DA:1024:G:H3'	22:DA:1025:G:H5"	1.24	1.11
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.28	1.09
53:CA:1213:A:O2'	53:CA:1214:C:H5'	1.53	1.08
20:CU:24:LYS:HG3	20:CU:25:ALA:H	1.18	1.08
22:DA:2135:A:H3'	22:DA:2136:G:H5"	1.33	1.08
21:AA:975:A:H4'	21:AA:976:G:H5'	1.26	1.08
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.18	1.08
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.68	1.08
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.32	1.07
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.36	1.07
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.16	1.07
5:AF:3:HIS:H	5:AF:92:THR:HG23	1.20	1.07
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.20	1.06
54:DB:58:A:H2'	54:DB:59:A:H8	1.02	1.06
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.19	1.06
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.35	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.06
22:DA:604:G:O2'	22:DA:605:G:H5'	1.56	1.05
22:BA:855:G:H21	44:BW:23:LYS:CG	1.69	1.05
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.15	1.05
21:AA:174:A:O2'	21:AA:175:C:H5'	1.57	1.05
22:DA:2051:A:H4'	22:DA:2052:A:OP1	1.50	1.05
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.34	1.05
8:AI:17:ARG:HH22	21:AA:1129:C:H5"	0.94	1.04
20:AU:9:GLU:HG3	20:AU:10:PRO:HD3	1.32	1.04
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.70	1.04
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.70	1.04
11:CL:43:LYS:HB3	11:CL:44:PRO:HD2	1.06	1.04
22:DA:1915:U:H2'	22:DA:1916:A:C8	1.91	1.04
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.71	1.04
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	0.98	1.04
6:CG:91:ARG:HG2	6:CG:92:PRO:HD2	1.34	1.03
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.58	1.03
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.39	1.03
22:DA:668:A:H2'	22:DA:670:A:H62	1.19	1.03
22:BA:636:G:C5	33:BL:111:ILE:HD11	1.93	1.03
32:BK:111:LYS:HE2	32:BK:111:LYS:H	1.22	1.03
3:CD:25:ARG:NH1	3:CD:30:LYS:HG2	1.73	1.03
11:CL:43:LYS:HB3	11:CL:44:PRO:CD	1.87	1.02
53:CA:1054:C:O2'	53:CA:1055:A:H5"	1.59	1.02
16:AQ:16:MET:HB2	16:AQ:19:SER:HB3	1.42	1.02
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.74	1.02
19:CT:73:ARG:HH11	19:CT:73:ARG:HG2	1.24	1.02
12:CM:25:GLY:H	53:CA:1329:A:H5"	1.20	1.02
22:DA:1662:U:H2'	22:DA:1663:G:H5"	1.42	1.02
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.39	1.02
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	1.95	1.02
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.25	1.02
3:AD:145:ARG:HH11	3:AD:147:LYS:HE3	1.23	1.02
53:CA:373:A:O2'	53:CA:374:A:H5'	1.59	1.02
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HD13	1.40	1.01
22:BA:762:U:H4'	22:BA:763:G:O5'	1.57	1.01
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	1.69	1.01
3:CD:61:ARG:HH21	3:CD:67:LEU:HA	1.21	1.01
8:AI:17:ARG:NH2	21:AA:1129:C:H5"	1.76	1.01
21:AA:1238:A:H5'	21:AA:1336:C:H41	1.21	1.01
16:CQ:46:HIS:HE2	16:CQ:48:GLU:HG2	1.24	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:207:A:H2'	22:DA:208:C:H6	1.25	1.01
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.42	1.01
3:CD:77:GLU:HG3	3:CD:81:LEU:HD11	1.38	1.00
9:CJ:84:VAL:HG23	9:CJ:85:ASP:H	1.25	1.00
22:DA:647:G:H2'	22:DA:648:G:H8	1.23	1.00
22:BA:855:G:H21	44:BW:23:LYS:HG2	0.86	1.00
4:AE:152:VAL:HB	4:AE:155:LYS:HZ2	1.26	1.00
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.44	1.00
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.26	1.00
6:CG:22:LEU:HA	6:CG:25:PHE:HB3	1.43	1.00
10:CK:74:LYS:HA	10:CK:78:ILE:HD11	1.43	1.00
20:CU:16:ARG:HG3	20:CU:19:LYS:HG2	1.40	1.00
22:DA:33:C:O2'	22:DA:34:U:H5'	1.60	1.00
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.40	1.00
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.43	1.00
22:DA:616:A:H2'	22:DA:617:G:H8	1.27	1.00
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.44	1.00
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.22	1.00
6:CG:74:VAL:HG13	6:CG:140:VAL:HG13	1.42	1.00
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.44	1.00
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.24	0.99
21:AA:204:G:H3'	21:AA:205:A:H5"	1.44	0.99
3:CD:2:ARG:HH21	3:CD:114:ARG:HD3	0.85	0.99
3:AD:109:THR:HG23	3:AD:112:GLU:H	1.27	0.99
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	1.76	0.99
5:AF:6:ILE:HG12	5:AF:89:VAL:HG23	1.44	0.99
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.44	0.99
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.61	0.99
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.43	0.99
25:BD:91:THR:O	25:BD:93:GLY:N	1.95	0.98
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.45	0.98
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.79	0.98
11:AL:33:CYS:HB3	11:AL:54:VAL:HG22	1.43	0.98
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.41	0.98
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.41	0.98
21:AA:182:A:C6	21:AA:194:C:N4	2.29	0.98
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.26	0.98
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.46	0.98
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.45	0.98
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.44	0.98
21:AA:1138:G:N3	21:AA:1138:G:H2'	1.79	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:32:A:H2'	53:CA:33:A:C8	1.97	0.98
22:DA:1784:A:H4'	22:DA:1785:A:O5'	1.59	0.98
16:AQ:18:LYS:HA	16:AQ:47:ASP:HB2	1.44	0.98
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.46	0.98
53:CA:664:G:H22	53:CA:741:G:H1	1.06	0.97
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.64	0.97
3:CD:2:ARG:HH21	3:CD:114:ARG:CD	1.78	0.97
22:BA:1079:C:N4	22:BA:1088:A:H2	1.62	0.97
8:CI:51:LEU:HG	8:CI:86:LEU:HD22	1.44	0.97
22:DA:2092:U:H4'	22:DA:2093:G:H5"	1.44	0.97
10:AK:126:ARG:HB2	20:AU:33:ARG:NH1	1.79	0.97
53:CA:764:C:H2'	53:CA:765:G:H5'	1.46	0.97
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	1.64	0.97
22:DA:2216:G:HO2'	22:DA:2217:G:H8	1.05	0.97
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.46	0.97
21:AA:721:G:H4'	21:AA:722:G:O5'	1.63	0.97
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.42	0.97
22:DA:310:A:HO2'	22:DA:311:A:H8	0.99	0.96
47:BZ:29:ARG:HH21	47:BZ:29:ARG:HG3	1.26	0.96
53:CA:1422:G:H5"	32:DK:48:PRO:HB3	1.47	0.96
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.47	0.96
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.47	0.96
21:AA:94:G:H4'	21:AA:95:C:C5'	1.95	0.96
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.44	0.96
1:AB:108:GLN:HE21	1:AB:108:GLN:H	0.97	0.96
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.00	0.96
20:CU:35:GLU:HG3	20:CU:36:PHE:H	1.30	0.96
2:AC:166:TRP:H	2:AC:166:TRP:HE3	1.12	0.96
22:DA:2304:G:H22	22:DA:2312:U:H3	1.12	0.96
22:BA:1073:A:H3'	22:BA:1074:G:H5"	1.47	0.95
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.44	0.95
22:DA:2408:U:O2'	22:DA:2409:G:H8	1.48	0.95
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.00	0.95
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.48	0.95
1:AB:9:LEU:HD12	1:AB:42:LEU:HD13	1.43	0.95
53:CA:198:G:O2'	53:CA:199:A:H8	1.48	0.95
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.31	0.95
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.65	0.95
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.29	0.95
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.02	0.95
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:109:THR:HG22	3:CD:111:ALA:H	1.31	0.95
21:AA:1021:A:H2'	21:AA:1022:A:H5"	1.48	0.95
22:BA:232:G:H4'	22:BA:233:A:OP1	1.66	0.95
29:BH:31:VAL:HB	29:BH:32:PRO:CD	1.97	0.95
22:BA:1738:G:HO2'	22:BA:1739:A:H8	1.12	0.94
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.07	0.94
1:AB:89:PHE:HB3	1:AB:149:GLY:HA2	1.47	0.94
33:DL:47:ARG:HH21	33:DL:47:ARG:HG2	1.32	0.94
22:DA:1026:G:O2'	22:DA:1027:A:H5'	1.68	0.94
22:BA:2728:U:O2'	22:BA:2729:G:H5"	1.67	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
22:DA:2313:C:HO2'	22:DA:2314:A:H8	0.94	0.94
53:CA:519:C:O2'	53:CA:520:A:H5'	1.67	0.94
13:AN:40:ARG:HH12	13:AN:44:VAL:HG11	1.33	0.94
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.48	0.94
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	0.99	0.94
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.49	0.94
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.33	0.94
22:DA:1060:U:H4'	22:DA:1061:U:O5'	1.67	0.94
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.33	0.94
27:DF:137:PHE:HB2	27:DF:138:PRO:HD2	1.50	0.94
22:BA:1073:A:C3'	22:BA:1074:G:H5"	1.98	0.94
46:BY:47:ARG:HH21	46:BY:47:ARG:HG3	1.33	0.94
53:CA:1228:C:HO2'	53:CA:1229:A:H8	0.94	0.94
32:DK:111:LYS:H	32:DK:111:LYS:HE3	1.33	0.94
22:BA:1063:G:H2'	22:BA:1064:C:O4'	1.68	0.93
16:CQ:30:HIS:HE1	16:CQ:32:ILE:HG13	1.32	0.93
23:BB:90:C:H5"	23:BB:90:C:H6	1.28	0.93
22:DA:1508:A:H4'	22:DA:1509:A:OP1	1.67	0.93
28:DG:93:TYR:H	28:DG:93:TYR:HD2	1.15	0.93
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.50	0.93
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.51	0.93
22:DA:1290:C:O2'	22:DA:1291:C:H6	1.50	0.93
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.65	0.93
1:AB:163:ILE:HG23	1:AB:164:ASP:H	1.30	0.93
22:BA:1784:A:H4'	22:BA:1785:A:O5'	1.64	0.93
22:DA:197:A:N6	22:DA:2430:A:H2'	1.82	0.93
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.51	0.93
53:CA:1124:G:H4'	53:CA:1125:U:OP1	1.66	0.93
22:DA:616:A:H2'	22:DA:617:G:C8	2.04	0.93
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.34	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.49	0.92
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.31	0.92
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.35	0.92
11:CL:19:ASN:H	11:CL:19:ASN:HD22	1.15	0.92
11:CL:43:LYS:CB	11:CL:44:PRO:HD2	1.98	0.92
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.50	0.92
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.47	0.92
21:AA:213:G:O2'	21:AA:214:C:H5'	1.69	0.92
21:AA:747:A:H5'	21:AA:748:G:OP2	1.69	0.92
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.50	0.92
21:AA:96:U:HO2'	21:AA:97:G:H8	1.09	0.92
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.48	0.92
22:DA:975:A:HO2'	22:DA:976:G:H8	0.92	0.92
22:DA:1439:A:C2	22:DA:1552:A:C5	2.53	0.92
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.33	0.92
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.51	0.92
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.51	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
43:BV:80:HIS:HD2	43:BV:83:LYS:H	1.09	0.92
6:CG:88:VAL:HG22	6:CG:89:GLU:H	1.33	0.92
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.34	0.92
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.50	0.92
21:AA:1007:U:H2'	21:AA:1008:U:H5"	1.52	0.92
22:DA:2800:A:O2'	22:DA:2801:G:H4'	1.69	0.92
14:AO:63:ARG:HG2	14:AO:87:ARG:NH1	1.84	0.92
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.66	0.92
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.00	0.92
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CB	1.82	0.92
1:CB:74:ALA:HB1	1:CB:206:ILE:HD11	1.50	0.92
22:DA:491:G:H2'	22:DA:492:A:H8	1.30	0.92
14:AO:63:ARG:HD3	14:AO:87:ARG:HH22	1.33	0.91
21:AA:214:C:HO2'	21:AA:215:C:H6	0.94	0.91
53:CA:279:A:H5"	53:CA:280:C:H3'	1.52	0.91
53:CA:330:C:HO2'	53:CA:331:G:H8	0.92	0.91
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.51	0.91
53:CA:519:C:H2'	53:CA:520:A:C8	2.06	0.91
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.70	0.91
21:AA:94:G:H4'	21:AA:95:C:H5"	1.51	0.91
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.51	0.91
22:BA:1073:A:H2'	22:BA:1074:G:H5"	1.53	0.91
10:CK:27:ASN:N	10:CK:27:ASN:HD22	1.65	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CR:72:ARG:HE	17:CR:72:ARG:H	1.15	0.91
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.04	0.91
41:BT:50:LEU:H	41:BT:50:LEU:HD12	1.35	0.91
22:DA:2324:U:H5'	22:DA:2325:G:H5"	1.51	0.91
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.51	0.91
11:AL:27:PRO:HB2	11:AL:28:GLN:OE1	1.68	0.91
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.19	0.91
53:CA:1183:U:H3'	53:CA:1184:G:H5"	1.53	0.91
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.50	0.91
10:AK:88:PRO:HD3	20:AU:28:LEU:HD13	1.53	0.91
22:BA:1090:A:O2'	22:BA:1091:G:H5'	1.70	0.91
22:DA:1537:G:C2'	22:DA:1538:G:H4'	2.01	0.91
21:AA:6:G:HO2'	21:AA:7:A:H8	0.93	0.91
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.67	0.91
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.51	0.91
7:CH:103:VAL:HG12	7:CH:124:ILE:HA	1.50	0.91
22:DA:1476:U:HO2'	22:DA:1477:A:H8	1.07	0.91
22:DA:1079:C:H41	22:DA:1088:A:H5"	1.34	0.91
22:DA:2728:U:O2'	22:DA:2729:G:H8	1.52	0.91
21:AA:60:A:H4'	21:AA:61:G:O5'	1.69	0.90
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.01	0.90
3:CD:143:SER:HB3	3:CD:178:GLU:HG3	1.50	0.90
19:CT:26:MET:HE1	19:CT:56:ILE:HD13	1.52	0.90
22:DA:217:A:H2'	22:DA:218:A:C8	2.06	0.90
22:DA:2149:U:O2'	22:DA:2150:C:H6	1.53	0.90
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.34	0.90
20:AU:52:VAL:HG13	20:AU:53:LYS:H	1.36	0.90
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.53	0.90
22:BA:272:A:HO2'	22:BA:273:G:H8	0.91	0.90
22:DA:2385:C:O2'	22:DA:2386:A:H8	1.54	0.90
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.53	0.90
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.94	0.90
7:AH:17:GLN:HE21	7:AH:71:VAL:HG23	1.36	0.90
22:BA:529:A:H4'	22:BA:530:G:OP1	1.70	0.90
22:BA:2336:A:N6	44:BW:40:ARG:HD2	1.86	0.90
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.88	0.90
22:DA:1166:G:H22	22:DA:1184:U:H1'	1.36	0.90
41:DT:29:THR:HB	41:DT:87:LEU:H	1.34	0.90
22:BA:1022:G:N2	22:BA:1142:A:N1	2.19	0.90
22:BA:1085:A:H3'	22:BA:1086:A:H2	1.37	0.90
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.07	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2352:A:N1	44:BW:30:VAL:HG11	1.85	0.90
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.36	0.90
22:DA:216:A:O2'	22:DA:217:A:H8	1.55	0.90
21:AA:274:A:O2'	21:AA:275:G:C8	2.24	0.90
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.34	0.90
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	1.86	0.90
21:AA:842:U:H3'	21:AA:843:U:H5"	1.51	0.90
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.53	0.90
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.71	0.90
22:DA:83:A:H61	22:DA:101:A:H5'	1.37	0.90
22:BA:915:C:H6	22:BA:915:C:H5"	1.34	0.90
53:CA:82:G:O2'	53:CA:83:C:H4'	1.71	0.90
32:BK:18:ARG:HH11	32:BK:18:ARG:HG3	1.37	0.89
53:CA:982:U:H4'	53:CA:983:A:O5'	1.72	0.89
22:DA:1731:G:O2'	22:DA:1732:C:H5"	1.72	0.89
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.34	0.89
21:AA:121:U:H6	21:AA:121:U:H5"	1.36	0.89
22:DA:2757:A:N1	28:DG:66:THR:HG21	1.86	0.89
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.54	0.89
4:CE:104:ILE:H	4:CE:122:VAL:H	1.20	0.89
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.54	0.89
22:BA:2725:A:O2'	22:BA:2726:A:H2'	1.72	0.89
40:BS:73:LYS:HE3	40:BS:74:ILE:N	1.87	0.89
4:CE:35:LEU:HD11	4:CE:136:VAL:HG11	1.55	0.89
7:CH:76:ARG:HD3	7:CH:77:VAL:H	1.35	0.89
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.52	0.89
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.88	0.89
4:AE:80:LEU:HD23	4:AE:122:VAL:HG11	1.54	0.89
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.54	0.89
53:CA:245:U:O2'	53:CA:246:A:H5'	1.73	0.89
22:DA:302:C:HO2'	22:DA:303:G:H8	0.92	0.89
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	2.02	0.89
22:BA:2197:U:O2'	22:BA:2198:A:H2'	1.72	0.89
25:BD:5:VAL:H	25:BD:32:ASN:HD21	1.21	0.89
53:CA:374:A:H5"	53:CA:452:A:N1	1.88	0.89
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.20	0.89
6:AG:76:SER:HA	6:AG:85:GLN:HB2	1.54	0.89
22:BA:545:U:H2'	22:BA:546:U:H4'	1.54	0.89
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.08	0.89
53:CA:1182:G:H4'	53:CA:1183:U:H5'	1.55	0.89
22:DA:2385:C:HO2'	22:DA:2386:A:H8	0.98	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:395:U:HO2'	22:DA:396:G:H8	1.18	0.89
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.53	0.89
22:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.37	0.89
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.71	0.89
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.54	0.89
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.36	0.88
8:AI:40:ARG:HA	8:AI:44:ARG:HB3	1.53	0.88
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.55	0.88
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.88	0.88
12:CM:33:LEU:HB3	12:CM:38:ILE:HB	1.54	0.88
4:AE:155:LYS:HD2	4:AE:156:ARG:H	1.39	0.88
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.21	0.88
22:BA:2267:A:H5"	22:BA:2268:A:H5'	1.54	0.88
53:CA:1382:C:O2'	53:CA:1383:C:H5'	1.72	0.88
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.56	0.88
22:BA:265:A:H4'	22:BA:266:G:OP1	1.72	0.88
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.56	0.88
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.37	0.88
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.55	0.88
21:AA:1125:U:O2'	21:AA:1126:U:H2'	1.73	0.88
53:CA:1268:G:H21	53:CA:1327:C:H1'	1.37	0.88
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.88	0.88
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.74	0.88
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.37	0.88
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.37	0.88
3:CD:30:LYS:HD3	3:CD:30:LYS:N	1.89	0.88
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.55	0.88
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.55	0.88
4:AE:81:GLN:HG2	4:AE:149:PRO:HG3	1.54	0.88
22:BA:728:G:HO2'	22:BA:730:A:H8	0.92	0.88
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.55	0.88
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.75	0.88
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.37	0.88
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.16	0.88
1:AB:40:ILE:HD13	1:AB:201:GLY:HA2	1.56	0.87
2:AC:156:LEU:HD12	2:AC:156:LEU:H	1.38	0.87
6:AG:12:LEU:H	6:AG:12:LEU:HD22	1.38	0.87
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.89	0.87
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.22	0.87
53:CA:1391:U:H2'	53:CA:1392:G:C8	2.09	0.87
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:28:VAL:HB	8:AI:63:TYR:HD2	1.39	0.87
3:AD:191:SER:HA	3:AD:194:ILE:HD11	1.53	0.87
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.40	0.87
52:B4:9:LYS:HD3	52:B4:9:LYS:H	1.38	0.87
53:CA:1144:G:H21	53:CA:1146:A:H62	1.22	0.87
22:DA:647:G:H2'	22:DA:648:G:C8	2.09	0.87
22:DA:802:A:H2'	22:DA:803:U:C6	2.09	0.87
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.86	0.87
1:CB:114:LYS:HA	1:CB:117:GLU:HG2	1.53	0.87
7:CH:76:ARG:HD3	7:CH:77:VAL:N	1.90	0.87
22:DA:2837:A:H2'	22:DA:2838:G:C8	2.08	0.87
7:AH:1:SER:HB2	21:AA:877:G:N2	1.88	0.87
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.40	0.87
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.74	0.87
21:AA:1398:A:H8	21:AA:1398:A:H5"	1.40	0.87
22:BA:1779:U:H5	22:BA:1784:A:N7	1.72	0.87
53:CA:496:A:N3	53:CA:496:A:H2'	1.89	0.87
22:DA:2199:A:H2'	22:DA:2200:C:H6	1.40	0.87
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.39	0.87
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.89	0.87
44:DW:40:ARG:HG2	44:DW:40:ARG:NH1	1.82	0.87
4:CE:29:ILE:HG23	4:CE:30:PHE:H	1.40	0.87
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.57	0.87
1:AB:66:ILE:HB	1:AB:88:GLN:HB3	1.54	0.87
22:DA:2093:G:HO2'	22:DA:2094:A:H8	1.19	0.87
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.86
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.57	0.86
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.56	0.86
6:AG:26:VAL:HG12	6:AG:42:VAL:HG21	1.55	0.86
22:BA:789:A:OP1	22:BA:790:U:H5	1.57	0.86
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.10	0.86
3:CD:25:ARG:HH12	3:CD:30:LYS:HG2	1.32	0.86
53:CA:120:A:C3'	53:CA:121:U:H5"	2.04	0.86
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.10	0.86
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.41	0.86
41:BT:59:ASN:O	41:BT:83:ALA:O	1.93	0.86
4:CE:29:ILE:HG23	4:CE:30:PHE:N	1.90	0.86
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.37	0.86
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.57	0.86
2:AC:155:ARG:HH21	21:AA:1055:A:H1'	1.39	0.86
21:AA:202:G:H21	21:AA:466:A:H61	1.24	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.40	0.86
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.55	0.86
54:DB:42:C:H2'	54:DB:43:C:C6	2.11	0.86
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.75	0.86
21:AA:496:A:H2'	21:AA:496:A:N3	1.89	0.86
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.32	0.86
22:DA:528:A:O2'	22:DA:529:A:H5"	1.73	0.86
22:DA:915:C:O2'	22:DA:916:G:H5'	1.75	0.86
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.36	0.86
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.58	0.86
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.56	0.86
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.56	0.86
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.23	0.86
32:BK:112:PHE:O	32:BK:115:ILE:HG22	1.76	0.86
33:BL:81:ASP:O	33:BL:82:LEU:HB3	1.74	0.86
10:CK:44:ALA:HB3	10:CK:69:CYS:HB2	1.56	0.86
14:CO:45:HIS:HB3	53:CA:668:G:O2'	1.76	0.86
22:DA:1345:C:HO2'	22:DA:1346:G:H8	0.86	0.86
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.57	0.86
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.38	0.86
6:CG:28:ILE:HG21	6:CG:100:MET:HG3	1.57	0.86
22:DA:508:A:H62	40:DS:9:HIS:CE1	1.93	0.86
7:AH:105:THR:HG21	7:AH:120:LEU:HD13	1.56	0.86
53:CA:1241:G:H2'	53:CA:1242:G:H8	1.38	0.86
53:CA:1299:A:H2'	53:CA:1299:A:N3	1.88	0.86
53:CA:1349:A:H2'	53:CA:1350:A:C8	2.11	0.86
22:DA:491:G:H2'	22:DA:492:A:C8	2.10	0.86
22:DA:1639:C:H2'	22:DA:1640:A:H5"	1.57	0.86
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.58	0.85
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.39	0.85
5:CF:92:THR:O	5:CF:93:LYS:HG2	1.75	0.85
53:CA:67:C:OP1	53:CA:199:A:H5"	1.76	0.85
22:DA:232:G:H4'	22:DA:233:A:OP1	1.74	0.85
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.40	0.85
4:AE:155:LYS:HA	4:AE:158:LYS:NZ	1.91	0.85
11:AL:49:ARG:HG2	11:AL:49:ARG:NH1	1.87	0.85
22:BA:856:G:H21	44:BW:19:ARG:HH22	1.22	0.85
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.41	0.85
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.57	0.85
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.58	0.85
21:AA:374:A:H5"	21:AA:452:A:N1	1.91	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:560:A:H5'	21:AA:566:G:N2	1.91	0.85
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.41	0.85
14:CO:63:ARG:HH22	22:DA:715:A:H5'	1.41	0.85
53:CA:990:C:H2'	53:CA:991:U:O4'	1.75	0.85
22:DA:207:A:H2'	22:DA:208:C:C6	2.12	0.85
22:DA:2439:A:H4'	22:DA:2440:C:O5'	1.73	0.85
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.12	0.85
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.58	0.85
22:DA:634:C:H2'	22:DA:635:C:C6	2.12	0.85
22:DA:1669:A:H2'	22:DA:1669:A:N3	1.89	0.85
42:DU:92:VAL:HB	42:DU:101:THR:HG21	1.59	0.85
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.59	0.85
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.56	0.85
53:CA:120:A:H3'	53:CA:121:U:H5"	1.57	0.85
53:CA:495:A:H4'	53:CA:496:A:O5'	1.74	0.85
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.77	0.85
21:AA:366:A:O2'	21:AA:394:G:N2	2.08	0.85
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.16	0.85
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.11	0.85
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.89	0.85
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	1.90	0.85
22:DA:2149:U:O2'	22:DA:2150:C:C6	2.27	0.85
22:DA:2868:A:H2'	22:DA:2869:G:C8	2.11	0.85
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.57	0.85
21:AA:511:C:O2'	21:AA:512:U:H5"	1.77	0.85
21:AA:1239:A:H62	21:AA:1299:A:N6	1.73	0.85
22:BA:1011:G:O2'	22:BA:1013:C:H5"	1.76	0.85
2:CC:190:THR:HG22	2:CC:191:THR:H	1.39	0.85
22:DA:834:G:H1'	22:DA:2358:A:N3	1.91	0.85
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.41	0.85
21:AA:563:A:H2'	21:AA:563:A:N3	1.89	0.85
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.90	0.85
1:AB:218:ALA:HA	1:AB:221:ARG:HH21	1.41	0.85
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.90	0.85
53:CA:72:A:O2'	53:CA:73:C:H5'	1.77	0.85
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.06	0.85
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.75	0.85
22:BA:2214:C:H6	22:BA:2214:C:H5'	1.39	0.85
5:AF:97:THR:O	5:AF:98:GLU:HG2	1.76	0.84
22:BA:1073:A:C2'	22:BA:1074:G:H5"	2.06	0.84
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.57	0.84
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.77	0.84
3:AD:204:SER:HB2	21:AA:8:A:H62	1.42	0.84
6:AG:61:PHE:CE1	6:AG:65:LEU:HD22	2.11	0.84
1:CB:99:MET:HA	1:CB:106:VAL:HG21	1.59	0.84
22:DA:1492:G:H3'	22:DA:1493:C:C5'	2.06	0.84
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.42	0.84
21:AA:566:G:H4'	21:AA:567:G:OP1	1.74	0.84
21:AA:654:G:H2'	21:AA:655:A:H8	1.42	0.84
21:AA:1287:A:H2'	21:AA:1288:A:C8	2.12	0.84
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.76	0.84
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.75	0.84
22:DA:297:G:H5"	42:DU:84:PHE:HB2	1.60	0.84
28:BG:7:PRO:O	28:BG:8:VAL:HB	1.76	0.84
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.24	0.84
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.25	0.84
22:DA:589:U:O2'	22:DA:590:A:H8	1.58	0.84
6:AG:114:SER:HB3	6:AG:117:LEU:HG	1.59	0.84
10:AK:87:GLY:H	10:AK:113:THR:HG22	1.43	0.84
1:CB:103:TRP:HA	1:CB:106:VAL:HB	1.56	0.84
9:CJ:64:GLN:HB2	13:CN:98:ALA:HB3	1.57	0.84
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.60	0.84
21:AA:1277:C:HO2'	21:AA:1279:G:H8	0.85	0.84
27:BF:129:MET:HG3	27:BF:153:ILE:HD11	1.57	0.84
4:CE:103:GLY:O	4:CE:104:ILE:HG22	1.78	0.84
53:CA:1493:A:H3'	22:DA:1913:A:N6	1.92	0.84
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.42	0.84
22:DA:2056:G:N2	48:D0:1:ALA:H3	1.76	0.84
22:DA:2135:A:H2'	22:DA:2136:G:O4'	1.77	0.84
21:AA:1279:G:H2'	21:AA:1279:G:N3	1.89	0.84
22:BA:1056:G:H5"	22:BA:1057:A:H5'	1.58	0.84
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.07	0.84
22:DA:1307:A:H62	22:DA:1606:C:H6	1.26	0.84
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.76	0.84
21:AA:666:G:H5'	21:AA:726:C:H1'	1.58	0.84
22:BA:74:A:H4'	22:BA:75:G:O5'	1.76	0.84
22:BA:459:U:O2'	22:BA:460:A:H5'	1.77	0.84
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.60	0.84
20:CU:24:LYS:CG	20:CU:25:ALA:H	1.90	0.84
54:DB:58:A:C2'	54:DB:59:A:H8	1.90	0.84
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:729:G:H2'	22:DA:729:G:N3	1.91	0.84
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.60	0.84
13:AN:60:ARG:O	13:AN:61:ASN:HB2	1.76	0.84
22:BA:619:G:H5"	22:BA:620:G:OP2	1.77	0.84
22:BA:1286:A:H4'	22:BA:1287:A:OP1	1.77	0.84
12:CM:25:GLY:N	53:CA:1329:A:H5"	1.92	0.84
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.42	0.84
3:AD:43:ARG:O	3:AD:45:PRO:HD3	1.78	0.83
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.12	0.83
23:BB:90:C:H5"	23:BB:90:C:C6	2.12	0.83
1:CB:146:SER:HB2	1:CB:147:LEU:HD12	1.58	0.83
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.40	0.83
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.59	0.83
38:BQ:10:ARG:HB2	38:BQ:10:ARG:NH1	1.93	0.83
22:DA:142:A:H2'	22:DA:143:C:C6	2.12	0.83
22:DA:2056:G:N2	48:D0:1:ALA:N	2.26	0.83
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	1.93	0.83
4:AE:80:LEU:HD12	4:AE:146:MET:HE1	1.60	0.83
25:BD:99:GLU:HG3	25:BD:100:LEU:N	1.93	0.83
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.08	0.83
11:CL:2:THR:HB	11:CL:5:GLN:HB2	1.59	0.83
22:DA:335:C:HO2'	22:DA:336:C:H6	1.24	0.83
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.60	0.83
2:CC:109:GLU:HG2	2:CC:139:ASN:HB2	1.59	0.83
7:CH:68:LYS:HD3	7:CH:69:ALA:H	1.42	0.83
53:CA:94:G:H4'	53:CA:95:C:OP1	1.79	0.83
22:DA:573:U:H4'	22:DA:574:A:OP1	1.78	0.83
54:DB:112:G:N2	36:DO:45:SER:HA	1.90	0.83
27:DF:49:LEU:H	27:DF:49:LEU:HD22	1.42	0.83
27:DF:74:ALA:HB3	27:DF:78:ILE:HB	1.59	0.83
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.61	0.83
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.44	0.83
22:DA:1274:A:O2'	22:DA:1275:A:H5"	1.78	0.83
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	1.94	0.83
21:AA:182:A:N6	21:AA:194:C:N4	2.27	0.83
22:BA:84:A:H62	22:BA:101:A:H2	1.25	0.83
37:BP:4:ILE:HG22	37:BP:5:LYS:N	1.94	0.83
2:CC:18:ASN:HA	2:CC:55:VAL:HG12	1.60	0.83
22:DA:686:U:O4	50:D2:12:ARG:HG3	1.78	0.83
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.79	0.83
22:DA:1141:U:H4'	22:DA:1142:A:O5'	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1326:U:O2'	22:DA:1327:A:H8	1.62	0.83
21:AA:495:A:H4'	21:AA:496:A:O5'	1.79	0.83
53:CA:113:G:H21	53:CA:353:A:H8	1.24	0.83
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.44	0.83
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.43	0.83
19:AT:26:MET:HE1	19:AT:56:ILE:HD11	1.60	0.83
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.61	0.83
22:DA:271:G:O2'	22:DA:272:A:H5"	1.78	0.83
22:DA:475:C:H2'	22:DA:476:G:C8	2.14	0.83
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.14	0.83
21:AA:982:U:H4'	21:AA:983:A:O5'	1.78	0.83
22:BA:335:C:H5"	42:BU:81:ARG:HD3	1.58	0.83
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.61	0.83
22:DA:593:U:H2'	22:DA:594:U:C6	2.14	0.83
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.78	0.83
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.61	0.83
21:AA:116:A:H2'	21:AA:117:G:H8	1.43	0.83
21:AA:243:A:H4'	21:AA:244:U:H5"	1.60	0.83
22:BA:1110:G:HO2'	22:BA:1111:A:H8	1.25	0.83
22:DA:1069:A:O2'	22:DA:1070:A:H5'	1.78	0.83
22:DA:1166:G:N2	22:DA:1184:U:H1'	1.93	0.83
5:AF:16:GLU:CG	3:CD:191:SER:HB2	2.08	0.82
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.94	0.82
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.78	0.82
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.93	0.82
22:DA:1438:U:H2'	22:DA:1439:A:O4'	1.79	0.82
22:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.43	0.82
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.43	0.82
15:CP:8:ARG:HB3	15:CP:28:ARG:NH1	1.94	0.82
22:DA:915:C:H2'	22:DA:916:G:C8	2.14	0.82
6:AG:110:ARG:NH1	6:AG:122:GLU:HG2	1.94	0.82
3:AD:172:VAL:HG22	3:AD:173:ASP:H	1.42	0.82
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.43	0.82
1:CB:47:PRO:HA	1:CB:50:ASN:HB2	1.61	0.82
1:CB:162:VAL:HG13	1:CB:184:ALA:HB2	1.61	0.82
22:DA:575:A:O2'	22:DA:576:U:H5'	1.79	0.82
22:DA:1076:C:O2	30:DI:92:PRO:HG2	1.80	0.82
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.60	0.82
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.62	0.82
1:AB:42:LEU:HG	1:AB:43:GLU:HG3	1.60	0.82
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:206:ILE:HA	1:CB:209:VAL:HG22	1.61	0.82
7:CH:28:SER:HA	7:CH:58:LEU:HD12	1.61	0.82
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.14	0.82
27:DF:39:VAL:HA	27:DF:49:LEU:HG	1.62	0.82
21:AA:198:G:N2	21:AA:220:G:H1'	1.94	0.82
22:BA:1929:G:H4'	22:BA:1930:G:OP1	1.77	0.82
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.13	0.82
6:AG:69:ARG:HG3	6:AG:95:ARG:HG2	1.62	0.82
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.42	0.82
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.61	0.82
53:CA:6:G:H2'	53:CA:6:G:N3	1.93	0.82
22:DA:143:C:H2'	22:DA:144:A:C8	2.13	0.82
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.14	0.82
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.79	0.82
24:BC:166:ARG:O	24:BC:166:ARG:HG3	1.78	0.82
20:AU:45:LYS:HA	20:AU:45:LYS:HE3	1.62	0.82
22:BA:571:U:H4'	22:BA:572:A:OP1	1.77	0.82
6:CG:4:ARG:HD2	6:CG:5:VAL:H	1.42	0.82
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.60	0.82
22:DA:2346:A:H3'	22:DA:2347:C:H5"	1.62	0.82
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.77	0.82
21:AA:1319:A:H4'	21:AA:1320:C:OP1	1.80	0.82
44:DW:40:ARG:HH11	44:DW:40:ARG:CG	1.86	0.82
53:CA:335:C:H2'	53:CA:336:A:C8	2.13	0.81
22:DA:249:C:H5"	22:DA:2394:C:O2'	1.80	0.81
14:AO:69:LEU:HD21	14:AO:76:ARG:HB2	1.62	0.81
22:BA:2813:A:H2	22:BA:2887:A:N6	1.77	0.81
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.78	0.81
6:CG:110:ARG:HG3	6:CG:111:GLY:H	1.45	0.81
10:CK:27:ASN:HD22	10:CK:27:ASN:H	1.26	0.81
1:AB:108:GLN:HE21	1:AB:108:GLN:N	1.77	0.81
3:AD:36:ALA:HA	3:AD:41:GLY:HA3	1.62	0.81
20:AU:48:LYS:HA	20:AU:51:ALA:HB3	1.61	0.81
22:BA:62:U:H4'	22:BA:63:A:OP1	1.80	0.81
22:BA:491:G:H2'	22:BA:492:A:C8	2.14	0.81
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.63	0.81
19:CT:73:ARG:HH11	19:CT:73:ARG:CG	1.93	0.81
22:DA:1534:U:H6	22:DA:1538:G:N1	1.78	0.81
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.62	0.81
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.45	0.81
27:DF:43:ILE:HG23	27:DF:44:ALA:H	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1157:A:H1'	21:AA:1181:G:N2	1.95	0.81
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.15	0.81
1:CB:79:VAL:HA	1:CB:213:LEU:HD21	1.63	0.81
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.63	0.81
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.60	0.81
37:DP:67:GLU:CD	37:DP:68:GLY:H	1.87	0.81
21:AA:473:U:H2'	21:AA:474:G:H8	1.46	0.81
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.61	0.81
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HG2	1.96	0.81
53:CA:1245:C:H2'	53:CA:1246:A:H8	1.44	0.81
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.44	0.81
22:DA:1565:C:O2'	22:DA:1566:A:H2'	1.81	0.81
22:DA:1731:G:H4'	22:DA:1732:C:OP1	1.80	0.81
21:AA:98:A:H2'	21:AA:99:C:H6	1.45	0.81
22:DA:729:G:O2'	22:DA:1775:U:H1'	1.81	0.81
25:BD:186:LEU:HD11	37:BP:3:ILE:HD11	1.63	0.81
48:B0:9:ARG:HH21	48:B0:9:ARG:HG3	1.44	0.81
22:DA:2358:A:H61	33:DL:54:GLN:HE22	1.25	0.81
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.62	0.81
21:AA:109:A:H2'	21:AA:326:G:N2	1.96	0.81
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.44	0.81
10:CK:126:ARG:HB2	20:CU:33:ARG:HD2	1.61	0.81
11:CL:113:ARG:HB3	11:CL:118:VAL:HB	1.61	0.81
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.78	0.81
1:CB:153:MET:HE3	1:CB:155:GLY:O	1.81	0.81
53:CA:721:G:H4'	53:CA:722:G:O5'	1.80	0.81
22:DA:919:U:H2'	22:DA:920:A:C8	2.16	0.81
22:DA:959:A:H2'	22:DA:960:A:C8	2.16	0.81
22:DA:1364:G:C5	45:DX:1:SER:HB2	2.16	0.81
22:DA:2631:G:H2'	22:DA:2632:A:H5"	1.61	0.81
14:AO:63:ARG:CG	14:AO:87:ARG:HH12	1.91	0.81
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.63	0.81
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	1.94	0.81
16:CQ:4:ILE:HG22	16:CQ:5:ARG:H	1.46	0.81
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.63	0.81
21:AA:204:G:H3'	21:AA:205:A:C5'	2.11	0.80
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.61	0.80
36:BO:31:THR:CG2	36:BO:34:HIS:H	1.94	0.80
5:CF:86:ARG:HH11	17:CR:63:TYR:HB3	1.46	0.80
22:DA:704:G:H2'	22:DA:726:G:H22	1.44	0.80
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:13:ARG:NH1	37:BP:74:GLN:HE21	1.77	0.80
39:BR:39:LEU:HD23	39:BR:39:LEU:N	1.95	0.80
9:CJ:15:HIS:CE1	9:CJ:68:ARG:HD3	2.16	0.80
53:CA:1278:G:H4'	53:CA:1279:G:O5'	1.81	0.80
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.45	0.80
20:AU:13:VAL:HG13	20:AU:15:LEU:HG	1.61	0.80
27:BF:129:MET:HG3	27:BF:153:ILE:CD1	2.11	0.80
7:CH:54:THR:O	7:CH:56:PRO:HD3	1.80	0.80
11:CL:3:VAL:HG23	11:CL:4:ASN:H	1.46	0.80
22:DA:1430:G:H2'	22:DA:1431:A:H8	1.45	0.80
21:AA:116:A:H2'	21:AA:117:G:C8	2.17	0.80
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.11	0.80
8:CI:71:ILE:HD12	8:CI:72:SER:H	1.46	0.80
53:CA:1378:C:H3'	53:CA:1379:G:H5"	1.64	0.80
22:DA:302:C:O2'	22:DA:303:G:H8	1.63	0.80
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.80	0.80
22:DA:2199:A:H2'	22:DA:2200:C:C6	2.16	0.80
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.29	0.80
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.45	0.80
21:AA:338:A:N1	21:AA:351:G:C6	2.49	0.80
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.62	0.80
12:CM:64:VAL:HG12	12:CM:65:GLU:H	1.44	0.80
12:CM:104:ASN:HB3	53:CA:948:C:H5"	1.62	0.80
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.46	0.80
27:DF:91:ARG:HH21	27:DF:91:ARG:HB3	1.46	0.80
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.62	0.80
1:AB:137:THR:HA	1:AB:140:LEU:HD13	1.64	0.80
4:AE:100:GLU:HB3	4:AE:121:ASN:HA	1.61	0.80
22:BA:752:A:H62	22:BA:2609:U:H3	1.29	0.80
22:DA:2384:U:H5"	22:DA:2386:A:OP1	1.80	0.80
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.64	0.80
31:BJ:88:THR:HG22	31:BJ:91:GLU:HG3	1.63	0.80
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.61	0.80
35:BN:71:ARG:HH21	35:BN:71:ARG:CG	1.95	0.80
22:DA:2311:A:H4'	22:DA:2312:U:OP2	1.81	0.80
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.45	0.80
13:AN:19:TYR:O	13:AN:22:LYS:HB3	1.81	0.80
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.46	0.80
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	1.63	0.80
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.80	0.80
37:BP:77:SER:OG	37:BP:79:VAL:HG13	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:449:A:O2'	22:DA:450:G:H5'	1.82	0.80
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.16	0.80
22:DA:2657:A:H2'	22:DA:2658:C:C6	2.17	0.80
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.63	0.80
19:AT:27:MET:HE1	19:AT:57:VAL:CG2	2.11	0.80
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.81	0.80
11:CL:110:LYS:HB2	53:CA:538:G:H5"	1.62	0.80
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.63	0.80
53:CA:33:A:H2'	53:CA:34:C:H6	1.47	0.80
53:CA:79:G:H2'	53:CA:80:A:H8	1.46	0.80
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.64	0.80
22:DA:2725:A:O2'	22:DA:2726:A:H2'	1.82	0.80
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.64	0.80
7:AH:103:VAL:HG12	7:AH:124:ILE:HG22	1.64	0.80
22:BA:1141:U:H4'	22:BA:1142:A:O5'	1.82	0.80
53:CA:1493:A:H8	22:DA:1913:A:H61	1.29	0.80
22:DA:445:C:O2'	22:DA:446:G:O4'	1.99	0.80
22:DA:674:G:O2'	26:DE:69:ARG:HG2	1.81	0.80
54:DB:42:C:H41	27:DF:87:LYS:HZ3	1.28	0.80
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.80	0.80
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.47	0.80
3:AD:61:ARG:NH1	3:AD:68:GLU:HG2	1.96	0.79
4:AE:152:VAL:HB	4:AE:155:LYS:NZ	1.96	0.79
28:BG:86:LEU:HD12	28:BG:86:LEU:N	1.97	0.79
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.82	0.79
52:B4:9:LYS:C	52:B4:10:LEU:HD23	2.06	0.79
20:CU:19:LYS:HZ3	20:CU:19:LYS:N	1.80	0.79
53:CA:1157:A:H4'	53:CA:1158:C:O5'	1.82	0.79
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.81	0.79
27:DF:41:GLU:HG2	27:DF:42:ALA:H	1.47	0.79
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.11	0.79
4:AE:120:HIS:C	4:AE:121:ASN:HD22	1.91	0.79
7:AH:15:ASN:HD21	21:AA:875:U:H1'	1.47	0.79
21:AA:94:G:H4'	21:AA:95:C:O5'	1.80	0.79
22:BA:1069:A:O2'	22:BA:1070:A:H5"	1.82	0.79
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.30	0.79
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.82	0.79
10:CK:64:VAL:O	10:CK:68:ARG:HB2	1.82	0.79
53:CA:983:A:O2'	53:CA:984:C:H5'	1.81	0.79
22:DA:704:G:H1'	22:DA:727:A:N6	1.97	0.79
22:DA:1965:C:H5'	22:DA:1966:A:H5"	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.64	0.79
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.47	0.79
22:BA:1870:C:H4'	22:BA:1871:A:OP1	1.79	0.79
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.45	0.79
22:DA:477:A:H2'	22:DA:478:A:H8	1.47	0.79
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.63	0.79
1:AB:148:GLY:HA2	1:AB:151:LYS:HB3	1.64	0.79
22:BA:704:G:O2'	22:BA:726:G:N2	2.14	0.79
6:CG:92:PRO:HA	6:CG:95:ARG:HB2	1.64	0.79
20:CU:24:LYS:HG3	20:CU:25:ALA:N	1.98	0.79
22:DA:2585:U:O2'	22:DA:2586:U:H5'	1.81	0.79
22:DA:2720:U:H5"	37:DP:52:ARG:NH2	1.97	0.79
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.17	0.79
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.06	0.79
22:DA:754:U:H2'	22:DA:755:U:C6	2.17	0.79
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.17	0.79
26:BE:110:SER:O	26:BE:113:VAL:HG12	1.82	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.64	0.79
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.63	0.79
22:DA:286:U:H2'	22:DA:287:G:C8	2.18	0.79
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.64	0.79
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.31	0.79
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.47	0.79
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.62	0.79
18:AS:6:LYS:HE2	18:AS:6:LYS:HA	1.65	0.79
21:AA:1277:C:O2'	21:AA:1279:G:H8	1.66	0.79
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.47	0.79
22:DA:49:A:H4'	22:DA:50:U:O5'	1.83	0.79
22:DA:1326:U:HO2'	22:DA:1327:A:H8	0.82	0.79
22:DA:2389:G:H5"	22:DA:2390:U:H5'	1.64	0.79
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.62	0.79
22:DA:502:A:H5'	22:DA:503:A:OP2	1.82	0.79
40:DS:86:MET:HE2	40:DS:87:PRO:HD2	1.64	0.79
5:AF:29:ILE:HG12	5:AF:64:VAL:HG11	1.65	0.79
22:BA:100:U:H4'	22:BA:101:A:O5'	1.82	0.79
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.18	0.79
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.64	0.79
11:AL:43:LYS:HB2	11:AL:44:PRO:CD	2.12	0.79
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.82	0.79
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.37	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:47:ILE:HD12	49:B1:47:ILE:H	1.48	0.79
19:CT:22:SER:O	19:CT:26:MET:HB2	1.82	0.79
53:CA:764:C:C2'	53:CA:765:G:H5'	2.13	0.79
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.83	0.79
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.46	0.79
22:DA:1870:C:H5"	22:DA:1871:A:H2	1.46	0.79
22:DA:2716:C:O2'	22:DA:2717:C:H5'	1.83	0.79
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.65	0.79
27:DF:76:PHE:HD2	27:DF:76:PHE:H	1.28	0.79
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.65	0.79
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.83	0.79
21:AA:531:U:H4'	21:AA:532:A:O5'	1.83	0.78
22:BA:250:G:H2'	22:BA:251:A:C8	2.18	0.78
3:CD:34:GLU:O	3:CD:36:ALA:N	2.16	0.78
11:CL:49:ARG:HH12	53:CA:523:A:H61	1.30	0.78
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.19	0.78
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.65	0.78
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.18	0.78
27:BF:134:GLN:H	27:BF:134:GLN:HE21	1.29	0.78
40:BS:96:ILE:O	40:BS:96:ILE:HG13	1.82	0.78
7:CH:11:THR:HG21	53:CA:876:C:H1'	1.64	0.78
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.65	0.78
10:AK:22:ILE:HD11	10:AK:85:VAL:HG13	1.65	0.78
13:AN:40:ARG:HH22	13:AN:44:VAL:HG21	1.48	0.78
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.64	0.78
50:D2:5:PHE:HZ	50:D2:12:ARG:HH11	1.30	0.78
50:D2:19:ARG:HH21	50:D2:19:ARG:HB3	1.48	0.78
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.78
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.97	0.78
37:BP:4:ILE:O	37:BP:6:GLN:N	2.16	0.78
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.83	0.78
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG13	2.18	0.78
53:CA:792:A:O2'	53:CA:794:A:N7	2.15	0.78
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.66	0.78
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.48	0.78
22:DA:1993:U:H2'	22:DA:1994:C:C6	2.18	0.78
24:DC:62:ARG:HG2	24:DC:62:ARG:HH21	1.49	0.78
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.66	0.78
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.66	0.78
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:71:THR:HG23	6:CG:72:VAL:HG23	1.63	0.78
20:CU:39:LYS:N	20:CU:40:PRO:HD2	1.98	0.78
22:DA:320:A:H4'	22:DA:322:A:N7	1.98	0.78
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.17	0.78
22:DA:2093:G:O2'	22:DA:2094:A:H8	1.66	0.78
22:DA:2310:C:H42	27:DF:76:PHE:HE1	1.32	0.78
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.66	0.78
13:AN:22:LYS:HG3	13:AN:23:ARG:H	1.47	0.78
21:AA:1468:A:C2'	21:AA:1469:C:H5"	2.14	0.78
22:BA:197:A:N6	22:BA:2430:A:H2'	1.99	0.78
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.65	0.78
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.48	0.78
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.79	0.78
22:DA:216:A:HO2'	22:DA:217:A:H8	0.81	0.78
54:DB:54:G:H21	27:DF:25:MET:HE2	1.49	0.78
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.14	0.78
11:AL:62:VAL:HG21	11:AL:94:TYR:CE2	2.19	0.78
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.13	0.78
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.13	0.78
47:BZ:40:THR:HG22	47:BZ:43:ILE:HG23	1.64	0.78
53:CA:32:A:H2'	53:CA:33:A:H8	1.46	0.78
4:AE:105:ILE:HD11	4:AE:123:LEU:HD23	1.65	0.78
17:AR:22:TYR:CZ	17:AR:23:LYS:HE3	2.19	0.78
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.80	0.78
22:DA:286:U:H2'	22:DA:287:G:H8	1.48	0.78
22:DA:633:A:O5'	22:DA:633:A:H8	1.66	0.78
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.97	0.78
22:DA:2662:A:H2'	22:DA:2663:G:O4'	1.83	0.78
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.66	0.78
22:BA:2757:A:N1	28:BG:66:THR:HG21	1.98	0.78
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.84	0.78
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.19	0.78
2:CC:166:TRP:O	2:CC:167:TYR:HB2	1.82	0.78
16:CQ:17:GLU:HG3	53:CA:254:G:H21	1.49	0.78
20:CU:39:LYS:H	20:CU:40:PRO:HD2	1.47	0.78
53:CA:1054:C:HO2'	53:CA:1055:A:H5"	1.47	0.78
22:DA:1611:C:HO2'	22:DA:1612:C:H6	1.32	0.78
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.83	0.78
22:DA:1870:C:H5"	22:DA:1871:A:C2	2.17	0.78
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.65	0.78
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:642:A:H2'	21:AA:643:C:H6	1.48	0.78
21:AA:841:C:C2	21:AA:843:U:H5'	2.19	0.78
22:BA:479:A:O2'	22:BA:481:G:H5'	1.83	0.78
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.66	0.78
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.64	0.78
3:CD:66:VAL:HG22	3:CD:96:ARG:NH1	1.98	0.78
18:CS:35:ARG:NH2	53:CA:1221:G:H4'	1.99	0.78
53:CA:1005:A:C5	53:CA:1006:G:H1'	2.18	0.78
22:DA:279:A:N6	22:DA:361:G:H1'	1.99	0.78
22:DA:2056:G:H21	48:D0:1:ALA:N	1.81	0.78
5:AF:91:ARG:HG3	5:AF:92:THR:H	1.49	0.77
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.92	0.77
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.77
8:CI:75:ALA:HA	8:CI:78:ILE:HD12	1.65	0.77
15:CP:44:SER:H	15:CP:46:LYS:NZ	1.80	0.77
53:CA:239:U:H6	53:CA:239:U:C5'	1.95	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.84	0.77
22:DA:2287:A:O2'	22:DA:2288:A:H3'	1.83	0.77
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.85	0.77
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.85	0.77
22:DA:2135:A:H8	22:DA:2135:A:OP2	1.68	0.77
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.20	0.77
20:AU:10:PRO:O	20:AU:11:PHE:HB3	1.83	0.77
31:BJ:64:VAL:O	31:BJ:65:THR:HB	1.84	0.77
43:BV:10:LYS:HD3	43:BV:10:LYS:H	1.47	0.77
53:CA:456:A:H2'	53:CA:457:G:C8	2.19	0.77
53:CA:1067:A:H1'	53:CA:1068:G:C8	2.18	0.77
22:DA:61:C:O2'	22:DA:62:U:H5'	1.84	0.77
22:DA:2287:A:HO2'	22:DA:2288:A:H3'	1.48	0.77
22:DA:2666:C:H2'	22:DA:2667:C:H5'	1.63	0.77
22:DA:2714:G:O2'	22:DA:2715:C:H5'	1.83	0.77
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.83	0.77
26:DE:149:ILE:O	26:DE:188:MET:HA	1.84	0.77
45:DX:31:ASN:ND2	45:DX:31:ASN:H	1.82	0.77
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.64	0.77
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.50	0.77
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.84	0.77
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.83	0.77
2:CC:36:PHE:HE1	13:CN:91:GLU:HB3	1.50	0.77
9:CJ:9:ARG:HH22	53:CA:1279:G:H5"	1.47	0.77
53:CA:456:A:H2'	53:CA:457:G:H8	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.18	0.77
22:DA:1024:G:H3'	22:DA:1025:G:C5'	2.10	0.77
22:DA:2060:A:H62	26:DE:69:ARG:HH12	1.30	0.77
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.84	0.77
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.64	0.77
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.67	0.77
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.48	0.77
20:AU:35:GLU:O	20:AU:36:PHE:HB2	1.85	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
22:DA:1676:A:C2	22:DA:1993:U:H5'	2.19	0.77
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.98	0.77
7:AH:6:ILE:HB	7:AH:76:ARG:HH12	1.47	0.77
20:AU:16:ARG:NH1	20:AU:19:LYS:HG3	1.99	0.77
22:BA:858:G:N2	22:BA:2269:G:OP2	2.18	0.77
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.67	0.77
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.14	0.77
22:DA:2104:C:O2	22:DA:2105:U:H5	1.66	0.77
27:DF:64:PRO:HA	27:DF:88:VAL:HG22	1.65	0.77
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	1.82	0.77
3:AD:68:GLU:HG3	21:AA:545:C:H5'	1.64	0.77
22:BA:1799:G:H4'	22:BA:1800:C:O5'	1.83	0.77
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	1.65	0.77
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.15	0.77
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.64	0.77
5:CF:54:LEU:HD12	5:CF:56:LYS:O	1.84	0.77
53:CA:702:A:OP1	53:CA:702:A:H8	1.65	0.77
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.67	0.77
27:DF:28:PRO:HB2	27:DF:168:LEU:HD21	1.66	0.77
21:AA:213:G:H2'	21:AA:214:C:C6	2.20	0.77
21:AA:1468:A:C3'	21:AA:1469:C:H5"	2.15	0.77
22:BA:620:G:H4'	22:BA:621:A:O5'	1.84	0.77
22:BA:2309:A:O2'	22:BA:2310:C:H5'	1.84	0.77
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	1.85	0.77
6:CG:45:ALA:HB1	6:CG:120:ALA:HB2	1.66	0.77
9:CJ:47:GLU:HB2	9:CJ:67:ILE:HG13	1.67	0.77
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.19	0.77
22:DA:1866:A:H2'	22:DA:1867:G:C8	2.18	0.77
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.50	0.77
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.00	0.77
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	1.99	0.77
1:AB:69:VAL:HB	1:AB:162:VAL:HG12	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:134:LYS:HE3	2:AC:138:GLN:NE2	1.99	0.77
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.84	0.77
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.50	0.77
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.20	0.77
2:CC:142:ARG:HG2	2:CC:143:LEU:HD12	1.65	0.77
11:CL:49:ARG:HH22	53:CA:522:C:H41	1.31	0.77
53:CA:268:U:H2'	53:CA:269:C:C6	2.19	0.77
22:DA:589:U:HO2'	22:DA:590:A:H8	0.77	0.77
22:DA:1011:G:O2'	22:DA:1013:C:H5"	1.85	0.77
22:DA:1808:A:O3'	22:DA:1809:A:H8	1.68	0.77
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.19	0.77
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.85	0.77
3:AD:130:ASN:HB3	21:AA:619:U:H3	1.48	0.77
9:CJ:40:ILE:HG22	9:CJ:42:LEU:HD12	1.67	0.77
22:DA:482:A:N6	22:DA:506:G:C4	2.52	0.77
22:DA:915:C:H2'	22:DA:916:G:H8	1.49	0.77
22:DA:976:G:H2'	22:DA:977:G:H8	1.50	0.77
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.50	0.77
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.65	0.77
4:AE:98:ALA:HB1	21:AA:6:G:O6	1.85	0.76
18:AS:28:LYS:HB3	18:AS:29:PRO:HD2	1.65	0.76
22:BA:221:A:H1'	22:BA:233:A:H1'	1.66	0.76
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.50	0.76
22:BA:2093:G:O2'	22:BA:2094:A:H5'	1.85	0.76
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.65	0.76
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.93	0.76
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.65	0.76
37:BP:67:GLU:OE1	37:BP:67:GLU:HA	1.84	0.76
53:CA:484:G:H4'	53:CA:485:U:O5'	1.85	0.76
53:CA:563:A:H2'	53:CA:563:A:N3	1.98	0.76
53:CA:1322:C:O2'	53:CA:1323:G:H5'	1.84	0.76
22:DA:1341:G:H3'	22:DA:1397:U:O2	1.85	0.76
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.50	0.76
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.49	0.76
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.68	0.76
3:CD:84:ASN:HB3	3:CD:87:GLU:HG3	1.68	0.76
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.48	0.76
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.65	0.76
7:AH:12:ARG:HH11	7:AH:26:MET:HB2	1.49	0.76
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG23	1.65	0.76
16:AQ:46:HIS:HA	16:AQ:70:LYS:HE3	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:753:A:H4'	21:AA:754:C:O5'	1.86	0.76
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.65	0.76
37:BP:85:VAL:HG13	37:BP:86:LYS:H	1.50	0.76
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	1.65	0.76
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.85	0.76
53:CA:977:A:O2'	53:CA:978:A:H5"	1.85	0.76
22:DA:480:A:H3'	22:DA:481:G:C5'	2.16	0.76
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.19	0.76
22:DA:2143:C:H5'	22:DA:2144:G:OP2	1.86	0.76
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.67	0.76
54:DB:42:C:H41	27:DF:87:LYS:NZ	1.81	0.76
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.21	0.76
15:AP:67:ILE:CG2	15:AP:72:ALA:HB2	2.15	0.76
21:AA:1468:A:H2'	21:AA:1469:C:H5"	1.67	0.76
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.85	0.76
53:CA:1293:C:H2'	53:CA:1294:G:C8	2.19	0.76
22:DA:637:A:H4'	22:DA:638:G:O5'	1.82	0.76
22:DA:671:C:O2'	22:DA:672:C:H5'	1.86	0.76
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.86	0.76
20:AU:3:ILE:HA	20:AU:19:LYS:NZ	2.01	0.76
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.50	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
53:CA:704:A:H2'	53:CA:705:G:C8	2.20	0.76
53:CA:1299:A:C8	53:CA:1301:U:H1'	2.20	0.76
22:DA:118:A:N3	22:DA:178:G:H1'	2.00	0.76
22:DA:1387:A:HO2'	22:DA:1388:G:H8	0.78	0.76
26:DE:166:LYS:HE2	26:DE:166:LYS:HA	1.67	0.76
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.67	0.76
13:AN:40:ARG:NH1	13:AN:44:VAL:HG11	1.99	0.76
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.65	0.76
12:CM:12:LYS:HA	12:CM:12:LYS:HE3	1.67	0.76
53:CA:1452:C:H4'	53:CA:1453:G:O5'	1.86	0.76
22:DA:216:A:O2'	22:DA:217:A:C8	2.31	0.76
7:AH:9:MET:HE2	7:AH:32:LYS:HG2	1.68	0.76
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.68	0.76
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	1.86	0.76
53:CA:1101:A:H4'	53:CA:1102:A:O5'	1.85	0.76
22:DA:100:U:H1'	22:DA:101:A:C5	2.20	0.76
22:DA:859:G:O2'	22:DA:860:U:OP2	2.02	0.76
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	2.01	0.76
3:AD:10:LEU:HD22	3:AD:62:ARG:HG3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:64:ALA:HB2	6:CG:126:ALA:HB1	1.67	0.76
53:CA:383:A:H2'	53:CA:384:G:O4'	1.86	0.76
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.67	0.76
39:DR:1:MET:HG3	39:DR:101:ILE:HD12	1.68	0.76
10:AK:126:ARG:HB2	20:AU:33:ARG:HH12	1.49	0.76
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.66	0.76
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.68	0.76
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE3	1.66	0.76
22:DA:1430:G:H2'	22:DA:1431:A:C8	2.20	0.76
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.68	0.76
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.21	0.76
22:BA:2503:A:H4'	22:BA:2504:U:OP1	1.85	0.76
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.39	0.76
2:CC:140:ALA:O	2:CC:145:ALA:HB3	1.86	0.76
8:CI:118:ARG:NH2	8:CI:122:ARG:HE	1.84	0.76
22:DA:1345:C:H3'	22:DA:1345:C:OP2	1.86	0.76
22:DA:1534:U:H6	22:DA:1538:G:H1	1.32	0.76
22:DA:2752:C:H2'	22:DA:2753:A:C8	2.21	0.76
54:DB:24:G:H1'	54:DB:27:C:N4	2.02	0.76
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.68	0.76
21:AA:96:U:O2'	21:AA:97:G:H8	1.67	0.75
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.16	0.75
1:CB:59:ILE:HA	1:CB:62:ARG:HD3	1.67	0.75
6:CG:118:ARG:HH22	53:CA:1239:A:H3'	1.49	0.75
9:CJ:40:ILE:HG12	53:CA:1125:U:C5	2.21	0.75
53:CA:429:U:H1'	53:CA:430:A:H5"	1.68	0.75
53:CA:1064:G:O2'	53:CA:1190:G:N2	2.19	0.75
53:CA:1493:A:H3'	22:DA:1913:A:H62	1.51	0.75
22:DA:140:C:H5'	22:DA:141:G:N2	2.01	0.75
22:DA:1734:G:H2'	22:DA:1735:A:H8	1.52	0.75
22:DA:2752:C:H2'	22:DA:2753:A:H8	1.49	0.75
22:BA:509:C:H5"	22:BA:509:C:H6	1.49	0.75
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.67	0.75
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	2.02	0.75
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	1.99	0.75
54:DB:56:G:H4'	54:DB:57:A:O5'	1.85	0.75
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.68	0.75
4:AE:149:PRO:O	4:AE:152:VAL:HG22	1.86	0.75
21:AA:1227:A:N3	21:AA:1227:A:H2'	2.01	0.75
22:BA:1079:C:N4	22:BA:1088:A:C2	2.53	0.75
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.67	0.75
53:CA:335:C:H2'	53:CA:336:A:H8	1.51	0.75
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.01	0.75
22:DA:1931:U:H2'	22:DA:1932:A:C8	2.21	0.75
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.66	0.75
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.67	0.75
3:AD:145:ARG:NH1	3:AD:147:LYS:HE3	2.01	0.75
8:AI:6:TYR:HE2	8:AI:17:ARG:HB2	1.52	0.75
14:AO:63:ARG:HD3	14:AO:87:ARG:NH2	2.00	0.75
22:BA:1057:A:C8	22:BA:1086:A:C8	2.74	0.75
53:CA:17:U:H2'	53:CA:18:C:C6	2.21	0.75
53:CA:120:A:C2'	53:CA:121:U:H5"	2.15	0.75
22:DA:794:A:H2'	22:DA:795:C:C6	2.21	0.75
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.85	0.75
10:AK:124:LYS:CE	20:AU:33:ARG:HH21	1.99	0.75
21:AA:548:G:H2'	21:AA:549:C:C6	2.22	0.75
22:BA:228:C:H4'	22:BA:229:C:H5"	1.67	0.75
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.87	0.75
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.68	0.75
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.87	0.75
22:BA:1964:G:H4'	22:BA:1965:C:OP2	1.86	0.75
34:BM:64:TRP:HZ3	34:BM:106:ASP:HB2	1.52	0.75
6:CG:59:GLU:OE2	6:CG:63:VAL:HG23	1.85	0.75
53:CA:366:A:O2'	53:CA:394:G:N2	2.20	0.75
22:DA:395:U:O2'	22:DA:396:G:H8	1.70	0.75
22:DA:1069:A:H4'	22:DA:1070:A:O5'	1.86	0.75
54:DB:42:C:O2'	54:DB:43:C:H5'	1.86	0.75
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.66	0.75
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.67	0.75
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.51	0.75
7:AH:17:GLN:NE2	7:AH:71:VAL:HG23	2.01	0.75
9:AJ:80:THR:HB	9:AJ:83:THR:HG22	1.68	0.75
12:AM:10:ASP:CG	12:AM:11:HIS:N	2.45	0.75
12:AM:106:ARG:HH21	12:AM:112:ARG:HB3	1.52	0.75
21:AA:795:C:H5"	21:AA:796:C:OP2	1.86	0.75
22:BA:84:A:H4'	22:BA:85:G:O5'	1.85	0.75
22:BA:312:G:O2'	22:BA:313:G:H5'	1.87	0.75
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.14	0.75
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.01	0.75
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.69	0.75
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.17	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:117:LEU:HA	6:CG:121:ASN:HB2	1.67	0.75
22:DA:244:A:H2'	22:DA:245:G:O4'	1.87	0.75
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	2.02	0.75
32:DK:7:MET:HE1	32:DK:20:MET:HB2	1.67	0.75
35:DN:35:LYS:HZ3	35:DN:112:TYR:HE1	1.32	0.75
2:AC:118:SER:O	2:AC:122:GLN:HG2	1.86	0.75
8:AI:83:THR:HG21	8:AI:102:PHE:HB3	1.69	0.75
18:AS:43:MET:O	18:AS:61:VAL:HG21	1.85	0.75
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.84	0.75
2:CC:63:ILE:HG12	2:CC:65:VAL:HG23	1.69	0.75
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.68	0.75
10:AK:14:GLN:HA	10:AK:76:TYR:O	1.86	0.75
21:AA:654:G:H2'	21:AA:655:A:C8	2.22	0.75
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.86	0.75
4:CE:76:ASN:O	4:CE:79:THR:HG22	1.86	0.75
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.22	0.75
54:DB:12:C:H4'	54:DB:13:G:OP1	1.84	0.75
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.49	0.75
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.02	0.75
5:AF:3:HIS:N	5:AF:92:THR:HG23	1.98	0.75
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	1.86	0.75
37:BP:50:ARG:CG	37:BP:57:ALA:H	1.99	0.75
4:CE:132:PRO:O	4:CE:136:VAL:HG12	1.86	0.75
8:CI:35:GLU:HA	8:CI:39:GLY:HA3	1.67	0.75
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.68	0.75
19:CT:67:HIS:HB3	19:CT:68:LYS:HD2	1.69	0.75
53:CA:547:A:H4'	53:CA:548:G:O5'	1.87	0.75
53:CA:1169:A:H2'	53:CA:1170:A:C8	2.22	0.75
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.67	0.75
5:AF:11:HIS:CD2	5:AF:13:ASP:H	2.05	0.74
6:AG:61:PHE:HE1	6:AG:65:LEU:HD22	1.52	0.74
21:AA:1239:A:H62	21:AA:1299:A:H62	1.34	0.74
22:BA:760:G:H2'	22:BA:761:A:H5'	1.68	0.74
22:BA:2134:A:HO2'	22:BA:2135:A:H8	1.35	0.74
24:BC:129:LEU:HD23	24:BC:130:PRO:HD2	1.68	0.74
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.02	0.74
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.22	0.74
13:CN:70:HIS:HB2	53:CA:976:G:OP1	1.87	0.74
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.01	0.74
22:DA:1731:G:HO2'	22:DA:1732:C:H5"	1.49	0.74
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:22:TRP:O	1:AB:22:TRP:CG	2.39	0.74
44:BW:37:VAL:HG12	44:BW:38:ARG:N	2.02	0.74
4:CE:44:ARG:HG2	4:CE:72:ASN:HA	1.69	0.74
10:CK:74:LYS:HD2	10:CK:104:PHE:HE1	1.52	0.74
53:CA:197:A:C6	53:CA:221:C:H4'	2.23	0.74
53:CA:209:U:H5"	53:CA:210:C:OP2	1.87	0.74
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.86	0.74
21:AA:17:U:H2'	21:AA:18:C:C6	2.21	0.74
21:AA:92:U:H2'	21:AA:93:U:C6	2.23	0.74
21:AA:842:U:H3'	21:AA:843:U:C5'	2.17	0.74
39:BR:59:ILE:HG12	39:BR:101:ILE:HD13	1.69	0.74
9:CJ:35:GLN:HG2	9:CJ:76:ILE:HG23	1.67	0.74
12:CM:27:THR:HG21	53:CA:1328:C:H5"	1.69	0.74
53:CA:79:G:H2'	53:CA:80:A:C8	2.22	0.74
53:CA:367:U:C6	53:CA:394:G:N2	2.55	0.74
22:DA:765:C:H2'	22:DA:766:U:C6	2.22	0.74
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.17	0.74
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	2.02	0.74
21:AA:110:C:H2'	21:AA:111:G:C8	2.21	0.74
22:BA:1082:U:H5'	30:BI:117:THR:O	1.88	0.74
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.99	0.74
2:CC:18:ASN:HD21	2:CC:53:ARG:NH1	1.85	0.74
7:CH:1:SER:HB3	7:CH:3:GLN:HG3	1.69	0.74
22:DA:1492:G:H3'	22:DA:1493:C:H5'	1.69	0.74
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.51	0.74
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.69	0.74
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.69	0.74
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.52	0.74
1:AB:163:ILE:O	1:AB:185:ILE:HG12	1.87	0.74
22:BA:194:G:N7	57:BA:3766:HOH:O	2.18	0.74
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.05	0.74
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.69	0.74
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.86	0.74
22:DA:1135:C:N4	22:DA:1139:G:C6	2.55	0.74
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.68	0.74
15:AP:59:HIS:CE1	15:AP:63:GLN:HE22	2.06	0.74
21:AA:109:A:H2'	21:AA:326:G:H21	1.49	0.74
21:AA:206:C:H2'	21:AA:207:C:O4'	1.88	0.74
21:AA:1299:A:H2'	21:AA:1299:A:N3	2.02	0.74
22:BA:1022:G:N2	22:BA:1142:A:C2	2.51	0.74
2:CC:59:PRO:HG2	2:CC:62:SER:HB3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:66:A:H2'	53:CA:66:A:N3	2.01	0.74
53:CA:982:U:H1'	53:CA:983:A:N7	2.02	0.74
22:DA:279:A:H61	22:DA:361:G:H1'	1.52	0.74
22:DA:960:A:H2'	22:DA:962:G:H5'	1.69	0.74
22:DA:1490:A:N3	22:DA:1490:A:H5'	2.02	0.74
24:DC:147:PRO:HA	24:DC:187:CYS:HB3	1.69	0.74
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.51	0.74
1:AB:127:LYS:HG3	1:AB:128:LEU:H	1.52	0.74
5:AF:3:HIS:H	5:AF:92:THR:CG2	1.99	0.74
15:AP:67:ILE:HG21	15:AP:72:ALA:HB2	1.68	0.74
22:BA:276:U:O2'	22:BA:278:A:N7	2.20	0.74
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.88	0.74
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.68	0.74
25:BD:107:VAL:H	25:BD:206:ALA:H	1.33	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
39:BR:1:MET:O	39:BR:1:MET:HG3	1.88	0.74
52:B4:3:VAL:O	52:B4:4:ARG:O	2.04	0.74
1:CB:49:PHE:HA	1:CB:52:ALA:HB3	1.70	0.74
53:CA:78:A:H2'	53:CA:79:G:C8	2.23	0.74
53:CA:1071:C:H2'	53:CA:1072:G:C8	2.22	0.74
22:DA:762:U:H4'	22:DA:763:G:O5'	1.88	0.74
22:DA:973:A:H1'	22:DA:1188:U:C6	2.23	0.74
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.87	0.74
22:DA:1069:A:N6	22:DA:1073:A:H5"	2.02	0.74
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.21	0.74
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.51	0.74
34:DM:72:PRO:O	34:DM:73:ILE:HB	1.86	0.74
1:AB:185:ILE:HA	1:AB:199:ILE:HB	1.68	0.74
10:AK:39:ASN:O	21:AA:684:U:H1'	1.88	0.74
22:BA:1026:G:O2'	22:BA:1027:A:H5'	1.87	0.74
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.70	0.74
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.55	0.74
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.70	0.74
22:DA:460:A:H2'	22:DA:461:C:O4'	1.87	0.74
22:DA:1439:A:N1	22:DA:1552:A:N7	2.34	0.74
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.39	0.74
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.70	0.74
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.50	0.74
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.52	0.74
21:AA:974:A:H4'	21:AA:975:A:H5'	1.69	0.74
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	1.88	0.74
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.12	0.74
44:BW:19:ARG:NH1	44:BW:22:VAL:HG11	2.03	0.74
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	1.70	0.74
19:AT:6:ALA:HB1	19:AT:9:ARG:HB2	1.70	0.74
21:AA:32:A:H2'	21:AA:33:A:C8	2.22	0.74
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.53	0.74
13:CN:76:PHE:HE2	13:CN:92:ILE:HG21	1.51	0.74
53:CA:33:A:H2'	53:CA:34:C:C6	2.22	0.74
53:CA:511:C:O2'	53:CA:512:U:H5"	1.88	0.74
53:CA:1154:G:H2'	53:CA:1155:A:H8	1.53	0.74
22:DA:1237:A:C2	22:DA:1238:G:H1'	2.22	0.74
20:AU:9:GLU:CG	20:AU:10:PRO:HD3	2.13	0.73
22:BA:588:U:H2'	22:BA:589:U:C6	2.22	0.73
22:BA:714:U:H5'	22:BA:715:A:OP2	1.89	0.73
22:BA:789:A:OP1	22:BA:790:U:C5	2.41	0.73
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.70	0.73
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.86	0.73
2:CC:13:ILE:HG22	2:CC:14:VAL:HG23	1.70	0.73
6:CG:137:ARG:CZ	6:CG:138:GLU:HG2	2.17	0.73
53:CA:93:U:O5'	53:CA:93:U:H6	1.70	0.73
22:DA:873:C:H4'	34:DM:64:TRP:HE1	1.53	0.73
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.69	0.73
1:AB:71:THR:HG22	1:AB:72:LYS:H	1.53	0.73
21:AA:176:C:H2'	21:AA:177:G:N3	2.03	0.73
22:BA:959:A:N6	34:BM:82:MET:HE3	2.02	0.73
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.70	0.73
3:CD:116:LEU:HD21	3:CD:153:ARG:HD3	1.70	0.73
11:CL:19:ASN:H	11:CL:19:ASN:ND2	1.86	0.73
22:DA:921:C:C2'	22:DA:922:C:H5'	2.18	0.73
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.52	0.73
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.52	0.73
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.23	0.73
4:AE:14:LEU:HB2	4:AE:36:THR:HG22	1.69	0.73
4:AE:153:ALA:HA	4:AE:156:ARG:HB2	1.68	0.73
9:AJ:51:VAL:HB	13:AN:80:ARG:HB2	1.71	0.73
18:AS:3:SER:O	18:AS:5:LYS:HG3	1.89	0.73
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.89	0.73
53:CA:536:C:OP1	57:CA:1882:HOH:O	2.05	0.73
53:CA:1391:U:H2'	53:CA:1392:G:H8	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:445:C:H2'	22:DA:446:G:C8	2.23	0.73
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.69	0.73
1:AB:46:VAL:HB	1:AB:47:PRO:HD3	1.70	0.73
13:AN:44:VAL:HG23	13:AN:45:LEU:H	1.54	0.73
22:BA:704:G:HO2'	22:BA:726:G:H22	1.36	0.73
22:BA:760:G:C2'	22:BA:761:A:H5'	2.18	0.73
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	1.68	0.73
28:BG:10:VAL:O	28:BG:10:VAL:HG23	1.87	0.73
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.03	0.73
6:CG:24:LYS:O	6:CG:28:ILE:HG12	1.88	0.73
22:DA:329:G:O6	42:DU:16:LYS:HB2	1.88	0.73
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.71	0.73
22:DA:1079:C:H41	22:DA:1088:A:C5'	2.01	0.73
22:DA:1310:G:H2'	22:DA:1311:G:O4'	1.88	0.73
25:DD:107:VAL:H	25:DD:206:ALA:H	1.36	0.73
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.53	0.73
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.29	0.73
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.53	0.73
3:AD:34:GLU:O	3:AD:37:PRO:HD3	1.89	0.73
14:AO:73:ASP:CG	14:AO:76:ARG:HG3	2.14	0.73
21:AA:1225:A:H2'	21:AA:1226:C:C5	2.23	0.73
22:BA:404:A:O2'	22:BA:405:U:OP2	2.06	0.73
22:BA:869:G:O2'	34:BM:8:LYS:HD3	1.89	0.73
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.18	0.73
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.70	0.73
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.04	0.73
6:CG:78:ARG:HA	6:CG:84:TYR:HB2	1.70	0.73
4:AE:14:LEU:HD13	4:AE:14:LEU:O	1.89	0.73
10:AK:86:LYS:HE3	21:AA:707:U:OP1	1.88	0.73
21:AA:1063:C:H2'	21:AA:1064:G:C8	2.23	0.73
22:BA:915:C:H5"	22:BA:915:C:C6	2.21	0.73
27:BF:35:LEU:HB3	27:BF:153:ILE:CG2	2.12	0.73
27:BF:134:GLN:HG2	27:BF:135:ILE:N	2.03	0.73
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.21	0.73
2:CC:9:ILE:HD12	13:CN:97:LYS:HD3	1.71	0.73
15:CP:74:LEU:O	15:CP:78:VAL:HG23	1.88	0.73
22:DA:1327:A:H2'	22:DA:1328:A:C8	2.24	0.73
22:DA:1676:A:H2	22:DA:1993:U:H5'	1.52	0.73
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.70	0.73
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.69	0.73
42:DU:95:PHE:HD1	42:DU:95:PHE:H	1.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:50:HIS:CE1	21:AA:667:G:H4'	2.24	0.73
22:BA:527:C:H4'	22:BA:528:A:O5'	1.88	0.73
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.18	0.73
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.71	0.73
8:CI:51:LEU:HB2	8:CI:56:MET:SD	2.29	0.73
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.89	0.73
22:DA:528:A:C2	22:DA:2042:A:H2'	2.23	0.73
9:AJ:14:ASP:HB3	9:AJ:17:LEU:HB3	1.69	0.73
15:AP:19:VAL:HG13	15:AP:37:GLY:C	2.14	0.73
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.70	0.73
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.18	0.73
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.45	0.73
20:CU:35:GLU:CG	20:CU:36:PHE:H	2.01	0.73
53:CA:513:C:O2'	53:CA:514:C:O4'	2.06	0.73
53:CA:1068:G:O2'	53:CA:1069:C:H5'	1.88	0.73
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.52	0.73
22:DA:95:A:H4'	46:DY:38:GLN:O	1.88	0.73
22:DA:1739:A:H2'	22:DA:1740:G:C8	2.23	0.73
9:AJ:42:LEU:HB3	9:AJ:43:PRO:HD2	1.70	0.73
19:AT:79:THR:O	19:AT:82:ILE:HG13	1.88	0.73
21:AA:914:A:H2'	21:AA:915:A:H8	1.53	0.73
22:BA:1558:C:H4'	22:BA:1559:U:O5'	1.88	0.73
22:DA:1070:A:H5'	22:DA:1071:G:H5"	1.70	0.73
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.24	0.73
22:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.54	0.73
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.52	0.73
1:AB:131:LYS:O	1:AB:135:MET:HB2	1.89	0.73
22:BA:1090:A:O2'	22:BA:1091:G:C5'	2.37	0.73
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.24	0.73
22:BA:1813:G:N3	24:BC:49:THR:HG21	2.03	0.73
22:BA:2199:A:C8	22:BA:2199:A:H5"	2.24	0.73
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.03	0.73
7:CH:54:THR:HG23	7:CH:55:LYS:H	1.54	0.73
12:CM:77:LYS:HA	12:CM:80:MET:HE2	1.71	0.73
12:CM:102:LYS:HA	53:CA:1226:C:H41	1.54	0.73
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.24	0.73
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.22	0.73
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.04	0.73
21:AA:274:A:O2'	21:AA:275:G:H8	1.72	0.72
22:BA:1494:A:H2'	22:BA:1495:A:H8	1.54	0.72
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	1.89	0.72
23:BB:54:G:H21	27:BF:25:MET:HE3	1.52	0.72
35:BN:70:THR:HB	35:BN:75:ILE:HD11	1.70	0.72
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.54	0.72
27:DF:90:LEU:O	27:DF:95:MET:HE3	1.89	0.72
19:AT:82:ILE:O	19:AT:86:ALA:HB3	1.89	0.72
22:BA:794:A:H2'	22:BA:795:C:C6	2.23	0.72
22:BA:1238:G:O2'	22:BA:1239:G:H5'	1.88	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.72
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.70	0.72
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.04	0.72
53:CA:251:G:H4'	53:CA:252:U:C5'	2.19	0.72
53:CA:1182:G:C4'	53:CA:1183:U:H5'	2.18	0.72
53:CA:1218:C:H2'	53:CA:1219:A:C8	2.24	0.72
22:DA:668:A:H2'	22:DA:670:A:N6	2.01	0.72
22:DA:2225:A:H5'	22:DA:2226:C:H5'	1.71	0.72
22:DA:2304:G:N2	22:DA:2312:U:H3	1.88	0.72
22:DA:2837:A:H2'	22:DA:2838:G:H8	1.54	0.72
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	2.04	0.72
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.86	0.72
6:AG:3:ARG:HG3	6:AG:4:ARG:H	1.53	0.72
21:AA:98:A:H2'	21:AA:99:C:C6	2.24	0.72
22:BA:1309:G:OP1	50:B2:9:VAL:HG12	1.89	0.72
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.71	0.72
22:BA:2791:G:H5"	22:BA:2791:G:H8	1.54	0.72
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.70	0.72
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.72	0.72
35:BN:96:ARG:NH2	35:BN:116:VAL:HG23	2.04	0.72
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.14	0.72
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.71	0.72
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.70	0.72
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.71	0.72
10:CK:81:LEU:HD11	10:CK:104:PHE:CD2	2.24	0.72
53:CA:205:A:C5	53:CA:206:C:N4	2.58	0.72
22:DA:1156:A:OP1	22:DA:1156:A:H8	1.72	0.72
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.23	0.72
43:DV:2:PHE:HD1	43:DV:50:MET:HE3	1.53	0.72
45:DX:31:ASN:H	45:DX:31:ASN:HD22	1.37	0.72
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.54	0.72
14:AO:57:ARG:HH11	14:AO:57:ARG:HB3	1.53	0.72
20:AU:16:ARG:HH11	20:AU:19:LYS:HG3	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1279:G:H1'	21:AA:1282:C:N4	2.04	0.72
22:BA:528:A:C2	22:BA:2043:C:H4'	2.24	0.72
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.23	0.72
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.31	0.72
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.04	0.72
1:CB:114:LYS:CA	1:CB:117:GLU:HG2	2.19	0.72
5:CF:4:TYR:O	5:CF:63:ASN:HA	1.88	0.72
22:DA:374:A:H2'	22:DA:375:G:C8	2.25	0.72
22:DA:533:G:H2'	22:DA:534:U:C6	2.24	0.72
22:DA:665:U:H2'	22:DA:666:A:H8	1.54	0.72
21:AA:451:A:H4'	21:AA:452:A:O5'	1.90	0.72
21:AA:519:C:H2'	21:AA:520:A:C8	2.25	0.72
21:AA:1239:A:H4'	21:AA:1240:U:C5'	2.20	0.72
41:BT:29:THR:HA	41:BT:86:THR:HA	1.71	0.72
41:BT:48:GLN:HE21	41:BT:48:GLN:HA	1.55	0.72
6:CG:142:ARG:O	6:CG:146:ALA:HB3	1.88	0.72
53:CA:110:C:H2'	53:CA:111:G:C8	2.25	0.72
53:CA:337:G:H2'	53:CA:338:A:C8	2.24	0.72
22:DA:27:G:H1'	22:DA:513:A:N6	2.04	0.72
22:DA:1268:A:H2'	22:DA:1269:A:C8	2.25	0.72
22:DA:1965:C:H3'	22:DA:1966:A:C5'	2.19	0.72
21:AA:47:C:H4'	21:AA:48:C:O5'	1.88	0.72
22:BA:2021:C:P	48:B0:8:THR:HG21	2.29	0.72
22:BA:2032:G:H4'	57:BA:3484:HOH:O	1.89	0.72
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	2.04	0.72
1:CB:44:LYS:O	1:CB:48:MET:HG3	1.89	0.72
1:CB:185:ILE:HG22	1:CB:199:ILE:HG13	1.70	0.72
2:CC:76:ILE:HD11	2:CC:102:ILE:HD11	1.72	0.72
7:CH:39:LEU:HB2	7:CH:45:ILE:HD11	1.71	0.72
12:CM:102:LYS:HA	53:CA:1226:C:C5	2.24	0.72
53:CA:1383:C:O2'	53:CA:1384:C:H5'	1.89	0.72
22:DA:975:A:O2'	22:DA:976:G:H8	1.68	0.72
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.71	0.72
1:AB:71:THR:O	1:AB:72:LYS:HG2	1.89	0.72
1:AB:187:ASP:HB2	1:AB:203:ASP:HB3	1.72	0.72
9:AJ:39:PRO:HD2	21:AA:1123:U:H4'	1.71	0.72
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.88	0.72
4:CE:55:VAL:O	4:CE:59:ILE:HG22	1.89	0.72
15:CP:16:PHE:CE2	15:CP:40:ASN:HB2	2.25	0.72
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.23	0.72
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	1.90	0.72
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.72	0.72
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.55	0.72
47:DZ:16:LEU:H	47:DZ:16:LEU:CD2	2.03	0.72
4:AE:155:LYS:HD2	4:AE:156:ARG:N	2.05	0.72
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.05	0.72
17:AR:66:LEU:O	17:AR:67:LEU:HD23	1.90	0.72
21:AA:484:G:H4'	21:AA:485:U:O5'	1.89	0.72
21:AA:1336:C:O2'	21:AA:1337:G:OP2	2.07	0.72
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.25	0.72
22:BA:2820:A:H3'	22:BA:2820:A:H8	1.53	0.72
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.89	0.72
43:BV:10:LYS:H	43:BV:10:LYS:CD	1.97	0.72
6:CG:76:SER:HA	6:CG:85:GLN:HA	1.71	0.72
10:CK:55:ARG:H	10:CK:55:ARG:HD2	1.54	0.72
20:CU:24:LYS:HZ2	20:CU:25:ALA:N	1.88	0.72
53:CA:753:A:H4'	53:CA:754:C:O5'	1.89	0.72
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.55	0.72
22:DA:249:C:H4'	22:DA:250:G:O5'	1.90	0.72
22:DA:483:A:H2'	22:DA:484:C:H6	1.55	0.72
22:DA:806:C:H2'	22:DA:807:U:H6	1.55	0.72
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	2.04	0.72
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.90	0.72
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.88	0.72
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.25	0.72
8:AI:119:LYS:HG3	8:AI:122:ARG:HB3	1.72	0.72
21:AA:243:A:H4'	21:AA:244:U:C5'	2.20	0.72
47:BZ:29:ARG:HH21	47:BZ:29:ARG:CG	2.02	0.72
1:CB:209:VAL:O	1:CB:213:LEU:HB2	1.90	0.72
53:CA:51:A:H4'	53:CA:52:C:H5'	1.71	0.72
22:DA:1723:G:H2'	22:DA:1724:G:H8	1.55	0.72
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.72	0.72
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.89	0.72
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.04	0.72
1:AB:89:PHE:HB3	1:AB:149:GLY:CA	2.19	0.72
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.70	0.72
1:CB:163:ILE:HG23	1:CB:185:ILE:HD11	1.70	0.72
22:DA:1739:A:H2'	22:DA:1740:G:H8	1.54	0.72
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.72	0.72
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.54	0.72
30:DI:51:GLY:O	30:DI:52:LEU:HB2	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:126:ARG:CB	20:AU:33:ARG:HH12	2.03	0.71
21:AA:390:U:H2'	21:AA:391:G:C8	2.25	0.71
28:BG:84:LYS:CG	28:BG:132:LEU:H	2.00	0.71
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.25	0.71
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.89	0.71
7:CH:52:GLY:HA3	7:CH:56:PRO:HA	1.71	0.71
16:CQ:3:LYS:HZ3	16:CQ:6:THR:HG21	1.55	0.71
29:DH:109:GLU:HA	29:DH:109:GLU:OE2	1.90	0.71
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.55	0.71
1:AB:76:SER:HB2	1:AB:92:ASN:HB2	1.72	0.71
6:AG:39:GLU:HB2	6:AG:43:TYR:HE2	1.54	0.71
21:AA:1361:G:H2'	21:AA:1362:A:H5'	1.72	0.71
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.05	0.71
10:CK:23:HIS:HB3	10:CK:30:ILE:HB	1.72	0.71
16:CQ:3:LYS:NZ	16:CQ:6:THR:HG21	2.05	0.71
53:CA:575:G:H4'	53:CA:576:C:O5'	1.91	0.71
22:DA:587:C:H1'	22:DA:671:C:H5'	1.72	0.71
22:DA:616:A:C2'	22:DA:617:G:H8	2.02	0.71
22:DA:727:A:H2'	22:DA:728:G:C8	2.25	0.71
22:DA:1399:C:O2'	22:DA:1400:U:H5'	1.88	0.71
22:DA:2618:G:H21	25:DD:155:VAL:HG21	1.55	0.71
22:DA:2807:U:H3'	22:DA:2808:G:H5"	1.71	0.71
29:DH:24:GLY:O	29:DH:28:ASN:HB2	1.89	0.71
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.14	0.71
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.38	0.71
7:AH:110:MET:HE2	7:AH:114:ALA:HB1	1.70	0.71
22:BA:289:G:H2'	22:BA:290:U:O4'	1.90	0.71
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.90	0.71
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.05	0.71
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.15	0.71
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.73	0.71
6:CG:101:ARG:NH2	53:CA:940:C:H5'	2.05	0.71
19:CT:23:ARG:HB3	19:CT:60:GLN:NE2	2.04	0.71
22:DA:313:G:H2'	22:DA:314:C:C6	2.25	0.71
22:DA:720:U:H2'	22:DA:721:A:C8	2.25	0.71
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.06	0.71
22:DA:1568:G:H21	24:DC:57:HIS:CE1	2.09	0.71
22:DA:2517:C:O2'	22:DA:2518:A:H3'	1.90	0.71
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.15	0.71
21:AA:143:A:H5'	21:AA:144:G:H5'	1.71	0.71
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.21	0.71
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.72	0.71
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.71
31:BJ:44:TYR:CD1	31:BJ:44:TYR:C	2.66	0.71
32:BK:111:LYS:HE2	32:BK:111:LYS:N	2.01	0.71
44:BW:31:LEU:N	44:BW:31:LEU:HD23	2.04	0.71
44:BW:67:LYS:O	44:BW:68:PHE:HB2	1.90	0.71
11:CL:109:ARG:HB2	11:CL:118:VAL:HG21	1.72	0.71
12:CM:13:HIS:HB3	12:CM:16:ILE:HB	1.71	0.71
22:DA:1695:G:H8	24:DC:7:PRO:O	1.74	0.71
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.25	0.71
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.54	0.71
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.53	0.71
1:AB:72:LYS:HZ2	1:AB:204:ASP:HB3	1.55	0.71
12:AM:10:ASP:CG	12:AM:11:HIS:H	1.96	0.71
21:AA:429:U:H1'	21:AA:430:A:H5"	1.72	0.71
21:AA:734:G:H2'	21:AA:735:C:C6	2.25	0.71
21:AA:1021:A:C2'	21:AA:1022:A:H5"	2.19	0.71
57:BA:3241:HOH:O	26:BE:81:GLY:HA2	1.90	0.71
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.21	0.71
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.72	0.71
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.56	0.71
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.90	0.71
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.15	0.71
40:BS:72:THR:HG21	40:BS:108:SER:OG	1.91	0.71
11:CL:91:GLY:O	11:CL:93:ARG:HG3	1.91	0.71
12:CM:12:LYS:HB3	12:CM:17:ALA:HB2	1.72	0.71
22:DA:196:A:H61	22:DA:831:G:H21	1.38	0.71
22:DA:241:A:H4'	22:DA:242:G:OP1	1.90	0.71
22:DA:374:A:H2'	22:DA:375:G:H8	1.54	0.71
22:DA:822:G:O6	22:DA:943:A:H2	1.73	0.71
22:DA:1429:G:HO2'	22:DA:1430:G:H8	0.76	0.71
22:DA:1439:A:N1	22:DA:1552:A:C4	2.58	0.71
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.73	0.71
1:AB:101:THR:HG22	1:AB:174:GLU:OE1	1.90	0.71
4:AE:106:ALA:HB2	4:AE:124:ALA:HB3	1.73	0.71
10:AK:124:LYS:NZ	20:AU:33:ARG:HH21	1.88	0.71
21:AA:569:C:H5"	21:AA:570:G:OP1	1.90	0.71
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.71	0.71
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.73	0.71
11:CL:5:GLN:HG3	11:CL:9:LYS:NZ	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:104:A:H2'	22:DA:105:C:O4'	1.89	0.71
22:DA:142:A:O2'	22:DA:143:C:H5'	1.91	0.71
22:DA:1491:G:O2'	22:DA:1492:G:H5'	1.90	0.71
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.26	0.71
1:AB:163:ILE:HG23	1:AB:164:ASP:N	2.03	0.71
21:AA:1125:U:O2'	21:AA:1126:U:O5'	2.08	0.71
22:BA:729:G:N3	22:BA:729:G:H2'	2.06	0.71
25:BD:99:GLU:CG	25:BD:100:LEU:H	1.97	0.71
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.73	0.71
1:CB:130:LYS:HA	1:CB:133:ALA:HB3	1.70	0.71
53:CA:183:C:O2'	53:CA:184:G:H5'	1.90	0.71
22:DA:83:A:N6	22:DA:101:A:H5'	2.04	0.71
22:DA:373:U:O2'	22:DA:374:A:H8	1.73	0.71
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.56	0.71
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.90	0.71
3:AD:99:ASN:O	3:AD:103:ARG:HB2	1.91	0.71
8:AI:129:ARG:HH22	21:AA:967:C:H1'	1.55	0.71
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.31	0.71
21:AA:86:G:C2	21:AA:87:C:N4	2.59	0.71
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.25	0.71
1:CB:10:LYS:HA	1:CB:10:LYS:HE3	1.71	0.71
53:CA:82:G:C2'	53:CA:83:C:H4'	2.21	0.71
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.26	0.71
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.25	0.71
21:AA:461:A:H3'	21:AA:461:A:N3	2.05	0.71
22:BA:1070:A:C2	30:BI:9:LYS:HG2	2.26	0.71
22:BA:1083:U:O2	22:BA:1086:A:N6	2.23	0.71
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.56	0.71
25:BD:101:PHE:HE2	25:BD:203:VAL:HG22	1.55	0.71
39:BR:15:SER:O	39:BR:18:GLN:HB3	1.91	0.71
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.53	0.71
53:CA:274:A:O2'	53:CA:275:G:H8	1.73	0.71
53:CA:677:U:H3	53:CA:713:G:H22	1.39	0.71
53:CA:1285:A:H4'	53:CA:1286:U:OP1	1.90	0.71
22:DA:874:G:H5'	22:DA:875:G:OP2	1.90	0.71
22:DA:2135:A:C3'	22:DA:2136:G:H5"	2.16	0.71
35:DN:5:LYS:HG2	35:DN:6:SER:H	1.56	0.71
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.26	0.71
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.55	0.71
21:AA:111:G:O6	21:AA:330:C:N4	2.24	0.71
22:BA:780:G:H21	22:BA:783:A:H62	1.39	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.73	0.71
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.72	0.71
12:CM:64:VAL:HG12	12:CM:65:GLU:HG3	1.73	0.71
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.26	0.71
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.56	0.71
22:DA:876:C:H3'	22:DA:877:A:H8	1.55	0.71
22:DA:1476:U:O2'	22:DA:1477:A:H5'	1.91	0.71
22:DA:2305:U:H4'	27:DF:132:ARG:HG2	1.73	0.71
54:DB:16:G:O2'	54:DB:17:C:H5'	1.90	0.71
27:DF:104:THR:HG22	27:DF:105:ILE:HG13	1.73	0.71
28:DG:90:GLY:HA2	28:DG:159:LYS:HE3	1.72	0.71
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.73	0.71
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.05	0.71
4:AE:37:VAL:HG11	4:AE:113:VAL:HA	1.73	0.70
14:AO:18:ALA:O	14:AO:19:ASN:HB2	1.90	0.70
22:BA:272:A:O2'	22:BA:273:G:H8	1.69	0.70
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.72	0.70
38:BQ:63:ARG:HD2	38:BQ:64:ILE:N	2.06	0.70
5:CF:18:VAL:O	5:CF:22:ILE:HG12	1.90	0.70
15:CP:1:MET:HB2	53:CA:135:C:O2	1.90	0.70
22:DA:142:A:H2'	22:DA:143:C:C5	2.26	0.70
22:DA:753:A:O2'	22:DA:754:U:H5'	1.91	0.70
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.73	0.70
21:AA:1324:A:H2'	21:AA:1325:C:C6	2.25	0.70
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.57	0.70
46:BY:32:ALA:HB2	46:BY:37:LEU:HD12	1.74	0.70
1:CB:110:ILE:HD13	1:CB:151:LYS:HA	1.71	0.70
2:CC:110:LEU:HD21	2:CC:203:LYS:HD2	1.73	0.70
5:CF:3:HIS:ND1	5:CF:92:THR:HG23	2.05	0.70
11:CL:82:ARG:HH11	11:CL:82:ARG:HG2	1.56	0.70
22:DA:84:A:H4'	22:DA:85:G:O5'	1.89	0.70
22:DA:1654:A:HO2'	22:DA:1655:A:H8	1.38	0.70
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.90	0.70
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.73	0.70
1:AB:212:TYR:O	1:AB:216:VAL:HG23	1.90	0.70
4:AE:155:LYS:HA	4:AE:158:LYS:HZ3	1.54	0.70
6:AG:121:ASN:O	6:AG:125:ASP:HB2	1.92	0.70
21:AA:662:U:H2'	21:AA:663:A:C8	2.25	0.70
21:AA:1157:A:H1'	21:AA:1181:G:C2	2.26	0.70
22:BA:191:A:H2'	22:BA:192:C:C6	2.26	0.70
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:118:ARG:HH12	53:CA:1239:A:H5"	1.55	0.70
12:CM:13:HIS:HB2	12:CM:43:LYS:HE2	1.72	0.70
53:CA:560:A:H4'	53:CA:561:U:H5"	1.73	0.70
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.73	0.70
27:DF:12:VAL:HA	27:DF:15:LEU:HB2	1.73	0.70
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.26	0.70
42:DU:45:GLN:HA	42:DU:45:GLN:HE21	1.55	0.70
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.16	0.70
21:AA:109:A:N6	21:AA:324:G:H1'	2.07	0.70
22:BA:947:A:O2'	22:BA:984:A:H2	1.73	0.70
24:BC:123:ILE:O	24:BC:123:ILE:HG12	1.89	0.70
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.74	0.70
3:CD:109:THR:HG22	3:CD:111:ALA:N	2.03	0.70
14:CO:47:LYS:HD2	14:CO:47:LYS:H	1.57	0.70
19:CT:2:ASN:N	19:CT:7:LYS:HZ3	1.88	0.70
22:DA:1024:G:C3'	22:DA:1025:G:H5"	2.11	0.70
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.26	0.70
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.27	0.70
22:DA:1993:U:H2'	22:DA:1994:C:H6	1.56	0.70
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.56	0.70
2:AC:56:ILE:HG12	2:AC:65:VAL:HG22	1.71	0.70
3:AD:131:ILE:HG21	21:AA:620:C:C2	2.27	0.70
37:BP:50:ARG:HB3	37:BP:57:ALA:N	2.00	0.70
12:CM:78:ARG:HH21	12:CM:79:LEU:HD23	1.55	0.70
53:CA:252:U:H2'	53:CA:253:A:C8	2.26	0.70
53:CA:802:A:H2'	53:CA:803:G:H5'	1.73	0.70
22:DA:1080:A:H2'	22:DA:1081:U:C6	2.26	0.70
22:DA:2420:C:OP1	51:D3:33:THR:HB	1.91	0.70
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	2.07	0.70
9:AJ:14:ASP:HB2	9:AJ:17:LEU:HD22	1.74	0.70
21:AA:1319:A:H2'	21:AA:1323:G:N7	2.07	0.70
22:BA:2334:U:H4'	22:BA:2335:A:OP2	1.92	0.70
24:BC:141:HIS:HD2	24:BC:192:GLY:O	1.74	0.70
3:CD:32:LYS:HB3	3:CD:35:GLN:OE1	1.91	0.70
11:CL:79:ILE:HD12	11:CL:96:THR:HG21	1.72	0.70
53:CA:90:C:O2'	53:CA:91:U:H5'	1.91	0.70
22:DA:118:A:OP2	22:DA:119:A:H3'	1.92	0.70
22:DA:740:C:O2'	22:DA:741:U:H5'	1.92	0.70
1:AB:86:CYS:HB2	1:AB:88:GLN:HG3	1.73	0.70
3:AD:195:ASN:O	3:AD:196:GLU:HG3	1.92	0.70
21:AA:299:G:H2'	21:AA:300:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:137:U:H5”	22:BA:140:C:C5	2.27	0.70
22:BA:491:G:H2’	22:BA:492:A:H8	1.56	0.70
22:BA:1045:C:C5’	22:BA:1046:A:H5’	2.22	0.70
22:BA:1416:G:HO2’	22:BA:1417:C:H6	1.37	0.70
22:BA:2868:A:H2’	22:BA:2869:G:C8	2.27	0.70
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.91	0.70
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.72	0.70
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.72	0.70
22:DA:45:G:H5’	22:DA:46:G:OP1	1.92	0.70
22:DA:464:U:H1’	22:DA:686:U:H5	1.56	0.70
22:DA:1056:G:H1’	22:DA:1103:A:N6	2.07	0.70
22:DA:1062:G:C8	22:DA:1088:A:C8	2.80	0.70
22:DA:1565:C:H3’	24:DC:17:LYS:HE2	1.73	0.70
22:DA:2298:A:H2’	22:DA:2299:U:C6	2.26	0.70
24:DC:181:ARG:HG3	24:DC:265:PHE:O	1.92	0.70
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.92	0.70
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.73	0.70
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.20	0.70
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.57	0.70
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.91	0.70
5:AF:71:ILE:HD11	5:AF:89:VAL:HG21	1.72	0.70
5:AF:92:THR:O	5:AF:93:LYS:HG2	1.91	0.70
11:AL:3:VAL:O	11:AL:7:VAL:HG23	1.90	0.70
22:BA:1871:A:O2’	22:BA:1872:A:C8	2.44	0.70
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.72	0.70
4:CE:103:GLY:HA3	4:CE:121:ASN:HA	1.74	0.70
22:DA:339:U:H2’	22:DA:340:A:C8	2.27	0.70
22:DA:477:A:H2’	22:DA:478:A:C8	2.27	0.70
22:DA:1611:C:O2’	22:DA:1612:C:H6	1.73	0.70
25:DD:107:VAL:HG13	25:DD:109:VAL:HG23	1.74	0.70
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.04	0.70
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.72	0.70
3:AD:33:ILE:O	3:AD:34:GLU:HB3	1.90	0.70
8:AI:28:VAL:HB	8:AI:63:TYR:CD2	2.26	0.70
15:AP:73:ALA:O	15:AP:77:GLU:HB2	1.92	0.70
16:AQ:80:LYS:HZ3	16:AQ:80:LYS:HB2	1.55	0.70
22:BA:1060:U:O4’	22:BA:1062:G:H5”	1.91	0.70
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.74	0.70
1:CB:184:ALA:O	1:CB:199:ILE:HG12	1.91	0.70
8:CI:11:ARG:HD3	8:CI:106:ASP:OD1	1.92	0.70
9:CJ:26:VAL:O	9:CJ:30:LYS:HB3	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:80:LEU:HB3	11:CL:97:VAL:HG22	1.74	0.70
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.73	0.70
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.90	0.70
27:DF:49:LEU:HA	27:DF:52:ALA:HB3	1.71	0.70
34:DM:42:THR:HG22	34:DM:44:ARG:N	2.06	0.70
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.74	0.70
1:AB:133:ALA:O	1:AB:137:THR:HG23	1.91	0.70
1:AB:146:SER:O	1:AB:147:LEU:HD23	1.91	0.70
21:AA:731:G:OP1	21:AA:766:A:H1'	1.92	0.70
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.56	0.70
36:BO:40:ILE:HG12	36:BO:47:VAL:HG12	1.72	0.70
37:BP:85:VAL:HG13	37:BP:86:LYS:N	2.06	0.70
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.73	0.70
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.43	0.70
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.27	0.70
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.27	0.70
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.57	0.70
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.74	0.69
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.92	0.69
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.74	0.69
4:CE:80:LEU:HD22	4:CE:146:MET:HE1	1.73	0.69
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.73	0.69
53:CA:1151:A:H2'	53:CA:1152:A:H8	1.57	0.69
22:DA:436:C:O2'	22:DA:437:U:H5'	1.92	0.69
22:DA:1662:U:C2'	22:DA:1663:G:H5"	2.21	0.69
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.21	0.69
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.07	0.69
18:AS:51:HIS:CD2	18:AS:53:GLY:H	2.09	0.69
20:AU:39:LYS:H	20:AU:40:PRO:HD2	1.57	0.69
22:BA:1654:A:H1'	25:BD:118:PHE:CD1	2.27	0.69
22:BA:2321:U:H6	22:BA:2321:U:H5"	1.56	0.69
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.92	0.69
11:CL:34:THR:HG22	11:CL:35:ARG:HG2	1.74	0.69
16:CQ:18:LYS:HD3	16:CQ:48:GLU:OE2	1.92	0.69
53:CA:960:U:H4'	53:CA:961:U:C5'	2.22	0.69
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.74	0.69
11:AL:23:LEU:HG	11:AL:24:GLU:H	1.58	0.69
21:AA:1324:A:H2'	21:AA:1325:C:H6	1.55	0.69
22:BA:163:C:H6	22:BA:163:C:OP1	1.73	0.69
22:BA:1152:C:O2'	22:BA:1153:C:H5'	1.92	0.69
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.56	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
41:BT:9:LYS:O	41:BT:9:LYS:HG3	1.92	0.69
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.21	0.69
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.22	0.69
46:BY:5:GLU:O	46:BY:8:GLU:HB2	1.92	0.69
3:CD:176:LYS:HG3	3:CD:178:GLU:HB2	1.73	0.69
18:CS:54:ARG:HG2	18:CS:55:GLN:H	1.56	0.69
53:CA:181:A:HO2'	53:CA:182:A:H2	1.41	0.69
22:DA:526:A:N6	22:DA:2626:C:H4'	2.07	0.69
22:DA:810:U:O4	33:DL:30:THR:HG22	1.92	0.69
22:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.74	0.69
22:DA:2210:U:H4'	22:DA:2211:A:O5'	1.91	0.69
22:DA:2216:G:O2'	22:DA:2217:G:H8	1.74	0.69
22:DA:2261:C:C2	22:DA:2280:G:N2	2.61	0.69
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.21	0.69
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.27	0.69
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.33	0.69
11:AL:28:GLN:HB2	11:AL:81:ILE:O	1.93	0.69
11:AL:72:ASN:ND2	11:AL:73:LEU:H	1.90	0.69
21:AA:794:A:H2'	21:AA:795:C:C6	2.27	0.69
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.57	0.69
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.18	0.69
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.02	0.69
1:CB:133:ALA:HA	1:CB:137:THR:HG21	1.74	0.69
22:DA:127:A:N7	50:D2:46:LYS:HE3	2.08	0.69
22:DA:2060:A:H62	26:DE:69:ARG:NH1	1.89	0.69
54:DB:67:G:O2'	54:DB:68:C:H6	1.75	0.69
24:DC:122:ALA:HB3	24:DC:127:ASN:HD22	1.56	0.69
27:DF:42:ALA:HB2	27:DF:49:LEU:HD21	1.74	0.69
32:DK:64:ARG:HD2	32:DK:102:PRO:O	1.92	0.69
2:AC:128:MET:HB3	2:AC:131:ARG:HG3	1.73	0.69
6:AG:1:PRO:HB2	21:AA:1379:G:O6	1.93	0.69
22:BA:1695:G:C8	24:BC:7:PRO:HG2	2.27	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.75	0.69
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	1.94	0.69
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.02	0.69
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	2.05	0.69
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.28	0.69
3:CD:61:ARG:NH2	3:CD:67:LEU:HA	2.03	0.69
9:CJ:11:LYS:HB3	9:CJ:71:LEU:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:30:PHE:HE2	19:CT:52:GLU:HG2	1.56	0.69
53:CA:500:G:O2'	53:CA:501:C:H5'	1.92	0.69
53:CA:960:U:O2'	53:CA:1223:C:H4'	1.92	0.69
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.28	0.69
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.92	0.69
22:DA:2135:A:H3'	22:DA:2136:G:C5'	2.18	0.69
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.57	0.69
2:AC:155:ARG:NH2	21:AA:1055:A:H1'	2.07	0.69
16:AQ:22:VAL:HG21	16:AQ:60:ILE:HD11	1.74	0.69
22:BA:142:A:H2'	22:BA:143:C:C6	2.26	0.69
22:BA:1655:A:H3'	22:BA:1656:C:C6	2.28	0.69
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.10	0.69
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.28	0.69
25:BD:45:TYR:N	25:BD:45:TYR:CD1	2.61	0.69
39:BR:51:VAL:HB	39:BR:52:PRO:HD3	1.75	0.69
6:CG:100:MET:CE	6:CG:100:MET:H	2.05	0.69
9:CJ:44:THR:HG22	9:CJ:45:ARG:H	1.58	0.69
18:CS:45:GLY:H	18:CS:61:VAL:HB	1.58	0.69
53:CA:256:U:H2'	53:CA:257:G:O4'	1.93	0.69
53:CA:536:C:H2'	53:CA:537:G:H8	1.57	0.69
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.27	0.69
22:DA:1722:A:N6	22:DA:1738:G:H1'	2.08	0.69
22:DA:1809:A:C2	22:DA:1810:A:C4	2.80	0.69
54:DB:65:U:H3'	54:DB:108:A:N6	2.07	0.69
27:DF:47:LYS:HA	27:DF:50:ASP:HB3	1.75	0.69
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.75	0.69
35:DN:2:ARG:HD2	35:DN:5:LYS:HB3	1.75	0.69
35:DN:71:ARG:HH21	35:DN:71:ARG:HB2	1.56	0.69
3:AD:84:ASN:HB3	3:AD:87:GLU:HG2	1.75	0.69
19:AT:66:ILE:HD11	19:AT:70:LYS:HE3	1.73	0.69
21:AA:352:C:H6	21:AA:352:C:H5"	1.58	0.69
21:AA:466:A:O2'	21:AA:467:U:H5	1.73	0.69
21:AA:1520:C:H2'	21:AA:1521:C:C6	2.27	0.69
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.75	0.69
34:BM:66:ARG:HG3	34:BM:101:VAL:HG13	1.73	0.69
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.06	0.69
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.07	0.69
53:CA:330:C:O2'	53:CA:331:G:H8	1.69	0.69
22:DA:125:A:H4'	22:DA:126:A:OP2	1.91	0.69
22:DA:1364:G:N7	45:DX:1:SER:HB2	2.07	0.69
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2271:G:H2'	22:DA:2272:U:H6	1.57	0.69
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.45	0.69
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.08	0.69
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.75	0.69
1:AB:13:VAL:CG2	1:AB:207:ARG:HH22	2.06	0.69
1:AB:49:PHE:CG	1:AB:212:TYR:OH	2.45	0.69
10:AK:87:GLY:H	10:AK:113:THR:CG2	2.06	0.69
12:AM:18:LEU:O	12:AM:24:VAL:HG21	1.93	0.69
21:AA:511:C:HO2'	21:AA:512:U:H5"	1.58	0.69
21:AA:1240:U:H3'	21:AA:1241:G:H5'	1.73	0.69
21:AA:1469:C:H6	21:AA:1469:C:H5'	1.57	0.69
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.58	0.69
22:BA:1313:U:H2'	22:BA:1313:U:O2	1.92	0.69
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.45	0.69
38:BQ:10:ARG:HB2	38:BQ:10:ARG:HH11	1.56	0.69
44:BW:29:SER:HA	44:BW:63:ASP:HB3	1.73	0.69
13:CN:96:LYS:HD2	13:CN:96:LYS:H	1.58	0.69
20:CU:8:ASN:ND2	20:CU:9:GLU:H	1.90	0.69
53:CA:695:A:H2'	53:CA:696:A:C8	2.27	0.69
53:CA:960:U:H5'	53:CA:961:U:H5"	1.75	0.69
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.92	0.69
22:DA:454:A:H4'	22:DA:455:C:OP2	1.92	0.69
22:DA:638:G:H2'	22:DA:639:U:C6	2.27	0.69
22:DA:747:U:H2'	22:DA:2613:U:O4	1.93	0.69
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.08	0.69
22:DA:1024:G:H2'	22:DA:1025:G:C8	2.27	0.69
22:DA:1300:G:H5"	22:DA:1301:A:H5'	1.74	0.69
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.91	0.69
22:DA:1608:A:C8	22:DA:1611:C:N4	2.61	0.69
22:DA:1698:A:H4'	22:DA:1699:G:O5'	1.92	0.69
22:DA:2638:G:H1'	22:DA:2778:A:N6	2.08	0.69
22:DA:2753:A:H2'	22:DA:2754:U:C6	2.28	0.69
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.27	0.69
1:AB:141:GLU:HA	1:AB:144:GLU:HB2	1.74	0.69
8:AI:32:ARG:HG2	8:AI:36:GLN:HB3	1.73	0.69
21:AA:466:A:HO2'	21:AA:467:U:H5	1.41	0.69
21:AA:613:C:H2'	21:AA:614:C:H6	1.56	0.69
21:AA:1181:G:C2	21:AA:1182:G:N2	2.61	0.69
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.28	0.69
23:BB:15:A:O2'	23:BB:16:G:H5'	1.92	0.69
1:CB:19:THR:HG22	1:CB:37:VAL:HG23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:101:THR:O	53:CA:1074:G:H4'	1.93	0.69
53:CA:173:U:H5"	53:CA:174:A:OP2	1.92	0.69
53:CA:211:G:H2'	53:CA:211:G:N3	2.08	0.69
53:CA:464:U:C4	53:CA:466:A:H4'	2.28	0.69
53:CA:1249:C:H2'	53:CA:1250:A:H5"	1.74	0.69
22:DA:138:U:H2'	22:DA:140:C:H1'	1.75	0.69
22:DA:510:C:H2'	22:DA:511:U:C6	2.28	0.69
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.93	0.69
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.27	0.69
22:DA:1654:A:O2'	22:DA:1655:A:H8	1.75	0.69
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.71	0.69
22:DA:1779:U:H5	22:DA:1784:A:N7	1.90	0.69
22:DA:2210:U:H4'	22:DA:2211:A:C5'	2.22	0.69
22:DA:2307:G:H1'	22:DA:2308:G:C5	2.27	0.69
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.75	0.69
41:DT:58:VAL:HG23	41:DT:85:VAL:HA	1.75	0.69
16:AQ:18:LYS:HA	16:AQ:47:ASP:CB	2.21	0.69
21:AA:1236:A:H4'	21:AA:1304:G:H4'	1.75	0.69
21:AA:1399:C:H4'	21:AA:1400:C:O5'	1.93	0.69
22:BA:1060:U:H4'	22:BA:1061:U:C5'	2.23	0.69
36:BO:111:ARG:O	36:BO:113:ALA:N	2.25	0.69
1:CB:125:PHE:HD1	1:CB:137:THR:HG22	1.58	0.69
53:CA:1347:G:N2	53:CA:1373:G:H2'	2.08	0.69
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.75	0.69
22:DA:729:G:N3	22:DA:729:G:C2'	2.56	0.69
22:DA:919:U:H2'	22:DA:920:A:H8	1.58	0.69
22:DA:989:G:H4'	22:DA:990:A:OP1	1.92	0.69
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.08	0.69
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.93	0.69
22:DA:2683:C:O2'	22:DA:2684:U:H5'	1.93	0.69
51:D3:23:HIS:O	51:D3:46:LYS:HB2	1.93	0.69
10:AK:126:ARG:CA	20:AU:33:ARG:HH12	2.05	0.68
21:AA:1151:A:O2'	21:AA:1152:A:H5"	1.93	0.68
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.22	0.68
50:B2:34:ARG:NH1	50:B2:39:ARG:HG2	2.07	0.68
2:CC:119:ILE:O	2:CC:123:LEU:HB2	1.93	0.68
2:CC:129:PHE:CE1	2:CC:156:LEU:HB3	2.29	0.68
5:CF:86:ARG:HD3	17:CR:63:TYR:O	1.93	0.68
13:CN:47:LEU:O	13:CN:50:LEU:HG	1.93	0.68
20:CU:36:PHE:HD1	20:CU:40:PRO:HB3	1.57	0.68
22:DA:802:A:H2'	22:DA:803:U:H6	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1283:G:H22	22:DA:1286:A:H5'	1.57	0.68
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.58	0.68
22:DA:2848:G:O2'	22:DA:2849:U:C6	2.46	0.68
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.75	0.68
8:AI:71:ILE:HD11	21:AA:1248:A:H2	1.58	0.68
21:AA:701:U:O2	21:AA:701:U:H2'	1.92	0.68
21:AA:1505:G:H5"	57:AA:1801:HOH:O	1.92	0.68
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.08	0.68
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.91	0.68
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.56	0.68
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	1.93	0.68
40:BS:2:GLU:O	40:BS:107:VAL:O	2.10	0.68
53:CA:486:U:H2'	53:CA:486:U:O2	1.92	0.68
53:CA:811:C:H4'	53:CA:900:A:N6	2.07	0.68
22:DA:312:G:H5'	22:DA:331:C:O2'	1.93	0.68
22:DA:538:A:H5"	31:DJ:7:LYS:NZ	2.08	0.68
22:DA:861:A:H2'	22:DA:862:G:H8	1.58	0.68
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.75	0.68
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.92	0.68
8:AI:40:ARG:CA	8:AI:44:ARG:HB3	2.22	0.68
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.75	0.68
22:BA:962:G:H21	22:BA:2250:G:H1	1.40	0.68
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.92	0.68
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.58	0.68
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.07	0.68
53:CA:519:C:O2'	53:CA:520:A:C5'	2.41	0.68
53:CA:536:C:H2'	53:CA:537:G:C8	2.29	0.68
22:DA:206:U:O2'	22:DA:207:A:H5'	1.93	0.68
22:DA:674:G:H2'	22:DA:804:A:H61	1.59	0.68
22:DA:754:U:H2'	22:DA:755:U:H6	1.57	0.68
22:DA:1051:G:H5'	22:DA:2752:C:H1'	1.75	0.68
22:DA:1515:A:H5'	22:DA:1557:C:H5'	1.75	0.68
22:DA:2519:U:C6	22:DA:2542:A:N6	2.61	0.68
32:DK:19:VAL:HG12	32:DK:41:ILE:HG12	1.74	0.68
4:AE:133:ILE:H	4:AE:133:ILE:HD12	1.58	0.68
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.76	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.24	0.68
43:BV:80:HIS:CD2	43:BV:82:TYR:H	2.11	0.68
13:CN:46:LYS:HE3	18:CS:10:ILE:HB	1.75	0.68
53:CA:1268:G:N2	53:CA:1327:C:H1'	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:568:U:H2'	22:DA:570:G:OP2	1.94	0.68
22:DA:739:A:H4'	22:DA:740:C:OP1	1.92	0.68
22:DA:777:G:N7	22:DA:793:A:H2	1.92	0.68
22:DA:921:C:H2'	22:DA:922:C:H5'	1.74	0.68
27:DF:147:ARG:HD3	27:DF:149:ARG:HH22	1.58	0.68
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.23	0.68
1:AB:119:GLN:C	1:AB:119:GLN:HE21	2.01	0.68
19:AT:8:LYS:HA	19:AT:11:ILE:HG23	1.75	0.68
21:AA:251:G:H4'	21:AA:252:U:O5'	1.93	0.68
21:AA:279:A:H5"	21:AA:281:G:O4'	1.93	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.75	0.68
35:BN:71:ARG:HH21	35:BN:71:ARG:HG3	1.57	0.68
35:BN:75:ILE:HG13	35:BN:76:VAL:N	2.09	0.68
3:CD:62:ARG:HA	3:CD:62:ARG:HE	1.57	0.68
18:CS:35:ARG:HA	18:CS:70:LEU:HB2	1.76	0.68
53:CA:451:A:H4'	53:CA:452:A:O5'	1.93	0.68
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.29	0.68
22:DA:84:A:C4	22:DA:103:A:N6	2.61	0.68
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	1.94	0.68
22:DA:945:A:H5'	22:DA:946:C:OP2	1.94	0.68
27:DF:136:ILE:O	27:DF:137:PHE:O	2.12	0.68
6:AG:2:ARG:HA	21:AA:1380:U:C5	2.29	0.68
6:AG:53:SER:C	6:AG:55:LYS:H	2.01	0.68
12:AM:26:LYS:O	12:AM:30:LYS:HG3	1.94	0.68
21:AA:423:G:H2'	21:AA:423:G:N3	2.09	0.68
21:AA:688:G:H5"	21:AA:688:G:H8	1.59	0.68
22:BA:320:A:H4'	22:BA:322:A:N7	2.09	0.68
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	1.75	0.68
37:BP:83:ILE:C	37:BP:83:ILE:HD13	2.18	0.68
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.18	0.68
53:CA:413:G:N2	53:CA:428:G:O2'	2.27	0.68
53:CA:961:U:OP1	53:CA:961:U:H3'	1.94	0.68
53:CA:1284:C:H5"	53:CA:1285:A:OP2	1.94	0.68
22:DA:533:G:H21	38:DQ:44:TYR:HD1	1.38	0.68
22:DA:848:C:H2'	22:DA:849:A:H8	1.59	0.68
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.29	0.68
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.11	0.68
54:DB:86:G:H2'	54:DB:87:U:H5"	1.76	0.68
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.57	0.68
40:DS:31:GLN:O	40:DS:35:ILE:HG12	1.94	0.68
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.58	0.68
4:AE:120:HIS:O	4:AE:121:ASN:HB3	1.93	0.68
4:AE:156:ARG:O	4:AE:158:LYS:N	2.27	0.68
13:AN:40:ARG:HH12	13:AN:44:VAL:CG1	2.06	0.68
22:BA:632:A:O2'	22:BA:633:A:H5'	1.94	0.68
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.27	0.68
22:BA:1871:A:C8	22:BA:1872:A:C6	2.82	0.68
22:BA:1931:U:O2'	22:BA:1932:A:H5'	1.93	0.68
27:BF:114:ARG:HD2	27:BF:114:ARG:H	1.59	0.68
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.94	0.68
1:CB:89:PHE:HE2	1:CB:152:ASP:HB2	1.58	0.68
53:CA:91:U:O2'	53:CA:92:U:O4'	2.11	0.68
53:CA:998:C:H2'	53:CA:999:C:H6	1.58	0.68
22:DA:1422:G:H4'	22:DA:1493:C:OP1	1.93	0.68
22:DA:2850:A:O2'	22:DA:2851:A:H5'	1.93	0.68
22:DA:2851:A:H2'	22:DA:2852:G:C8	2.29	0.68
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.74	0.68
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.76	0.68
1:AB:17:HIS:CD2	1:AB:202:ASN:HD21	2.12	0.68
5:AF:46:GLN:HE22	5:AF:55:HIS:HB2	1.58	0.68
5:AF:86:ARG:NH1	17:AR:63:TYR:HB3	2.09	0.68
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.19	0.68
28:BG:84:LYS:O	28:BG:85:LYS:HB2	1.93	0.68
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.09	0.68
20:CU:39:LYS:N	20:CU:40:PRO:CD	2.57	0.68
53:CA:1250:A:H2'	53:CA:1251:A:O4'	1.93	0.68
22:DA:1439:A:C6	22:DA:1552:A:N7	2.62	0.68
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.94	0.68
22:DA:1989:G:H2'	22:DA:1990:C:H5'	1.76	0.68
31:DJ:29:ALA:HB3	31:DJ:108:MET:HE3	1.74	0.68
41:DT:29:THR:HB	41:DT:87:LEU:N	2.08	0.68
13:AN:22:LYS:HG3	13:AN:23:ARG:N	2.09	0.68
21:AA:701:U:O2'	21:AA:702:A:OP2	2.11	0.68
21:AA:815:A:H4'	21:AA:817:C:C4	2.29	0.68
21:AA:975:A:H4'	21:AA:976:G:C5'	2.17	0.68
21:AA:1066:C:H5"	21:AA:1066:C:H6	1.58	0.68
21:AA:1411:C:C2'	21:AA:1412:C:H5'	2.24	0.68
22:BA:572:A:C2	22:BA:2033:A:C2	2.81	0.68
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.58	0.68
24:BC:20:ASN:HD22	24:BC:20:ASN:C	2.02	0.68
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:153:ILE:HD12	27:BF:153:ILE:O	1.94	0.68
1:CB:96:LEU:H	1:CB:99:MET:HE3	1.59	0.68
4:CE:13:LYS:HE2	4:CE:13:LYS:HA	1.75	0.68
53:CA:373:A:H2'	53:CA:374:A:H8	1.59	0.68
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.74	0.68
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.74	0.68
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.76	0.68
3:AD:21:LYS:O	3:AD:21:LYS:HD3	1.93	0.68
22:BA:2068:U:H6	22:BA:2068:U:H5"	1.59	0.68
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.76	0.68
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.53	0.68
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.37	0.68
32:BK:18:ARG:HH11	32:BK:18:ARG:CG	2.06	0.68
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.11	0.68
1:CB:164:ASP:OD2	1:CB:203:ASP:HB2	1.94	0.68
22:DA:456:C:O2'	41:DT:73:ARG:HG3	1.93	0.68
22:DA:687:C:H2'	22:DA:688:U:C6	2.28	0.68
22:DA:1738:G:O2'	22:DA:1739:A:H8	1.77	0.68
22:DA:2136:G:H2'	22:DA:2137:U:C5	2.29	0.68
22:DA:2738:A:H2	22:DA:2766:A:H61	1.41	0.68
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.59	0.68
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.62	0.68
2:AC:21:TRP:HB3	2:AC:58:ARG:H	1.60	0.67
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.09	0.67
22:BA:1434:A:OP1	22:BA:1434:A:H4'	1.94	0.67
22:BA:2573:C:H2'	57:BA:3719:HOH:O	1.94	0.67
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.93	0.67
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.12	0.67
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.57	0.67
34:BM:72:PRO:O	34:BM:91:TYR:O	2.11	0.67
2:CC:10:ARG:HD3	2:CC:177:LEU:HA	1.75	0.67
9:CJ:15:HIS:HE1	9:CJ:68:ARG:HD3	1.59	0.67
9:CJ:84:VAL:HG23	9:CJ:85:ASP:N	2.05	0.67
53:CA:15:G:H2'	53:CA:16:A:C8	2.29	0.67
22:DA:2562:U:H1'	32:DK:23:LYS:HE2	1.76	0.67
54:DB:11:C:H5'	44:DW:71:LYS:HD3	1.74	0.67
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.76	0.67
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.59	0.67
1:AB:45:THR:HG23	1:AB:200:PRO:HG2	1.77	0.67
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.28	0.67
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:22:LYS:H	4:CE:29:ILE:HG22	1.60	0.67
53:CA:520:A:H2'	53:CA:521:G:O4'	1.94	0.67
22:DA:481:G:O2'	22:DA:507:A:N6	2.25	0.67
22:DA:1381:G:H2'	22:DA:1382:G:H5"	1.75	0.67
22:DA:1965:C:H2'	22:DA:1966:A:C8	2.28	0.67
54:DB:88:C:OP2	54:DB:88:C:H3'	1.95	0.67
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.76	0.67
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.29	0.67
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.24	0.67
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.93	0.67
2:AC:154:GLY:O	2:AC:195:ILE:HG12	1.95	0.67
21:AA:143:A:N3	21:AA:143:A:H2'	2.10	0.67
22:BA:409:G:O2'	22:BA:410:G:H5'	1.94	0.67
22:BA:571:U:C5	22:BA:575:A:C6	2.82	0.67
22:BA:962:G:N2	22:BA:2250:G:H1	1.92	0.67
22:BA:1343:G:H2'	22:BA:1344:U:C6	2.29	0.67
22:BA:1941:C:H2'	22:BA:1942:C:C6	2.29	0.67
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.59	0.67
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.58	0.67
36:BO:33:ARG:HG2	36:BO:34:HIS:ND1	2.10	0.67
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CD1	2.12	0.67
3:CD:66:VAL:HG22	3:CD:96:ARG:HH11	1.56	0.67
4:CE:48:GLY:HA3	4:CE:66:ALA:HB2	1.76	0.67
8:CI:24:ASN:O	8:CI:61:ASP:HA	1.95	0.67
15:CP:1:MET:HA	15:CP:1:MET:HE3	1.77	0.67
22:DA:185:G:H2'	22:DA:186:G:C8	2.29	0.67
22:DA:600:G:H5"	26:DE:27:LEU:HD22	1.75	0.67
24:DC:14:HIS:O	24:DC:203:VAL:HG11	1.94	0.67
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.57	0.67
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.76	0.67
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.30	0.67
39:DR:48:LYS:HD2	39:DR:48:LYS:H	1.57	0.67
21:AA:182:A:N3	21:AA:184:G:C8	2.62	0.67
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.42	0.67
22:BA:2820:A:H3'	22:BA:2820:A:C8	2.29	0.67
34:BM:17:ASN:O	34:BM:38:ARG:HD3	1.94	0.67
34:BM:35:ALA:O	34:BM:128:THR:HA	1.94	0.67
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.30	0.67
5:CF:18:VAL:HG21	5:CF:58:HIS:CD2	2.29	0.67
7:CH:68:LYS:HD3	7:CH:69:ALA:N	2.10	0.67
9:CJ:37:ARG:HB3	9:CJ:74:VAL:O	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:8:ARG:HB2	53:CA:1217:C:OP1	1.95	0.67
2:AC:139:ASN:HA	2:AC:142:ARG:HB2	1.77	0.67
6:AG:39:GLU:HB2	6:AG:43:TYR:CE2	2.29	0.67
20:AU:36:PHE:HA	20:AU:39:LYS:HE2	1.75	0.67
22:BA:1378:A:O2'	22:BA:1379:U:O5'	2.12	0.67
22:BA:1417:C:H2'	22:BA:1418:G:C8	2.30	0.67
33:BL:95:LEU:HB3	33:BL:100:ILE:HD11	1.76	0.67
44:BW:39:GLN:C	44:BW:41:GLY:N	2.47	0.67
4:CE:14:LEU:HD22	4:CE:59:ILE:HD13	1.76	0.67
6:CG:100:MET:H	6:CG:100:MET:HE2	1.57	0.67
20:CU:37:TYR:O	20:CU:38:GLU:HG2	1.93	0.67
53:CA:694:A:H3'	53:CA:695:A:H5"	1.77	0.67
53:CA:1449:C:O2'	53:CA:1450:U:H5'	1.94	0.67
22:DA:783:A:H2	22:DA:1778:U:H4'	1.57	0.67
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.76	0.67
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.29	0.67
7:AH:17:GLN:HE21	7:AH:71:VAL:CG2	2.06	0.67
21:AA:1447:A:H5'	21:AA:1448:C:H5	1.58	0.67
22:BA:815:C:OP1	39:BR:85:LYS:HE2	1.95	0.67
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.29	0.67
25:BD:107:VAL:HG13	25:BD:203:VAL:HG23	1.76	0.67
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.53	0.67
40:BS:82:MET:HB2	40:BS:98:LYS:HB2	1.77	0.67
1:CB:46:VAL:HG13	1:CB:47:PRO:HD3	1.75	0.67
8:CI:18:VAL:HG11	8:CI:82:ILE:HA	1.76	0.67
53:CA:239:U:H6	53:CA:239:U:H5"	1.59	0.67
53:CA:460:A:O2'	53:CA:462:G:H5'	1.94	0.67
53:CA:1134:G:C6	53:CA:1135:U:H1'	2.28	0.67
53:CA:1347:G:H22	53:CA:1373:G:H2'	1.59	0.67
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.29	0.67
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.75	0.67
1:AB:32:GLY:HA3	1:AB:39:ILE:HG12	1.74	0.67
21:AA:181:A:H5"	21:AA:182:A:OP1	1.95	0.67
21:AA:891:U:O2'	21:AA:892:A:H5'	1.95	0.67
22:BA:655:A:O2'	22:BA:656:G:C8	2.48	0.67
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.59	0.67
22:BA:1936:A:H2	22:BA:1943:U:C5	2.12	0.67
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.29	0.67
32:BK:17:ARG:HG3	32:BK:47:ILE:HD13	1.77	0.67
3:CD:96:ARG:O	3:CD:100:VAL:HG23	1.95	0.67
53:CA:81:A:C2	53:CA:89:U:O4	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1160:G:O2'	53:CA:1161:C:H5'	1.95	0.67
22:DA:574:A:H4'	22:DA:575:A:H5'	1.74	0.67
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.28	0.67
54:DB:5:U:H2'	54:DB:6:G:C8	2.30	0.67
32:DK:13:ASN:H	32:DK:13:ASN:ND2	1.92	0.67
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.60	0.67
46:DY:1:MET:N	46:DY:1:MET:HE2	2.10	0.67
3:AD:117:VAL:N	3:AD:122:ILE:HD11	2.09	0.67
21:AA:275:G:H2'	21:AA:276:G:H8	1.60	0.67
21:AA:1167:A:C8	21:AA:1169:A:N6	2.63	0.67
22:BA:358:U:H2'	22:BA:359:G:O4'	1.95	0.67
22:BA:1062:G:C8	22:BA:1088:A:C8	2.83	0.67
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.10	0.67
31:BJ:44:TYR:O	31:BJ:45:THR:HB	1.92	0.67
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.60	0.67
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.10	0.67
13:CN:9:GLU:HA	13:CN:12:ARG:HD2	1.77	0.67
53:CA:219:U:H2'	53:CA:220:G:H8	1.60	0.67
22:DA:2:G:C6	22:DA:3:U:C4	2.83	0.67
22:DA:303:G:H2'	22:DA:304:U:C6	2.30	0.67
22:DA:465:G:H4'	50:D2:16:HIS:HD2	1.60	0.67
22:DA:664:G:H4'	22:DA:941:A:OP1	1.93	0.67
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.95	0.67
22:DA:1476:U:O2'	22:DA:1477:A:C5'	2.43	0.67
22:DA:1555:G:O2'	22:DA:1556:C:H5'	1.94	0.67
22:DA:2271:G:O2'	22:DA:2272:U:H5'	1.95	0.67
26:DE:73:ILE:O	26:DE:73:ILE:HG13	1.95	0.67
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.57	0.67
48:D0:4:GLN:HG2	48:D0:4:GLN:O	1.94	0.67
1:AB:20:ARG:HH12	1:AB:38:HIS:CE1	2.13	0.67
1:AB:40:ILE:O	1:AB:41:ASN:HB2	1.94	0.67
4:AE:79:THR:HB	4:AE:121:ASN:ND2	2.09	0.67
6:AG:52:ARG:HH12	6:AG:121:ASN:HD21	1.43	0.67
21:AA:465:A:H2'	21:AA:466:A:O4'	1.95	0.67
21:AA:555:U:H2'	21:AA:556:C:C6	2.30	0.67
21:AA:596:A:H2'	21:AA:597:G:H8	1.60	0.67
22:BA:1707:G:H2'	22:BA:1708:C:C6	2.30	0.67
22:BA:2214:C:H5'	22:BA:2214:C:C6	2.28	0.67
24:BC:151:GLY:C	24:BC:152:GLN:HG3	2.20	0.67
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.76	0.67
53:CA:1160:G:C6	53:CA:1181:G:O6	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2313:C:O2'	22:DA:2314:A:H5'	1.92	0.67
22:DA:2682:A:H61	22:DA:2728:U:H1'	1.60	0.67
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.59	0.67
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.08	0.67
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.77	0.67
7:AH:12:ARG:NH1	7:AH:26:MET:HB2	2.09	0.67
9:AJ:91:ASP:O	9:AJ:92:LEU:O	2.12	0.67
13:AN:15:LEU:HD23	13:AN:18:LYS:HD2	1.77	0.67
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.76	0.67
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.10	0.67
46:BY:47:ARG:HH21	46:BY:47:ARG:CG	2.07	0.67
50:B2:43:THR:O	50:B2:44:VAL:HB	1.94	0.67
1:CB:125:PHE:CD1	1:CB:137:THR:HG22	2.30	0.67
53:CA:77:A:H2'	53:CA:78:A:C8	2.30	0.67
53:CA:533:A:C2	53:CA:536:C:C5	2.83	0.67
53:CA:1503:A:C8	53:CA:1531:A:H1'	2.29	0.67
22:DA:1056:G:N2	22:DA:1102:C:H5	1.93	0.67
22:DA:1901:A:OP2	24:DC:252:LYS:HE3	1.95	0.67
22:DA:2396:G:C2	22:DA:2421:G:C2	2.83	0.67
32:DK:76:VAL:HB	37:DP:72:VAL:CG2	2.25	0.67
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.25	0.67
38:DQ:60:TRP:O	38:DQ:63:ARG:HG2	1.94	0.67
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.94	0.67
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.60	0.67
45:DX:19:HIS:C	45:DX:21:LEU:H	2.03	0.67
17:AR:56:ARG:O	17:AR:60:ARG:HB2	1.95	0.66
19:AT:29:THR:HA	19:AT:32:LYS:HG2	1.78	0.66
21:AA:1261:A:N1	21:AA:1274:A:C2	2.63	0.66
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.60	0.66
22:BA:2502:G:H5'	22:BA:2503:A:H5"	1.77	0.66
24:BC:242:HIS:O	24:BC:244:VAL:HG13	1.95	0.66
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.77	0.66
44:BW:28:GLU:O	44:BW:30:VAL:N	2.27	0.66
6:CG:91:ARG:CG	6:CG:92:PRO:HD2	2.19	0.66
6:CG:107:ALA:O	6:CG:118:ARG:HB3	1.95	0.66
11:CL:49:ARG:HH12	53:CA:523:A:N6	1.93	0.66
18:CS:49:ALA:HB1	18:CS:56:HIS:HB3	1.75	0.66
53:CA:109:A:C8	53:CA:327:A:O4'	2.49	0.66
53:CA:113:G:N2	53:CA:353:A:H8	1.90	0.66
53:CA:559:A:H4'	53:CA:560:A:O5'	1.94	0.66
53:CA:913:A:H4'	53:CA:914:A:O5'	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:992:U:H1'	53:CA:993:G:N2	2.10	0.66
53:CA:1269:A:H2	53:CA:1312:G:H21	1.42	0.66
22:DA:225:C:H2'	22:DA:226:A:O4'	1.94	0.66
22:DA:565:C:H2'	22:DA:566:U:O4'	1.95	0.66
22:DA:718:A:H5'	22:DA:719:C:OP2	1.95	0.66
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.30	0.66
22:DA:1807:G:C2'	22:DA:1808:A:H5'	2.24	0.66
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.30	0.66
22:DA:2215:C:HO2'	22:DA:2216:G:H8	1.37	0.66
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.29	0.66
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.10	0.66
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.60	0.66
5:AF:38:ARG:HG3	5:AF:39:LEU:N	2.09	0.66
16:AQ:18:LYS:C	16:AQ:47:ASP:OD2	2.37	0.66
21:AA:198:G:H2'	21:AA:199:A:C8	2.30	0.66
21:AA:1003:G:N2	21:AA:1005:A:H5'	2.11	0.66
21:AA:1299:A:O2'	21:AA:1300:G:H4'	1.95	0.66
22:BA:1059:G:H5"	22:BA:1060:U:H3'	1.76	0.66
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.12	0.66
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.76	0.66
22:BA:2810:A:H2'	22:BA:2811:G:O4'	1.94	0.66
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.10	0.66
34:BM:2:LEU:HD23	34:BM:69:PRO:CD	2.25	0.66
38:BQ:86:SER:HB2	39:BR:50:GLY:O	1.94	0.66
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.75	0.66
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.10	0.66
11:CL:49:ARG:NH2	53:CA:522:C:H41	1.93	0.66
53:CA:266:G:O2'	53:CA:267:C:H3'	1.95	0.66
53:CA:995:C:H42	53:CA:1046:A:H1'	1.61	0.66
22:DA:298:G:H2'	22:DA:339:U:O4	1.95	0.66
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.31	0.66
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.58	0.66
32:DK:1:MET:HB2	32:DK:32:TYR:HB3	1.76	0.66
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.77	0.66
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.59	0.66
1:AB:89:PHE:CZ	1:AB:153:MET:HB2	2.29	0.66
13:AN:48:GLN:HA	13:AN:48:GLN:NE2	2.09	0.66
21:AA:1038:C:H2'	21:AA:1039:G:C8	2.31	0.66
22:BA:2364:C:C2'	22:BA:2365:G:H5'	2.25	0.66
28:BG:112:VAL:HG23	28:BG:113:ASP:H	1.61	0.66
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:68:VAL:HG22	6:CG:134:VAL:HG12	1.76	0.66
53:CA:1033:G:O2'	53:CA:1034:G:O4'	2.13	0.66
22:DA:846:U:O2'	22:DA:847:U:H5"	1.95	0.66
22:DA:1916:A:H2'	22:DA:1917:U:C6	2.30	0.66
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.94	0.66
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.75	0.66
2:AC:143:LEU:H	2:AC:143:LEU:HD22	1.61	0.66
4:AE:80:LEU:HD23	4:AE:122:VAL:CG1	2.25	0.66
10:AK:39:ASN:HA	21:AA:683:G:H21	1.60	0.66
21:AA:215:C:O2'	21:AA:216:U:O4'	2.13	0.66
21:AA:1303:C:O2'	21:AA:1304:G:H5'	1.95	0.66
21:AA:1520:C:H2'	21:AA:1521:C:H6	1.58	0.66
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.09	0.66
22:BA:1829:A:N3	24:BC:14:HIS:HE1	1.92	0.66
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.30	0.66
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.95	0.66
26:BE:3:LEU:O	26:BE:11:ALA:HA	1.95	0.66
2:CC:192:TYR:HE2	53:CA:532:A:C8	2.14	0.66
4:CE:95:MET:HE1	4:CE:114:LEU:HD21	1.77	0.66
7:CH:1:SER:C	7:CH:3:GLN:H	2.03	0.66
16:CQ:61:ARG:HG2	16:CQ:75:VAL:HG11	1.77	0.66
18:CS:40:PHE:CB	18:CS:41:PRO:HD2	2.25	0.66
53:CA:464:U:O4	53:CA:466:A:H4'	1.94	0.66
53:CA:1241:G:H2'	53:CA:1242:G:C8	2.28	0.66
22:DA:347:A:H2'	22:DA:348:A:H8	1.60	0.66
22:DA:1330:C:HO2'	22:DA:1331:G:H8	1.43	0.66
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.60	0.66
22:DA:2036:C:H2'	22:DA:2037:A:C8	2.30	0.66
43:DV:70:ILE:N	43:DV:70:ILE:HD13	2.10	0.66
3:AD:196:GLU:HA	3:AD:199:ILE:HG22	1.76	0.66
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.77	0.66
21:AA:903:G:C5	21:AA:904:U:C5	2.83	0.66
22:BA:381:G:OP1	45:BX:17:ARG:HD3	1.94	0.66
22:BA:2336:A:H61	44:BW:40:ARG:HB3	1.61	0.66
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.76	0.66
42:BU:25:LYS:O	42:BU:26:ASN:HB3	1.95	0.66
42:BU:82:VAL:O	42:BU:94:PHE:O	2.14	0.66
52:B4:9:LYS:O	52:B4:10:LEU:HD23	1.94	0.66
15:CP:78:VAL:C	15:CP:80:LYS:H	2.04	0.66
16:CQ:13:SER:O	16:CQ:20:ILE:HB	1.95	0.66
53:CA:51:A:H4'	53:CA:52:C:C5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:920:U:H2'	53:CA:921:U:C6	2.29	0.66
22:DA:118:A:C8	22:DA:119:A:C8	2.84	0.66
22:DA:452:G:OP1	26:DE:53:THR:HG23	1.96	0.66
22:DA:590:A:H2'	22:DA:591:U:H6	1.61	0.66
22:DA:655:A:O2'	22:DA:656:G:C8	2.48	0.66
22:DA:686:U:C6	22:DA:788:A:N1	2.64	0.66
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.60	0.66
41:DT:24:MET:HE2	41:DT:24:MET:HA	1.78	0.66
1:AB:202:ASN:ND2	1:AB:205:ALA:HB2	2.10	0.66
4:AE:153:ALA:CA	4:AE:156:ARG:HB2	2.25	0.66
7:AH:88:LYS:HG3	7:AH:89:ASP:H	1.59	0.66
7:AH:104:SER:HB2	7:AH:125:ILE:HD11	1.76	0.66
21:AA:243:A:C2	21:AA:245:U:H2'	2.31	0.66
21:AA:1251:A:H2'	21:AA:1252:A:C8	2.31	0.66
22:BA:2104:C:H2'	22:BA:2105:U:O4'	1.96	0.66
22:BA:2573:C:OP1	57:BA:3720:HOH:O	2.14	0.66
22:BA:2726:A:O2'	22:BA:2727:A:H5'	1.95	0.66
25:BD:12:THR:HG22	25:BD:13:ARG:N	2.10	0.66
27:BF:45:ASP:HB2	27:BF:48:LEU:HB2	1.78	0.66
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.77	0.66
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	1.96	0.66
53:CA:243:A:H4'	53:CA:244:U:H5'	1.75	0.66
53:CA:1129:C:O2'	53:CA:1130:A:C8	2.45	0.66
53:CA:1228:C:O2'	53:CA:1229:A:H8	1.73	0.66
53:CA:1530:G:O2'	53:CA:1531:A:C8	2.48	0.66
22:DA:140:C:H5'	22:DA:141:G:H21	1.60	0.66
22:DA:705:A:N6	22:DA:726:G:H1'	2.11	0.66
22:DA:781:A:H5"	22:DA:782:A:OP1	1.96	0.66
22:DA:973:A:H5'	22:DA:974:G:OP2	1.95	0.66
22:DA:1815:A:H1'	22:DA:1817:G:N7	2.11	0.66
54:DB:57:A:O2'	54:DB:58:A:H8	1.76	0.66
47:DZ:16:LEU:HD22	47:DZ:16:LEU:N	2.11	0.66
16:AQ:20:ILE:H	16:AQ:47:ASP:CG	2.03	0.66
21:AA:76:G:H2'	21:AA:76:G:N3	2.11	0.66
22:BA:2886:A:N3	22:BA:2887:A:H1'	2.11	0.66
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.76	0.66
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.77	0.66
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.77	0.66
34:BM:13:HIS:O	34:BM:14:LYS:HB2	1.95	0.66
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.07	0.66
19:CT:9:ARG:HD3	19:CT:12:GLN:NE2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:60:GLN:HB3	19:CT:65:LEU:HD12	1.77	0.66
53:CA:269:C:H2'	53:CA:270:A:C8	2.31	0.66
53:CA:1024:G:H2'	53:CA:1025:U:O4'	1.95	0.66
22:DA:503:A:H4'	22:DA:504:A:O5'	1.96	0.66
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.59	0.66
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.77	0.66
16:AQ:67:SER:OG	16:AQ:70:LYS:HB3	1.95	0.66
21:AA:205:A:OP1	21:AA:205:A:H4'	1.96	0.66
22:BA:726:G:O2'	22:BA:727:A:P	2.53	0.66
22:BA:1780:A:OP1	57:BA:3698:HOH:O	2.12	0.66
22:BA:2654:A:H4'	22:BA:2655:G:OP1	1.95	0.66
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	1.95	0.66
41:BT:32:LEU:HD23	41:BT:83:ALA:CB	2.26	0.66
1:CB:105:THR:O	1:CB:108:GLN:HG2	1.95	0.66
1:CB:127:LYS:HE3	1:CB:132:GLU:HG3	1.76	0.66
22:DA:647:G:O2'	22:DA:648:G:H5'	1.95	0.66
22:DA:1287:A:H5'	35:DN:103:ARG:HD2	1.77	0.66
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.10	0.66
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.59	0.66
22:DA:2145:C:H3'	22:DA:2147:A:OP2	1.95	0.66
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.60	0.66
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.76	0.66
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.77	0.66
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.94	0.66
1:AB:22:TRP:HA	1:AB:188:THR:O	1.95	0.66
7:AH:76:ARG:NE	7:AH:78:SER:O	2.29	0.66
12:AM:105:ALA:O	12:AM:109:LYS:HB2	1.96	0.66
21:AA:686:U:O2'	21:AA:687:A:C8	2.47	0.66
22:BA:509:C:H6	22:BA:509:C:C5'	2.08	0.66
22:BA:2296:U:H4'	22:BA:2297:A:OP1	1.95	0.66
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.11	0.66
10:CK:78:ILE:H	10:CK:78:ILE:HD13	1.61	0.66
12:CM:13:HIS:HB3	12:CM:16:ILE:HD13	1.78	0.66
53:CA:412:A:H4'	53:CA:413:G:OP1	1.94	0.66
53:CA:1071:C:H2'	53:CA:1072:G:H8	1.60	0.66
22:DA:141:G:H3'	22:DA:142:A:O4'	1.94	0.66
22:DA:849:A:H2'	22:DA:850:U:C6	2.31	0.66
22:DA:1480:C:H2'	22:DA:1481:U:O4'	1.95	0.66
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.31	0.66
22:DA:1717:A:H2'	22:DA:1718:G:O4'	1.96	0.66
22:DA:2311:A:H3'	22:DA:2312:U:H6	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:9:VAL:O	37:DP:4:ILE:HD11	1.95	0.66
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.04	0.66
3:AD:100:VAL:HG12	3:AD:100:VAL:O	1.96	0.66
14:AO:72:LYS:HE2	14:AO:72:LYS:HA	1.78	0.66
21:AA:480:U:H5"	21:AA:481:G:OP2	1.96	0.66
21:AA:1441:A:H62	21:AA:1461:G:H21	1.42	0.66
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.96	0.66
25:BD:98:VAL:O	25:BD:99:GLU:C	2.38	0.66
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.24	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.78	0.66
1:CB:56:LEU:HD22	1:CB:59:ILE:HD11	1.78	0.66
5:CF:11:HIS:CD2	5:CF:54:LEU:HD21	2.31	0.66
9:CJ:52:LEU:HD23	9:CJ:62:ARG:HG2	1.78	0.66
22:DA:91:A:HO2'	22:DA:92:U:H6	1.42	0.66
22:DA:878:A:H4'	22:DA:898:C:H42	1.59	0.66
22:DA:923:G:H1'	44:DW:23:LYS:NZ	2.10	0.66
22:DA:1062:G:HO2'	22:DA:1063:G:H8	1.44	0.66
22:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.95	0.66
22:DA:2654:A:H4'	22:DA:2655:G:OP1	1.95	0.66
24:DC:141:HIS:HB2	24:DC:190:THR:O	1.96	0.66
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.94	0.66
29:DH:1:MET:HE3	29:DH:23:ALA:HB2	1.78	0.66
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.77	0.66
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.95	0.66
4:AE:155:LYS:HA	4:AE:158:LYS:HZ1	1.61	0.65
21:AA:270:A:H2'	21:AA:271:C:C6	2.31	0.65
21:AA:843:U:H2'	21:AA:844:G:H5'	1.79	0.65
21:AA:1143:G:H2'	21:AA:1144:G:H8	1.62	0.65
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.26	0.65
22:BA:2733:A:H8	22:BA:2733:A:O5'	1.78	0.65
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.77	0.65
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.77	0.65
32:BK:36:GLY:HA2	32:BK:62:VAL:O	1.96	0.65
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.78	0.65
48:B0:9:ARG:HH21	48:B0:9:ARG:CG	2.07	0.65
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.10	0.65
1:CB:9:LEU:HD12	1:CB:11:ALA:C	2.21	0.65
12:CM:82:LEU:HD21	18:CS:60:PHE:HB3	1.76	0.65
53:CA:84:U:O2'	53:CA:85:U:H5'	1.95	0.65
53:CA:738:C:H2'	53:CA:739:C:H6	1.59	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:627:A:O2'	22:DA:628:G:C8	2.49	0.65
22:DA:1127:A:O2'	22:DA:1128:G:H5'	1.96	0.65
22:DA:2860:A:H8	22:DA:2860:A:O5'	1.79	0.65
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.25	0.65
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.48	0.65
1:AB:53:LEU:HA	1:AB:56:LEU:HB3	1.77	0.65
2:AC:34:SER:O	2:AC:38:VAL:HG13	1.96	0.65
3:AD:1:ALA:HB2	21:AA:404:G:N7	2.10	0.65
12:AM:2:ARG:O	12:AM:3:ILE:HG12	1.96	0.65
15:AP:79:ASN:O	15:AP:80:LYS:HB2	1.94	0.65
21:AA:486:U:O2'	21:AA:487:A:H5'	1.97	0.65
22:BA:7:G:H2'	22:BA:8:C:C6	2.32	0.65
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.29	0.65
53:CA:151:A:H2'	53:CA:152:A:O4'	1.96	0.65
22:DA:183:C:H2'	22:DA:184:C:H5'	1.77	0.65
22:DA:594:U:H2'	22:DA:595:C:C6	2.31	0.65
22:DA:686:U:OP2	57:DA:3703:HOH:O	2.14	0.65
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.96	0.65
22:DA:2093:G:O6	22:DA:2225:A:C8	2.49	0.65
27:DF:147:ARG:HG2	27:DF:149:ARG:HH12	1.62	0.65
7:AH:21:LYS:HE2	7:AH:21:LYS:HA	1.79	0.65
21:AA:982:U:H4'	21:AA:983:A:C5'	2.26	0.65
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.26	0.65
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.08	0.65
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.43	0.65
44:BW:13:ARG:O	44:BW:14:ASP:C	2.39	0.65
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.61	0.65
8:CI:58:GLU:HG3	8:CI:59:LYS:H	1.60	0.65
22:DA:422:A:H2'	22:DA:423:A:C8	2.31	0.65
22:DA:876:C:H3'	22:DA:877:A:C8	2.31	0.65
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	1.96	0.65
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.43	0.65
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.95	0.65
38:DQ:50:ARG:HD2	38:DQ:50:ARG:N	2.10	0.65
1:AB:165:ALA:HB2	1:AB:186:VAL:HG12	1.77	0.65
11:AL:34:THR:HG22	11:AL:35:ARG:NE	2.12	0.65
21:AA:109:A:H61	21:AA:324:G:H1'	1.58	0.65
22:BA:243:U:O2'	22:BA:244:A:H5'	1.95	0.65
22:BA:819:A:OP2	22:BA:1187:G:N2	2.21	0.65
22:BA:2146:C:H4'	22:BA:2147:A:O5'	1.96	0.65
24:BC:259:ASN:C	24:BC:261:ARG:H	2.04	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:9:ASP:O	27:BF:10:GLU:HB2	1.96	0.65
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.26	0.65
28:BG:63:GLN:HA	28:BG:63:GLN:OE1	1.96	0.65
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.76	0.65
1:CB:160:LEU:HB2	1:CB:182:VAL:HG12	1.78	0.65
53:CA:459:A:O2'	53:CA:460:A:H5'	1.96	0.65
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.26	0.65
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.31	0.65
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.22	0.65
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.32	0.65
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.30	0.65
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.04	0.65
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.78	0.65
5:AF:1:MET:HE2	5:AF:67:PRO:HD3	1.77	0.65
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.77	0.65
10:AK:19:VAL:HG22	10:AK:82:GLU:HG2	1.79	0.65
12:AM:10:ASP:OD1	12:AM:44:ILE:HD13	1.97	0.65
21:AA:1007:U:C2'	21:AA:1008:U:H5"	2.26	0.65
21:AA:1414:U:H2'	21:AA:1415:G:C8	2.32	0.65
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.12	0.65
22:BA:1655:A:H3'	22:BA:1656:C:H6	1.61	0.65
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.78	0.65
36:BO:67:ASN:O	36:BO:69:ASP:N	2.29	0.65
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.77	0.65
2:CC:76:ILE:HA	2:CC:83:VAL:HG13	1.79	0.65
8:CI:10:ARG:HG3	8:CI:14:SER:O	1.97	0.65
16:CQ:25:GLU:HG2	16:CQ:40:THR:HG22	1.77	0.65
53:CA:143:A:H2'	53:CA:143:A:N3	2.11	0.65
53:CA:247:G:O6	53:CA:278:G:C6	2.49	0.65
22:DA:45:G:H5'	22:DA:46:G:H5'	1.77	0.65
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.61	0.65
22:DA:1539:U:O2'	22:DA:1540:G:O4'	2.15	0.65
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.97	0.65
24:DC:77:VAL:HG23	24:DC:111:ALA:HA	1.79	0.65
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.27	0.65
2:AC:196:GLY:H	21:AA:1057:G:H4'	1.61	0.65
5:AF:98:GLU:HG3	5:AF:99:ALA:N	2.11	0.65
21:AA:1151:A:O2'	21:AA:1152:A:H8	1.80	0.65
25:BD:104:VAL:O	25:BD:177:VAL:HG21	1.97	0.65
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.97	0.65
33:BL:27:LEU:H	33:BL:27:LEU:CD1	1.98	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:41:GLY:O	44:BW:42:THR:C	2.39	0.65
1:CB:114:LYS:HE3	1:CB:151:LYS:HB2	1.77	0.65
53:CA:1326:U:H2'	53:CA:1327:C:C6	2.31	0.65
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.27	0.65
22:DA:1965:C:C5'	22:DA:1966:A:H5"	2.26	0.65
26:DE:119:ILE:O	26:DE:119:ILE:HG13	1.96	0.65
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.77	0.65
52:D4:3:VAL:O	52:D4:4:ARG:HB2	1.95	0.65
1:AB:209:VAL:HG23	1:AB:210:THR:H	1.62	0.65
22:BA:907:G:C2'	22:BA:908:C:H5'	2.27	0.65
22:BA:2062:A:O2'	22:BA:2063:C:H5'	1.97	0.65
22:BA:2728:U:O2'	22:BA:2729:G:C5'	2.43	0.65
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.10	0.65
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.26	0.65
47:BZ:36:GLU:C	47:BZ:37:ARG:HD2	2.21	0.65
2:CC:36:PHE:CE1	13:CN:91:GLU:HB3	2.31	0.65
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.62	0.65
4:CE:80:LEU:CD2	4:CE:146:MET:HE1	2.27	0.65
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.32	0.65
53:CA:142:G:C2	53:CA:143:A:H1'	2.32	0.65
53:CA:708:C:H2'	53:CA:709:U:H6	1.61	0.65
22:DA:79:C:H2'	22:DA:80:G:O4'	1.96	0.65
22:DA:370:G:N1	22:DA:424:G:C5	2.65	0.65
22:DA:617:G:O2'	22:DA:618:G:O4'	2.12	0.65
22:DA:1091:G:O2'	22:DA:1092:C:O4'	2.14	0.65
22:DA:2720:U:H5"	37:DP:52:ARG:HH21	1.60	0.65
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.26	0.65
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.60	0.65
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.12	0.65
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.30	0.65
3:AD:64:TYR:CD1	3:AD:93:LEU:HD13	2.32	0.65
21:AA:345:C:H3'	37:BP:33:GLU:OE1	1.96	0.65
24:BC:259:ASN:O	24:BC:260:LYS:HB2	1.95	0.65
26:BE:47:LYS:HB3	26:BE:51:GLU:HG3	1.77	0.65
33:BL:61:LEU:O	51:B3:12:ARG:HD3	1.95	0.65
37:BP:50:ARG:HD3	37:BP:56:SER:CB	2.19	0.65
22:DA:170:U:H2'	22:DA:171:U:H6	1.62	0.65
22:DA:275:C:H2'	22:DA:276:U:O4'	1.97	0.65
22:DA:1071:G:N7	22:DA:1089:A:C5	2.65	0.65
22:DA:1265:A:H4'	22:DA:1266:G:O5'	1.94	0.65
22:DA:1373:A:H2'	22:DA:1374:G:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:72:GLY:O	24:DC:73:ILE:HD13	1.97	0.65
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.78	0.65
40:DS:86:MET:CE	40:DS:87:PRO:HD2	2.26	0.65
1:AB:79:VAL:O	1:AB:83:ALA:HB3	1.97	0.65
3:AD:167:PRO:HB2	3:AD:170:LEU:HD11	1.78	0.65
7:AH:91:LEU:HD23	7:AH:92:PRO:HD2	1.79	0.65
21:AA:258:G:N2	21:AA:259:G:H1'	2.12	0.65
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	1.97	0.65
22:BA:2714:G:P	57:BA:3555:HOH:O	2.55	0.65
25:BD:182:ALA:O	25:BD:184:ARG:N	2.30	0.65
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.77	0.65
32:BK:111:LYS:H	32:BK:111:LYS:CE	2.05	0.65
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	2.12	0.65
8:CI:6:TYR:CE1	53:CA:1147:C:H4'	2.31	0.65
53:CA:501:C:H1'	53:CA:549:C:H1'	1.79	0.65
53:CA:960:U:C5'	53:CA:961:U:H5"	2.27	0.65
22:DA:67:U:H2'	22:DA:68:G:H8	1.62	0.65
22:DA:784:G:O2'	22:DA:785:G:H8	1.79	0.65
22:DA:855:G:H21	44:DW:23:LYS:HZ2	1.44	0.65
22:DA:1554:U:H5"	22:DA:1555:G:OP2	1.96	0.65
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.27	0.65
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.97	0.65
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	1.95	0.65
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.95	0.65
5:AF:55:HIS:O	5:AF:56:LYS:HB2	1.96	0.65
22:BA:2813:A:C2	22:BA:2887:A:N6	2.64	0.65
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.62	0.65
39:BR:90:ARG:O	39:BR:91:GLN:HB3	1.96	0.65
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.79	0.65
2:CC:39:ARG:HG2	2:CC:54:ILE:HD13	1.79	0.65
11:CL:29:LYS:O	11:CL:80:LEU:HD12	1.97	0.65
20:CU:19:LYS:N	20:CU:19:LYS:NZ	2.45	0.65
53:CA:1078:U:C5	53:CA:1079:G:C5	2.85	0.65
53:CA:1147:C:HO2'	53:CA:1148:U:H6	1.43	0.65
22:DA:513:A:H2'	22:DA:514:A:C8	2.32	0.65
54:DB:15:A:OP1	54:DB:108:A:H5'	1.98	0.65
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.36	0.65
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	1.97	0.65
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.78	0.65
2:AC:57:GLU:HG2	2:AC:64:ARG:HB3	1.79	0.64
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.30	0.64
22:BA:1416:G:O2'	22:BA:1417:C:H6	1.80	0.64
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.31	0.64
32:BK:76:VAL:HB	37:BP:72:VAL:HG22	1.79	0.64
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.97	0.64
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.80	0.64
3:CD:8:LEU:HD23	53:CA:429:U:H3'	1.78	0.64
6:CG:4:ARG:NH2	6:CG:6:ILE:HB	2.12	0.64
10:CK:51:PHE:O	10:CK:52:ARG:HD2	1.97	0.64
18:CS:36:ARG:HD3	53:CA:1318:A:O2'	1.97	0.64
22:DA:1906:G:H8	22:DA:1929:G:H2'	1.62	0.64
35:DN:63:ARG:O	35:DN:67:PHE:HB2	1.97	0.64
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.09	0.64
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD12	1.78	0.64
19:AT:75:LYS:HD2	21:AA:186:C:O4'	1.96	0.64
21:AA:426:U:H2'	21:AA:427:U:C6	2.32	0.64
22:BA:528:A:H5"	31:BJ:116:ARG:HH22	1.62	0.64
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.12	0.64
38:BQ:88:GLU:OE1	38:BQ:88:GLU:C	2.39	0.64
10:CK:127:ARG:HB3	53:CA:796:C:OP1	1.98	0.64
53:CA:239:U:C5'	53:CA:239:U:C6	2.78	0.64
53:CA:1031:C:H5'	53:CA:1032:G:H5"	1.78	0.64
22:DA:27:G:H1'	22:DA:513:A:H61	1.60	0.64
22:DA:674:G:O3'	26:DE:60:TRP:HH2	1.80	0.64
22:DA:870:U:H2'	22:DA:871:U:H5'	1.79	0.64
22:DA:1071:G:O6	22:DA:1091:G:N7	2.30	0.64
22:DA:1635:A:O2'	22:DA:1636:U:H5'	1.96	0.64
22:DA:1866:A:H2'	22:DA:1867:G:H8	1.60	0.64
3:AD:23:GLY:HA3	21:AA:409:U:OP1	1.97	0.64
20:AU:10:PRO:HB3	2:CC:74:ILE:HD12	1.79	0.64
21:AA:61:G:H2'	21:AA:62:U:C6	2.32	0.64
21:AA:1094:G:HO2'	21:AA:1095:U:P	2.19	0.64
22:BA:27:G:O2'	22:BA:28:A:P	2.55	0.64
22:BA:357:C:H2'	22:BA:358:U:C6	2.32	0.64
22:BA:1059:G:C6	22:BA:1060:U:N3	2.64	0.64
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.43	0.64
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.61	0.64
35:BN:103:ARG:CD	35:BN:110:MET:HE3	2.27	0.64
38:BQ:68:ALA:HB1	38:BQ:73:ILE:HG23	1.78	0.64
10:CK:27:ASN:H	10:CK:27:ASN:ND2	1.95	0.64
10:CK:111:ASP:H	20:CU:3:ILE:N	1.95	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:68:G:H5'	53:CA:171:A:O2'	1.97	0.64
22:DA:1055:G:H2'	22:DA:1055:G:N3	2.11	0.64
22:DA:1328:A:H3'	22:DA:1330:C:H41	1.62	0.64
22:DA:1518:C:H2'	22:DA:1519:G:O4'	1.96	0.64
22:DA:1639:C:C2'	22:DA:1640:A:H5"	2.25	0.64
22:DA:1962:C:H4'	22:DA:1963:U:OP1	1.98	0.64
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.61	0.64
41:DT:29:THR:H	41:DT:87:LEU:CB	2.11	0.64
1:AB:20:ARG:HA	1:AB:20:ARG:NH1	2.12	0.64
7:AH:88:LYS:HG3	7:AH:89:ASP:N	2.13	0.64
12:AM:27:THR:HG21	21:AA:1328:C:H5"	1.77	0.64
16:AQ:37:ILE:H	16:AQ:37:ILE:HD12	1.63	0.64
22:BA:1476:U:OP2	22:BA:1476:U:H6	1.80	0.64
22:BA:1510:G:H2'	22:BA:1511:G:H8	1.62	0.64
22:BA:1669:A:H2'	22:BA:1669:A:N3	2.11	0.64
8:CI:35:GLU:HA	8:CI:39:GLY:CA	2.26	0.64
22:DA:1157:G:O2'	22:DA:1158:C:H5'	1.97	0.64
22:DA:1313:U:O2	22:DA:1313:U:C2'	2.43	0.64
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.28	0.64
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.26	0.64
32:DK:99:ILE:HD12	32:DK:118:LEU:HB2	1.78	0.64
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.27	0.64
2:AC:21:TRP:CD1	2:AC:58:ARG:HG2	2.32	0.64
19:AT:25:SER:O	19:AT:28:ARG:HG3	1.98	0.64
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.11	0.64
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.59	0.64
37:BP:85:VAL:O	37:BP:86:LYS:HB2	1.98	0.64
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.97	0.64
9:CJ:15:HIS:HA	9:CJ:18:ILE:CG2	2.26	0.64
22:DA:1062:G:C8	22:DA:1088:A:H8	2.14	0.64
22:DA:1178:C:H2'	22:DA:1179:G:O4'	1.98	0.64
22:DA:1387:A:N6	22:DA:1401:G:C6	2.66	0.64
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.62	0.64
22:DA:1708:C:H2'	22:DA:1709:U:H6	1.63	0.64
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.32	0.64
24:DC:127:ASN:O	24:DC:190:THR:HA	1.98	0.64
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.80	0.64
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.79	0.64
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.97	0.64
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	1.97	0.64
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:29:THR:C	3:AD:30:LYS:HD3	2.23	0.64
8:AI:6:TYR:CG	8:AI:7:GLY:N	2.65	0.64
10:AK:96:ILE:HG13	10:AK:97:ARG:N	2.13	0.64
21:AA:86:G:N2	21:AA:87:C:N4	2.45	0.64
21:AA:1218:C:H2'	21:AA:1219:A:C8	2.33	0.64
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.62	0.64
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.10	0.64
44:BW:50:VAL:O	44:BW:52:CYS:N	2.26	0.64
53:CA:765:G:C8	53:CA:812:G:C2	2.86	0.64
53:CA:820:U:H4'	53:CA:821:G:OP2	1.97	0.64
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.98	0.64
22:DA:1071:G:N7	22:DA:1089:A:C6	2.66	0.64
22:DA:1965:C:H3'	22:DA:1966:A:H5"	1.80	0.64
22:DA:2726:A:O2'	22:DA:2727:A:H5'	1.97	0.64
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.80	0.64
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.04	0.64
25:DD:149:ASN:O	25:DD:151:THR:N	2.30	0.64
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.78	0.64
33:DL:93:ASN:CG	33:DL:94:THR:H	2.05	0.64
1:AB:99:MET:HA	1:AB:106:VAL:HG21	1.78	0.64
8:AI:117:LEU:HD23	8:AI:123:ARG:HD3	1.80	0.64
21:AA:792:A:H4'	21:AA:793:U:O5'	1.98	0.64
21:AA:1046:A:O2'	21:AA:1047:G:C5'	2.45	0.64
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.63	0.64
25:BD:182:ALA:C	25:BD:184:ARG:N	2.53	0.64
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.54	0.64
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.80	0.64
44:BW:30:VAL:HG22	44:BW:30:VAL:O	1.97	0.64
6:CG:10:LYS:HE3	6:CG:10:LYS:N	2.13	0.64
53:CA:752:G:H1'	53:CA:754:C:H41	1.63	0.64
53:CA:1048:G:H21	53:CA:1214:C:H5	1.44	0.64
22:DA:1312:U:H4'	22:DA:1313:U:O5'	1.98	0.64
22:DA:2056:G:C2	22:DA:2057:G:C8	2.86	0.64
22:DA:2275:C:O2'	34:DM:84:LYS:HA	1.97	0.64
24:DC:28:PRO:HB3	24:DC:62:ARG:HH22	1.62	0.64
25:DD:33:ARG:HH21	25:DD:51:THR:HG22	1.63	0.64
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.61	0.64
28:DG:163:TYR:HD2	28:DG:163:TYR:N	1.95	0.64
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.78	0.64
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.79	0.64
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.10	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:36:ILE:HG22	5:AF:64:VAL:HG22	1.80	0.64
19:AT:68:LYS:HB2	19:AT:68:LYS:NZ	2.12	0.64
22:BA:1414:C:C4	22:BA:1415:U:H5	2.16	0.64
22:BA:1779:U:C5	22:BA:1784:A:N7	2.61	0.64
22:BA:2017:U:H4'	48:B0:4:GLN:O	1.98	0.64
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	2.07	0.64
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.56	0.64
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.63	0.64
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.27	0.64
2:CC:190:THR:HG22	2:CC:191:THR:N	2.12	0.64
4:CE:38:VAL:HG12	4:CE:39:GLY:N	2.13	0.64
19:CT:74:HIS:O	19:CT:78:LEU:HB2	1.97	0.64
53:CA:87:C:O2'	53:CA:88:U:H4'	1.98	0.64
53:CA:802:A:C2'	53:CA:803:G:H5'	2.27	0.64
53:CA:1201:A:H1'	53:CA:1202:U:OP2	1.98	0.64
22:DA:2422:C:H2'	22:DA:2423:U:H5"	1.79	0.64
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.62	0.64
54:DB:41:G:O6	27:DF:68:LYS:HD3	1.97	0.64
25:DD:112:THR:HG22	25:DD:113:SER:N	2.13	0.64
33:DL:117:THR:HG22	33:DL:118:THR:H	1.63	0.64
37:DP:56:SER:O	37:DP:75:THR:HG22	1.98	0.64
43:DV:80:HIS:HD2	43:DV:82:TYR:H	1.43	0.64
13:AN:42:ASN:C	13:AN:44:VAL:H	2.04	0.64
21:AA:49:U:O4	21:AA:365:U:H5	1.80	0.64
22:BA:284:U:H2'	22:BA:285:G:H8	1.63	0.64
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.45	0.64
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.26	0.64
36:BO:2:ASP:HB3	36:BO:5:SER:HB2	1.80	0.64
52:B4:9:LYS:CD	52:B4:9:LYS:N	2.60	0.64
3:CD:144:ILE:HD12	3:CD:177:MET:HB3	1.80	0.64
9:CJ:8:ILE:HG22	9:CJ:100:ILE:HG12	1.79	0.64
53:CA:84:U:N3	53:CA:87:C:H1'	2.12	0.64
53:CA:154:U:H2'	53:CA:155:A:H5'	1.79	0.64
22:DA:128:C:H6	22:DA:128:C:H5"	1.62	0.64
22:DA:379:G:C6	22:DA:396:G:O6	2.51	0.64
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.98	0.64
22:DA:2313:C:O2'	22:DA:2314:A:H8	1.73	0.64
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.80	0.64
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.98	0.64
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.79	0.64
9:AJ:14:ASP:CB	9:AJ:17:LEU:HB3	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AU:3:ILE:HA	20:AU:19:LYS:HZ1	1.62	0.64
21:AA:16:A:O2'	21:AA:17:U:H5'	1.98	0.64
21:AA:197:A:O2'	21:AA:198:G:C8	2.50	0.64
21:AA:1285:A:H5'	21:AA:1286:U:C4	2.33	0.64
22:BA:2286:G:O6	49:B1:22:THR:HG21	1.97	0.64
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.63	0.64
27:BF:35:LEU:HD12	27:BF:88:VAL:HB	1.78	0.64
29:BH:31:VAL:O	29:BH:32:PRO:C	2.41	0.64
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.63	0.64
33:BL:40:SER:O	33:BL:41:ARG:HB2	1.97	0.64
36:BO:88:LYS:O	36:BO:89:ASP:HB2	1.98	0.64
46:BY:42:LEU:O	46:BY:43:LEU:C	2.41	0.64
53:CA:654:G:H2'	53:CA:655:A:C8	2.33	0.64
22:DA:1345:C:O2'	22:DA:1346:G:H8	1.69	0.64
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.79	0.64
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.33	0.64
22:DA:2893:A:H4'	22:DA:2894:G:O5'	1.97	0.64
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.62	0.64
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	1.98	0.64
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.80	0.64
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.13	0.64
3:AD:68:GLU:CG	21:AA:545:C:H5'	2.28	0.63
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	1.96	0.63
24:BC:250:GLN:N	24:BC:250:GLN:HE21	1.96	0.63
25:BD:113:SER:C	25:BD:114:LYS:HE3	2.23	0.63
25:BD:169:ARG:C	25:BD:170:VAL:HG13	2.23	0.63
45:BX:65:THR:O	45:BX:68:ALA:HB3	1.97	0.63
1:CB:20:ARG:HH21	1:CB:38:HIS:CD2	2.16	0.63
14:CO:38:LEU:HD12	14:CO:41:HIS:HB3	1.79	0.63
53:CA:47:C:O2'	53:CA:48:C:H5'	1.98	0.63
53:CA:1144:G:N2	53:CA:1146:A:H62	1.96	0.63
53:CA:1190:G:O2'	53:CA:1191:A:P	2.54	0.63
53:CA:1316:G:N2	53:CA:1318:A:H3'	2.12	0.63
22:DA:607:U:O4	22:DA:619:G:H2'	1.98	0.63
22:DA:1555:G:N2	22:DA:1556:C:C2	2.66	0.63
22:DA:2147:A:OP1	22:DA:2147:A:H4'	1.98	0.63
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.80	0.63
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.80	0.63
46:DY:4:LYS:HZ3	46:DY:4:LYS:HB2	1.63	0.63
11:AL:74:GLN:HG3	11:AL:75:GLU:HG2	1.80	0.63
19:AT:17:ARG:HG2	21:AA:322:C:O2'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1289:C:H2'	22:BA:1290:C:H6	1.62	0.63
22:BA:1495:A:H2'	22:BA:1496:A:C8	2.34	0.63
22:BA:2602:A:H4'	22:BA:2603:G:OP2	1.97	0.63
29:BH:76:GLU:HG2	29:BH:106:ALA:HB2	1.80	0.63
33:BL:27:LEU:HD12	33:BL:27:LEU:N	1.98	0.63
41:BT:32:LEU:HD23	41:BT:83:ALA:HB3	1.81	0.63
42:BU:6:ARG:O	42:BU:24:VAL:HB	1.98	0.63
42:BU:85:ARG:HA	42:BU:91:LYS:O	1.97	0.63
2:CC:120:THR:HG22	2:CC:120:THR:O	1.98	0.63
3:CD:32:LYS:HE3	53:CA:413:G:N1	2.13	0.63
7:CH:11:THR:HG21	53:CA:876:C:C1'	2.28	0.63
9:CJ:51:VAL:HB	13:CN:80:ARG:HB2	1.80	0.63
53:CA:664:G:N2	53:CA:741:G:H1	1.89	0.63
53:CA:1095:U:H2'	53:CA:1096:C:C6	2.33	0.63
22:DA:284:U:H2'	22:DA:285:G:H8	1.62	0.63
22:DA:370:G:C6	22:DA:424:G:N7	2.66	0.63
22:DA:1343:G:H2'	22:DA:1344:U:C5	2.32	0.63
22:DA:1655:A:H2'	22:DA:1656:C:C6	2.33	0.63
22:DA:2492:U:O2'	22:DA:2493:U:H5'	1.98	0.63
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.64	0.63
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	1.98	0.63
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.13	0.63
20:AU:40:PRO:HA	20:AU:43:GLU:HB2	1.79	0.63
22:BA:1289:C:H2'	22:BA:1290:C:C6	2.33	0.63
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.80	0.63
26:BE:149:ILE:O	26:BE:188:MET:HA	1.98	0.63
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.80	0.63
35:BN:1:MET:O	35:BN:2:ARG:HB2	1.98	0.63
44:BW:24:ARG:HD2	44:BW:24:ARG:C	2.23	0.63
44:BW:39:GLN:O	44:BW:40:ARG:C	2.41	0.63
45:BX:67:LEU:HD13	45:BX:77:TYR:CE1	2.33	0.63
52:B4:37:GLN:O	52:B4:37:GLN:HG2	1.97	0.63
6:CG:16:LYS:HE2	8:CI:45:MET:SD	2.39	0.63
8:CI:78:ILE:O	8:CI:82:ILE:HG13	1.99	0.63
20:CU:39:LYS:H	20:CU:40:PRO:CD	2.11	0.63
53:CA:6:G:N3	53:CA:6:G:C2'	2.61	0.63
53:CA:252:U:H5'	53:CA:252:U:H6	1.64	0.63
53:CA:1348:U:HO2'	53:CA:1349:A:H8	1.46	0.63
22:DA:13:A:O2'	22:DA:15:G:N7	2.31	0.63
22:DA:528:A:C2	22:DA:2043:C:O5'	2.52	0.63
22:DA:1812:U:H2'	22:DA:1813:G:H8	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1919:A:O2'	22:DA:1920:C:H5'	1.99	0.63
22:DA:2060:A:O2'	57:DA:3510:HOH:O	2.15	0.63
22:DA:2285:C:H2'	22:DA:2286:G:H5"	1.81	0.63
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.98	0.63
21:AA:121:U:H5"	21:AA:121:U:C6	2.27	0.63
21:AA:499:A:O2'	21:AA:500:G:C8	2.50	0.63
21:AA:501:C:H1'	21:AA:549:C:H1'	1.79	0.63
21:AA:903:G:H2'	21:AA:904:U:H6	1.61	0.63
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.81	0.63
22:BA:1935:G:H1	22:BA:1962:C:H2'	1.64	0.63
57:BA:3662:HOH:O	25:BD:140:HIS:CE1	2.52	0.63
25:BD:92:VAL:O	25:BD:93:GLY:C	2.40	0.63
26:BE:83:VAL:O	26:BE:83:VAL:HG12	1.97	0.63
40:BS:73:LYS:HB3	40:BS:106:VAL:HB	1.80	0.63
53:CA:1229:A:O2'	53:CA:1230:C:O4'	2.12	0.63
22:DA:1130:U:O2'	22:DA:1131:G:H8	1.80	0.63
22:DA:1635:A:H5'	22:DA:1635:A:C8	2.34	0.63
54:DB:24:G:H1'	54:DB:27:C:H42	1.63	0.63
29:DH:84:ALA:HA	29:DH:89:LYS:O	1.96	0.63
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.79	0.63
2:AC:10:ARG:O	2:AC:13:ILE:O	2.16	0.63
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.79	0.63
3:AD:31:CYS:O	3:AD:32:LYS:HB2	1.97	0.63
8:AI:110:VAL:HG21	21:AA:1370:G:O5'	1.98	0.63
21:AA:115:G:H4'	21:AA:116:A:O5'	1.98	0.63
21:AA:374:A:H5"	21:AA:452:A:C2	2.32	0.63
21:AA:946:A:H2'	21:AA:947:G:C8	2.34	0.63
21:AA:1127:G:O2'	21:AA:1128:C:H5'	1.97	0.63
22:BA:1187:G:H5"	39:BR:83:TYR:CE2	2.33	0.63
22:BA:1338:G:O2'	22:BA:1339:G:H5'	1.99	0.63
22:BA:2491:U:H5"	22:BA:2570:G:H5"	1.81	0.63
2:CC:10:ARG:HH21	2:CC:181:ILE:HB	1.64	0.63
13:CN:62:ARG:HE	13:CN:69:PRO:HA	1.63	0.63
20:CU:38:GLU:HA	20:CU:41:THR:OG1	1.99	0.63
53:CA:652:U:HO2'	53:CA:653:U:P	2.21	0.63
53:CA:1200:C:O2'	53:CA:1201:A:OP2	2.15	0.63
22:DA:1210:G:H5"	22:DA:1211:C:H3'	1.81	0.63
22:DA:1826:G:C6	22:DA:1827:U:C4	2.86	0.63
22:DA:1827:U:H2'	22:DA:1828:G:O4'	1.98	0.63
54:DB:67:G:HO2'	54:DB:68:C:H6	1.46	0.63
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:54:ILE:C	2:AC:54:ILE:HD12	2.24	0.63
2:AC:76:ILE:C	2:AC:82:ASP:HB2	2.24	0.63
5:AF:20:GLY:O	5:AF:24:ARG:HD3	1.98	0.63
21:AA:1278:G:O5'	21:AA:1279:G:H5'	1.98	0.63
22:BA:215:G:H4'	22:BA:216:A:OP1	1.98	0.63
22:BA:869:G:HO2'	34:BM:8:LYS:HD3	1.61	0.63
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.64	0.63
30:BI:116:MET:HE2	30:BI:116:MET:HA	1.81	0.63
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.64	0.63
1:CB:89:PHE:HB3	1:CB:149:GLY:O	1.98	0.63
11:CL:87:LYS:HG2	11:CL:87:LYS:O	1.99	0.63
53:CA:313:A:H2'	53:CA:314:C:C6	2.34	0.63
53:CA:1151:A:C6	53:CA:1152:A:N6	2.67	0.63
22:DA:53:A:O2'	22:DA:54:G:H5'	1.98	0.63
22:DA:656:G:H2'	22:DA:657:U:C6	2.34	0.63
22:DA:1062:G:C4	22:DA:1063:G:C8	2.86	0.63
22:DA:1439:A:H2	22:DA:1552:A:C6	2.06	0.63
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.63	0.63
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.34	0.63
27:DF:65:LEU:HD23	27:DF:65:LEU:H	1.64	0.63
27:DF:74:ALA:HB1	27:DF:76:PHE:CD2	2.33	0.63
32:DK:13:ASN:HD22	32:DK:13:ASN:N	1.92	0.63
3:AD:60:VAL:O	3:AD:63:ILE:HG22	1.98	0.63
21:AA:70:U:O2'	21:AA:71:A:C8	2.51	0.63
21:AA:1063:C:H2'	21:AA:1064:G:H8	1.61	0.63
22:BA:2443:C:O2'	22:BA:2444:G:H5'	1.99	0.63
26:BE:72:SER:C	26:BE:74:LYS:H	2.07	0.63
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.13	0.63
49:B1:22:THR:OG1	49:B1:23:THR:N	2.32	0.63
14:CO:16:ARG:HB2	14:CO:23:SER:HB2	1.81	0.63
15:CP:77:GLU:C	15:CP:79:ASN:H	2.06	0.63
53:CA:977:A:H8	53:CA:1223:C:N3	1.97	0.63
53:CA:1052:U:H5"	53:CA:1053:G:OP2	1.98	0.63
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.64	0.63
22:DA:2234:G:C5	22:DA:2235:G:C8	2.86	0.63
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	1.98	0.63
40:DS:71:VAL:O	40:DS:71:VAL:HG13	1.98	0.63
2:AC:190:THR:HG21	2:AC:195:ILE:HG13	1.80	0.63
21:AA:1094:G:O2'	21:AA:1095:U:OP2	2.16	0.63
22:BA:1354:A:H2'	22:BA:1355:G:O4'	1.99	0.63
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2555:U:C5	22:BA:2556:C:C2	2.86	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.79	0.63
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.98	0.63
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.28	0.63
43:BV:10:LYS:HD3	43:BV:10:LYS:N	2.13	0.63
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.80	0.63
3:CD:176:LYS:HE2	3:CD:178:GLU:CD	2.23	0.63
6:CG:2:ARG:HD3	53:CA:932:C:H5"	1.79	0.63
9:CJ:9:ARG:HH12	53:CA:1279:G:H5'	1.64	0.63
53:CA:704:A:H2'	53:CA:705:G:H8	1.61	0.63
22:DA:71:A:OP2	22:DA:71:A:H3'	1.99	0.63
22:DA:91:A:O2'	22:DA:92:U:H6	1.81	0.63
22:DA:185:G:H2'	22:DA:186:G:H8	1.63	0.63
22:DA:574:A:H4'	22:DA:575:A:C5'	2.29	0.63
22:DA:649:G:H2'	22:DA:650:C:C6	2.34	0.63
22:DA:859:G:N2	22:DA:916:G:H2'	2.14	0.63
22:DA:861:A:H2'	22:DA:862:G:C8	2.34	0.63
22:DA:2184:A:H2'	22:DA:2185:U:O4'	1.99	0.63
22:DA:2429:G:H3'	22:DA:2429:G:OP2	1.99	0.63
22:DA:2728:U:HO2'	22:DA:2729:G:H8	0.71	0.63
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.24	0.63
22:DA:2822:G:H2'	22:DA:2823:A:H5"	1.81	0.63
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.28	0.63
27:DF:147:ARG:O	27:DF:148:VAL:HG22	1.99	0.63
22:BA:1450:G:C6	22:BA:1451:C:N4	2.67	0.63
22:BA:1682:G:C8	22:BA:1757:A:C2	2.86	0.63
22:BA:1872:A:H2'	22:BA:1873:G:O4'	1.98	0.63
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.33	0.63
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.28	0.63
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.29	0.63
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.98	0.63
35:BN:70:THR:CB	35:BN:75:ILE:HD11	2.28	0.63
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.79	0.63
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.46	0.63
1:CB:9:LEU:HG	1:CB:10:LYS:H	1.64	0.63
1:CB:26:MET:HE1	1:CB:192:PRO:HB3	1.80	0.63
12:CM:102:LYS:HA	53:CA:1226:C:H5	1.63	0.63
15:CP:44:SER:H	15:CP:46:LYS:HZ2	1.47	0.63
19:CT:34:VAL:HG21	19:CT:53:MET:HG2	1.80	0.63
22:DA:347:A:H2'	22:DA:348:A:C8	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:373:U:HO2'	22:DA:374:A:H8	1.38	0.63
22:DA:526:A:C6	22:DA:2626:C:H4'	2.33	0.63
22:DA:624:C:O2'	22:DA:657:U:H5"	1.98	0.63
22:DA:1716:U:O2'	22:DA:1717:A:H5'	1.99	0.63
22:DA:1967:C:H6	22:DA:1967:C:H5"	1.63	0.63
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.80	0.63
54:DB:54:G:N2	27:DF:25:MET:HE2	2.13	0.63
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.99	0.63
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.14	0.63
28:DG:72:ASN:O	28:DG:76:ILE:HG12	1.99	0.63
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.80	0.63
29:DH:102:ALA:C	29:DH:104:THR:H	2.07	0.63
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	1.98	0.63
39:DR:97:LYS:HG2	39:DR:97:LYS:O	1.99	0.63
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.13	0.63
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.24	0.63
5:AF:16:GLU:HG2	3:CD:191:SER:CB	2.13	0.62
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.80	0.62
9:AJ:26:VAL:O	9:AJ:30:LYS:HG2	1.98	0.62
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.99	0.62
21:AA:250:A:H4'	21:AA:251:G:O5'	1.99	0.62
21:AA:1123:U:H5"	21:AA:1124:G:OP2	1.99	0.62
21:AA:1240:U:H3'	21:AA:1241:G:C5'	2.28	0.62
22:BA:747:U:C5	22:BA:2613:U:C5	2.87	0.62
22:BA:1528:A:H2'	22:BA:1529:G:O4'	1.99	0.62
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.13	0.62
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.81	0.62
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	2.13	0.62
9:CJ:5:ARG:HH21	9:CJ:77:VAL:HG13	1.64	0.62
11:CL:97:VAL:O	11:CL:97:VAL:HG23	1.98	0.62
53:CA:1090:U:H2'	53:CA:1091:U:H6	1.64	0.62
22:DA:246:C:H2'	22:DA:247:G:H5'	1.81	0.62
22:DA:247:G:C5	22:DA:249:C:H1'	2.34	0.62
22:DA:478:A:N6	22:DA:480:A:C6	2.67	0.62
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.99	0.62
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.79	0.62
27:DF:32:LYS:HB3	27:DF:156:THR:HB	1.80	0.62
32:DK:101:GLY:O	32:DK:120:PRO:HB3	1.99	0.62
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.81	0.62
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.23	0.62
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:78:ARG:O	12:AM:82:LEU:HG	1.97	0.62
16:AQ:16:MET:HE3	21:AA:276:G:OP1	1.98	0.62
16:AQ:29:LYS:HB2	16:AQ:36:PHE:CE1	2.34	0.62
18:AS:55:GLN:CD	18:AS:56:HIS:H	2.06	0.62
20:AU:36:PHE:HD1	20:AU:39:LYS:HB3	1.63	0.62
21:AA:374:A:OP1	21:AA:452:A:N1	2.32	0.62
22:BA:364:C:H2'	22:BA:365:U:C6	2.34	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.65	0.62
22:BA:2689:U:H4'	22:BA:2690:U:OP2	1.98	0.62
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.80	0.62
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.23	0.62
3:CD:89:LEU:HD23	3:CD:199:ILE:HD11	1.81	0.62
18:CS:77:ARG:NH1	53:CA:1225:A:H4'	2.14	0.62
20:CU:16:ARG:CG	20:CU:19:LYS:HG2	2.21	0.62
53:CA:423:G:H2'	53:CA:424:G:O4'	1.98	0.62
53:CA:663:A:O2'	53:CA:664:G:H5'	1.99	0.62
53:CA:994:A:N6	53:CA:1216:A:H5'	2.14	0.62
53:CA:1365:G:O2'	53:CA:1366:C:H5'	1.98	0.62
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.15	0.62
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.64	0.62
22:DA:1311:G:H21	22:DA:1603:A:H62	1.44	0.62
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.80	0.62
22:DA:2657:A:H2'	22:DA:2658:C:H6	1.63	0.62
54:DB:110:C:O2'	54:DB:111:U:H5'	1.98	0.62
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.99	0.62
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.81	0.62
10:AK:42:GLY:HA3	10:AK:73:VAL:HG12	1.80	0.62
14:AO:50:HIS:ND1	21:AA:667:G:H4'	2.14	0.62
16:AQ:18:LYS:CA	16:AQ:47:ASP:HB2	2.23	0.62
21:AA:189:A:H2'	21:AA:190:A:C8	2.34	0.62
22:BA:743:A:O3'	57:BA:3661:HOH:O	2.15	0.62
22:BA:838:C:H2'	22:BA:839:U:H6	1.64	0.62
22:BA:2134:A:O2'	22:BA:2135:A:H5"	2.00	0.62
24:BC:180:MET:HE2	24:BC:268:ARG:HH12	1.64	0.62
24:BC:255:LYS:O	24:BC:257:ARG:N	2.29	0.62
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.98	0.62
32:BK:98:ARG:HA	32:BK:118:LEU:HD23	1.79	0.62
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	1.97	0.62
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.99	0.62
17:CR:72:ARG:H	17:CR:72:ARG:NE	1.92	0.62
53:CA:313:A:H2'	53:CA:314:C:H6	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:613:C:H2'	53:CA:614:C:C6	2.34	0.62
53:CA:801:U:H2'	53:CA:802:A:C8	2.34	0.62
22:DA:7:G:H2'	22:DA:8:C:O4'	2.00	0.62
22:DA:2746:U:H1'	28:DG:138:GLN:HG3	1.81	0.62
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.79	0.62
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.99	0.62
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.64	0.62
33:DL:62:PRO:O	51:D3:12:ARG:HB3	1.99	0.62
33:DL:73:ILE:O	33:DL:105:ILE:HG23	1.99	0.62
35:DN:72:ASP:O	35:DN:76:VAL:HG13	1.99	0.62
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.14	0.62
16:AQ:51:GLU:HG2	16:AQ:52:CYS:SG	2.40	0.62
21:AA:56:U:H2'	21:AA:57:G:C8	2.33	0.62
21:AA:198:G:C2'	21:AA:199:A:H8	2.10	0.62
21:AA:714:G:H2'	21:AA:715:A:C8	2.33	0.62
21:AA:1101:A:H4'	21:AA:1102:A:O5'	1.98	0.62
22:BA:1330:C:O2'	22:BA:1331:G:H5'	1.99	0.62
22:BA:1398:C:H2'	22:BA:1399:C:C6	2.34	0.62
23:BB:45:A:H2'	23:BB:46:A:H8	1.64	0.62
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.00	0.62
31:BJ:32:LEU:HD22	31:BJ:54:ILE:HG12	1.82	0.62
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.82	0.62
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.28	0.62
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.65	0.62
46:BY:18:LEU:O	46:BY:22:LEU:HB2	1.98	0.62
2:CC:34:SER:O	2:CC:38:VAL:HG13	2.00	0.62
5:CF:27:ALA:O	5:CF:31:GLY:HA3	1.98	0.62
6:CG:118:ARG:NH2	53:CA:1239:A:H3'	2.14	0.62
22:DA:78:U:O2'	22:DA:79:C:H5'	2.00	0.62
22:DA:308:G:C6	22:DA:309:A:C6	2.87	0.62
22:DA:620:G:H4'	22:DA:621:A:O5'	1.99	0.62
22:DA:1317:G:C2	22:DA:1336:A:C2	2.88	0.62
22:DA:1751:U:H2'	22:DA:1752:C:H6	1.63	0.62
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.33	0.62
22:DA:2603:G:OP2	22:DA:2603:G:H4'	1.99	0.62
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.97	0.62
54:DB:17:C:H2'	54:DB:18:G:H8	1.61	0.62
24:DC:131:MET:HE1	24:DC:183:VAL:HG11	1.81	0.62
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.81	0.62
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.33	0.62
37:DP:50:ARG:HB3	37:DP:57:ALA:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:8:SER:O	44:DW:9:THR:HB	1.99	0.62
1:AB:86:CYS:H	1:AB:88:GLN:NE2	1.97	0.62
22:BA:403:U:O2'	22:BA:404:A:OP2	2.16	0.62
22:BA:1171:G:C6	22:BA:1172:C:C4	2.88	0.62
22:BA:2492:U:O2'	22:BA:2493:U:H5'	1.98	0.62
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.31	0.62
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.00	0.62
41:BT:61:LEU:HA	57:BT:201:HOH:O	1.98	0.62
3:CD:33:ILE:O	3:CD:35:GLN:HG2	1.98	0.62
6:CG:22:LEU:HA	6:CG:25:PHE:CB	2.25	0.62
12:CM:21:ILE:HB	12:CM:24:VAL:HG23	1.82	0.62
12:CM:111:PRO:HG2	12:CM:113:LYS:HG3	1.81	0.62
13:CN:60:ARG:HG2	13:CN:61:ASN:H	1.65	0.62
53:CA:608:A:H2'	53:CA:609:A:O4'	1.99	0.62
53:CA:977:A:H2'	53:CA:1224:U:O4	1.98	0.62
53:CA:1013:G:H22	53:CA:1015:G:H3'	1.63	0.62
53:CA:1183:U:O2'	53:CA:1184:G:OP1	2.16	0.62
22:DA:609:A:H2'	22:DA:610:C:O4'	1.99	0.62
22:DA:1412:U:H2'	22:DA:1413:A:O4'	2.00	0.62
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.99	0.62
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.81	0.62
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.62	0.62
2:AC:156:LEU:HD12	2:AC:156:LEU:N	2.11	0.62
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.14	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.81	0.62
18:AS:4:LEU:H	18:AS:4:LEU:HD12	1.64	0.62
22:BA:142:A:H5"	22:BA:142:A:H8	1.64	0.62
22:BA:1157:G:H2'	22:BA:1158:C:C6	2.33	0.62
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.64	0.62
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.34	0.62
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.17	0.62
2:CC:118:SER:O	2:CC:122:GLN:HG2	1.98	0.62
11:CL:80:LEU:HD23	11:CL:97:VAL:HG21	1.81	0.62
53:CA:452:A:H2'	53:CA:453:G:O4'	2.00	0.62
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.34	0.62
53:CA:1239:A:H62	53:CA:1299:A:N6	1.97	0.62
53:CA:1450:U:H4'	53:CA:1451:U:H5	1.62	0.62
22:DA:411:G:H4'	22:DA:412:A:OP1	1.99	0.62
22:DA:956:G:C1'	34:DM:82:MET:HE1	2.29	0.62
22:DA:1079:C:N3	22:DA:1088:A:H2	1.98	0.62
22:DA:2666:C:H2'	22:DA:2667:C:C5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:126:VAL:HG21	26:DE:134:LEU:HD13	1.82	0.62
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.63	0.62
27:DF:33:ILE:HB	27:DF:90:LEU:HB2	1.81	0.62
28:DG:93:TYR:CD2	28:DG:93:TYR:N	2.64	0.62
30:DI:50:LYS:HA	30:DI:50:LYS:HE2	1.82	0.62
38:DQ:59:LEU:O	38:DQ:63:ARG:HD3	1.99	0.62
1:AB:42:LEU:HG	1:AB:43:GLU:N	2.15	0.62
4:AE:110:MET:HE2	4:AE:124:ALA:HB1	1.80	0.62
11:AL:64:SER:OG	11:AL:96:THR:HG23	1.99	0.62
21:AA:172:A:C5	21:AA:174:A:N7	2.68	0.62
21:AA:1303:C:H2'	21:AA:1304:G:C8	2.34	0.62
22:BA:90:U:H2'	22:BA:91:A:C8	2.35	0.62
22:BA:2203:U:H5"	22:BA:2204:G:OP1	2.00	0.62
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.14	0.62
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.32	0.62
29:BH:49:ALA:HB3	29:BH:50:ARG:HH22	1.64	0.62
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.29	0.62
45:BX:58:ILE:HG13	45:BX:66:VAL:HG21	1.82	0.62
3:CD:2:ARG:CZ	3:CD:114:ARG:HD3	2.27	0.62
14:CO:31:LEU:O	14:CO:35:ILE:HG13	2.00	0.62
19:CT:73:ARG:CG	19:CT:73:ARG:NH1	2.58	0.62
53:CA:286:C:H2'	53:CA:287:U:O4'	1.98	0.62
53:CA:1144:G:H21	53:CA:1146:A:N6	1.96	0.62
22:DA:9:G:H1	22:DA:2629:U:H2'	1.64	0.62
22:DA:77:G:N2	22:DA:110:G:H1'	2.15	0.62
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.14	0.62
22:DA:973:A:H1'	22:DA:1188:U:C5	2.34	0.62
22:DA:1534:U:C6	22:DA:1538:G:N1	2.66	0.62
41:DT:19:LYS:HE2	41:DT:23:ALA:HB3	1.82	0.62
2:AC:52:SER:HB2	2:AC:111:ASP:OD2	2.00	0.62
9:AJ:48:ARG:NH2	13:AN:100:TRP:CD2	2.68	0.62
11:AL:23:LEU:CB	11:AL:58:ASN:HD22	2.13	0.62
13:AN:51:PRO:O	13:AN:52:ARG:HB2	1.99	0.62
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	1.99	0.62
40:BS:24:ILE:HD12	40:BS:32:ALA:HA	1.82	0.62
41:BT:48:GLN:HB2	41:BT:49:LYS:HE3	1.82	0.62
3:CD:195:ASN:HB3	3:CD:197:HIS:CD2	2.34	0.62
19:CT:26:MET:C	19:CT:26:MET:HE2	2.23	0.62
53:CA:15:G:H2'	53:CA:16:A:H8	1.64	0.62
53:CA:198:G:O2'	53:CA:199:A:C5'	2.47	0.62
53:CA:752:G:H1'	53:CA:754:C:N4	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:994:A:O2'	53:CA:995:C:H6	1.82	0.62
53:CA:1113:C:H2'	53:CA:1114:C:H6	1.65	0.62
22:DA:233:A:O2'	22:DA:234:U:O5'	2.13	0.62
22:DA:324:A:C2	22:DA:325:G:H1'	2.34	0.62
22:DA:481:G:HO2'	22:DA:507:A:N6	1.97	0.62
22:DA:538:A:H5"	31:DJ:7:LYS:HZ3	1.62	0.62
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.34	0.62
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.99	0.62
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.14	0.62
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.65	0.62
37:DP:88:ARG:NE	37:DP:112:ARG:HH21	1.94	0.62
3:AD:129:VAL:HG13	3:AD:131:ILE:HD12	1.80	0.62
10:AK:39:ASN:HA	21:AA:683:G:N2	2.14	0.62
16:AQ:45:VAL:HG21	16:AQ:60:ILE:CD1	2.22	0.62
21:AA:1305:G:N2	21:AA:1331:G:H2'	2.15	0.62
21:AA:1343:G:H2'	21:AA:1344:C:C6	2.34	0.62
22:BA:996:A:O3'	38:BQ:91:ARG:HG2	1.99	0.62
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.00	0.62
22:BA:2630:G:H2'	22:BA:2631:G:H8	1.65	0.62
25:BD:191:GLY:O	25:BD:192:ALA:HB3	1.99	0.62
33:BL:40:SER:O	33:BL:41:ARG:CB	2.48	0.62
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.81	0.62
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.25	0.62
53:CA:491:G:O2'	53:CA:492:C:H5'	2.00	0.62
53:CA:569:C:H5"	53:CA:570:G:OP1	2.00	0.62
53:CA:701:U:H4'	53:CA:702:A:H5"	1.81	0.62
53:CA:1067:A:H4'	53:CA:1068:G:O5'	2.00	0.62
22:DA:37:C:H1'	26:DE:45:ALA:HB2	1.81	0.62
22:DA:396:G:O2'	22:DA:397:U:C6	2.51	0.62
22:DA:481:G:O2'	22:DA:482:A:OP2	2.17	0.62
22:DA:833:A:H2'	22:DA:834:G:C8	2.34	0.62
22:DA:848:C:H2'	22:DA:849:A:C8	2.34	0.62
26:DE:112:LEU:HD11	26:DE:186:VAL:HG11	1.81	0.62
32:DK:1:MET:HA	32:DK:33:ALA:O	2.00	0.62
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.81	0.62
9:AJ:71:LEU:O	9:AJ:72:ARG:HD3	2.00	0.62
10:AK:60:PHE:O	10:AK:63:GLN:HB3	1.99	0.62
16:AQ:20:ILE:N	16:AQ:47:ASP:OD1	2.32	0.62
22:BA:1499:C:O2'	22:BA:1500:G:H5'	1.98	0.62
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.65	0.62
22:BA:1936:A:C2	22:BA:1943:U:C5	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:94:GLN:O	25:BD:95:SER:HB2	1.99	0.62
25:BD:107:VAL:O	25:BD:174:SER:O	2.18	0.62
34:BM:57:VAL:HA	34:BM:112:LEU:HD21	1.81	0.62
37:BP:80:VAL:O	37:BP:81:ASP:HB3	1.99	0.62
2:CC:137:VAL:O	2:CC:140:ALA:HB3	1.99	0.62
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.00	0.62
7:CH:91:LEU:HB3	7:CH:112:ASP:OD2	1.99	0.62
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.64	0.62
12:CM:12:LYS:H	12:CM:44:ILE:HG13	1.65	0.62
19:CT:26:MET:HE2	19:CT:26:MET:O	2.00	0.62
53:CA:120:A:H3'	53:CA:121:U:C5'	2.29	0.62
53:CA:166:U:H2'	53:CA:167:A:H5'	1.81	0.62
53:CA:597:G:H2'	53:CA:598:U:H5'	1.81	0.62
22:DA:126:A:O5'	50:D2:19:ARG:HG3	1.99	0.62
22:DA:179:C:H2'	22:DA:180:G:O4'	2.00	0.62
22:DA:686:U:H6	22:DA:788:A:N1	1.97	0.62
22:DA:828:U:H4'	22:DA:831:G:N1	2.15	0.62
22:DA:865:C:H5"	22:DA:866:A:OP1	1.99	0.62
22:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.28	0.62
22:DA:1090:A:H3'	22:DA:1091:G:H5"	1.81	0.62
22:DA:1204:A:H4'	22:DA:1205:A:C5'	2.30	0.62
22:DA:2216:G:C2'	22:DA:2217:G:H8	2.12	0.62
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.35	0.62
28:DG:1:SER:C	28:DG:3:VAL:H	2.07	0.62
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.82	0.62
32:DK:7:MET:HA	32:DK:7:MET:CE	2.29	0.62
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	2.00	0.62
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.64	0.62
44:DW:44:PHE:HE2	44:DW:76:ARG:HE	1.47	0.62
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.00	0.62
16:AQ:44:HIS:HE1	21:AA:276:G:O3'	1.82	0.61
21:AA:198:G:H2'	21:AA:199:A:H8	1.65	0.61
21:AA:1094:G:O2'	21:AA:1095:U:P	2.58	0.61
22:BA:919:U:H2'	22:BA:920:A:O4'	2.00	0.61
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.63	0.61
22:BA:1179:G:OP2	22:BA:1180:U:H5"	2.00	0.61
22:BA:1641:A:H5"	22:BA:1642:G:OP2	1.99	0.61
23:BB:14:U:OP2	23:BB:70:C:O2'	2.17	0.61
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	2.00	0.61
28:BG:88:LEU:HD22	28:BG:161:VAL:HG22	1.80	0.61
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG21	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.15	0.61
37:BP:50:ARG:CD	37:BP:51:ASN:H	2.13	0.61
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.24	0.61
39:BR:1:MET:HA	39:BR:42:ALA:O	2.00	0.61
47:BZ:29:ARG:HG3	47:BZ:29:ARG:NH2	2.06	0.61
52:B4:9:LYS:HD3	52:B4:9:LYS:N	2.11	0.61
3:CD:137:SER:O	3:CD:140:ASP:HB2	2.00	0.61
22:DA:151:C:H2'	22:DA:152:A:C8	2.35	0.61
22:DA:372:G:C8	45:DX:56:ARG:HG2	2.35	0.61
22:DA:797:G:OP1	26:DE:57:LYS:HG2	2.00	0.61
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.11	0.61
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.65	0.61
26:DE:164:LEU:HD12	26:DE:167:VAL:HG12	1.82	0.61
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.81	0.61
37:DP:109:ILE:O	37:DP:110:LYS:HG3	2.00	0.61
1:AB:19:THR:HB	1:AB:37:VAL:HB	1.81	0.61
2:AC:21:TRP:CG	2:AC:58:ARG:HG2	2.35	0.61
8:AI:40:ARG:O	8:AI:44:ARG:HD3	2.00	0.61
10:AK:87:GLY:N	10:AK:113:THR:HG22	2.14	0.61
22:BA:802:A:H2'	22:BA:803:U:C6	2.34	0.61
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.00	0.61
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.81	0.61
4:CE:131:ASN:HD22	4:CE:132:PRO:HD2	1.64	0.61
4:CE:152:VAL:HG21	7:CH:98:LEU:HD22	1.82	0.61
4:CE:154:ALA:HB1	7:CH:65:PHE:HE2	1.65	0.61
8:CI:6:TYR:HE2	8:CI:17:ARG:HA	1.64	0.61
15:CP:48:GLU:HG3	15:CP:51:ARG:HH21	1.64	0.61
53:CA:81:A:H2	53:CA:89:U:O4	1.83	0.61
53:CA:748:G:H2'	53:CA:749:A:H8	1.65	0.61
22:DA:5:A:C2	22:DA:2899:A:C2	2.89	0.61
22:DA:532:A:N1	22:DA:2020:A:H1'	2.15	0.61
22:DA:627:A:O2'	22:DA:628:G:O5'	2.17	0.61
22:DA:784:G:HO2'	22:DA:785:G:H8	1.48	0.61
22:DA:2348:U:O2'	22:DA:2349:G:O4'	2.18	0.61
54:DB:42:C:H4'	27:DF:63:LYS:HB3	1.81	0.61
54:DB:50:A:C2	54:DB:51:G:H1'	2.35	0.61
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.00	0.61
29:DH:83:LYS:HG3	29:DH:149:GLU:HB2	1.82	0.61
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.14	0.61
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.35	0.61
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.36	0.61
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.82	0.61
4:AE:110:MET:H	4:AE:113:VAL:HG13	1.64	0.61
5:AF:85:ILE:O	5:AF:86:ARG:C	2.43	0.61
18:AS:50:VAL:HG21	18:AS:70:LEU:HB3	1.81	0.61
19:AT:28:ARG:O	19:AT:32:LYS:HG2	2.00	0.61
21:AA:452:A:H2'	21:AA:453:G:O4'	1.99	0.61
22:BA:603:A:H4'	22:BA:604:G:O5'	1.99	0.61
22:BA:777:G:H2'	22:BA:778:G:H8	1.65	0.61
22:BA:1082:U:N3	22:BA:1086:A:C5	2.69	0.61
22:BA:1609:A:O2'	22:BA:1610:A:H5"	1.99	0.61
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.30	0.61
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.35	0.61
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.31	0.61
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.35	0.61
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.65	0.61
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CD1	2.88	0.61
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.66	0.61
14:CO:63:ARG:HH22	22:DA:715:A:C5'	2.11	0.61
53:CA:198:G:O6	53:CA:220:G:C4	2.53	0.61
53:CA:1151:A:H2'	53:CA:1152:A:C8	2.35	0.61
22:DA:226:A:H2'	22:DA:227:A:H8	1.65	0.61
22:DA:1437:C:H2'	22:DA:1438:U:C6	2.35	0.61
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.32	0.61
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.93	0.61
11:AL:7:VAL:HG13	16:AQ:30:HIS:CD2	2.35	0.61
11:AL:43:LYS:HB2	11:AL:44:PRO:HD3	1.83	0.61
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.83	0.61
21:AA:724:G:O2'	21:AA:725:G:H5'	2.01	0.61
21:AA:1338:G:H2'	21:AA:1339:A:H8	1.63	0.61
22:BA:277:G:H4'	22:BA:278:A:N7	2.15	0.61
22:BA:434:U:HO2'	22:BA:436:C:H5	1.49	0.61
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.99	0.61
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.35	0.61
43:BV:5:ASN:ND2	43:BV:5:ASN:H	1.97	0.61
2:CC:110:LEU:O	2:CC:110:LEU:HD23	2.01	0.61
6:CG:30:MET:O	6:CG:31:VAL:HB	1.99	0.61
6:CG:68:VAL:O	6:CG:70:PRO:HD3	2.00	0.61
8:CI:48:ARG:HH21	8:CI:57:VAL:HG21	1.65	0.61
53:CA:371:A:O2'	53:CA:372:C:H5'	1.99	0.61
53:CA:846:G:O2'	53:CA:847:G:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:196:A:N6	22:DA:831:G:H21	1.98	0.61
22:DA:464:U:H1'	22:DA:686:U:C5	2.34	0.61
22:DA:1130:U:HO2'	22:DA:1131:G:H8	1.44	0.61
22:DA:1680:U:H2'	22:DA:1681:G:O4'	1.99	0.61
22:DA:1737:G:C6	22:DA:1738:G:N1	2.69	0.61
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.16	0.61
24:DC:211:ARG:C	24:DC:213:ARG:H	2.07	0.61
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.30	0.61
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	2.15	0.61
3:AD:96:ARG:HB3	3:AD:98:ASP:OD1	2.00	0.61
4:AE:135:VAL:O	4:AE:139:THR:HG23	2.01	0.61
6:AG:30:MET:HE3	6:AG:33:GLY:HA2	1.81	0.61
11:AL:49:ARG:HH11	11:AL:49:ARG:CG	1.99	0.61
21:AA:895:G:H2'	21:AA:896:C:C6	2.36	0.61
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.33	0.61
22:BA:675:A:OP1	26:BE:58:LYS:HE2	2.01	0.61
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.35	0.61
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.83	0.61
22:BA:2267:A:H5"	22:BA:2268:A:C5'	2.27	0.61
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.01	0.61
36:BO:76:LYS:O	36:BO:80:GLU:HG2	2.00	0.61
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.65	0.61
44:BW:29:SER:N	44:BW:63:ASP:HB3	2.16	0.61
15:CP:73:ALA:HA	15:CP:76:LYS:HB2	1.82	0.61
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.41	0.61
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.01	0.61
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.65	0.61
53:CA:1336:C:H1'	53:CA:1337:G:C2	2.34	0.61
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.34	0.61
22:DA:612:G:C2	22:DA:614:A:H1'	2.34	0.61
22:DA:999:U:O2'	22:DA:1000:A:H5'	2.00	0.61
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.00	0.61
22:DA:1647:U:H5"	22:DA:1648:U:OP1	1.99	0.61
22:DA:1669:A:N3	22:DA:1669:A:C2'	2.61	0.61
22:DA:2023:C:HO2'	22:DA:2024:G:H8	1.43	0.61
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.82	0.61
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.16	0.61
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.83	0.61
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.63	0.61
2:AC:143:LEU:HD22	2:AC:143:LEU:N	2.15	0.61
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AU:16:ARG:HH11	20:AU:19:LYS:CG	2.13	0.61
21:AA:91:U:H2'	21:AA:92:U:C1'	2.30	0.61
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.35	0.61
22:BA:1885:A:H2'	22:BA:1886:U:C6	2.35	0.61
22:BA:2364:C:H2'	22:BA:2365:G:H5'	1.83	0.61
28:BG:84:LYS:HD2	28:BG:133:LYS:HG2	1.83	0.61
38:BQ:63:ARG:HH22	38:BQ:96:ASP:HB3	1.65	0.61
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.29	0.61
4:CE:107:GLY:O	4:CE:111:ARG:HB2	2.00	0.61
6:CG:12:LEU:HD22	6:CG:13:PRO:O	2.01	0.61
6:CG:74:VAL:HG11	6:CG:143:MET:HB2	1.83	0.61
6:CG:88:VAL:HG22	6:CG:89:GLU:N	2.12	0.61
7:CH:75:GLN:O	7:CH:126:CYS:HB2	2.00	0.61
9:CJ:38:GLY:O	9:CJ:40:ILE:HD12	2.00	0.61
11:CL:5:GLN:HG3	11:CL:9:LYS:HZ1	1.65	0.61
11:CL:119:LYS:HE3	53:CA:36:C:OP1	2.01	0.61
18:CS:46:LEU:HD23	18:CS:46:LEU:H	1.64	0.61
19:CT:73:ARG:HH12	53:CA:263:A:P	2.23	0.61
20:CU:36:PHE:CD2	20:CU:39:LYS:HE2	2.35	0.61
53:CA:934:C:H4'	53:CA:935:A:OP1	1.99	0.61
22:DA:1912:A:H62	22:DA:1917:U:H3	1.49	0.61
22:DA:1996:C:H4'	22:DA:1997:C:OP1	2.00	0.61
22:DA:2677:G:H2'	22:DA:2678:C:H6	1.65	0.61
24:DC:43:ASN:ND2	24:DC:44:ASN:H	1.99	0.61
27:DF:35:LEU:HD11	27:DF:153:ILE:HG23	1.82	0.61
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.82	0.61
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.82	0.61
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.00	0.61
10:AK:85:VAL:HG11	10:AK:92:ARG:HG3	1.83	0.61
14:AO:57:ARG:HB3	14:AO:57:ARG:NH1	2.16	0.61
16:AQ:13:SER:HB3	16:AQ:16:MET:HE1	1.82	0.61
18:AS:14:LEU:HD13	18:AS:32:THR:HG21	1.83	0.61
21:AA:89:U:O2'	21:AA:90:C:H5"	2.00	0.61
22:BA:1644:C:H2'	22:BA:1645:G:H5'	1.81	0.61
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.01	0.61
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.82	0.61
31:BJ:88:THR:HG22	31:BJ:91:GLU:CB	2.31	0.61
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.83	0.61
32:BK:121:GLU:HG2	32:BK:122:VAL:HG23	1.81	0.61
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.16	0.61
37:BP:57:ALA:HB1	37:BP:73:PHE:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.01	0.61
4:CE:68:ARG:O	4:CE:69:ASN:C	2.43	0.61
5:CF:90:MET:CE	17:CR:60:ARG:HD3	2.30	0.61
6:CG:41:ILE:HG21	6:CG:115:MET:HE3	1.82	0.61
20:CU:33:ARG:NH1	20:CU:34:ARG:HD3	2.16	0.61
53:CA:205:A:C6	53:CA:206:C:N4	2.69	0.61
53:CA:992:U:O2'	53:CA:993:G:OP2	2.17	0.61
53:CA:1304:G:H1'	53:CA:1333:A:N6	2.16	0.61
22:DA:637:A:OP2	33:DL:112:LEU:HD22	2.00	0.61
22:DA:674:G:H5"	26:DE:71:GLY:H	1.65	0.61
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.63	0.61
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.18	0.61
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.36	0.61
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.36	0.61
22:DA:2729:G:H5"	25:DD:190:LYS:NZ	2.16	0.61
24:DC:66:PHE:HB3	24:DC:150:GLY:O	2.01	0.61
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.40	0.61
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.82	0.61
35:DN:5:LYS:O	57:DN:202:HOH:O	2.16	0.61
1:AB:48:MET:HA	1:AB:48:MET:HE3	1.83	0.61
4:AE:100:GLU:HB2	4:AE:103:GLY:HA2	1.81	0.61
9:AJ:81:GLU:O	9:AJ:85:ASP:HB2	2.01	0.61
18:AS:17:LYS:HB3	18:AS:30:LEU:HD23	1.83	0.61
22:BA:545:U:H2'	22:BA:546:U:C4'	2.28	0.61
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.82	0.61
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.36	0.61
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.01	0.61
24:BC:77:VAL:HG22	24:BC:77:VAL:O	2.00	0.61
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.65	0.61
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.63	0.61
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.01	0.61
10:CK:94:SER:O	10:CK:97:ARG:HB2	2.00	0.61
12:CM:69:ARG:HA	12:CM:72:ILE:HG22	1.82	0.61
18:CS:33:TRP:HB2	53:CA:1014:A:C2	2.36	0.61
53:CA:973:G:O2'	53:CA:974:A:H5'	2.00	0.61
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.00	0.61
53:CA:1051:C:O2'	53:CA:1052:U:O4'	2.19	0.61
22:DA:53:A:H2'	22:DA:54:G:O4'	2.01	0.61
22:DA:309:A:H1'	22:DA:329:G:C4	2.36	0.61
22:DA:602:A:H1'	22:DA:656:G:N2	2.16	0.61
22:DA:657:U:H2'	22:DA:658:U:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:708:G:N2	22:DA:724:U:H1'	2.16	0.61
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.36	0.61
22:DA:1833:C:C4	22:DA:1834:U:C4	2.88	0.61
54:DB:81:G:C5	54:DB:82:U:C5	2.89	0.61
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.09	0.61
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.99	0.61
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.66	0.61
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.40	0.61
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.65	0.61
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.34	0.61
3:AD:196:GLU:C	3:AD:198:LEU:H	2.09	0.61
4:AE:97:PRO:HA	4:AE:122:VAL:HG12	1.83	0.61
21:AA:1441:A:N6	21:AA:1461:G:H21	1.99	0.61
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.16	0.61
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.36	0.61
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.66	0.61
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.33	0.61
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.30	0.61
44:BW:28:GLU:OE2	44:BW:28:GLU:CA	2.48	0.61
46:BY:9:LYS:HB3	46:BY:12:GLU:HB2	1.82	0.61
15:CP:44:SER:H	15:CP:46:LYS:HZ1	1.49	0.61
18:CS:50:VAL:HG11	18:CS:70:LEU:HB3	1.82	0.61
53:CA:90:C:H2'	53:CA:91:U:C5	2.36	0.61
53:CA:476:U:C6	53:CA:476:U:OP2	2.54	0.61
53:CA:1130:A:C5	53:CA:1146:A:C6	2.88	0.61
53:CA:1430:A:H2'	53:CA:1431:A:O4'	2.00	0.61
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.01	0.61
22:DA:1342:A:C4	22:DA:1345:C:N4	2.69	0.61
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.36	0.61
22:DA:1912:A:N6	22:DA:1917:U:H3	1.99	0.61
54:DB:90:C:H6	54:DB:90:C:H5"	1.66	0.61
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.00	0.61
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.67	0.61
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.82	0.61
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	2.00	0.61
1:AB:218:ALA:HA	1:AB:221:ARG:NH2	2.14	0.61
3:AD:55:ARG:HH12	3:AD:58:GLN:HG2	1.66	0.61
11:AL:113:ARG:HB3	11:AL:118:VAL:HB	1.82	0.61
13:AN:40:ARG:NH2	13:AN:44:VAL:HG21	2.15	0.61
22:BA:309:A:N3	22:BA:329:G:O2'	2.34	0.61
22:BA:819:A:C4	22:BA:1189:A:C2	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:959:A:H62	34:BM:82:MET:HE3	1.65	0.61
22:BA:1871:A:H8	22:BA:1872:A:C6	2.17	0.61
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.29	0.61
28:BG:11:PRO:O	28:BG:14:VAL:HG22	2.01	0.61
32:BK:107:LEU:C	32:BK:109:SER:H	2.07	0.61
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.16	0.61
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.31	0.61
3:CD:187:ARG:C	3:CD:189:ASP:H	2.08	0.61
11:CL:33:CYS:HB3	11:CL:77:SER:O	1.99	0.61
53:CA:245:U:H6	53:CA:245:U:H5"	1.66	0.61
53:CA:801:U:H2'	53:CA:802:A:H8	1.66	0.61
53:CA:1072:G:H2'	53:CA:1073:U:C6	2.36	0.61
22:DA:478:A:C6	22:DA:480:A:C5	2.89	0.61
22:DA:705:A:H2'	22:DA:706:A:C8	2.36	0.61
22:DA:1792:G:H5"	24:DC:203:VAL:HG22	1.83	0.61
22:DA:1808:A:C3'	22:DA:1809:A:H8	2.14	0.61
54:DB:6:G:H4'	54:DB:28:C:H4'	1.83	0.61
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.01	0.61
40:DS:6:LYS:HZ2	40:DS:104:THR:HG23	1.64	0.61
1:AB:115:ASP:O	1:AB:119:GLN:HB3	2.01	0.60
1:AB:119:GLN:HA	1:AB:122:ASP:HB2	1.83	0.60
11:AL:1:ALA:HB3	11:AL:5:GLN:OE1	2.01	0.60
11:AL:52:CYS:O	11:AL:54:VAL:HG23	2.00	0.60
12:AM:45:SER:O	12:AM:46:GLU:HB2	2.00	0.60
14:AO:29:ALA:HA	14:AO:84:LEU:HD21	1.81	0.60
19:AT:77:ASN:HD22	19:AT:78:LEU:N	1.98	0.60
22:BA:278:A:C2	22:BA:362:A:C8	2.89	0.60
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.36	0.60
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	1.82	0.60
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.31	0.60
1:CB:69:VAL:HB	1:CB:162:VAL:HB	1.83	0.60
3:CD:149:LYS:HZ3	3:CD:176:LYS:HD2	1.65	0.60
19:CT:4:LYS:HB3	19:CT:6:ALA:H	1.66	0.60
22:DA:492:A:O2'	22:DA:493:G:H5'	2.00	0.60
22:DA:527:C:O2'	22:DA:528:A:C8	2.54	0.60
22:DA:589:U:O2'	22:DA:590:A:H5'	2.01	0.60
22:DA:726:G:O2'	22:DA:727:A:OP2	2.17	0.60
22:DA:1799:G:C8	24:DC:179:GLU:OE1	2.52	0.60
22:DA:1915:U:O2'	22:DA:1916:A:H5'	2.00	0.60
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.66	0.60
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.01	0.60
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.31	0.60
21:AA:574:A:H5"	21:AA:575:G:OP2	2.01	0.60
21:AA:596:A:N6	21:AA:645:G:C6	2.69	0.60
21:AA:1038:C:H2'	21:AA:1039:G:H8	1.65	0.60
21:AA:1064:G:N2	21:AA:1190:G:O2'	2.34	0.60
22:BA:304:U:H2'	22:BA:305:C:C6	2.36	0.60
22:BA:364:C:H2'	22:BA:365:U:H6	1.66	0.60
22:BA:1537:G:H5"	22:BA:1537:G:N3	2.16	0.60
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.81	0.60
24:BC:247:TRP:O	24:BC:249:VAL:HG23	2.00	0.60
25:BD:182:ALA:C	25:BD:184:ARG:H	2.08	0.60
28:BG:54:ARG:HD3	28:BG:54:ARG:C	2.26	0.60
37:BP:51:ASN:O	37:BP:52:ARG:HG2	2.02	0.60
4:CE:52:ALA:HB2	4:CE:61:LYS:HE3	1.83	0.60
6:CG:115:MET:HE1	6:CG:119:LEU:HB3	1.82	0.60
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HG3	1.83	0.60
53:CA:644:U:H2'	53:CA:645:G:H8	1.66	0.60
53:CA:1167:A:N7	53:CA:1169:A:N6	2.48	0.60
22:DA:1078:U:H4'	22:DA:1079:C:C5'	2.30	0.60
22:DA:1312:U:O2'	22:DA:1314:C:N4	2.35	0.60
22:DA:2303:G:H5'	27:DF:121:PHE:CE1	2.37	0.60
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.31	0.60
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.49	0.60
36:DO:8:ILE:H	36:DO:8:ILE:HD12	1.66	0.60
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.66	0.60
4:AE:149:PRO:HA	4:AE:152:VAL:HG13	1.83	0.60
11:AL:43:LYS:HZ2	11:AL:44:PRO:HD2	1.65	0.60
19:AT:53:MET:O	19:AT:56:ILE:HG22	2.01	0.60
20:AU:13:VAL:HG13	20:AU:15:LEU:CG	2.31	0.60
21:AA:246:A:H4'	21:AA:247:G:OP1	2.01	0.60
22:BA:372:G:H5"	45:BX:60:LYS:HE3	1.84	0.60
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.01	0.60
22:BA:927:A:H2'	22:BA:928:A:C8	2.36	0.60
22:BA:1414:C:C4	22:BA:1415:U:C5	2.89	0.60
26:BE:7:ASP:O	26:BE:9:GLN:N	2.34	0.60
26:BE:153:LEU:C	26:BE:153:LEU:HD12	2.26	0.60
27:BF:24:VAL:O	27:BF:27:VAL:HG12	2.01	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.65	0.60
33:BL:77:ILE:HD13	33:BL:108:ALA:HB1	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.32	0.60
47:BZ:2:LYS:O	47:BZ:2:LYS:HE2	2.01	0.60
10:CK:60:PHE:O	10:CK:64:VAL:HG13	2.01	0.60
53:CA:82:G:C5	53:CA:89:U:C5	2.89	0.60
22:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.01	0.60
22:DA:422:A:O2'	22:DA:423:A:H5'	2.01	0.60
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.01	0.60
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.82	0.60
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.67	0.60
1:AB:77:GLU:HB2	1:AB:80:LYS:HE2	1.83	0.60
21:AA:536:C:H2'	21:AA:537:G:C8	2.36	0.60
21:AA:1016:A:C8	21:AA:1017:U:H1'	2.36	0.60
22:BA:321:U:HO2'	22:BA:340:A:HO2'	1.49	0.60
22:BA:571:U:C5	22:BA:575:A:C5	2.89	0.60
22:BA:742:A:H2'	22:BA:743:A:C8	2.36	0.60
22:BA:1560:G:H2'	22:BA:1561:C:H6	1.67	0.60
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.65	0.60
28:BG:32:LEU:O	28:BG:33:THR:HG23	2.00	0.60
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.82	0.60
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.02	0.60
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.01	0.60
42:BU:38:ILE:HG22	42:BU:39:ASN:N	2.15	0.60
1:CB:81:ASP:CG	1:CB:82:ALA:H	2.10	0.60
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.17	0.60
16:CQ:18:LYS:HA	16:CQ:50:ASN:OD1	2.00	0.60
18:CS:52:ASN:HD21	18:CS:55:GLN:N	1.99	0.60
53:CA:644:U:H2'	53:CA:645:G:C8	2.35	0.60
53:CA:652:U:O2'	53:CA:653:U:O5'	2.20	0.60
22:DA:158:U:H1'	22:DA:169:G:N2	2.17	0.60
22:DA:1207:C:H2'	22:DA:1208:C:C6	2.36	0.60
22:DA:1935:G:H1	22:DA:1962:C:H2'	1.67	0.60
22:DA:2226:C:H2'	22:DA:2227:A:C8	2.36	0.60
25:DD:181:ASP:C	25:DD:183:GLU:H	2.09	0.60
29:DH:62:LEU:C	29:DH:64:ALA:H	2.08	0.60
35:DN:37:THR:HA	35:DN:110:MET:HE2	1.83	0.60
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.16	0.60
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.82	0.60
1:AB:9:LEU:HD23	1:AB:11:ALA:N	2.17	0.60
4:AE:11:GLN:HE21	4:AE:11:GLN:HA	1.66	0.60
4:AE:80:LEU:HD12	4:AE:146:MET:CE	2.30	0.60
11:AL:85:ARG:CZ	11:AL:87:LYS:HB3	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AU:19:LYS:HE2	20:AU:19:LYS:N	2.16	0.60
21:AA:511:C:H2'	21:AA:534:U:O2	2.02	0.60
21:AA:1004:A:H2'	21:AA:1005:A:O4'	2.01	0.60
21:AA:1142:G:C2	21:AA:1143:G:H1'	2.36	0.60
22:BA:1967:C:O2'	22:BA:1968:G:H5'	2.00	0.60
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.65	0.60
24:BC:12:ARG:HH11	24:BC:12:ARG:HG2	1.65	0.60
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.84	0.60
34:BM:133:LYS:O	34:BM:134:THR:HB	2.00	0.60
37:BP:105:LYS:HA	37:BP:108:ARG:NH2	2.17	0.60
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.26	0.60
42:BU:97:SER:O	42:BU:98:ASN:HB3	2.00	0.60
45:BX:76:LYS:HG3	45:BX:77:TYR:H	1.66	0.60
2:CC:191:THR:O	53:CA:1206:G:H4'	2.01	0.60
15:CP:46:LYS:NZ	15:CP:46:LYS:H	2.00	0.60
53:CA:1003:G:N2	53:CA:1005:A:H5"	2.16	0.60
53:CA:1242:G:O2'	53:CA:1243:C:O5'	2.18	0.60
53:CA:1348:U:O2'	53:CA:1349:A:H5'	2.01	0.60
53:CA:1365:G:H2'	53:CA:1366:C:C6	2.36	0.60
22:DA:26:G:H1'	22:DA:515:A:H61	1.67	0.60
22:DA:390:U:O2'	22:DA:391:A:C8	2.53	0.60
22:DA:2093:G:C2	22:DA:2094:A:C5	2.90	0.60
22:DA:2728:U:O2'	22:DA:2729:G:C8	2.36	0.60
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.32	0.60
25:DD:17:GLU:CD	25:DD:17:GLU:H	2.09	0.60
26:DE:110:SER:O	26:DE:113:VAL:HG12	2.01	0.60
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.67	0.60
31:DJ:25:LEU:HD22	31:DJ:26:GLY:N	2.17	0.60
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.66	0.60
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.66	0.60
8:AI:32:ARG:HG2	8:AI:36:GLN:CB	2.32	0.60
19:AT:4:LYS:HE2	19:AT:4:LYS:C	2.27	0.60
21:AA:204:G:H1'	21:AA:465:A:C2	2.37	0.60
21:AA:486:U:H2'	21:AA:487:A:C8	2.37	0.60
21:AA:978:A:OP2	21:AA:1362:A:N7	2.35	0.60
21:AA:1533:C:H3'	21:AA:1534:A:H5"	1.82	0.60
22:BA:893:C:H2'	22:BA:894:U:O4'	2.01	0.60
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.81	0.60
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.84	0.60
24:BC:250:GLN:H	24:BC:250:GLN:NE2	2.00	0.60
25:BD:104:VAL:HG13	25:BD:106:LYS:HD2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:93:TYR:O	28:BG:105:SER:O	2.20	0.60
29:BH:24:GLY:O	29:BH:28:ASN:HB2	2.01	0.60
31:BJ:88:THR:CG2	31:BJ:90:GLU:HG3	2.32	0.60
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.31	0.60
33:BL:91:ASP:HB2	33:BL:94:THR:HB	1.83	0.60
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.14	0.60
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.29	0.60
1:CB:9:LEU:HD23	1:CB:9:LEU:H	1.66	0.60
2:CC:126:ARG:HA	2:CC:126:ARG:HE	1.67	0.60
7:CH:93:LYS:HD3	7:CH:93:LYS:N	2.17	0.60
9:CJ:70:HIS:CE1	53:CA:1151:A:O3'	2.54	0.60
11:CL:109:ARG:NH1	53:CA:537:G:H5"	2.16	0.60
20:CU:35:GLU:HG3	20:CU:36:PHE:N	2.10	0.60
53:CA:14:U:H2'	53:CA:16:A:OP2	2.02	0.60
22:DA:164:C:O2'	22:DA:165:A:H5'	2.02	0.60
22:DA:354:A:H2'	22:DA:355:U:O4'	2.01	0.60
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.02	0.60
22:DA:991:C:H6	22:DA:991:C:O5'	1.85	0.60
22:DA:1059:G:N1	22:DA:1088:A:C2	2.70	0.60
22:DA:1204:A:N1	22:DA:1241:A:N1	2.50	0.60
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.36	0.60
27:DF:129:MET:HE2	27:DF:174:PHE:CZ	2.37	0.60
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.83	0.60
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.37	0.60
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.06	0.60
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.02	0.60
4:AE:64:GLU:HG2	4:AE:68:ARG:NH2	2.16	0.60
4:AE:148:SER:O	4:AE:152:VAL:HG13	2.02	0.60
8:AI:71:ILE:HD11	21:AA:1248:A:C2	2.37	0.60
12:AM:36:ALA:HB3	12:AM:38:ILE:HG12	1.82	0.60
16:AQ:12:VAL:HG13	16:AQ:13:SER:N	2.17	0.60
21:AA:77:A:H2'	21:AA:78:A:N7	2.16	0.60
21:AA:1138:G:O2'	21:AA:1139:G:H4'	2.02	0.60
22:BA:136:G:H2'	22:BA:137:U:C5	2.36	0.60
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.32	0.60
22:BA:2319:G:O2'	22:BA:2320:U:H5	1.85	0.60
22:BA:2747:G:O2'	28:BG:66:THR:HG22	2.02	0.60
24:BC:117:SER:HB2	24:BC:128:THR:HB	1.84	0.60
27:BF:47:LYS:HB3	27:BF:47:LYS:NZ	2.16	0.60
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.02	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	1.82	0.60
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.67	0.60
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.84	0.60
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.64	0.60
50:B2:43:THR:O	50:B2:44:VAL:CB	2.50	0.60
6:CG:42:VAL:O	6:CG:43:TYR:HB2	2.01	0.60
7:CH:38:VAL:O	7:CH:41:GLU:HB2	2.01	0.60
11:CL:2:THR:HG22	11:CL:4:ASN:H	1.67	0.60
12:CM:102:LYS:HZ1	53:CA:952:U:H5	1.48	0.60
13:CN:52:ARG:HA	13:CN:52:ARG:NE	2.17	0.60
53:CA:90:C:H2'	53:CA:91:U:C6	2.37	0.60
53:CA:1206:G:C6	53:CA:1207:G:C5	2.90	0.60
22:DA:447:A:H5'	22:DA:449:A:C5	2.36	0.60
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.66	0.60
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.31	0.60
22:DA:2212:A:C8	22:DA:2214:C:N4	2.70	0.60
22:DA:2234:G:C6	22:DA:2235:G:N7	2.70	0.60
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.02	0.60
27:DF:139:GLU:HB3	27:DF:142:TYR:HB3	1.84	0.60
38:DQ:8:ILE:HG12	38:DQ:8:ILE:O	2.01	0.60
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.82	0.60
43:DV:56:PHE:C	43:DV:58:SER:H	2.09	0.60
8:AI:38:PHE:HA	8:AI:41:GLU:OE1	2.02	0.60
12:AM:15:VAL:HA	12:AM:33:LEU:CD1	2.32	0.60
21:AA:642:A:H2'	21:AA:643:C:C6	2.34	0.60
21:AA:1084:G:C5	21:AA:1085:U:C4	2.90	0.60
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.37	0.60
22:BA:692:C:H5"	24:BC:38:LYS:HB2	1.83	0.60
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.37	0.60
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.01	0.60
22:BA:2134:A:N6	22:BA:2157:G:C5	2.70	0.60
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.67	0.60
26:BE:108:ILE:HB	33:BL:2:ARG:HH22	1.66	0.60
28:BG:72:ASN:O	28:BG:76:ILE:HG22	2.01	0.60
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.01	0.60
51:B3:54:LEU:O	51:B3:58:ILE:HG13	2.02	0.60
51:B3:56:LEU:HD22	51:B3:56:LEU:H	1.67	0.60
1:CB:141:GLU:HG2	1:CB:145:ASN:HD21	1.67	0.60
11:CL:98:ARG:HD3	11:CL:103:CYS:SG	2.42	0.60
53:CA:60:A:H4'	53:CA:61:G:O5'	2.00	0.60
53:CA:113:G:H1'	53:CA:354:G:H5'	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1348:U:H2'	53:CA:1349:A:H8	1.66	0.60
22:DA:64:A:H2'	22:DA:65:U:O4'	2.02	0.60
22:DA:247:G:H4'	22:DA:386:G:C5	2.37	0.60
22:DA:1358:G:H2'	22:DA:1372:U:O4	2.02	0.60
22:DA:1956:U:O2'	22:DA:1957:C:H5'	2.01	0.60
22:DA:2267:A:N6	22:DA:2271:G:C6	2.70	0.60
22:DA:2758:A:H2'	22:DA:2759:G:H5'	1.83	0.60
24:DC:93:VAL:HG12	24:DC:101:ARG:H	1.66	0.60
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.31	0.60
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.84	0.60
42:DU:95:PHE:O	42:DU:97:SER:N	2.34	0.60
46:DY:31:GLN:C	46:DY:33:ALA:H	2.07	0.60
1:AB:9:LEU:HD23	1:AB:11:ALA:H	1.67	0.60
4:AE:152:VAL:CB	4:AE:155:LYS:HZ2	2.10	0.60
6:AG:88:VAL:HG22	6:AG:89:GLU:N	2.17	0.60
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.00	0.60
15:AP:77:GLU:C	15:AP:79:ASN:H	2.08	0.60
22:BA:1062:G:C8	22:BA:1088:A:H8	2.20	0.60
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	2.02	0.60
39:BR:97:LYS:O	39:BR:98:ILE:HB	2.01	0.60
41:BT:51:PHE:O	41:BT:52:GLU:HG2	2.02	0.60
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.83	0.60
11:CL:45:ASN:HA	53:CA:529:G:O6	2.01	0.60
20:CU:38:GLU:N	20:CU:40:PRO:HD2	2.17	0.60
53:CA:481:G:H4'	53:CA:482:A:OP1	2.02	0.60
53:CA:1304:G:H1'	53:CA:1333:A:H61	1.66	0.60
22:DA:303:G:O2'	22:DA:304:U:O4'	2.19	0.60
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.32	0.60
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.02	0.60
22:DA:2550:G:C2	22:DA:2559:C:O2	2.55	0.60
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.67	0.60
2:AC:46:LEU:HB3	2:AC:49:ALA:HB3	1.83	0.60
4:AE:105:ILE:HG13	4:AE:123:LEU:HA	1.83	0.60
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.02	0.60
9:AJ:51:VAL:O	9:AJ:62:ARG:HA	2.02	0.60
22:BA:119:A:H4'	22:BA:120:U:O5'	2.02	0.60
22:BA:481:G:C4	22:BA:507:A:C2	2.90	0.60
22:BA:693:A:O2'	22:BA:694:U:H5'	2.02	0.60
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.50	0.60
22:BA:1286:A:O2'	22:BA:1288:G:OP2	2.19	0.60
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2407:A:H2'	22:BA:2408:U:C6	2.37	0.60
23:BB:45:A:H2'	23:BB:46:A:C8	2.37	0.60
34:BM:8:LYS:HD2	34:BM:8:LYS:N	2.13	0.60
34:BM:46:ILE:HD12	34:BM:46:ILE:C	2.27	0.60
36:BO:7:ARG:HH11	36:BO:7:ARG:HG2	1.67	0.60
41:BT:73:ARG:HB3	41:BT:73:ARG:CZ	2.30	0.60
9:CJ:64:GLN:CB	13:CN:98:ALA:HB3	2.30	0.60
53:CA:859:G:H2'	53:CA:860:A:C8	2.37	0.60
53:CA:996:A:H2'	53:CA:997:U:C6	2.37	0.60
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.37	0.60
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.32	0.60
22:DA:2392:A:C8	22:DA:2429:G:C2	2.89	0.60
22:DA:2602:A:OP1	22:DA:2602:A:H3'	2.02	0.60
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.83	0.60
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.02	0.60
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	2.17	0.60
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.70	0.60
38:DQ:91:ARG:NH2	38:DQ:93:ILE:HD13	2.17	0.60
5:AF:11:HIS:HD2	5:AF:13:ASP:H	1.50	0.59
13:AN:86:ALA:O	13:AN:91:GLU:HB2	2.02	0.59
18:AS:46:LEU:H	18:AS:61:VAL:CG2	2.14	0.59
20:AU:33:ARG:HE	20:AU:34:ARG:HG3	1.66	0.59
21:AA:202:G:N2	21:AA:466:A:H61	1.97	0.59
22:BA:480:A:H2	22:BA:499:U:O2	1.85	0.59
22:BA:751:A:H5"	22:BA:752:A:OP1	2.02	0.59
22:BA:979:A:H2'	22:BA:982:C:H42	1.66	0.59
22:BA:1936:A:H2	22:BA:1943:U:C4	2.19	0.59
22:BA:2313:C:H5"	27:BF:87:LYS:HD3	1.84	0.59
22:BA:2650:U:O2'	22:BA:2651:C:H5'	2.03	0.59
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.84	0.59
28:BG:112:VAL:HG23	28:BG:113:ASP:N	2.16	0.59
40:BS:107:VAL:O	40:BS:107:VAL:HG12	2.01	0.59
41:BT:50:LEU:H	41:BT:50:LEU:CD1	2.13	0.59
1:CB:101:THR:O	1:CB:102:ASN:HB2	2.01	0.59
13:CN:55:SER:C	13:CN:57:SER:H	2.10	0.59
53:CA:269:C:H2'	53:CA:270:A:H8	1.67	0.59
53:CA:517:G:H5'	53:CA:519:C:C2	2.37	0.59
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.02	0.59
22:DA:1673:G:H2'	22:DA:1674:G:H5'	1.84	0.59
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.84	0.59
54:DB:116:G:H2'	54:DB:117:G:H8	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.16	0.59
26:DE:196:VAL:HG13	26:DE:200:LEU:HD23	1.84	0.59
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	2.02	0.59
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.03	0.59
33:DL:56:PRO:O	33:DL:60:ARG:HG3	2.02	0.59
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.02	0.59
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.84	0.59
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.83	0.59
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.02	0.59
1:AB:66:ILE:HB	1:AB:88:GLN:CB	2.31	0.59
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.02	0.59
9:AJ:21:ALA:HA	9:AJ:24:GLU:HG3	1.83	0.59
21:AA:81:A:O2'	21:AA:89:U:O2	2.20	0.59
21:AA:182:A:C2	21:AA:184:G:C8	2.90	0.59
21:AA:1356:G:H2'	21:AA:1357:A:C8	2.37	0.59
22:BA:588:U:H2'	22:BA:589:U:H6	1.67	0.59
22:BA:923:G:N3	44:BW:23:LYS:CE	2.62	0.59
22:BA:1169:A:C2	22:BA:1181:U:O2	2.55	0.59
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.37	0.59
22:BA:2325:G:C6	22:BA:2326:C:N4	2.71	0.59
22:BA:2476:A:C2'	22:BA:2477:U:H5'	2.32	0.59
24:BC:185:ALA:C	24:BC:187:CYS:H	2.08	0.59
31:BJ:44:TYR:HD1	31:BJ:44:TYR:O	1.85	0.59
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.29	0.59
41:BT:70:HIS:HB2	41:BT:73:ARG:O	2.02	0.59
44:BW:17:ALA:O	44:BW:18:LYS:HB3	2.02	0.59
3:CD:28:ASP:O	3:CD:29:THR:O	2.20	0.59
8:CI:51:LEU:C	8:CI:53:LEU:H	2.10	0.59
53:CA:157:U:O2'	53:CA:158:G:H5'	2.01	0.59
53:CA:567:G:H1'	57:CA:1819:HOH:O	2.02	0.59
53:CA:734:G:H2'	53:CA:735:C:C6	2.38	0.59
53:CA:794:A:H2'	53:CA:795:C:C6	2.37	0.59
53:CA:998:C:H2'	53:CA:999:C:C6	2.37	0.59
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.84	0.59
53:CA:1365:G:O2'	53:CA:1366:C:C5'	2.50	0.59
22:DA:749:A:C2	22:DA:750:A:C8	2.90	0.59
22:DA:1056:G:C1'	22:DA:1103:A:H61	2.14	0.59
22:DA:1078:U:H4'	22:DA:1079:C:H5"	1.83	0.59
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.36	0.59
54:DB:27:C:H2'	54:DB:28:C:C6	2.37	0.59
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.27	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.17	0.59
13:AN:20:PHE:C	13:AN:22:LYS:H	2.10	0.59
15:AP:5:ARG:HA	15:AP:68:SER:OG	2.01	0.59
16:AQ:18:LYS:HE3	21:AA:255:G:H4'	1.84	0.59
21:AA:115:G:H1'	21:AA:116:A:N7	2.16	0.59
21:AA:600:A:H2'	21:AA:601:G:H8	1.67	0.59
21:AA:1064:G:O2'	21:AA:1190:G:N2	2.35	0.59
22:BA:1150:C:H2'	22:BA:1151:A:O5'	2.01	0.59
22:BA:2628:C:O2'	22:BA:2781:A:H2'	2.03	0.59
25:BD:114:LYS:N	25:BD:114:LYS:CE	2.61	0.59
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	2.18	0.59
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	2.03	0.59
5:CF:90:MET:HE1	17:CR:60:ARG:HD3	1.85	0.59
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.84	0.59
15:CP:35:ARG:HH12	15:CP:38:PHE:HB3	1.67	0.59
19:CT:22:SER:HB3	53:CA:1458:G:O2'	2.02	0.59
53:CA:249:U:H5'	53:CA:250:A:OP2	2.02	0.59
53:CA:754:C:H2'	53:CA:754:C:O2	2.01	0.59
53:CA:1172:C:O2'	53:CA:1173:U:H5'	2.02	0.59
22:DA:1273:U:H4'	22:DA:1275:A:P	2.41	0.59
22:DA:1438:U:C4	22:DA:1552:A:N1	2.69	0.59
22:DA:1439:A:N7	22:DA:1440:U:N1	2.50	0.59
22:DA:1813:G:N3	24:DC:49:THR:HB	2.17	0.59
22:DA:2653:U:C4	22:DA:2654:A:C6	2.90	0.59
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.37	0.59
22:DA:2756:U:H4'	22:DA:2757:A:O5'	2.02	0.59
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.85	0.59
5:AF:90:MET:HE1	17:AR:22:TYR:CZ	2.38	0.59
6:AG:4:ARG:HA	6:AG:4:ARG:NE	2.17	0.59
20:AU:39:LYS:N	20:AU:40:PRO:HD2	2.16	0.59
21:AA:969:A:O2'	21:AA:970:C:H5'	2.02	0.59
21:AA:1414:U:H2'	21:AA:1415:G:H8	1.66	0.59
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.01	0.59
23:BB:40:U:O2'	23:BB:43:C:H5	1.86	0.59
28:BG:83:THR:HA	28:BG:84:LYS:HZ1	1.67	0.59
29:BH:95:GLY:C	29:BH:97:ARG:H	2.09	0.59
33:BL:130:GLY:O	33:BL:133:ALA:HB3	2.02	0.59
37:BP:61:ARG:HG2	37:BP:70:GLU:CG	2.32	0.59
41:BT:32:LEU:HD23	41:BT:32:LEU:N	2.17	0.59
44:BW:9:THR:HG23	44:BW:10:ARG:HD3	1.83	0.59
44:BW:29:SER:O	44:BW:30:VAL:HB	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:19:SER:HB3	6:CG:22:LEU:HB3	1.85	0.59
8:CI:118:ARG:HG3	8:CI:124:PRO:HG3	1.84	0.59
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.02	0.59
15:CP:67:ILE:HG12	15:CP:72:ALA:HB2	1.84	0.59
53:CA:174:A:O2'	53:CA:175:C:H5'	2.01	0.59
53:CA:345:C:H4'	53:CA:346:G:H5"	1.83	0.59
53:CA:369:G:OP2	53:CA:388:G:N2	2.33	0.59
53:CA:844:G:O2'	53:CA:845:A:H5"	2.03	0.59
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.54	0.59
22:DA:481:G:HO2'	22:DA:507:A:H61	1.50	0.59
22:DA:1060:U:H1'	22:DA:1062:G:OP2	2.02	0.59
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.03	0.59
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.66	0.59
37:DP:56:SER:HB2	37:DP:75:THR:HG21	1.83	0.59
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.32	0.59
6:AG:146:ALA:C	6:AG:148:LYS:H	2.10	0.59
10:AK:110:THR:HG22	20:AU:4:LYS:CB	2.32	0.59
11:AL:23:LEU:HB2	11:AL:58:ASN:ND2	2.17	0.59
21:AA:87:C:H2'	21:AA:88:U:H6	1.67	0.59
21:AA:922:G:H2'	21:AA:923:A:C8	2.37	0.59
22:BA:373:U:O2'	22:BA:374:A:H5'	2.02	0.59
22:BA:1560:G:H2'	22:BA:1561:C:C6	2.36	0.59
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.03	0.59
23:BB:30:C:H2'	23:BB:31:C:H5'	1.84	0.59
26:BE:175:ILE:HG23	26:BE:175:ILE:O	2.00	0.59
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.84	0.59
8:CI:71:ILE:CD1	8:CI:72:SER:H	2.13	0.59
12:CM:78:ARG:NH2	12:CM:79:LEU:HD23	2.17	0.59
22:DA:172:A:H2'	22:DA:173:A:C8	2.37	0.59
22:DA:304:U:H2'	22:DA:305:C:C6	2.37	0.59
22:DA:491:G:O2'	22:DA:492:A:H5'	2.02	0.59
22:DA:920:A:H2'	22:DA:921:C:C6	2.38	0.59
22:DA:1237:A:O2'	22:DA:1238:G:H4'	2.03	0.59
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.37	0.59
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.83	0.59
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.83	0.59
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.17	0.59
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.01	0.59
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	1.83	0.59
3:AD:166:LYS:HB3	3:AD:166:LYS:NZ	2.18	0.59
9:AJ:52:LEU:HD23	9:AJ:62:ARG:HG2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:7:LEU:HD23	16:AQ:24:ILE:CD1	2.32	0.59
19:AT:26:MET:HB3	21:AA:1458:G:H5'	1.85	0.59
20:AU:38:GLU:HB2	21:AA:1526:G:P	2.42	0.59
21:AA:968:A:H4'	21:AA:969:A:OP2	2.01	0.59
21:AA:1314:C:O2'	21:AA:1315:U:H5'	2.03	0.59
22:BA:42:A:C3'	22:BA:43:G:H5"	2.32	0.59
22:BA:271:G:HO2'	22:BA:272:A:C5'	2.16	0.59
22:BA:1082:U:N3	22:BA:1086:A:C6	2.70	0.59
22:BA:2476:A:H2'	22:BA:2477:U:H5'	1.85	0.59
29:BH:26:ALA:HA	29:BH:30:LEU:HB2	1.82	0.59
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.18	0.59
2:CC:113:LYS:HG3	2:CC:184:ASN:ND2	2.18	0.59
6:CG:135:LYS:O	6:CG:139:ASP:HB2	2.02	0.59
18:CS:79:TYR:O	18:CS:80:ARG:HB2	2.02	0.59
22:DA:642:U:O2	22:DA:644:A:H5"	2.02	0.59
22:DA:724:U:H2'	22:DA:725:G:O4'	2.03	0.59
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.38	0.59
22:DA:1440:U:O2'	22:DA:1441:G:H5'	2.03	0.59
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.66	0.59
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.66	0.59
22:DA:2612:C:H5"	22:DA:2613:U:OP1	2.02	0.59
22:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.14	0.59
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.18	0.59
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.32	0.59
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.66	0.59
12:AM:106:ARG:HH21	12:AM:112:ARG:CB	2.15	0.59
22:BA:196:A:H2'	22:BA:805:G:O6	2.02	0.59
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	2.32	0.59
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.85	0.59
4:CE:136:VAL:O	4:CE:140:ILE:HG13	2.03	0.59
10:CK:117:HIS:ND1	53:CA:675:A:H1'	2.16	0.59
11:CL:65:TYR:HB3	11:CL:95:HIS:HD2	1.67	0.59
13:CN:8:ARG:HD2	13:CN:12:ARG:CZ	2.33	0.59
13:CN:66:THR:HG23	13:CN:82:LYS:HE3	1.84	0.59
53:CA:373:A:C8	53:CA:373:A:H5'	2.38	0.59
53:CA:388:G:O2'	53:CA:389:A:P	2.60	0.59
53:CA:821:G:H2'	53:CA:822:U:C6	2.38	0.59
53:CA:1520:C:H2'	53:CA:1521:C:C6	2.37	0.59
22:DA:70:G:H5'	22:DA:112:U:O2	2.02	0.59
22:DA:828:U:H2'	22:DA:829:A:C8	2.37	0.59
22:DA:2312:U:H2'	22:DA:2313:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	2.17	0.59
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.83	0.59
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.85	0.59
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.84	0.59
4:AE:153:ALA:O	4:AE:154:ALA:C	2.45	0.59
5:AF:46:GLN:NE2	5:AF:55:HIS:HB2	2.17	0.59
10:AK:35:ASP:OD2	10:AK:39:ASN:HB2	2.03	0.59
13:AN:25:GLU:HG2	13:AN:26:LEU:HD12	1.85	0.59
19:AT:29:THR:O	19:AT:33:LYS:HE2	2.03	0.59
19:AT:73:ARG:NH2	21:AA:261:U:OP2	2.36	0.59
21:AA:275:G:O2'	21:AA:276:G:H5'	2.01	0.59
21:AA:382:A:H2'	21:AA:383:A:C8	2.37	0.59
21:AA:397:A:N7	21:AA:547:A:O2'	2.35	0.59
21:AA:903:G:C4	21:AA:904:U:C5	2.91	0.59
21:AA:978:A:HO2'	21:AA:1322:C:H5	1.50	0.59
22:BA:303:G:H2'	22:BA:304:U:H6	1.68	0.59
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.01	0.59
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.86	0.59
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.02	0.59
37:BP:50:ARG:HG2	37:BP:57:ALA:H	1.60	0.59
45:BX:34:SER:CA	45:BX:49:ARG:HA	2.32	0.59
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.51	0.59
51:B3:30:HIS:O	51:B3:31:ILE:C	2.46	0.59
5:CF:2:ARG:NH2	5:CF:91:ARG:HB2	2.18	0.59
5:CF:68:GLN:O	5:CF:71:ILE:HG22	2.02	0.59
8:CI:30:ASN:O	8:CI:32:ARG:HG2	2.02	0.59
12:CM:102:LYS:HA	53:CA:1226:C:N4	2.17	0.59
14:CO:2:LEU:HD13	14:CO:34:GLN:HG2	1.84	0.59
53:CA:79:G:N1	53:CA:80:A:N6	2.51	0.59
22:DA:365:U:H2'	22:DA:366:C:O4'	2.01	0.59
22:DA:414:C:H5"	22:DA:1879:C:O2'	2.03	0.59
22:DA:1081:U:H4'	30:DI:123:ALA:HA	1.84	0.59
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.33	0.59
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.36	0.59
22:DA:2867:G:C2'	22:DA:2867:G:N3	2.64	0.59
25:DD:12:THR:HG22	25:DD:13:ARG:O	2.03	0.59
25:DD:106:LYS:O	25:DD:107:VAL:HB	2.01	0.59
28:DG:84:LYS:O	28:DG:85:LYS:HB3	2.03	0.59
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	2.03	0.59
7:AH:88:LYS:HA	7:AH:91:LEU:HD12	1.85	0.59
10:AK:22:ILE:CD1	10:AK:95:THR:HG21	2.26	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:46:LEU:H	18:AS:61:VAL:HG23	1.68	0.59
20:AU:24:LYS:HG2	20:AU:25:ALA:H	1.67	0.59
21:AA:1129:C:H2'	21:AA:1139:G:N7	2.17	0.59
22:BA:1011:G:H4'	22:BA:1012:U:OP1	2.02	0.59
22:BA:1936:A:C2	22:BA:1943:U:H5	2.21	0.59
27:BF:153:ILE:HD12	27:BF:153:ILE:C	2.28	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.16	0.59
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.03	0.59
5:CF:11:HIS:NE2	5:CF:54:LEU:HD21	2.18	0.59
16:CQ:70:LYS:HD3	53:CA:254:G:H5"	1.85	0.59
53:CA:1176:A:H2'	53:CA:1177:G:O4'	2.02	0.59
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.34	0.59
22:DA:1130:U:O2'	22:DA:1131:G:C8	2.55	0.59
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.03	0.59
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.51	0.59
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	2.02	0.59
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.85	0.59
40:DS:66:ILE:HD13	40:DS:66:ILE:H	1.67	0.59
12:AM:5:GLY:HA3	12:AM:65:GLU:HG3	1.84	0.59
21:AA:1167:A:C8	21:AA:1169:A:C6	2.91	0.59
21:AA:1233:G:H2'	21:AA:1234:C:C6	2.38	0.59
21:AA:1499:A:O2'	21:AA:1500:A:H5'	2.03	0.59
22:BA:946:C:O2'	22:BA:947:A:H5'	2.03	0.59
22:BA:2051:A:H8	22:BA:2051:A:OP2	1.86	0.59
22:BA:2134:A:C6	22:BA:2135:A:C6	2.91	0.59
22:BA:2556:C:H2'	22:BA:2557:G:H5'	1.84	0.59
24:BC:89:ASN:O	24:BC:90:ILE:HD13	2.03	0.59
27:BF:129:MET:SD	27:BF:153:ILE:HD11	2.42	0.59
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.38	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.33	0.59
7:CH:33:VAL:C	7:CH:35:ILE:H	2.10	0.59
11:CL:50:LYS:HD2	11:CL:50:LYS:N	2.18	0.59
18:CS:54:ARG:NH1	53:CA:958:A:H62	2.01	0.59
53:CA:1160:G:O2'	53:CA:1161:C:C5'	2.51	0.59
22:DA:1352:U:C5	22:DA:1377:G:C6	2.91	0.59
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.33	0.59
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.21	0.59
27:DF:103:ILE:HA	27:DF:107:VAL:HG21	1.84	0.59
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:81:ASP:O	33:DL:83:ALA:N	2.35	0.59
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.85	0.59
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.67	0.59
41:DT:29:THR:CB	41:DT:86:THR:H	2.16	0.59
46:DY:4:LYS:HD3	46:DY:4:LYS:H	1.67	0.59
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.03	0.59
3:AD:80:ARG:HH21	3:AD:81:LEU:HD21	1.67	0.58
4:AE:158:LYS:HE2	7:AH:63:LYS:HZ1	1.67	0.58
14:AO:84:LEU:HB3	14:AO:86:LEU:HD22	1.84	0.58
21:AA:1049:U:H1'	21:AA:1201:A:N7	2.17	0.58
21:AA:1466:C:H2'	21:AA:1467:C:O4'	2.02	0.58
22:BA:725:G:C6	22:BA:726:G:N1	2.71	0.58
22:BA:811:U:O2'	22:BA:1250:G:H2'	2.03	0.58
22:BA:900:A:H2'	22:BA:901:C:O4'	2.03	0.58
22:BA:1287:A:OP2	35:BN:103:ARG:HG3	2.03	0.58
22:BA:1871:A:H8	22:BA:1872:A:C5	2.20	0.58
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.38	0.58
26:BE:18:THR:HG22	26:BE:106:LYS:HE3	1.84	0.58
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.14	0.58
31:BJ:4:PHE:N	31:BJ:44:TYR:OH	2.36	0.58
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.68	0.58
36:BO:33:ARG:HG2	36:BO:34:HIS:CE1	2.38	0.58
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.33	0.58
1:CB:164:ASP:CG	1:CB:203:ASP:HB2	2.27	0.58
3:CD:2:ARG:NH2	3:CD:114:ARG:HH11	2.01	0.58
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.04	0.58
10:CK:74:LYS:HD2	10:CK:104:PHE:CE1	2.36	0.58
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.83	0.58
15:CP:1:MET:HE2	15:CP:2:VAL:O	2.03	0.58
15:CP:70:ARG:O	15:CP:74:LEU:HG	2.03	0.58
53:CA:251:G:H4'	53:CA:252:U:H5'	1.85	0.58
53:CA:357:G:H8	53:CA:357:G:OP2	1.85	0.58
53:CA:372:C:O2'	53:CA:373:A:P	2.61	0.58
22:DA:160:A:N6	22:DA:167:A:H1'	2.18	0.58
22:DA:222:A:N6	22:DA:232:G:H1'	2.18	0.58
22:DA:396:G:OP2	45:DX:9:LYS:NZ	2.33	0.58
22:DA:972:A:H3'	22:DA:973:A:H5"	1.85	0.58
22:DA:1476:U:O2'	22:DA:1477:A:O5'	2.22	0.58
54:DB:12:C:H5"	54:DB:15:A:H62	1.67	0.58
25:DD:38:LYS:HB3	25:DD:38:LYS:NZ	2.17	0.58
27:DF:48:LEU:HD23	27:DF:48:LEU:H	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:108:GLN:H	1:AB:108:GLN:NE2	1.83	0.58
3:AD:146:GLU:HB3	3:AD:147:LYS:NZ	2.18	0.58
21:AA:34:C:H2'	21:AA:35:G:H8	1.68	0.58
21:AA:991:U:H4'	21:AA:992:U:OP1	2.02	0.58
22:BA:914:G:C8	22:BA:914:G:H5"	2.39	0.58
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.33	0.58
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.42	0.58
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	1.84	0.58
28:BG:30:GLY:O	28:BG:32:LEU:N	2.36	0.58
28:BG:54:ARG:HG3	28:BG:57:TYR:HD1	1.68	0.58
29:BH:67:ALA:C	29:BH:69:ALA:H	2.10	0.58
47:BZ:37:ARG:HD2	47:BZ:37:ARG:N	2.17	0.58
53:CA:204:G:H2'	53:CA:205:A:O4'	2.02	0.58
22:DA:357:C:H2'	22:DA:358:U:H6	1.68	0.58
22:DA:1068:G:C8	22:DA:1069:A:N7	2.72	0.58
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.38	0.58
22:DA:2798:U:H5'	22:DA:2800:A:N7	2.18	0.58
54:DB:50:A:OP1	36:DO:68:LYS:HB2	2.02	0.58
24:DC:95:TYR:C	24:DC:97:ASP:H	2.08	0.58
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.18	0.58
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.31	0.58
27:DF:91:ARG:HB3	27:DF:91:ARG:NH2	2.17	0.58
27:DF:129:MET:HG3	27:DF:153:ILE:HD12	1.84	0.58
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.16	0.58
2:AC:142:ARG:HB3	2:AC:143:LEU:HD13	1.86	0.58
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.58
10:AK:39:ASN:O	10:AK:40:ALA:HB3	2.04	0.58
10:AK:43:TRP:HZ3	10:AK:45:THR:HG23	1.68	0.58
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.85	0.58
21:AA:580:C:H2'	21:AA:581:G:O4'	2.04	0.58
21:AA:613:C:H2'	21:AA:614:C:C6	2.38	0.58
21:AA:734:G:H2'	21:AA:735:C:H6	1.68	0.58
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.26	0.58
22:BA:1254:A:H5"	22:BA:1255:U:H5"	1.85	0.58
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.04	0.58
22:BA:1713:A:H4'	22:BA:1714:U:OP1	2.02	0.58
22:BA:2581:G:H4'	22:BA:2582:G:C8	2.37	0.58
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.84	0.58
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.85	0.58
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.37	0.58
32:BK:59:LYS:HE2	32:BK:89:ASN:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:109:PRO:O	34:BM:110:GLU:C	2.46	0.58
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.03	0.58
41:BT:34:VAL:O	41:BT:34:VAL:HG23	2.02	0.58
45:BX:34:SER:HA	45:BX:48:LEU:O	2.02	0.58
47:BZ:26:LEU:O	47:BZ:37:ARG:NH1	2.36	0.58
49:B1:42:VAL:C	49:B1:43:ARG:HE	2.10	0.58
9:CJ:45:ARG:NH2	53:CA:1279:G:H2'	2.18	0.58
53:CA:501:C:H2'	53:CA:502:A:C8	2.38	0.58
53:CA:1287:A:O2'	53:CA:1288:A:O4'	2.22	0.58
22:DA:84:A:C5	22:DA:103:A:N6	2.71	0.58
22:DA:200:U:O4	22:DA:248:G:C2	2.56	0.58
22:DA:576:U:H2'	22:DA:577:G:C8	2.39	0.58
22:DA:628:G:C6	22:DA:636:G:C2	2.91	0.58
22:DA:1142:A:C8	22:DA:1144:A:N7	2.71	0.58
22:DA:1373:A:H4'	22:DA:2212:A:H1'	1.85	0.58
22:DA:1682:G:H2'	22:DA:1683:U:C5	2.39	0.58
54:DB:17:C:O2'	54:DB:18:G:H5'	2.03	0.58
28:DG:94:ARG:CZ	28:DG:105:SER:HB2	2.33	0.58
37:DP:44:GLY:HA3	37:DP:60:VAL:HG12	1.84	0.58
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.67	0.58
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.09	0.58
4:AE:59:ILE:O	4:AE:62:ALA:HB3	2.04	0.58
4:AE:100:GLU:HB2	4:AE:103:GLY:CA	2.33	0.58
10:AK:22:ILE:HG22	10:AK:31:VAL:HG13	1.84	0.58
12:AM:88:LEU:HD23	12:AM:91:ARG:HH21	1.68	0.58
12:AM:113:LYS:H	12:AM:114:PRO:CD	2.16	0.58
21:AA:978:A:OP2	21:AA:1362:A:N6	2.34	0.58
22:BA:506:G:H4'	22:BA:507:A:H5'	1.84	0.58
22:BA:705:A:N6	22:BA:726:G:H1'	2.19	0.58
22:BA:959:A:H62	34:BM:82:MET:CE	2.16	0.58
22:BA:960:A:H5"	22:BA:961:C:OP2	2.03	0.58
22:BA:962:G:OP1	57:BA:3360:HOH:O	2.17	0.58
23:BB:57:A:O2'	23:BB:58:A:H5'	2.03	0.58
27:BF:110:ILE:O	27:BF:111:ARG:C	2.46	0.58
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.85	0.58
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.58
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.22	0.58
38:BQ:91:ARG:NE	39:BR:11:GLN:HB2	2.17	0.58
41:BT:27:SER:O	41:BT:28:ASN:OD1	2.21	0.58
44:BW:8:SER:O	44:BW:9:THR:HG22	2.04	0.58
44:BW:35:ILE:O	44:BW:37:VAL:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:123:MET:HE2	3:CD:126:GLY:O	2.04	0.58
6:CG:112:ASP:HB3	6:CG:117:LEU:HB3	1.85	0.58
19:CT:73:ARG:HG2	19:CT:73:ARG:NH1	2.06	0.58
53:CA:238:A:H2'	53:CA:239:U:H5"	1.84	0.58
53:CA:373:A:H5'	53:CA:373:A:H8	1.68	0.58
53:CA:430:A:O2'	53:CA:431:A:H5'	2.03	0.58
22:DA:311:A:O2'	22:DA:332:A:H5'	2.03	0.58
22:DA:545:U:C2	22:DA:547:A:H5"	2.38	0.58
22:DA:739:A:O2'	22:DA:740:C:C5	2.56	0.58
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.03	0.58
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.53	0.58
22:DA:2542:A:H4'	22:DA:2543:G:C5'	2.33	0.58
25:DD:110:THR:OG1	25:DD:171:THR:HG22	2.03	0.58
26:DE:117:ARG:NH2	33:DL:2:ARG:HB3	2.18	0.58
27:DF:48:LEU:HG	27:DF:49:LEU:HD22	1.86	0.58
4:AE:81:GLN:HG2	4:AE:149:PRO:CG	2.32	0.58
21:AA:267:C:O2'	21:AA:268:U:H5'	2.02	0.58
21:AA:579:A:H2'	21:AA:580:C:C6	2.39	0.58
21:AA:1352:C:H2'	21:AA:1353:G:C8	2.38	0.58
22:BA:38:A:N3	26:BE:43:THR:HB	2.19	0.58
22:BA:182:A:H2'	22:BA:183:C:C6	2.38	0.58
22:BA:283:G:C6	22:BA:284:U:N3	2.71	0.58
22:BA:983:A:C6	22:BA:984:A:C2	2.92	0.58
22:BA:1079:C:C4	22:BA:1088:A:H2	2.21	0.58
22:BA:1245:G:OP1	33:BL:13:LYS:HE3	2.02	0.58
22:BA:1475:G:O2'	22:BA:1476:U:P	2.62	0.58
22:BA:1476:U:OP2	22:BA:1476:U:C6	2.57	0.58
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.66	0.58
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.38	0.58
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	2.03	0.58
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.39	0.58
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.85	0.58
27:BF:46:LYS:HD2	27:BF:46:LYS:H	1.68	0.58
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.03	0.58
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.81	0.58
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.28	0.58
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.60	0.58
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.33	0.58
39:BR:5:PHE:HA	39:BR:39:LEU:HD21	1.84	0.58
4:CE:155:LYS:HB3	7:CH:70:VAL:HG23	1.85	0.58
9:CJ:25:ILE:HG22	9:CJ:25:ILE:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:94:LEU:HD21	53:CA:1226:C:H5"	1.86	0.58
53:CA:82:G:H2'	53:CA:83:C:H4'	1.86	0.58
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.68	0.58
22:DA:607:U:H5	22:DA:619:G:C4	2.21	0.58
22:DA:666:A:H5"	33:DL:48:ARG:HG2	1.84	0.58
22:DA:800:A:H4'	22:DA:801:G:O5'	2.02	0.58
22:DA:1378:A:H2'	22:DA:1380:G:N7	2.18	0.58
22:DA:1721:G:H1'	22:DA:1739:A:N6	2.18	0.58
22:DA:1820:U:OP1	24:DC:176:ARG:HB3	2.03	0.58
22:DA:1827:U:C4'	22:DA:1970:A:O2'	2.51	0.58
22:DA:2283:C:C5	22:DA:2389:G:C4	2.91	0.58
22:DA:2418:A:OP1	51:D3:44:ARG:HD3	2.04	0.58
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.03	0.58
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.85	0.58
27:DF:43:ILE:HG12	27:DF:77:LYS:HD3	1.85	0.58
29:DH:78:VAL:HG22	29:DH:100:ALA:HA	1.86	0.58
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	2.01	0.58
32:DK:77:ILE:HG23	37:DP:71:ARG:HD2	1.86	0.58
32:DK:111:LYS:HG2	32:DK:112:PHE:CD1	2.37	0.58
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.02	0.58
1:AB:67:LEU:HB3	1:AB:160:LEU:CD1	2.34	0.58
19:AT:43:LYS:NZ	19:AT:86:ALA:HA	2.19	0.58
21:AA:148:G:N3	21:AA:1446:A:H2	2.01	0.58
21:AA:702:A:C4	22:BA:1847:A:H2	2.22	0.58
21:AA:821:G:H4'	57:AA:1740:HOH:O	2.04	0.58
21:AA:1239:A:H4'	21:AA:1240:U:H5'	1.84	0.58
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.04	0.58
22:BA:2474:U:H5"	22:BA:2475:C:OP2	2.03	0.58
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.03	0.58
26:BE:44:ARG:HG3	26:BE:44:ARG:HH21	1.68	0.58
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.66	0.58
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.67	0.58
37:BP:21:PRO:HD3	37:BP:49:ILE:HD12	1.85	0.58
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.02	0.58
52:B4:33:HIS:O	52:B4:35:GLN:HG3	2.02	0.58
2:CC:176:THR:HG22	2:CC:178:ARG:HG3	1.85	0.58
6:CG:30:MET:HE1	6:CG:33:GLY:HA2	1.85	0.58
9:CJ:45:ARG:HH21	53:CA:1279:G:H2'	1.68	0.58
13:CN:52:ARG:HG3	53:CA:1219:A:OP1	2.03	0.58
16:CQ:47:ASP:HB3	16:CQ:74:LEU:HB3	1.85	0.58
22:DA:41:C:H2'	22:DA:42:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:176:A:H3'	22:DA:177:G:N2	2.19	0.58
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.87	0.58
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.19	0.58
22:DA:1521:G:C6	22:DA:1522:A:N6	2.72	0.58
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.38	0.58
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.39	0.58
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.03	0.58
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.03	0.58
3:AD:13:ARG:HG2	3:AD:55:ARG:HH21	1.68	0.58
4:AE:123:LEU:HD22	21:AA:7:A:C8	2.38	0.58
6:AG:94:ARG:O	6:AG:95:ARG:C	2.47	0.58
9:AJ:59:LYS:HG2	21:AA:972:C:H4'	1.86	0.58
21:AA:198:G:H22	21:AA:220:G:H1'	1.68	0.58
21:AA:199:A:O2'	21:AA:200:G:O4'	2.18	0.58
21:AA:274:A:H4'	21:AA:275:G:O5'	2.03	0.58
21:AA:486:U:H2'	21:AA:487:A:H8	1.69	0.58
21:AA:715:A:H2'	21:AA:716:A:C8	2.39	0.58
21:AA:975:A:C4'	21:AA:976:G:H5'	2.18	0.58
21:AA:1097:C:H2'	21:AA:1098:C:C6	2.38	0.58
21:AA:1261:A:H61	21:AA:1274:A:C2'	2.17	0.58
22:BA:556:A:H5"	22:BA:557:C:OP2	2.04	0.58
22:BA:1139:G:O2'	22:BA:1140:C:H5'	2.03	0.58
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.02	0.58
22:BA:1716:U:O2'	22:BA:1717:A:H5'	2.03	0.58
22:BA:2438:U:O2'	22:BA:2439:A:H5"	2.04	0.58
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.33	0.58
23:BB:54:G:N2	27:BF:25:MET:HE3	2.19	0.58
23:BB:66:A:H4'	23:BB:67:G:OP1	2.04	0.58
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.04	0.58
41:BT:68:LYS:HE2	41:BT:77:ARG:NE	2.18	0.58
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.11	0.58
4:CE:14:LEU:HD13	4:CE:59:ILE:HD12	1.85	0.58
6:CG:124:SER:O	6:CG:128:GLU:HG2	2.03	0.58
10:CK:70:ALA:HB1	10:CK:104:PHE:CZ	2.37	0.58
53:CA:1013:G:N2	53:CA:1015:G:H3'	2.18	0.58
53:CA:1170:A:H2'	53:CA:1171:A:O4'	2.04	0.58
22:DA:738:G:H2'	22:DA:739:A:C8	2.38	0.58
22:DA:1281:G:H2'	22:DA:1282:U:O4'	2.04	0.58
22:DA:2093:G:C6	22:DA:2225:A:C8	2.92	0.58
24:DC:44:ASN:C	24:DC:46:GLY:H	2.11	0.58
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.84	0.58
27:DF:39:VAL:HG22	27:DF:49:LEU:HG	1.85	0.58
31:DJ:35:ARG:HH12	31:DJ:140:LEU:HD21	1.69	0.58
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.16	0.58
44:DW:31:LEU:C	44:DW:33:GLY:H	2.10	0.58
3:AD:173:ASP:O	3:AD:174:ALA:HB2	2.03	0.58
21:AA:214:C:O2'	21:AA:215:C:C6	2.54	0.58
21:AA:328:C:O2	21:AA:328:C:H2'	2.02	0.58
21:AA:373:A:H2'	21:AA:374:A:H8	1.69	0.58
21:AA:830:G:H2'	21:AA:831:A:C8	2.39	0.58
22:BA:1857:G:O2'	22:BA:1858:A:P	2.60	0.58
25:BD:118:PHE:O	25:BD:120:GLY:N	2.33	0.58
25:BD:140:HIS:N	25:BD:140:HIS:CD2	2.71	0.58
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.04	0.58
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.33	0.58
1:CB:60:ALA:C	1:CB:62:ARG:H	2.11	0.58
3:CD:32:LYS:HE3	53:CA:413:G:C6	2.38	0.58
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.04	0.58
12:CM:86:ARG:NH1	12:CM:90:HIS:HD2	2.01	0.58
18:CS:52:ASN:HD22	18:CS:52:ASN:C	2.11	0.58
53:CA:764:C:C4	53:CA:812:G:O6	2.56	0.58
53:CA:975:A:O2'	53:CA:1358:U:H1'	2.03	0.58
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.68	0.58
53:CA:1215:G:H2'	53:CA:1216:A:H8	1.69	0.58
53:CA:1293:C:H2'	53:CA:1294:G:H8	1.66	0.58
22:DA:459:U:O2'	22:DA:460:A:H5'	2.04	0.58
22:DA:752:A:O2'	22:DA:753:A:OP2	2.21	0.58
22:DA:785:G:O2'	22:DA:1779:U:H5"	2.03	0.58
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.04	0.58
22:DA:2631:G:C2'	22:DA:2632:A:H5"	2.32	0.58
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.16	0.58
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.19	0.58
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.84	0.58
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	2.02	0.58
31:DJ:116:ARG:HG3	31:DJ:120:ARG:HH22	1.68	0.58
1:AB:163:ILE:CG2	1:AB:164:ASP:H	2.11	0.58
1:AB:202:ASN:HD21	1:AB:205:ALA:HB2	1.68	0.58
2:AC:156:LEU:H	2:AC:156:LEU:CD1	2.12	0.58
3:AD:57:LYS:HB2	3:AD:199:ILE:HG13	1.85	0.58
3:AD:60:VAL:HA	3:AD:63:ILE:HG22	1.85	0.58
4:AE:136:VAL:HG22	4:AE:136:VAL:O	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:71:THR:O	6:AG:90:VAL:HG12	2.04	0.58
14:AO:23:SER:HA	21:AA:751:U:H4'	1.85	0.58
21:AA:372:C:H4'	21:AA:373:A:OP1	2.03	0.58
21:AA:486:U:C6	21:AA:486:U:H5"	2.39	0.58
22:BA:533:G:H2'	22:BA:534:U:C6	2.39	0.58
22:BA:995:C:O2'	22:BA:996:A:P	2.62	0.58
22:BA:1059:G:C6	22:BA:1080:A:C6	2.92	0.58
22:BA:2770:G:H5"	22:BA:2771:C:OP2	2.04	0.58
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	2.04	0.58
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.39	0.58
27:BF:134:GLN:HE21	27:BF:134:GLN:N	2.01	0.58
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.51	0.58
28:BG:9:VAL:O	28:BG:11:PRO:HD3	2.03	0.58
28:BG:61:TRP:O	28:BG:65:GLY:N	2.34	0.58
32:BK:5:GLN:O	32:BK:6:THR:HB	2.03	0.58
43:BV:2:PHE:CD1	43:BV:50:MET:HE2	2.39	0.58
46:BY:7:ARG:H	46:BY:60:LYS:NZ	2.02	0.58
3:CD:29:THR:C	3:CD:30:LYS:HZ2	2.12	0.58
53:CA:615:G:H2'	53:CA:616:G:H8	1.69	0.58
53:CA:978:A:O2'	53:CA:979:C:H5'	2.03	0.58
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.68	0.58
53:CA:1242:G:C2	53:CA:1243:C:H1'	2.38	0.58
22:DA:45:G:C5'	22:DA:46:G:H5'	2.34	0.58
22:DA:150:U:H2'	22:DA:151:C:C6	2.38	0.58
22:DA:223:A:N6	22:DA:422:A:C6	2.72	0.58
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.56	0.58
22:DA:740:C:C5	22:DA:1981:A:C2	2.92	0.58
22:DA:1338:G:H4'	41:DT:18:GLU:CD	2.28	0.58
22:DA:1700:A:H2'	22:DA:1701:A:O4'	2.04	0.58
22:DA:2259:U:O4'	22:DA:2427:C:H2'	2.03	0.58
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.38	0.58
22:DA:2582:G:O2'	22:DA:2583:G:H5'	2.03	0.58
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.28	0.58
39:DR:33:VAL:HG23	39:DR:61:ALA:HB3	1.86	0.58
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.86	0.58
43:DV:55:GLU:O	43:DV:57:TYR:N	2.37	0.58
4:AE:76:ASN:HB3	4:AE:81:GLN:HG3	1.84	0.58
11:AL:88:ASP:CB	21:AA:523:A:H61	2.16	0.58
21:AA:1281:C:O2'	21:AA:1282:C:H5'	2.03	0.58
22:BA:509:C:H5"	22:BA:509:C:C6	2.36	0.58
22:BA:633:A:C8	22:BA:633:A:C3'	2.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1373:A:H8	22:BA:1373:A:O5'	1.87	0.58
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.39	0.58
22:BA:2886:A:H2'	22:BA:2887:A:O4'	2.03	0.58
40:BS:4:ILE:CG2	40:BS:106:VAL:HG22	2.34	0.58
41:BT:39:THR:HG22	41:BT:39:THR:O	2.02	0.58
44:BW:16:GLU:OE2	44:BW:16:GLU:HA	2.04	0.58
51:B3:15:LYS:HE2	51:B3:19:GLY:HA2	1.85	0.58
6:CG:10:LYS:HE3	6:CG:10:LYS:H	1.69	0.58
20:CU:15:LEU:O	20:CU:15:LEU:HD12	2.03	0.58
53:CA:1213:A:O2'	53:CA:1214:C:C5'	2.42	0.58
22:DA:37:C:H2'	22:DA:38:A:O4'	2.03	0.58
22:DA:699:A:H2'	22:DA:700:G:O4'	2.04	0.58
22:DA:794:A:H2'	22:DA:795:C:H6	1.67	0.58
22:DA:832:U:P	33:DL:38:GLN:H	2.27	0.58
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.04	0.58
22:DA:2021:C:O2	22:DA:2021:C:H2'	2.04	0.58
22:DA:2320:U:H1'	22:DA:2333:A:H62	1.69	0.58
24:DC:8:THR:O	24:DC:9:SER:HB3	2.03	0.58
24:DC:9:SER:O	24:DC:12:ARG:HB2	2.04	0.58
24:DC:131:MET:HE2	24:DC:187:CYS:O	2.03	0.58
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.04	0.58
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.86	0.58
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.04	0.58
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.68	0.58
5:AF:47:LEU:HD13	5:AF:51:ILE:HG22	1.85	0.57
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.04	0.57
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.85	0.57
15:AP:51:ARG:O	15:AP:52:LEU:HD12	2.04	0.57
19:AT:14:GLU:HA	19:AT:17:ARG:HB2	1.86	0.57
21:AA:633:G:H2'	21:AA:634:C:H6	1.69	0.57
21:AA:1305:G:H22	21:AA:1331:G:H2'	1.69	0.57
22:BA:460:A:OP1	50:B2:41:ARG:NH1	2.35	0.57
22:BA:627:A:C6	22:BA:637:A:C8	2.92	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.19	0.57
22:BA:1847:A:N3	22:BA:1847:A:H2'	2.19	0.57
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.68	0.57
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.66	0.57
26:BE:164:LEU:HB3	26:BE:167:VAL:HG12	1.85	0.57
32:BK:91:SER:O	32:BK:92:GLU:C	2.46	0.57
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CG	2.92	0.57
40:BS:74:ILE:HD13	40:BS:105:VAL:HG22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:68:GLN:HG2	5:CF:69:GLU:H	1.68	0.57
8:CI:90:ASP:HB3	8:CI:93:LEU:HD23	1.86	0.57
13:CN:76:PHE:CE2	13:CN:92:ILE:HG21	2.37	0.57
17:CR:19:GLU:CD	17:CR:20:ILE:H	2.12	0.57
18:CS:52:ASN:ND2	18:CS:54:ARG:HG2	2.19	0.57
20:CU:35:GLU:O	20:CU:36:PHE:CD2	2.57	0.57
53:CA:140:U:O2	53:CA:183:C:N4	2.37	0.57
53:CA:328:C:H2'	53:CA:328:C:O2	2.03	0.57
22:DA:511:U:H5"	22:DA:1235:G:H4'	1.85	0.57
22:DA:1273:U:H4'	22:DA:1275:A:OP1	2.04	0.57
22:DA:1327:A:H2'	22:DA:1328:A:H8	1.68	0.57
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.86	0.57
22:DA:2076:U:H5"	22:DA:2238:G:H22	1.69	0.57
22:DA:2077:A:C5	22:DA:2078:C:C5	2.92	0.57
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.39	0.57
22:DA:2461:A:H1'	22:DA:2492:U:H3	1.68	0.57
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.04	0.57
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.52	0.57
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.68	0.57
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	1.86	0.57
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.86	0.57
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.19	0.57
3:AD:25:ARG:NH1	3:AD:30:LYS:HE3	2.19	0.57
3:AD:98:ASP:HB3	3:AD:114:ARG:HG2	1.86	0.57
4:AE:152:VAL:CB	4:AE:155:LYS:NZ	2.67	0.57
12:AM:28:ARG:O	12:AM:32:ILE:HG12	2.04	0.57
21:AA:1365:G:H2'	21:AA:1366:C:C6	2.39	0.57
21:AA:1398:A:H5"	21:AA:1398:A:C8	2.30	0.57
22:BA:733:G:C8	22:BA:761:A:N6	2.72	0.57
22:BA:1082:U:H2'	22:BA:1083:U:O2	2.04	0.57
22:BA:1340:U:C5	22:BA:1603:A:C8	2.93	0.57
22:BA:1461:C:O2'	22:BA:1462:C:H5'	2.04	0.57
22:BA:2320:U:H4'	22:BA:2321:U:H5"	1.86	0.57
22:BA:2383:G:O2'	22:BA:2384:U:H5'	2.04	0.57
24:BC:16:VAL:N	24:BC:203:VAL:HG12	2.18	0.57
28:BG:162:ARG:NH1	28:BG:168:VAL:HG21	2.19	0.57
29:BH:12:LEU:HB2	29:BH:19:VAL:HG11	1.86	0.57
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.85	0.57
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.34	0.57
38:BQ:114:ALA:C	38:BQ:116:LEU:H	2.13	0.57
40:BS:13:SER:O	40:BS:14:ALA:CB	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:11:LEU:HD11	41:BT:47:VAL:HG22	1.85	0.57
2:CC:14:VAL:HG12	2:CC:14:VAL:O	2.04	0.57
4:CE:14:LEU:HD22	4:CE:59:ILE:CD1	2.34	0.57
7:CH:78:SER:HB2	7:CH:124:ILE:O	2.04	0.57
8:CI:19:PHE:O	8:CI:63:TYR:HB3	2.04	0.57
8:CI:48:ARG:C	8:CI:50:PRO:HD2	2.29	0.57
53:CA:496:A:N3	53:CA:496:A:C2'	2.66	0.57
53:CA:960:U:O2'	53:CA:1223:C:H5"	2.04	0.57
22:DA:467:G:H4'	22:DA:796:C:O2'	2.04	0.57
22:DA:607:U:H5	22:DA:619:G:C5	2.22	0.57
22:DA:867:C:HO2'	22:DA:868:U:C5'	2.16	0.57
22:DA:1087:G:N2	22:DA:1103:A:H1'	2.20	0.57
22:DA:1328:A:H2'	22:DA:1330:C:C4	2.39	0.57
22:DA:1552:A:H2'	22:DA:1552:A:N3	2.18	0.57
24:DC:51:ARG:O	24:DC:53:ILE:HG22	2.04	0.57
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.34	0.57
25:DD:178:VAL:HG12	25:DD:179:ARG:HG3	1.85	0.57
28:DG:43:LYS:O	28:DG:49:LEU:HD12	2.04	0.57
30:DI:118:GLY:O	30:DI:123:ALA:HB3	2.04	0.57
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	2.04	0.57
32:DK:104:THR:C	32:DK:106:GLU:H	2.10	0.57
34:DM:38:ARG:O	34:DM:126:ILE:HG21	2.04	0.57
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.85	0.57
38:DQ:69:ARG:HB2	38:DQ:69:ARG:HH21	1.68	0.57
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.85	0.57
49:D1:5:ARG:NH2	49:D1:23:THR:HB	2.19	0.57
9:AJ:57:VAL:CG2	9:AJ:58:ASN:H	2.13	0.57
10:AK:126:ARG:C	20:AU:33:ARG:HH12	2.12	0.57
11:AL:85:ARG:NH2	11:AL:87:LYS:HD2	2.19	0.57
17:AR:48:ALA:HB2	21:AA:834:U:OP1	2.04	0.57
18:AS:54:ARG:HH21	18:AS:55:GLN:HB3	1.69	0.57
21:AA:920:U:H2'	21:AA:921:U:C6	2.39	0.57
21:AA:1015:G:H1'	21:AA:1218:C:O2'	2.04	0.57
22:BA:1539:U:C2	22:BA:1540:G:C8	2.92	0.57
22:BA:2425:A:H5'	22:BA:2427:C:O4'	2.05	0.57
25:BD:190:LYS:O	25:BD:191:GLY:O	2.21	0.57
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.52	0.57
32:BK:39:ILE:HG22	32:BK:60:ALA:O	2.03	0.57
33:BL:18:ARG:O	33:BL:19:LEU:HB3	2.05	0.57
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.03	0.57
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:37:VAL:HG22	44:BW:55:ASP:O	2.04	0.57
44:BW:40:ARG:HD3	44:BW:45:HIS:HE1	1.68	0.57
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.29	0.57
5:CF:3:HIS:HD2	5:CF:65:GLU:HG2	1.69	0.57
15:CP:5:ARG:HA	15:CP:71:VAL:HG11	1.85	0.57
17:CR:21:ASP:HB3	17:CR:23:LYS:HG2	1.84	0.57
53:CA:327:A:O2'	53:CA:329:A:H5"	2.04	0.57
53:CA:457:G:N3	53:CA:457:G:H2'	2.18	0.57
53:CA:623:C:H6	53:CA:623:C:O5'	1.87	0.57
53:CA:995:C:N4	53:CA:1046:A:H1'	2.19	0.57
53:CA:1134:G:C5	53:CA:1135:U:H1'	2.39	0.57
53:CA:1202:U:O2'	53:CA:1203:C:H5'	2.04	0.57
22:DA:176:A:H3'	22:DA:177:G:H21	1.69	0.57
22:DA:279:A:N6	22:DA:361:G:O2'	2.38	0.57
22:DA:704:G:C2'	22:DA:726:G:H22	2.15	0.57
22:DA:832:U:OP1	33:DL:39:LYS:N	2.35	0.57
22:DA:836:G:C6	22:DA:837:C:C4	2.92	0.57
22:DA:849:A:H2'	22:DA:850:U:H6	1.69	0.57
22:DA:1078:U:H4'	22:DA:1079:C:O5'	2.03	0.57
22:DA:1288:G:C8	22:DA:1327:A:N6	2.72	0.57
22:DA:1416:G:C4	22:DA:1417:C:C5	2.93	0.57
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.05	0.57
22:DA:1846:G:H5"	22:DA:1847:A:OP2	2.04	0.57
54:DB:44:G:H5"	27:DF:91:ARG:CZ	2.34	0.57
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.04	0.57
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.03	0.57
26:DE:188:MET:HE3	26:DE:193:VAL:HG22	1.87	0.57
27:DF:66:ILE:HG13	27:DF:83:PRO:HB3	1.87	0.57
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.19	0.57
32:DK:97:THR:O	32:DK:98:ARG:HB2	2.02	0.57
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.86	0.57
36:DO:24:THR:HG22	36:DO:41:ALA:HA	1.86	0.57
38:DQ:15:LYS:HD2	38:DQ:19:GLN:HE21	1.69	0.57
44:DW:13:ARG:HG3	44:DW:14:ASP:N	2.15	0.57
1:AB:86:CYS:SG	1:AB:221:ARG:HB2	2.44	0.57
1:AB:161:PHE:HA	1:AB:183:PHE:O	2.04	0.57
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.69	0.57
6:AG:49:LEU:HD12	6:AG:60:ALA:HB1	1.87	0.57
9:AJ:19:ASP:HA	9:AJ:22:THR:HB	1.87	0.57
21:AA:243:A:C2	21:AA:245:U:C2	2.92	0.57
21:AA:767:A:H2'	21:AA:768:A:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.38	0.57
21:AA:1306:A:N6	21:AA:1331:G:H1'	2.19	0.57
22:BA:655:A:H4'	22:BA:656:G:OP1	2.03	0.57
22:BA:1866:A:H2'	22:BA:1867:G:O4'	2.04	0.57
23:BB:89:U:OP2	23:BB:89:U:H4'	2.05	0.57
25:BD:118:PHE:HD2	25:BD:119:ALA:N	2.01	0.57
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.72	0.57
33:BL:59:ARG:HA	51:B3:12:ARG:NH2	2.20	0.57
34:BM:76:LYS:O	34:BM:77:PRO:O	2.22	0.57
44:BW:54:ARG:HB2	44:BW:54:ARG:HH11	1.68	0.57
6:CG:9:ARG:HD3	6:CG:24:LYS:NZ	2.20	0.57
13:CN:33:VAL:HG22	13:CN:40:ARG:HH21	1.68	0.57
53:CA:130:A:O2'	53:CA:131:A:O5'	2.21	0.57
53:CA:239:U:H4'	53:CA:239:U:OP1	2.05	0.57
53:CA:900:A:H2'	53:CA:901:A:C8	2.39	0.57
53:CA:994:A:HO2'	53:CA:995:C:H6	1.49	0.57
22:DA:333:G:O2'	22:DA:334:C:H5'	2.03	0.57
22:DA:1071:G:O2'	22:DA:1072:C:H5'	2.05	0.57
22:DA:1325:U:H4'	22:DA:1326:U:OP1	2.04	0.57
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.39	0.57
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.40	0.57
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.05	0.57
29:DH:27:ARG:HB2	29:DH:27:ARG:HH21	1.68	0.57
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.86	0.57
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.05	0.57
2:AC:38:VAL:O	2:AC:42:LEU:HB2	2.05	0.57
5:AF:38:ARG:HH11	5:AF:38:ARG:HG2	1.70	0.57
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	1.85	0.57
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.45	0.57
12:AM:106:ARG:HA	12:AM:106:ARG:HH11	1.69	0.57
21:AA:338:A:C2	21:AA:351:G:O6	2.56	0.57
21:AA:536:C:H2'	21:AA:537:G:H8	1.69	0.57
22:BA:136:G:C6	22:BA:142:A:N6	2.72	0.57
22:BA:312:G:H2'	22:BA:313:G:H8	1.70	0.57
22:BA:670:A:H4'	22:BA:671:C:O5'	2.05	0.57
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.69	0.57
22:BA:1132:U:H3'	22:BA:1133:A:H5"	1.85	0.57
22:BA:1454:C:H41	35:BN:73:ASN:HD21	1.52	0.57
25:BD:91:THR:C	25:BD:93:GLY:N	2.61	0.57
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.57
32:BK:18:ARG:HG3	32:BK:18:ARG:NH1	2.11	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:101:ILE:HG22	33:BL:102:GLY:H	1.69	0.57
37:BP:3:ILE:C	37:BP:3:ILE:HD13	2.30	0.57
38:BQ:91:ARG:HB3	38:BQ:93:ILE:HG22	1.86	0.57
2:CC:148:ILE:HD13	2:CC:201:ILE:HG12	1.87	0.57
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.69	0.57
7:CH:3:GLN:HA	53:CA:587:G:H4'	1.85	0.57
8:CI:110:VAL:HG21	53:CA:1370:G:H5"	1.86	0.57
12:CM:36:ALA:HB2	12:CM:55:LEU:HD21	1.85	0.57
14:CO:54:GLY:O	14:CO:58:MET:HG3	2.04	0.57
53:CA:461:A:N3	53:CA:461:A:H2'	2.19	0.57
53:CA:745:G:H2'	53:CA:746:A:C8	2.40	0.57
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.85	0.57
53:CA:1087:G:H2'	53:CA:1088:G:H8	1.70	0.57
53:CA:1394:A:N6	53:CA:1501:C:H5'	2.19	0.57
22:DA:227:A:H61	22:DA:410:G:H1'	1.69	0.57
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.39	0.57
22:DA:960:A:C2'	22:DA:962:G:H5'	2.33	0.57
22:DA:1267:U:O2'	22:DA:1268:A:H5'	2.04	0.57
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.67	0.57
22:DA:2235:G:H2'	22:DA:2236:U:C6	2.40	0.57
54:DB:8:C:O2'	36:DO:40:ILE:HD13	2.05	0.57
27:DF:7:TYR:O	27:DF:8:LYS:HG3	2.04	0.57
27:DF:131:VAL:C	27:DF:133:GLU:H	2.13	0.57
27:DF:160:LYS:HD3	27:DF:161:SER:N	2.20	0.57
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.70	0.57
34:DM:126:ILE:O	34:DM:128:THR:HG23	2.04	0.57
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.40	0.57
2:AC:6:PRO:HG2	2:AC:183:TYR:CG	2.40	0.57
2:AC:107:LYS:NZ	2:AC:107:LYS:HB2	2.19	0.57
4:AE:109:ALA:C	4:AE:111:ARG:H	2.12	0.57
7:AH:25:THR:O	7:AH:26:MET:HB3	2.04	0.57
10:AK:28:ASN:OD1	10:AK:46:ALA:HB3	2.04	0.57
10:AK:87:GLY:O	10:AK:92:ARG:HD2	2.05	0.57
10:AK:91:GLY:O	10:AK:95:THR:HB	2.04	0.57
21:AA:642:A:C5	21:AA:643:C:C5	2.93	0.57
21:AA:771:G:H2'	21:AA:772:U:C6	2.39	0.57
21:AA:1257:A:H4'	21:AA:1258:G:OP2	2.03	0.57
22:BA:27:G:H1'	22:BA:513:A:N6	2.19	0.57
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.37	0.57
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.39	0.57
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.39	0.57
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.04	0.57
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.19	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57
1:CB:29:PHE:O	1:CB:40:ILE:HG23	2.04	0.57
2:CC:161:ILE:HD13	2:CC:161:ILE:H	1.69	0.57
12:CM:81:ASP:HB3	12:CM:82:LEU:HD12	1.87	0.57
13:CN:66:THR:CG2	13:CN:82:LYS:HE3	2.34	0.57
53:CA:160:A:H2'	53:CA:161:A:O4'	2.04	0.57
53:CA:567:G:N2	57:CA:1818:HOH:O	2.34	0.57
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.20	0.57
22:DA:117:G:N1	22:DA:119:A:N6	2.52	0.57
22:DA:226:A:H2'	22:DA:227:A:C8	2.38	0.57
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.57	0.57
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.38	0.57
22:DA:1437:C:C2	22:DA:1438:U:C5	2.92	0.57
22:DA:1700:A:O2'	22:DA:1701:A:H5'	2.04	0.57
25:DD:159:LYS:HE2	25:DD:160:LYS:N	2.19	0.57
26:DE:138:LEU:HD23	26:DE:141:MET:HE1	1.87	0.57
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.86	0.57
26:DE:153:LEU:HB2	26:DE:171:ASP:HB3	1.87	0.57
27:DF:45:ASP:C	27:DF:47:LYS:H	2.12	0.57
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.05	0.57
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.93	0.57
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.70	0.57
40:DS:55:ILE:HG23	40:DS:66:ILE:HG21	1.84	0.57
1:AB:9:LEU:CD1	1:AB:42:LEU:HD13	2.26	0.57
2:AC:6:PRO:HG2	2:AC:183:TYR:CD2	2.39	0.57
3:AD:109:THR:HG23	3:AD:112:GLU:N	2.09	0.57
10:AK:22:ILE:O	10:AK:22:ILE:HG13	2.05	0.57
10:AK:124:LYS:HE2	10:AK:124:LYS:C	2.30	0.57
11:AL:114:SER:HB3	21:AA:502:A:OP1	2.05	0.57
21:AA:35:G:H2'	21:AA:36:C:C6	2.39	0.57
21:AA:75:G:C5	21:AA:76:G:C8	2.93	0.57
21:AA:183:C:O2'	21:AA:184:G:H5'	2.05	0.57
21:AA:600:A:H2'	21:AA:601:G:C8	2.40	0.57
21:AA:688:G:H5"	21:AA:688:G:C8	2.39	0.57
21:AA:1323:G:H2'	21:AA:1324:A:C8	2.39	0.57
22:BA:475:C:C4	22:BA:481:G:O6	2.58	0.57
22:BA:704:G:O2'	22:BA:705:A:OP2	2.21	0.57
22:BA:790:U:O2'	22:BA:791:C:O5'	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.37	0.57
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.87	0.57
22:BA:1799:G:N2	22:BA:1818:U:O2'	2.37	0.57
22:BA:2682:A:C8	25:BD:11:MET:CG	2.87	0.57
22:BA:2801:G:O2'	22:BA:2802:G:H5'	2.05	0.57
24:BC:252:LYS:HZ3	24:BC:252:LYS:HB2	1.70	0.57
36:BO:57:ALA:C	36:BO:59:ALA:H	2.13	0.57
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.86	0.57
37:BP:3:ILE:HD13	37:BP:3:ILE:O	2.04	0.57
38:BQ:86:SER:O	38:BQ:87:VAL:C	2.48	0.57
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.86	0.57
40:BS:51:LEU:O	40:BS:55:ILE:HG13	2.05	0.57
1:CB:150:ILE:HD11	1:CB:153:MET:CE	2.34	0.57
3:CD:25:ARG:HD2	53:CA:410:G:OP1	2.05	0.57
6:CG:59:GLU:HG3	6:CG:60:ALA:N	2.19	0.57
7:CH:57:GLU:HG3	7:CH:58:LEU:H	1.68	0.57
16:CQ:23:ALA:C	16:CQ:24:ILE:HD12	2.30	0.57
53:CA:170:U:O2'	53:CA:171:A:H5'	2.04	0.57
53:CA:729:A:H2'	53:CA:730:G:O4'	2.04	0.57
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.34	0.57
22:DA:142:A:O2'	22:DA:143:C:C5'	2.52	0.57
22:DA:272:A:C2	22:DA:273:G:C6	2.93	0.57
22:DA:370:G:C6	22:DA:424:G:C5	2.93	0.57
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.05	0.57
22:DA:878:A:H4'	22:DA:898:C:N4	2.18	0.57
22:DA:1608:A:C5	22:DA:1611:C:C4	2.93	0.57
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.40	0.57
22:DA:2508:G:C2	22:DA:2582:G:C6	2.93	0.57
54:DB:43:C:O2'	54:DB:45:A:N7	2.29	0.57
25:DD:116:LYS:HA	35:DN:1:MET:HE1	1.86	0.57
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.05	0.57
27:DF:107:VAL:N	27:DF:108:PRO:CD	2.68	0.57
35:DN:20:MET:C	35:DN:22:ARG:H	2.10	0.57
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.85	0.57
1:AB:86:CYS:HG	1:AB:88:GLN:CD	2.12	0.57
3:AD:189:ASP:O	3:AD:190:LEU:HB3	2.04	0.57
6:AG:119:LEU:CD2	6:AG:123:LEU:HD23	2.35	0.57
13:AN:30:ILE:HG23	13:AN:44:VAL:HG12	1.86	0.57
13:AN:88:MET:HE1	13:AN:97:LYS:HD2	1.86	0.57
16:AQ:79:GLU:C	16:AQ:80:LYS:HD3	2.29	0.57
21:AA:147:G:H2'	21:AA:148:G:C8	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:173:U:C2	21:AA:197:A:N1	2.73	0.57
21:AA:1142:G:H2'	21:AA:1143:G:O4'	2.04	0.57
22:BA:64:A:H2'	22:BA:65:U:C6	2.39	0.57
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.37	0.57
25:BD:151:THR:O	25:BD:152:PRO:C	2.44	0.57
25:BD:151:THR:HG22	25:BD:152:PRO:N	2.19	0.57
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.13	0.57
28:BG:23:ILE:H	28:BG:23:ILE:HD12	1.70	0.57
28:BG:54:ARG:HG3	28:BG:57:TYR:CD1	2.39	0.57
33:BL:85:VAL:CG2	33:BL:94:THR:HG23	2.34	0.57
45:BX:16:ASN:HB2	45:BX:24:THR:OG1	2.04	0.57
49:B1:3:GLY:C	49:B1:5:ARG:H	2.12	0.57
11:CL:2:THR:HB	11:CL:5:GLN:H	1.70	0.57
12:CM:78:ARG:HH21	12:CM:79:LEU:CD2	2.18	0.57
13:CN:81:ILE:HD13	53:CA:1202:U:O2	2.04	0.57
17:CR:19:GLU:CD	17:CR:20:ILE:N	2.63	0.57
53:CA:810:C:H2'	53:CA:811:C:H5'	1.86	0.57
53:CA:974:A:HO2'	53:CA:975:A:P	2.28	0.57
53:CA:1477:U:H2'	53:CA:1478:U:C6	2.40	0.57
22:DA:301:G:C6	22:DA:302:C:N4	2.73	0.57
22:DA:706:A:H2'	22:DA:707:G:O4'	2.05	0.57
22:DA:742:A:H2'	22:DA:743:A:C8	2.40	0.57
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.40	0.57
22:DA:1438:U:O4	22:DA:1552:A:N1	2.37	0.57
22:DA:1673:G:C2'	22:DA:1674:G:H5'	2.35	0.57
22:DA:2214:C:H2'	22:DA:2215:C:H6	1.66	0.57
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.05	0.57
54:DB:17:C:O2'	54:DB:18:G:C5'	2.53	0.57
27:DF:101:ARG:HH11	27:DF:138:PRO:HB3	1.69	0.57
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.38	0.57
44:DW:51:GLY:HA3	44:DW:59:PHE:HB3	1.87	0.57
1:AB:14:HIS:O	1:AB:14:HIS:CG	2.58	0.57
3:AD:62:ARG:NE	3:AD:62:ARG:HA	2.20	0.57
3:AD:68:GLU:HB2	21:AA:546:A:P	2.45	0.57
6:AG:20:GLU:O	6:AG:24:LYS:HG3	2.04	0.57
7:AH:29:SER:HB3	7:AH:32:LYS:HG3	1.86	0.57
7:AH:104:SER:O	7:AH:122:GLY:HA3	2.05	0.57
13:AN:5:MET:SD	13:AN:8:ARG:NH1	2.78	0.57
17:AR:69:TYR:CD1	21:AA:674:G:H4'	2.40	0.57
21:AA:986:U:H2'	21:AA:987:G:O4'	2.05	0.57
21:AA:1247:U:O2'	21:AA:1248:A:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:434:U:H4'	22:BA:435:C:OP1	2.05	0.57
22:BA:855:G:N3	44:BW:23:LYS:CD	2.67	0.57
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.34	0.57
22:BA:2898:U:O2	31:BJ:134:ALA:HB1	2.05	0.57
26:BE:46:GLN:CG	26:BE:87:ALA:H	2.17	0.57
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.13	0.57
35:BN:71:ARG:HG3	35:BN:71:ARG:NH2	2.18	0.57
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.30	0.57
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.23	0.57
41:BT:8:LEU:HD13	41:BT:46:ALA:HA	1.87	0.57
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.87	0.57
44:BW:37:VAL:HG13	44:BW:56:HIS:HB2	1.87	0.57
2:CC:192:TYR:CE2	53:CA:532:A:C8	2.93	0.57
8:CI:27:ILE:HD13	8:CI:62:LEU:HB3	1.86	0.57
53:CA:765:G:C5	53:CA:812:G:C5	2.93	0.57
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.21	0.57
22:DA:191:A:H2'	22:DA:192:C:C6	2.40	0.57
22:DA:373:U:O2'	22:DA:374:A:C8	2.50	0.57
22:DA:2506:U:H5	22:DA:2576:G:O6	1.87	0.57
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.05	0.57
5:AF:52:ASN:O	5:AF:53:LYS:HB3	2.05	0.57
21:AA:390:U:H2'	21:AA:391:G:H8	1.66	0.57
21:AA:1002:G:H2'	21:AA:1003:G:O4'	2.04	0.57
21:AA:1409:C:H2'	21:AA:1410:A:H8	1.69	0.57
22:BA:540:C:O2'	22:BA:541:A:H5'	2.04	0.57
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.04	0.57
22:BA:1025:G:H4'	22:BA:1026:G:OP2	2.04	0.57
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.29	0.57
22:BA:1275:A:H4'	22:BA:1276:A:OP1	2.03	0.57
22:BA:2250:G:H8	22:BA:2250:G:O5'	1.88	0.57
24:BC:246:PRO:HG2	24:BC:247:TRP:CE3	2.38	0.57
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.13	0.57
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.19	0.57
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.05	0.57
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.04	0.57
3:CD:2:ARG:NH2	3:CD:114:ARG:CD	2.50	0.57
4:CE:147:ASN:HA	4:CE:151:MET:HE3	1.87	0.57
7:CH:79:ARG:HB2	53:CA:878:A:OP1	2.04	0.57
7:CH:106:SER:HA	53:CA:642:A:C8	2.39	0.57
11:CL:67:GLY:O	11:CL:98:ARG:HG3	2.05	0.57
15:CP:4:ILE:HD12	15:CP:4:ILE:N	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:209:U:O2	53:CA:209:U:H2'	2.03	0.57
53:CA:346:G:H2'	53:CA:346:G:N3	2.18	0.57
22:DA:234:U:O2'	22:DA:235:U:H5'	2.05	0.57
22:DA:532:A:H4'	22:DA:533:G:C8	2.40	0.57
22:DA:755:U:O2'	22:DA:756:A:H5'	2.05	0.57
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.05	0.57
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.40	0.57
25:DD:117:GLY:O	25:DD:119:ALA:N	2.37	0.57
33:DL:73:ILE:O	33:DL:105:ILE:HA	2.04	0.57
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.35	0.57
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.87	0.57
2:AC:177:LEU:HD22	21:AA:1112:C:C4	2.40	0.56
16:AQ:60:ILE:HG22	16:AQ:72:TRP:HE3	1.69	0.56
21:AA:1447:A:H5'	21:AA:1448:C:C5	2.38	0.56
22:BA:83:A:OP1	42:BU:91:LYS:HE3	2.05	0.56
24:BC:156:SER:O	24:BC:159:THR:HG23	2.04	0.56
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.32	0.56
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.20	0.56
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.69	0.56
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.83	0.56
3:CD:58:GLN:OE1	3:CD:58:GLN:HA	2.05	0.56
3:CD:84:ASN:HD22	3:CD:84:ASN:C	2.12	0.56
4:CE:13:LYS:HD3	4:CE:14:LEU:N	2.20	0.56
4:CE:22:LYS:HD2	53:CA:1081:A:H5'	1.87	0.56
9:CJ:52:LEU:HB2	13:CN:80:ARG:HE	1.70	0.56
9:CJ:84:VAL:CG2	9:CJ:85:ASP:H	2.08	0.56
12:CM:106:ARG:HH21	12:CM:112:ARG:CZ	2.17	0.56
15:CP:16:PHE:CD2	15:CP:40:ASN:HB2	2.39	0.56
53:CA:458:U:H2'	53:CA:459:A:C8	2.39	0.56
53:CA:996:A:N1	53:CA:1046:A:H5'	2.20	0.56
22:DA:1113:U:HO2'	22:DA:1114:C:H6	1.50	0.56
22:DA:1721:G:H1'	22:DA:1739:A:H61	1.70	0.56
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.87	0.56
26:DE:79:ARG:O	26:DE:80:SER:C	2.48	0.56
27:DF:16:MET:HA	27:DF:21:TYR:HB2	1.86	0.56
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.04	0.56
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.24	0.56
42:DU:26:ASN:O	42:DU:34:ILE:HB	2.05	0.56
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.87	0.56
4:AE:29:ILE:HD12	4:AE:30:PHE:N	2.19	0.56
9:AJ:8:ILE:HG12	9:AJ:100:ILE:HG22	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AN:83:VAL:HG12	13:AN:84:ARG:N	2.19	0.56
18:AS:52:ASN:O	18:AS:76:THR:HG22	2.06	0.56
21:AA:68:G:H5'	21:AA:171:A:O2'	2.05	0.56
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.06	0.56
22:BA:1229:C:H2'	22:BA:1230:A:H8	1.70	0.56
22:BA:2725:A:HO2'	22:BA:2726:A:H2'	1.67	0.56
22:BA:2728:U:O2'	22:BA:2729:G:H8	1.87	0.56
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.06	0.56
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.05	0.56
28:BG:73:SER:HA	28:BG:76:ILE:HG21	1.87	0.56
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.53	0.56
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.05	0.56
39:BR:34:GLU:CD	39:BR:60:LYS:HZ3	2.12	0.56
39:BR:48:LYS:H	39:BR:48:LYS:HD2	1.70	0.56
42:BU:86:PHE:CE1	42:BU:101:THR:HG21	2.40	0.56
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.35	0.56
1:CB:74:ALA:CB	1:CB:206:ILE:HD11	2.32	0.56
1:CB:212:TYR:CD2	1:CB:215:ALA:HB3	2.40	0.56
3:CD:125:ASN:HB2	3:CD:141:VAL:H	1.70	0.56
4:CE:105:ILE:HG22	4:CE:105:ILE:O	2.04	0.56
6:CG:63:VAL:HG11	6:CG:127:ALA:HB2	1.87	0.56
8:CI:44:ARG:O	8:CI:48:ARG:HG2	2.05	0.56
9:CJ:30:LYS:CG	9:CJ:36:VAL:HG22	2.35	0.56
11:CL:3:VAL:HG23	11:CL:4:ASN:N	2.16	0.56
53:CA:113:G:H2'	53:CA:114:U:H6	1.70	0.56
53:CA:162:A:H2'	53:CA:163:C:O4'	2.04	0.56
53:CA:714:G:H2'	53:CA:715:A:C8	2.40	0.56
53:CA:892:A:C5	53:CA:893:C:C5	2.93	0.56
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.20	0.56
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.52	0.56
22:DA:12:U:O2	22:DA:12:U:H2'	2.05	0.56
22:DA:329:G:OP1	22:DA:329:G:H3'	2.05	0.56
22:DA:834:G:H1'	22:DA:2358:A:C2	2.39	0.56
22:DA:962:G:H3'	22:DA:962:G:OP1	2.05	0.56
22:DA:1815:A:H4'	22:DA:1816:C:OP1	2.05	0.56
22:DA:2331:G:N1	22:DA:2385:C:C4	2.73	0.56
25:DD:19:GLY:O	32:DK:72:PRO:HB2	2.05	0.56
27:DF:42:ALA:CB	27:DF:49:LEU:HD21	2.35	0.56
28:DG:19:ASN:N	28:DG:19:ASN:HD22	2.03	0.56
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.20	0.56
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.38	0.56
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.05	0.56
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.05	0.56
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.36	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.18	0.56
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.29	0.56
2:AC:119:ILE:HA	2:AC:122:GLN:HG3	1.86	0.56
3:AD:119:HIS:O	3:AD:120:LYS:C	2.47	0.56
4:AE:29:ILE:HD12	4:AE:30:PHE:H	1.69	0.56
4:AE:67:ARG:HB2	4:AE:68:ARG:HE	1.70	0.56
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.69	0.56
16:AQ:74:LEU:C	16:AQ:74:LEU:HD13	2.31	0.56
19:AT:75:LYS:HG3	21:AA:186:C:H4'	1.88	0.56
21:AA:372:C:H2'	21:AA:387:U:O4	2.06	0.56
21:AA:1227:A:O2'	21:AA:1228:C:O5'	2.23	0.56
21:AA:1365:G:O2'	21:AA:1366:C:H5'	2.04	0.56
22:BA:65:U:H2'	22:BA:66:C:H6	1.70	0.56
22:BA:242:G:C8	51:B3:4:LYS:HG2	2.40	0.56
22:BA:1019:U:C4	22:BA:1020:A:N6	2.74	0.56
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.05	0.56
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.40	0.56
22:BA:2225:A:H4'	22:BA:2226:C:O5'	2.05	0.56
23:BB:24:G:N7	23:BB:56:G:H2'	2.19	0.56
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.39	0.56
24:BC:250:GLN:N	24:BC:250:GLN:NE2	2.53	0.56
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.84	0.56
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.87	0.56
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.30	0.56
29:BH:44:ILE:O	29:BH:48:GLU:HB2	2.05	0.56
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.12	0.56
39:BR:39:LEU:N	39:BR:39:LEU:CD2	2.68	0.56
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.35	0.56
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.05	0.56
46:BY:23:ARG:O	46:BY:24:GLU:C	2.49	0.56
1:CB:90:PHE:CE2	1:CB:149:GLY:HA3	2.40	0.56
5:CF:43:GLY:O	5:CF:44:ARG:C	2.49	0.56
6:CG:128:GLU:HG3	6:CG:130:LYS:H	1.71	0.56
6:CG:148:LYS:HD3	6:CG:148:LYS:O	2.05	0.56
9:CJ:45:ARG:O	9:CJ:46:LYS:C	2.47	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:748:G:H2'	53:CA:749:A:C8	2.40	0.56
53:CA:1202:U:H2'	53:CA:1203:C:H6	1.70	0.56
53:CA:1448:C:O2'	53:CA:1449:C:C6	2.58	0.56
53:CA:1533:C:H2'	53:CA:1534:A:H5"	1.87	0.56
22:DA:28:A:C6	22:DA:513:A:C8	2.93	0.56
22:DA:187:G:C2	22:DA:210:C:C2	2.93	0.56
22:DA:1013:C:O2'	22:DA:1014:A:H5'	2.06	0.56
22:DA:1079:C:O2'	22:DA:1080:A:O4'	2.14	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.39	0.56
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.05	0.56
22:DA:1422:G:O2'	22:DA:1492:G:O2'	2.22	0.56
22:DA:1439:A:N6	22:DA:1552:A:C8	2.73	0.56
22:DA:2250:G:OP1	22:DA:2275:C:H2'	2.06	0.56
22:DA:2408:U:HO2'	22:DA:2409:G:H8	0.68	0.56
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.05	0.56
24:DC:106:PRO:HB3	24:DC:141:HIS:HE1	1.69	0.56
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.37	0.56
32:DK:87:LEU:HA	32:DK:95:ILE:H	1.71	0.56
33:DL:47:ARG:HH21	33:DL:47:ARG:CG	2.13	0.56
38:DQ:79:ILE:HD13	38:DQ:79:ILE:C	2.29	0.56
40:DS:70:LYS:HD2	40:DS:110:ARG:O	2.06	0.56
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.70	0.56
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.36	0.56
9:AJ:53:ILE:HG22	9:AJ:61:ALA:CB	2.27	0.56
10:AK:85:VAL:CG1	10:AK:92:ARG:HG3	2.35	0.56
11:AL:73:LEU:HD11	11:AL:79:ILE:HG21	1.87	0.56
13:AN:50:LEU:O	13:AN:52:ARG:N	2.39	0.56
15:AP:28:ARG:NH2	21:AA:390:U:H4'	2.20	0.56
16:AQ:13:SER:O	16:AQ:20:ILE:HD11	2.05	0.56
19:AT:55:PRO:O	19:AT:59:ARG:HB3	2.04	0.56
21:AA:487:A:H2'	21:AA:488:C:O4'	2.06	0.56
22:BA:1735:A:H2'	22:BA:1736:U:C6	2.39	0.56
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.87	0.56
31:BJ:17:VAL:HG13	31:BJ:55:ILE:CG1	2.36	0.56
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	1.87	0.56
44:BW:39:GLN:HE21	44:BW:43:LYS:N	2.03	0.56
6:CG:8:GLN:CD	6:CG:9:ARG:H	2.13	0.56
11:CL:86:VAL:C	11:CL:88:ASP:H	2.13	0.56
14:CO:7:THR:O	14:CO:11:VAL:HG23	2.05	0.56
16:CQ:25:GLU:HA	16:CQ:39:ARG:O	2.05	0.56
17:CR:62:ARG:HB3	17:CR:69:TYR:CE1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:211:G:N3	53:CA:211:G:C2'	2.67	0.56
53:CA:451:A:H61	53:CA:481:G:H5'	1.70	0.56
53:CA:642:A:O2'	53:CA:643:C:C6	2.58	0.56
22:DA:929:U:H1'	47:DZ:25:GLY:O	2.05	0.56
22:DA:1275:A:O2'	22:DA:1276:A:O4'	2.22	0.56
22:DA:1619:G:O2'	22:DA:1620:G:H5'	2.05	0.56
22:DA:2149:U:HO2'	22:DA:2150:C:H6	0.72	0.56
54:DB:12:C:H5"	54:DB:15:A:N6	2.19	0.56
25:DD:55:LYS:HB3	25:DD:75:ALA:HB1	1.86	0.56
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.30	0.56
27:DF:36:ASN:O	27:DF:37:MET:HB3	2.05	0.56
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.86	0.56
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.87	0.56
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.62	0.56
50:D2:22:MET:HG2	50:D2:22:MET:O	2.04	0.56
1:AB:61:SER:C	1:AB:63:LYS:H	2.13	0.56
21:AA:582:C:C2	21:AA:583:A:C8	2.93	0.56
22:BA:71:A:H3'	22:BA:71:A:OP2	2.06	0.56
22:BA:699:A:H1'	22:BA:1634:A:H2'	1.86	0.56
22:BA:1313:U:O2	22:BA:1313:U:C2'	2.50	0.56
22:BA:1818:U:H2'	24:BC:152:GLN:O	2.04	0.56
22:BA:2813:A:H2	22:BA:2887:A:H62	1.51	0.56
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.21	0.56
11:CL:27:PRO:HB2	11:CL:28:GLN:OE1	2.06	0.56
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.34	0.56
15:CP:71:VAL:O	15:CP:74:LEU:HB2	2.05	0.56
20:CU:41:THR:O	20:CU:45:LYS:HB2	2.06	0.56
53:CA:198:G:O6	53:CA:220:G:C5	2.58	0.56
53:CA:239:U:C6	53:CA:239:U:H5'	2.41	0.56
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.06	0.56
22:DA:1833:C:H2'	22:DA:1834:U:H6	1.70	0.56
22:DA:1866:A:O2'	22:DA:1867:G:H5'	2.04	0.56
22:DA:2314:A:H2'	22:DA:2315:G:H8	1.69	0.56
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.19	0.56
27:DF:58:ALA:HB1	27:DF:139:GLU:HG2	1.87	0.56
28:DG:149:ALA:O	28:DG:151:ARG:N	2.38	0.56
3:AD:53:GLN:HE21	3:AD:202:LEU:HA	1.70	0.56
15:AP:48:GLU:HG3	15:AP:49:GLY:N	2.20	0.56
19:AT:67:HIS:HB3	19:AT:68:LYS:NZ	2.21	0.56
21:AA:830:G:H2'	21:AA:831:A:H8	1.70	0.56
21:AA:983:A:O2'	21:AA:984:C:H5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1052:U:C5'	21:AA:1053:G:OP2	2.54	0.56
21:AA:1066:C:H5"	21:AA:1066:C:C6	2.40	0.56
22:BA:513:A:O2'	22:BA:514:A:H5'	2.06	0.56
22:BA:915:C:H6	22:BA:915:C:C5'	2.15	0.56
22:BA:1537:G:H2'	22:BA:1538:G:O4'	2.05	0.56
22:BA:2210:U:H4'	22:BA:2211:A:O5'	2.05	0.56
22:BA:2557:G:H2'	22:BA:2558:C:H6	1.69	0.56
29:BH:14:SER:OG	29:BH:17:ASP:HB2	2.06	0.56
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.41	0.56
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	1.88	0.56
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.20	0.56
52:B4:9:LYS:H	52:B4:9:LYS:CE	2.18	0.56
1:CB:169:HIS:HD2	1:CB:173:LYS:HZ3	1.54	0.56
2:CC:122:GLN:HB2	2:CC:127:VAL:HG21	1.88	0.56
5:CF:9:MET:HE1	17:CR:64:LEU:O	2.06	0.56
6:CG:2:ARG:HB2	53:CA:1380:U:O4	2.05	0.56
8:CI:61:ASP:O	8:CI:62:LEU:HD22	2.06	0.56
12:CM:68:LEU:HD22	12:CM:69:ARG:HH11	1.70	0.56
13:CN:20:PHE:HA	13:CN:24:ALA:HB2	1.85	0.56
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.06	0.56
53:CA:268:U:H2'	53:CA:269:C:H6	1.68	0.56
53:CA:1102:A:O2'	53:CA:1103:C:H5'	2.05	0.56
22:DA:465:G:C4'	50:D2:16:HIS:HD2	2.18	0.56
22:DA:634:C:H2'	22:DA:635:C:H6	1.65	0.56
22:DA:784:G:C6	24:DC:227:VAL:HG11	2.40	0.56
22:DA:982:C:H5"	22:DA:983:A:OP1	2.05	0.56
22:DA:1280:G:C2'	22:DA:1281:G:H5'	2.34	0.56
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.87	0.56
22:DA:2415:G:C6	22:DA:2416:C:C4	2.93	0.56
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.06	0.56
24:DC:128:THR:C	24:DC:129:LEU:HD23	2.29	0.56
27:DF:60:SER:C	27:DF:62:GLN:H	2.13	0.56
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	1.88	0.56
28:DG:84:LYS:HB3	28:DG:132:LEU:O	2.04	0.56
29:DH:66:ASN:HD22	29:DH:137:GLU:HB3	1.71	0.56
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.87	0.56
37:DP:28:LYS:NZ	37:DP:82:SER:HB2	2.20	0.56
38:DQ:40:LYS:HD2	38:DQ:44:TYR:CE2	2.41	0.56
8:AI:6:TYR:CE2	8:AI:17:ARG:HB2	2.36	0.56
16:AQ:14:ASP:O	16:AQ:16:MET:SD	2.64	0.56
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:57:G:H2'	21:AA:58:C:C6	2.41	0.56
21:AA:191:G:H2'	21:AA:192:A:H8	1.71	0.56
22:BA:62:U:C4'	22:BA:63:A:OP1	2.53	0.56
22:BA:454:A:H4'	22:BA:455:C:OP2	2.05	0.56
22:BA:646:U:H3'	22:BA:647:G:H5"	1.88	0.56
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.36	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.87	0.56
10:CK:74:LYS:O	10:CK:74:LYS:HG2	2.06	0.56
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.05	0.56
53:CA:1091:U:O2	53:CA:1093:A:H8	1.87	0.56
53:CA:1409:C:H2'	53:CA:1410:A:C8	2.41	0.56
22:DA:765:C:H2'	22:DA:766:U:H6	1.67	0.56
22:DA:1311:G:H1'	22:DA:1313:U:O4	2.06	0.56
22:DA:1710:G:H4'	22:DA:2858:C:O2	2.06	0.56
22:DA:2210:U:H4'	22:DA:2211:A:H5'	1.85	0.56
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.21	0.56
27:DF:5:ASP:C	27:DF:7:TYR:H	2.13	0.56
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.70	0.56
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.06	0.56
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.20	0.56
4:AE:134:ASN:O	4:AE:137:ARG:HB3	2.05	0.56
7:AH:2:MET:HE1	21:AA:654:G:H4'	1.87	0.56
11:AL:23:LEU:HB3	11:AL:58:ASN:HD22	1.69	0.56
16:AQ:11:VAL:HG12	16:AQ:12:VAL:HG12	1.87	0.56
21:AA:1442:G:H2'	21:AA:1443:C:H6	1.70	0.56
22:BA:312:G:H2'	22:BA:313:G:C8	2.41	0.56
22:BA:2730:C:O3'	25:BD:174:SER:HB3	2.06	0.56
22:BA:2820:A:C8	22:BA:2820:A:C3'	2.88	0.56
26:BE:150:THR:HG21	26:BE:153:LEU:HA	1.88	0.56
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.31	0.56
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.04	0.56
31:BJ:18:VAL:HG23	31:BJ:54:ILE:HD13	1.88	0.56
32:BK:99:ILE:HG22	32:BK:119:ALA:HA	1.86	0.56
35:BN:38:LEU:O	35:BN:38:LEU:HD12	2.05	0.56
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.19	0.56
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.05	0.56
42:BU:44:HIS:O	42:BU:45:GLN:C	2.49	0.56
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.71	0.56
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	2.20	0.56
9:CJ:9:ARG:HH22	53:CA:1279:G:C5'	2.16	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:74:LYS:HG3	10:CK:78:ILE:HG12	1.88	0.56
10:CK:126:ARG:N	20:CU:33:ARG:HE	2.02	0.56
20:CU:38:GLU:HG3	53:CA:1526:G:OP1	2.06	0.56
53:CA:408:A:C2	53:CA:435:A:C2	2.94	0.56
53:CA:719:C:H3'	53:CA:720:C:C6	2.41	0.56
53:CA:821:G:H2'	53:CA:822:U:H6	1.71	0.56
53:CA:1005:A:C4	53:CA:1006:G:H1'	2.40	0.56
53:CA:1387:G:H2'	53:CA:1388:C:C6	2.41	0.56
22:DA:287:G:O2'	22:DA:288:U:H5'	2.06	0.56
22:DA:322:A:H3'	26:DE:163:ASN:ND2	2.21	0.56
22:DA:379:G:C6	22:DA:396:G:C6	2.94	0.56
22:DA:1062:G:H2'	22:DA:1070:A:OP1	2.05	0.56
22:DA:1082:U:N3	22:DA:1086:A:C5	2.73	0.56
22:DA:1252:G:H5"	57:DA:3287:HOH:O	2.05	0.56
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.06	0.56
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.06	0.56
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.38	0.56
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.41	0.56
22:DA:2823:A:C5	22:DA:2824:C:C5	2.93	0.56
54:DB:75:G:H1	54:DB:102:G:H22	1.54	0.56
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.88	0.56
34:DM:26:VAL:HG21	34:DM:132:THR:O	2.06	0.56
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.20	0.56
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.35	0.56
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.88	0.56
1:AB:68:PHE:CD2	1:AB:83:ALA:HB1	2.41	0.56
3:AD:28:ASP:OD1	3:AD:33:ILE:HG12	2.04	0.56
3:AD:196:GLU:HA	3:AD:199:ILE:CG2	2.36	0.56
5:AF:42:TRP:CZ2	5:AF:61:LEU:HD22	2.41	0.56
7:AH:15:ASN:ND2	21:AA:875:U:H1'	2.19	0.56
13:AN:51:PRO:O	13:AN:52:ARG:CB	2.54	0.56
21:AA:92:U:O2'	21:AA:93:U:H5'	2.05	0.56
21:AA:182:A:N6	21:AA:194:C:C4	2.74	0.56
21:AA:790:A:H2'	21:AA:791:G:C8	2.40	0.56
21:AA:1152:A:H2'	21:AA:1153:G:H8	1.70	0.56
21:AA:1394:A:C5	21:AA:1501:C:H4'	2.41	0.56
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.20	0.56
22:BA:2204:G:H4'	24:BC:149:LYS:HG3	1.87	0.56
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.69	0.56
22:BA:2366:A:C2	22:BA:2367:G:H1'	2.41	0.56
22:BA:2801:G:H2'	22:BA:2802:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:230:PRO:CD	24:BC:246:PRO:HA	2.35	0.56
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.05	0.56
26:BE:24:ASN:O	26:BE:28:VAL:HG12	2.05	0.56
28:BG:44:HIS:HA	28:BG:49:LEU:HD23	1.87	0.56
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.35	0.56
41:BT:24:MET:HG3	41:BT:29:THR:HG23	1.87	0.56
43:BV:65:VAL:CG2	43:BV:65:VAL:O	2.53	0.56
44:BW:49:ASN:C	44:BW:49:ASN:ND2	2.61	0.56
2:CC:175:HIS:CE1	53:CA:1108:G:H5"	2.40	0.56
3:CD:43:ARG:O	3:CD:45:PRO:HD3	2.06	0.56
14:CO:24:THR:HG21	14:CO:69:LEU:HB2	1.88	0.56
18:CS:13:HIS:CD2	53:CA:1014:A:H4'	2.41	0.56
18:CS:35:ARG:HH21	18:CS:51:HIS:HD2	1.53	0.56
53:CA:984:C:O2'	53:CA:985:C:C6	2.53	0.56
53:CA:1008:U:C4	53:CA:1022:A:C2	2.94	0.56
53:CA:1017:U:OP2	53:CA:1017:U:H6	1.89	0.56
53:CA:1261:A:N7	53:CA:1274:A:H2	2.04	0.56
53:CA:1380:U:H4'	53:CA:1381:U:OP1	2.04	0.56
22:DA:466:A:H2	22:DA:795:C:O2	1.89	0.56
22:DA:491:G:C4	22:DA:492:A:C8	2.94	0.56
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.41	0.56
22:DA:2214:C:O2'	22:DA:2215:C:C5'	2.50	0.56
54:DB:100:G:H2'	54:DB:101:A:O4'	2.06	0.56
24:DC:145:MET:HE3	24:DC:181:ARG:NH2	2.20	0.56
30:DI:28:GLY:O	30:DI:30:GLN:HG3	2.05	0.56
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.05	0.56
36:DO:70:ALA:O	36:DO:74:VAL:HG23	2.06	0.56
1:AB:172:ILE:HG23	1:AB:182:VAL:HG11	1.88	0.56
3:AD:151:GLN:O	3:AD:152:SER:C	2.49	0.56
4:AE:45:VAL:HG22	4:AE:117:ALA:HA	1.88	0.56
4:AE:153:ALA:HA	4:AE:156:ARG:CB	2.34	0.56
16:AQ:11:VAL:HG12	16:AQ:12:VAL:N	2.20	0.56
16:AQ:58:VAL:HG23	16:AQ:77:VAL:HG22	1.87	0.56
21:AA:473:U:H2'	21:AA:474:G:C8	2.34	0.56
21:AA:481:G:O2'	21:AA:482:A:C8	2.59	0.56
21:AA:918:A:H2'	21:AA:919:A:C8	2.40	0.56
21:AA:1016:A:H3'	21:AA:1017:U:O4'	2.05	0.56
21:AA:1039:G:O2'	21:AA:1040:U:H5'	2.06	0.56
21:AA:1261:A:C2	21:AA:1275:A:C6	2.93	0.56
22:BA:907:G:O2'	22:BA:908:C:H5'	2.06	0.56
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.71	0.56
22:BA:1731:G:C4	22:BA:1733:G:N7	2.74	0.56
22:BA:2109:U:C4	22:BA:2181:U:O4	2.59	0.56
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.88	0.56
39:BR:54:VAL:O	39:BR:55:ASP:C	2.48	0.56
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.06	0.56
42:BU:15:GLY:O	42:BU:17:ASP:N	2.35	0.56
44:BW:24:ARG:CD	44:BW:25:PHE:N	2.61	0.56
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.88	0.56
6:CG:37:THR:HB	53:CA:1240:U:O2'	2.05	0.56
14:CO:38:LEU:HD12	14:CO:41:HIS:CB	2.36	0.56
17:CR:22:TYR:HA	17:CR:57:ALA:HB1	1.86	0.56
53:CA:686:U:O2'	53:CA:687:A:C8	2.59	0.56
53:CA:840:C:N3	53:CA:842:U:H4'	2.21	0.56
53:CA:989:U:C2'	53:CA:990:C:H5'	2.36	0.56
53:CA:1511:G:C5	53:CA:1512:U:C5	2.93	0.56
22:DA:468:G:H5"	26:DE:55:SER:CB	2.35	0.56
22:DA:513:A:H2'	22:DA:514:A:H8	1.68	0.56
22:DA:515:A:H1'	22:DA:581:C:H1'	1.87	0.56
22:DA:1014:A:O2'	22:DA:1015:U:H5'	2.06	0.56
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.20	0.56
22:DA:1300:G:H4'	22:DA:1301:A:O5'	2.04	0.56
22:DA:1430:G:O2'	22:DA:1431:A:H5'	2.06	0.56
22:DA:1722:A:H61	22:DA:1738:G:H1'	1.71	0.56
54:DB:4:C:H2'	54:DB:5:U:H6	1.71	0.56
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.74	0.56
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.21	0.56
36:DO:108:ASP:C	36:DO:110:ALA:H	2.13	0.56
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.88	0.56
41:DT:40:LYS:HA	41:DT:43:ILE:HG22	1.88	0.56
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.06	0.56
1:AB:132:GLU:O	1:AB:132:GLU:HG3	2.04	0.55
1:AB:148:GLY:O	1:AB:151:LYS:HG2	2.06	0.55
2:AC:10:ARG:NH2	2:AC:181:ILE:HG13	2.21	0.55
16:AQ:10:ARG:O	16:AQ:22:VAL:HG13	2.06	0.55
21:AA:413:G:N2	21:AA:428:G:O2'	2.39	0.55
21:AA:913:A:H4'	21:AA:914:A:O5'	2.06	0.55
22:BA:396:G:H2'	22:BA:397:U:C6	2.41	0.55
22:BA:923:G:H4'	44:BW:25:PHE:CE1	2.41	0.55
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.41	0.55
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:261:ARG:O	24:BC:261:ARG:HG2	2.05	0.55
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.05	0.55
35:BN:23:ASN:N	35:BN:23:ASN:HD22	2.03	0.55
37:BP:64:SER:O	37:BP:65:ASN:C	2.48	0.55
38:BQ:86:SER:O	38:BQ:88:GLU:N	2.38	0.55
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.81	0.55
2:CC:22:PHE:CD2	9:CJ:97:ASP:HB2	2.41	0.55
4:CE:103:GLY:HA3	4:CE:120:HIS:O	2.07	0.55
9:CJ:7:ARG:NH1	9:CJ:102:LEU:HG	2.21	0.55
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.88	0.55
12:CM:57:ASP:O	12:CM:61:LYS:HG3	2.06	0.55
53:CA:198:G:O2'	53:CA:199:A:O5'	2.24	0.55
53:CA:203:G:H8	53:CA:203:G:O5'	1.88	0.55
53:CA:1356:G:H2'	53:CA:1357:A:C8	2.41	0.55
22:DA:98:G:O2'	22:DA:103:A:C8	2.59	0.55
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.31	0.55
22:DA:444:C:HO2'	22:DA:445:C:H6	1.52	0.55
22:DA:622:G:H2'	22:DA:623:C:C6	2.41	0.55
22:DA:1079:C:N4	22:DA:1088:A:N3	2.54	0.55
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.18	0.55
27:DF:46:LYS:HD3	27:DF:50:ASP:HB2	1.87	0.55
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HD13	1.88	0.55
35:DN:16:HIS:O	35:DN:20:MET:N	2.40	0.55
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	1.89	0.55
40:DS:66:ILE:HD13	40:DS:66:ILE:N	2.20	0.55
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.88	0.55
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.42	0.55
16:AQ:46:HIS:HB2	16:AQ:66:LEU:CD1	2.35	0.55
18:AS:21:ALA:O	18:AS:22:VAL:HG23	2.06	0.55
21:AA:428:G:H1'	21:AA:430:A:N7	2.21	0.55
21:AA:707:U:H2'	21:AA:708:C:C6	2.41	0.55
21:AA:901:A:N7	21:AA:902:G:H1'	2.21	0.55
22:BA:558:U:H5"	31:BJ:111:LYS:HE3	1.88	0.55
22:BA:595:C:H2'	22:BA:596:U:C6	2.42	0.55
22:BA:947:A:HO2'	22:BA:984:A:H2	1.47	0.55
22:BA:974:G:H8	22:BA:990:A:H62	1.53	0.55
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.05	0.55
22:BA:1734:G:O2'	22:BA:1735:A:O4'	2.24	0.55
22:BA:2197:U:OP1	3:CD:150:LYS:HE3	2.06	0.55
23:BB:88:C:H5'	23:BB:88:C:H6	1.71	0.55
27:BF:134:GLN:HE22	27:BF:149:ARG:HB3	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:132:LEU:N	28:BG:132:LEU:HD23	2.21	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.20	0.55
45:BX:30:PRO:O	45:BX:32:LEU:HD12	2.05	0.55
1:CB:66:ILE:H	1:CB:88:GLN:HB3	1.71	0.55
6:CG:4:ARG:HG3	6:CG:5:VAL:N	2.21	0.55
53:CA:960:U:C5	53:CA:1225:A:H1'	2.41	0.55
53:CA:989:U:H2'	53:CA:990:C:H5'	1.88	0.55
53:CA:1036:A:C2'	53:CA:1037:C:H5'	2.36	0.55
53:CA:1316:G:H22	53:CA:1318:A:H3'	1.72	0.55
22:DA:56:A:C2	22:DA:115:C:C2	2.93	0.55
22:DA:117:G:C6	22:DA:119:A:C6	2.95	0.55
22:DA:223:A:C6	22:DA:422:A:C5	2.94	0.55
22:DA:273:G:H2'	22:DA:274:C:C6	2.41	0.55
22:DA:466:A:P	50:D2:34:ARG:HH21	2.30	0.55
22:DA:527:C:N3	22:DA:2779:U:H2'	2.21	0.55
22:DA:642:U:H2'	22:DA:644:A:OP2	2.06	0.55
22:DA:644:A:O2'	22:DA:645:C:H5'	2.05	0.55
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.70	0.55
22:DA:1275:A:H2'	22:DA:1275:A:N3	2.22	0.55
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.06	0.55
22:DA:2036:C:H2'	22:DA:2037:A:H8	1.71	0.55
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.69	0.55
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.88	0.55
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.36	0.55
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.86	0.55
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.87	0.55
42:DU:95:PHE:N	42:DU:95:PHE:CD1	2.74	0.55
45:DX:52:ALA:O	45:DX:53:LYS:HB3	2.05	0.55
2:AC:107:LYS:HB2	2:AC:107:LYS:HZ2	1.71	0.55
3:AD:109:THR:HG21	21:AA:408:A:P	2.46	0.55
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.55
11:AL:23:LEU:O	11:AL:25:ALA:N	2.38	0.55
16:AQ:13:SER:O	16:AQ:16:MET:SD	2.65	0.55
21:AA:481:G:O2'	21:AA:482:A:H8	1.89	0.55
22:BA:633:A:C8	22:BA:633:A:H3'	2.41	0.55
22:BA:637:A:H4'	22:BA:638:G:O5'	2.06	0.55
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.06	0.55
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.42	0.55
22:BA:2554:U:C4	22:BA:2555:U:O4	2.60	0.55
26:BE:129:PRO:HG3	26:BE:156:ASN:OD1	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:10:VAL:HB	28:BG:14:VAL:HG21	1.86	0.55
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.63	0.55
35:BN:93:GLY:C	35:BN:95:THR:H	2.14	0.55
1:CB:128:LEU:O	1:CB:129:THR:C	2.50	0.55
3:CD:60:VAL:HG22	3:CD:194:ILE:HG21	1.86	0.55
18:CS:54:ARG:CG	18:CS:55:GLN:H	2.19	0.55
20:CU:31:VAL:O	20:CU:33:ARG:N	2.39	0.55
53:CA:106:C:O2	53:CA:379:C:H4'	2.05	0.55
53:CA:181:A:H1'	53:CA:182:A:C2	2.41	0.55
53:CA:562:U:H4'	53:CA:563:A:O5'	2.05	0.55
53:CA:705:G:H2'	53:CA:706:A:C8	2.42	0.55
53:CA:960:U:H4'	53:CA:961:U:H5"	1.87	0.55
22:DA:120:U:C2	22:DA:149:A:C6	2.94	0.55
22:DA:1171:G:N2	22:DA:1179:G:H1'	2.22	0.55
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.68	0.55
29:DH:50:ARG:HG3	29:DH:54:LEU:HG	1.88	0.55
3:AD:204:SER:HB2	21:AA:8:A:N6	2.18	0.55
6:AG:25:PHE:CE1	6:AG:104:VAL:HG23	2.41	0.55
19:AT:2:ASN:O	19:AT:3:ILE:C	2.49	0.55
20:AU:18:PHE:O	20:AU:21:SER:HB3	2.07	0.55
21:AA:269:C:H2'	21:AA:270:A:C8	2.42	0.55
21:AA:502:A:H2'	21:AA:503:C:O4'	2.06	0.55
21:AA:1151:A:O2'	21:AA:1152:A:C5'	2.54	0.55
22:BA:28:A:H2'	22:BA:29:U:H6	1.71	0.55
22:BA:54:G:O2'	50:B2:35:ARG:HD3	2.06	0.55
22:BA:197:A:H62	22:BA:2430:A:H2'	1.71	0.55
22:BA:1509:A:N3	22:BA:1510:G:C8	2.75	0.55
32:BK:34:GLY:O	32:BK:35:VAL:C	2.49	0.55
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.88	0.55
42:BU:17:ASP:O	42:BU:18:LYS:C	2.49	0.55
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.06	0.55
2:CC:84:GLU:C	2:CC:86:LEU:H	2.13	0.55
3:CD:29:THR:C	3:CD:30:LYS:HD3	2.30	0.55
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.87	0.55
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.87	0.55
7:CH:106:SER:HA	53:CA:642:A:N7	2.22	0.55
8:CI:40:ARG:H	8:CI:44:ARG:HD3	1.71	0.55
53:CA:483:C:H2'	53:CA:484:G:C8	2.41	0.55
53:CA:1145:A:O2'	53:CA:1146:A:H5"	2.05	0.55
53:CA:1253:G:N1	53:CA:1285:A:N6	2.54	0.55
22:DA:100:U:H1'	22:DA:101:A:N7	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:118:A:OP1	50:D2:22:MET:SD	2.64	0.55
22:DA:173:A:H2'	22:DA:174:U:H6	1.71	0.55
22:DA:503:A:C6	22:DA:506:G:C6	2.94	0.55
22:DA:506:G:H4'	22:DA:507:A:H5'	1.88	0.55
22:DA:518:G:H2'	22:DA:519:U:C6	2.40	0.55
22:DA:565:C:H4'	22:DA:1253:A:N6	2.21	0.55
22:DA:637:A:N6	22:DA:652:U:H4'	2.21	0.55
22:DA:1206:G:C2	22:DA:1207:C:C2	2.95	0.55
22:DA:1461:C:H2'	22:DA:1462:C:C6	2.40	0.55
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.71	0.55
22:DA:2706:A:N6	57:DA:3665:HOH:O	2.38	0.55
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.88	0.55
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.05	0.55
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.88	0.55
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.21	0.55
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.86	0.55
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.20	0.55
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.21	0.55
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.22	0.55
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.22	0.55
44:DW:37:VAL:C	44:DW:39:GLN:H	2.14	0.55
1:AB:117:GLU:HA	1:AB:120:SER:HB2	1.88	0.55
2:AC:55:VAL:O	2:AC:65:VAL:HA	2.07	0.55
3:AD:151:GLN:H	3:AD:154:VAL:CG1	2.18	0.55
3:AD:191:SER:OG	3:AD:192:ALA:N	2.37	0.55
7:AH:106:SER:HA	21:AA:642:A:N7	2.22	0.55
10:AK:108:ASN:HB3	20:AU:6:ARG:HG2	1.88	0.55
11:AL:49:ARG:NH1	11:AL:49:ARG:CG	2.65	0.55
12:AM:86:ARG:HH22	12:AM:97:ARG:HA	1.70	0.55
16:AQ:14:ASP:O	16:AQ:16:MET:HG2	2.06	0.55
21:AA:764:C:O2'	21:AA:765:G:H5'	2.07	0.55
22:BA:310:A:O2'	22:BA:311:A:H5"	2.06	0.55
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.41	0.55
22:BA:1288:G:C4	22:BA:1327:A:C2	2.94	0.55
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.06	0.55
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.41	0.55
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	2.31	0.55
38:BQ:111:LYS:HE2	39:BR:50:GLY:HA2	1.89	0.55
39:BR:48:LYS:HD2	39:BR:48:LYS:O	2.07	0.55
44:BW:18:LYS:HE3	44:BW:19:ARG:CG	2.36	0.55
1:CB:35:ASN:O	1:CB:36:LYS:HD2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:83:VAL:HA	2:CC:86:LEU:HD12	1.89	0.55
3:CD:203:TYR:C	3:CD:205:LYS:H	2.14	0.55
5:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.42	0.55
6:CG:101:ARG:HH22	53:CA:940:C:H5'	1.70	0.55
8:CI:5:TYR:N	8:CI:5:TYR:HD2	2.05	0.55
10:CK:27:ASN:HA	10:CK:57:SER:HB3	1.88	0.55
53:CA:672:U:H2'	53:CA:673:A:C8	2.41	0.55
53:CA:1026:G:H1	53:CA:1036:A:N6	2.04	0.55
22:DA:128:C:H2'	22:DA:129:C:C6	2.42	0.55
22:DA:279:A:C2	22:DA:362:A:H4'	2.41	0.55
22:DA:1301:A:C8	22:DA:1303:G:C8	2.95	0.55
22:DA:1552:A:O2'	22:DA:1553:A:H5'	2.07	0.55
22:DA:2311:A:H1'	27:DF:78:ILE:HD11	1.89	0.55
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.72	0.55
54:DB:27:C:O2'	54:DB:28:C:H5'	2.05	0.55
25:DD:56:LYS:NZ	25:DD:56:LYS:HB3	2.21	0.55
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.36	0.55
27:DF:8:LYS:HB2	27:DF:8:LYS:NZ	2.20	0.55
29:DH:5:LEU:HD11	29:DH:13:GLY:HA3	1.87	0.55
39:DR:36:ALA:HA	39:DR:58:VAL:HA	1.89	0.55
42:DU:33:VAL:O	42:DU:34:ILE:HG13	2.06	0.55
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.87	0.55
45:DX:4:CYS:HA	45:DX:32:LEU:HD11	1.89	0.55
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	1.87	0.55
16:AQ:49:ASN:O	16:AQ:50:ASN:C	2.48	0.55
19:AT:79:THR:O	19:AT:80:ALA:C	2.50	0.55
21:AA:198:G:O2'	21:AA:199:A:H8	1.89	0.55
21:AA:686:U:O2'	21:AA:687:A:H8	1.86	0.55
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.42	0.55
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.41	0.55
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.42	0.55
23:BB:66:A:H61	23:BB:107:G:H2'	1.72	0.55
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.31	0.55
26:BE:48:THR:H	26:BE:51:GLU:CG	2.19	0.55
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.89	0.55
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.36	0.55
32:BK:61:VAL:CG2	32:BK:87:LEU:HD11	2.37	0.55
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.87	0.55
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.31	0.55
1:CB:74:ALA:HB1	1:CB:206:ILE:CD1	2.31	0.55
4:CE:21:SER:OG	4:CE:28:ARG:HG3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:128:LYS:O	8:CI:129:ARG:HB2	2.06	0.55
16:CQ:61:ARG:HG2	16:CQ:75:VAL:CG1	2.35	0.55
19:CT:57:VAL:HG12	19:CT:71:ALA:HB2	1.88	0.55
53:CA:487:A:H2'	53:CA:488:C:O4'	2.07	0.55
53:CA:968:A:C4	53:CA:1062:U:H4'	2.41	0.55
53:CA:1070:U:H2'	53:CA:1071:C:H6	1.71	0.55
22:DA:602:A:H4'	22:DA:604:G:O3'	2.05	0.55
22:DA:1388:G:O2'	22:DA:1389:G:H5'	2.06	0.55
22:DA:2264:C:H41	44:DW:11:ASN:ND2	2.04	0.55
22:DA:2873:A:H4'	57:DN:201:HOH:O	2.06	0.55
27:DF:28:PRO:CB	27:DF:168:LEU:HD21	2.36	0.55
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.07	0.55
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.07	0.55
42:DU:52:ASN:CG	42:DU:54:PRO:HD3	2.31	0.55
1:AB:95:TRP:HZ3	1:AB:98:GLY:H	1.53	0.55
4:AE:109:ALA:O	4:AE:110:MET:HG2	2.07	0.55
20:AU:52:VAL:HG13	20:AU:53:LYS:N	2.15	0.55
21:AA:197:A:H4'	21:AA:198:G:O5'	2.05	0.55
22:BA:568:U:OP1	33:BL:36:LYS:HE3	2.07	0.55
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.87	0.55
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.37	0.55
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.06	0.55
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.53	0.55
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.39	0.55
41:BT:32:LEU:O	41:BT:34:VAL:HG13	2.07	0.55
11:CL:72:ASN:HD22	11:CL:72:ASN:H	1.55	0.55
12:CM:32:ILE:HD13	12:CM:32:ILE:O	2.06	0.55
53:CA:654:G:H2'	53:CA:655:A:H8	1.71	0.55
53:CA:696:A:H2'	53:CA:697:U:H6	1.72	0.55
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.60	0.55
53:CA:1513:A:H2'	53:CA:1514:G:C8	2.41	0.55
22:DA:230:G:O2'	22:DA:231:A:H5'	2.07	0.55
22:DA:308:G:N1	22:DA:309:A:C2	2.74	0.55
22:DA:627:A:O2'	22:DA:628:G:P	2.65	0.55
22:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.72	0.55
22:DA:1954:G:O2'	22:DA:1955:U:P	2.64	0.55
22:DA:2627:G:N3	22:DA:2781:A:H2	2.04	0.55
22:DA:2638:G:O2'	22:DA:2639:A:C8	2.60	0.55
22:DA:2875:C:O2'	22:DA:2876:G:C8	2.50	0.55
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.33	0.55
30:DI:57:VAL:HG21	30:DI:69:VAL:H	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.89	0.55
34:DM:27:SER:N	34:DM:66:ARG:HH22	2.00	0.55
34:DM:103:TYR:O	34:DM:104:GLU:HG3	2.07	0.55
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.22	0.55
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.89	0.55
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.07	0.55
1:AB:56:LEU:HB2	1:AB:183:PHE:CE1	2.42	0.55
2:AC:35:ASP:C	2:AC:37:LYS:H	2.14	0.55
6:AG:3:ARG:HG3	6:AG:4:ARG:N	2.22	0.55
7:AH:74:ILE:HG23	7:AH:74:ILE:O	2.06	0.55
13:AN:50:LEU:HB3	13:AN:51:PRO:HD2	1.87	0.55
21:AA:210:C:H4'	21:AA:211:G:N2	2.22	0.55
21:AA:548:G:H2'	21:AA:549:C:H6	1.71	0.55
21:AA:769:G:H4'	21:AA:1513:A:H4'	1.88	0.55
21:AA:1006:G:H2'	21:AA:1007:U:O4'	2.06	0.55
21:AA:1103:C:H2'	21:AA:1104:G:O4'	2.07	0.55
21:AA:1143:G:H2'	21:AA:1144:G:C8	2.41	0.55
22:BA:277:G:H4'	22:BA:278:A:C8	2.42	0.55
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.55	0.55
22:BA:639:U:H2'	22:BA:640:C:C6	2.42	0.55
22:BA:1856:U:H3	22:BA:1886:U:H3	1.55	0.55
22:BA:2405:G:H1'	22:BA:2412:A:N6	2.22	0.55
23:BB:90:C:H6	23:BB:90:C:C5'	2.09	0.55
24:BC:158:GLY:H	24:BC:194:VAL:HG13	1.70	0.55
24:BC:247:TRP:C	24:BC:249:VAL:H	2.14	0.55
26:BE:131:THR:HG22	26:BE:160:ALA:HA	1.88	0.55
28:BG:61:TRP:O	28:BG:62:ALA:C	2.48	0.55
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.89	0.55
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG22	1.88	0.55
33:BL:14:LYS:HG3	33:BL:15:ALA:H	1.72	0.55
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.07	0.55
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.06	0.55
40:BS:13:SER:O	40:BS:14:ALA:HB2	2.07	0.55
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.88	0.55
4:CE:68:ARG:O	4:CE:70:MET:HG2	2.06	0.55
4:CE:125:LYS:HG3	53:CA:9:G:OP2	2.06	0.55
7:CH:28:SER:HB3	7:CH:56:PRO:HB2	1.89	0.55
8:CI:49:GLN:N	8:CI:50:PRO:CD	2.70	0.55
10:CK:126:ARG:O	20:CU:33:ARG:NH2	2.40	0.55
11:CL:42:LYS:HG2	11:CL:43:LYS:N	2.21	0.55
15:CP:78:VAL:HG12	15:CP:78:VAL:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:86:G:H1'	53:CA:87:C:O5'	2.06	0.55
53:CA:920:U:H2'	53:CA:921:U:H6	1.71	0.55
22:DA:196:A:H61	22:DA:831:G:N2	2.03	0.55
22:DA:302:C:O2'	22:DA:303:G:C8	2.48	0.55
22:DA:505:A:O2'	22:DA:506:G:H5'	2.07	0.55
22:DA:704:G:H1'	22:DA:727:A:H61	1.67	0.55
22:DA:851:C:H2'	22:DA:852:U:C6	2.41	0.55
22:DA:947:A:O2'	22:DA:948:C:O4'	2.24	0.55
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.37	0.55
22:DA:1616:A:OP1	22:DA:1616:A:H8	1.90	0.55
22:DA:2136:G:O6	22:DA:2156:G:C2	2.60	0.55
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	1.89	0.55
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.37	0.55
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.14	0.55
1:AB:221:ARG:CZ	1:AB:221:ARG:HB3	2.37	0.55
6:AG:52:ARG:HH12	6:AG:121:ASN:ND2	2.05	0.55
7:AH:87:ARG:O	7:AH:121:GLY:HA3	2.07	0.55
9:AJ:11:LYS:HG3	9:AJ:97:ASP:HB3	1.89	0.55
11:AL:81:ILE:HD11	11:AL:94:TYR:CG	2.42	0.55
15:AP:31:ARG:HH21	21:AA:230:G:H5"	1.72	0.55
21:AA:346:G:H2'	21:AA:346:G:N3	2.21	0.55
21:AA:953:G:C2	21:AA:954:G:H1'	2.41	0.55
21:AA:1022:A:H2'	21:AA:1023:U:O4'	2.07	0.55
21:AA:1239:A:H1'	21:AA:1241:G:C5	2.42	0.55
21:AA:1323:G:H4'	21:AA:1362:A:C2	2.42	0.55
21:AA:1453:G:N2	21:AA:1454:G:C8	2.75	0.55
22:BA:1045:C:H5"	22:BA:1046:A:H5'	1.89	0.55
22:BA:1913:A:OP1	22:BA:1913:A:H4'	2.06	0.55
28:BG:139:VAL:C	28:BG:141:GLY:N	2.62	0.55
38:BQ:85:ALA:O	38:BQ:87:VAL:O	2.25	0.55
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.22	0.55
41:BT:40:LYS:O	41:BT:44:LYS:N	2.39	0.55
41:BT:56:GLU:HG2	41:BT:57:VAL:HG12	1.89	0.55
44:BW:28:GLU:OE2	44:BW:29:SER:N	2.39	0.55
45:BX:50:VAL:HG12	45:BX:51:SER:O	2.06	0.55
7:CH:24:VAL:HG22	7:CH:25:THR:H	1.72	0.55
8:CI:29:ILE:HA	8:CI:64:ILE:O	2.07	0.55
10:CK:124:LYS:O	20:CU:34:ARG:HB2	2.07	0.55
53:CA:183:C:O2'	53:CA:184:G:C5'	2.55	0.55
53:CA:461:A:P	53:CA:462:G:OP2	2.65	0.55
22:DA:748:G:O5'	40:DS:89:ALA:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:858:G:C4	22:DA:2268:A:C2	2.95	0.55
22:DA:1364:G:H1'	22:DA:1368:G:H22	1.71	0.55
22:DA:1574:C:H2'	22:DA:1575:C:O4'	2.07	0.55
22:DA:2339:C:H2'	22:DA:2340:A:H8	1.71	0.55
24:DC:245:THR:C	24:DC:247:TRP:H	2.14	0.55
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.72	0.55
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.35	0.55
31:DJ:86:GLN:O	31:DJ:87:ALA:HB2	2.07	0.55
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.49	0.55
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.41	0.55
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.06	0.55
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.88	0.55
45:DX:52:ALA:C	45:DX:54:GLY:H	2.15	0.55
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.88	0.55
1:AB:105:THR:HG22	1:AB:105:THR:O	2.07	0.55
1:AB:212:TYR:HA	1:AB:215:ALA:HB3	1.89	0.55
2:AC:153:SER:HB2	2:AC:164:THR:HG22	1.89	0.55
5:AF:42:TRP:HZ2	5:AF:61:LEU:HD22	1.72	0.55
9:AJ:18:ILE:HD13	9:AJ:72:ARG:HG2	1.88	0.55
11:AL:29:LYS:O	11:AL:81:ILE:HG22	2.07	0.55
15:AP:44:SER:O	15:AP:46:LYS:HG3	2.07	0.55
21:AA:107:G:H2'	21:AA:108:G:H5'	1.88	0.55
22:BA:364:C:O2'	22:BA:365:U:H5'	2.06	0.55
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.07	0.55
22:BA:686:U:O4	50:B2:12:ARG:NH2	2.40	0.55
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.43	0.55
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.15	0.55
22:BA:1962:C:O2'	22:BA:1964:G:OP2	2.25	0.55
22:BA:2134:A:N6	22:BA:2135:A:N6	2.55	0.55
22:BA:2732:G:H8	22:BA:2732:G:OP2	1.90	0.55
24:BC:94:LEU:HB2	24:BC:100:ARG:HD3	1.89	0.55
27:BF:128:SER:OG	27:BF:154:THR:HB	2.07	0.55
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.87	0.55
41:BT:19:LYS:O	41:BT:20:ALA:C	2.49	0.55
41:BT:24:MET:HE3	41:BT:24:MET:HA	1.88	0.55
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	1.88	0.55
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.07	0.55
4:CE:79:THR:HA	4:CE:121:ASN:CG	2.32	0.55
5:CF:91:ARG:O	5:CF:93:LYS:HE3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:148:LYS:NZ	6:CG:148:LYS:HB2	2.22	0.55
8:CI:123:ARG:HB3	53:CA:1343:G:H4'	1.89	0.55
9:CJ:37:ARG:HG2	9:CJ:75:ASP:HB3	1.88	0.55
11:CL:70:GLY:C	11:CL:98:ARG:HH22	2.15	0.55
53:CA:961:U:C4	53:CA:983:A:C6	2.95	0.55
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.41	0.55
22:DA:322:A:H3'	26:DE:163:ASN:HD21	1.72	0.55
22:DA:671:C:O2'	22:DA:672:C:C5'	2.55	0.55
22:DA:950:G:C6	22:DA:951:C:C4	2.94	0.55
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.07	0.55
22:DA:1828:G:O2'	22:DA:1829:A:H5'	2.07	0.55
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.59	0.55
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.41	0.55
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.35	0.55
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.21	0.55
28:DG:58:ALA:O	28:DG:59:ASP:C	2.50	0.55
32:DK:87:LEU:HB2	32:DK:92:GLU:O	2.06	0.55
33:DL:3:LEU:O	33:DL:4:ASN:C	2.49	0.55
38:DQ:67:ALA:O	38:DQ:105:PHE:HE1	1.89	0.55
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.06	0.55
1:AB:20:ARG:HA	1:AB:20:ARG:CZ	2.37	0.54
3:AD:131:ILE:HG21	21:AA:620:C:N3	2.21	0.54
4:AE:104:ILE:HD11	4:AE:114:LEU:HB3	1.89	0.54
10:AK:107:THR:HG22	10:AK:108:ASN:ND2	2.21	0.54
19:AT:5:SER:OG	19:AT:6:ALA:N	2.38	0.54
20:AU:24:LYS:CG	20:AU:25:ALA:H	2.20	0.54
21:AA:129:A:O2'	21:AA:130:A:H5"	2.07	0.54
21:AA:198:G:O2'	21:AA:199:A:H5'	2.07	0.54
21:AA:209:U:H5'	21:AA:210:C:OP2	2.07	0.54
21:AA:736:C:H2'	21:AA:737:C:C6	2.42	0.54
21:AA:1114:C:H2'	21:AA:1115:U:O4'	2.07	0.54
21:AA:1441:A:H62	21:AA:1461:G:N2	2.04	0.54
22:BA:573:U:H4'	22:BA:574:A:OP1	2.06	0.54
22:BA:729:G:C4	22:BA:1775:U:O2	2.60	0.54
22:BA:1735:A:C2	22:BA:1736:U:C2	2.95	0.54
22:BA:2728:U:HO2'	22:BA:2729:G:H8	1.50	0.54
24:BC:139:THR:O	24:BC:161:VAL:O	2.25	0.54
25:BD:191:GLY:O	25:BD:192:ALA:CB	2.56	0.54
28:BG:82:PHE:CZ	28:BG:137:LYS:HB2	2.42	0.54
41:BT:39:THR:O	41:BT:41:ALA:N	2.38	0.54
1:CB:80:LYS:HD3	1:CB:90:PHE:CZ	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:185:ILE:HA	1:CB:199:ILE:HG13	1.89	0.54
9:CJ:81:GLU:HG2	9:CJ:85:ASP:HB3	1.89	0.54
18:CS:77:ARG:HH21	53:CA:1222:G:H5'	1.72	0.54
53:CA:78:A:C6	53:CA:79:G:C6	2.96	0.54
53:CA:252:U:H2'	53:CA:253:A:H8	1.68	0.54
53:CA:818:G:C3'	53:CA:819:A:H5"	2.37	0.54
53:CA:834:U:H2'	53:CA:835:U:H6	1.72	0.54
53:CA:1467:C:H2'	53:CA:1468:A:C8	2.42	0.54
22:DA:370:G:H8	22:DA:370:G:OP2	1.91	0.54
22:DA:945:A:C8	22:DA:2448:A:C2	2.95	0.54
22:DA:960:A:C8	22:DA:962:G:C8	2.95	0.54
22:DA:1059:G:H1	22:DA:1088:A:H2	1.55	0.54
22:DA:1385:A:H4'	22:DA:1386:C:OP1	2.07	0.54
22:DA:1511:G:O2'	22:DA:1512:C:O4'	2.25	0.54
22:DA:1534:U:H2'	22:DA:1536:C:O2	2.07	0.54
22:DA:1830:C:H4'	24:DC:14:HIS:HE1	1.71	0.54
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.25	0.54
22:DA:2266:A:H4'	22:DA:2267:A:O5'	2.07	0.54
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.06	0.54
22:DA:2285:C:H5	49:D1:5:ARG:NH2	2.04	0.54
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.42	0.54
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.88	0.54
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.88	0.54
36:DO:18:LEU:HD13	36:DO:25:ARG:HD2	1.89	0.54
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.20	0.54
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.72	0.54
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.20	0.54
21:AA:500:G:H2'	21:AA:501:C:C6	2.43	0.54
21:AA:588:G:C2	21:AA:589:U:C2	2.96	0.54
21:AA:593:U:O2'	21:AA:594:U:H5'	2.07	0.54
21:AA:702:A:N9	22:BA:1847:A:H2	2.06	0.54
21:AA:1197:A:O2'	21:AA:1198:G:H5'	2.07	0.54
22:BA:38:A:O2'	26:BE:43:THR:HA	2.06	0.54
22:BA:633:A:H8	22:BA:633:A:O5'	1.88	0.54
22:BA:1569:A:N6	22:BA:1570:A:C6	2.75	0.54
22:BA:1734:G:C2'	22:BA:1735:A:H8	2.19	0.54
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.37	0.54
22:BA:2860:A:H8	22:BA:2860:A:O5'	1.89	0.54
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.05	0.54
27:BF:128:SER:HA	27:BF:154:THR:HA	1.89	0.54
28:BG:51:PHE:N	28:BG:51:PHE:CD2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
31:BJ:88:THR:HG23	31:BJ:90:GLU:HG3	1.88	0.54
33:BL:55:MET:HA	33:BL:55:MET:CE	2.37	0.54
40:BS:88:ARG:HH21	40:BS:88:ARG:CG	2.20	0.54
41:BT:29:THR:CA	41:BT:86:THR:HA	2.38	0.54
43:BV:38:LEU:CD2	43:BV:40:ILE:HD11	2.37	0.54
43:BV:65:VAL:O	43:BV:66:ASP:OD1	2.26	0.54
44:BW:19:ARG:NH1	44:BW:22:VAL:CG1	2.71	0.54
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.07	0.54
49:B1:16:THR:HB	49:B1:41:VAL:HG21	1.88	0.54
13:CN:20:PHE:CA	13:CN:24:ALA:HB2	2.38	0.54
53:CA:78:A:H2'	53:CA:79:G:H8	1.71	0.54
53:CA:441:A:C2	53:CA:497:G:C6	2.95	0.54
53:CA:1095:U:H2'	53:CA:1096:C:H6	1.72	0.54
53:CA:1200:C:HO2'	53:CA:1201:A:P	2.30	0.54
53:CA:1409:C:H2'	53:CA:1410:A:H8	1.71	0.54
22:DA:412:A:N7	22:DA:2412:A:H1'	2.23	0.54
22:DA:508:A:H3'	22:DA:509:C:H5'	1.89	0.54
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.72	0.54
22:DA:574:A:C2	22:DA:2032:G:O2'	2.60	0.54
22:DA:1090:A:C3'	22:DA:1091:G:H5"	2.38	0.54
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.41	0.54
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.42	0.54
22:DA:2143:C:H3'	22:DA:2144:G:C8	2.42	0.54
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.07	0.54
54:DB:13:G:H8	54:DB:13:G:H5"	1.72	0.54
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.87	0.54
25:DD:120:GLY:O	25:DD:124:ARG:HB2	2.07	0.54
27:DF:3:LEU:HG	27:DF:100:GLU:CD	2.32	0.54
27:DF:137:PHE:CB	27:DF:138:PRO:HD2	2.29	0.54
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.22	0.54
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.22	0.54
42:DU:20:LYS:HD2	42:DU:38:ILE:HD11	1.89	0.54
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.89	0.54
12:AM:7:ASN:HD22	12:AM:8:ILE:N	2.05	0.54
13:AN:60:ARG:O	13:AN:61:ASN:CB	2.54	0.54
16:AQ:48:GLU:HA	16:AQ:48:GLU:OE1	2.07	0.54
17:AR:62:ARG:HD3	17:AR:69:TYR:CD2	2.42	0.54
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.91	0.54
32:BK:63:VAL:HG22	32:BK:107:LEU:CD2	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:14:ALA:O	40:BS:18:ARG:HG3	2.07	0.54
1:CB:122:ASP:HB3	1:CB:124:THR:HG22	1.90	0.54
2:CC:180:ASP:OD2	2:CC:203:LYS:HB2	2.06	0.54
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.16	0.54
6:CG:70:PRO:HB3	6:CG:98:LEU:HD12	1.89	0.54
6:CG:74:VAL:CG1	6:CG:143:MET:HB2	2.38	0.54
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.90	0.54
8:CI:44:ARG:HH21	8:CI:48:ARG:NH1	2.05	0.54
12:CM:18:LEU:H	12:CM:18:LEU:HD12	1.71	0.54
53:CA:1446:A:H2'	53:CA:1447:A:H5"	1.89	0.54
53:CA:1455:G:H2'	53:CA:1456:A:C8	2.41	0.54
22:DA:402:A:H2'	22:DA:403:U:O4'	2.07	0.54
22:DA:671:C:HO2'	22:DA:672:C:H6	1.49	0.54
22:DA:831:G:H5"	33:DL:37:GLY:HA2	1.89	0.54
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.37	0.54
22:DA:1574:C:O5'	22:DA:1574:C:H6	1.90	0.54
22:DA:1800:C:H5"	24:DC:145:MET:HE1	1.89	0.54
22:DA:1982:U:H6	22:DA:1982:U:C5'	2.20	0.54
22:DA:2458:G:H2'	22:DA:2490:G:H1	1.72	0.54
22:DA:2665:A:H2'	22:DA:2666:C:O2	2.07	0.54
26:DE:98:LYS:O	26:DE:99:LYS:HB2	2.06	0.54
31:DJ:92:MET:HE2	31:DJ:92:MET:HA	1.90	0.54
32:DK:118:LEU:O	32:DK:120:PRO:HD2	2.07	0.54
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.88	0.54
39:DR:39:LEU:H	39:DR:39:LEU:HD23	1.71	0.54
50:D2:11:LYS:NZ	57:D2:101:HOH:O	2.39	0.54
51:D3:32:LEU:HD23	51:D3:35:LYS:HE2	1.89	0.54
4:AE:100:GLU:HB2	4:AE:103:GLY:N	2.23	0.54
4:AE:148:SER:HB2	4:AE:151:MET:HB2	1.90	0.54
4:AE:149:PRO:HG2	4:AE:150:GLU:H	1.73	0.54
4:AE:158:LYS:HE2	7:AH:63:LYS:NZ	2.22	0.54
12:AM:7:ASN:HD22	12:AM:8:ILE:H	1.54	0.54
21:AA:429:U:C1'	21:AA:430:A:H5"	2.37	0.54
21:AA:570:G:H2'	21:AA:571:U:C6	2.41	0.54
21:AA:601:G:H2'	21:AA:602:A:C8	2.42	0.54
21:AA:1005:A:C2	21:AA:1006:G:H1'	2.42	0.54
21:AA:1160:G:O6	21:AA:1181:G:C6	2.60	0.54
22:BA:65:U:H2'	22:BA:66:C:C6	2.42	0.54
22:BA:800:A:H4'	22:BA:801:G:O5'	2.08	0.54
22:BA:1343:G:H2'	22:BA:1344:U:H6	1.71	0.54
22:BA:2109:U:O4	22:BA:2110:G:C5	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.71	0.54
24:BC:208:GLY:HA2	24:BC:211:ARG:HB2	1.89	0.54
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.13	0.54
26:BE:58:LYS:HG3	26:BE:71:GLY:HA2	1.88	0.54
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.33	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
5:CF:38:ARG:HG3	5:CF:63:ASN:HB2	1.90	0.54
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.23	0.54
15:CP:43:ALA:HB1	15:CP:46:LYS:HZ1	1.72	0.54
15:CP:44:SER:HB2	15:CP:46:LYS:CG	2.36	0.54
15:CP:52:LEU:CD2	15:CP:75:ILE:HG12	2.35	0.54
53:CA:166:U:OP2	53:CA:166:U:H6	1.89	0.54
53:CA:486:U:O2	53:CA:486:U:C2'	2.56	0.54
53:CA:1004:A:C4	53:CA:1026:G:N7	2.76	0.54
53:CA:1151:A:N6	53:CA:1152:A:N6	2.55	0.54
53:CA:1439:G:C2	53:CA:1463:U:O2	2.60	0.54
22:DA:480:A:H3'	22:DA:481:G:H5'	1.89	0.54
22:DA:642:U:H4'	22:DA:2349:G:O2'	2.06	0.54
22:DA:866:A:O2'	22:DA:867:C:C6	2.59	0.54
22:DA:1799:G:N2	22:DA:1818:U:HO2'	2.03	0.54
22:DA:2093:G:O2'	22:DA:2094:A:O5'	2.25	0.54
22:DA:2332:C:H5"	44:DW:76:ARG:NH1	2.23	0.54
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.89	0.54
22:DA:2667:C:H2'	22:DA:2668:G:C8	2.42	0.54
25:DD:119:ALA:CB	25:DD:163:GLY:H	2.14	0.54
26:DE:62:GLN:O	26:DE:65:THR:HG22	2.08	0.54
27:DF:91:ARG:HA	27:DF:95:MET:SD	2.47	0.54
27:DF:129:MET:HE2	27:DF:174:PHE:HZ	1.71	0.54
32:DK:111:LYS:HE3	32:DK:111:LYS:N	2.14	0.54
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.90	0.54
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.89	0.54
1:AB:138:ARG:HG3	1:AB:139:GLU:N	2.23	0.54
7:AH:2:MET:HE1	21:AA:654:G:C4'	2.38	0.54
8:AI:10:ARG:HD2	21:AA:1118:U:OP1	2.08	0.54
8:AI:88:GLU:HG3	8:AI:89:TYR:H	1.72	0.54
10:AK:121:ARG:NH2	20:AU:35:GLU:HG3	2.22	0.54
17:AR:40:PRO:HB2	17:AR:42:ARG:HG2	1.88	0.54
17:AR:46:THR:HG21	17:AR:51:GLN:OE1	2.07	0.54
19:AT:17:ARG:CG	21:AA:322:C:O2'	2.56	0.54
19:AT:67:HIS:HB3	19:AT:68:LYS:HZ2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:272:A:O2'	22:BA:273:G:O5'	2.26	0.54
22:BA:923:G:N2	44:BW:23:LYS:HZ3	2.06	0.54
22:BA:1615:C:H2'	22:BA:1617:C:C6	2.42	0.54
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.37	0.54
22:BA:2352:A:H5"	22:BA:2353:G:OP2	2.07	0.54
22:BA:2752:C:H2'	22:BA:2753:A:C8	2.41	0.54
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.08	0.54
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.23	0.54
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.56	0.54
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.06	0.54
46:BY:40:SER:C	46:BY:42:LEU:N	2.62	0.54
5:CF:9:MET:HB2	5:CF:85:ILE:HG13	1.89	0.54
10:CK:90:PRO:O	10:CK:91:GLY:C	2.51	0.54
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.89	0.54
15:CP:57:ILE:O	15:CP:61:VAL:HG23	2.08	0.54
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.71	0.54
20:CU:53:LYS:HB2	20:CU:53:LYS:NZ	2.22	0.54
53:CA:79:G:N2	53:CA:91:U:C2	2.76	0.54
53:CA:737:C:H2'	53:CA:738:C:C6	2.42	0.54
53:CA:908:A:H2'	53:CA:909:A:C8	2.43	0.54
22:DA:653:U:OP1	22:DA:653:U:H4'	2.08	0.54
22:DA:685:A:H5'	22:DA:686:U:OP1	2.07	0.54
22:DA:834:G:H5'	51:D3:56:LEU:HD11	1.90	0.54
22:DA:1057:A:C8	22:DA:1086:A:H2'	2.42	0.54
22:DA:1759:A:H2'	22:DA:1760:C:C6	2.42	0.54
22:DA:1774:C:O2	24:DC:10:PRO:HB2	2.07	0.54
22:DA:1936:A:H2	22:DA:1943:U:O4	1.91	0.54
22:DA:2283:C:O2'	22:DA:2284:A:H5'	2.08	0.54
22:DA:2386:A:H2	44:DW:38:ARG:HG2	1.71	0.54
22:DA:2683:C:H4'	25:DD:13:ARG:NH2	2.23	0.54
22:DA:2836:U:O2'	22:DA:2837:A:O5'	2.24	0.54
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.90	0.54
54:DB:26:C:H1'	54:DB:117:G:H1'	1.88	0.54
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.07	0.54
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.08	0.54
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.90	0.54
35:DN:34:ILE:HD12	35:DN:44:LEU:HD21	1.90	0.54
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.88	0.54
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.89	0.54
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.43	0.54
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:80:LYS:HG3	1:AB:90:PHE:CE1	2.43	0.54
1:AB:139:GLU:O	1:AB:143:LEU:HD23	2.07	0.54
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.89	0.54
8:AI:54:VAL:O	8:AI:55:ASP:O	2.25	0.54
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.08	0.54
16:AQ:58:VAL:HG22	16:AQ:59:GLU:N	2.22	0.54
19:AT:33:LYS:HE2	19:AT:33:LYS:N	2.22	0.54
21:AA:80:A:C2	21:AA:81:A:H1'	2.42	0.54
21:AA:579:A:H2'	21:AA:580:C:H6	1.72	0.54
21:AA:1234:C:O2'	21:AA:1235:U:H5'	2.07	0.54
21:AA:1251:A:H2'	21:AA:1252:A:H8	1.70	0.54
21:AA:1409:C:O2'	21:AA:1410:A:H5'	2.07	0.54
21:AA:1435:G:H2'	21:AA:1436:U:C6	2.42	0.54
22:BA:94:A:H2'	22:BA:95:A:C8	2.43	0.54
22:BA:395:U:O2'	22:BA:396:G:C8	2.60	0.54
22:BA:528:A:C2	22:BA:2042:A:H2'	2.42	0.54
22:BA:767:U:O2'	22:BA:768:G:H5'	2.08	0.54
22:BA:804:A:H5"	22:BA:805:G:OP1	2.07	0.54
22:BA:1268:A:C2	22:BA:2013:A:C4	2.95	0.54
22:BA:1477:A:H2'	22:BA:1478:G:O4'	2.08	0.54
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.42	0.54
22:BA:2899:A:H2'	22:BA:2900:A:C8	2.43	0.54
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.65	0.54
26:BE:108:ILE:HD13	26:BE:109:LEU:N	2.23	0.54
29:BH:66:ASN:C	29:BH:68:ARG:H	2.14	0.54
30:BI:27:LEU:C	30:BI:27:LEU:HD12	2.33	0.54
31:BJ:17:VAL:HG13	31:BJ:55:ILE:HG13	1.88	0.54
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.23	0.54
32:BK:72:PRO:O	32:BK:74:GLY:N	2.35	0.54
37:BP:83:ILE:HD13	37:BP:84:SER:N	2.23	0.54
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.09	0.54
46:BY:5:GLU:O	46:BY:6:LEU:C	2.51	0.54
52:B4:7:VAL:HG23	52:B4:8:LYS:H	1.72	0.54
1:CB:9:LEU:HB2	1:CB:11:ALA:H	1.72	0.54
2:CC:109:GLU:HG3	2:CC:139:ASN:O	2.08	0.54
8:CI:39:GLY:O	8:CI:40:ARG:HB2	2.07	0.54
8:CI:59:LYS:HG2	8:CI:60:LEU:HG	1.88	0.54
9:CJ:80:THR:O	9:CJ:84:VAL:HG22	2.08	0.54
11:CL:14:LYS:C	11:CL:14:LYS:HE3	2.33	0.54
53:CA:389:A:H2'	53:CA:390:U:O4'	2.07	0.54
53:CA:499:A:H1'	53:CA:500:G:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:552:U:H2'	53:CA:553:A:H8	1.72	0.54
53:CA:1408:A:N1	53:CA:1494:G:C6	2.75	0.54
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.89	0.54
22:DA:816:C:H2'	22:DA:817:C:H6	1.72	0.54
22:DA:1338:G:C2'	22:DA:1339:G:H5'	2.36	0.54
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.71	0.54
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.37	0.54
26:DE:34:ALA:HA	26:DE:94:GLN:HG3	1.90	0.54
29:DH:125:THR:HG22	29:DH:146:VAL:HG11	1.89	0.54
32:DK:107:LEU:C	32:DK:109:SER:H	2.15	0.54
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.89	0.54
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.22	0.54
3:AD:131:ILE:HG12	21:AA:620:C:C6	2.42	0.54
4:AE:93:VAL:HG21	4:AE:139:THR:HG22	1.90	0.54
21:AA:539:A:H2'	21:AA:540:G:C8	2.43	0.54
22:BA:39:G:H2'	22:BA:40:U:C6	2.41	0.54
22:BA:136:G:O6	22:BA:142:A:N6	2.41	0.54
22:BA:153:U:O2'	22:BA:154:U:H5'	2.07	0.54
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.72	0.54
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.90	0.54
22:BA:2402:U:H2'	22:BA:2403:C:OP2	2.08	0.54
25:BD:140:HIS:HE1	57:BD:302:HOH:O	1.90	0.54
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.22	0.54
36:BO:59:ALA:HA	36:BO:62:LEU:HD12	1.90	0.54
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.22	0.54
44:BW:29:SER:CA	44:BW:63:ASP:HB3	2.36	0.54
2:CC:187:GLU:O	2:CC:188:ALA:HB2	2.08	0.54
5:CF:12:PRO:HD3	5:CF:57:ALA:HA	1.90	0.54
8:CI:9:GLY:HA3	8:CI:16:ALA:HB3	1.89	0.54
11:CL:97:VAL:O	11:CL:97:VAL:CG2	2.55	0.54
13:CN:27:LYS:HD2	13:CN:27:LYS:C	2.33	0.54
15:CP:6:LEU:HB2	15:CP:17:TYR:HB3	1.89	0.54
20:CU:3:ILE:HG21	20:CU:18:PHE:HB3	1.90	0.54
53:CA:511:C:O2'	53:CA:512:U:C5'	2.55	0.54
53:CA:1394:A:C5	53:CA:1501:C:H4'	2.42	0.54
22:DA:61:C:N3	22:DA:94:A:C2	2.76	0.54
22:DA:110:G:N2	22:DA:111:A:H1'	2.22	0.54
22:DA:183:C:C2'	22:DA:184:C:H5'	2.37	0.54
22:DA:249:C:O2	22:DA:249:C:H2'	2.06	0.54
22:DA:273:G:H2'	22:DA:274:C:H6	1.71	0.54
22:DA:303:G:C2	22:DA:304:U:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1329:U:HO2'	22:DA:1330:C:P	2.30	0.54
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.08	0.54
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.66	0.54
22:DA:1609:A:O2'	22:DA:1610:A:H5"	2.07	0.54
22:DA:2077:A:OP1	22:DA:2238:G:N1	2.40	0.54
54:DB:38:C:H4'	36:DO:100:HIS:NE2	2.22	0.54
54:DB:108:A:HO2'	54:DB:109:A:P	2.30	0.54
24:DC:2:VAL:O	24:DC:3:VAL:HB	2.08	0.54
24:DC:44:ASN:C	24:DC:46:GLY:N	2.65	0.54
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.22	0.54
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.85	0.54
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.08	0.54
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.89	0.54
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.25	0.54
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.89	0.54
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.23	0.54
8:AI:24:ASN:H	8:AI:61:ASP:HB2	1.72	0.54
10:AK:30:ILE:HD11	21:AA:706:A:O2'	2.08	0.54
11:AL:57:THR:HG21	21:AA:363:A:OP1	2.07	0.54
12:AM:10:ASP:OD1	12:AM:11:HIS:N	2.25	0.54
15:AP:12:LYS:O	15:AP:13:LYS:HB2	2.08	0.54
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.23	0.54
21:AA:85:U:O5'	21:AA:86:G:N2	2.40	0.54
21:AA:188:C:O2	21:AA:188:C:H2'	2.07	0.54
21:AA:994:A:C5	21:AA:1216:A:H4'	2.43	0.54
21:AA:1452:C:H5'	21:AA:1453:G:C5	2.43	0.54
22:BA:285:G:N3	22:BA:285:G:H2'	2.22	0.54
22:BA:475:C:O2'	22:BA:476:G:H5'	2.08	0.54
22:BA:547:A:C8	22:BA:548:G:N3	2.76	0.54
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.43	0.54
22:BA:2037:A:H2'	22:BA:2038:G:C8	2.43	0.54
23:BB:57:A:H2'	23:BB:58:A:C8	2.43	0.54
24:BC:140:VAL:HA	24:BC:190:THR:O	2.07	0.54
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.43	0.54
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.32	0.54
2:CC:84:GLU:HA	2:CC:87:ARG:HB2	1.89	0.54
2:CC:155:ARG:HD3	53:CA:1055:A:O2'	2.08	0.54
4:CE:148:SER:H	4:CE:151:MET:CE	2.21	0.54
9:CJ:59:LYS:HG2	53:CA:972:C:H4'	1.90	0.54
20:CU:14:ALA:O	20:CU:15:LEU:O	2.26	0.54
22:DA:64:A:O2'	41:DT:69:ARG:HG2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:401:A:H2'	22:DA:402:A:C8	2.43	0.54
22:DA:1435:G:C2	22:DA:1558:C:N4	2.75	0.54
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.43	0.54
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.08	0.54
22:DA:2732:G:H5"	22:DA:2733:A:O4'	2.08	0.54
27:DF:52:ALA:HA	27:DF:55:ASP:HB2	1.89	0.54
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.71	0.54
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.71	0.54
42:DU:14:THR:HB	42:DU:68:ASN:CB	2.36	0.54
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.73	0.54
44:DW:70:VAL:HG22	44:DW:70:VAL:O	2.07	0.54
2:AC:76:ILE:HD11	2:AC:102:ILE:HG12	1.90	0.54
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.88	0.54
5:AF:91:ARG:CG	5:AF:92:THR:H	2.18	0.54
10:AK:42:GLY:HA3	10:AK:73:VAL:CG1	2.37	0.54
14:AO:23:SER:O	14:AO:24:THR:C	2.50	0.54
22:BA:14:A:H8	22:BA:14:A:O5'	1.91	0.54
22:BA:469:G:O6	50:B2:37:LYS:HE2	2.07	0.54
22:BA:871:U:H2'	22:BA:872:U:C6	2.42	0.54
22:BA:876:C:H2'	22:BA:877:A:O4'	2.08	0.54
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.54	0.54
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.08	0.54
22:BA:2531:A:H5'	28:BG:156:TYR:CE2	2.43	0.54
22:BA:2599:G:N7	24:BC:234:GLY:HA2	2.22	0.54
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.08	0.54
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.07	0.54
28:BG:10:VAL:O	28:BG:10:VAL:CG2	2.56	0.54
28:BG:86:LEU:N	28:BG:86:LEU:CD1	2.69	0.54
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.41	0.54
31:BJ:88:THR:HG22	31:BJ:91:GLU:HB2	1.88	0.54
33:BL:93:ASN:ND2	33:BL:94:THR:H	1.95	0.54
33:BL:125:LEU:HD23	33:BL:125:LEU:N	2.23	0.54
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.16	0.54
39:BR:21:ARG:NH2	39:BR:93:PHE:CD1	2.76	0.54
1:CB:104:LYS:HD2	1:CB:104:LYS:H	1.73	0.54
3:CD:2:ARG:HE	3:CD:114:ARG:CD	2.20	0.54
3:CD:195:ASN:HB3	3:CD:197:HIS:NE2	2.23	0.54
8:CI:51:LEU:HG	8:CI:86:LEU:CD2	2.27	0.54
12:CM:28:ARG:O	12:CM:28:ARG:HD2	2.07	0.54
15:CP:52:LEU:O	15:CP:53:ASP:HB2	2.08	0.54
53:CA:71:A:C2	53:CA:72:A:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:631:C:H3'	53:CA:632:U:H5'	1.89	0.54
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.42	0.54
53:CA:1322:C:H2'	53:CA:1322:C:O2	2.06	0.54
22:DA:590:A:H2'	22:DA:591:U:C6	2.39	0.54
22:DA:668:A:C5	22:DA:670:A:N7	2.75	0.54
22:DA:836:G:C6	22:DA:837:C:N3	2.76	0.54
22:DA:1338:G:H2'	22:DA:1339:G:H5'	1.90	0.54
22:DA:1439:A:H1'	22:DA:1553:A:N6	2.23	0.54
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.61	0.54
22:DA:1817:G:H4'	24:DC:85:ASN:O	2.08	0.54
22:DA:2652:C:C4	22:DA:2653:U:C4	2.95	0.54
54:DB:58:A:C2'	54:DB:59:A:C8	2.73	0.54
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.72	0.54
27:DF:111:ARG:HG3	27:DF:135:ILE:HG12	1.90	0.54
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.08	0.54
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	1.90	0.54
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.08	0.54
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.88	0.54
41:DT:67:VAL:O	41:DT:68:LYS:HG3	2.07	0.54
42:DU:54:PRO:HG2	42:DU:55:GLY:N	2.21	0.54
42:DU:94:PHE:O	42:DU:95:PHE:C	2.50	0.54
43:DV:4:ILE:HD11	43:DV:50:MET:HE1	1.90	0.54
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.90	0.54
49:D1:24:LYS:HD2	49:D1:33:LEU:HD22	1.90	0.54
50:D2:46:LYS:HD2	50:D2:46:LYS:N	2.23	0.54
52:D4:22:VAL:O	52:D4:24:ARG:HG3	2.08	0.54
8:AI:60:LEU:HD23	8:AI:60:LEU:H	1.73	0.54
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.08	0.54
9:AJ:44:THR:HG23	9:AJ:70:HIS:HA	1.90	0.54
12:AM:24:VAL:HG23	12:AM:24:VAL:O	2.06	0.54
18:AS:10:ILE:HD11	18:AS:15:LEU:HB2	1.90	0.54
21:AA:107:G:C2'	21:AA:108:G:H5'	2.38	0.54
21:AA:652:U:HO2'	21:AA:653:U:P	2.30	0.54
21:AA:978:A:O2'	21:AA:1322:C:H5	1.90	0.54
21:AA:1228:C:H2'	21:AA:1229:A:C8	2.43	0.54
22:BA:708:G:N2	22:BA:724:U:H1'	2.23	0.54
22:BA:721:A:H2'	22:BA:722:A:C8	2.43	0.54
22:BA:729:G:C4	22:BA:1775:U:C2	2.96	0.54
22:BA:894:U:H2'	22:BA:895:U:C6	2.43	0.54
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.38	0.54
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.37	0.54
2:CC:191:THR:HB	2:CC:192:TYR:CE1	2.43	0.54
5:CF:67:PRO:O	5:CF:68:GLN:C	2.51	0.54
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.88	0.54
15:CP:5:ARG:NH1	15:CP:24:SER:HA	2.23	0.54
18:CS:28:LYS:O	18:CS:30:LEU:HD12	2.08	0.54
19:CT:14:GLU:HA	19:CT:17:ARG:HB2	1.89	0.54
53:CA:183:C:H2'	53:CA:183:C:O2	2.05	0.54
53:CA:745:G:H2'	53:CA:746:A:H8	1.73	0.54
53:CA:1349:A:H2'	53:CA:1350:A:H8	1.70	0.54
53:CA:1363:A:C5	53:CA:1365:G:C6	2.96	0.54
53:CA:1409:C:H5'	22:DA:1916:A:N1	2.22	0.54
22:DA:33:C:H2'	22:DA:446:G:N2	2.22	0.54
22:DA:49:A:C6	22:DA:177:G:C6	2.96	0.54
22:DA:397:U:OP1	45:DX:30:PRO:HA	2.07	0.54
22:DA:547:A:H8	22:DA:548:G:H5'	1.73	0.54
22:DA:1330:C:O2'	22:DA:1331:G:H8	1.90	0.54
22:DA:1386:C:O2'	22:DA:1387:A:H8	1.90	0.54
22:DA:1649:G:H2'	22:DA:1650:A:H8	1.71	0.54
22:DA:2058:A:N6	22:DA:2059:A:N6	2.56	0.54
24:DC:62:ARG:HD3	24:DC:83:ASP:CG	2.33	0.54
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.22	0.54
27:DF:59:ILE:HG23	27:DF:137:PHE:HE1	1.73	0.54
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.43	0.54
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.08	0.54
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.89	0.54
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.73	0.54
44:DW:33:GLY:O	44:DW:34:SER:CB	2.55	0.54
1:AB:20:ARG:O	1:AB:22:TRP:N	2.40	0.53
1:AB:101:THR:HG21	21:AA:1101:A:H61	1.74	0.53
3:AD:57:LYS:HG2	3:AD:202:LEU:CD2	2.38	0.53
10:AK:124:LYS:O	20:AU:33:ARG:NE	2.41	0.53
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.09	0.53
13:AN:5:MET:HA	13:AN:8:ARG:HD2	1.89	0.53
21:AA:206:C:C2	21:AA:207:C:H1'	2.43	0.53
21:AA:842:U:H2'	21:AA:844:G:P	2.48	0.53
21:AA:901:A:C5	21:AA:902:G:H1'	2.43	0.53
21:AA:1055:A:C5	21:AA:1206:G:C2	2.96	0.53
22:BA:747:U:H2'	22:BA:2613:U:O4	2.08	0.53
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.56	0.53
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1434:A:H2'	22:BA:1435:G:H8	1.73	0.53
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.23	0.53
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.08	0.53
27:BF:30:VAL:O	27:BF:30:VAL:HG13	2.08	0.53
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.62	0.53
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	1.90	0.53
34:BM:8:LYS:N	34:BM:8:LYS:CD	2.70	0.53
37:BP:92:ARG:O	37:BP:92:ARG:CG	2.55	0.53
40:BS:1:MET:HE2	40:BS:1:MET:HA	1.90	0.53
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.08	0.53
1:CB:9:LEU:O	1:CB:10:LYS:CB	2.56	0.53
4:CE:39:GLY:HA2	4:CE:45:VAL:HA	1.90	0.53
6:CG:33:GLY:HA3	53:CA:1350:A:H2	1.72	0.53
17:CR:35:SER:HA	17:CR:71:ASP:OD1	2.09	0.53
20:CU:35:GLU:OE2	20:CU:35:GLU:HA	2.08	0.53
20:CU:36:PHE:CD1	20:CU:40:PRO:HB3	2.41	0.53
53:CA:121:U:OP1	53:CA:121:U:H3'	2.07	0.53
53:CA:557:G:C6	53:CA:558:G:N1	2.76	0.53
53:CA:1250:A:N3	53:CA:1287:A:N6	2.56	0.53
53:CA:1449:C:O2'	53:CA:1450:U:C5'	2.56	0.53
22:DA:232:G:O2'	22:DA:233:A:H5"	2.08	0.53
22:DA:632:A:H5"	33:DL:68:SER:OG	2.08	0.53
22:DA:786:C:H4'	22:DA:1780:A:N7	2.23	0.53
22:DA:980:A:C4	22:DA:1136:G:O4'	2.61	0.53
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.90	0.53
22:DA:1215:G:H5"	38:DQ:7:VAL:CG1	2.38	0.53
22:DA:1355:G:C2	22:DA:1356:G:C8	2.96	0.53
22:DA:1681:G:O2'	22:DA:1762:A:C2'	2.56	0.53
22:DA:2458:G:H5"	22:DA:2459:A:OP1	2.07	0.53
54:DB:59:A:H2'	54:DB:60:C:O4'	2.08	0.53
25:DD:47:ALA:HB2	25:DD:83:ARG:HD2	1.89	0.53
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.37	0.53
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.43	0.53
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.07	0.53
44:DW:44:PHE:HB3	44:DW:78:PHE:CD1	2.43	0.53
5:AF:98:GLU:HG3	5:AF:99:ALA:H	1.73	0.53
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.72	0.53
6:AG:145:GLU:HA	6:AG:148:LYS:HD2	1.90	0.53
8:AI:90:ASP:OD2	8:AI:93:LEU:HG	2.07	0.53
9:AJ:7:ARG:HD2	9:AJ:73:LEU:HD11	1.90	0.53
21:AA:13:U:O2'	21:AA:14:U:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:181:A:N6	21:AA:195:A:OP2	2.42	0.53
21:AA:198:G:C4	21:AA:199:A:N7	2.76	0.53
21:AA:914:A:H2'	21:AA:915:A:C8	2.38	0.53
21:AA:1157:A:C5	21:AA:1180:A:C6	2.97	0.53
22:BA:52:A:O2'	22:BA:53:A:H5'	2.08	0.53
22:BA:221:A:N1	22:BA:265:A:O2'	2.35	0.53
22:BA:945:A:H5'	22:BA:946:C:OP2	2.08	0.53
22:BA:1414:C:C5	22:BA:1415:U:H5	2.26	0.53
22:BA:2210:U:H4'	22:BA:2211:A:C5'	2.39	0.53
24:BC:109:LEU:CD2	24:BC:110:LYS:H	2.21	0.53
28:BG:93:TYR:O	28:BG:94:ARG:O	2.25	0.53
33:BL:77:ILE:O	33:BL:110:VAL:O	2.26	0.53
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.52	0.53
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.06	0.53
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.89	0.53
2:CC:10:ARG:O	2:CC:13:ILE:O	2.26	0.53
4:CE:80:LEU:HD13	4:CE:80:LEU:O	2.08	0.53
6:CG:32:ASP:HB2	6:CG:34:LYS:HD3	1.89	0.53
7:CH:17:GLN:HE21	7:CH:71:VAL:HG23	1.73	0.53
7:CH:75:GLN:HA	7:CH:75:GLN:OE1	2.08	0.53
8:CI:14:SER:HA	8:CI:68:GLY:O	2.09	0.53
11:CL:75:GLU:C	11:CL:77:SER:H	2.17	0.53
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.22	0.53
17:CR:72:ARG:HA	20:CU:4:LYS:HE3	1.90	0.53
53:CA:781:A:H2	53:CA:1514:G:H4'	1.73	0.53
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.43	0.53
22:DA:417:C:H2'	22:DA:418:C:H6	1.73	0.53
22:DA:605:G:H1'	22:DA:657:U:O2'	2.07	0.53
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.37	0.53
22:DA:754:U:O2'	22:DA:755:U:H5'	2.06	0.53
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.74	0.53
22:DA:1688:U:C4	22:DA:1698:A:C2	2.96	0.53
22:DA:2581:G:H5"	22:DA:2582:G:OP1	2.09	0.53
22:DA:2729:G:H5"	25:DD:190:LYS:HZ3	1.73	0.53
54:DB:57:A:O2'	54:DB:58:A:C8	2.51	0.53
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	2.09	0.53
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.23	0.53
33:DL:33:ARG:HD3	33:DL:40:SER:HA	1.89	0.53
35:DN:16:HIS:C	35:DN:18:GLN:H	2.16	0.53
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.91	0.53
46:DY:28:LEU:O	46:DY:28:LEU:HD22	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:116:ALA:HB1	2:AC:186:SER:HB2	1.91	0.53
9:AJ:56:HIS:HD2	9:AJ:57:VAL:HG12	1.72	0.53
14:AO:15:GLY:C	14:AO:17:ASP:H	2.16	0.53
21:AA:191:G:H2'	21:AA:192:A:C8	2.44	0.53
21:AA:194:C:O2'	21:AA:195:A:H5'	2.08	0.53
21:AA:858:G:C2'	21:AA:859:G:H5'	2.39	0.53
21:AA:958:A:C6	21:AA:959:A:N1	2.77	0.53
21:AA:1381:U:H2'	21:AA:1382:C:C6	2.43	0.53
22:BA:324:A:N6	22:BA:338:G:H2'	2.24	0.53
22:BA:659:G:H21	26:BE:30:GLN:HE22	1.55	0.53
22:BA:765:C:H2'	22:BA:766:U:C6	2.43	0.53
22:BA:777:G:H2'	22:BA:778:G:C8	2.42	0.53
22:BA:907:G:H2'	22:BA:908:C:H5'	1.90	0.53
22:BA:1088:A:O4'	22:BA:1088:A:N3	2.41	0.53
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.07	0.53
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.91	0.53
22:BA:1915:U:C4	22:BA:1916:A:C6	2.96	0.53
22:BA:2467:C:O2	34:BM:123:LYS:HE2	2.08	0.53
25:BD:148:GLN:OE1	25:BD:152:PRO:HG2	2.08	0.53
26:BE:37:ALA:C	26:BE:39:ALA:H	2.15	0.53
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.16	0.53
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.08	0.53
37:BP:25:VAL:HG11	37:BP:46:VAL:CG2	2.38	0.53
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.07	0.53
2:CC:175:HIS:ND1	53:CA:1108:G:H5"	2.23	0.53
17:CR:31:TYR:CG	17:CR:54:LEU:HD21	2.44	0.53
18:CS:28:LYS:HB3	18:CS:29:PRO:HD2	1.91	0.53
53:CA:104:G:C2	53:CA:105:G:C8	2.97	0.53
53:CA:1073:U:H2'	53:CA:1074:G:H8	1.73	0.53
53:CA:1319:A:C6	53:CA:1323:G:C4	2.96	0.53
53:CA:1408:A:C2	53:CA:1492:A:N6	2.77	0.53
53:CA:1480:A:H2'	53:CA:1481:U:O4'	2.08	0.53
22:DA:76:C:OP1	46:DY:48:ARG:HG2	2.08	0.53
22:DA:293:U:H5"	22:DA:294:A:OP2	2.08	0.53
22:DA:315:G:H2'	22:DA:316:C:O4'	2.09	0.53
22:DA:395:U:O2'	22:DA:396:G:O5'	2.26	0.53
22:DA:1936:A:H2'	22:DA:1945:G:O6	2.08	0.53
22:DA:2262:U:H5"	44:DW:38:ARG:NH2	2.22	0.53
22:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.08	0.53
22:DA:2506:U:C5	22:DA:2576:G:O6	2.61	0.53
22:DA:2542:A:H4'	22:DA:2543:G:H5'	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DB:11:C:H2'	54:DB:15:A:N6	2.23	0.53
24:DC:62:ARG:HH21	24:DC:62:ARG:CG	2.20	0.53
26:DE:144:GLU:O	26:DE:145:ASP:C	2.52	0.53
28:DG:62:ALA:O	28:DG:66:THR:HG23	2.09	0.53
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.15	0.53
31:DJ:45:THR:O	31:DJ:45:THR:HG23	2.07	0.53
33:DL:124:GLY:H	33:DL:143:GLU:CG	2.18	0.53
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.72	0.53
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.08	0.53
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.90	0.53
4:AE:51:LYS:HE3	21:AA:1080:A:OP1	2.08	0.53
5:AF:2:ARG:HH21	5:AF:68:GLN:NE2	2.05	0.53
6:AG:89:GLU:N	6:AG:89:GLU:CD	2.67	0.53
6:AG:92:PRO:O	6:AG:93:VAL:HG13	2.08	0.53
7:AH:95:MET:HB2	7:AH:98:LEU:O	2.09	0.53
10:AK:111:ASP:CB	20:AU:19:LYS:HD2	2.39	0.53
20:AU:46:ARG:C	20:AU:48:LYS:H	2.16	0.53
21:AA:722:G:H5"	21:AA:722:G:N3	2.24	0.53
22:BA:215:G:H4'	22:BA:216:A:H4'	1.91	0.53
22:BA:851:C:H2'	22:BA:852:U:C6	2.43	0.53
22:BA:919:U:H6	22:BA:919:U:C4'	2.20	0.53
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.08	0.53
22:BA:1427:A:H4'	22:BA:1428:C:O5'	2.09	0.53
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.08	0.53
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.38	0.53
27:BF:10:GLU:O	27:BF:11:VAL:HB	2.07	0.53
29:BH:101:ASP:O	29:BH:104:THR:HB	2.07	0.53
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.73	0.53
37:BP:52:ARG:O	37:BP:53:GLY:C	2.50	0.53
38:BQ:10:ARG:HB2	38:BQ:10:ARG:CZ	2.38	0.53
42:BU:82:VAL:O	42:BU:83:GLY:O	2.27	0.53
43:BV:61:LEU:O	43:BV:71:LYS:HA	2.08	0.53
45:BX:77:TYR:O	45:BX:77:TYR:CG	2.61	0.53
47:BZ:7:THR:HG23	47:BZ:34:THR:OG1	2.08	0.53
3:CD:111:ALA:O	3:CD:114:ARG:HB3	2.08	0.53
5:CF:6:ILE:H	5:CF:6:ILE:HD12	1.73	0.53
6:CG:35:LYS:HB3	53:CA:1373:G:H5"	1.90	0.53
6:CG:91:ARG:HG2	6:CG:92:PRO:CD	2.24	0.53
53:CA:564:C:H2'	53:CA:565:U:C6	2.43	0.53
53:CA:613:C:H2'	53:CA:614:C:H6	1.74	0.53
53:CA:1018:G:H2'	53:CA:1019:A:O4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.38	0.53
53:CA:1299:A:N3	53:CA:1299:A:C2'	2.69	0.53
22:DA:109:C:H4'	22:DA:348:A:H4'	1.91	0.53
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.73	0.53
22:DA:553:G:H2'	22:DA:554:U:O4'	2.08	0.53
22:DA:655:A:H4'	22:DA:656:G:O5'	2.08	0.53
22:DA:806:C:H2'	22:DA:807:U:C6	2.39	0.53
22:DA:975:A:C2'	22:DA:976:G:H8	2.22	0.53
22:DA:1399:C:H2'	22:DA:1400:U:C6	2.43	0.53
22:DA:1439:A:H2	22:DA:1552:A:N1	2.05	0.53
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.09	0.53
22:DA:1738:G:HO2'	22:DA:1739:A:H8	1.44	0.53
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.07	0.53
22:DA:2074:U:O2'	22:DA:2075:U:H5'	2.08	0.53
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.09	0.53
54:DB:44:G:H5"	27:DF:91:ARG:NE	2.24	0.53
24:DC:173:LEU:HD22	24:DC:173:LEU:H	1.73	0.53
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.23	0.53
27:DF:11:VAL:HG12	27:DF:12:VAL:N	2.23	0.53
27:DF:147:ARG:HD2	27:DF:147:ARG:H	1.74	0.53
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.38	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB3	1.88	0.53
32:DK:41:ILE:HG22	32:DK:58:LEU:O	2.09	0.53
34:DM:76:LYS:O	34:DM:77:PRO:O	2.26	0.53
35:DN:1:MET:HE3	35:DN:3:HIS:CE1	2.43	0.53
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	1.89	0.53
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.54	0.53
6:AG:2:ARG:HB3	21:AA:933:G:OP2	2.07	0.53
21:AA:56:U:H2'	21:AA:57:G:H8	1.73	0.53
21:AA:213:G:O2'	21:AA:214:C:C5'	2.51	0.53
21:AA:214:C:O2'	21:AA:215:C:H5'	2.09	0.53
21:AA:563:A:H1'	21:AA:566:G:O2'	2.08	0.53
21:AA:587:G:N2	21:AA:755:G:C5	2.76	0.53
21:AA:1088:G:H21	21:AA:1167:A:H62	1.55	0.53
21:AA:1234:C:C2'	21:AA:1235:U:H5'	2.38	0.53
22:BA:141:G:H5'	22:BA:142:A:C8	2.43	0.53
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.89	0.53
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.09	0.53
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.22	0.53
22:BA:1493:C:H5"	22:BA:1494:A:OP2	2.08	0.53
22:BA:2005:A:OP1	57:BA:3386:HOH:O	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:247:TRP:O	24:BC:249:VAL:N	2.41	0.53
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.09	0.53
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.09	0.53
32:BK:98:ARG:O	32:BK:99:ILE:HD12	2.09	0.53
38:BQ:91:ARG:CZ	38:BQ:93:ILE:HG21	2.38	0.53
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	2.08	0.53
42:BU:85:ARG:HG3	42:BU:86:PHE:O	2.09	0.53
44:BW:24:ARG:HD3	44:BW:65:LYS:HE2	1.90	0.53
5:CF:11:HIS:HD2	5:CF:12:PRO:HD2	1.74	0.53
6:CG:35:LYS:O	8:CI:42:THR:HG21	2.08	0.53
6:CG:77:ARG:NH1	53:CA:1381:U:C4	2.77	0.53
9:CJ:6:ILE:HG23	9:CJ:100:ILE:HG23	1.90	0.53
14:CO:69:LEU:HD22	14:CO:69:LEU:O	2.09	0.53
20:CU:39:LYS:O	20:CU:43:GLU:HB2	2.07	0.53
53:CA:337:G:H2'	53:CA:338:A:H8	1.74	0.53
53:CA:348:G:H2'	53:CA:349:A:H8	1.73	0.53
53:CA:818:G:O2'	53:CA:819:A:H5"	2.08	0.53
53:CA:892:A:O2'	53:CA:1415:G:H4'	2.07	0.53
22:DA:243:U:HO2'	22:DA:244:A:H8	1.56	0.53
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.07	0.53
24:DC:244:VAL:HB	24:DC:249:VAL:H	1.74	0.53
25:DD:33:ARG:HD2	25:DD:33:ARG:H	1.72	0.53
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.90	0.53
29:DH:57:LYS:O	29:DH:57:LYS:HD2	2.08	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.90	0.53
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.91	0.53
3:AD:131:ILE:HD13	3:AD:134:TYR:HB2	1.91	0.53
5:AF:67:PRO:C	5:AF:69:GLU:H	2.16	0.53
8:AI:56:MET:SD	8:AI:57:VAL:N	2.82	0.53
12:AM:76:ILE:HG22	12:AM:80:MET:HE2	1.89	0.53
21:AA:214:C:O2'	21:AA:215:C:H6	1.74	0.53
21:AA:257:G:H2'	21:AA:258:G:H8	1.73	0.53
21:AA:327:A:O2'	21:AA:329:A:H5"	2.08	0.53
21:AA:450:G:N7	21:AA:481:G:O6	2.42	0.53
22:BA:494:G:N2	40:BS:57:ASN:HD21	2.07	0.53
22:BA:503:A:H4'	22:BA:504:A:O5'	2.09	0.53
22:BA:540:C:C2'	22:BA:541:A:H5'	2.39	0.53
22:BA:811:U:H2'	33:BL:21:ARG:HD3	1.90	0.53
22:BA:919:U:C3'	22:BA:919:U:C6	2.91	0.53
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.24	0.53
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:101:ASP:C	29:BH:104:THR:HB	2.33	0.53
40:BS:42:LYS:O	40:BS:45:VAL:HG13	2.08	0.53
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.23	0.53
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.91	0.53
48:B0:54:ILE:HG22	48:B0:54:ILE:O	2.08	0.53
1:CB:130:LYS:HD3	1:CB:133:ALA:HB3	1.90	0.53
2:CC:24:ASN:O	2:CC:28:PHE:HB2	2.08	0.53
2:CC:175:HIS:HD1	53:CA:1108:G:H5"	1.74	0.53
4:CE:154:ALA:HB1	7:CH:65:PHE:CE2	2.43	0.53
6:CG:110:ARG:HG3	6:CG:111:GLY:N	2.22	0.53
11:CL:2:THR:HG22	11:CL:4:ASN:N	2.23	0.53
18:CS:59:VAL:HB	18:CS:73:PHE:HD2	1.72	0.53
53:CA:129:A:O2'	53:CA:130:A:C8	2.62	0.53
53:CA:197:A:H4'	53:CA:198:G:O5'	2.09	0.53
53:CA:604:G:H2'	53:CA:605:U:O4'	2.08	0.53
53:CA:747:A:H2'	53:CA:748:G:O4'	2.09	0.53
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.44	0.53
22:DA:70:G:O2'	22:DA:71:A:C5'	2.57	0.53
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.54	0.53
22:DA:263:G:H4'	22:DA:430:A:O4'	2.08	0.53
22:DA:271:G:O2'	22:DA:272:A:C5'	2.54	0.53
22:DA:310:A:C2	22:DA:330:A:C4	2.96	0.53
22:DA:638:G:O2'	22:DA:639:U:O4'	2.22	0.53
22:DA:804:A:H2'	22:DA:806:C:C4	2.43	0.53
22:DA:828:U:C5	22:DA:829:A:N6	2.76	0.53
22:DA:855:G:N3	44:DW:23:LYS:HE3	2.23	0.53
22:DA:1084:A:H2'	22:DA:1085:A:H5'	1.91	0.53
22:DA:1263:U:O2'	48:D0:7:PRO:HD2	2.09	0.53
22:DA:1512:C:C4	22:DA:1513:U:C4	2.97	0.53
22:DA:1754:A:C6	22:DA:1755:A:C6	2.96	0.53
22:DA:2037:A:C6	22:DA:2038:G:C6	2.97	0.53
22:DA:2056:G:N2	48:D0:1:ALA:H1	2.04	0.53
22:DA:2668:G:O2'	22:DA:2669:G:O4'	2.25	0.53
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.08	0.53
34:DM:49:ALA:O	34:DM:120:ALA:HB1	2.09	0.53
35:DN:2:ARG:CD	35:DN:5:LYS:HB3	2.38	0.53
40:DS:32:ALA:HA	40:DS:35:ILE:HD11	1.90	0.53
40:DS:36:LEU:C	40:DS:38:TYR:H	2.17	0.53
40:DS:36:LEU:C	40:DS:38:TYR:N	2.65	0.53
40:DS:71:VAL:HG23	40:DS:107:VAL:HB	1.90	0.53
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:43:LYS:HB3	44:DW:79:ILE:HD11	1.90	0.53
2:AC:110:LEU:HD21	2:AC:143:LEU:HD23	1.91	0.53
8:AI:12:LYS:H	8:AI:105:ARG:HH12	1.55	0.53
18:AS:47:THR:O	18:AS:48:ILE:C	2.52	0.53
21:AA:182:A:H1'	21:AA:183:C:C6	2.44	0.53
21:AA:508:U:H4'	21:AA:509:A:OP1	2.08	0.53
21:AA:953:G:H2'	21:AA:954:G:O4'	2.09	0.53
21:AA:1238:A:H5'	21:AA:1336:C:N4	2.06	0.53
22:BA:587:C:H42	33:BL:33:ARG:HD3	1.74	0.53
22:BA:2661:G:O2'	22:BA:2662:A:H5'	2.08	0.53
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.44	0.53
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.07	0.53
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.09	0.53
28:BG:148:ARG:HA	28:BG:161:VAL:CG1	2.39	0.53
31:BJ:128:ASN:O	31:BJ:128:ASN:CG	2.52	0.53
32:BK:107:LEU:O	32:BK:109:SER:N	2.39	0.53
1:CB:76:SER:O	1:CB:79:VAL:HG12	2.09	0.53
3:CD:144:ILE:HD11	3:CD:154:VAL:HG21	1.90	0.53
6:CG:9:ARG:HD3	6:CG:24:LYS:HZ2	1.74	0.53
7:CH:17:GLN:OE1	7:CH:62:LEU:HB3	2.08	0.53
8:CI:5:TYR:N	8:CI:5:TYR:CD2	2.76	0.53
8:CI:38:PHE:CE2	8:CI:71:ILE:HG22	2.44	0.53
8:CI:59:LYS:HE3	8:CI:60:LEU:HG	1.90	0.53
53:CA:32:A:C2'	53:CA:33:A:H8	2.18	0.53
22:DA:125:A:H5"	50:D2:19:ARG:HB2	1.91	0.53
22:DA:154:U:H2'	22:DA:155:A:O4'	2.09	0.53
22:DA:604:G:C2	22:DA:605:G:C5	2.97	0.53
22:DA:811:U:H5"	22:DA:812:C:OP2	2.08	0.53
22:DA:1802:A:P	22:DA:1815:A:H61	2.32	0.53
22:DA:2142:A:H2'	22:DA:2144:G:P	2.49	0.53
22:DA:2191:A:H3'	22:DA:2192:U:H6	1.73	0.53
22:DA:2440:C:H2'	22:DA:2441:U:O4'	2.09	0.53
22:DA:2493:U:H2'	22:DA:2494:G:H5"	1.90	0.53
22:DA:2544:G:H5'	22:DA:2645:G:N7	2.23	0.53
24:DC:259:ASN:C	24:DC:261:ARG:H	2.16	0.53
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.09	0.53
25:DD:51:THR:HG21	25:DD:75:ALA:O	2.08	0.53
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.88	0.53
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	2.09	0.53
30:DI:83:ALA:HB2	30:DI:99:LYS:O	2.09	0.53
31:DJ:55:ILE:O	31:DJ:55:ILE:HG13	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.08	0.53
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.56	0.53
8:AI:9:GLY:CA	8:AI:80:HIS:HD2	2.20	0.53
13:AN:9:GLU:OE1	13:AN:60:ARG:HB3	2.09	0.53
14:AO:16:ARG:O	14:AO:17:ASP:HB3	2.09	0.53
20:AU:33:ARG:NE	20:AU:34:ARG:HG3	2.24	0.53
21:AA:109:A:H4'	21:AA:110:C:OP2	2.07	0.53
21:AA:172:A:C6	21:AA:174:A:C8	2.97	0.53
21:AA:213:G:H2'	21:AA:214:C:H6	1.68	0.53
21:AA:280:C:H4'	21:AA:281:G:OP2	2.09	0.53
22:BA:481:G:O2'	22:BA:507:A:N1	2.33	0.53
22:BA:668:A:H2'	22:BA:670:A:H62	1.74	0.53
22:BA:897:C:H5"	22:BA:898:C:OP2	2.09	0.53
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.09	0.53
22:BA:1535:A:O2'	22:BA:1536:C:OP1	2.27	0.53
22:BA:1569:A:C6	22:BA:1570:A:C6	2.97	0.53
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.38	0.53
22:BA:2405:G:H1'	22:BA:2412:A:H61	1.74	0.53
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.09	0.53
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.17	0.53
25:BD:107:VAL:HG13	25:BD:203:VAL:CG2	2.38	0.53
27:BF:39:VAL:HG13	27:BF:84:ILE:HD12	1.90	0.53
27:BF:134:GLN:C	27:BF:136:ILE:H	2.17	0.53
31:BJ:45:THR:H	31:BJ:46:PRO:HD3	1.74	0.53
37:BP:96:LEU:HB3	37:BP:99:LEU:HD22	1.90	0.53
37:BP:104:GLY:O	37:BP:106:ALA:N	2.41	0.53
41:BT:26:LYS:O	41:BT:27:SER:HB2	2.07	0.53
44:BW:17:ALA:CA	44:BW:35:ILE:HG23	2.30	0.53
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.55	0.53
3:CD:25:ARG:HH12	3:CD:30:LYS:CG	2.15	0.53
4:CE:127:TYR:CE2	53:CA:560:A:C5	2.97	0.53
6:CG:4:ARG:CG	6:CG:5:VAL:N	2.71	0.53
6:CG:59:GLU:HG3	6:CG:60:ALA:H	1.72	0.53
7:CH:24:VAL:HG22	7:CH:25:THR:N	2.24	0.53
7:CH:82:LEU:HD21	16:CQ:34:GLY:O	2.09	0.53
9:CJ:57:VAL:HG23	53:CA:972:C:O2'	2.09	0.53
10:CK:51:PHE:C	10:CK:52:ARG:HD2	2.33	0.53
53:CA:1217:C:H2'	53:CA:1218:C:H6	1.73	0.53
53:CA:1236:A:H2'	53:CA:1237:C:C6	2.44	0.53
22:DA:391:A:O2'	22:DA:392:U:H5'	2.09	0.53
22:DA:1331:G:C4	22:DA:1333:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1376:C:H5”	57:DA:3407:HOH:O	2.08	0.53
22:DA:1597:A:O3’	22:DA:1598:A:H8	1.92	0.53
22:DA:1670:C:C5	22:DA:1671:U:C4	2.97	0.53
22:DA:1675:C:O2’	22:DA:1676:A:H5’	2.09	0.53
22:DA:1965:C:H2’	22:DA:1966:A:H8	1.71	0.53
22:DA:2226:C:H2’	22:DA:2227:A:H8	1.74	0.53
22:DA:2699:C:H2’	22:DA:2700:A:H8	1.74	0.53
54:DB:18:G:C2	54:DB:67:G:O6	2.62	0.53
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.08	0.53
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.24	0.53
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.62	0.53
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.56	0.53
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.33	0.53
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.09	0.53
36:DO:62:LEU:HD11	36:DO:65:THR:N	2.24	0.53
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.09	0.53
4:AE:152:VAL:O	4:AE:156:ARG:HB2	2.08	0.53
7:AH:75:GLN:O	7:AH:126:CYS:HB2	2.08	0.53
8:AI:3:ASN:O	8:AI:4:GLN:HG2	2.08	0.53
10:AK:121:ARG:CZ	20:AU:35:GLU:HG3	2.38	0.53
10:AK:125:LYS:C	20:AU:33:ARG:NH2	2.66	0.53
12:AM:84:CYS:HA	18:AS:73:PHE:HD2	1.73	0.53
22:BA:455:C:N3	22:BA:472:A:H2’	2.23	0.53
22:BA:995:C:O2’	22:BA:996:A:OP2	2.27	0.53
22:BA:1071:G:C8	22:BA:1089:A:N6	2.77	0.53
22:BA:1897:G:H2’	22:BA:1898:U:O4’	2.09	0.53
22:BA:2884:U:H2’	22:BA:2885:G:C8	2.44	0.53
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.08	0.53
25:BD:186:LEU:O	25:BD:187:LEU:HB2	2.08	0.53
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.23	0.53
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.87	0.53
36:BO:68:LYS:O	36:BO:71:ALA:HB3	2.08	0.53
43:BV:72:VAL:HG21	43:BV:91:PHE:HB3	1.91	0.53
4:CE:79:THR:HA	4:CE:121:ASN:OD1	2.08	0.53
5:CF:6:ILE:HD12	5:CF:6:ILE:N	2.24	0.53
9:CJ:53:ILE:HG12	53:CA:1060:U:H5’	1.90	0.53
10:CK:41:LEU:HD22	10:CK:76:TYR:CE2	2.44	0.53
12:CM:64:VAL:HG12	12:CM:65:GLU:N	2.18	0.53
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.91	0.53
16:CQ:65:PRO:HD2	53:CA:130:A:N7	2.24	0.53
19:CT:73:ARG:NH1	53:CA:263:A:OP1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CU:33:ARG:HH12	20:CU:34:ARG:HD3	1.74	0.53
53:CA:79:G:N3	53:CA:80:A:N7	2.57	0.53
53:CA:1159:U:H5	53:CA:1182:G:O2'	1.92	0.53
53:CA:1394:A:H2'	53:CA:1501:C:O2'	2.09	0.53
22:DA:54:G:H2'	22:DA:55:G:O4'	2.07	0.53
22:DA:55:G:C2	22:DA:116:C:C2	2.96	0.53
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.08	0.53
22:DA:649:G:H2'	22:DA:650:C:H6	1.73	0.53
22:DA:1069:A:O2'	22:DA:1071:G:H5"	2.09	0.53
22:DA:1197:G:H5'	22:DA:1227:G:O2'	2.09	0.53
22:DA:1437:C:H2'	22:DA:1438:U:H6	1.73	0.53
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.44	0.53
22:DA:2333:A:C2	22:DA:2335:A:N6	2.77	0.53
22:DA:2350:C:H5	51:D3:41:ARG:NH1	2.07	0.53
24:DC:140:VAL:HG22	24:DC:161:VAL:O	2.09	0.53
28:DG:70:LEU:O	28:DG:74:MET:HB2	2.08	0.53
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.91	0.53
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.38	0.53
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.09	0.53
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.08	0.53
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.24	0.53
1:AB:149:GLY:O	1:AB:153:MET:HE3	2.09	0.53
2:AC:41:TYR:OH	2:AC:89:VAL:HG21	2.09	0.53
4:AE:87:VAL:HG12	4:AE:92:ARG:HA	1.91	0.53
4:AE:132:PRO:HA	4:AE:135:VAL:HG13	1.91	0.53
5:AF:47:LEU:CD1	5:AF:51:ILE:HG22	2.39	0.53
6:AG:110:ARG:HD3	6:AG:112:ASP:OD1	2.09	0.53
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.39	0.53
10:AK:109:ILE:HB	20:AU:5:VAL:CG2	2.39	0.53
10:AK:111:ASP:HB2	20:AU:19:LYS:HD2	1.90	0.53
11:AL:73:LEU:HD11	11:AL:79:ILE:CG2	2.39	0.53
13:AN:90:GLY:O	13:AN:92:ILE:N	2.41	0.53
21:AA:269:C:H2'	21:AA:270:A:H8	1.73	0.53
21:AA:330:C:O2'	21:AA:331:G:H5'	2.08	0.53
21:AA:1151:A:HO2'	21:AA:1152:A:H8	1.51	0.53
21:AA:1261:A:C2	21:AA:1274:A:C2	2.97	0.53
21:AA:1349:A:O2'	21:AA:1350:A:H5'	2.09	0.53
21:AA:1453:G:N3	21:AA:1453:G:H2'	2.24	0.53
22:BA:838:C:H2'	22:BA:839:U:C6	2.44	0.53
22:BA:892:A:H2'	22:BA:893:C:H6	1.74	0.53
22:BA:1085:A:C3'	22:BA:1086:A:C2	2.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1157:G:H2'	22:BA:1158:C:H6	1.74	0.53
22:BA:2244:U:O2'	22:BA:2245:U:H5'	2.09	0.53
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.51	0.53
22:BA:2714:G:H8	22:BA:2714:G:O5'	1.91	0.53
26:BE:72:SER:C	26:BE:74:LYS:N	2.67	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.08	0.53
34:BM:117:PHE:HD2	34:BM:130:PHE:CE1	2.26	0.53
35:BN:70:THR:O	35:BN:71:ARG:C	2.51	0.53
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.72	0.53
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.24	0.53
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.72	0.53
1:CB:58:LYS:O	1:CB:62:ARG:HG3	2.09	0.53
1:CB:132:GLU:O	1:CB:137:THR:HG23	2.08	0.53
2:CC:185:THR:O	2:CC:186:SER:HB2	2.09	0.53
6:CG:113:LYS:HA	53:CA:1298:U:H5	1.74	0.53
12:CM:13:HIS:NE2	12:CM:41:ASP:HA	2.23	0.53
12:CM:75:SER:C	12:CM:77:LYS:H	2.16	0.53
18:CS:38:THR:HA	18:CS:69:LYS:HA	1.90	0.53
53:CA:198:G:O2'	53:CA:199:A:H5'	2.08	0.53
53:CA:246:A:C4	53:CA:282:A:N6	2.77	0.53
53:CA:566:G:H4'	53:CA:567:G:OP1	2.08	0.53
53:CA:692:U:H1'	53:CA:695:A:N7	2.24	0.53
53:CA:919:A:O2'	53:CA:920:U:H5'	2.09	0.53
53:CA:974:A:O2'	53:CA:975:A:P	2.66	0.53
22:DA:28:A:H2'	22:DA:29:U:O4'	2.09	0.53
22:DA:632:A:H4'	33:DL:68:SER:HA	1.91	0.53
22:DA:708:G:H2'	22:DA:709:U:H6	1.74	0.53
22:DA:714:U:H2'	22:DA:716:A:OP2	2.08	0.53
22:DA:976:G:H2'	22:DA:977:G:C8	2.37	0.53
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.44	0.53
22:DA:1478:G:C6	22:DA:1514:G:C2	2.97	0.53
22:DA:2068:U:H5"	22:DA:2068:U:H6	1.74	0.53
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.91	0.53
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.36	0.53
27:DF:113:PHE:O	27:DF:114:ARG:CB	2.57	0.53
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.74	0.53
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.91	0.53
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.33	0.53
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.90	0.53
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:82:MET:HE2	40:DS:84:ARG:HH12	1.74	0.53
44:DW:33:GLY:O	44:DW:34:SER:HB2	2.09	0.53
45:DX:1:SER:O	45:DX:3:VAL:N	2.42	0.53
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.09	0.53
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.44	0.53
1:AB:143:LEU:HD23	1:AB:143:LEU:H	1.73	0.52
2:AC:158:GLY:HA2	2:AC:192:TYR:CE1	2.44	0.52
4:AE:24:VAL:O	4:AE:25:LYS:C	2.51	0.52
6:AG:49:LEU:CD2	6:AG:124:SER:HB2	2.38	0.52
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.39	0.52
8:AI:56:MET:HE2	8:AI:57:VAL:H	1.74	0.52
13:AN:48:GLN:HA	13:AN:48:GLN:HE21	1.73	0.52
21:AA:346:G:P	37:BP:33:GLU:OE2	2.67	0.52
21:AA:428:G:C1'	21:AA:430:A:C8	2.92	0.52
21:AA:791:G:C6	21:AA:792:A:N7	2.77	0.52
21:AA:1130:A:H5"	21:AA:1130:A:H8	1.74	0.52
22:BA:31:C:H4'	22:BA:1238:G:H4'	1.91	0.52
22:BA:1962:C:H4'	22:BA:1963:U:OP1	2.08	0.52
22:BA:2097:A:C2	22:BA:2193:G:C2	2.97	0.52
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.09	0.52
26:BE:5:LEU:CD1	26:BE:10:SER:HB3	2.36	0.52
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.91	0.52
32:BK:51:LYS:O	32:BK:51:LYS:HD2	2.09	0.52
34:BM:126:ILE:O	34:BM:128:THR:HG23	2.09	0.52
37:BP:105:LYS:CA	37:BP:108:ARG:HH21	2.21	0.52
44:BW:40:ARG:HG2	44:BW:52:CYS:SG	2.48	0.52
46:BY:57:LEU:CA	46:BY:60:LYS:HB3	2.33	0.52
2:CC:148:ILE:HD12	2:CC:149:LYS:H	1.74	0.52
5:CF:67:PRO:O	5:CF:69:GLU:N	2.42	0.52
6:CG:94:ARG:HB3	6:CG:98:LEU:HG	1.91	0.52
8:CI:5:TYR:O	8:CI:19:PHE:HA	2.10	0.52
11:CL:62:VAL:HG21	11:CL:94:TYR:CE2	2.44	0.52
11:CL:81:ILE:HD11	11:CL:94:TYR:HB2	1.91	0.52
18:CS:36:ARG:O	18:CS:69:LYS:HD2	2.07	0.52
18:CS:68:HIS:HB3	18:CS:72:GLU:HG3	1.90	0.52
20:CU:19:LYS:C	20:CU:21:SER:H	2.17	0.52
53:CA:1074:G:H2'	53:CA:1075:U:H6	1.72	0.52
53:CA:1533:C:C2'	53:CA:1534:A:H5"	2.38	0.52
22:DA:320:A:H5"	22:DA:321:U:OP1	2.09	0.52
22:DA:457:A:N1	22:DA:470:A:H5"	2.23	0.52
22:DA:518:G:H2'	22:DA:519:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:784:G:C2	24:DC:227:VAL:HG21	2.44	0.52
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.27	0.52
22:DA:1343:G:H2'	22:DA:1344:U:H5	1.74	0.52
22:DA:1552:A:N3	22:DA:1552:A:C2'	2.71	0.52
22:DA:1613:G:C6	22:DA:1619:G:O6	2.63	0.52
22:DA:2337:G:H2'	22:DA:2337:G:N3	2.23	0.52
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.44	0.52
22:DA:2571:U:C4	22:DA:2574:G:C8	2.97	0.52
22:DA:2889:C:N4	22:DA:2890:G:C6	2.77	0.52
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.67	0.52
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.91	0.52
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.43	0.52
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.10	0.52
2:AC:153:SER:O	2:AC:195:ILE:HG23	2.09	0.52
3:AD:65:GLY:HA3	3:AD:114:ARG:HH22	1.73	0.52
4:AE:120:HIS:O	4:AE:121:ASN:CB	2.57	0.52
10:AK:44:ALA:HB3	10:AK:69:CYS:HB2	1.91	0.52
11:AL:11:ARG:HB3	21:AA:562:U:H1'	1.91	0.52
12:AM:3:ILE:HA	12:AM:56:ARG:HG3	1.91	0.52
15:AP:11:ALA:O	15:AP:12:LYS:C	2.52	0.52
18:AS:28:LYS:HB3	18:AS:29:PRO:CD	2.38	0.52
20:AU:21:SER:C	20:AU:22:CYS:SG	2.92	0.52
21:AA:672:U:H2'	21:AA:673:A:C8	2.44	0.52
21:AA:1004:A:C2	21:AA:1005:A:H1'	2.44	0.52
21:AA:1239:A:N6	21:AA:1299:A:H62	2.04	0.52
22:BA:26:G:H1'	22:BA:514:A:N6	2.24	0.52
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.74	0.52
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.09	0.52
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.10	0.52
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.31	0.52
22:BA:1936:A:H2	22:BA:1943:U:O4	1.90	0.52
22:BA:2019:A:H2'	22:BA:2020:A:O5'	2.09	0.52
28:BG:35:THR:C	28:BG:36:LEU:HD22	2.33	0.52
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.69	0.52
1:CB:100:LEU:O	1:CB:103:TRP:HE3	1.92	0.52
1:CB:128:LEU:HD22	1:CB:132:GLU:HG2	1.91	0.52
7:CH:1:SER:C	7:CH:3:GLN:N	2.67	0.52
12:CM:18:LEU:HD22	12:CM:32:ILE:HG21	1.92	0.52
53:CA:642:A:O2'	53:CA:643:C:H6	1.92	0.52
53:CA:811:C:H4'	53:CA:900:A:H61	1.72	0.52
53:CA:1147:C:O2'	53:CA:1148:U:H6	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.09	0.52
22:DA:90:U:H3'	22:DA:91:A:H5"	1.92	0.52
22:DA:483:A:H2'	22:DA:484:C:C6	2.41	0.52
22:DA:1168:G:C2	22:DA:1182:G:C2	2.97	0.52
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.24	0.52
22:DA:2107:G:H2'	22:DA:2108:A:C8	2.45	0.52
54:DB:116:G:H4'	36:DO:54:VAL:HG22	1.92	0.52
24:DC:43:ASN:CG	24:DC:44:ASN:H	2.17	0.52
32:DK:19:VAL:CG1	32:DK:41:ILE:HG12	2.37	0.52
33:DL:79:LEU:CA	33:DL:82:LEU:HD11	2.34	0.52
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.90	0.52
34:DM:119:LEU:O	34:DM:119:LEU:HD23	2.09	0.52
38:DQ:13:HIS:O	38:DQ:17:LEU:HB2	2.09	0.52
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	1.91	0.52
47:DZ:37:ARG:NE	47:DZ:37:ARG:HA	2.24	0.52
47:DZ:51:SER:HA	47:DZ:54:VAL:HG22	1.90	0.52
1:AB:27:LYS:HB3	1:AB:28:PRO:HD3	1.90	0.52
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.09	0.52
4:AE:24:VAL:HA	21:AA:922:G:H4'	1.91	0.52
17:AR:41:SER:C	17:AR:43:ILE:H	2.17	0.52
20:AU:33:ARG:HE	20:AU:34:ARG:CG	2.22	0.52
21:AA:57:G:H2'	21:AA:58:C:O4'	2.09	0.52
21:AA:68:G:C5	21:AA:69:G:H1'	2.44	0.52
21:AA:184:G:H2'	21:AA:185:U:C6	2.45	0.52
21:AA:338:A:C6	21:AA:351:G:O6	2.60	0.52
21:AA:1097:C:H2'	21:AA:1098:C:H6	1.74	0.52
21:AA:1293:C:H2'	21:AA:1294:G:H8	1.74	0.52
22:BA:7:G:H2'	22:BA:8:C:H6	1.72	0.52
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.44	0.52
22:BA:1079:C:C4	22:BA:1080:A:N7	2.77	0.52
25:BD:189:VAL:C	25:BD:191:GLY:H	2.17	0.52
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
34:BM:1:MET:HE3	34:BM:2:LEU:H	1.73	0.52
34:BM:47:GLU:O	34:BM:48:ALA:C	2.53	0.52
36:BO:75:GLY:HA2	36:BO:106:LEU:HD12	1.92	0.52
38:BQ:39:ILE:O	38:BQ:43:GLN:HG3	2.09	0.52
38:BQ:86:SER:O	38:BQ:88:GLU:HB2	2.09	0.52
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.23	0.52
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.10	0.52
1:CB:176:ASN:C	1:CB:178:LEU:H	2.18	0.52
2:CC:80:GLY:O	2:CC:83:VAL:HG22	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:22:LEU:HD23	6:CG:22:LEU:C	2.34	0.52
7:CH:46:GLU:H	7:CH:63:LYS:HG3	1.75	0.52
53:CA:80:A:H3'	53:CA:81:A:H4'	1.91	0.52
53:CA:109:A:H8	53:CA:327:A:O4'	1.90	0.52
53:CA:802:A:H2'	53:CA:803:G:C5'	2.38	0.52
53:CA:1239:A:H62	53:CA:1299:A:H61	1.56	0.52
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.09	0.52
22:DA:73:A:H8	22:DA:73:A:O5'	1.92	0.52
22:DA:90:U:OP2	22:DA:91:A:H3'	2.09	0.52
22:DA:581:C:P	38:DQ:32:ARG:HE	2.32	0.52
22:DA:708:G:H2'	22:DA:709:U:C6	2.44	0.52
22:DA:836:G:C5	22:DA:837:C:C4	2.98	0.52
22:DA:1245:G:OP1	33:DL:8:PRO:HG3	2.09	0.52
22:DA:1655:A:H4'	25:DD:118:PHE:CD1	2.44	0.52
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.21	0.52
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.73	0.52
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.91	0.52
22:DA:2619:C:H5'	25:DD:157:LYS:HA	1.92	0.52
22:DA:2623:G:H21	48:D0:18:HIS:CE1	2.28	0.52
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.09	0.52
22:DA:2798:U:O4'	22:DA:2800:A:N6	2.42	0.52
25:DD:149:ASN:O	25:DD:152:PRO:HD2	2.09	0.52
27:DF:118:ALA:HB2	27:DF:176:PHE:HB3	1.90	0.52
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.10	0.52
28:DG:88:LEU:HG	28:DG:128:THR:O	2.09	0.52
32:DK:63:VAL:HG21	32:DK:85:VAL:HG23	1.91	0.52
32:DK:108:ARG:HA	32:DK:116:ILE:HD13	1.90	0.52
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.90	0.52
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.23	0.52
1:AB:49:PHE:C	1:AB:49:PHE:CD1	2.88	0.52
2:AC:177:LEU:HD22	21:AA:1112:C:N4	2.23	0.52
8:AI:90:ASP:CG	8:AI:92:SER:HB3	2.34	0.52
9:AJ:52:LEU:HD23	9:AJ:62:ARG:CG	2.40	0.52
11:AL:23:LEU:C	11:AL:25:ALA:H	2.18	0.52
21:AA:393:A:H5'	21:AA:483:C:O2'	2.09	0.52
21:AA:908:A:C2	21:AA:909:A:C4	2.97	0.52
21:AA:1349:A:H2'	21:AA:1350:A:C8	2.45	0.52
21:AA:1417:G:C6	21:AA:1482:G:C6	2.98	0.52
22:BA:402:A:H2'	22:BA:403:U:H5'	1.92	0.52
22:BA:460:A:P	50:B2:41:ARG:HH12	2.31	0.52
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:914:G:H5”	22:BA:914:G:H8	1.73	0.52
22:BA:1568:G:H4’	24:BC:58:LYS:HG2	1.91	0.52
22:BA:2199:A:H3’	22:BA:2200:C:C6	2.43	0.52
22:BA:2602:A:H5”	22:BA:2603:G:C5’	2.39	0.52
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.08	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	0.52
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.92	0.52
34:BM:69:PRO:HA	34:BM:94:ALA:HB2	1.90	0.52
44:BW:49:ASN:ND2	44:BW:50:VAL:N	2.58	0.52
46:BY:40:SER:O	46:BY:42:LEU:N	2.42	0.52
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	2.09	0.52
49:B1:49:LYS:O	49:B1:50:GLU:HB3	2.09	0.52
1:CB:112:ARG:O	1:CB:112:ARG:HG3	2.09	0.52
7:CH:121:GLY:C	53:CA:599:C:H4’	2.34	0.52
11:CL:89:LEU:HB3	11:CL:92:VAL:HG21	1.91	0.52
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.91	0.52
19:CT:25:SER:O	19:CT:26:MET:C	2.51	0.52
53:CA:642:A:O2’	53:CA:643:C:C5’	2.58	0.52
53:CA:665:A:H2’	53:CA:725:G:N2	2.24	0.52
53:CA:765:G:C4	53:CA:812:G:C6	2.97	0.52
53:CA:1072:G:C6	53:CA:1073:U:C4	2.98	0.52
53:CA:1160:G:O6	53:CA:1181:G:C6	2.62	0.52
22:DA:36:G:C6	22:DA:445:C:N4	2.78	0.52
22:DA:250:G:H2’	22:DA:251:A:C8	2.44	0.52
22:DA:511:U:C5’	22:DA:1235:G:H4’	2.39	0.52
22:DA:661:A:H2’	22:DA:662:G:O4’	2.10	0.52
22:DA:1008:A:H5”	31:DJ:37:ARG:HH22	1.73	0.52
22:DA:1087:G:C5	22:DA:1089:A:C2	2.97	0.52
22:DA:1465:G:H2’	22:DA:1466:U:H6	1.73	0.52
22:DA:1525:A:H2’	22:DA:1526:C:O4’	2.09	0.52
22:DA:2072:C:C2’	22:DA:2073:C:H5’	2.39	0.52
22:DA:2852:G:H2’	22:DA:2853:C:O4’	2.09	0.52
29:DH:1:MET:HE3	29:DH:23:ALA:CB	2.39	0.52
29:DH:24:GLY:O	29:DH:25:TYR:C	2.52	0.52
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.74	0.52
46:DY:23:ARG:O	46:DY:27:ASN:HB2	2.08	0.52
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.10	0.52
8:AI:128:LYS:HD2	8:AI:129:ARG:H	1.74	0.52
15:AP:5:ARG:HD2	21:AA:376:G:H4’	1.92	0.52
21:AA:224:U:H2’	21:AA:225:C:H6	1.74	0.52
21:AA:299:G:O2’	21:AA:300:A:H5’	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:582:C:H2'	21:AA:583:A:H8	1.74	0.52
21:AA:1531:A:O2'	21:AA:1532:U:H5'	2.08	0.52
22:BA:1138:G:H5"	22:BA:1139:G:OP2	2.08	0.52
22:BA:2297:A:H8	22:BA:2297:A:O5'	1.93	0.52
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.75	0.52
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.25	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.52
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.16	0.52
44:BW:39:GLN:O	44:BW:41:GLY:N	2.42	0.52
1:CB:48:MET:O	1:CB:199:ILE:HG22	2.10	0.52
1:CB:128:LEU:HB3	1:CB:131:LYS:HB3	1.91	0.52
4:CE:89:THR:OG1	4:CE:90:GLY:N	2.39	0.52
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.25	0.52
11:CL:2:THR:CB	11:CL:5:GLN:HB2	2.35	0.52
14:CO:47:LYS:HD2	14:CO:47:LYS:N	2.24	0.52
20:CU:8:ASN:CG	20:CU:9:GLU:H	2.16	0.52
53:CA:356:A:H2'	53:CA:357:G:O4'	2.10	0.52
53:CA:457:G:C8	53:CA:457:G:OP2	2.62	0.52
53:CA:926:G:H3'	53:CA:1505:G:H21	1.75	0.52
22:DA:604:G:C6	22:DA:625:G:C6	2.98	0.52
22:DA:745:G:H5"	22:DA:746:U:OP2	2.10	0.52
22:DA:818:G:N7	22:DA:1187:G:C6	2.77	0.52
22:DA:984:A:HO2'	22:DA:985:C:P	2.32	0.52
22:DA:1059:G:C5	22:DA:1060:U:C2	2.98	0.52
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.40	0.52
22:DA:1649:G:C6	22:DA:2009:A:C6	2.97	0.52
22:DA:1833:C:C4	22:DA:1834:U:C5	2.97	0.52
54:DB:75:G:H1	54:DB:102:G:N2	2.07	0.52
54:DB:75:G:H1'	43:DV:29:ILE:HG12	1.92	0.52
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.35	0.52
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.92	0.52
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.09	0.52
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.91	0.52
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.44	0.52
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.39	0.52
44:DW:25:PHE:O	44:DW:27:GLY:N	2.42	0.52
44:DW:28:GLU:H	44:DW:31:LEU:CD2	2.17	0.52
13:AN:46:LYS:C	13:AN:48:GLN:H	2.17	0.52
19:AT:68:LYS:HD2	21:AA:132:C:H5"	1.91	0.52
21:AA:150:U:H2'	21:AA:151:A:H8	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1046:A:O2'	21:AA:1047:G:H5'	2.10	0.52
21:AA:1225:A:H2'	21:AA:1226:C:C6	2.44	0.52
21:AA:1336:C:HO2'	21:AA:1337:G:P	2.32	0.52
21:AA:1355:G:O2'	21:AA:1356:G:H5'	2.09	0.52
21:AA:1511:G:C5	21:AA:1512:U:C5	2.98	0.52
22:BA:919:U:C6	22:BA:919:U:H3'	2.45	0.52
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.25	0.52
22:BA:2109:U:N3	22:BA:2181:U:C4	2.78	0.52
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.92	0.52
37:BP:28:LYS:HB3	37:BP:39:LEU:HD23	1.91	0.52
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.09	0.52
41:BT:30:ILE:HG12	41:BT:32:LEU:HD22	1.91	0.52
43:BV:70:ILE:O	43:BV:71:LYS:CB	2.57	0.52
44:BW:35:ILE:O	44:BW:35:ILE:HG12	2.09	0.52
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.92	0.52
4:CE:12:GLU:HG2	4:CE:63:MET:HE3	1.91	0.52
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.45	0.52
13:CN:33:VAL:HG22	13:CN:40:ARG:NH2	2.25	0.52
14:CO:38:LEU:O	14:CO:41:HIS:HB3	2.09	0.52
18:CS:40:PHE:HB3	18:CS:41:PRO:CD	2.35	0.52
19:CT:81:GLN:NE2	53:CA:258:G:H5'	2.25	0.52
53:CA:32:A:C2	53:CA:33:A:C5	2.98	0.52
53:CA:65:A:H4'	53:CA:66:A:O5'	2.10	0.52
53:CA:137:U:O2	53:CA:227:G:C2	2.63	0.52
53:CA:325:A:N6	53:CA:326:G:C6	2.78	0.52
53:CA:1074:G:H2'	53:CA:1075:U:C6	2.44	0.52
22:DA:49:A:N6	22:DA:177:G:C5	2.78	0.52
22:DA:528:A:H2	22:DA:2042:A:H2'	1.72	0.52
22:DA:813:U:C2	22:DA:1195:G:N2	2.78	0.52
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.10	0.52
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.91	0.52
22:DA:1945:G:H2'	22:DA:1946:U:C6	2.44	0.52
22:DA:2262:U:H4'	22:DA:2328:A:C2	2.44	0.52
22:DA:2329:U:O5'	22:DA:2329:U:H6	1.93	0.52
22:DA:2447:G:N7	22:DA:2500:U:H2'	2.24	0.52
22:DA:2746:U:C1'	28:DG:138:GLN:HG3	2.38	0.52
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.39	0.52
22:DA:2837:A:N6	22:DA:2882:A:N6	2.58	0.52
24:DC:166:ARG:HG3	24:DC:166:ARG:O	2.09	0.52
27:DF:32:LYS:HD2	27:DF:156:THR:HG21	1.92	0.52
27:DF:34:THR:O	27:DF:35:LEU:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:94:THR:O	33:DL:98:ALA:N	2.43	0.52
39:DR:68:ARG:CZ	39:DR:90:ARG:HG2	2.40	0.52
42:DU:85:ARG:HA	42:DU:85:ARG:HE	1.74	0.52
44:DW:44:PHE:HE2	44:DW:76:ARG:NE	2.07	0.52
8:AI:123:ARG:HB3	21:AA:1343:G:O3'	2.10	0.52
9:AJ:93:ALA:O	9:AJ:96:VAL:HG23	2.10	0.52
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.92	0.52
11:AL:65:TYR:HE1	11:AL:67:GLY:HA2	1.75	0.52
15:AP:5:ARG:HB2	21:AA:376:G:H5"	1.90	0.52
18:AS:44:ILE:HA	18:AS:61:VAL:HB	1.91	0.52
21:AA:373:A:O2'	21:AA:374:A:H5'	2.10	0.52
21:AA:1195:C:H2'	21:AA:1197:A:H5'	1.92	0.52
21:AA:1225:A:C2'	21:AA:1225:A:N3	2.73	0.52
21:AA:1528:U:O2'	21:AA:1530:G:H5"	2.09	0.52
22:BA:322:A:H1'	22:BA:339:U:O2	2.10	0.52
22:BA:697:G:H2'	22:BA:698:C:C6	2.44	0.52
22:BA:892:A:H2'	22:BA:893:C:C6	2.44	0.52
22:BA:1210:G:P	22:BA:1212:G:H5'	2.50	0.52
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.44	0.52
22:BA:1813:G:H21	24:BC:49:THR:HG22	1.73	0.52
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.91	0.52
23:BB:116:G:H4'	36:BO:54:VAL:O	2.09	0.52
26:BE:119:ILE:HG12	26:BE:119:ILE:O	2.09	0.52
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.08	0.52
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.39	0.52
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.10	0.52
29:BH:43:ASN:N	29:BH:43:ASN:HD22	2.08	0.52
30:BI:75:ALA:HB3	30:BI:131:THR:HG21	1.91	0.52
30:BI:78:LEU:HD23	30:BI:81:LYS:HE3	1.90	0.52
31:BJ:64:VAL:O	31:BJ:65:THR:CB	2.55	0.52
40:BS:68:ASP:O	40:BS:109:ASP:HB3	2.09	0.52
41:BT:7:LEU:C	41:BT:9:LYS:H	2.18	0.52
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.09	0.52
44:BW:74:LYS:O	44:BW:75:ASN:C	2.52	0.52
51:B3:14:LYS:O	51:B3:21:PHE:O	2.27	0.52
2:CC:185:THR:HG22	2:CC:186:SER:H	1.73	0.52
3:CD:55:ARG:HA	3:CD:55:ARG:HH11	1.74	0.52
7:CH:28:SER:HB2	7:CH:57:GLU:O	2.09	0.52
11:CL:6:LEU:HA	11:CL:9:LYS:O	2.10	0.52
13:CN:85:GLU:O	13:CN:89:ARG:HD3	2.09	0.52
53:CA:425:G:H2'	53:CA:426:U:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:440:C:C2'	53:CA:441:A:H5'	2.40	0.52
53:CA:951:G:H2'	53:CA:952:U:H6	1.74	0.52
53:CA:1001:C:H2'	53:CA:1002:G:O4'	2.08	0.52
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.10	0.52
53:CA:1202:U:H2'	53:CA:1203:C:C6	2.45	0.52
22:DA:460:A:OP2	50:D2:41:ARG:NH1	2.41	0.52
22:DA:512:G:OP2	22:DA:1235:G:H5'	2.08	0.52
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.33	0.52
22:DA:1608:A:C5	22:DA:1611:C:N4	2.77	0.52
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.57	0.52
22:DA:1810:A:H3'	22:DA:1811:G:H8	1.75	0.52
25:DD:21:SER:O	25:DD:23:PRO:HD3	2.09	0.52
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	1.99	0.52
26:DE:108:ILE:O	26:DE:108:ILE:HD13	2.10	0.52
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.38	0.52
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.53	0.52
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.73	0.52
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.39	0.52
35:DN:100:CYS:O	48:D0:41:HIS:HD2	1.93	0.52
38:DQ:10:ARG:O	38:DQ:14:LYS:HB2	2.10	0.52
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.38	0.52
42:DU:47:PRO:HB3	42:DU:54:PRO:HG3	1.91	0.52
1:AB:36:LYS:HA	1:AB:36:LYS:HE3	1.91	0.52
3:AD:117:VAL:HG12	3:AD:130:ASN:O	2.10	0.52
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.92	0.52
7:AH:3:GLN:NE2	21:AA:586:C:O2'	2.43	0.52
8:AI:129:ARG:HH22	21:AA:967:C:C1'	2.22	0.52
19:AT:34:VAL:HG12	19:AT:38:ILE:HD11	1.90	0.52
21:AA:243:A:H2	21:AA:245:U:H2'	1.73	0.52
21:AA:653:U:O2'	21:AA:654:G:H5'	2.10	0.52
21:AA:957:U:O2	21:AA:959:A:C8	2.63	0.52
21:AA:1140:C:HO2'	21:AA:1141:C:H6	1.56	0.52
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.10	0.52
22:BA:178:G:O2'	22:BA:179:C:H5'	2.09	0.52
22:BA:417:C:H2'	22:BA:418:C:H6	1.74	0.52
22:BA:859:G:H8	22:BA:859:G:OP2	1.92	0.52
22:BA:1116:G:H2'	22:BA:1117:C:O5'	2.09	0.52
22:BA:1586:A:C8	22:BA:1587:G:C8	2.98	0.52
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.42	0.52
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.75	0.52
22:BA:2557:G:C6	22:BA:2558:C:N4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.61	0.52
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.40	0.52
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.25	0.52
33:BL:87:GLY:O	33:BL:89:VAL:N	2.42	0.52
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.10	0.52
6:CG:10:LYS:O	6:CG:10:LYS:HD2	2.10	0.52
11:CL:42:LYS:HG2	11:CL:43:LYS:H	1.74	0.52
53:CA:1151:A:C4	53:CA:1152:A:N7	2.78	0.52
22:DA:156:A:H2'	22:DA:157:C:O4'	2.09	0.52
22:DA:184:C:H2'	22:DA:185:G:C8	2.44	0.52
22:DA:672:C:O2'	26:DE:77:ILE:HD11	2.10	0.52
22:DA:1031:G:O2'	52:D4:7:VAL:HG12	2.09	0.52
22:DA:1048:A:N3	22:DA:1049:C:N3	2.58	0.52
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.28	0.52
22:DA:1345:C:O2'	22:DA:1346:G:O5'	2.28	0.52
22:DA:2477:U:O4	52:D4:10:LEU:HD22	2.10	0.52
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.45	0.52
25:DD:49:GLN:NE2	25:DD:79:LEU:HB3	2.24	0.52
33:DL:117:THR:HG22	33:DL:118:THR:N	2.23	0.52
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.37	0.52
36:DO:82:ALA:HB3	36:DO:115:LEU:HD11	1.90	0.52
37:DP:107:ALA:O	37:DP:108:ARG:C	2.53	0.52
38:DQ:10:ARG:CZ	38:DQ:10:ARG:HB2	2.40	0.52
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.09	0.52
50:D2:12:ARG:O	50:D2:12:ARG:HG2	2.09	0.52
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.25	0.52
3:AD:22:SER:O	3:AD:23:GLY:C	2.53	0.52
3:AD:69:ARG:HA	3:AD:69:ARG:HE	1.74	0.52
4:AE:147:ASN:O	4:AE:149:PRO:HD3	2.10	0.52
6:AG:101:ARG:O	6:AG:105:GLU:HB3	2.10	0.52
21:AA:202:G:H21	21:AA:466:A:N6	2.00	0.52
21:AA:999:C:H2'	21:AA:1000:A:C8	2.45	0.52
22:BA:765:C:H2'	22:BA:766:U:H6	1.75	0.52
22:BA:1510:G:H2'	22:BA:1511:G:C8	2.44	0.52
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.45	0.52
22:BA:1799:G:C5	24:BC:175:LEU:HD23	2.44	0.52
22:BA:2556:C:C2'	22:BA:2557:G:H5'	2.39	0.52
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.42	0.52
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.39	0.52
26:BE:119:ILE:HD13	26:BE:119:ILE:H	1.75	0.52
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:39:LYS:HA	31:BJ:43:GLU:HG3	1.92	0.52
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.23	0.52
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.21	0.52
40:BS:59:GLU:HA	40:BS:64:ALA:CA	2.40	0.52
42:BU:64:ILE:O	42:BU:64:ILE:HG23	2.10	0.52
44:BW:18:LYS:N	44:BW:36:ILE:HG12	2.25	0.52
1:CB:161:PHE:HA	1:CB:183:PHE:O	2.09	0.52
3:CD:115:GLN:NE2	3:CD:153:ARG:NH2	2.58	0.52
3:CD:120:LYS:HD2	53:CA:439:U:H4'	1.92	0.52
4:CE:28:ARG:HG2	4:CE:29:ILE:N	2.25	0.52
5:CF:42:TRP:HB2	5:CF:59:TYR:CB	2.40	0.52
5:CF:81:ASN:O	5:CF:83:ALA:N	2.42	0.52
10:CK:126:ARG:NH2	53:CA:796:C:O3'	2.32	0.52
12:CM:3:ILE:O	12:CM:4:ALA:HB2	2.10	0.52
12:CM:11:HIS:CE1	12:CM:43:LYS:HD2	2.45	0.52
14:CO:23:SER:O	14:CO:26:VAL:HB	2.10	0.52
53:CA:122:G:O2'	53:CA:123:U:H5'	2.10	0.52
53:CA:844:G:H3'	53:CA:844:G:OP2	2.10	0.52
53:CA:1004:A:H2'	53:CA:1005:A:O4'	2.10	0.52
53:CA:1031:C:H5'	53:CA:1032:G:C5'	2.40	0.52
53:CA:1242:G:HO2'	53:CA:1243:C:C4'	2.22	0.52
53:CA:1471:U:O2'	53:CA:1472:U:H5'	2.10	0.52
22:DA:241:A:H1'	22:DA:243:U:C5	2.45	0.52
22:DA:513:A:C2	22:DA:514:A:C5	2.97	0.52
22:DA:636:G:H5'	22:DA:639:U:OP1	2.10	0.52
22:DA:1057:A:N3	22:DA:1082:U:C2	2.78	0.52
22:DA:1157:G:H2'	22:DA:1158:C:C5	2.45	0.52
22:DA:1248:G:H2'	38:DQ:1:ALA:O	2.09	0.52
22:DA:1328:A:H2'	22:DA:1330:C:N4	2.24	0.52
22:DA:1494:A:OP2	22:DA:1494:A:H3'	2.10	0.52
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.75	0.52
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.10	0.52
22:DA:2718:G:O3'	37:DP:95:LYS:HG3	2.10	0.52
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.10	0.52
54:DB:44:G:H3'	27:DF:91:ARG:HE	1.74	0.52
25:DD:4:LEU:HB3	25:DD:32:ASN:HD21	1.75	0.52
27:DF:76:PHE:CD2	27:DF:76:PHE:N	2.70	0.52
31:DJ:2:LYS:HB2	31:DJ:2:LYS:NZ	2.25	0.52
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.57	0.52
32:DK:92:GLU:O	32:DK:93:GLN:O	2.28	0.52
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.22	0.52
41:DT:28:ASN:HB3	41:DT:91:GLN:HE22	1.75	0.52
42:DU:44:HIS:CD2	42:DU:57:ILE:HG21	2.42	0.52
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.38	0.52
45:DX:69:GLU:HA	45:DX:72:ALA:HB3	1.91	0.52
48:D0:12:ARG:HG3	48:D0:15:ARG:NH1	2.19	0.52
1:AB:168:GLU:O	1:AB:169:HIS:C	2.52	0.52
11:AL:82:ARG:HG2	11:AL:82:ARG:NH1	2.24	0.52
13:AN:42:ASN:O	13:AN:44:VAL:N	2.43	0.52
20:AU:18:PHE:C	20:AU:19:LYS:HE2	2.35	0.52
21:AA:13:U:C4	21:AA:916:U:O4	2.63	0.52
21:AA:182:A:C5	21:AA:194:C:N4	2.75	0.52
21:AA:198:G:O2'	21:AA:199:A:C5'	2.58	0.52
21:AA:978:A:H5'	21:AA:1224:U:O4	2.10	0.52
21:AA:1380:U:H5'	21:AA:1381:U:OP1	2.09	0.52
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.24	0.52
22:BA:638:G:H2'	22:BA:639:U:C6	2.44	0.52
22:BA:693:A:H2'	22:BA:694:U:O4'	2.10	0.52
22:BA:729:G:C6	24:BC:206:LYS:HB2	2.45	0.52
22:BA:875:G:C2'	22:BA:876:C:H5'	2.40	0.52
22:BA:1064:C:H5'	30:BI:88:GLY:HA3	1.91	0.52
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.08	0.52
22:BA:2061:G:H5"	22:BA:2503:A:C2	2.45	0.52
24:BC:94:LEU:HD13	24:BC:100:ARG:HH11	1.74	0.52
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.26	0.52
33:BL:4:ASN:N	33:BL:4:ASN:HD22	2.08	0.52
34:BM:53:MET:HE1	34:BM:103:TYR:CE2	2.44	0.52
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.91	0.52
36:BO:74:VAL:O	36:BO:78:VAL:HG22	2.10	0.52
39:BR:45:GLU:OE2	39:BR:45:GLU:HA	2.10	0.52
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.91	0.52
43:BV:80:HIS:CG	43:BV:81:PRO:HD2	2.44	0.52
1:CB:103:TRP:O	1:CB:107:ARG:HG2	2.10	0.52
3:CD:77:GLU:HG3	3:CD:81:LEU:CD1	2.24	0.52
3:CD:102:TYR:C	3:CD:104:MET:H	2.17	0.52
7:CH:65:PHE:O	7:CH:67:GLY:N	2.38	0.52
14:CO:25:GLU:HG2	14:CO:80:LEU:HG	1.92	0.52
14:CO:83:ARG:HG2	14:CO:83:ARG:O	2.10	0.52
20:CU:19:LYS:HB3	20:CU:24:LYS:HB2	1.92	0.52
53:CA:189:A:H3'	53:CA:190:A:C8	2.45	0.52
53:CA:513:C:H2'	53:CA:514:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:861:G:C5	53:CA:862:C:C5	2.97	0.52
53:CA:1124:G:O2'	53:CA:1125:U:C5	2.63	0.52
22:DA:585:G:C2'	22:DA:1254:A:H61	2.23	0.52
22:DA:946:C:O2'	22:DA:947:A:H5'	2.09	0.52
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.10	0.52
22:DA:1731:G:C4'	22:DA:1732:C:OP1	2.56	0.52
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.09	0.52
22:DA:1816:C:O2'	22:DA:1817:G:P	2.68	0.52
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.10	0.52
22:DA:1936:A:H2	22:DA:1943:U:C4	2.28	0.52
22:DA:2144:G:O2'	22:DA:2147:A:OP2	2.20	0.52
24:DC:30:ALA:HB3	24:DC:31:PRO:HD3	1.91	0.52
26:DE:61:ARG:O	26:DE:61:ARG:HD2	2.10	0.52
27:DF:19:PHE:HB3	27:DF:21:TYR:CE2	2.45	0.52
27:DF:92:GLY:O	27:DF:95:MET:HB3	2.09	0.52
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.25	0.52
34:DM:1:MET:O	34:DM:2:LEU:O	2.28	0.52
37:DP:51:ASN:H	37:DP:56:SER:HB3	1.75	0.52
37:DP:91:VAL:HG21	37:DP:96:LEU:HD21	1.92	0.52
39:DR:6:GLN:HA	39:DR:6:GLN:HE21	1.75	0.52
41:DT:34:VAL:O	41:DT:35:ALA:HB3	2.09	0.52
42:DU:20:LYS:HD2	42:DU:38:ILE:CD1	2.40	0.52
43:DV:40:ILE:N	43:DV:40:ILE:HD13	2.25	0.52
2:AC:138:GLN:C	2:AC:140:ALA:H	2.19	0.51
10:AK:76:TYR:CD1	10:AK:76:TYR:N	2.79	0.51
18:AS:51:HIS:HD2	18:AS:53:GLY:H	1.55	0.51
21:AA:692:U:O2	21:AA:694:A:C8	2.63	0.51
22:BA:302:C:O2'	22:BA:303:G:C5'	2.58	0.51
22:BA:483:A:O2'	42:BU:56:GLY:HA2	2.09	0.51
22:BA:704:G:O2'	22:BA:705:A:P	2.68	0.51
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.59	0.51
22:BA:1021:A:H61	22:BA:1142:A:N6	2.08	0.51
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.10	0.51
22:BA:1106:G:C2	22:BA:1107:G:C8	2.99	0.51
22:BA:1206:G:H2'	22:BA:1207:C:C6	2.44	0.51
22:BA:2276:G:P	34:BM:83:GLY:O	2.68	0.51
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.45	0.51
24:BC:129:LEU:HB3	24:BC:134:ILE:HD11	1.91	0.51
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.52	0.51
28:BG:86:LEU:CD1	28:BG:132:LEU:HD21	2.39	0.51
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.18	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.74	0.51
46:BY:61:ALA:C	46:BY:63:ALA:H	2.19	0.51
47:BZ:29:ARG:CG	47:BZ:29:ARG:NH2	2.67	0.51
50:B2:12:ARG:NH2	50:B2:12:ARG:HB2	2.25	0.51
3:CD:24:VAL:HG23	3:CD:25:ARG:HB2	1.93	0.51
6:CG:59:GLU:C	6:CG:61:PHE:H	2.16	0.51
13:CN:89:ARG:HG3	13:CN:91:GLU:HG3	1.92	0.51
18:CS:35:ARG:NH1	18:CS:76:THR:HG22	2.25	0.51
19:CT:11:ILE:C	19:CT:13:SER:H	2.18	0.51
20:CU:36:PHE:HB3	20:CU:40:PRO:HD3	1.91	0.51
53:CA:113:G:C1'	53:CA:354:G:H5'	2.39	0.51
53:CA:652:U:O2'	53:CA:653:U:P	2.66	0.51
53:CA:711:G:O2'	53:CA:712:A:H5'	2.10	0.51
53:CA:1513:A:H2'	53:CA:1514:G:H8	1.73	0.51
22:DA:90:U:C4	22:DA:91:A:C5	2.98	0.51
22:DA:686:U:C4	50:D2:12:ARG:HG3	2.42	0.51
22:DA:819:A:OP2	22:DA:1187:G:N2	2.44	0.51
22:DA:927:A:H2'	22:DA:928:A:C8	2.45	0.51
22:DA:1205:A:H5"	22:DA:1206:G:N7	2.25	0.51
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.10	0.51
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.46	0.51
22:DA:1349:C:H2'	22:DA:1350:C:C5	2.45	0.51
22:DA:1351:C:H4'	22:DA:1572:A:O4'	2.10	0.51
22:DA:1867:G:O2'	22:DA:1868:C:O4'	2.24	0.51
22:DA:1867:G:O6	22:DA:1875:G:N2	2.43	0.51
22:DA:2104:C:O2	22:DA:2105:U:C5	2.57	0.51
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.75	0.51
34:DM:112:LEU:HD13	34:DM:112:LEU:O	2.10	0.51
36:DO:7:ARG:NH2	36:DO:29:HIS:HD2	2.09	0.51
43:DV:40:ILE:HD13	43:DV:40:ILE:H	1.75	0.51
1:AB:187:ASP:HB2	1:AB:203:ASP:CB	2.39	0.51
2:AC:192:TYR:HB3	21:AA:532:A:N7	2.25	0.51
6:AG:49:LEU:CD1	6:AG:60:ALA:HB1	2.40	0.51
15:AP:10:GLY:O	15:AP:11:ALA:HB2	2.10	0.51
21:AA:1405:G:O4'	21:AA:1519:A:H4'	2.10	0.51
22:BA:923:G:H21	44:BW:23:LYS:NZ	2.07	0.51
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.10	0.51
22:BA:1997:C:O2'	22:BA:1998:A:H5'	2.11	0.51
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.25	0.51
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.10	0.51
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:268:ARG:HH11	24:BC:268:ARG:HB3	1.74	0.51
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.90	0.51
27:BF:46:LYS:H	27:BF:46:LYS:CD	2.23	0.51
40:BS:66:ILE:HA	40:BS:69:LEU:HD22	1.90	0.51
42:BU:91:LYS:O	42:BU:92:VAL:HB	2.10	0.51
49:B1:33:LEU:H	49:B1:51:ALA:CB	2.23	0.51
3:CD:62:ARG:HE	3:CD:62:ARG:CA	2.23	0.51
6:CG:75:LYS:HG3	6:CG:76:SER:N	2.25	0.51
12:CM:106:ARG:HA	12:CM:110:GLY:O	2.10	0.51
20:CU:35:GLU:CG	20:CU:36:PHE:N	2.72	0.51
53:CA:89:U:O2'	53:CA:90:C:O4'	2.20	0.51
53:CA:174:A:H2'	53:CA:175:C:H6	1.75	0.51
53:CA:216:U:H2'	53:CA:217:C:C6	2.44	0.51
53:CA:557:G:C6	53:CA:558:G:C2	2.98	0.51
53:CA:763:G:H2'	53:CA:764:C:H6	1.75	0.51
53:CA:1183:U:C3'	53:CA:1184:G:H5"	2.34	0.51
53:CA:1405:G:H1'	53:CA:1518:A:O2'	2.10	0.51
22:DA:736:C:O5'	22:DA:736:C:H6	1.93	0.51
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.45	0.51
22:DA:2581:G:H2'	22:DA:2610:C:N4	2.25	0.51
22:DA:2682:A:HO2'	22:DA:2683:C:C5'	2.23	0.51
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.92	0.51
27:DF:169:LEU:HB3	27:DF:174:PHE:HB2	1.92	0.51
29:DH:68:ARG:CG	29:DH:71:LYS:HD3	2.39	0.51
30:DI:61:TYR:HE2	30:DI:67:THR:H	1.56	0.51
37:DP:24:THR:HA	37:DP:44:GLY:O	2.09	0.51
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD11	2.40	0.51
39:DR:10:LYS:HD2	39:DR:10:LYS:N	2.25	0.51
1:AB:15:PHE:HD1	1:AB:16:GLY:N	2.09	0.51
1:AB:71:THR:HG22	1:AB:72:LYS:N	2.21	0.51
3:AD:37:PRO:HD2	3:AD:41:GLY:CA	2.41	0.51
3:AD:151:GLN:H	3:AD:154:VAL:HG13	1.74	0.51
9:AJ:7:ARG:HD3	9:AJ:75:ASP:OD1	2.10	0.51
13:AN:56:PRO:HA	13:AN:59:GLN:HE22	1.75	0.51
15:AP:54:LEU:H	15:AP:54:LEU:HD12	1.75	0.51
16:AQ:45:VAL:HG13	16:AQ:72:TRP:O	2.10	0.51
21:AA:32:A:H2'	21:AA:33:A:H8	1.68	0.51
21:AA:251:G:N1	21:AA:266:G:O6	2.43	0.51
21:AA:1261:A:N3	21:AA:1275:A:C6	2.79	0.51
22:BA:195:A:N7	57:BA:3766:HOH:O	2.33	0.51
22:BA:817:C:O2'	22:BA:839:U:H5"	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:827:U:H2'	22:BA:2068:U:C2	2.45	0.51
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.45	0.51
22:BA:1079:C:C4	22:BA:1088:A:C2	2.98	0.51
22:BA:1485:U:C2	22:BA:1505:A:C2	2.99	0.51
22:BA:1653:G:H1	35:BN:11:ASN:ND2	2.08	0.51
22:BA:1814:G:H2'	22:BA:1815:A:C8	2.45	0.51
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.74	0.51
22:BA:2395:C:H2'	22:BA:2396:G:O4'	2.11	0.51
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.10	0.51
22:BA:2682:A:C8	25:BD:11:MET:HG3	2.44	0.51
22:BA:2822:G:P	25:BD:115:GLY:HA3	2.50	0.51
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.07	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51
33:BL:93:ASN:O	33:BL:95:LEU:N	2.42	0.51
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.57	0.51
40:BS:96:ILE:O	40:BS:96:ILE:CG1	2.56	0.51
47:BZ:52:PHE:CE2	47:BZ:53:MET:HG2	2.45	0.51
1:CB:80:LYS:O	1:CB:81:ASP:C	2.54	0.51
1:CB:80:LYS:HB3	1:CB:90:PHE:CE2	2.45	0.51
1:CB:160:LEU:HD22	1:CB:175:ALA:HB2	1.91	0.51
6:CG:74:VAL:HG13	6:CG:140:VAL:CG1	2.29	0.51
7:CH:85:TYR:CD1	53:CA:598:U:H4'	2.45	0.51
7:CH:89:ASP:OD1	7:CH:89:ASP:N	2.44	0.51
7:CH:93:LYS:HD3	7:CH:93:LYS:H	1.74	0.51
10:CK:117:HIS:CD2	53:CA:718:A:C5	2.99	0.51
16:CQ:58:VAL:HB	16:CQ:74:LEU:HD11	1.91	0.51
19:CT:3:ILE:O	19:CT:4:LYS:HG2	2.09	0.51
53:CA:1190:G:HO2'	53:CA:1191:A:P	2.33	0.51
22:DA:274:C:H2'	22:DA:275:C:O4'	2.10	0.51
22:DA:1048:A:N6	22:DA:1111:A:C4	2.78	0.51
22:DA:1429:G:O2'	22:DA:1430:G:C8	2.44	0.51
22:DA:1800:C:C5'	24:DC:145:MET:HE1	2.41	0.51
22:DA:2015:A:C6	48:D0:2:VAL:HG11	2.45	0.51
22:DA:2267:A:N6	22:DA:2271:G:O6	2.44	0.51
54:DB:19:C:H2'	54:DB:20:G:H8	1.73	0.51
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.39	0.51
26:DE:16:GLU:HG3	26:DE:16:GLU:O	2.10	0.51
29:DH:62:LEU:C	29:DH:64:ALA:N	2.68	0.51
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.10	0.51
32:DK:28:SER:O	32:DK:29:HIS:CB	2.59	0.51
33:DL:63:LYS:C	33:DL:65:GLY:H	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.10	0.51
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ2	1.76	0.51
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.24	0.51
1:AB:59:ILE:C	1:AB:59:ILE:HD12	2.35	0.51
1:AB:72:LYS:O	1:AB:74:ALA:N	2.41	0.51
2:AC:164:THR:O	2:AC:165:GLU:C	2.54	0.51
4:AE:14:LEU:CB	4:AE:36:THR:HG22	2.38	0.51
6:AG:69:ARG:HG3	6:AG:95:ARG:CG	2.36	0.51
7:AH:9:MET:HG3	7:AH:26:MET:HE1	1.92	0.51
8:AI:128:LYS:CD	8:AI:129:ARG:H	2.24	0.51
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.92	0.51
14:AO:9:LYS:HB3	14:AO:9:LYS:NZ	2.25	0.51
20:AU:4:LYS:O	20:AU:4:LYS:HD2	2.10	0.51
21:AA:664:G:H22	21:AA:741:G:H1	1.56	0.51
21:AA:1160:G:O2'	21:AA:1161:C:O5'	2.27	0.51
21:AA:1293:C:H2'	21:AA:1294:G:C8	2.46	0.51
21:AA:1411:C:H2'	21:AA:1412:C:H5'	1.92	0.51
22:BA:81:G:C2	22:BA:106:C:C2	2.99	0.51
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.10	0.51
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.75	0.51
28:BG:95:ALA:HB2	28:BG:104:LEU:HD23	1.92	0.51
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.21	0.51
29:BH:75:LEU:HD22	29:BH:143:ILE:HG12	1.92	0.51
31:BJ:132:HIS:HB3	31:BJ:135:GLN:HG2	1.93	0.51
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CB	2.23	0.51
44:BW:50:VAL:HB	44:BW:61:LYS:NZ	2.25	0.51
46:BY:40:SER:C	46:BY:42:LEU:H	2.17	0.51
1:CB:52:ALA:O	1:CB:56:LEU:HB2	2.11	0.51
3:CD:26:ALA:HA	3:CD:31:CYS:SG	2.50	0.51
3:CD:69:ARG:HG3	3:CD:69:ARG:HH11	1.75	0.51
3:CD:72:ARG:HA	3:CD:203:TYR:HE1	1.75	0.51
8:CI:111:GLU:CD	53:CA:1186:G:H4'	2.35	0.51
9:CJ:44:THR:OG1	9:CJ:70:HIS:CE1	2.64	0.51
15:CP:32:PHE:C	15:CP:32:PHE:CD1	2.89	0.51
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.75	0.51
53:CA:97:G:C6	53:CA:98:A:H1'	2.45	0.51
53:CA:461:A:O5'	53:CA:462:G:OP2	2.27	0.51
53:CA:914:A:H2'	53:CA:915:A:H8	1.75	0.51
53:CA:1026:G:H22	53:CA:1036:A:H61	1.58	0.51
22:DA:396:G:O2'	22:DA:397:U:C5'	2.58	0.51
22:DA:1207:C:H2'	22:DA:1208:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.40	0.51
22:DA:1925:C:H6	22:DA:1925:C:H3'	1.75	0.51
22:DA:2209:G:C5	22:DA:2210:U:C4	2.99	0.51
54:DB:42:C:H5	27:DF:65:LEU:HD13	1.74	0.51
24:DC:119:VAL:HG13	24:DC:133:ASN:HD21	1.75	0.51
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.11	0.51
26:DE:57:LYS:HZ1	26:DE:58:LYS:N	2.09	0.51
26:DE:79:ARG:CG	26:DE:80:SER:H	2.22	0.51
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.91	0.51
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.35	0.51
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.28	0.51
1:AB:63:LYS:HD3	1:AB:63:LYS:C	2.36	0.51
1:AB:66:ILE:HG13	1:AB:220:VAL:HG11	1.92	0.51
19:AT:68:LYS:HB3	19:AT:69:ASN:OD1	2.11	0.51
20:AU:48:LYS:HE2	21:AA:723:U:H5'	1.93	0.51
21:AA:519:C:O2'	21:AA:520:A:H5'	2.09	0.51
21:AA:1258:G:O2'	21:AA:1259:C:H5'	2.11	0.51
21:AA:1287:A:C2'	21:AA:1288:A:C8	2.89	0.51
22:BA:96:C:O2'	22:BA:97:C:H5'	2.11	0.51
22:BA:137:U:O2'	22:BA:138:U:P	2.68	0.51
22:BA:754:U:H2'	22:BA:755:U:C6	2.45	0.51
22:BA:1185:G:H5"	22:BA:1186:G:OP2	2.10	0.51
22:BA:1337:G:O2'	22:BA:1338:G:H5'	2.10	0.51
22:BA:1360:G:P	57:BA:3623:HOH:O	2.68	0.51
24:BC:181:ARG:NH2	24:BC:265:PHE:HB3	2.25	0.51
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.73	0.51
29:BH:45:GLU:O	29:BH:49:ALA:N	2.39	0.51
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.51
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	2.10	0.51
34:BM:78:LEU:HD23	34:BM:78:LEU:C	2.35	0.51
36:BO:67:ASN:O	36:BO:67:ASN:CG	2.53	0.51
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.41	0.51
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	2.11	0.51
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.24	0.51
44:BW:18:LYS:HG3	44:BW:19:ARG:N	2.26	0.51
46:BY:2:LYS:HG3	46:BY:52:ARG:HD3	1.92	0.51
49:B1:10:LEU:O	49:B1:19:PHE:HB2	2.11	0.51
2:CC:29:ALA:HB1	13:CN:64:ARG:NH1	2.26	0.51
4:CE:95:MET:HB3	4:CE:124:ALA:HB2	1.91	0.51
6:CG:75:LYS:CE	6:CG:76:SER:H	2.24	0.51
12:CM:36:ALA:HB3	12:CM:55:LEU:HD11	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:69:ARG:HA	12:CM:72:ILE:CG2	2.41	0.51
12:CM:95:PRO:HG3	12:CM:99:GLN:CD	2.36	0.51
18:CS:13:HIS:O	18:CS:17:LYS:HG2	2.10	0.51
53:CA:392:C:H2'	53:CA:393:A:H8	1.76	0.51
53:CA:1098:C:H2'	53:CA:1099:G:O4'	2.10	0.51
22:DA:272:A:O2'	22:DA:273:G:C8	2.61	0.51
22:DA:373:U:O2	22:DA:374:A:C8	2.63	0.51
22:DA:442:G:C6	22:DA:444:C:N4	2.79	0.51
22:DA:612:G:N2	22:DA:614:A:O2'	2.43	0.51
22:DA:1287:A:OP1	35:DN:103:ARG:HG3	2.11	0.51
22:DA:2626:C:O2'	22:DA:2627:G:H5'	2.09	0.51
54:DB:40:U:O2'	54:DB:45:A:N6	2.43	0.51
25:DD:34:VAL:CG1	25:DD:48:ILE:HD11	2.39	0.51
26:DE:105:LEU:HD23	26:DE:177:PRO:HG3	1.92	0.51
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.10	0.51
32:DK:2:ILE:HD11	32:DK:65:THR:HG22	1.92	0.51
32:DK:92:GLU:O	32:DK:93:GLN:C	2.52	0.51
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.41	0.51
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	1.91	0.51
36:DO:26:LEU:HD23	36:DO:92:PHE:HE1	1.73	0.51
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.74	0.51
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.25	0.51
1:AB:9:LEU:HB2	1:AB:42:LEU:HD13	1.92	0.51
10:AK:43:TRP:CZ3	10:AK:45:THR:HG23	2.46	0.51
10:AK:124:LYS:HE2	20:AU:33:ARG:HH21	1.73	0.51
17:AR:44:THR:OG1	17:AR:46:THR:HG22	2.11	0.51
21:AA:587:G:C2	21:AA:755:G:C5	2.99	0.51
21:AA:804:U:H5"	21:AA:805:C:OP2	2.10	0.51
21:AA:1171:A:C2	21:AA:1172:C:C2	2.99	0.51
21:AA:1183:U:H3'	21:AA:1184:G:H5"	1.93	0.51
21:AA:1253:G:N1	21:AA:1285:A:N6	2.58	0.51
22:BA:137:U:C5	22:BA:137:U:OP2	2.63	0.51
22:BA:580:U:O3'	38:BQ:30:VAL:HG13	2.10	0.51
22:BA:632:A:H2'	22:BA:633:A:C8	2.46	0.51
22:BA:645:C:O2'	22:BA:646:U:H5"	2.10	0.51
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.11	0.51
22:BA:923:G:H4'	44:BW:25:PHE:CZ	2.44	0.51
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.44	0.51
22:BA:2210:U:C2	22:BA:2212:A:N7	2.79	0.51
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.10	0.51
24:BC:239:PHE:O	24:BC:241:LYS:HG2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:54:GLY:HA3	26:BE:74:LYS:HE2	1.92	0.51
26:BE:73:ILE:O	26:BE:73:ILE:HG12	2.11	0.51
27:BF:7:TYR:O	27:BF:10:GLU:O	2.29	0.51
27:BF:134:GLN:NE2	27:BF:150:GLY:H	2.09	0.51
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.75	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.11	0.51
41:BT:23:ALA:C	41:BT:25:GLU:H	2.18	0.51
41:BT:40:LYS:HA	41:BT:43:ILE:HG23	1.91	0.51
45:BX:32:LEU:O	45:BX:33:HIS:CD2	2.64	0.51
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.64	0.51
47:BZ:5:LYS:HD2	47:BZ:5:LYS:H	1.76	0.51
1:CB:132:GLU:C	1:CB:134:LEU:H	2.19	0.51
11:CL:71:HIS:ND1	11:CL:73:LEU:N	2.58	0.51
14:CO:16:ARG:HB2	14:CO:23:SER:CB	2.39	0.51
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.26	0.51
53:CA:682:G:H2'	53:CA:683:G:H8	1.76	0.51
22:DA:82:U:H5"	22:DA:296:U:H5"	1.92	0.51
22:DA:804:A:H2'	22:DA:806:C:N4	2.25	0.51
22:DA:956:G:O4'	34:DM:82:MET:HE1	2.10	0.51
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.25	0.51
22:DA:1338:G:H5"	41:DT:17:SER:HB3	1.92	0.51
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.45	0.51
22:DA:1439:A:H3'	22:DA:1439:A:C8	2.46	0.51
22:DA:1587:G:N2	22:DA:1588:G:H1'	2.26	0.51
22:DA:2056:G:N3	22:DA:2056:G:H2'	2.25	0.51
22:DA:2314:A:C2	22:DA:2315:G:C5	2.99	0.51
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.44	0.51
22:DA:2654:A:N6	22:DA:2667:C:N4	2.58	0.51
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.11	0.51
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	1.92	0.51
28:DG:104:LEU:HG	28:DG:112:VAL:HG21	1.92	0.51
31:DJ:116:ARG:HG3	31:DJ:120:ARG:NH2	2.25	0.51
34:DM:19:GLY:N	34:DM:38:ARG:NH2	2.57	0.51
37:DP:64:SER:O	37:DP:66:GLY:N	2.43	0.51
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.26	0.51
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	2.28	0.51
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.26	0.51
50:D2:1:MET:HG3	50:D2:2:LYS:N	2.26	0.51
1:AB:165:ALA:CB	1:AB:186:VAL:HG12	2.41	0.51
3:AD:129:VAL:HG13	3:AD:131:ILE:CD1	2.39	0.51
5:AF:81:ASN:HB3	5:AF:84:VAL:CG1	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:91:ARG:HG3	5:AF:92:THR:N	2.21	0.51
10:AK:13:LYS:O	10:AK:14:GLN:HB3	2.09	0.51
20:AU:8:ASN:N	20:AU:8:ASN:HD22	2.09	0.51
20:AU:10:PRO:O	20:AU:11:PHE:CB	2.55	0.51
21:AA:1055:A:C6	21:AA:1206:G:C5	2.99	0.51
21:AA:1428:A:H2'	21:AA:1429:A:O4'	2.11	0.51
22:BA:216:A:H2'	22:BA:217:A:H8	1.75	0.51
22:BA:973:A:O4'	22:BA:1188:U:C6	2.63	0.51
22:BA:1059:G:H4'	30:BI:116:MET:HE1	1.92	0.51
22:BA:1411:U:C4	22:BA:1412:U:C4	2.99	0.51
22:BA:1695:G:H2'	22:BA:1696:G:O4'	2.11	0.51
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.11	0.51
22:BA:2873:A:H5"	22:BA:2874:C:OP2	2.10	0.51
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.11	0.51
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.25	0.51
31:BJ:40:HIS:H	31:BJ:40:HIS:HD2	1.58	0.51
34:BM:126:ILE:O	34:BM:126:ILE:HD12	2.11	0.51
50:B2:24:THR:O	50:B2:25:LYS:C	2.54	0.51
3:CD:144:ILE:CD1	3:CD:154:VAL:HG21	2.41	0.51
3:CD:148:ALA:HB1	3:CD:151:GLN:NE2	2.26	0.51
4:CE:82:HIS:CE1	7:CH:95:MET:HE3	2.46	0.51
6:CG:59:GLU:HB2	6:CG:62:GLU:HB2	1.91	0.51
8:CI:70:GLY:O	8:CI:73:GLY:N	2.42	0.51
13:CN:33:VAL:HB	53:CA:1272:G:H5'	1.93	0.51
17:CR:63:TYR:CE2	53:CA:734:G:N2	2.78	0.51
20:CU:24:LYS:CG	20:CU:25:ALA:N	2.60	0.51
53:CA:223:A:C6	53:CA:224:U:C4	2.99	0.51
22:DA:70:G:O2'	22:DA:71:A:H5'	2.10	0.51
22:DA:639:U:H2'	22:DA:640:C:C6	2.45	0.51
22:DA:663:G:O6	22:DA:664:G:C6	2.63	0.51
22:DA:1062:G:OP1	22:DA:1070:A:H4'	2.11	0.51
22:DA:1203:U:N3	22:DA:1204:A:N6	2.59	0.51
22:DA:1334:G:H2'	22:DA:1335:C:O4'	2.10	0.51
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.92	0.51
22:DA:1738:G:O2'	22:DA:1739:A:C8	2.55	0.51
22:DA:1815:A:H1'	22:DA:1817:G:C8	2.46	0.51
22:DA:2135:A:OP2	22:DA:2135:A:C8	2.57	0.51
22:DA:2136:G:C2'	22:DA:2137:U:C6	2.91	0.51
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.11	0.51
25:DD:184:ARG:NH2	37:DP:6:GLN:HE21	1.99	0.51
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:41:GLU:O	27:DF:43:ILE:N	2.44	0.51
37:DP:88:ARG:NH1	37:DP:112:ARG:NH2	2.56	0.51
38:DQ:57:ARG:O	38:DQ:61:ILE:HD13	2.11	0.51
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.26	0.51
41:DT:34:VAL:O	41:DT:34:VAL:HG12	2.10	0.51
42:DU:7:ASP:O	42:DU:8:ASP:HB2	2.10	0.51
43:DV:30:ILE:HD12	43:DV:38:LEU:HD23	1.93	0.51
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.75	0.51
1:AB:186:VAL:N	1:AB:199:ILE:O	2.39	0.51
2:AC:150:VAL:HG12	2:AC:199:VAL:HB	1.93	0.51
7:AH:28:SER:HB2	7:AH:58:LEU:HB2	1.92	0.51
7:AH:45:ILE:HA	7:AH:63:LYS:HG3	1.93	0.51
16:AQ:14:ASP:HA	16:AQ:20:ILE:HD11	1.92	0.51
17:AR:70:THR:OG1	17:AR:72:ARG:HG2	2.11	0.51
22:BA:78:U:H2'	22:BA:79:C:C6	2.45	0.51
22:BA:181:A:H1'	22:BA:435:C:H5'	1.92	0.51
22:BA:284:U:H2'	22:BA:285:G:C8	2.44	0.51
22:BA:384:A:H2'	22:BA:385:C:H5'	1.93	0.51
22:BA:1019:U:O4	22:BA:1020:A:N6	2.44	0.51
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.46	0.51
22:BA:1859:U:H2'	22:BA:1860:G:C8	2.43	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
36:BO:4:LYS:O	36:BO:8:ILE:HG13	2.11	0.51
36:BO:31:THR:HG22	36:BO:34:HIS:O	2.10	0.51
37:BP:8:GLU:HB3	37:BP:54:LEU:HD22	1.93	0.51
37:BP:85:VAL:CG1	37:BP:86:LYS:H	2.23	0.51
9:CJ:5:ARG:C	9:CJ:6:ILE:HD12	2.36	0.51
12:CM:28:ARG:HA	12:CM:31:ALA:HB3	1.92	0.51
13:CN:13:VAL:HA	13:CN:59:GLN:NE2	2.26	0.51
14:CO:40:GLY:O	14:CO:43:ALA:HB3	2.11	0.51
53:CA:936:C:H2'	53:CA:937:A:H8	1.75	0.51
53:CA:940:C:H2'	53:CA:941:G:O4'	2.10	0.51
53:CA:1026:G:N2	53:CA:1036:A:H61	2.09	0.51
53:CA:1251:A:H2	53:CA:1369:C:O2	1.94	0.51
53:CA:1400:C:H4'	53:CA:1401:G:OP2	2.11	0.51
22:DA:108:G:H2'	22:DA:109:C:C6	2.46	0.51
22:DA:374:A:C6	22:DA:401:A:C8	2.99	0.51
22:DA:590:A:C5	22:DA:591:U:C5	2.99	0.51
22:DA:1000:A:N1	22:DA:1001:A:C2	2.79	0.51
22:DA:1342:A:C5	22:DA:1345:C:N4	2.79	0.51
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1737:G:C5	22:DA:1738:G:C6	2.99	0.51
22:DA:1814:G:N1	22:DA:1815:A:N6	2.58	0.51
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.45	0.51
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.40	0.51
22:DA:2645:G:H4'	22:DA:2732:G:H2'	1.91	0.51
22:DA:2681:C:H4'	22:DA:2682:A:O5'	2.10	0.51
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.75	0.51
24:DC:146:LYS:HB2	24:DC:149:LYS:CB	2.36	0.51
27:DF:36:ASN:O	27:DF:37:MET:CB	2.59	0.51
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.92	0.51
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.26	0.51
35:DN:28:LEU:HD23	35:DN:28:LEU:C	2.36	0.51
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.46	0.51
46:DY:1:MET:HE2	46:DY:1:MET:H3	1.74	0.51
50:D2:19:ARG:HH21	50:D2:19:ARG:CB	2.21	0.51
51:D3:41:ARG:CG	51:D3:41:ARG:NH2	2.73	0.51
3:AD:173:ASP:O	3:AD:174:ALA:CB	2.59	0.51
4:AE:152:VAL:O	4:AE:155:LYS:HD2	2.10	0.51
9:AJ:67:ILE:HG13	13:AN:95:LEU:HD13	1.92	0.51
11:AL:43:LYS:NZ	11:AL:44:PRO:HD2	2.26	0.51
18:AS:35:ARG:NH1	21:AA:1320:C:N3	2.59	0.51
18:AS:36:ARG:HG2	21:AA:1320:C:H41	1.76	0.51
20:AU:48:LYS:C	20:AU:51:ALA:H	2.19	0.51
21:AA:1136:C:H5"	21:AA:1137:C:OP2	2.11	0.51
21:AA:1282:C:H2'	21:AA:1283:U:C6	2.46	0.51
21:AA:1477:U:H2'	21:AA:1478:U:C6	2.45	0.51
22:BA:1378:A:O2'	22:BA:1379:U:H3'	2.09	0.51
22:BA:1510:G:O2'	22:BA:1511:G:H5'	2.11	0.51
22:BA:1707:G:H2'	22:BA:1708:C:H6	1.75	0.51
22:BA:1819:A:OP1	24:BC:159:THR:HG21	2.10	0.51
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.92	0.51
24:BC:142:ASN:CG	24:BC:142:ASN:O	2.54	0.51
26:BE:44:ARG:HH21	26:BE:44:ARG:CG	2.24	0.51
27:BF:84:ILE:O	27:BF:84:ILE:HG13	2.10	0.51
35:BN:60:VAL:O	35:BN:61:ALA:C	2.53	0.51
2:CC:120:THR:O	2:CC:120:THR:CG2	2.58	0.51
5:CF:41:ASP:O	5:CF:42:TRP:C	2.53	0.51
5:CF:81:ASN:O	5:CF:82:ASP:C	2.54	0.51
10:CK:125:LYS:C	20:CU:33:ARG:HE	2.19	0.51
14:CO:21:THR:HG21	53:CA:658:C:H1'	1.93	0.51
53:CA:93:U:H2'	53:CA:95:C:H5	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:733:G:O2'	53:CA:734:G:H5'	2.11	0.51
53:CA:974:A:O2'	53:CA:975:A:OP2	2.29	0.51
53:CA:988:G:H2'	53:CA:989:U:O4'	2.11	0.51
53:CA:1129:C:O2'	53:CA:1130:A:H8	1.89	0.51
53:CA:1296:C:C5	53:CA:1297:G:N2	2.79	0.51
22:DA:64:A:H8	22:DA:64:A:O5'	1.94	0.51
22:DA:636:G:H3'	33:DL:128:THR:HG21	1.92	0.51
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.40	0.51
22:DA:1049:C:HO2'	22:DA:1050:A:C5'	2.23	0.51
22:DA:2035:G:H5"	22:DA:2036:C:H5	1.76	0.51
22:DA:2582:G:H2'	22:DA:2582:G:N3	2.26	0.51
22:DA:2628:C:O2'	22:DA:2781:A:H2'	2.11	0.51
26:DE:115:GLN:O	26:DE:117:ARG:N	2.44	0.51
26:DE:149:ILE:O	26:DE:149:ILE:HG12	2.11	0.51
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.76	0.51
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.18	0.51
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.11	0.51
32:DK:14:SER:OG	32:DK:51:LYS:N	2.43	0.51
32:DK:57:VAL:O	32:DK:57:VAL:HG13	2.10	0.51
35:DN:12:ARG:NE	35:DN:12:ARG:HA	2.26	0.51
35:DN:78:LYS:O	35:DN:82:GLU:HB3	2.10	0.51
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.45	0.51
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.11	0.51
47:DZ:40:THR:N	47:DZ:43:ILE:HD11	2.25	0.51
3:AD:68:GLU:HG3	21:AA:545:C:C5'	2.37	0.51
4:AE:12:GLU:HB2	4:AE:38:VAL:HG12	1.92	0.51
4:AE:121:ASN:HD22	4:AE:121:ASN:N	2.08	0.51
7:AH:1:SER:C	7:AH:3:GLN:N	2.68	0.51
12:AM:4:ALA:HB2	12:AM:59:VAL:HG13	1.93	0.51
20:AU:38:GLU:HB2	21:AA:1526:G:OP2	2.11	0.51
21:AA:91:U:H2'	21:AA:92:U:H1'	1.93	0.51
21:AA:383:A:C5	21:AA:384:G:H1'	2.46	0.51
21:AA:1143:G:O2'	21:AA:1144:G:H5'	2.11	0.51
21:AA:1211:U:H1'	21:AA:1213:A:C2	2.46	0.51
22:BA:512:G:N7	57:BA:3776:HOH:O	2.34	0.51
22:BA:1443:U:H2'	22:BA:1444:G:C8	2.46	0.51
22:BA:1585:C:O5'	22:BA:1585:C:H6	1.92	0.51
22:BA:2019:A:C2'	22:BA:2020:A:O5'	2.59	0.51
22:BA:2210:U:O2	22:BA:2212:A:C8	2.64	0.51
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.46	0.51
22:BA:2756:U:H4'	22:BA:2757:A:O5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:12:LEU:O	26:BE:13:THR:HB	2.10	0.51
27:BF:41:GLU:HB2	27:BF:48:LEU:HD23	1.93	0.51
27:BF:129:MET:HG3	27:BF:153:ILE:HD12	1.93	0.51
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.51
37:BP:92:ARG:O	37:BP:93:LYS:HB2	2.11	0.51
38:BQ:6:GLY:HA2	38:BQ:9:ALA:HB3	1.93	0.51
41:BT:34:VAL:HG21	41:BT:43:ILE:HD12	1.92	0.51
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.67	0.51
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.59	0.51
49:B1:3:GLY:O	49:B1:5:ARG:N	2.43	0.51
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.11	0.51
7:CH:102:VAL:HG23	7:CH:125:ILE:HD12	1.93	0.51
8:CI:45:MET:HE3	8:CI:48:ARG:HG3	1.93	0.51
8:CI:83:THR:HG21	8:CI:102:PHE:HB3	1.91	0.51
11:CL:7:VAL:O	11:CL:8:ARG:HB2	2.09	0.51
13:CN:68:ARG:NH1	13:CN:80:ARG:HH12	2.09	0.51
53:CA:962:C:N4	53:CA:974:A:H61	2.08	0.51
22:DA:236:C:H2'	22:DA:237:C:H6	1.75	0.51
22:DA:749:A:C4	22:DA:750:A:C8	2.98	0.51
22:DA:834:G:H2'	22:DA:835:C:O4'	2.10	0.51
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.75	0.51
22:DA:2292:U:H2'	22:DA:2293:G:C8	2.46	0.51
22:DA:2305:U:H4'	27:DF:132:ARG:CG	2.41	0.51
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.64	0.51
22:DA:2786:U:O2'	22:DA:2787:C:H5'	2.10	0.51
24:DC:77:VAL:CG2	24:DC:111:ALA:HA	2.41	0.51
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.11	0.51
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.10	0.51
35:DN:37:THR:HG22	35:DN:39:PRO:CD	2.29	0.51
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.45	0.51
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.11	0.51
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.36	0.51
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.39	0.51
39:DR:81:LYS:O	39:DR:82:HIS:C	2.54	0.51
49:D1:10:LEU:HD23	49:D1:20:TYR:HD2	1.75	0.51
4:AE:79:THR:OG1	4:AE:80:LEU:N	2.44	0.50
9:AJ:65:TYR:CB	13:AN:95:LEU:HD11	2.41	0.50
11:AL:72:ASN:OD1	11:AL:104:SER:HB3	2.11	0.50
16:AQ:12:VAL:CB	16:AQ:21:VAL:HG22	2.40	0.50
19:AT:27:MET:HE2	19:AT:31:ILE:HD11	1.93	0.50
21:AA:267:C:H2'	21:AA:268:U:C5	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:740:U:O2'	21:AA:741:G:H5'	2.11	0.50
22:BA:337:C:H2'	22:BA:338:G:O4'	2.11	0.50
22:BA:1060:U:C4'	22:BA:1061:U:H5'	2.30	0.50
22:BA:1385:A:O2'	22:BA:1396:U:O2	2.28	0.50
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.11	0.50
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.11	0.50
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.46	0.50
25:BD:48:ILE:HG23	25:BD:84:LEU:HD21	1.93	0.50
25:BD:51:THR:HG21	25:BD:68:PHE:HE2	1.76	0.50
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.25	0.50
31:BJ:88:THR:CG2	31:BJ:91:GLU:HG3	2.38	0.50
32:BK:51:LYS:HG3	32:BK:95:ILE:CG1	2.40	0.50
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.11	0.50
41:BT:29:THR:CG2	41:BT:86:THR:HG22	2.41	0.50
41:BT:48:GLN:CB	41:BT:49:LYS:HE3	2.41	0.50
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.41	0.50
47:BZ:43:ILE:HD12	47:BZ:43:ILE:O	2.11	0.50
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.92	0.50
1:CB:147:LEU:HD12	1:CB:147:LEU:N	2.26	0.50
2:CC:175:HIS:NE2	53:CA:1190:G:H5'	2.25	0.50
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.11	0.50
14:CO:69:LEU:CD1	14:CO:77:TYR:HA	2.41	0.50
53:CA:132:C:O2'	53:CA:133:U:H5'	2.11	0.50
53:CA:140:U:H2'	53:CA:141:G:O4'	2.10	0.50
53:CA:696:A:H8	53:CA:696:A:O5'	1.93	0.50
53:CA:790:A:N6	53:CA:791:G:C6	2.78	0.50
53:CA:818:G:C2'	53:CA:819:A:H5"	2.41	0.50
53:CA:1029:U:H1'	53:CA:1033:G:O6	2.10	0.50
53:CA:1239:A:O2'	53:CA:1241:G:C5	2.61	0.50
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.24	0.50
22:DA:60:G:HO2'	22:DA:61:C:P	2.34	0.50
22:DA:195:A:C6	22:DA:198:C:C5	2.99	0.50
22:DA:338:G:H2'	22:DA:339:U:H5'	1.93	0.50
22:DA:605:G:H2'	22:DA:606:U:C6	2.46	0.50
22:DA:673:C:H5"	26:DE:75:SER:HB2	1.93	0.50
22:DA:1417:C:O2'	22:DA:1418:G:H5'	2.11	0.50
22:DA:1539:U:H2'	22:DA:1540:G:C8	2.46	0.50
22:DA:1803:A:H2'	22:DA:1804:C:O4'	2.11	0.50
22:DA:1901:A:OP2	22:DA:1901:A:H4'	2.10	0.50
22:DA:2578:G:OP2	22:DA:2578:G:H4'	2.10	0.50
22:DA:2641:G:H5"	31:DJ:78:THR:HB	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.25	0.50
22:DA:2866:U:H4'	22:DA:2867:G:O5'	2.11	0.50
26:DE:46:GLN:HB3	26:DE:86:ALA:HB1	1.93	0.50
27:DF:37:MET:HE3	27:DF:56:LEU:HD23	1.92	0.50
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.41	0.50
29:DH:2:GLN:O	29:DH:3:VAL:O	2.29	0.50
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.10	0.50
31:DJ:37:ARG:NH2	31:DJ:39:LYS:HZ1	2.09	0.50
39:DR:49:ILE:HG22	39:DR:54:VAL:H	1.75	0.50
7:AH:88:LYS:O	7:AH:91:LEU:HB2	2.10	0.50
7:AH:106:SER:HA	21:AA:642:A:C5	2.46	0.50
9:AJ:41:PRO:HA	9:AJ:72:ARG:HH11	1.76	0.50
10:AK:125:LYS:O	20:AU:33:ARG:NH1	2.45	0.50
11:AL:3:VAL:HG23	11:AL:4:ASN:H	1.76	0.50
11:AL:94:TYR:CD2	11:AL:94:TYR:N	2.78	0.50
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.93	0.50
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.26	0.50
21:AA:415:A:H2'	21:AA:416:G:O4'	2.11	0.50
21:AA:701:U:O2'	21:AA:702:A:P	2.70	0.50
21:AA:1303:C:O2'	21:AA:1304:G:C5'	2.58	0.50
22:BA:400:G:O6	45:BX:56:ARG:NH1	2.44	0.50
22:BA:794:A:H2'	22:BA:795:C:H6	1.74	0.50
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.92	0.50
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.41	0.50
22:BA:1499:C:O2'	22:BA:1500:G:C5'	2.60	0.50
24:BC:161:VAL:HG11	24:BC:173:LEU:HG	1.94	0.50
28:BG:72:ASN:C	28:BG:72:ASN:HD22	2.17	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
50:B2:24:THR:HG23	50:B2:27:GLY:N	2.18	0.50
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.51	0.50
6:CG:17:PHE:HB2	6:CG:43:TYR:OH	2.11	0.50
17:CR:59:LYS:HD3	53:CA:735:C:H5'	1.93	0.50
17:CR:63:TYR:CE2	17:CR:69:TYR:OH	2.64	0.50
20:CU:25:ALA:O	20:CU:29:ALA:N	2.42	0.50
53:CA:197:A:O2'	53:CA:198:G:C8	2.65	0.50
53:CA:502:A:H2'	53:CA:503:C:O4'	2.10	0.50
53:CA:607:A:C2	53:CA:608:A:C4	2.99	0.50
22:DA:111:A:C2	22:DA:112:U:C2	2.99	0.50
22:DA:112:U:C5	22:DA:113:U:C4	2.99	0.50
22:DA:1168:G:C6	22:DA:1182:G:C6	2.99	0.50
22:DA:1878:G:H2'	22:DA:1879:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1970:A:H1'	22:DA:1972:G:C8	2.47	0.50
22:DA:2150:C:H2'	22:DA:2151:U:O4'	2.11	0.50
22:DA:2407:A:O2'	22:DA:2408:U:H5'	2.12	0.50
22:DA:2667:C:O2'	22:DA:2668:G:O4'	2.27	0.50
54:DB:68:C:O2'	54:DB:69:G:O5'	2.18	0.50
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.76	0.50
30:DI:16:MET:SD	30:DI:19:PRO:HG2	2.51	0.50
30:DI:98:GLY:HA3	30:DI:137:LEU:HA	1.94	0.50
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.11	0.50
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.74	0.50
33:DL:40:SER:O	33:DL:41:ARG:O	2.29	0.50
36:DO:25:ARG:HB3	36:DO:93:ASP:HB2	1.93	0.50
38:DQ:9:ALA:C	38:DQ:11:ALA:H	2.18	0.50
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.41	0.50
40:DS:66:ILE:HA	40:DS:69:LEU:HD13	1.93	0.50
45:DX:24:THR:O	45:DX:25:LYS:C	2.55	0.50
48:D0:37:HIS:HB2	48:D0:41:HIS:HE1	1.76	0.50
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.93	0.50
4:AE:152:VAL:HG12	4:AE:155:LYS:HZ1	1.75	0.50
6:AG:106:ALA:HB1	6:AG:132:THR:HB	1.94	0.50
6:AG:146:ALA:C	6:AG:148:LYS:N	2.69	0.50
15:AP:12:LYS:HG2	15:AP:13:LYS:HG2	1.94	0.50
16:AQ:15:LYS:HE2	21:AA:274:A:H5'	1.92	0.50
17:AR:63:TYR:CD1	17:AR:69:TYR:OH	2.63	0.50
21:AA:548:G:H8	21:AA:548:G:H5"	1.76	0.50
21:AA:575:G:C6	21:AA:821:G:N7	2.80	0.50
21:AA:1054:C:O4'	21:AA:1054:C:O2	2.29	0.50
21:AA:1141:C:O2'	21:AA:1142:G:O5'	2.24	0.50
21:AA:1348:U:H2'	21:AA:1349:A:H8	1.76	0.50
21:AA:1350:A:C6	21:AA:1351:U:N3	2.79	0.50
21:AA:1356:G:H2'	21:AA:1357:A:H8	1.75	0.50
22:BA:346:A:C2	22:BA:347:A:H1'	2.46	0.50
22:BA:712:G:C2	22:BA:713:G:H1'	2.46	0.50
22:BA:845:A:H3'	22:BA:845:A:N3	2.26	0.50
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.76	0.50
22:BA:2322:A:N6	22:BA:2333:A:N6	2.59	0.50
22:BA:2391:G:O6	22:BA:2425:A:H8	1.94	0.50
29:BH:32:PRO:HB3	45:BX:38:TRP:CB	2.36	0.50
32:BK:7:MET:HE1	32:BK:44:LYS:HG3	1.94	0.50
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.93	0.50
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	1.92	0.50
35:BN:33:ILE:HD12	35:BN:33:ILE:N	2.25	0.50
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.93	0.50
37:BP:92:ARG:HH11	37:BP:92:ARG:HB2	1.75	0.50
38:BQ:65:ASN:CG	38:BQ:75:TYR:HB2	2.37	0.50
40:BS:24:ILE:HG22	40:BS:71:VAL:HG21	1.94	0.50
48:B0:53:VAL:O	48:B0:54:ILE:C	2.53	0.50
1:CB:9:LEU:HD12	1:CB:12:GLY:N	2.26	0.50
1:CB:54:ALA:HA	1:CB:57:ASN:HB3	1.92	0.50
6:CG:28:ILE:HG21	6:CG:100:MET:CG	2.37	0.50
15:CP:41:PRO:O	15:CP:42:ILE:HD13	2.11	0.50
18:CS:57:VAL:HG21	18:CS:75:PRO:HD2	1.93	0.50
53:CA:132:C:O2'	53:CA:133:U:C5'	2.59	0.50
53:CA:512:U:O2'	53:CA:513:C:C6	2.61	0.50
53:CA:995:C:N3	53:CA:1046:A:O2'	2.37	0.50
53:CA:1129:C:C1'	53:CA:1146:A:H61	2.23	0.50
22:DA:422:A:H2'	22:DA:423:A:H8	1.75	0.50
22:DA:566:U:OP1	33:DL:29:LYS:HD2	2.12	0.50
22:DA:1062:G:N3	22:DA:1063:G:C8	2.79	0.50
22:DA:1654:A:N3	22:DA:1655:A:C8	2.80	0.50
22:DA:2402:U:O2'	22:DA:2403:C:P	2.69	0.50
22:DA:2458:G:H8	22:DA:2459:A:H62	1.59	0.50
22:DA:2678:C:H2'	22:DA:2679:A:O4'	2.11	0.50
22:DA:2748:A:C2	22:DA:2757:A:C5	2.99	0.50
24:DC:130:PRO:N	24:DC:188:ARG:HG3	2.25	0.50
29:DH:8:LYS:C	29:DH:8:LYS:HD2	2.36	0.50
33:DL:93:ASN:CG	33:DL:94:THR:N	2.68	0.50
34:DM:19:GLY:N	34:DM:38:ARG:HH21	1.97	0.50
35:DN:9:GLN:C	35:DN:10:LEU:O	2.53	0.50
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	2.10	0.50
44:DW:17:ALA:HB1	44:DW:36:ILE:HA	1.92	0.50
46:DY:60:LYS:HG2	46:DY:60:LYS:O	2.12	0.50
1:AB:17:HIS:CD2	1:AB:202:ASN:ND2	2.80	0.50
2:AC:75:VAL:O	2:AC:82:ASP:HB3	2.11	0.50
8:AI:11:ARG:NH2	21:AA:1347:G:O6	2.44	0.50
12:AM:40:GLU:HG3	12:AM:41:ASP:N	2.26	0.50
21:AA:92:U:H2'	21:AA:93:U:H6	1.71	0.50
21:AA:113:G:C5	21:AA:114:U:C5	2.99	0.50
21:AA:1411:C:O2'	21:AA:1412:C:H5'	2.11	0.50
21:AA:1530:G:O2'	21:AA:1531:A:C8	2.65	0.50
22:BA:221:A:H4'	22:BA:222:A:O5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.46	0.50
22:BA:1115:G:HO2'	22:BA:1116:G:P	2.34	0.50
22:BA:2138:G:H2'	22:BA:2138:G:N3	2.25	0.50
22:BA:2140:G:C2	22:BA:2141:G:C4	2.99	0.50
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.91	0.50
23:BB:94:A:C5	23:BB:95:U:C5	2.99	0.50
25:BD:101:PHE:HD1	25:BD:101:PHE:N	2.09	0.50
25:BD:101:PHE:N	25:BD:101:PHE:CD1	2.80	0.50
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.89	0.50
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.24	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.77	0.50
35:BN:73:ASN:ND2	35:BN:76:VAL:HG11	2.27	0.50
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.46	0.50
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.72	0.50
1:CB:19:THR:OG1	1:CB:20:ARG:N	2.43	0.50
1:CB:127:LYS:HE2	1:CB:136:ARG:NH2	2.26	0.50
1:CB:169:HIS:HD2	1:CB:173:LYS:NZ	2.09	0.50
1:CB:209:VAL:HG23	1:CB:210:THR:N	2.26	0.50
2:CC:100:ILE:HD12	2:CC:101:ASN:N	2.25	0.50
3:CD:102:TYR:C	3:CD:104:MET:N	2.69	0.50
7:CH:9:MET:SD	7:CH:32:LYS:HG3	2.51	0.50
7:CH:17:GLN:NE2	7:CH:71:VAL:HG23	2.26	0.50
10:CK:38:GLY:HA3	53:CA:708:C:H4'	1.93	0.50
10:CK:91:GLY:C	10:CK:95:THR:HG22	2.36	0.50
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.12	0.50
15:CP:48:GLU:CD	15:CP:51:ARG:HB2	2.36	0.50
16:CQ:22:VAL:HG21	16:CQ:58:VAL:HG21	1.93	0.50
53:CA:14:U:O2	53:CA:16:A:C8	2.64	0.50
53:CA:190:A:O5'	53:CA:190:A:H8	1.95	0.50
53:CA:330:C:O2'	53:CA:331:G:C8	2.54	0.50
53:CA:369:G:O2'	53:CA:370:C:H5'	2.11	0.50
53:CA:738:C:C2	53:CA:739:C:C5	3.00	0.50
53:CA:1029:U:H4'	53:CA:1032:G:H1	1.76	0.50
53:CA:1484:C:H2'	53:CA:1485:U:O4'	2.12	0.50
22:DA:206:U:O2'	22:DA:207:A:H8	1.94	0.50
22:DA:475:C:H4'	22:DA:509:C:O2'	2.10	0.50
22:DA:478:A:C6	22:DA:480:A:C6	3.00	0.50
22:DA:571:U:C5	22:DA:575:A:C6	2.98	0.50
22:DA:603:A:H4'	22:DA:604:G:C4'	2.41	0.50
22:DA:779:U:OP1	24:DC:48:ILE:HG13	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.47	0.50
22:DA:1525:A:C6	22:DA:1526:C:C2	2.99	0.50
22:DA:2234:G:C6	22:DA:2235:G:C5	2.99	0.50
22:DA:2262:U:H4'	22:DA:2328:A:H2	1.76	0.50
22:DA:2313:C:O2'	22:DA:2314:A:C5'	2.59	0.50
22:DA:2568:U:H2'	22:DA:2569:G:O4'	2.12	0.50
22:DA:2800:A:H2'	22:DA:2801:G:O4'	2.11	0.50
54:DB:30:C:H2'	54:DB:31:C:H5'	1.93	0.50
54:DB:42:C:C6	27:DF:65:LEU:HD22	2.46	0.50
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.47	0.50
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.93	0.50
27:DF:35:LEU:HA	27:DF:152:ASP:O	2.11	0.50
29:DH:94:ILE:HG21	29:DH:98:ASP:OD1	2.11	0.50
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG13	1.94	0.50
32:DK:104:THR:C	32:DK:106:GLU:N	2.69	0.50
32:DK:119:ALA:O	32:DK:120:PRO:C	2.55	0.50
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.92	0.50
45:DX:1:SER:O	45:DX:2:ARG:C	2.54	0.50
1:AB:18:GLN:O	1:AB:37:VAL:HG23	2.12	0.50
4:AE:83:PRO:HB3	4:AE:96:GLN:NE2	2.27	0.50
7:AH:105:THR:HG22	7:AH:121:GLY:O	2.11	0.50
8:AI:113:LYS:HG2	8:AI:114:LYS:N	2.26	0.50
11:AL:89:LEU:HB3	11:AL:92:VAL:CG2	2.42	0.50
14:AO:2:LEU:O	14:AO:3:SER:C	2.55	0.50
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.41	0.50
15:AP:48:GLU:CG	15:AP:49:GLY:N	2.75	0.50
16:AQ:80:LYS:HB2	16:AQ:80:LYS:NZ	2.20	0.50
19:AT:38:ILE:C	19:AT:40:ALA:H	2.19	0.50
19:AT:43:LYS:HD3	19:AT:86:ALA:O	2.11	0.50
21:AA:51:A:H4'	21:AA:52:C:C5'	2.41	0.50
21:AA:201:G:H2'	21:AA:202:G:O4'	2.11	0.50
21:AA:684:U:H3	21:AA:706:A:H61	1.59	0.50
21:AA:725:G:H2'	21:AA:726:C:H6	1.76	0.50
21:AA:748:G:H2'	21:AA:749:A:H8	1.76	0.50
21:AA:983:A:H2	21:AA:1222:G:H22	1.60	0.50
22:BA:225:C:H2'	22:BA:226:A:O4'	2.11	0.50
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.50
22:BA:1249:U:H2'	33:BL:18:ARG:NH2	2.26	0.50
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.65	0.50
22:BA:1932:A:H2'	22:BA:1933:G:O4'	2.11	0.50
22:BA:2246:G:H2'	22:BA:2247:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.45	0.50
23:BB:53:A:O2'	23:BB:54:G:H5'	2.11	0.50
26:BE:189:THR:O	26:BE:192:ALA:N	2.33	0.50
28:BG:162:ARG:CZ	28:BG:168:VAL:HG21	2.41	0.50
35:BN:2:ARG:O	35:BN:3:HIS:C	2.55	0.50
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.93	0.50
41:BT:54:GLU:OE1	41:BT:88:LYS:HG3	2.11	0.50
41:BT:73:ARG:NH2	41:BT:74:ILE:H	2.08	0.50
51:B3:49:VAL:HG23	51:B3:53:ASP:HB2	1.94	0.50
1:CB:127:LYS:HE2	1:CB:136:ARG:HH21	1.77	0.50
3:CD:104:MET:HG2	3:CD:104:MET:O	2.12	0.50
3:CD:153:ARG:HG2	3:CD:154:VAL:N	2.23	0.50
4:CE:17:VAL:HA	4:CE:33:THR:O	2.10	0.50
4:CE:157:GLY:HA3	7:CH:63:LYS:HE3	1.94	0.50
8:CI:26:LYS:O	8:CI:62:LEU:HB2	2.11	0.50
15:CP:75:ILE:HA	15:CP:78:VAL:HG23	1.93	0.50
16:CQ:29:LYS:HE2	16:CQ:36:PHE:CZ	2.46	0.50
53:CA:1091:U:O2	53:CA:1093:A:C8	2.63	0.50
22:DA:599:A:N3	22:DA:659:G:C2	2.79	0.50
22:DA:956:G:H1'	34:DM:82:MET:HE1	1.93	0.50
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.12	0.50
22:DA:1238:G:O2'	22:DA:1239:G:H5'	2.12	0.50
22:DA:1345:C:H3'	22:DA:1345:C:P	2.51	0.50
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.64	0.50
22:DA:1455:G:HO2'	22:DA:1456:G:H8	1.60	0.50
22:DA:1667:G:OP1	32:DK:6:THR:HA	2.11	0.50
22:DA:1943:U:O4'	22:DA:1943:U:O2	2.27	0.50
22:DA:2305:U:O2'	27:DF:132:ARG:HA	2.12	0.50
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.47	0.50
24:DC:8:THR:O	24:DC:9:SER:CB	2.59	0.50
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.94	0.50
26:DE:106:LYS:HG3	26:DE:200:LEU:HD12	1.94	0.50
27:DF:103:ILE:HG22	27:DF:103:ILE:O	2.11	0.50
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.94	0.50
28:DG:152:ARG:HD2	28:DG:153:PRO:HD2	1.93	0.50
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.94	0.50
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.19	0.50
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.45	0.50
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.41	0.50
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.11	0.50
35:DN:14:SER:C	35:DN:16:HIS:H	2.20	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:31:HIS:C	35:DN:33:ILE:H	2.18	0.50
39:DR:37:GLU:HB2	39:DR:53:PHE:CG	2.47	0.50
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.11	0.50
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.22	0.50
43:DV:9:ARG:HD3	43:DV:39:ALA:HB1	1.92	0.50
4:AE:96:GLN:OE1	21:AA:7:A:N6	2.45	0.50
9:AJ:44:THR:OG1	21:AA:1151:A:H5"	2.11	0.50
19:AT:4:LYS:O	19:AT:5:SER:C	2.54	0.50
21:AA:345:C:O2'	32:BK:116:ILE:HD13	2.11	0.50
21:AA:373:A:C2	21:AA:374:A:C8	2.99	0.50
21:AA:844:G:H2'	21:AA:844:G:N3	2.25	0.50
21:AA:1006:G:H2'	21:AA:1007:U:C6	2.46	0.50
21:AA:1025:U:H5"	21:AA:1026:G:H5'	1.93	0.50
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.65	0.50
22:BA:327:G:N2	22:BA:336:C:C2	2.79	0.50
22:BA:1065:U:O4	22:BA:1074:G:N3	2.44	0.50
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.64	0.50
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.47	0.50
22:BA:2458:G:O2'	22:BA:2460:U:O4	2.29	0.50
23:BB:33:G:O2'	23:BB:34:A:H5'	2.12	0.50
29:BH:68:ARG:HH21	29:BH:72:ILE:HG21	1.76	0.50
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.92	0.50
29:BH:100:ALA:O	29:BH:101:ASP:C	2.55	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.26	0.50
32:BK:113:MET:C	32:BK:115:ILE:N	2.69	0.50
34:BM:36:VAL:HG22	43:BV:82:TYR:CD1	2.46	0.50
37:BP:39:LEU:HD21	37:BP:81:ASP:OD2	2.10	0.50
37:BP:72:VAL:O	37:BP:72:VAL:HG23	2.10	0.50
3:CD:48:SER:O	3:CD:49:ASP:C	2.53	0.50
6:CG:4:ARG:HD2	6:CG:5:VAL:N	2.21	0.50
8:CI:16:ALA:HA	8:CI:65:THR:O	2.11	0.50
10:CK:28:ASN:OD1	10:CK:46:ALA:HB3	2.11	0.50
11:CL:58:ASN:OD1	11:CL:60:PHE:HD1	1.95	0.50
18:CS:52:ASN:HD21	18:CS:54:ARG:HG2	1.76	0.50
53:CA:65:A:C5	53:CA:200:G:O2'	2.65	0.50
53:CA:82:G:C6	53:CA:89:U:C5	3.00	0.50
53:CA:636:U:H2'	53:CA:637:C:C6	2.47	0.50
53:CA:728:A:H2'	53:CA:729:A:C8	2.46	0.50
53:CA:1297:G:H5'	53:CA:1299:A:N7	2.27	0.50
22:DA:77:G:H2'	22:DA:78:U:O4'	2.12	0.50
22:DA:364:C:H2'	22:DA:365:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:455:C:N3	22:DA:473:G:H5'	2.27	0.50
22:DA:850:U:O2'	47:DZ:22:THR:HG22	2.11	0.50
22:DA:1056:G:OP2	22:DA:1056:G:H3'	2.12	0.50
22:DA:1331:G:C4	22:DA:1333:G:C8	3.00	0.50
22:DA:1340:U:C4	22:DA:1603:A:C8	3.00	0.50
22:DA:1698:A:H1'	22:DA:1700:A:OP2	2.12	0.50
22:DA:1833:C:C2	22:DA:1834:U:C6	2.99	0.50
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.11	0.50
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.45	0.50
26:DE:132:LYS:HG2	26:DE:132:LYS:O	2.12	0.50
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.46	0.50
32:DK:17:ARG:HD3	32:DK:18:ARG:HG3	1.93	0.50
32:DK:20:MET:HE2	32:DK:44:LYS:HE2	1.94	0.50
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.41	0.50
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.11	0.50
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.93	0.50
4:AE:105:ILE:HD12	21:AA:7:A:H3'	1.94	0.50
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.12	0.50
11:AL:74:GLN:O	11:AL:75:GLU:C	2.54	0.50
13:AN:20:PHE:C	13:AN:22:LYS:N	2.70	0.50
13:AN:40:ARG:HH12	13:AN:44:VAL:HG21	1.77	0.50
14:AO:63:ARG:CD	14:AO:87:ARG:HH22	2.15	0.50
14:AO:84:LEU:HB3	14:AO:86:LEU:CD2	2.42	0.50
16:AQ:76:ARG:HG2	16:AQ:77:VAL:H	1.76	0.50
21:AA:1517:G:N3	22:BA:1919:A:O2'	2.45	0.50
22:BA:395:U:O2'	22:BA:396:G:N7	2.42	0.50
22:BA:744:U:H2'	22:BA:745:G:O4'	2.12	0.50
22:BA:1103:A:H2'	22:BA:1104:C:H5'	1.93	0.50
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.12	0.50
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.77	0.50
23:BB:34:A:O2'	23:BB:35:C:H5'	2.11	0.50
24:BC:263:ASP:O	24:BC:264:LYS:C	2.53	0.50
27:BF:127:TYR:CE2	27:BF:129:MET:HG2	2.47	0.50
29:BH:8:LYS:O	29:BH:13:GLY:HA3	2.10	0.50
32:BK:1:MET:HG3	32:BK:67:LYS:HG3	1.94	0.50
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.93	0.50
34:BM:42:THR:O	34:BM:44:ARG:N	2.45	0.50
41:BT:40:LYS:H	41:BT:43:ILE:CG2	2.25	0.50
43:BV:2:PHE:HD1	43:BV:50:MET:HE2	1.76	0.50
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.47	0.50
47:BZ:43:ILE:HD12	47:BZ:43:ILE:C	2.36	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:32:ALA:O	5:CF:33:GLU:HB2	2.11	0.50
7:CH:17:GLN:NE2	7:CH:69:ALA:HB1	2.26	0.50
10:CK:91:GLY:O	10:CK:92:ARG:C	2.55	0.50
18:CS:38:THR:OG1	18:CS:67:GLY:HA2	2.12	0.50
19:CT:42:ASP:O	19:CT:43:LYS:C	2.54	0.50
20:CU:28:LEU:O	20:CU:28:LEU:HD23	2.12	0.50
53:CA:17:U:H2'	53:CA:18:C:H6	1.73	0.50
53:CA:344:A:H5"	53:CA:345:C:C5	2.46	0.50
53:CA:953:G:C6	53:CA:1229:A:N6	2.79	0.50
53:CA:961:U:O2'	53:CA:962:C:O4'	2.30	0.50
53:CA:1026:G:H22	53:CA:1036:A:N6	2.10	0.50
53:CA:1211:U:O2'	53:CA:1213:A:C2	2.63	0.50
22:DA:224:U:H5	22:DA:420:C:H4'	1.75	0.50
22:DA:228:C:H5'	22:DA:229:C:H5	1.77	0.50
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.71	0.50
24:DC:221:GLY:O	24:DC:224:MET:HG2	2.12	0.50
26:DE:69:ARG:O	26:DE:70:SER:HB3	2.10	0.50
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.11	0.50
30:DI:20:SER:OG	30:DI:25:PRO:HG2	2.11	0.50
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.94	0.50
37:DP:49:ILE:O	37:DP:50:ARG:O	2.30	0.50
42:DU:16:LYS:HD2	42:DU:17:ASP:OD1	2.12	0.50
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.91	0.50
46:DY:25:GLN:O	46:DY:29:ARG:HD3	2.11	0.50
52:D4:9:LYS:HD3	52:D4:9:LYS:C	2.36	0.50
5:AF:2:ARG:HH21	5:AF:68:GLN:HE21	1.60	0.50
6:AG:68:VAL:HG21	6:AG:103:ILE:CG1	2.42	0.50
8:AI:111:GLU:HG2	8:AI:120:ALA:HB1	1.94	0.50
21:AA:882:C:O2'	21:AA:883:C:H5'	2.12	0.50
21:AA:1394:A:H2'	21:AA:1501:C:O2'	2.11	0.50
21:AA:1508:A:H2'	21:AA:1509:C:C6	2.46	0.50
22:BA:320:A:O2'	22:BA:322:A:H8	1.95	0.50
22:BA:558:U:P	31:BJ:113:PRO:HB2	2.52	0.50
22:BA:879:G:H2'	22:BA:880:G:C8	2.47	0.50
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.11	0.50
22:BA:2151:U:N3	22:BA:2152:G:C5	2.80	0.50
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.47	0.50
22:BA:2862:G:H2'	22:BA:2863:C:C6	2.47	0.50
24:BC:119:VAL:HG23	24:BC:120:ASP:H	1.76	0.50
26:BE:190:ALA:C	26:BE:192:ALA:N	2.70	0.50
29:BH:95:GLY:C	29:BH:97:ARG:N	2.70	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
38:BQ:27:ARG:HG3	38:BQ:27:ARG:HH11	1.75	0.50
38:BQ:68:ALA:HB1	38:BQ:73:ILE:CG2	2.41	0.50
41:BT:14:PRO:HD3	46:BY:30:MET:HE1	1.93	0.50
41:BT:67:VAL:HG23	41:BT:68:LYS:N	2.26	0.50
44:BW:41:GLY:C	44:BW:43:LYS:N	2.67	0.50
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.25	0.50
52:B4:7:VAL:HG23	52:B4:8:LYS:N	2.26	0.50
10:CK:63:GLN:HB2	10:CK:98:ALA:HB2	1.94	0.50
11:CL:52:CYS:HB3	11:CL:66:ILE:HD11	1.94	0.50
14:CO:38:LEU:HD11	53:CA:740:U:H4'	1.93	0.50
53:CA:158:G:C5	53:CA:164:G:C6	3.00	0.50
53:CA:632:U:H3'	53:CA:633:G:H5'	1.93	0.50
53:CA:828:U:H2'	53:CA:829:G:O5'	2.12	0.50
53:CA:977:A:H4'	53:CA:981:U:O2	2.11	0.50
53:CA:1278:G:O2'	53:CA:1279:G:C2	2.65	0.50
53:CA:1284:C:P	53:CA:1285:A:H3'	2.52	0.50
53:CA:1348:U:O2'	53:CA:1349:A:C5'	2.60	0.50
22:DA:972:A:C6	22:DA:973:A:C6	3.00	0.50
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.47	0.50
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.26	0.50
22:DA:1317:G:N2	22:DA:1336:A:N3	2.60	0.50
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.41	0.50
22:DA:1555:G:C2	22:DA:1556:C:C2	3.00	0.50
22:DA:1722:A:C6	22:DA:1739:A:C8	2.99	0.50
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.46	0.50
22:DA:2655:G:H1'	22:DA:2656:U:H5	1.76	0.50
54:DB:58:A:O2'	54:DB:59:A:C5'	2.60	0.50
25:DD:116:LYS:HD3	35:DN:1:MET:HE1	1.93	0.50
26:DE:130:LYS:O	26:DE:134:LEU:HB3	2.11	0.50
28:DG:120:ILE:O	28:DG:120:ILE:HD13	2.12	0.50
29:DH:9:VAL:CG1	29:DH:10:ALA:N	2.75	0.50
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.11	0.50
34:DM:36:VAL:HG13	43:DV:82:TYR:HD1	1.72	0.50
37:DP:1:SER:HB3	37:DP:4:ILE:HB	1.92	0.50
37:DP:9:GLN:HB3	37:DP:12:MET:HE3	1.93	0.50
37:DP:22:GLY:H	37:DP:46:VAL:HB	1.77	0.50
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	1.94	0.50
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.30	0.50
43:DV:6:ALA:HB3	43:DV:65:VAL:HB	1.93	0.50
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:20:ARG:O	1:AB:22:TRP:HB3	2.12	0.50
1:AB:134:LEU:HA	1:AB:137:THR:OG1	2.11	0.50
2:AC:5:HIS:HD2	2:AC:7:ASN:H	1.60	0.50
2:AC:79:LYS:HE3	2:AC:79:LYS:HA	1.94	0.50
8:AI:113:LYS:HG3	8:AI:119:LYS:HA	1.93	0.50
12:AM:40:GLU:HG3	12:AM:41:ASP:H	1.77	0.50
12:AM:92:ARG:CZ	12:AM:92:ARG:HB3	2.42	0.50
15:AP:59:HIS:CE1	15:AP:63:GLN:NE2	2.76	0.50
21:AA:874:G:O2'	21:AA:875:U:H5'	2.11	0.50
21:AA:960:U:O2'	21:AA:1223:C:H5'	2.12	0.50
21:AA:1005:A:H2'	21:AA:1006:G:O4'	2.12	0.50
21:AA:1071:C:H2'	21:AA:1072:G:C8	2.47	0.50
22:BA:300:A:N1	22:BA:333:G:O2'	2.40	0.50
22:BA:320:A:C2	26:BE:163:ASN:HB3	2.47	0.50
22:BA:372:G:O4'	45:BX:60:LYS:HE3	2.11	0.50
22:BA:595:C:H2'	22:BA:596:U:H6	1.75	0.50
22:BA:1322:A:H2'	22:BA:1323:C:H5'	1.94	0.50
22:BA:2365:G:O2'	22:BA:2366:A:C8	2.60	0.50
22:BA:2581:G:H4'	22:BA:2582:G:N7	2.27	0.50
22:BA:2615:U:H2'	22:BA:2616:C:H6	1.76	0.50
22:BA:2722:G:H4'	35:BN:4:ARG:HB2	1.93	0.50
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.47	0.50
23:BB:109:A:H2'	23:BB:110:C:C6	2.47	0.50
27:BF:53:ALA:O	27:BF:64:PRO:HG2	2.11	0.50
28:BG:148:ARG:HD2	28:BG:163:TYR:CE2	2.47	0.50
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.50
33:BL:4:ASN:HD22	33:BL:4:ASN:H	1.59	0.50
36:BO:57:ALA:O	36:BO:59:ALA:N	2.44	0.50
44:BW:58:LEU:HD13	44:BW:58:LEU:N	2.25	0.50
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.94	0.50
48:B0:53:VAL:O	48:B0:54:ILE:O	2.30	0.50
1:CB:184:ALA:HB3	1:CB:195:VAL:HG21	1.94	0.50
2:CC:67:ILE:H	2:CC:102:ILE:HA	1.77	0.50
8:CI:55:ASP:O	8:CI:59:LYS:HE2	2.11	0.50
11:CL:89:LEU:HB3	11:CL:92:VAL:CG2	2.42	0.50
12:CM:13:HIS:CD2	12:CM:14:ALA:H	2.30	0.50
13:CN:4:SER:O	13:CN:7:ALA:HB3	2.12	0.50
15:CP:1:MET:HE1	53:CA:136:C:H1'	1.94	0.50
20:CU:19:LYS:HZ3	20:CU:19:LYS:H	1.60	0.50
20:CU:20:ARG:NH1	20:CU:24:LYS:HG2	2.27	0.50
53:CA:415:A:H3'	53:CA:416:G:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:460:A:HO2'	53:CA:462:G:H5'	1.75	0.50
53:CA:501:C:H2'	53:CA:502:A:H8	1.76	0.50
53:CA:629:A:H2'	53:CA:630:A:O4'	2.12	0.50
53:CA:855:U:H5	53:CA:871:U:O4	1.94	0.50
53:CA:1079:G:C6	53:CA:1080:A:N6	2.79	0.50
53:CA:1086:U:H6	53:CA:1086:U:C5'	2.25	0.50
53:CA:1242:G:H4'	53:CA:1304:G:OP1	2.12	0.50
53:CA:1272:G:H2'	53:CA:1273:C:H5'	1.93	0.50
53:CA:1507:A:H2'	53:CA:1508:A:C8	2.47	0.50
22:DA:28:A:C2	22:DA:29:U:H1'	2.47	0.50
22:DA:321:U:O4'	26:DE:159:LEU:HG	2.12	0.50
22:DA:511:U:H4'	22:DA:1235:G:H4'	1.93	0.50
22:DA:532:A:N1	22:DA:2020:A:O2'	2.38	0.50
22:DA:727:A:C2'	22:DA:728:G:C8	2.94	0.50
22:DA:750:A:H5"	22:DA:751:A:OP2	2.11	0.50
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.47	0.50
22:DA:1439:A:C8	22:DA:1439:A:C3'	2.93	0.50
22:DA:1475:G:N3	22:DA:1475:G:H2'	2.26	0.50
22:DA:1722:A:N6	22:DA:1739:A:C8	2.80	0.50
22:DA:2154:A:H2'	22:DA:2155:U:H6	1.77	0.50
22:DA:2215:C:O2'	22:DA:2216:G:C8	2.47	0.50
22:DA:2591:C:P	24:DC:237:ARG:HD2	2.52	0.50
22:DA:2725:A:C4	22:DA:2727:A:C8	3.00	0.50
22:DA:2734:A:C8	22:DA:2735:G:C8	3.00	0.50
54:DB:13:G:N2	54:DB:16:G:C4	2.79	0.50
54:DB:18:G:C2	54:DB:67:G:C6	3.00	0.50
54:DB:19:C:H2'	54:DB:20:G:C8	2.47	0.50
24:DC:53:ILE:HA	24:DC:214:GLY:O	2.11	0.50
25:DD:138:LEU:N	25:DD:138:LEU:HD13	2.26	0.50
28:DG:86:LEU:HD12	28:DG:132:LEU:HD11	1.94	0.50
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.94	0.50
30:DI:28:GLY:O	30:DI:29:GLN:C	2.54	0.50
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.12	0.50
30:DI:57:VAL:O	30:DI:58:ILE:HG13	2.12	0.50
34:DM:22:GLN:HB2	34:DM:100:LYS:HZ3	1.76	0.50
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.11	0.50
38:DQ:69:ARG:NH2	38:DQ:74:SER:HB2	2.27	0.50
39:DR:23:GLU:O	39:DR:25:LEU:HD22	2.11	0.50
40:DS:68:ASP:OD1	40:DS:68:ASP:N	2.45	0.50
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.12	0.50
6:AG:38:ALA:O	6:AG:42:VAL:HG23	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.27	0.49
15:AP:78:VAL:HG22	15:AP:78:VAL:O	2.11	0.49
18:AS:41:PRO:O	18:AS:44:ILE:HG13	2.12	0.49
21:AA:157:U:O2'	21:AA:158:G:H5'	2.12	0.49
21:AA:215:C:H2'	21:AA:216:U:C6	2.47	0.49
21:AA:373:A:N3	21:AA:374:A:C8	2.79	0.49
21:AA:469:C:H2'	21:AA:470:C:C6	2.47	0.49
21:AA:501:C:O2'	21:AA:502:A:H5'	2.12	0.49
21:AA:996:A:C2	21:AA:1046:A:H5'	2.47	0.49
21:AA:1277:C:H2'	21:AA:1278:G:H5"	1.94	0.49
22:BA:1494:A:C2	22:BA:1495:A:C4	2.99	0.49
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.45	0.49
22:BA:2197:U:O2'	22:BA:2198:A:C2'	2.52	0.49
22:BA:2272:U:H5"	22:BA:2273:A:OP1	2.12	0.49
22:BA:2602:A:H5"	22:BA:2603:G:H5"	1.94	0.49
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.76	0.49
23:BB:51:G:H2'	23:BB:52:A:C8	2.47	0.49
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.66	0.49
25:BD:93:GLY:O	25:BD:94:GLN:C	2.54	0.49
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.45	0.49
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.12	0.49
32:BK:19:VAL:HG22	32:BK:41:ILE:HG13	1.93	0.49
33:BL:29:LYS:O	33:BL:31:GLY:N	2.41	0.49
34:BM:53:MET:HE1	34:BM:103:TYR:CD2	2.47	0.49
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.59	0.49
40:BS:29:VAL:HG12	40:BS:30:SER:N	2.27	0.49
40:BS:33:LEU:HD12	40:BS:48:LYS:HD3	1.93	0.49
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.12	0.49
4:CE:98:ALA:O	4:CE:121:ASN:HB2	2.12	0.49
15:CP:29:ASN:O	53:CA:309:A:H5"	2.11	0.49
19:CT:23:ARG:HB3	19:CT:60:GLN:HE22	1.76	0.49
20:CU:33:ARG:CZ	20:CU:34:ARG:HD3	2.42	0.49
53:CA:998:C:C6	53:CA:999:C:H5	2.30	0.49
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.12	0.49
53:CA:1265:C:C4	53:CA:1266:G:N7	2.80	0.49
53:CA:1298:U:H4'	53:CA:1299:A:O5'	2.11	0.49
22:DA:170:U:H2'	22:DA:171:U:C6	2.43	0.49
22:DA:340:A:H2'	22:DA:341:C:O4'	2.11	0.49
22:DA:672:C:H5'	22:DA:672:C:H6	1.77	0.49
22:DA:1056:G:H1'	22:DA:1103:A:N1	2.27	0.49
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1439:A:N1	22:DA:1552:A:C8	2.80	0.49
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.11	0.49
22:DA:1973:G:C6	22:DA:1974:C:C4	3.00	0.49
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.12	0.49
54:DB:32:U:C2	54:DB:51:G:N2	2.79	0.49
25:DD:16:THR:HG22	25:DD:20:VAL:H	1.76	0.49
27:DF:28:PRO:HB2	27:DF:168:LEU:CD2	2.38	0.49
28:DG:37:ASN:HD22	28:DG:40:VAL:CG2	2.24	0.49
28:DG:85:LYS:HD3	28:DG:164:ALA:HB3	1.94	0.49
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.12	0.49
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.76	0.49
33:DL:21:ARG:NH2	33:DL:21:ARG:HB3	2.26	0.49
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.37	0.49
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.27	0.49
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.47	0.49
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.93	0.49
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.76	0.49
44:DW:40:ARG:NH1	44:DW:40:ARG:CG	2.56	0.49
45:DX:20:ALA:O	45:DX:21:LEU:HB2	2.12	0.49
1:AB:59:ILE:HD12	1:AB:60:ALA:N	2.27	0.49
1:AB:168:GLU:HB3	1:AB:171:ALA:HB3	1.94	0.49
4:AE:112:ALA:O	4:AE:113:VAL:C	2.56	0.49
4:AE:114:LEU:HG	4:AE:119:VAL:CG2	2.42	0.49
7:AH:45:ILE:C	7:AH:63:LYS:HD2	2.37	0.49
8:AI:88:GLU:HG3	8:AI:89:TYR:N	2.27	0.49
21:AA:51:A:H4'	21:AA:52:C:O5'	2.12	0.49
21:AA:957:U:O2	21:AA:959:A:H8	1.94	0.49
21:AA:1305:G:H21	21:AA:1332:A:H2	1.60	0.49
21:AA:1492:A:N1	22:BA:1913:A:C4	2.80	0.49
22:BA:26:G:H1'	22:BA:514:A:H61	1.78	0.49
22:BA:63:A:O2'	22:BA:64:A:H5'	2.12	0.49
22:BA:357:C:H2'	22:BA:358:U:H6	1.75	0.49
22:BA:405:U:C3'	22:BA:406:G:H5'	2.41	0.49
22:BA:613:A:C8	22:BA:616:A:N1	2.80	0.49
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.12	0.49
22:BA:1805:A:N3	24:BC:49:THR:HG23	2.27	0.49
22:BA:1858:A:H8	22:BA:1858:A:OP2	1.94	0.49
23:BB:52:A:H4'	23:BB:53:A:OP1	2.11	0.49
25:BD:4:LEU:HD13	25:BD:100:LEU:HD23	1.95	0.49
26:BE:78:TRP:O	26:BE:79:ARG:O	2.30	0.49
33:BL:62:PRO:HB2	51:B3:29:ARG:NH2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:77:ILE:HD12	33:BL:77:ILE:N	2.26	0.49
33:BL:82:LEU:C	33:BL:84:LYS:H	2.19	0.49
34:BM:1:MET:O	34:BM:2:LEU:CB	2.59	0.49
34:BM:41:LEU:HA	34:BM:45:GLN:OE1	2.12	0.49
35:BN:61:ALA:O	35:BN:64:ARG:HB2	2.11	0.49
1:CB:80:LYS:O	1:CB:84:LEU:N	2.37	0.49
4:CE:113:VAL:CG2	4:CE:136:VAL:HG23	2.42	0.49
4:CE:135:VAL:O	4:CE:138:ALA:HB3	2.13	0.49
8:CI:114:LYS:HD2	8:CI:120:ALA:O	2.12	0.49
8:CI:115:VAL:HG21	9:CJ:61:ALA:O	2.11	0.49
12:CM:64:VAL:O	12:CM:65:GLU:C	2.55	0.49
20:CU:9:GLU:HB3	20:CU:10:PRO:CD	2.42	0.49
53:CA:113:G:H2'	53:CA:114:U:C6	2.46	0.49
53:CA:227:G:H2'	53:CA:228:A:O4'	2.12	0.49
22:DA:78:U:C2'	22:DA:79:C:H5'	2.43	0.49
22:DA:468:G:H5"	26:DE:55:SER:HB2	1.94	0.49
22:DA:870:U:C2'	22:DA:871:U:H5'	2.42	0.49
22:DA:1126:A:OP1	22:DA:1126:A:H8	1.95	0.49
22:DA:1205:A:H5"	22:DA:1206:G:C8	2.47	0.49
22:DA:2093:G:C6	22:DA:2225:A:N7	2.80	0.49
22:DA:2379:G:H2'	22:DA:2380:C:H6	1.77	0.49
22:DA:2529:G:H4'	28:DG:174:LYS:CD	2.41	0.49
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	2.12	0.49
22:DA:2637:U:H5'	25:DD:45:TYR:CE1	2.48	0.49
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.46	0.49
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.93	0.49
54:DB:111:U:H2'	54:DB:112:G:C8	2.47	0.49
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.60	0.49
27:DF:11:VAL:HG22	27:DF:171:ALA:HA	1.94	0.49
27:DF:134:GLN:HG3	27:DF:149:ARG:O	2.12	0.49
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.95	0.49
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.20	0.49
31:DJ:99:ARG:O	31:DJ:103:ILE:HG23	2.13	0.49
35:DN:16:HIS:CE1	35:DN:20:MET:HE2	2.47	0.49
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	1.94	0.49
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.94	0.49
6:AG:112:ASP:O	6:AG:113:LYS:HD3	2.11	0.49
11:AL:23:LEU:CB	11:AL:58:ASN:ND2	2.74	0.49
13:AN:62:ARG:O	13:AN:63:CYS:C	2.54	0.49
20:AU:24:LYS:HG2	20:AU:25:ALA:N	2.27	0.49
21:AA:36:C:H2'	21:AA:37:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:174:A:C2'	21:AA:175:C:H5'	2.39	0.49
21:AA:559:A:H4'	21:AA:560:A:O5'	2.12	0.49
21:AA:821:G:H2'	21:AA:822:U:C6	2.48	0.49
21:AA:1055:A:N6	21:AA:1206:G:C5	2.81	0.49
21:AA:1316:G:N2	21:AA:1318:A:H3'	2.27	0.49
21:AA:1469:C:H6	21:AA:1469:C:C5'	2.22	0.49
22:BA:141:G:H3'	22:BA:142:A:C5'	2.42	0.49
22:BA:276:U:O2'	22:BA:277:G:O5'	2.30	0.49
22:BA:544:C:N3	22:BA:548:G:OP1	2.45	0.49
22:BA:573:U:O2'	22:BA:574:A:H3'	2.11	0.49
22:BA:852:U:H2'	22:BA:853:C:C6	2.47	0.49
22:BA:923:G:H1'	44:BW:23:LYS:HE2	1.94	0.49
22:BA:1322:A:C2'	22:BA:1323:C:H5'	2.42	0.49
22:BA:2662:A:H2'	22:BA:2663:G:O4'	2.11	0.49
22:BA:2773:C:H2'	22:BA:2774:C:H6	1.77	0.49
23:BB:12:C:H4'	23:BB:13:G:OP1	2.12	0.49
23:BB:54:G:H2'	23:BB:55:U:H6	1.76	0.49
24:BC:103:ILE:O	24:BC:104:LEU:O	2.29	0.49
24:BC:145:MET:HB2	24:BC:152:GLN:NE2	2.27	0.49
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.30	0.49
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE2	2.13	0.49
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.41	0.49
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.78	0.49
50:B2:21:ARG:HG2	50:B2:31:LEU:HG	1.93	0.49
2:CC:120:THR:HG23	2:CC:187:GLU:O	2.12	0.49
3:CD:165:GLU:O	3:CD:166:LYS:HB3	2.11	0.49
7:CH:54:THR:C	7:CH:56:PRO:HD3	2.38	0.49
11:CL:41:PRO:HG2	11:CL:45:ASN:O	2.11	0.49
13:CN:94:GLY:O	13:CN:95:LEU:C	2.54	0.49
18:CS:38:THR:HG1	18:CS:40:PHE:HD1	1.60	0.49
53:CA:280:C:H4'	53:CA:281:G:OP2	2.13	0.49
53:CA:579:A:H2'	53:CA:580:C:C6	2.46	0.49
53:CA:812:G:H2'	53:CA:812:G:N3	2.27	0.49
53:CA:1300:G:N2	53:CA:1334:G:H2'	2.22	0.49
22:DA:815:C:P	39:DR:85:LYS:HE2	2.52	0.49
22:DA:860:U:HO2'	22:DA:861:A:C5'	2.25	0.49
22:DA:1075:C:HO2'	22:DA:1076:C:H6	1.59	0.49
22:DA:1232:G:H2'	22:DA:1233:C:H6	1.77	0.49
22:DA:1716:U:C4	22:DA:1745:A:N6	2.80	0.49
22:DA:1964:G:H4'	22:DA:1965:C:OP2	2.12	0.49
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.41	0.49
22:DA:2425:A:H1'	22:DA:2427:C:C5	2.47	0.49
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.47	0.49
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.28	0.49
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.43	0.49
27:DF:11:VAL:O	27:DF:12:VAL:HB	2.12	0.49
27:DF:113:PHE:CE2	27:DF:116:LEU:HD22	2.47	0.49
35:DN:75:ILE:HD12	35:DN:79:LEU:HD12	1.93	0.49
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	2.11	0.49
39:DR:43:ASN:ND2	39:DR:44:GLY:H	2.10	0.49
48:D0:29:VAL:HG21	48:D0:34:GLY:HA2	1.94	0.49
1:AB:27:LYS:C	1:AB:29:PHE:H	2.19	0.49
1:AB:67:LEU:O	1:AB:160:LEU:HD12	2.12	0.49
2:AC:174:LEU:O	2:AC:174:LEU:HD12	2.11	0.49
4:AE:114:LEU:O	4:AE:119:VAL:HG22	2.12	0.49
5:AF:18:VAL:HG11	5:AF:58:HIS:CD2	2.46	0.49
9:AJ:18:ILE:HG23	9:AJ:19:ASP:N	2.25	0.49
14:AO:86:LEU:C	14:AO:88:ARG:H	2.20	0.49
15:AP:14:ARG:HH12	21:AA:617:G:H21	1.60	0.49
19:AT:38:ILE:C	19:AT:40:ALA:N	2.71	0.49
19:AT:72:ALA:O	19:AT:73:ARG:C	2.56	0.49
21:AA:4:U:O2	21:AA:4:U:H2'	2.13	0.49
21:AA:1261:A:H61	21:AA:1274:A:H2'	1.76	0.49
22:BA:402:A:C2'	22:BA:403:U:H5'	2.43	0.49
22:BA:503:A:H5'	22:BA:505:A:OP1	2.11	0.49
22:BA:859:G:OP2	22:BA:859:G:C8	2.64	0.49
22:BA:1057:A:C8	22:BA:1086:A:H8	2.29	0.49
22:BA:1224:U:C4	22:BA:1225:G:C6	3.00	0.49
22:BA:1334:G:C2'	22:BA:1335:C:H5'	2.41	0.49
22:BA:1462:C:H2'	22:BA:1463:C:H6	1.77	0.49
22:BA:1943:U:H4'	22:BA:1944:U:O5'	2.12	0.49
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.47	0.49
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	2.13	0.49
25:BD:16:THR:O	25:BD:19:GLY:N	2.44	0.49
26:BE:48:THR:O	26:BE:52:VAL:HG23	2.12	0.49
29:BH:14:SER:O	29:BH:16:GLY:N	2.46	0.49
29:BH:90:LEU:HD22	29:BH:123:ARG:HA	1.94	0.49
32:BK:21:CYS:SG	32:BK:39:ILE:HD11	2.51	0.49
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.47	0.49
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.27	0.49
40:BS:88:ARG:CG	40:BS:88:ARG:NH2	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:27:SER:O	41:BT:28:ASN:CG	2.55	0.49
42:BU:48:VAL:O	42:BU:53:GLN:HB3	2.12	0.49
44:BW:8:SER:O	44:BW:9:THR:CB	2.60	0.49
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.75	0.49
1:CB:169:HIS:CD2	1:CB:173:LYS:NZ	2.80	0.49
2:CC:129:PHE:CZ	2:CC:156:LEU:HB3	2.47	0.49
3:CD:3:TYR:O	3:CD:4:LEU:HB2	2.12	0.49
5:CF:38:ARG:HH11	5:CF:63:ASN:ND2	2.09	0.49
7:CH:59:GLU:C	7:CH:60:LEU:HD12	2.38	0.49
9:CJ:15:HIS:CE1	9:CJ:70:HIS:CD2	3.01	0.49
13:CN:100:TRP:C	13:CN:100:TRP:CD1	2.89	0.49
20:CU:37:TYR:HD1	53:CA:1525:G:OP1	1.94	0.49
53:CA:134:G:H2'	53:CA:135:C:O4'	2.13	0.49
53:CA:149:A:C2	53:CA:150:U:C2	3.00	0.49
53:CA:730:G:H5"	53:CA:731:G:OP2	2.12	0.49
53:CA:1476:A:H2'	53:CA:1477:U:O4'	2.11	0.49
53:CA:1486:G:H2'	53:CA:1487:G:O4'	2.12	0.49
22:DA:159:G:O2'	22:DA:160:A:H5"	2.12	0.49
22:DA:246:C:C2'	22:DA:247:G:H5'	2.42	0.49
22:DA:332:A:C5	22:DA:335:C:N4	2.81	0.49
22:DA:379:G:C6	22:DA:380:G:C5	2.99	0.49
22:DA:927:A:C6	22:DA:928:A:C6	3.01	0.49
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.47	0.49
22:DA:1179:G:N2	22:DA:1180:U:C2	2.81	0.49
22:DA:1529:G:H2'	22:DA:1530:G:O4'	2.13	0.49
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.27	0.49
22:DA:2373:G:C6	22:DA:2374:C:C4	2.99	0.49
22:DA:2414:G:H2'	22:DA:2415:G:H5'	1.94	0.49
25:DD:10:GLY:O	25:DD:11:MET:CB	2.61	0.49
25:DD:118:PHE:CE1	25:DD:119:ALA:O	2.65	0.49
27:DF:37:MET:N	27:DF:151:LEU:HB3	2.27	0.49
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.42	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
34:DM:74:THR:HB	34:DM:87:GLY:O	2.12	0.49
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.94	0.49
45:DX:69:GLU:O	45:DX:71:ARG:N	2.46	0.49
51:D3:41:ARG:HG2	51:D3:44:ARG:NH2	2.28	0.49
1:AB:32:GLY:HA3	1:AB:39:ILE:HB	1.94	0.49
3:AD:1:ALA:CB	21:AA:404:G:N7	2.74	0.49
3:AD:63:ILE:HG23	3:AD:64:TYR:CD1	2.47	0.49
3:AD:112:GLU:HG3	3:AD:153:ARG:HD3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AF:38:ARG:HG2	5:AF:38:ARG:NH1	2.26	0.49
19:AT:34:VAL:HG11	19:AT:78:LEU:HD22	1.94	0.49
21:AA:408:A:C2	21:AA:435:A:C2	3.00	0.49
21:AA:497:G:O2'	21:AA:498:A:H5'	2.12	0.49
21:AA:1453:G:H2'	21:AA:1454:G:O4'	2.12	0.49
22:BA:545:U:O4'	22:BA:545:U:O2	2.26	0.49
23:BB:40:U:O2'	23:BB:43:C:C5	2.63	0.49
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.13	0.49
24:BC:254:LYS:O	24:BC:255:LYS:HB2	2.11	0.49
28:BG:88:LEU:HD11	28:BG:95:ALA:CB	2.38	0.49
28:BG:116:LEU:HD21	28:BG:122:ALA:HB3	1.94	0.49
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	1.94	0.49
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.36	0.49
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.27	0.49
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.81	0.49
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.93	0.49
37:BP:24:THR:HG22	37:BP:87:ARG:N	2.20	0.49
40:BS:66:ILE:HD13	40:BS:67:ASP:N	2.27	0.49
44:BW:35:ILE:O	44:BW:37:VAL:HG23	2.12	0.49
45:BX:53:LYS:HD3	45:BX:53:LYS:C	2.37	0.49
47:BZ:20:LYS:O	47:BZ:21:ALA:C	2.56	0.49
48:B0:9:ARG:CG	48:B0:9:ARG:NH2	2.71	0.49
48:B0:12:ARG:O	48:B0:13:GLY:C	2.56	0.49
1:CB:212:TYR:O	1:CB:212:TYR:HD2	1.96	0.49
10:CK:125:LYS:O	10:CK:126:ARG:O	2.30	0.49
11:CL:5:GLN:HG3	11:CL:9:LYS:HZ3	1.77	0.49
18:CS:10:ILE:HG22	18:CS:14:LEU:HD21	1.95	0.49
19:CT:2:ASN:O	19:CT:3:ILE:C	2.55	0.49
19:CT:42:ASP:HB3	19:CT:45:ALA:HB3	1.95	0.49
53:CA:575:G:C6	53:CA:821:G:N7	2.81	0.49
53:CA:892:A:C6	53:CA:893:C:C4	3.01	0.49
53:CA:1284:C:H5"	53:CA:1285:A:H5"	1.94	0.49
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.26	0.49
53:CA:1440:U:OP2	53:CA:1440:U:H6	1.94	0.49
22:DA:730:A:H2'	22:DA:731:C:H6	1.78	0.49
22:DA:876:C:H2'	22:DA:877:A:OP1	2.13	0.49
22:DA:1451:C:H1'	22:DA:1452:G:N7	2.27	0.49
22:DA:1491:G:C6	22:DA:1500:G:C2	3.00	0.49
22:DA:1608:A:C4	22:DA:1611:C:N4	2.81	0.49
22:DA:1716:U:O2'	22:DA:1717:A:C5'	2.59	0.49
22:DA:1866:A:C4	22:DA:1876:A:N6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2516:A:C4	22:DA:2569:G:N2	2.81	0.49
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.78	0.49
24:DC:140:VAL:CG2	24:DC:161:VAL:HB	2.43	0.49
25:DD:148:GLN:OE1	25:DD:152:PRO:HG2	2.12	0.49
26:DE:151:GLY:HA3	26:DE:191:ASP:OD1	2.12	0.49
27:DF:59:ILE:HD13	27:DF:137:PHE:HZ	1.77	0.49
29:DH:68:ARG:HD3	29:DH:71:LYS:HB2	1.94	0.49
36:DO:77:ALA:O	36:DO:81:ARG:HG3	2.13	0.49
37:DP:87:ARG:NH1	37:DP:111:GLU:HG3	2.27	0.49
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.20	0.49
41:DT:63:VAL:HG21	41:DT:80:TRP:CE2	2.47	0.49
43:DV:26:PHE:CD2	43:DV:42:LEU:HB2	2.48	0.49
51:D3:22:LYS:H	51:D3:48:MET:CB	2.24	0.49
1:AB:67:LEU:HB3	1:AB:160:LEU:HD12	1.93	0.49
2:AC:25:THR:HG23	13:AN:75:LYS:HD3	1.93	0.49
4:AE:149:PRO:CA	4:AE:152:VAL:HG13	2.43	0.49
6:AG:110:ARG:HH12	6:AG:122:GLU:HG2	1.76	0.49
7:AH:105:THR:HG22	7:AH:121:GLY:C	2.37	0.49
13:AN:46:LYS:C	13:AN:48:GLN:N	2.70	0.49
16:AQ:51:GLU:O	16:AQ:52:CYS:O	2.30	0.49
16:AQ:55:GLY:HA3	16:AQ:82:VAL:HG11	1.95	0.49
20:AU:3:ILE:CA	20:AU:19:LYS:HZ1	2.26	0.49
21:AA:1046:A:O2'	21:AA:1047:G:O5'	2.31	0.49
21:AA:1371:G:H5"	21:AA:1372:U:OP2	2.11	0.49
22:BA:12:U:H2'	22:BA:13:A:O5'	2.13	0.49
22:BA:271:G:C4	22:BA:272:A:N7	2.80	0.49
22:BA:869:G:H2'	22:BA:870:U:O4'	2.12	0.49
22:BA:1509:A:O2'	22:BA:1510:G:P	2.71	0.49
22:BA:1688:U:H5"	22:BA:1689:A:OP1	2.12	0.49
22:BA:1820:U:C2	24:BC:200:MET:HB2	2.46	0.49
22:BA:2714:G:H2'	22:BA:2715:C:H6	1.76	0.49
23:BB:2:G:C2	23:BB:119:A:N3	2.80	0.49
24:BC:259:ASN:C	24:BC:261:ARG:N	2.65	0.49
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.95	0.49
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.95	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
34:BM:71:LYS:HD3	34:BM:95:LEU:CD1	2.42	0.49
35:BN:63:ARG:O	35:BN:64:ARG:C	2.53	0.49
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	2.13	0.49
37:BP:17:PRO:HG3	37:BP:83:ILE:O	2.13	0.49
41:BT:2:ILE:HB	41:BT:3:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:20:ALA:O	45:BX:21:LEU:HB2	2.12	0.49
3:CD:70:GLN:HG2	3:CD:74:TYR:CE2	2.47	0.49
4:CE:103:GLY:O	4:CE:104:ILE:CG2	2.57	0.49
7:CH:46:GLU:N	7:CH:63:LYS:HG3	2.28	0.49
8:CI:74:GLN:HE22	53:CA:1249:C:H4'	1.77	0.49
9:CJ:11:LYS:HE2	9:CJ:97:ASP:CG	2.38	0.49
53:CA:692:U:O2'	53:CA:694:A:N7	2.39	0.49
53:CA:881:G:C6	53:CA:882:C:C4	3.01	0.49
53:CA:995:C:HO2'	53:CA:996:A:P	2.34	0.49
22:DA:185:G:C6	22:DA:212:G:C2	3.01	0.49
22:DA:226:A:C2	22:DA:230:G:O6	2.65	0.49
22:DA:301:G:O2'	22:DA:302:C:O5'	2.31	0.49
22:DA:866:A:O2'	22:DA:867:C:H6	1.96	0.49
22:DA:991:C:C4	22:DA:1185:G:C6	3.00	0.49
22:DA:1073:A:OP2	22:DA:1073:A:H4'	2.12	0.49
22:DA:1142:A:C4	22:DA:1144:A:C8	3.01	0.49
22:DA:1215:G:H5"	38:DQ:7:VAL:HG11	1.95	0.49
22:DA:1228:G:H2'	22:DA:1229:C:C6	2.48	0.49
22:DA:1425:G:H8	22:DA:1425:G:O5'	1.95	0.49
22:DA:1439:A:H3'	22:DA:1439:A:H8	1.75	0.49
22:DA:1507:C:H3'	22:DA:1508:A:O4'	2.12	0.49
22:DA:1544:A:C6	22:DA:1545:A:C6	3.01	0.49
22:DA:2138:G:H8	22:DA:2138:G:OP2	1.94	0.49
22:DA:2283:C:N4	22:DA:2389:G:C6	2.81	0.49
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.77	0.49
54:DB:27:C:O2'	54:DB:28:C:C5'	2.61	0.49
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.47	0.49
29:DH:7:ASP:O	29:DH:15:LEU:HA	2.13	0.49
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.79	0.49
35:DN:1:MET:O	35:DN:2:ARG:CB	2.60	0.49
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.42	0.49
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.93	0.49
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.27	0.49
4:AE:94:PHE:CD1	4:AE:94:PHE:C	2.89	0.49
9:AJ:18:ILE:CG2	9:AJ:19:ASP:N	2.75	0.49
21:AA:82:G:N2	21:AA:84:U:N3	2.60	0.49
21:AA:89:U:O2'	21:AA:90:C:C5'	2.60	0.49
21:AA:433:G:C2'	21:AA:434:U:H5'	2.42	0.49
21:AA:961:U:O5'	21:AA:961:U:H6	1.96	0.49
21:AA:981:U:C2	21:AA:982:U:C5	3.01	0.49
21:AA:1452:C:H4'	21:AA:1453:G:C4	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:182:A:H2'	22:BA:183:C:H6	1.77	0.49
22:BA:229:C:C2'	22:BA:230:G:O5'	2.61	0.49
22:BA:282:A:H2'	22:BA:283:G:C8	2.48	0.49
22:BA:649:G:H2'	22:BA:650:C:C6	2.48	0.49
22:BA:942:G:H2'	22:BA:943:A:H5'	1.95	0.49
22:BA:1339:G:N2	22:BA:1603:A:H1'	2.27	0.49
22:BA:1406:U:O2'	22:BA:1407:G:O5'	2.31	0.49
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.43	0.49
22:BA:2264:C:H41	44:BW:11:ASN:ND2	2.10	0.49
22:BA:2582:G:O2'	22:BA:2583:G:H5'	2.13	0.49
24:BC:169:ALA:O	24:BC:185:ALA:HB3	2.12	0.49
25:BD:101:PHE:HE2	25:BD:203:VAL:CG2	2.24	0.49
26:BE:46:GLN:HG2	26:BE:87:ALA:H	1.77	0.49
26:BE:97:ASN:HB2	26:BE:100:MET:HG3	1.93	0.49
33:BL:85:VAL:HG22	33:BL:94:THR:HG23	1.95	0.49
38:BQ:25:GLY:O	38:BQ:29:ARG:HG3	2.12	0.49
41:BT:39:THR:O	41:BT:39:THR:CG2	2.61	0.49
2:CC:53:ARG:HH11	2:CC:53:ARG:HB2	1.77	0.49
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.12	0.49
7:CH:75:GLN:O	7:CH:126:CYS:CB	2.60	0.49
8:CI:126:PHE:O	8:CI:126:PHE:CG	2.66	0.49
11:CL:19:ASN:HD22	11:CL:19:ASN:N	1.96	0.49
12:CM:103:THR:HG22	12:CM:104:ASN:N	2.28	0.49
16:CQ:11:VAL:HG12	16:CQ:54:ILE:HA	1.94	0.49
16:CQ:47:ASP:HB3	16:CQ:74:LEU:CB	2.42	0.49
20:CU:33:ARG:HH22	20:CU:34:ARG:HH11	1.60	0.49
53:CA:320:A:C2	53:CA:334:C:C2	3.01	0.49
53:CA:502:A:H4'	53:CA:550:G:H4'	1.94	0.49
53:CA:518:C:H2'	53:CA:530:G:N7	2.28	0.49
53:CA:961:U:H5	53:CA:1223:C:H1'	1.78	0.49
53:CA:994:A:N3	53:CA:995:C:C6	2.81	0.49
53:CA:1130:A:C6	53:CA:1131:G:N7	2.81	0.49
22:DA:2:G:C5	22:DA:3:U:C4	3.00	0.49
22:DA:90:U:H3'	22:DA:91:A:C5'	2.42	0.49
22:DA:319:G:C6	22:DA:333:G:N1	2.81	0.49
22:DA:2578:G:H21	25:DD:130:GLN:NE2	2.10	0.49
25:DD:182:ALA:N	25:DD:183:GLU:OE1	2.46	0.49
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.27	0.49
33:DL:54:GLN:O	33:DL:55:MET:C	2.56	0.49
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.13	0.49
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:88:ARG:HH11	37:DP:112:ARG:CZ	2.26	0.49
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.95	0.49
39:DR:55:ASP:CG	39:DR:56:GLY:H	2.20	0.49
7:AH:45:ILE:HG22	7:AH:62:LEU:HD13	1.95	0.49
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.43	0.49
14:AO:26:VAL:HG12	14:AO:30:LEU:HD11	1.94	0.49
21:AA:198:G:N1	21:AA:220:G:C4	2.80	0.49
21:AA:677:U:H3	21:AA:713:G:H22	1.59	0.49
21:AA:819:A:N7	21:AA:1529:G:C2	2.81	0.49
21:AA:872:A:C2	21:AA:874:G:C6	3.01	0.49
21:AA:1442:G:H2'	21:AA:1443:C:C6	2.47	0.49
22:BA:528:A:C2'	22:BA:529:A:H5"	2.43	0.49
22:BA:709:U:H2'	22:BA:710:U:C6	2.47	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:CE	2.61	0.49
22:BA:1083:U:C5	22:BA:1085:A:OP2	2.66	0.49
22:BA:1434:A:H2'	22:BA:1435:G:C8	2.47	0.49
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.47	0.49
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.61	0.49
23:BB:34:A:H2'	23:BB:35:C:OP2	2.11	0.49
24:BC:29:PHE:CZ	24:BC:31:PRO:CG	2.96	0.49
24:BC:69:ASN:O	24:BC:70:LYS:C	2.54	0.49
28:BG:59:ASP:O	28:BG:60:GLY:C	2.55	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
32:BK:1:MET:HE2	32:BK:32:TYR:CE1	2.48	0.49
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.95	0.49
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.84	0.49
45:BX:39:VAL:HG13	45:BX:46:VAL:HG22	1.94	0.49
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.41	0.49
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.60	0.49
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	2.05	0.49
1:CB:111:LYS:C	1:CB:113:LEU:H	2.20	0.49
1:CB:114:LYS:C	1:CB:117:GLU:HG2	2.38	0.49
1:CB:156:LEU:HD23	1:CB:156:LEU:H	1.78	0.49
4:CE:20:VAL:HB	53:CA:16:A:O2'	2.13	0.49
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.95	0.49
14:CO:52:ARG:O	14:CO:55:LEU:HB3	2.13	0.49
53:CA:39:G:H2'	53:CA:40:C:H6	1.78	0.49
53:CA:82:G:N7	53:CA:89:U:C4	2.81	0.49
22:DA:323:C:C4	22:DA:333:G:N7	2.80	0.49
22:DA:333:G:O2'	22:DA:334:C:C5'	2.60	0.49
22:DA:802:A:O2'	22:DA:803:U:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:969:G:H2'	22:DA:970:U:C6	2.48	0.49
22:DA:972:A:N1	22:DA:973:A:N6	2.61	0.49
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.45	0.49
22:DA:1183:U:H2'	22:DA:1184:U:H6	1.76	0.49
22:DA:1461:C:H2'	22:DA:1462:C:H6	1.76	0.49
22:DA:2143:C:H5"	22:DA:2144:G:N7	2.27	0.49
22:DA:2199:A:O2'	22:DA:2200:C:H5'	2.13	0.49
22:DA:2264:C:C2	22:DA:2277:G:N2	2.81	0.49
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.43	0.49
22:DA:2430:A:H5'	22:DA:2431:U:OP2	2.12	0.49
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.47	0.49
24:DC:145:MET:HE3	24:DC:181:ARG:HH22	1.78	0.49
24:DC:231:HIS:O	24:DC:232:GLY:C	2.56	0.49
24:DC:251:THR:HG22	24:DC:252:LYS:N	2.26	0.49
28:DG:1:SER:C	28:DG:3:VAL:N	2.70	0.49
28:DG:104:LEU:H	28:DG:112:VAL:HG23	1.78	0.49
29:DH:2:GLN:HB3	29:DH:18:GLN:CD	2.38	0.49
29:DH:66:ASN:HA	29:DH:137:GLU:CD	2.38	0.49
33:DL:64:PHE:HD2	51:D3:24:LYS:CG	2.21	0.49
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.52	0.49
37:DP:32:VAL:O	37:DP:32:VAL:HG13	2.13	0.49
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.70	0.49
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.48	0.49
3:AD:3:TYR:O	3:AD:4:LEU:HB2	2.13	0.49
6:AG:34:LYS:HB3	6:AG:37:THR:HG23	1.93	0.49
10:AK:124:LYS:O	20:AU:33:ARG:CZ	2.60	0.49
11:AL:33:CYS:N	11:AL:54:VAL:HG13	2.26	0.49
13:AN:42:ASN:C	13:AN:44:VAL:N	2.69	0.49
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.12	0.49
16:AQ:45:VAL:HG22	16:AQ:72:TRP:HB2	1.94	0.49
21:AA:428:G:O4'	21:AA:430:A:C8	2.65	0.49
21:AA:532:A:H4'	21:AA:533:A:OP2	2.12	0.49
21:AA:994:A:O2'	21:AA:995:C:H5'	2.13	0.49
21:AA:1491:G:H5'	21:AA:1492:A:OP1	2.13	0.49
22:BA:181:A:H2'	22:BA:182:A:C8	2.48	0.49
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.56	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:HE2	2.12	0.49
22:BA:1023:U:H6	22:BA:1023:U:C5'	2.24	0.49
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.28	0.49
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.45	0.49
22:BA:1334:G:C6	22:BA:1335:C:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.13	0.49
22:BA:1731:G:C2	22:BA:1733:G:C5	3.00	0.49
22:BA:1945:G:H2'	22:BA:1946:U:H6	1.74	0.49
22:BA:2748:A:O3'	28:BG:3:VAL:HG11	2.13	0.49
24:BC:18:VAL:HG22	24:BC:18:VAL:O	2.13	0.49
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.60	0.49
27:BF:134:GLN:NE2	27:BF:148:VAL:O	2.46	0.49
28:BG:148:ARG:HA	28:BG:161:VAL:HG11	1.95	0.49
28:BG:155:PRO:O	28:BG:170:THR:HA	2.13	0.49
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.37	0.49
31:BJ:70:THR:HA	31:BJ:90:GLU:HG2	1.95	0.49
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.75	0.49
42:BU:48:VAL:O	42:BU:48:VAL:HG13	2.13	0.49
48:B0:39:ARG:HB2	48:B0:39:ARG:NH1	2.22	0.49
1:CB:14:HIS:O	1:CB:14:HIS:CG	2.65	0.49
1:CB:99:MET:O	1:CB:103:TRP:HB3	2.13	0.49
1:CB:137:THR:O	1:CB:140:LEU:HB3	2.13	0.49
1:CB:208:ALA:O	1:CB:211:LEU:HB3	2.13	0.49
4:CE:11:GLN:HB3	4:CE:116:VAL:HB	1.95	0.49
12:CM:87:GLY:O	12:CM:91:ARG:HD2	2.12	0.49
14:CO:20:ASP:HB2	53:CA:750:C:O2'	2.13	0.49
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.11	0.49
53:CA:384:G:H2'	53:CA:385:C:C6	2.48	0.49
53:CA:397:A:H5'	53:CA:398:U:OP1	2.13	0.49
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.27	0.49
53:CA:1337:G:H5"	53:CA:1338:G:OP1	2.12	0.49
22:DA:52:A:O2'	22:DA:53:A:H5'	2.12	0.49
22:DA:85:G:O2'	22:DA:86:G:H5"	2.12	0.49
22:DA:120:U:O4	22:DA:177:G:C8	2.66	0.49
22:DA:284:U:H2'	22:DA:285:G:C8	2.46	0.49
22:DA:973:A:OP1	22:DA:973:A:H8	1.95	0.49
22:DA:1048:A:C2	22:DA:1049:C:N3	2.80	0.49
22:DA:1478:G:O6	22:DA:1514:G:C2	2.65	0.49
22:DA:1587:G:H21	22:DA:1588:G:H1'	1.77	0.49
22:DA:1655:A:H2'	22:DA:1656:C:H6	1.73	0.49
22:DA:1760:C:OP1	22:DA:2712:C:H5	1.96	0.49
22:DA:1833:C:C2	22:DA:1834:U:C5	3.01	0.49
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.12	0.49
22:DA:2867:G:N3	22:DA:2867:G:O2'	2.44	0.49
54:DB:26:C:H1'	54:DB:117:G:C1'	2.43	0.49
38:DQ:9:ALA:C	38:DQ:11:ALA:N	2.68	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.77	0.49
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.26	0.49
1:AB:14:HIS:HB2	1:AB:208:ALA:HB2	1.95	0.49
3:AD:9:LYS:O	3:AD:12:ARG:HB2	2.13	0.49
6:AG:68:VAL:HB	6:AG:99:ALA:HB1	1.95	0.49
11:AL:114:SER:CB	21:AA:502:A:OP1	2.61	0.49
15:AP:67:ILE:HG23	15:AP:68:SER:O	2.12	0.49
16:AQ:12:VAL:HB	16:AQ:21:VAL:HG22	1.94	0.49
20:AU:49:ALA:O	20:AU:52:VAL:HG12	2.13	0.49
21:AA:61:G:O2'	21:AA:62:U:H5'	2.12	0.49
21:AA:90:C:O2'	21:AA:91:U:C5	2.64	0.49
21:AA:811:C:H4'	21:AA:900:A:N6	2.27	0.49
21:AA:1124:G:H2'	21:AA:1145:A:N6	2.28	0.49
21:AA:1454:G:H2'	21:AA:1455:G:H8	1.77	0.49
22:BA:141:G:C5'	22:BA:142:A:C8	2.96	0.49
22:BA:151:C:H5'	22:BA:1360:G:OP1	2.13	0.49
22:BA:303:G:H2'	22:BA:304:U:C6	2.48	0.49
22:BA:593:U:H2'	22:BA:594:U:C6	2.48	0.49
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.48	0.49
22:BA:1003:G:N2	22:BA:1004:U:C2	2.81	0.49
22:BA:1071:G:H1'	22:BA:1089:A:C8	2.48	0.49
22:BA:1534:U:H5'	22:BA:1535:A:P	2.52	0.49
22:BA:1676:A:C2	22:BA:1993:U:H5'	2.48	0.49
25:BD:98:VAL:O	25:BD:100:LEU:N	2.46	0.49
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.28	0.49
29:BH:3:VAL:HA	29:BH:37:VAL:O	2.13	0.49
31:BJ:45:THR:O	31:BJ:45:THR:HG23	2.13	0.49
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.95	0.49
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.37	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.96	0.49
42:BU:64:ILE:O	42:BU:65:GLN:C	2.55	0.49
42:BU:100:GLU:O	42:BU:101:THR:HB	2.12	0.49
47:BZ:39:ASP:CG	47:BZ:44:ARG:HH11	2.21	0.49
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.28	0.49
2:CC:26:LYS:HA	2:CC:26:LYS:HE3	1.93	0.49
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.18	0.49
7:CH:121:GLY:HA3	53:CA:599:C:O3'	2.13	0.49
12:CM:5:GLY:C	12:CM:6:ILE:HG13	2.37	0.49
13:CN:16:ALA:HA	13:CN:20:PHE:CD1	2.48	0.49
18:CS:35:ARG:HH21	18:CS:51:HIS:CD2	2.31	0.49
20:CU:34:ARG:O	20:CU:35:GLU:O	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:321:A:O2'	53:CA:322:C:H5'	2.13	0.49
53:CA:397:A:N7	53:CA:547:A:O2'	2.44	0.49
53:CA:632:U:H2'	53:CA:632:U:O2	2.11	0.49
53:CA:755:G:O2'	53:CA:756:C:H5'	2.12	0.49
53:CA:801:U:O2'	53:CA:802:A:H5'	2.13	0.49
53:CA:1072:G:C5	53:CA:1073:U:C4	3.00	0.49
53:CA:1150:A:N6	53:CA:1151:A:N6	2.60	0.49
53:CA:1336:C:H1'	53:CA:1337:G:N1	2.28	0.49
53:CA:1408:A:N1	53:CA:1494:G:C5	2.80	0.49
22:DA:27:G:HO2'	22:DA:28:A:H8	1.60	0.49
22:DA:53:A:C2	50:D2:35:ARG:NH1	2.81	0.49
22:DA:299:A:N3	22:DA:319:G:O2'	2.43	0.49
22:DA:468:G:H4'	26:DE:57:LYS:HG2	1.94	0.49
22:DA:470:A:C2	22:DA:471:A:C4	3.00	0.49
22:DA:510:C:O2'	22:DA:511:U:H5'	2.13	0.49
22:DA:1055:G:H2'	22:DA:1056:G:H5'	1.94	0.49
22:DA:1075:C:O2'	22:DA:1076:C:H6	1.95	0.49
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.13	0.49
22:DA:1300:G:H5'	22:DA:1301:A:C2	2.48	0.49
22:DA:1327:A:O2'	22:DA:1328:A:O4'	2.17	0.49
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.94	0.49
22:DA:1823:G:H5"	57:DC:310:HOH:O	2.11	0.49
22:DA:2414:G:N2	33:DL:66:PHE:CZ	2.72	0.49
22:DA:2836:U:HO2'	22:DA:2837:A:P	2.36	0.49
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.45	0.49
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.94	0.49
24:DC:226:PRO:O	24:DC:227:VAL:C	2.55	0.49
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.13	0.49
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	0.49
33:DL:47:ARG:NH2	33:DL:47:ARG:CG	2.72	0.49
35:DN:31:HIS:O	35:DN:33:ILE:N	2.46	0.49
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.13	0.49
1:AB:49:PHE:CB	1:AB:212:TYR:OH	2.61	0.48
3:AD:55:ARG:HA	3:AD:55:ARG:HH11	1.77	0.48
6:AG:14:ASP:OD1	6:AG:17:PHE:HB2	2.12	0.48
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.94	0.48
7:AH:14:ARG:HE	7:AH:74:ILE:HG23	1.78	0.48
9:AJ:49:PHE:HE1	9:AJ:67:ILE:HG13	1.78	0.48
21:AA:108:G:H2'	21:AA:109:A:OP1	2.13	0.48
21:AA:827:U:C4	21:AA:870:U:C2	3.01	0.48
21:AA:900:A:H2'	21:AA:901:A:O4'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1269:A:H2	21:AA:1312:G:N3	2.10	0.48
22:BA:508:A:H4'	22:BA:509:C:OP2	2.12	0.48
22:BA:622:G:H2'	22:BA:623:C:H6	1.78	0.48
22:BA:764:A:H3'	22:BA:765:C:H5'	1.95	0.48
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.46	0.48
22:BA:1635:A:C6	22:BA:1636:U:C2	3.01	0.48
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.65	0.48
22:BA:2202:U:H5"	22:BA:2203:U:OP1	2.12	0.48
22:BA:2791:G:H5"	22:BA:2791:G:C8	2.42	0.48
24:BC:159:THR:O	24:BC:160:TYR:HB3	2.12	0.48
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.27	0.48
29:BH:80:ILE:HG23	29:BH:147:VAL:HG21	1.95	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
33:BL:9:ALA:HB3	33:BL:12:SER:HB2	1.95	0.48
34:BM:53:MET:HE2	34:BM:120:ALA:CB	2.43	0.48
37:BP:83:ILE:C	37:BP:83:ILE:CD1	2.86	0.48
40:BS:14:ALA:O	40:BS:15:GLN:C	2.55	0.48
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.28	0.48
45:BX:73:ARG:HG2	45:BX:75:GLU:HG3	1.95	0.48
2:CC:6:PRO:HG2	2:CC:183:TYR:CD2	2.48	0.48
3:CD:29:THR:O	3:CD:31:CYS:N	2.41	0.48
8:CI:35:GLU:CA	8:CI:39:GLY:HA3	2.40	0.48
8:CI:49:GLN:HA	8:CI:52:GLU:HG2	1.94	0.48
9:CJ:33:GLY:O	9:CJ:35:GLN:N	2.46	0.48
9:CJ:49:PHE:CE2	13:CN:73:LEU:HD13	2.48	0.48
13:CN:13:VAL:HG22	13:CN:59:GLN:OE1	2.13	0.48
17:CR:59:LYS:O	17:CR:63:TYR:CD1	2.66	0.48
18:CS:54:ARG:HG2	18:CS:55:GLN:N	2.27	0.48
53:CA:936:C:H2'	53:CA:937:A:C8	2.48	0.48
22:DA:86:G:C2	22:DA:87:U:C4	3.00	0.48
22:DA:300:A:H2'	22:DA:301:G:H5'	1.94	0.48
22:DA:416:U:H2'	22:DA:417:C:C6	2.47	0.48
22:DA:590:A:C6	22:DA:591:U:C4	3.01	0.48
22:DA:726:G:O2'	22:DA:727:A:P	2.70	0.48
22:DA:799:G:C6	22:DA:800:A:C6	3.01	0.48
22:DA:1014:A:C2	22:DA:1149:G:C2	3.01	0.48
22:DA:1361:G:C5	22:DA:1362:C:C5	3.01	0.48
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.47	0.48
22:DA:2210:U:C4'	22:DA:2211:A:H5'	2.43	0.48
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.13	0.48
22:DA:2331:G:N1	22:DA:2385:C:N4	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2403:C:O2'	22:DA:2404:U:C5'	2.61	0.48
22:DA:2666:C:O2	22:DA:2666:C:O4'	2.31	0.48
22:DA:2889:C:C4	22:DA:2890:G:C6	3.01	0.48
54:DB:21:G:H2'	54:DB:22:U:O4'	2.12	0.48
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.28	0.48
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.78	0.48
26:DE:57:LYS:NZ	26:DE:58:LYS:N	2.61	0.48
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.27	0.48
29:DH:68:ARG:HD3	29:DH:71:LYS:HD3	1.94	0.48
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.95	0.48
31:DJ:56:VAL:HG11	31:DJ:101:ILE:HG21	1.94	0.48
31:DJ:110:PRO:CG	31:DJ:111:LYS:HG2	2.41	0.48
34:DM:19:GLY:O	34:DM:20:LEU:HB2	2.12	0.48
37:DP:3:ILE:C	37:DP:5:LYS:H	2.21	0.48
37:DP:30:TRP:HD1	37:DP:39:LEU:HD12	1.78	0.48
42:DU:34:ILE:HG12	42:DU:62:ALA:O	2.13	0.48
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.27	0.48
48:D0:38:LEU:O	48:D0:41:HIS:ND1	2.46	0.48
2:AC:190:THR:C	2:AC:192:TYR:H	2.21	0.48
3:AD:1:ALA:O	3:AD:67:LEU:HD11	2.13	0.48
6:AG:4:ARG:HA	6:AG:4:ARG:HE	1.77	0.48
12:AM:45:SER:O	12:AM:46:GLU:CB	2.60	0.48
19:AT:82:ILE:C	19:AT:82:ILE:HD12	2.38	0.48
20:AU:8:ASN:O	20:AU:11:PHE:HE2	1.96	0.48
21:AA:212:G:H2'	21:AA:213:G:H8	1.78	0.48
21:AA:340:U:H2'	21:AA:341:C:C6	2.48	0.48
21:AA:967:C:O5'	21:AA:967:C:H6	1.96	0.48
21:AA:1218:C:H2'	21:AA:1219:A:H8	1.75	0.48
22:BA:207:A:H2'	22:BA:208:C:O4'	2.13	0.48
22:BA:304:U:H2'	22:BA:305:C:H6	1.78	0.48
22:BA:544:C:H3'	22:BA:545:U:O2	2.13	0.48
22:BA:811:U:HO2'	22:BA:1250:G:H2'	1.78	0.48
22:BA:858:G:N3	22:BA:2268:A:H2'	2.29	0.48
22:BA:994:C:O2'	39:BR:10:LYS:NZ	2.46	0.48
22:BA:1061:U:C5	30:BI:9:LYS:HG3	2.48	0.48
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.13	0.48
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.95	0.48
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.13	0.48
22:BA:2076:U:O4'	22:BA:2076:U:O2	2.31	0.48
22:BA:2078:C:O2'	22:BA:2079:U:H5'	2.13	0.48
24:BC:198:GLU:O	24:BC:199:HIS:C	2.54	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:173:ASP:O	27:BF:174:PHE:C	2.56	0.48
28:BG:120:ILE:HD11	28:BG:132:LEU:CB	2.33	0.48
29:BH:86:ASP:O	29:BH:87:GLU:C	2.56	0.48
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.95	0.48
36:BO:6:ALA:O	36:BO:10:ARG:HB2	2.12	0.48
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.61	0.48
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.92	0.48
49:B1:35:LEU:O	49:B1:35:LEU:HD23	2.13	0.48
2:CC:63:ILE:HG12	2:CC:65:VAL:CG2	2.40	0.48
3:CD:2:ARG:NH2	3:CD:114:ARG:NH1	2.61	0.48
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.95	0.48
6:CG:41:ILE:HG21	6:CG:115:MET:CE	2.43	0.48
7:CH:94:VAL:HG21	7:CH:127:TYR:HB3	1.95	0.48
16:CQ:19:SER:HB3	16:CQ:70:LYS:NZ	2.27	0.48
53:CA:216:U:H4'	53:CA:464:U:H4'	1.94	0.48
53:CA:218:U:H2'	53:CA:219:U:O4'	2.13	0.48
53:CA:977:A:H8	53:CA:1223:C:C4	2.31	0.48
53:CA:1127:G:O2'	53:CA:1128:C:H5'	2.12	0.48
53:CA:1378:C:H3'	53:CA:1379:G:C5'	2.39	0.48
53:CA:1441:A:C2	53:CA:1442:G:H1'	2.48	0.48
53:CA:1463:U:H2'	53:CA:1464:U:C6	2.47	0.48
22:DA:91:A:H1'	22:DA:92:U:C6	2.48	0.48
22:DA:528:A:H2	22:DA:2043:C:O5'	1.94	0.48
22:DA:620:G:O2'	22:DA:622:G:N7	2.45	0.48
22:DA:678:C:H2'	22:DA:679:C:O4'	2.13	0.48
22:DA:1667:G:OP1	32:DK:7:MET:N	2.34	0.48
22:DA:2638:G:H2'	22:DA:2775:G:H22	1.77	0.48
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.43	0.48
32:DK:70:ARG:HB3	32:DK:76:VAL:CG2	2.30	0.48
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	1.95	0.48
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.26	0.48
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.48	0.48
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.95	0.48
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.28	0.48
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	1.95	0.48
43:DV:31:TYR:O	43:DV:92:VAL:HA	2.13	0.48
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.13	0.48
47:DZ:51:SER:HA	47:DZ:54:VAL:CG2	2.43	0.48
1:AB:103:TRP:CH2	1:AB:107:ARG:HD3	2.49	0.48
1:AB:179:GLY:O	1:AB:180:ILE:HD13	2.13	0.48
8:AI:83:THR:HG21	8:AI:102:PHE:CB	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:89:TYR:HB2	8:AI:93:LEU:HD21	1.95	0.48
10:AK:30:ILE:O	10:AK:30:ILE:HG13	2.12	0.48
11:AL:24:GLU:O	11:AL:25:ALA:C	2.55	0.48
14:AO:44:GLU:O	14:AO:45:HIS:HB2	2.12	0.48
17:AR:33:THR:CG2	17:AR:37:LYS:HB2	2.42	0.48
21:AA:1261:A:C6	21:AA:1274:A:N3	2.81	0.48
21:AA:1306:A:H2'	21:AA:1307:U:H5'	1.95	0.48
22:BA:313:G:O2'	22:BA:314:C:H5'	2.14	0.48
22:BA:2874:C:H2'	22:BA:2875:C:C6	2.48	0.48
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.49	0.48
25:BD:54:ALA:N	25:BD:76:GLY:HA2	2.28	0.48
27:BF:113:PHE:HE1	27:BF:116:LEU:HD22	1.78	0.48
27:BF:161:SER:HB2	27:BF:163:GLU:HB3	1.93	0.48
31:BJ:54:ILE:HD12	31:BJ:54:ILE:C	2.38	0.48
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.94	0.48
35:BN:73:ASN:HD22	35:BN:76:VAL:CG1	2.26	0.48
39:BR:70:GLU:O	39:BR:71:LYS:C	2.55	0.48
1:CB:46:VAL:HG13	1:CB:47:PRO:CD	2.42	0.48
3:CD:68:GLU:O	3:CD:69:ARG:C	2.56	0.48
3:CD:170:LEU:HA	3:CD:182:LYS:HB2	1.94	0.48
4:CE:112:ALA:O	4:CE:113:VAL:C	2.56	0.48
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.12	0.48
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.13	0.48
11:CL:72:ASN:HD21	11:CL:104:SER:H	1.60	0.48
11:CL:82:ARG:HB2	11:CL:97:VAL:HG12	1.96	0.48
13:CN:30:ILE:C	13:CN:40:ARG:HA	2.37	0.48
15:CP:17:TYR:CD1	15:CP:39:PHE:HD2	2.31	0.48
15:CP:54:LEU:HD23	15:CP:54:LEU:H	1.77	0.48
17:CR:32:ILE:HA	17:CR:39:VAL:HG23	1.95	0.48
53:CA:717:U:N3	53:CA:734:G:N7	2.60	0.48
22:DA:188:G:H2'	22:DA:189:G:H5'	1.95	0.48
22:DA:410:G:C6	22:DA:2407:A:N6	2.80	0.48
22:DA:453:A:H4'	22:DA:472:A:H62	1.77	0.48
22:DA:589:U:O2'	22:DA:590:A:C8	2.47	0.48
22:DA:669:G:N3	22:DA:669:G:H2'	2.27	0.48
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.26	0.48
22:DA:2024:G:O2'	22:DA:2025:C:H5'	2.12	0.48
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.13	0.48
22:DA:2478:A:N7	22:DA:2529:G:C6	2.81	0.48
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	2.12	0.48
22:DA:2848:G:O2'	22:DA:2849:U:P	2.72	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:99:GLU:HG2	24:DC:100:ARG:H	1.78	0.48
26:DE:31:VAL:HG11	26:DE:100:MET:O	2.13	0.48
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.13	0.48
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.38	0.48
33:DL:135:ILE:HG23	33:DL:136:GLU:N	2.28	0.48
34:DM:57:VAL:HG12	34:DM:112:LEU:CD1	2.43	0.48
35:DN:22:ARG:HG2	35:DN:22:ARG:O	2.13	0.48
40:DS:65:ASP:C	40:DS:67:ASP:H	2.21	0.48
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.78	0.48
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.43	0.48
46:DY:1:MET:HE2	46:DY:1:MET:H1	1.76	0.48
46:DY:58:ASN:C	46:DY:60:LYS:N	2.71	0.48
51:D3:22:LYS:HG2	51:D3:46:LYS:HD3	1.95	0.48
1:AB:157:PRO:O	1:AB:180:ILE:HD12	2.14	0.48
2:AC:129:PHE:O	2:AC:133:MET:HG3	2.13	0.48
3:AD:104:MET:HE2	3:AD:170:LEU:HB2	1.95	0.48
4:AE:93:VAL:HG13	4:AE:94:PHE:N	2.29	0.48
4:AE:103:GLY:HA2	4:AE:121:ASN:HA	1.96	0.48
14:AO:80:LEU:HD11	14:AO:84:LEU:HD22	1.96	0.48
15:AP:52:LEU:O	15:AP:54:LEU:HD12	2.13	0.48
21:AA:121:U:H6	21:AA:121:U:C5'	2.19	0.48
21:AA:443:C:O2'	21:AA:444:G:H5'	2.14	0.48
21:AA:659:U:H2'	21:AA:660:C:H6	1.78	0.48
21:AA:1055:A:N6	21:AA:1206:G:C6	2.82	0.48
21:AA:1277:C:O2'	21:AA:1279:G:C8	2.51	0.48
22:BA:286:U:H2'	22:BA:287:G:O4'	2.12	0.48
22:BA:728:G:O2'	22:BA:730:A:H8	1.75	0.48
22:BA:1179:G:C2	22:BA:1180:U:O2'	2.66	0.48
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.44	0.48
22:BA:1698:A:H4'	22:BA:1699:G:O5'	2.12	0.48
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.13	0.48
22:BA:1865:U:O2'	22:BA:1866:A:H5"	2.13	0.48
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.48	0.48
22:BA:2612:C:H5"	22:BA:2613:U:OP1	2.13	0.48
28:BG:27:GLY:O	28:BG:28:LYS:C	2.55	0.48
33:BL:3:LEU:HD23	33:BL:3:LEU:HA	1.62	0.48
38:BQ:34:ALA:O	38:BQ:37:ALA:HB3	2.13	0.48
42:BU:42:LYS:N	42:BU:42:LYS:HD3	2.27	0.48
45:BX:39:VAL:HG21	45:BX:42:GLU:HB2	1.96	0.48
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.13	0.48
7:CH:100:ILE:C	7:CH:100:ILE:HD12	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:106:ASP:OD1	8:CI:106:ASP:N	2.47	0.48
15:CP:46:LYS:HE2	15:CP:47:GLU:N	2.29	0.48
17:CR:59:LYS:O	17:CR:63:TYR:HD1	1.96	0.48
19:CT:11:ILE:C	19:CT:13:SER:N	2.71	0.48
19:CT:76:ALA:C	19:CT:78:LEU:H	2.21	0.48
53:CA:219:U:H2'	53:CA:220:G:C8	2.44	0.48
53:CA:255:G:O2'	53:CA:256:U:H5'	2.13	0.48
53:CA:631:C:H5"	53:CA:632:U:O4'	2.13	0.48
53:CA:861:G:H2'	53:CA:862:C:H6	1.77	0.48
53:CA:1213:A:C8	53:CA:1215:G:C5	3.02	0.48
53:CA:1319:A:N6	53:CA:1323:G:N3	2.61	0.48
53:CA:1504:G:H3'	53:CA:1505:G:H5'	1.96	0.48
22:DA:323:C:H6	26:DE:165:HIS:CE1	2.31	0.48
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.96	0.48
22:DA:740:C:C5	22:DA:1981:A:N1	2.82	0.48
22:DA:974:G:H1'	22:DA:975:A:C8	2.48	0.48
22:DA:1568:G:N3	24:DC:57:HIS:HE1	2.12	0.48
22:DA:1831:G:C6	22:DA:1832:C:C4	3.00	0.48
22:DA:1862:G:C2	22:DA:1881:C:C2	3.01	0.48
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.48	0.48
22:DA:2212:A:N7	22:DA:2214:C:N4	2.62	0.48
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.14	0.48
22:DA:2366:A:H2'	22:DA:2367:G:O4'	2.13	0.48
24:DC:62:ARG:N	24:DC:62:ARG:HD2	2.28	0.48
24:DC:69:ASN:O	24:DC:70:LYS:C	2.56	0.48
26:DE:55:SER:OG	26:DE:56:GLY:N	2.47	0.48
27:DF:101:ARG:HH11	27:DF:138:PRO:CB	2.26	0.48
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.95	0.48
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.44	0.48
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.79	0.48
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.25	0.48
1:AB:19:THR:HG23	1:AB:20:ARG:H	1.78	0.48
1:AB:22:TRP:CZ3	1:AB:24:PRO:HA	2.49	0.48
1:AB:53:LEU:CA	1:AB:56:LEU:HB3	2.41	0.48
1:AB:60:ALA:HB3	1:AB:223:GLY:HA3	1.96	0.48
3:AD:11:SER:HA	3:AD:18:LEU:HD12	1.95	0.48
6:AG:68:VAL:HG12	6:AG:102:TRP:HE3	1.79	0.48
10:AK:22:ILE:CD1	10:AK:85:VAL:HG13	2.42	0.48
13:AN:2:LYS:HE2	21:AA:1216:A:OP1	2.13	0.48
21:AA:17:U:H2'	21:AA:18:C:H6	1.76	0.48
21:AA:1173:U:H2'	21:AA:1174:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1261:A:N1	21:AA:1274:A:N3	2.60	0.48
21:AA:1316:G:H5"	21:AA:1317:C:OP2	2.14	0.48
21:AA:1323:G:H4'	21:AA:1362:A:N3	2.28	0.48
22:BA:103:A:H2'	22:BA:104:A:H8	1.79	0.48
22:BA:404:A:C8	22:BA:406:G:C6	3.02	0.48
22:BA:752:A:N6	22:BA:2609:U:H3	2.05	0.48
22:BA:1075:C:C4	22:BA:1076:C:N4	2.81	0.48
22:BA:1179:G:N1	22:BA:1180:U:O2'	2.47	0.48
22:BA:1417:C:H2'	22:BA:1418:G:H8	1.78	0.48
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.44	0.48
22:BA:2318:G:C6	22:BA:2319:G:N1	2.81	0.48
22:BA:2860:A:C3'	22:BA:2860:A:C8	2.96	0.48
23:BB:109:A:O2'	23:BB:110:C:H5'	2.13	0.48
24:BC:70:LYS:HD2	24:BC:99:GLU:OE1	2.13	0.48
25:BD:16:THR:O	25:BD:17:GLU:C	2.57	0.48
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.43	0.48
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.61	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.96	0.48
30:BI:61:TYR:N	30:BI:61:TYR:CD2	2.81	0.48
31:BJ:88:THR:HG23	31:BJ:91:GLU:H	1.78	0.48
34:BM:70:ASP:OD1	34:BM:70:ASP:C	2.55	0.48
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.96	0.48
38:BQ:51:GLN:HE21	38:BQ:55:GLN:HE21	1.60	0.48
47:BZ:15:ARG:O	47:BZ:20:LYS:HE2	2.13	0.48
1:CB:89:PHE:CE2	1:CB:152:ASP:HB2	2.45	0.48
3:CD:39:GLN:C	3:CD:41:GLY:H	2.21	0.48
3:CD:151:GLN:O	3:CD:152:SER:C	2.55	0.48
4:CE:88:HIS:O	4:CE:89:THR:C	2.57	0.48
4:CE:131:ASN:HD22	4:CE:132:PRO:CD	2.25	0.48
9:CJ:37:ARG:CG	9:CJ:75:ASP:HB3	2.43	0.48
11:CL:98:ARG:HA	11:CL:103:CYS:SG	2.53	0.48
19:CT:71:ALA:O	19:CT:72:ALA:C	2.57	0.48
53:CA:276:G:O2'	53:CA:277:C:O4'	2.30	0.48
53:CA:533:A:O2'	53:CA:535:A:OP2	2.25	0.48
53:CA:570:G:H1'	53:CA:820:U:N3	2.27	0.48
53:CA:953:G:C6	53:CA:954:G:C6	3.01	0.48
53:CA:1087:G:H2'	53:CA:1088:G:C8	2.48	0.48
53:CA:1481:U:H2'	53:CA:1482:G:C8	2.48	0.48
22:DA:30:G:C6	22:DA:31:C:N3	2.82	0.48
22:DA:95:A:H2'	22:DA:96:C:C5'	2.43	0.48
22:DA:206:U:H2'	22:DA:207:A:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:571:U:C4	22:DA:2030:A:C6	3.02	0.48
22:DA:1060:U:H4'	22:DA:1061:U:C5'	2.43	0.48
22:DA:1112:G:O2'	22:DA:1113:U:C5'	2.62	0.48
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.47	0.48
22:DA:1264:A:H1'	22:DA:2015:A:H61	1.79	0.48
22:DA:1387:A:O2'	22:DA:1388:G:P	2.71	0.48
22:DA:1838:C:C6	22:DA:1899:A:C6	3.02	0.48
22:DA:1930:G:O2'	22:DA:1931:U:P	2.71	0.48
22:DA:2079:U:O2'	45:DX:22:ASN:ND2	2.46	0.48
22:DA:2143:C:C2	22:DA:2148:G:N1	2.79	0.48
22:DA:2209:G:C2	22:DA:2216:G:C2	3.01	0.48
22:DA:2287:A:N7	22:DA:2289:G:C8	2.81	0.48
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.43	0.48
22:DA:2488:G:H2'	22:DA:2489:U:O4'	2.14	0.48
22:DA:2563:U:H2'	22:DA:2565:A:OP2	2.13	0.48
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.29	0.48
22:DA:2682:A:O2'	22:DA:2683:C:C5'	2.61	0.48
22:DA:2858:C:H2'	22:DA:2859:G:O4'	2.13	0.48
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.28	0.48
26:DE:139:LYS:HB2	26:DE:139:LYS:NZ	2.29	0.48
27:DF:27:VAL:O	27:DF:27:VAL:HG23	2.13	0.48
34:DM:34:LYS:HE2	34:DM:99:GLY:HA2	1.96	0.48
34:DM:57:VAL:O	34:DM:58:LYS:HB2	2.14	0.48
38:DQ:82:LEU:HD23	38:DQ:112:ALA:HB2	1.95	0.48
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.79	0.48
1:AB:61:SER:HA	1:AB:223:GLY:C	2.38	0.48
2:AC:6:PRO:O	2:AC:10:ARG:HG2	2.14	0.48
3:AD:35:GLN:O	3:AD:36:ALA:HB2	2.13	0.48
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.14	0.48
11:AL:72:ASN:CG	11:AL:73:LEU:H	2.22	0.48
11:AL:119:LYS:HE3	21:AA:36:C:OP1	2.13	0.48
12:AM:76:ILE:O	12:AM:79:LEU:HB2	2.14	0.48
21:AA:259:G:H2'	21:AA:260:G:C8	2.49	0.48
21:AA:1003:G:C6	21:AA:1036:A:N6	2.82	0.48
21:AA:1034:G:H2'	21:AA:1035:A:C8	2.48	0.48
21:AA:1288:A:H1'	21:AA:1352:C:O2'	2.14	0.48
21:AA:1391:U:H2'	21:AA:1392:G:C8	2.49	0.48
22:BA:1091:G:O2'	22:BA:1092:C:C6	2.65	0.48
22:BA:1425:G:H2'	22:BA:1426:G:C8	2.49	0.48
22:BA:1839:G:H2'	22:BA:1840:G:H8	1.79	0.48
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2336:A:H62	44:BW:40:ARG:HD2	1.74	0.48
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.94	0.48
25:BD:182:ALA:O	25:BD:183:GLU:C	2.56	0.48
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.13	0.48
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.13	0.48
32:BK:51:LYS:HG3	32:BK:95:ILE:HG12	1.96	0.48
35:BN:69:ARG:H	35:BN:69:ARG:HG2	1.33	0.48
37:BP:19:PHE:O	37:BP:20:ARG:HB3	2.13	0.48
42:BU:66:VAL:C	42:BU:68:ASN:H	2.21	0.48
44:BW:47:GLY:H	44:BW:80:SER:HB3	1.78	0.48
3:CD:25:ARG:O	3:CD:26:ALA:C	2.56	0.48
7:CH:12:ARG:HH12	7:CH:27:PRO:HD2	1.78	0.48
12:CM:91:ARG:HD3	12:CM:91:ARG:O	2.13	0.48
13:CN:20:PHE:HE1	13:CN:54:SER:HB2	1.78	0.48
16:CQ:29:LYS:HB2	16:CQ:36:PHE:CE1	2.49	0.48
20:CU:33:ARG:NH2	20:CU:34:ARG:HD3	2.29	0.48
53:CA:781:A:H2'	53:CA:782:A:H5'	1.96	0.48
53:CA:815:A:C2	53:CA:1529:G:C4	3.02	0.48
53:CA:1094:G:O2'	53:CA:1095:U:OP2	2.27	0.48
22:DA:28:A:C6	22:DA:29:U:C2	3.02	0.48
22:DA:60:G:O2'	22:DA:61:C:P	2.71	0.48
22:DA:91:A:O2'	22:DA:92:U:H5"	2.13	0.48
22:DA:223:A:C5	22:DA:422:A:N7	2.81	0.48
22:DA:627:A:O2'	22:DA:628:G:H8	1.95	0.48
22:DA:659:G:H2'	22:DA:660:C:C6	2.48	0.48
22:DA:991:C:OP2	22:DA:1186:G:OP2	2.32	0.48
22:DA:1264:A:C6	22:DA:1265:A:N6	2.81	0.48
22:DA:1738:G:O2'	22:DA:1739:A:P	2.71	0.48
22:DA:2345:G:H4'	22:DA:2346:A:H5"	1.95	0.48
22:DA:2421:G:N7	51:D3:30:HIS:HD2	2.12	0.48
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.14	0.48
25:DD:16:THR:HG23	25:DD:19:GLY:H	1.79	0.48
27:DF:41:GLU:HG2	27:DF:42:ALA:N	2.24	0.48
27:DF:46:LYS:HD3	27:DF:46:LYS:O	2.14	0.48
28:DG:154:GLU:C	28:DG:156:TYR:H	2.21	0.48
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.39	0.48
35:DN:5:LYS:O	35:DN:6:SER:HB2	2.13	0.48
43:DV:56:PHE:C	43:DV:58:SER:N	2.71	0.48
1:AB:40:ILE:HG21	1:AB:201:GLY:H	1.78	0.48
2:AC:125:ARG:O	2:AC:126:ARG:CB	2.61	0.48
5:AF:18:VAL:O	5:AF:22:ILE:HD12	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.13	0.48
8:AI:68:GLY:HA2	21:AA:1250:A:O3'	2.14	0.48
10:AK:86:LYS:HA	10:AK:113:THR:HG22	1.94	0.48
11:AL:2:THR:HG22	11:AL:4:ASN:H	1.79	0.48
16:AQ:58:VAL:HG21	16:AQ:74:LEU:HD23	1.96	0.48
18:AS:6:LYS:HA	18:AS:6:LYS:CE	2.41	0.48
21:AA:268:U:O2'	21:AA:269:C:O4'	2.29	0.48
21:AA:502:A:H2'	21:AA:503:C:C6	2.48	0.48
21:AA:594:U:H2'	21:AA:595:A:O4'	2.13	0.48
21:AA:1055:A:C6	21:AA:1206:G:C4	3.01	0.48
21:AA:1136:C:H4'	21:AA:1137:C:OP1	2.13	0.48
21:AA:1262:C:N4	21:AA:1274:A:C2	2.82	0.48
22:BA:194:G:C5	57:BA:3766:HOH:O	2.64	0.48
22:BA:405:U:H3'	22:BA:406:G:H5'	1.94	0.48
22:BA:763:G:O2'	22:BA:764:A:H3'	2.13	0.48
22:BA:956:G:O2'	34:BM:82:MET:HE1	2.13	0.48
22:BA:1009:A:H8	22:BA:1009:A:O5'	1.96	0.48
22:BA:1071:G:C5	22:BA:1089:A:C6	3.01	0.48
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.29	0.48
22:BA:2028:U:H2'	22:BA:2029:G:O4'	2.14	0.48
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.44	0.48
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.13	0.48
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.46	0.48
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.78	0.48
29:BH:54:LEU:N	29:BH:57:LYS:HB3	2.29	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:HB2	1.95	0.48
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	1.96	0.48
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.44	0.48
36:BO:59:ALA:HA	36:BO:62:LEU:CD1	2.43	0.48
40:BS:36:LEU:HD23	40:BS:48:LYS:HA	1.96	0.48
42:BU:27:VAL:HG22	42:BU:28:LEU:N	2.28	0.48
44:BW:50:VAL:HB	44:BW:61:LYS:HZ3	1.78	0.48
2:CC:18:ASN:ND2	2:CC:53:ARG:NH1	2.59	0.48
2:CC:46:LEU:HD22	2:CC:75:VAL:HG22	1.95	0.48
2:CC:91:ALA:HB2	2:CC:98:ALA:HB3	1.95	0.48
4:CE:59:ILE:O	4:CE:59:ILE:HG13	2.12	0.48
4:CE:132:PRO:O	4:CE:134:ASN:N	2.47	0.48
7:CH:30:LYS:O	7:CH:33:VAL:HB	2.13	0.48
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.14	0.48
17:CR:32:ILE:HD12	17:CR:33:THR:O	2.14	0.48
18:CS:50:VAL:CG1	18:CS:70:LEU:HB3	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:152:A:N6	53:CA:170:U:C2	2.82	0.48
53:CA:1242:G:HO2'	53:CA:1243:C:C5'	2.24	0.48
53:CA:1496:C:H2'	53:CA:1497:G:O4'	2.13	0.48
22:DA:17:G:C6	22:DA:524:G:C6	3.01	0.48
22:DA:184:C:H2'	22:DA:185:G:H8	1.77	0.48
22:DA:243:U:O2'	22:DA:244:A:H5'	2.14	0.48
22:DA:247:G:H4'	22:DA:386:G:C4	2.49	0.48
22:DA:648:G:O2'	22:DA:649:G:H8	1.96	0.48
22:DA:1098:A:H2'	22:DA:1099:G:O4'	2.13	0.48
22:DA:1139:G:O3'	31:DJ:26:GLY:HA3	2.14	0.48
22:DA:1400:U:HO2'	22:DA:1401:G:C1'	2.25	0.48
22:DA:1536:C:OP2	22:DA:1536:C:C2	2.66	0.48
22:DA:1886:U:H6	22:DA:1886:U:O5'	1.96	0.48
22:DA:2049:G:N2	25:DD:161:MET:HE2	2.29	0.48
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.39	0.48
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.49	0.48
54:DB:83:G:OP1	47:DZ:16:LEU:HD21	2.13	0.48
25:DD:141:ARG:HH11	25:DD:141:ARG:CB	2.20	0.48
27:DF:56:LEU:O	27:DF:60:SER:HB3	2.14	0.48
28:DG:120:ILE:CG1	28:DG:140:ILE:HG22	2.39	0.48
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	2.13	0.48
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.95	0.48
31:DJ:105:VAL:HA	31:DJ:108:MET:HG3	1.94	0.48
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.28	0.48
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.74	0.48
35:DN:14:SER:C	35:DN:16:HIS:N	2.70	0.48
35:DN:93:GLY:O	35:DN:116:VAL:HG21	2.13	0.48
37:DP:13:LYS:HD2	37:DP:13:LYS:H	1.78	0.48
37:DP:95:LYS:HA	37:DP:95:LYS:HE3	1.96	0.48
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.70	0.48
51:D3:41:ARG:HG2	51:D3:44:ARG:HH22	1.79	0.48
3:AD:114:ARG:O	3:AD:115:GLN:C	2.54	0.48
3:AD:117:VAL:CA	3:AD:122:ILE:HD11	2.43	0.48
4:AE:108:GLY:C	4:AE:109:ALA:O	2.56	0.48
4:AE:110:MET:HB3	4:AE:139:THR:HG21	1.94	0.48
14:AO:16:ARG:O	14:AO:17:ASP:CB	2.61	0.48
15:AP:1:MET:HB3	21:AA:135:C:O2	2.14	0.48
21:AA:500:G:C6	21:AA:546:A:C2	3.01	0.48
21:AA:1202:U:H2'	21:AA:1203:C:C6	2.49	0.48
21:AA:1239:A:H1'	21:AA:1241:G:C4	2.49	0.48
22:BA:386:G:H4'	22:BA:387:U:OP2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1444:G:C4	22:BA:1445:G:C8	3.02	0.48
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.96	0.48
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.48	0.48
22:BA:1870:C:H3'	22:BA:1871:A:C2	2.48	0.48
26:BE:127:GLU:CD	26:BE:127:GLU:N	2.72	0.48
27:BF:97:GLU:O	27:BF:101:ARG:HG2	2.14	0.48
27:BF:109:ARG:HH11	27:BF:138:PRO:HG3	1.79	0.48
28:BG:66:THR:O	28:BG:70:LEU:HG	2.14	0.48
28:BG:75:VAL:HG12	28:BG:76:ILE:N	2.29	0.48
34:BM:43:ALA:O	34:BM:46:ILE:HG13	2.14	0.48
37:BP:85:VAL:O	37:BP:86:LYS:CB	2.61	0.48
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.49	0.48
38:BQ:69:ARG:HH21	38:BQ:69:ARG:CG	2.25	0.48
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD13	1.96	0.48
38:BQ:114:ALA:C	38:BQ:116:LEU:N	2.72	0.48
41:BT:29:THR:CB	41:BT:86:THR:HG22	2.41	0.48
1:CB:17:HIS:CG	1:CB:18:GLN:N	2.80	0.48
1:CB:221:ARG:C	1:CB:223:GLY:H	2.20	0.48
2:CC:104:GLU:HG2	2:CC:105:VAL:N	2.29	0.48
3:CD:187:ARG:CZ	3:CD:191:SER:OG	2.61	0.48
5:CF:88:MET:HE3	5:CF:90:MET:SD	2.53	0.48
6:CG:3:ARG:HD3	53:CA:933:G:P	2.53	0.48
8:CI:76:GLY:O	8:CI:79:ARG:HB3	2.13	0.48
12:CM:106:ARG:HG3	53:CA:947:G:P	2.54	0.48
53:CA:247:G:C6	53:CA:278:G:C2	3.02	0.48
53:CA:672:U:O2'	53:CA:673:A:H5'	2.14	0.48
53:CA:696:A:H2'	53:CA:697:U:C6	2.49	0.48
53:CA:1238:A:OP1	53:CA:1336:C:H5	1.97	0.48
22:DA:100:U:C6	22:DA:100:U:OP1	2.66	0.48
22:DA:647:G:C5	22:DA:648:G:N7	2.82	0.48
22:DA:852:U:H2'	22:DA:853:C:C6	2.49	0.48
22:DA:975:A:H2'	22:DA:976:G:C8	2.49	0.48
22:DA:1027:A:N6	22:DA:1126:A:H1'	2.29	0.48
22:DA:1139:G:O2'	22:DA:1143:A:N1	2.42	0.48
22:DA:1277:G:O2'	35:DN:24:MET:HB2	2.14	0.48
22:DA:1290:C:C2	22:DA:1291:C:C5	3.01	0.48
22:DA:1713:A:H4'	22:DA:1714:U:OP1	2.12	0.48
22:DA:1737:G:H5'	22:DA:1738:G:OP2	2.13	0.48
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.49	0.48
22:DA:1838:C:N4	22:DA:1899:A:O4'	2.47	0.48
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2450:A:O2'	22:DA:2451:A:H5'	2.13	0.48
22:DA:2489:U:C4	22:DA:2490:G:C6	3.02	0.48
22:DA:2638:G:H1'	22:DA:2778:A:H61	1.76	0.48
22:DA:2725:A:C4	22:DA:2727:A:N7	2.81	0.48
22:DA:2766:A:H2'	22:DA:2766:A:N3	2.28	0.48
22:DA:2815:C:H2'	22:DA:2816:G:O4'	2.14	0.48
22:DA:2867:G:N3	22:DA:2867:G:H2'	2.29	0.48
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.77	0.48
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.28	0.48
26:DE:85:PHE:O	26:DE:86:ALA:C	2.57	0.48
28:DG:104:LEU:HB3	28:DG:106:LEU:HD21	1.95	0.48
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.14	0.48
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.25	0.48
44:DW:14:ASP:C	44:DW:16:GLU:H	2.22	0.48
47:DZ:17:PRO:HA	47:DZ:20:LYS:HD3	1.95	0.48
1:AB:72:LYS:HZ2	1:AB:204:ASP:CB	2.26	0.48
1:AB:127:LYS:HG3	1:AB:128:LEU:N	2.24	0.48
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	1.96	0.48
3:AD:147:LYS:HE2	3:AD:147:LYS:H	1.78	0.48
12:AM:1:ALA:O	12:AM:9:PRO:HD2	2.14	0.48
13:AN:14:ALA:C	13:AN:18:LYS:HE2	2.39	0.48
18:AS:14:LEU:HB2	18:AS:32:THR:HG21	1.96	0.48
21:AA:198:G:C2'	21:AA:199:A:C8	2.94	0.48
21:AA:790:A:C6	21:AA:791:G:C6	3.02	0.48
21:AA:979:C:C5	21:AA:980:C:C6	3.01	0.48
21:AA:1138:G:N3	21:AA:1138:G:C2'	2.63	0.48
22:BA:740:C:H5'	22:BA:1784:A:C3'	2.44	0.48
22:BA:817:C:H2'	22:BA:818:G:O4'	2.14	0.48
22:BA:959:A:N6	34:BM:82:MET:CE	2.75	0.48
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.49	0.48
22:BA:1285:A:C2	22:BA:1328:A:H5"	2.49	0.48
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.13	0.48
22:BA:2030:A:C2	22:BA:2499:C:H5"	2.49	0.48
22:BA:2729:G:H5"	22:BA:2729:G:H8	1.79	0.48
22:BA:2879:A:H4'	22:BA:2880:C:OP1	2.13	0.48
24:BC:268:ARG:HH11	24:BC:268:ARG:CB	2.27	0.48
25:BD:106:LYS:O	25:BD:175:LEU:O	2.32	0.48
27:BF:60:SER:O	27:BF:61:GLY:C	2.56	0.48
28:BG:85:LYS:HA	28:BG:130:ILE:O	2.14	0.48
28:BG:117:PRO:O	28:BG:118:ALA:O	2.32	0.48
28:BG:174:LYS:HE2	28:BG:176:LYS:OXT	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
31:BJ:49:ASP:C	31:BJ:49:ASP:OD2	2.57	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.44	0.48
34:BM:54:THR:O	34:BM:56:ALA:N	2.47	0.48
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.48	0.48
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HB2	1.78	0.48
39:BR:38:VAL:HG22	39:BR:54:VAL:HG13	1.95	0.48
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.60	0.48
44:BW:51:GLY:O	44:BW:52:CYS:C	2.57	0.48
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.75	0.48
46:BY:42:LEU:O	46:BY:45:GLN:O	2.32	0.48
1:CB:206:ILE:C	1:CB:208:ALA:H	2.21	0.48
2:CC:5:HIS:NE2	2:CC:183:TYR:HE2	2.12	0.48
2:CC:38:VAL:HG21	2:CC:56:ILE:HD11	1.96	0.48
2:CC:154:GLY:O	2:CC:156:LEU:N	2.46	0.48
12:CM:2:ARG:HA	12:CM:7:ASN:O	2.13	0.48
14:CO:32:THR:O	14:CO:33:ALA:C	2.56	0.48
15:CP:16:PHE:HE2	15:CP:40:ASN:HB2	1.75	0.48
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	2.14	0.48
53:CA:120:A:C3'	53:CA:121:U:C5'	2.86	0.48
53:CA:123:U:OP1	53:CA:311:C:O2'	2.29	0.48
53:CA:429:U:H1'	53:CA:430:A:C5'	2.42	0.48
53:CA:705:G:H2'	53:CA:706:A:H8	1.77	0.48
53:CA:872:A:C4	53:CA:874:G:N7	2.82	0.48
53:CA:908:A:H2'	53:CA:909:A:H8	1.79	0.48
53:CA:1160:G:O6	53:CA:1181:G:O6	2.32	0.48
22:DA:33:C:H2'	22:DA:446:G:H22	1.79	0.48
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.65	0.48
22:DA:1179:G:C2	22:DA:1180:U:C2	3.01	0.48
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.48	0.48
22:DA:1308:A:N6	22:DA:1309:G:C2	2.82	0.48
22:DA:1356:G:C6	22:DA:1376:C:N3	2.82	0.48
22:DA:1516:G:O2'	22:DA:1517:G:H5'	2.14	0.48
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.14	0.48
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.79	0.48
22:DA:2093:G:N3	22:DA:2094:A:C8	2.81	0.48
22:DA:2314:A:H2'	22:DA:2315:G:C8	2.49	0.48
22:DA:2361:G:OP1	51:D3:25:HIS:HA	2.13	0.48
22:DA:2450:A:OP1	22:DA:2497:A:H2'	2.13	0.48
28:DG:39:ALA:O	28:DG:40:VAL:HG13	2.14	0.48
31:DJ:64:VAL:HG13	31:DJ:65:THR:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:57:VAL:HG12	34:DM:112:LEU:HD13	1.95	0.48
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.29	0.48
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.13	0.48
43:DV:26:PHE:CE2	43:DV:42:LEU:HD12	2.49	0.48
1:AB:67:LEU:HD13	1:AB:160:LEU:CD1	2.44	0.48
2:AC:125:ARG:O	2:AC:126:ARG:HB3	2.14	0.48
4:AE:100:GLU:HB3	4:AE:121:ASN:CA	2.38	0.48
13:AN:61:ASN:HD22	13:AN:61:ASN:HA	1.51	0.48
14:AO:9:LYS:O	14:AO:13:GLU:HG3	2.13	0.48
21:AA:191:G:C4	21:AA:192:A:C8	3.01	0.48
21:AA:476:U:O2'	21:AA:477:C:H5'	2.14	0.48
21:AA:601:G:H2'	21:AA:602:A:H8	1.78	0.48
21:AA:751:U:H2'	21:AA:752:G:O4'	2.14	0.48
21:AA:795:C:C5'	21:AA:796:C:OP2	2.60	0.48
21:AA:1142:G:H3'	21:AA:1143:G:H8	1.79	0.48
21:AA:1461:G:H2'	21:AA:1462:C:H6	1.79	0.48
22:BA:222:A:N6	22:BA:232:G:H1'	2.29	0.48
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.13	0.48
22:BA:1184:U:H2'	22:BA:1185:G:O5'	2.14	0.48
22:BA:1339:G:H21	22:BA:1603:A:H1'	1.78	0.48
22:BA:1438:U:O2'	22:BA:1439:A:H5'	2.14	0.48
22:BA:1581:G:C6	22:BA:1582:C:C4	3.02	0.48
22:BA:1682:G:C8	22:BA:1757:A:N3	2.82	0.48
22:BA:1728:C:O2'	22:BA:1729:U:C5	2.67	0.48
22:BA:1965:C:H2'	22:BA:1966:A:C8	2.49	0.48
22:BA:2470:G:O2'	22:BA:2471:A:H5'	2.14	0.48
22:BA:2868:A:H2'	22:BA:2869:G:H8	1.76	0.48
23:BB:37:C:C5	23:BB:38:C:C4	3.02	0.48
24:BC:251:THR:HG22	24:BC:252:LYS:N	2.20	0.48
25:BD:97:SER:CA	25:BD:99:GLU:HG2	2.44	0.48
29:BH:96:THR:O	29:BH:96:THR:HG23	2.14	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.95	0.48
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.48	0.48
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.95	0.48
45:BX:32:LEU:HA	45:BX:51:SER:HA	1.96	0.48
45:BX:50:VAL:CG1	45:BX:51:SER:N	2.76	0.48
2:CC:149:LYS:O	2:CC:200:TRP:HE3	1.96	0.48
4:CE:44:ARG:NH2	4:CE:70:MET:HB2	2.28	0.48
4:CE:103:GLY:HA3	4:CE:121:ASN:CA	2.43	0.48
5:CF:61:LEU:HD13	5:CF:62:MET:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.22	0.48
20:CU:35:GLU:OE1	20:CU:37:TYR:CD1	2.67	0.48
53:CA:71:A:C6	53:CA:100:G:C5	3.01	0.48
53:CA:94:G:O2'	53:CA:95:C:H5'	2.14	0.48
53:CA:250:A:H1'	53:CA:252:U:C4	2.49	0.48
53:CA:264:C:H2'	53:CA:265:G:O4'	2.14	0.48
53:CA:549:C:H2'	53:CA:550:G:O4'	2.14	0.48
53:CA:1179:A:H2'	53:CA:1180:A:O4'	2.14	0.48
53:CA:1375:A:H2'	53:CA:1376:U:C6	2.49	0.48
22:DA:68:G:N2	22:DA:74:A:OP2	2.46	0.48
22:DA:95:A:H2'	22:DA:96:C:O4'	2.14	0.48
22:DA:200:U:C4	22:DA:248:G:C2	3.02	0.48
22:DA:571:U:C4	22:DA:575:A:C5	3.02	0.48
22:DA:574:A:C8	22:DA:2055:C:H5"	2.49	0.48
22:DA:1056:G:N2	22:DA:1102:C:C5	2.80	0.48
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.49	0.48
22:DA:1982:U:O2'	22:DA:1983:G:H5'	2.14	0.48
22:DA:2216:G:C2'	22:DA:2217:G:C8	2.94	0.48
22:DA:2566:A:O2'	22:DA:2567:G:OP2	2.30	0.48
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.56	0.48
54:DB:40:U:H1'	54:DB:45:A:N6	2.29	0.48
54:DB:86:G:C2'	54:DB:87:U:H5"	2.43	0.48
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.82	0.48
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.29	0.48
29:DH:103:VAL:C	29:DH:105:ALA:H	2.21	0.48
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.95	0.48
32:DK:21:CYS:SG	32:DK:39:ILE:HG22	2.54	0.48
35:DN:34:ILE:HB	35:DN:113:ILE:HG23	1.96	0.48
38:DQ:12:ARG:HD2	38:DQ:12:ARG:H	1.79	0.48
1:AB:105:THR:HG21	21:AA:1072:G:N2	2.29	0.47
5:AF:47:LEU:HD22	17:AR:65:SER:HB3	1.96	0.47
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.14	0.47
11:AL:89:LEU:HB3	11:AL:92:VAL:HG21	1.96	0.47
13:AN:15:LEU:N	13:AN:18:LYS:HE2	2.29	0.47
21:AA:259:G:H2'	21:AA:260:G:H8	1.78	0.47
21:AA:464:U:N3	21:AA:466:A:H5'	2.29	0.47
21:AA:764:C:C2'	21:AA:765:G:H5'	2.44	0.47
21:AA:771:G:H2'	21:AA:772:U:H6	1.79	0.47
21:AA:1253:G:C6	21:AA:1285:A:N6	2.82	0.47
21:AA:1256:A:H1'	21:AA:1258:G:C5	2.48	0.47
21:AA:1261:A:C2	21:AA:1275:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:329:G:O4'	22:BA:477:A:H1'	2.14	0.47
22:BA:453:A:H5"	57:BA:3242:HOH:O	2.13	0.47
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.58	0.47
22:BA:726:G:O2'	22:BA:727:A:OP2	2.32	0.47
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.96	0.47
22:BA:1783:A:H5'	22:BA:2608:G:H4'	1.96	0.47
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.14	0.47
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.44	0.47
24:BC:80:LEU:HD13	24:BC:109:LEU:HG	1.96	0.47
25:BD:189:VAL:O	25:BD:191:GLY:N	2.39	0.47
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.14	0.47
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.43	0.47
37:BP:92:ARG:O	37:BP:92:ARG:HG3	2.13	0.47
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.79	0.47
7:CH:109:VAL:C	7:CH:110:MET:HG3	2.38	0.47
8:CI:45:MET:HB3	8:CI:49:GLN:HG3	1.96	0.47
16:CQ:12:VAL:HG22	16:CQ:12:VAL:O	2.12	0.47
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.96	0.47
18:CS:20:LYS:C	18:CS:20:LYS:HD3	2.38	0.47
53:CA:168:G:C2'	53:CA:169:C:H5'	2.44	0.47
53:CA:927:G:C2	53:CA:1391:U:O2	2.66	0.47
53:CA:1079:G:H2'	53:CA:1080:A:C8	2.48	0.47
53:CA:1408:A:C6	53:CA:1494:G:C6	3.03	0.47
22:DA:377:G:C6	22:DA:378:C:N3	2.82	0.47
22:DA:1261:C:H2'	22:DA:1262:A:H5"	1.95	0.47
22:DA:1379:U:O2	22:DA:1379:U:H2'	2.14	0.47
22:DA:1398:C:HO2'	22:DA:1399:C:H6	1.61	0.47
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.14	0.47
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.96	0.47
22:DA:2316:G:H2'	22:DA:2317:A:H8	1.79	0.47
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.49	0.47
22:DA:2531:A:C4	22:DA:2532:G:C8	3.02	0.47
22:DA:2543:G:H5'	22:DA:2543:G:H8	1.79	0.47
22:DA:2544:G:H2'	22:DA:2545:G:H8	1.78	0.47
22:DA:2578:G:H21	25:DD:130:GLN:HE22	1.62	0.47
24:DC:68:ARG:HD3	24:DC:103:ILE:HD13	1.96	0.47
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.79	0.47
31:DJ:106:LYS:HB2	31:DJ:119:PHE:CE2	2.45	0.47
32:DK:121:GLU:O	32:DK:122:VAL:C	2.57	0.47
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.44	0.47
39:DR:8:GLY:HA3	39:DR:23:GLU:HG2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:55:VAL:HG23	41:DT:86:THR:O	2.14	0.47
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.26	0.47
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.14	0.47
49:D1:8:ILE:HD12	49:D1:52:LYS:HG3	1.95	0.47
3:AD:172:VAL:HG22	3:AD:173:ASP:N	2.21	0.47
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.95	0.47
4:AE:83:PRO:HB3	4:AE:96:GLN:HE21	1.78	0.47
4:AE:136:VAL:O	4:AE:137:ARG:HB2	2.13	0.47
7:AH:3:GLN:HA	21:AA:587:G:H4'	1.94	0.47
10:AK:76:TYR:N	10:AK:76:TYR:HD1	2.11	0.47
11:AL:2:THR:HG21	21:AA:880:C:OP2	2.15	0.47
12:AM:84:CYS:HA	18:AS:73:PHE:CD2	2.48	0.47
12:AM:84:CYS:HB3	18:AS:73:PHE:HE2	1.79	0.47
14:AO:23:SER:HB3	14:AO:26:VAL:HG23	1.96	0.47
14:AO:53:ARG:NH1	21:AA:579:A:O2'	2.47	0.47
21:AA:430:A:H2'	21:AA:431:A:H8	1.79	0.47
21:AA:491:G:C6	21:AA:492:C:C4	3.02	0.47
21:AA:818:G:HO2'	21:AA:820:U:H6	1.57	0.47
21:AA:819:A:H4'	21:AA:820:U:OP2	2.15	0.47
22:BA:88:G:C2	22:BA:89:A:C8	3.03	0.47
22:BA:747:U:C4	22:BA:2613:U:C5	3.02	0.47
22:BA:1021:A:H61	22:BA:1142:A:H61	1.61	0.47
22:BA:1188:U:O2'	22:BA:1189:A:H5'	2.13	0.47
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.13	0.47
22:BA:2023:C:O2	22:BA:2023:C:H2'	2.09	0.47
22:BA:2386:A:C2	44:BW:38:ARG:HD2	2.49	0.47
24:BC:71:ASP:OD1	24:BC:118:GLY:HA2	2.14	0.47
24:BC:141:HIS:CE1	24:BC:194:VAL:HA	2.50	0.47
24:BC:259:ASN:ND2	24:BC:262:THR:OG1	2.47	0.47
25:BD:9:VAL:HG22	25:BD:10:GLY:H	1.80	0.47
25:BD:90:PHE:C	25:BD:92:VAL:N	2.69	0.47
28:BG:8:VAL:CG1	28:BG:49:LEU:H	2.23	0.47
28:BG:31:GLU:O	28:BG:32:LEU:C	2.57	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.47
31:BJ:64:VAL:CG1	31:BJ:65:THR:N	2.78	0.47
32:BK:1:MET:HE2	32:BK:32:TYR:CD1	2.49	0.47
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.49	0.47
34:BM:4:PRO:HG3	34:BM:70:ASP:HA	1.96	0.47
36:BO:104:GLN:C	36:BO:105:ALA:O	2.51	0.47
37:BP:19:PHE:HE1	37:BP:58:PHE:CD2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:48:LYS:H	39:BR:48:LYS:CD	2.27	0.47
41:BT:11:LEU:N	41:BT:11:LEU:HD23	2.28	0.47
1:CB:150:ILE:HD11	1:CB:153:MET:SD	2.54	0.47
3:CD:81:LEU:O	3:CD:83:GLY:N	2.47	0.47
3:CD:145:ARG:HG3	3:CD:146:GLU:N	2.29	0.47
4:CE:73:VAL:HG12	4:CE:74:ALA:O	2.14	0.47
9:CJ:40:ILE:HG21	53:CA:1125:U:C5	2.50	0.47
11:CL:109:ARG:CB	11:CL:118:VAL:HG21	2.43	0.47
13:CN:30:ILE:O	13:CN:45:LEU:HD11	2.13	0.47
16:CQ:59:GLU:HG3	16:CQ:75:VAL:HG22	1.96	0.47
53:CA:206:C:O5'	53:CA:207:C:OP2	2.32	0.47
53:CA:276:G:O2'	53:CA:277:C:C5'	2.62	0.47
53:CA:304:U:H2'	53:CA:305:G:C8	2.50	0.47
53:CA:352:C:H6	53:CA:352:C:H5"	1.79	0.47
53:CA:802:A:O2'	53:CA:803:G:H5'	2.13	0.47
53:CA:992:U:H1'	53:CA:993:G:C2	2.49	0.47
22:DA:216:A:O2'	22:DA:217:A:O5'	2.33	0.47
22:DA:230:G:C2	22:DA:231:A:N7	2.82	0.47
22:DA:324:A:O2'	22:DA:325:G:O4'	2.29	0.47
22:DA:971:G:O6	22:DA:972:A:C2	2.67	0.47
22:DA:1055:G:H3'	22:DA:1056:G:H5'	1.95	0.47
22:DA:1420:A:N3	22:DA:2211:A:N7	2.61	0.47
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.43	0.47
22:DA:1713:A:H1'	22:DA:1716:U:H5'	1.96	0.47
22:DA:1918:A:H4'	22:DA:1919:A:OP1	2.13	0.47
22:DA:2402:U:H5'	22:DA:2402:U:H6	1.79	0.47
22:DA:2447:G:C8	22:DA:2500:U:H2'	2.49	0.47
54:DB:17:C:H2'	54:DB:18:G:C8	2.47	0.47
24:DC:82:TYR:O	24:DC:84:PRO:HD3	2.14	0.47
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.14	0.47
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.38	0.47
39:DR:37:GLU:HB2	39:DR:53:PHE:CD2	2.48	0.47
39:DR:48:LYS:H	39:DR:48:LYS:CD	2.19	0.47
42:DU:42:LYS:HB2	42:DU:42:LYS:NZ	2.30	0.47
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	1.96	0.47
1:AB:15:PHE:O	1:AB:40:ILE:HG12	2.13	0.47
1:AB:42:LEU:CG	1:AB:43:GLU:HG3	2.37	0.47
2:AC:108:PRO:C	2:AC:110:LEU:H	2.22	0.47
5:AF:52:ASN:O	5:AF:53:LYS:CB	2.63	0.47
6:AG:113:LYS:HB2	6:AG:117:LEU:HD12	1.96	0.47
6:AG:128:GLU:O	6:AG:129:ASN:C	2.56	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:9:MET:HE1	7:AH:32:LYS:HA	1.96	0.47
14:AO:45:HIS:C	14:AO:47:LYS:H	2.21	0.47
19:AT:33:LYS:HD3	19:AT:33:LYS:HA	1.64	0.47
21:AA:78:A:N6	21:AA:79:G:C6	2.82	0.47
21:AA:208:U:H3	21:AA:212:G:N2	2.12	0.47
21:AA:471:U:H2'	21:AA:472:U:O4'	2.13	0.47
21:AA:843:U:H3	1:CB:114:LYS:HB3	1.77	0.47
21:AA:1012:A:C6	21:AA:1013:G:C6	3.01	0.47
21:AA:1201:A:H1'	21:AA:1202:U:OP2	2.15	0.47
22:BA:434:U:O2'	22:BA:436:C:H5	1.96	0.47
22:BA:476:G:H4'	22:BA:502:A:N1	2.29	0.47
22:BA:478:A:C6	22:BA:480:A:C6	3.02	0.47
22:BA:1059:G:C2	22:BA:1080:A:N3	2.83	0.47
22:BA:1522:A:H1'	22:BA:1524:G:C5	2.49	0.47
22:BA:1885:A:O2'	22:BA:1886:U:H5'	2.14	0.47
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.50	0.47
24:BC:211:ARG:C	24:BC:213:ARG:H	2.23	0.47
26:BE:115:GLN:O	26:BE:116:ASP:C	2.58	0.47
28:BG:25:ILE:HD13	28:BG:75:VAL:HG23	1.96	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
37:BP:91:VAL:O	37:BP:92:ARG:HG2	2.15	0.47
40:BS:88:ARG:HG3	40:BS:88:ARG:HH21	1.79	0.47
44:BW:14:ASP:OD2	44:BW:16:GLU:OE1	2.32	0.47
44:BW:25:PHE:O	44:BW:26:GLY:C	2.57	0.47
46:BY:7:ARG:HA	46:BY:60:LYS:HZ3	1.79	0.47
49:B1:34:GLU:CD	49:B1:49:LYS:HG3	2.40	0.47
6:CG:78:ARG:HH21	53:CA:1382:C:H4'	1.79	0.47
7:CH:111:THR:HG22	7:CH:113:ARG:H	1.79	0.47
8:CI:125:GLN:H	8:CI:125:GLN:NE2	2.12	0.47
9:CJ:80:THR:HB	9:CJ:82:LYS:NZ	2.29	0.47
12:CM:16:ILE:H	12:CM:16:ILE:HD12	1.79	0.47
13:CN:16:ALA:HB2	13:CN:59:GLN:HE22	1.78	0.47
16:CQ:67:SER:OG	16:CQ:70:LYS:HB2	2.14	0.47
18:CS:29:PRO:HA	18:CS:47:THR:HB	1.96	0.47
53:CA:22:G:H4'	53:CA:885:G:C8	2.49	0.47
53:CA:767:A:H2'	53:CA:768:A:C8	2.49	0.47
53:CA:1138:G:N2	53:CA:1140:C:C4	2.82	0.47
53:CA:1297:G:O2'	53:CA:1298:U:OP2	2.27	0.47
53:CA:1408:A:C2	53:CA:1494:G:C4	3.01	0.47
53:CA:1478:U:H2'	53:CA:1479:C:C6	2.49	0.47
22:DA:42:A:C2	22:DA:438:G:C2	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:45:G:N2	22:DA:434:U:C2	2.83	0.47
22:DA:152:A:C2	22:DA:175:G:C2	3.02	0.47
22:DA:389:G:C8	22:DA:2413:G:H4'	2.50	0.47
22:DA:437:U:O2'	22:DA:438:G:O4'	2.31	0.47
22:DA:1083:U:H1'	22:DA:1086:A:C2	2.49	0.47
22:DA:1289:C:HO2'	22:DA:1290:C:C5'	2.27	0.47
22:DA:1291:C:O2'	22:DA:1292:G:O4'	2.27	0.47
22:DA:1295:C:H1'	35:DN:23:ASN:HD21	1.79	0.47
22:DA:1491:G:O6	22:DA:1500:G:C2	2.67	0.47
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.49	0.47
22:DA:1593:A:C5	22:DA:1594:U:C4	3.02	0.47
22:DA:1640:A:H3'	22:DA:1641:A:H8	1.78	0.47
22:DA:1737:G:N7	22:DA:1738:G:C6	2.82	0.47
22:DA:1973:G:C6	22:DA:1974:C:N4	2.83	0.47
22:DA:2234:G:C6	22:DA:2235:G:C8	3.03	0.47
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.61	0.47
32:DK:2:ILE:CG2	32:DK:3:GLN:N	2.76	0.47
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.15	0.47
34:DM:28:PHE:HB2	34:DM:104:GLU:OE1	2.14	0.47
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.45	0.47
37:DP:105:LYS:HA	37:DP:108:ARG:CZ	2.45	0.47
46:DY:57:LEU:HD13	46:DY:57:LEU:O	2.15	0.47
1:AB:67:LEU:HD13	1:AB:160:LEU:HD13	1.96	0.47
3:AD:71:PHE:CZ	3:AD:199:ILE:HD11	2.49	0.47
4:AE:108:GLY:O	4:AE:109:ALA:HB3	2.15	0.47
6:AG:68:VAL:HG21	6:AG:103:ILE:HG13	1.94	0.47
6:AG:68:VAL:O	6:AG:69:ARG:C	2.57	0.47
9:AJ:8:ILE:HA	9:AJ:99:GLN:O	2.14	0.47
9:AJ:74:VAL:HG12	9:AJ:75:ASP:N	2.30	0.47
12:AM:86:ARG:NH2	12:AM:97:ARG:HA	2.28	0.47
20:AU:25:ALA:O	20:AU:26:GLY:C	2.56	0.47
21:AA:82:G:N2	21:AA:84:U:H3	2.11	0.47
21:AA:131:A:O2'	21:AA:132:C:O4'	2.33	0.47
21:AA:211:G:C2	21:AA:212:G:H1'	2.49	0.47
21:AA:895:G:H2'	21:AA:896:C:H6	1.77	0.47
22:BA:754:U:H2'	22:BA:755:U:H6	1.78	0.47
22:BA:994:C:O3'	22:BA:995:C:H3'	2.15	0.47
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	2.14	0.47
22:BA:1858:A:OP2	22:BA:1858:A:C8	2.68	0.47
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.79	0.47
23:BB:56:G:H5"	23:BB:57:A:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:109:VAL:HG11	25:BD:193:VAL:HB	1.95	0.47
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.87	0.47
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.30	0.47
31:BJ:45:THR:N	31:BJ:46:PRO:HD3	2.29	0.47
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.15	0.47
40:BS:24:ILE:CG2	40:BS:71:VAL:HG11	2.44	0.47
41:BT:25:GLU:HA	41:BT:28:ASN:O	2.14	0.47
44:BW:41:GLY:HA2	44:BW:44:PHE:CE2	2.49	0.47
45:BX:50:VAL:HG12	45:BX:51:SER:N	2.28	0.47
49:B1:7:LYS:HG3	49:B1:23:THR:HG22	1.97	0.47
1:CB:91:VAL:HG11	1:CB:95:TRP:HD1	1.78	0.47
1:CB:208:ALA:C	1:CB:211:LEU:HB3	2.39	0.47
6:CG:2:ARG:HG2	6:CG:3:ARG:N	2.28	0.47
8:CI:102:PHE:C	8:CI:104:THR:H	2.22	0.47
8:CI:118:ARG:HH21	8:CI:122:ARG:HE	1.62	0.47
10:CK:34:THR:HG1	10:CK:39:ASN:C	2.22	0.47
12:CM:97:ARG:CZ	53:CA:1308:U:H5	2.26	0.47
15:CP:8:ARG:O	15:CP:29:ASN:ND2	2.43	0.47
53:CA:90:C:O2'	53:CA:91:U:C6	2.66	0.47
53:CA:91:U:HO2'	53:CA:92:U:H6	1.62	0.47
53:CA:328:C:O2	53:CA:328:C:C2'	2.62	0.47
53:CA:545:C:C2'	53:CA:546:A:H5'	2.43	0.47
53:CA:909:A:H2'	53:CA:910:C:O4'	2.14	0.47
53:CA:1202:U:O2'	53:CA:1203:C:C5'	2.62	0.47
22:DA:101:A:O2'	22:DA:102:U:P	2.73	0.47
22:DA:382:A:H2'	22:DA:383:C:H5"	1.96	0.47
22:DA:426:C:C2'	22:DA:427:U:H5'	2.44	0.47
22:DA:1439:A:C2	22:DA:1552:A:N6	2.80	0.47
22:DA:1649:G:H2'	22:DA:1650:A:C8	2.49	0.47
22:DA:1826:G:C5	22:DA:1827:U:C4	3.03	0.47
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.44	0.47
22:DA:2188:U:H2'	22:DA:2189:U:C6	2.49	0.47
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.44	0.47
22:DA:2429:G:C8	33:DL:55:MET:HE3	2.49	0.47
54:DB:27:C:H2'	54:DB:28:C:H6	1.78	0.47
27:DF:35:LEU:O	27:DF:87:LYS:HA	2.14	0.47
29:DH:68:ARG:CD	29:DH:71:LYS:HB2	2.44	0.47
31:DJ:35:ARG:HH11	31:DJ:140:LEU:HD11	1.79	0.47
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.72	0.47
36:DO:26:LEU:HA	36:DO:38:GLN:O	2.14	0.47
36:DO:41:ALA:O	36:DO:43:ASN:N	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.15	0.47
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.22	0.47
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.44	0.47
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.30	0.47
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.41	0.47
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.77	0.47
1:AB:49:PHE:CD1	1:AB:53:LEU:HD23	2.49	0.47
1:AB:187:ASP:HB2	1:AB:203:ASP:CG	2.40	0.47
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.14	0.47
3:AD:146:GLU:HB3	3:AD:147:LYS:HZ3	1.79	0.47
4:AE:106:ALA:CB	4:AE:124:ALA:HB3	2.43	0.47
7:AH:9:MET:HG3	7:AH:26:MET:CE	2.44	0.47
10:AK:82:GLU:CD	10:AK:82:GLU:H	2.20	0.47
10:AK:127:ARG:HG2	21:AA:1506:U:O2	2.14	0.47
13:AN:53:ASP:HA	13:AN:58:ARG:HH11	1.79	0.47
20:AU:33:ARG:HD3	20:AU:34:ARG:HG3	1.95	0.47
21:AA:135:C:H2'	21:AA:136:C:H5'	1.96	0.47
21:AA:340:U:O2'	21:AA:341:C:H5'	2.14	0.47
21:AA:475:C:H2'	21:AA:476:U:H6	1.78	0.47
21:AA:858:G:O2'	21:AA:859:G:H5'	2.14	0.47
21:AA:1451:U:O2	21:AA:1451:U:H2'	2.15	0.47
22:BA:61:C:O5'	22:BA:61:C:H6	1.97	0.47
22:BA:152:A:H2'	22:BA:153:U:C6	2.50	0.47
22:BA:1042:G:C2'	22:BA:1043:C:H5'	2.45	0.47
22:BA:1398:C:H2'	22:BA:1399:C:H6	1.79	0.47
22:BA:1483:G:C2	22:BA:1484:U:C2	3.03	0.47
22:BA:1585:C:O2'	22:BA:1586:A:H5'	2.13	0.47
22:BA:1946:U:H2'	22:BA:1947:C:H6	1.78	0.47
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.29	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
32:BK:118:LEU:O	32:BK:119:ALA:O	2.32	0.47
35:BN:38:LEU:HD12	35:BN:38:LEU:C	2.39	0.47
35:BN:83:LEU:HD11	35:BN:86:ARG:NH2	2.30	0.47
37:BP:112:ARG:O	37:BP:113:LEU:C	2.57	0.47
41:BT:32:LEU:N	41:BT:83:ALA:HB3	2.21	0.47
41:BT:68:LYS:HG2	41:BT:69:ARG:H	1.79	0.47
44:BW:23:LYS:HE3	44:BW:24:ARG:O	2.14	0.47
52:B4:15:LYS:O	52:B4:16:ILE:O	2.32	0.47
1:CB:71:THR:O	1:CB:72:LYS:C	2.58	0.47
2:CC:54:ILE:HG23	2:CC:54:ILE:O	2.13	0.47
3:CD:190:LEU:O	3:CD:190:LEU:HD23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:111:ASP:N	20:CU:3:ILE:N	2.61	0.47
11:CL:78:VAL:HG23	11:CL:101:LEU:HD12	1.96	0.47
12:CM:16:ILE:HD12	12:CM:16:ILE:N	2.29	0.47
15:CP:78:VAL:C	15:CP:80:LYS:N	2.70	0.47
53:CA:108:G:H5'	53:CA:109:A:H5"	1.96	0.47
53:CA:279:A:H4'	53:CA:280:C:O5'	2.15	0.47
53:CA:369:G:H2'	53:CA:370:C:C6	2.49	0.47
53:CA:611:C:C5	53:CA:612:C:C5	3.02	0.47
53:CA:754:C:O2	53:CA:754:C:C2'	2.61	0.47
53:CA:1278:G:H4'	53:CA:1279:G:H5'	1.95	0.47
22:DA:231:A:O2'	22:DA:232:G:H5'	2.15	0.47
22:DA:569:U:H5"	22:DA:821:A:C2	2.50	0.47
22:DA:605:G:H2'	22:DA:606:U:H6	1.79	0.47
22:DA:632:A:H2'	22:DA:633:A:C8	2.49	0.47
22:DA:1142:A:C8	22:DA:1144:A:C5	3.02	0.47
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.62	0.47
22:DA:1519:G:N1	22:DA:1520:U:C2	2.82	0.47
22:DA:1637:A:H5'	22:DA:1760:C:O2'	2.14	0.47
22:DA:1723:G:C4	22:DA:1724:G:C8	3.02	0.47
22:DA:1785:A:H2'	22:DA:1787:A:N7	2.29	0.47
22:DA:1927:A:H2'	22:DA:1928:A:C8	2.50	0.47
22:DA:2100:G:C6	22:DA:2101:A:C6	3.02	0.47
22:DA:2148:G:O2'	22:DA:2149:U:C6	2.68	0.47
22:DA:2283:C:N4	22:DA:2389:G:C5	2.83	0.47
22:DA:2755:C:O3'	22:DA:2756:U:H6	1.96	0.47
24:DC:19:VAL:HG12	24:DC:19:VAL:O	2.15	0.47
25:DD:110:THR:HA	25:DD:171:THR:HA	1.97	0.47
25:DD:196:ALA:O	25:DD:197:THR:C	2.57	0.47
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.97	0.47
27:DF:122:ASP:HB3	27:DF:126:ASN:ND2	2.29	0.47
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.57	0.47
31:DJ:23:LYS:CB	31:DJ:28:LEU:HD13	2.44	0.47
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	1.96	0.47
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.14	0.47
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.14	0.47
39:DR:39:LEU:HB2	39:DR:49:ILE:CD1	2.45	0.47
41:DT:39:THR:C	41:DT:41:ALA:H	2.22	0.47
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.49	0.47
44:DW:49:ASN:HB2	44:DW:60:ALA:HA	1.96	0.47
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.96	0.47
50:D2:34:ARG:HB3	50:D2:42:LEU:CD1	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.79	0.47
2:AC:17:TRP:CD1	13:AN:90:GLY:HA2	2.50	0.47
3:AD:57:LYS:HZ2	3:AD:61:ARG:HD3	1.80	0.47
5:AF:71:ILE:HG23	5:AF:72:ASP:N	2.28	0.47
5:AF:90:MET:HB3	17:AR:60:ARG:HH21	1.80	0.47
7:AH:82:LEU:HD22	7:AH:82:LEU:C	2.40	0.47
12:AM:49:GLU:O	12:AM:52:ILE:HG22	2.15	0.47
16:AQ:75:VAL:HB	16:AQ:76:ARG:H	1.48	0.47
18:AS:42:ASN:ND2	18:AS:42:ASN:C	2.72	0.47
20:AU:34:ARG:C	20:AU:36:PHE:N	2.69	0.47
21:AA:181:A:C2	21:AA:182:A:N6	2.82	0.47
21:AA:303:A:H2'	21:AA:304:U:O4'	2.15	0.47
21:AA:1113:C:H2'	21:AA:1114:C:C6	2.49	0.47
21:AA:1136:C:H3'	21:AA:1136:C:O2	2.15	0.47
21:AA:1157:A:H4'	21:AA:1158:C:H5"	1.97	0.47
21:AA:1221:G:H2'	21:AA:1222:G:H8	1.79	0.47
21:AA:1332:A:H5"	21:AA:1332:A:N3	2.30	0.47
22:BA:27:G:O2'	22:BA:28:A:OP2	2.32	0.47
22:BA:279:A:H2'	22:BA:280:U:O4'	2.14	0.47
22:BA:417:C:H2'	22:BA:418:C:C6	2.50	0.47
22:BA:1154:G:OP1	38:BQ:57:ARG:HD3	2.15	0.47
22:BA:1179:G:C6	22:BA:1180:U:O2'	2.63	0.47
22:BA:1587:G:C2	22:BA:1588:G:C8	3.02	0.47
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.74	0.47
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.47	0.47
26:BE:48:THR:C	26:BE:50:ALA:N	2.68	0.47
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.77	0.47
28:BG:148:ARG:HG3	28:BG:161:VAL:HG12	1.96	0.47
32:BK:7:MET:C	32:BK:8:LEU:HD23	2.39	0.47
33:BL:95:LEU:HD22	33:BL:100:ILE:HG12	1.96	0.47
35:BN:53:THR:HA	35:BN:56:LYS:HG3	1.96	0.47
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.39	0.47
40:BS:24:ILE:HG23	40:BS:71:VAL:HG11	1.95	0.47
41:BT:14:PRO:HA	41:BT:32:LEU:HB3	1.97	0.47
41:BT:87:LEU:O	41:BT:88:LYS:C	2.57	0.47
46:BY:7:ARG:N	46:BY:60:LYS:NZ	2.63	0.47
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.15	0.47
51:B3:31:ILE:CG1	51:B3:34:LYS:HD2	2.45	0.47
1:CB:27:LYS:N	1:CB:28:PRO:CD	2.77	0.47
6:CG:33:GLY:HA3	53:CA:1350:A:C2	2.49	0.47
7:CH:33:VAL:O	7:CH:35:ILE:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:49:GLN:O	8:CI:52:GLU:HG2	2.14	0.47
13:CN:8:ARG:NH1	13:CN:12:ARG:HH22	2.12	0.47
13:CN:52:ARG:HA	13:CN:52:ARG:CZ	2.44	0.47
15:CP:26:ASN:OD1	15:CP:31:ARG:HB3	2.14	0.47
16:CQ:11:VAL:CG1	16:CQ:54:ILE:HA	2.45	0.47
19:CT:66:ILE:HD12	19:CT:70:LYS:HB3	1.96	0.47
53:CA:350:G:C6	53:CA:351:G:C6	3.03	0.47
53:CA:702:A:OP1	53:CA:702:A:C8	2.56	0.47
22:DA:223:A:C6	22:DA:422:A:N7	2.82	0.47
22:DA:475:C:O2	22:DA:479:A:N6	2.42	0.47
22:DA:657:U:H2'	22:DA:658:U:H6	1.76	0.47
22:DA:712:G:C2	22:DA:720:U:O2	2.68	0.47
22:DA:1062:G:H22	22:DA:1077:A:H2	1.63	0.47
22:DA:1108:U:H2'	22:DA:1109:C:O4'	2.14	0.47
22:DA:1208:C:N3	22:DA:1209:U:C5	2.82	0.47
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.78	0.47
22:DA:1264:A:H2'	22:DA:2014:A:N6	2.29	0.47
22:DA:1588:G:H2'	22:DA:1589:U:C6	2.50	0.47
22:DA:1611:C:O2'	22:DA:1612:C:C6	2.60	0.47
22:DA:1649:G:O6	22:DA:2009:A:N6	2.47	0.47
22:DA:1914:C:H2'	22:DA:1915:U:C6	2.50	0.47
22:DA:2234:G:C4	22:DA:2235:G:C8	3.03	0.47
22:DA:2250:G:O5'	22:DA:2250:G:C8	2.68	0.47
22:DA:2425:A:O2'	22:DA:2426:A:OP2	2.24	0.47
25:DD:94:GLN:O	25:DD:95:SER:C	2.56	0.47
26:DE:47:LYS:CB	26:DE:51:GLU:HB2	2.37	0.47
26:DE:196:VAL:HA	26:DE:199:MET:HB3	1.97	0.47
27:DF:64:PRO:HA	27:DF:88:VAL:CG2	2.39	0.47
29:DH:104:THR:O	29:DH:104:THR:HG23	2.14	0.47
31:DJ:44:TYR:CD1	38:DQ:59:LEU:HD11	2.49	0.47
32:DK:22:ILE:HD11	32:DK:40:LYS:HG3	1.96	0.47
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.96	0.47
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.96	0.47
37:DP:44:GLY:HA3	37:DP:60:VAL:CG1	2.44	0.47
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.14	0.47
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.96	0.47
45:DX:19:HIS:C	45:DX:21:LEU:N	2.68	0.47
1:AB:14:HIS:O	1:AB:14:HIS:CD2	2.68	0.47
1:AB:67:LEU:HD22	1:AB:69:VAL:HG23	1.96	0.47
3:AD:145:ARG:C	3:AD:147:LYS:N	2.69	0.47
3:AD:166:LYS:HB3	3:AD:166:LYS:HZ2	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:88:HIS:HE1	21:AA:1078:U:O4'	1.97	0.47
4:AE:131:ASN:HA	4:AE:132:PRO:HD2	1.75	0.47
7:AH:63:LYS:C	7:AH:64:TYR:CD1	2.92	0.47
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	1.97	0.47
10:AK:21:HIS:CD2	10:AK:34:THR:HG21	2.49	0.47
16:AQ:12:VAL:HG13	16:AQ:16:MET:HE1	1.96	0.47
17:AR:35:SER:HA	17:AR:71:ASP:HB3	1.96	0.47
19:AT:27:MET:HG3	19:AT:28:ARG:N	2.28	0.47
21:AA:184:G:H2'	21:AA:185:U:C5	2.50	0.47
21:AA:212:G:C2	21:AA:213:G:N7	2.83	0.47
21:AA:272:C:H2'	21:AA:273:U:H6	1.80	0.47
21:AA:357:G:H1'	21:AA:368:U:O2	2.14	0.47
21:AA:466:A:H4'	21:AA:467:U:OP2	2.15	0.47
21:AA:531:U:C4'	21:AA:532:A:O5'	2.60	0.47
21:AA:792:A:O2'	21:AA:794:A:N7	2.33	0.47
21:AA:895:G:C6	21:AA:896:C:C4	3.03	0.47
21:AA:982:U:H4'	21:AA:983:A:H5'	1.97	0.47
21:AA:1058:G:C5	21:AA:1059:C:C5	3.03	0.47
21:AA:1130:A:H5"	21:AA:1130:A:C8	2.50	0.47
22:BA:81:G:N2	22:BA:106:C:C2	2.83	0.47
22:BA:182:A:C6	22:BA:183:C:C4	3.03	0.47
22:BA:304:U:C2	22:BA:305:C:C5	3.02	0.47
22:BA:464:U:C6	22:BA:788:A:C2	3.03	0.47
22:BA:856:G:N2	44:BW:19:ARG:HH22	2.01	0.47
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.50	0.47
22:BA:1327:A:OP2	57:BA:3617:HOH:O	2.20	0.47
22:BA:1408:G:C6	22:BA:1409:U:C4	3.02	0.47
22:BA:1824:G:O2'	22:BA:1825:U:H5'	2.14	0.47
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.47	0.47
22:BA:2186:G:C6	22:BA:2187:U:C2	3.03	0.47
22:BA:2280:G:C2	22:BA:2281:A:C8	3.03	0.47
22:BA:2473:U:H5"	22:BA:2474:U:OP2	2.14	0.47
22:BA:2517:C:H2'	22:BA:2542:A:N7	2.29	0.47
22:BA:2752:C:H2'	22:BA:2753:A:H8	1.80	0.47
22:BA:2805:C:C4	22:BA:2806:C:C4	3.02	0.47
23:BB:94:A:C5	23:BB:95:U:C4	3.03	0.47
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.63	0.47
24:BC:156:SER:O	24:BC:157:ALA:C	2.56	0.47
25:BD:1:MET:SD	25:BD:100:LEU:HD11	2.55	0.47
25:BD:100:LEU:HD23	25:BD:101:PHE:HE1	1.80	0.47
27:BF:33:ILE:O	27:BF:90:LEU:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.96	0.47
28:BG:1:SER:HB3	28:BG:5:LYS:NZ	2.29	0.47
28:BG:102:ILE:HG21	28:BG:130:ILE:HD13	1.96	0.47
29:BH:66:ASN:C	29:BH:68:ARG:N	2.72	0.47
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
31:BJ:2:LYS:HD3	31:BJ:2:LYS:H	1.77	0.47
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG22	1.97	0.47
32:BK:63:VAL:CG2	32:BK:107:LEU:HD21	2.39	0.47
33:BL:37:GLY:HA3	57:BL:204:HOH:O	2.14	0.47
33:BL:53:GLY:O	33:BL:54:GLN:C	2.58	0.47
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.60	0.47
34:BM:45:GLN:O	34:BM:46:ILE:C	2.58	0.47
34:BM:53:MET:O	34:BM:56:ALA:HB3	2.15	0.47
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.15	0.47
35:BN:8:ARG:HB3	35:BN:10:LEU:HD22	1.97	0.47
35:BN:36:THR:HG23	35:BN:37:THR:O	2.15	0.47
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.15	0.47
36:BO:55:GLU:O	36:BO:56:LYS:C	2.58	0.47
37:BP:59:THR:OG1	37:BP:72:VAL:HG12	2.14	0.47
38:BQ:78:PHE:HE2	38:BQ:109:VAL:HA	1.80	0.47
39:BR:49:ILE:O	39:BR:49:ILE:CG1	2.58	0.47
39:BR:55:ASP:CG	39:BR:56:GLY:H	2.23	0.47
42:BU:97:SER:O	42:BU:98:ASN:CB	2.63	0.47
44:BW:24:ARG:HD2	44:BW:25:PHE:CA	2.45	0.47
1:CB:56:LEU:HD23	1:CB:183:PHE:CE1	2.49	0.47
1:CB:172:ILE:HG23	1:CB:182:VAL:HG21	1.96	0.47
1:CB:209:VAL:CG2	1:CB:210:THR:N	2.77	0.47
1:CB:216:VAL:O	1:CB:220:VAL:HG23	2.14	0.47
2:CC:22:PHE:CE2	9:CJ:97:ASP:HB2	2.50	0.47
2:CC:84:GLU:C	2:CC:86:LEU:N	2.73	0.47
2:CC:175:HIS:CE1	53:CA:1190:G:H5'	2.50	0.47
2:CC:190:THR:CG2	2:CC:191:THR:H	2.19	0.47
4:CE:29:ILE:CG2	4:CE:30:PHE:N	2.63	0.47
5:CF:43:GLY:HA2	5:CF:58:HIS:HE1	1.79	0.47
6:CG:6:ILE:HG13	6:CG:7:GLY:N	2.27	0.47
7:CH:39:LEU:HB2	7:CH:45:ILE:CD1	2.44	0.47
7:CH:78:SER:CB	7:CH:124:ILE:O	2.62	0.47
9:CJ:42:LEU:HD23	53:CA:1280:A:H5'	1.97	0.47
18:CS:39:ILE:HG12	18:CS:68:HIS:O	2.14	0.47
53:CA:80:A:C6	53:CA:81:A:O2'	2.67	0.47
53:CA:119:A:H4'	53:CA:120:A:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:137:U:H1'	53:CA:227:G:N2	2.29	0.47
53:CA:247:G:C6	53:CA:278:G:N1	2.82	0.47
53:CA:276:G:C2	53:CA:277:C:C2	3.03	0.47
53:CA:300:A:H2'	53:CA:301:G:O4'	2.15	0.47
53:CA:471:U:H2'	53:CA:472:U:C6	2.48	0.47
53:CA:484:G:C4'	53:CA:485:U:O5'	2.61	0.47
53:CA:558:G:O5'	53:CA:559:A:H3'	2.13	0.47
53:CA:795:C:H5"	53:CA:796:C:OP2	2.15	0.47
53:CA:1046:A:O2'	53:CA:1047:G:H5'	2.14	0.47
53:CA:1067:A:O2'	53:CA:1094:G:H3'	2.14	0.47
53:CA:1087:G:C6	53:CA:1099:G:C2	3.03	0.47
53:CA:1255:G:N1	53:CA:1279:G:N7	2.62	0.47
53:CA:1416:G:C2'	53:CA:1417:G:H5'	2.45	0.47
53:CA:1514:G:H2'	53:CA:1515:G:H8	1.80	0.47
53:CA:1531:A:H8	53:CA:1531:A:O5'	1.98	0.47
22:DA:8:C:C2'	22:DA:9:G:H5'	2.45	0.47
22:DA:33:C:O2'	22:DA:34:U:C5'	2.49	0.47
22:DA:55:G:N2	22:DA:116:C:C2	2.83	0.47
22:DA:63:A:N6	22:DA:91:A:N6	2.62	0.47
22:DA:172:A:H2'	22:DA:173:A:H8	1.79	0.47
22:DA:188:G:C2'	22:DA:189:G:H5'	2.44	0.47
22:DA:380:G:O3'	45:DX:15:ASN:HB2	2.15	0.47
22:DA:475:C:C2'	22:DA:476:G:C8	2.93	0.47
22:DA:584:C:P	38:DQ:5:ARG:HD3	2.55	0.47
22:DA:599:A:C2	22:DA:659:G:C2	3.02	0.47
22:DA:711:G:C2	22:DA:721:A:C2	3.02	0.47
22:DA:1059:G:C2	22:DA:1080:A:C2	3.03	0.47
22:DA:1103:A:H8	22:DA:1103:A:O5'	1.97	0.47
22:DA:1413:A:C6	22:DA:1414:C:N4	2.83	0.47
22:DA:1521:G:C6	22:DA:1522:A:C6	3.01	0.47
22:DA:1522:A:H1'	22:DA:1524:G:C5	2.50	0.47
22:DA:1567:G:H5"	24:DC:84:PRO:HB3	1.97	0.47
22:DA:1607:C:N4	22:DA:1622:G:N7	2.62	0.47
22:DA:1681:G:O2'	22:DA:1762:A:H2'	2.15	0.47
22:DA:1802:A:O2'	22:DA:1803:A:H5'	2.15	0.47
22:DA:1982:U:H6	22:DA:1982:U:O5'	1.98	0.47
22:DA:2415:G:H2'	22:DA:2416:C:H6	1.80	0.47
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.32	0.47
22:DA:2624:G:C2	22:DA:2625:G:H1'	2.50	0.47
54:DB:40:U:O2	54:DB:43:C:H2'	2.14	0.47
24:DC:211:ARG:C	24:DC:213:ARG:N	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.78	0.47
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.14	0.47
26:DE:129:PRO:HG3	26:DE:159:LEU:HD23	1.96	0.47
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.14	0.47
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.15	0.47
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.62	0.47
29:DH:45:GLU:C	29:DH:47:PHE:H	2.22	0.47
29:DH:58:LEU:O	29:DH:61:VAL:HG12	2.15	0.47
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.48	0.47
35:DN:83:LEU:O	35:DN:87:PHE:HB2	2.15	0.47
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.57	0.47
36:DO:7:ARG:O	36:DO:8:ILE:C	2.56	0.47
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.73	0.47
39:DR:5:PHE:HB3	39:DR:59:ILE:HD12	1.97	0.47
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.49	0.47
41:DT:15:HIS:CE1	41:DT:80:TRP:CH2	3.02	0.47
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.40	0.47
42:DU:3:LYS:O	42:DU:4:ILE:C	2.56	0.47
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.14	0.47
43:DV:32:GLY:O	43:DV:33:GLY:C	2.58	0.47
46:DY:49:ASP:O	46:DY:52:ARG:HB2	2.15	0.47
1:AB:143:LEU:HA	1:AB:146:SER:OG	2.13	0.47
2:AC:13:ILE:N	2:AC:13:ILE:HD13	2.30	0.47
2:AC:21:TRP:CZ3	2:AC:23:ALA:HB3	2.50	0.47
3:AD:34:GLU:C	3:AD:36:ALA:H	2.22	0.47
8:AI:8:THR:HG22	8:AI:9:GLY:N	2.29	0.47
8:AI:56:MET:CE	8:AI:57:VAL:H	2.27	0.47
10:AK:125:LYS:C	20:AU:33:ARG:CZ	2.88	0.47
14:AO:16:ARG:HD3	14:AO:20:ASP:OD2	2.15	0.47
21:AA:198:G:C6	21:AA:220:G:C2	3.03	0.47
21:AA:593:U:H2'	21:AA:594:U:H6	1.80	0.47
21:AA:739:C:C4	21:AA:740:U:C5	3.03	0.47
21:AA:854:U:H3'	21:AA:871:U:O4	2.14	0.47
21:AA:872:A:C4	21:AA:874:G:N7	2.83	0.47
21:AA:999:C:H2'	21:AA:1000:A:H8	1.80	0.47
21:AA:1002:G:C5	21:AA:1003:G:C8	3.03	0.47
21:AA:1113:C:H2'	21:AA:1114:C:H6	1.80	0.47
21:AA:1451:U:O5'	21:AA:1452:C:H5	1.98	0.47
22:BA:118:A:C8	22:BA:119:A:C8	3.02	0.47
22:BA:359:G:H3'	22:BA:360:U:H6	1.80	0.47
22:BA:418:C:H2'	22:BA:419:U:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:773:U:O2'	24:BC:47:ARG:HD3	2.15	0.47
22:BA:1872:A:C2'	22:BA:1873:G:O4'	2.63	0.47
22:BA:2298:A:C2	22:BA:2321:U:N3	2.83	0.47
24:BC:61:TYR:HD2	24:BC:85:ASN:ND2	2.13	0.47
24:BC:173:LEU:O	24:BC:180:MET:HA	2.15	0.47
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.15	0.47
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.49	0.47
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.46	0.47
24:BC:259:ASN:O	24:BC:261:ARG:N	2.41	0.47
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.45	0.47
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.30	0.47
35:BN:83:LEU:HA	35:BN:83:LEU:HD12	1.53	0.47
36:BO:88:LYS:O	36:BO:89:ASP:CB	2.62	0.47
36:BO:94:ARG:H	36:BO:94:ARG:HG3	1.41	0.47
39:BR:3:ALA:HA	39:BR:40:MET:O	2.15	0.47
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.80	0.47
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.30	0.47
42:BU:73:ASN:C	42:BU:75:ALA:H	2.21	0.47
47:BZ:46:MET:O	47:BZ:47:ILE:C	2.58	0.47
2:CC:2:GLN:NE2	53:CA:1191:A:OP1	2.48	0.47
2:CC:41:TYR:HE1	2:CC:89:VAL:HG12	1.78	0.47
2:CC:178:ARG:O	2:CC:205:GLU:O	2.33	0.47
6:CG:49:LEU:HG	6:CG:123:LEU:HB3	1.97	0.47
12:CM:11:HIS:O	12:CM:12:LYS:HG2	2.15	0.47
15:CP:44:SER:HB2	15:CP:46:LYS:HG3	1.97	0.47
20:CU:35:GLU:O	20:CU:36:PHE:HD2	1.96	0.47
53:CA:15:G:H5'	53:CA:1396:A:O2'	2.14	0.47
53:CA:178:C:C4	53:CA:179:A:N7	2.83	0.47
53:CA:643:C:O2'	53:CA:644:U:H5'	2.15	0.47
53:CA:1231:G:C5	53:CA:1232:U:C5	3.03	0.47
53:CA:1239:A:N6	53:CA:1299:A:N6	2.62	0.47
53:CA:1442:G:H2'	53:CA:1443:C:C6	2.49	0.47
22:DA:312:G:C2'	22:DA:313:G:H5'	2.45	0.47
22:DA:672:C:O2'	22:DA:673:C:H5'	2.14	0.47
22:DA:1142:A:N9	22:DA:1144:A:N7	2.63	0.47
22:DA:1268:A:O2'	22:DA:1269:A:O4'	2.26	0.47
22:DA:1510:G:N2	22:DA:1511:G:C4	2.82	0.47
22:DA:1568:G:N2	24:DC:57:HIS:CE1	2.82	0.47
22:DA:2056:G:N2	22:DA:2057:G:C8	2.83	0.47
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.50	0.47
22:DA:2415:G:C2	22:DA:2416:C:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2620:C:O4'	25:DD:161:MET:HG3	2.14	0.47
22:DA:2667:C:H2'	22:DA:2668:G:H8	1.80	0.47
54:DB:4:C:H2'	54:DB:5:U:C6	2.49	0.47
24:DC:147:PRO:CD	24:DC:184:GLU:HG3	2.38	0.47
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.15	0.47
28:DG:154:GLU:O	28:DG:156:TYR:N	2.48	0.47
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.45	0.47
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.15	0.47
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.14	0.47
37:DP:28:LYS:HZ3	37:DP:82:SER:HB2	1.80	0.47
37:DP:87:ARG:NH2	37:DP:110:LYS:O	2.48	0.47
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.40	0.47
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.13	0.47
1:AB:57:ASN:C	1:AB:57:ASN:HD22	2.21	0.47
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.96	0.47
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.14	0.47
12:AM:112:ARG:C	12:AM:113:LYS:HG3	2.40	0.47
21:AA:316:C:C2	21:AA:317:U:C5	3.02	0.47
21:AA:517:G:O2'	21:AA:530:G:H4'	2.15	0.47
21:AA:596:A:C6	21:AA:645:G:C2	3.03	0.47
21:AA:662:U:H2'	21:AA:663:A:H8	1.77	0.47
21:AA:1432:G:O2'	21:AA:1433:A:OP2	2.24	0.47
22:BA:514:A:H1'	22:BA:581:C:O2'	2.15	0.47
22:BA:598:U:H2'	22:BA:599:A:C8	2.50	0.47
22:BA:975:A:H1'	22:BA:990:A:C2	2.50	0.47
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.50	0.47
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.50	0.47
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.96	0.47
22:BA:2714:G:H2'	22:BA:2715:C:C6	2.50	0.47
29:BH:9:VAL:HG12	29:BH:12:LEU:HG	1.95	0.47
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.15	0.47
33:BL:92:LEU:HA	33:BL:125:LEU:HD21	1.95	0.47
40:BS:3:THR:HB	40:BS:62:ASP:OD2	2.15	0.47
44:BW:47:GLY:C	44:BW:49:ASN:H	2.23	0.47
44:BW:72:GLY:C	44:BW:74:LYS:H	2.22	0.47
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.48	0.47
50:B2:42:LEU:H	50:B2:42:LEU:HD22	1.80	0.47
1:CB:103:TRP:HA	1:CB:106:VAL:H	1.80	0.47
1:CB:133:ALA:HA	1:CB:137:THR:CG2	2.45	0.47
5:CF:12:PRO:CG	5:CF:54:LEU:HD11	2.45	0.47
5:CF:88:MET:HG2	5:CF:90:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:3:GLN:CA	53:CA:587:G:H4'	2.45	0.47
8:CI:51:LEU:C	8:CI:53:LEU:N	2.71	0.47
8:CI:112:ARG:O	8:CI:112:ARG:HG3	2.14	0.47
11:CL:72:ASN:ND2	11:CL:104:SER:H	2.13	0.47
12:CM:102:LYS:CA	53:CA:1226:C:H5	2.27	0.47
14:CO:22:GLY:O	14:CO:23:SER:C	2.58	0.47
18:CS:36:ARG:HG3	53:CA:1320:C:N4	2.29	0.47
20:CU:28:LEU:HD23	20:CU:28:LEU:C	2.39	0.47
53:CA:769:G:O2'	53:CA:770:C:H5'	2.14	0.47
53:CA:811:C:C4'	53:CA:900:A:H61	2.28	0.47
22:DA:17:G:H2'	22:DA:18:U:C6	2.49	0.47
22:DA:83:A:C6	22:DA:101:A:OP1	2.68	0.47
22:DA:132:G:N2	22:DA:148:U:C2	2.83	0.47
22:DA:227:A:O2'	22:DA:228:C:O5'	2.32	0.47
22:DA:678:C:H2'	22:DA:679:C:C6	2.50	0.47
22:DA:784:G:O2'	22:DA:785:G:H5"	2.14	0.47
22:DA:995:C:H1'	38:DQ:60:TRP:HZ2	1.80	0.47
22:DA:1627:G:N2	22:DA:1628:G:C8	2.83	0.47
22:DA:1667:G:P	32:DK:6:THR:HA	2.55	0.47
22:DA:1910:G:C2	22:DA:1921:G:C2	3.02	0.47
22:DA:1915:U:C2'	22:DA:1916:A:H8	2.18	0.47
22:DA:2029:G:C2	22:DA:2033:A:N7	2.83	0.47
22:DA:2360:G:H5"	22:DA:2361:G:OP2	2.15	0.47
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.50	0.47
22:DA:2747:G:O6	22:DA:2755:C:H5"	2.15	0.47
22:DA:2815:C:H2'	22:DA:2816:G:H8	1.79	0.47
54:DB:94:A:OP1	43:DV:19:ARG:CD	2.63	0.47
27:DF:5:ASP:C	27:DF:7:TYR:N	2.73	0.47
29:DH:75:LEU:O	29:DH:76:GLU:HB2	2.14	0.47
32:DK:7:MET:HG3	32:DK:17:ARG:HH12	1.80	0.47
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.40	0.47
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.79	0.47
35:DN:45:ARG:C	35:DN:47:VAL:H	2.21	0.47
36:DO:49:VAL:HG11	36:DO:81:ARG:HB3	1.97	0.47
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.14	0.47
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.29	0.47
39:DR:19:THR:HG22	39:DR:20:VAL:N	2.29	0.47
48:D0:53:VAL:O	48:D0:54:ILE:O	2.32	0.47
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.78	0.47
1:AB:49:PHE:HB2	1:AB:53:LEU:CD2	2.45	0.47
1:AB:66:ILE:CG1	1:AB:220:VAL:HG11	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:209:VAL:O	1:AB:211:LEU:N	2.48	0.47
2:AC:81:GLU:O	2:AC:84:GLU:HB3	2.14	0.47
3:AD:75:TYR:CD1	3:AD:75:TYR:C	2.93	0.47
6:AG:83:THR:O	6:AG:84:TYR:C	2.58	0.47
13:AN:20:PHE:HA	13:AN:24:ALA:CB	2.45	0.47
21:AA:62:U:H5"	21:AA:385:C:O2	2.15	0.47
21:AA:71:A:C5	21:AA:100:G:C5	3.03	0.47
21:AA:182:A:H1'	21:AA:183:C:H6	1.79	0.47
21:AA:204:G:C1'	21:AA:465:A:C2	2.98	0.47
21:AA:702:A:C4	22:BA:1847:A:C2	3.03	0.47
21:AA:791:G:C5	21:AA:792:A:N7	2.83	0.47
21:AA:1219:A:H2'	21:AA:1220:G:C8	2.50	0.47
21:AA:1416:G:C2	21:AA:1485:U:O2	2.68	0.47
21:AA:1433:A:H2'	21:AA:1434:A:C8	2.50	0.47
22:BA:80:G:C2	22:BA:107:G:C2	3.03	0.47
22:BA:727:A:H2'	22:BA:728:G:C8	2.50	0.47
22:BA:1392:A:H62	41:BT:19:LYS:HD2	1.80	0.47
22:BA:1437:C:H2'	22:BA:1438:U:H6	1.80	0.47
22:BA:1797:G:O3'	24:BC:255:LYS:O	2.33	0.47
22:BA:1956:U:O2'	22:BA:1957:C:H5'	2.15	0.47
22:BA:2021:C:OP1	48:B0:8:THR:HG21	2.15	0.47
22:BA:2136:G:HO2'	22:BA:2137:U:H6	1.63	0.47
22:BA:2322:A:N6	22:BA:2333:A:H62	2.13	0.47
22:BA:2500:U:O2	22:BA:2504:U:C4	2.67	0.47
27:BF:7:TYR:O	27:BF:12:VAL:HG12	2.15	0.47
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.87	0.47
31:BJ:124:VAL:HG23	31:BJ:125:TYR:N	2.29	0.47
32:BK:63:VAL:HG11	32:BK:103:VAL:HG12	1.96	0.47
34:BM:101:VAL:HG13	34:BM:101:VAL:O	2.15	0.47
37:BP:3:ILE:C	37:BP:4:ILE:O	2.57	0.47
42:BU:3:LYS:HD3	42:BU:82:VAL:HB	1.96	0.47
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.15	0.47
51:B3:31:ILE:O	51:B3:35:LYS:HE3	2.15	0.47
1:CB:103:TRP:CA	1:CB:106:VAL:HB	2.35	0.47
2:CC:11:LEU:C	2:CC:13:ILE:N	2.73	0.47
4:CE:110:MET:HG2	4:CE:139:THR:HG21	1.97	0.47
4:CE:131:ASN:C	4:CE:135:VAL:HG23	2.40	0.47
6:CG:41:ILE:HD13	6:CG:115:MET:HB3	1.97	0.47
8:CI:37:TYR:HD1	53:CA:1248:A:O2'	1.98	0.47
12:CM:12:LYS:HA	12:CM:12:LYS:CE	2.42	0.47
53:CA:54:C:N4	53:CA:352:C:H2'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:57:G:H2'	53:CA:58:C:C6	2.50	0.47
53:CA:702:A:H5'	53:CA:703:G:N7	2.29	0.47
53:CA:892:A:H2'	53:CA:893:C:H6	1.80	0.47
53:CA:1004:A:H2'	53:CA:1005:A:H8	1.80	0.47
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.68	0.47
53:CA:1507:A:H8	53:CA:1507:A:H5"	1.80	0.47
22:DA:90:U:C4	22:DA:91:A:C6	3.03	0.47
22:DA:416:U:C4	22:DA:417:C:C4	3.03	0.47
22:DA:1008:A:OP1	22:DA:1008:A:H8	1.97	0.47
22:DA:1079:C:C4	22:DA:1088:A:C2	3.03	0.47
22:DA:1171:G:C2	22:DA:1179:G:N3	2.83	0.47
22:DA:1343:G:C5	22:DA:1597:A:N6	2.83	0.47
22:DA:1385:A:C2	22:DA:1386:C:N3	2.82	0.47
22:DA:1420:A:C4	22:DA:2211:A:N7	2.83	0.47
22:DA:1813:G:C2	24:DC:49:THR:HB	2.49	0.47
22:DA:1867:G:C2	22:DA:1868:C:C2	3.03	0.47
22:DA:2093:G:O2'	22:DA:2094:A:C5'	2.63	0.47
22:DA:2234:G:C5	22:DA:2235:G:N7	2.83	0.47
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.67	0.47
22:DA:2898:U:H2'	22:DA:2899:A:H8	1.76	0.47
24:DC:110:LYS:HB3	24:DC:113:ASP:OD1	2.15	0.47
27:DF:135:ILE:O	27:DF:137:PHE:N	2.45	0.47
28:DG:94:ARG:NH1	28:DG:105:SER:HB2	2.30	0.47
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.45	0.47
31:DJ:43:GLU:O	31:DJ:43:GLU:CG	2.63	0.47
34:DM:49:ALA:HB2	34:DM:123:LYS:HB2	1.95	0.47
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.80	0.47
38:DQ:26:ALA:HB1	38:DQ:30:VAL:CG2	2.45	0.47
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.15	0.47
41:DT:62:VAL:HG12	41:DT:63:VAL:H	1.78	0.47
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.14	0.47
2:AC:10:ARG:HH21	2:AC:181:ILE:HG13	1.80	0.46
3:AD:28:ASP:C	3:AD:29:THR:O	2.57	0.46
10:AK:109:ILE:HG22	10:AK:110:THR:N	2.30	0.46
11:AL:7:VAL:HG13	16:AQ:30:HIS:HD2	1.79	0.46
13:AN:56:PRO:HA	13:AN:59:GLN:NE2	2.30	0.46
15:AP:6:LEU:HG	15:AP:17:TYR:HB3	1.96	0.46
19:AT:74:HIS:O	19:AT:75:LYS:C	2.57	0.46
22:BA:783:A:C8	22:BA:784:G:H4'	2.49	0.46
22:BA:792:A:C4'	22:BA:793:A:H5'	2.45	0.46
22:BA:923:G:N3	44:BW:23:LYS:NZ	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1060:U:H5"	22:BA:1061:U:OP1	2.15	0.46
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.74	0.46
22:BA:1491:G:O2'	22:BA:1492:G:H5'	2.16	0.46
22:BA:1636:U:O2'	22:BA:1760:C:O2'	2.30	0.46
22:BA:1848:A:H2'	22:BA:1849:G:C8	2.50	0.46
22:BA:2305:U:H2'	22:BA:2306:C:O4'	2.14	0.46
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.48	0.46
23:BB:89:U:H3'	23:BB:90:C:C5'	2.45	0.46
23:BB:98:G:H1	43:BV:14:LYS:HB3	1.80	0.46
24:BC:185:ALA:C	24:BC:187:CYS:N	2.72	0.46
25:BD:2:ILE:CD1	25:BD:96:ILE:HD13	2.45	0.46
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.63	0.46
28:BG:25:ILE:HD11	28:BG:71:LEU:HD12	1.97	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.96	0.46
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.97	0.46
33:BL:14:LYS:CG	33:BL:15:ALA:N	2.75	0.46
35:BN:116:VAL:O	35:BN:117:ASP:CB	2.63	0.46
42:BU:34:ILE:HG12	42:BU:63:ALA:HA	1.96	0.46
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.98	0.46
47:BZ:3:THR:C	47:BZ:4:ILE:HG22	2.39	0.46
2:CC:21:TRP:CZ3	13:CN:93:PRO:HG2	2.51	0.46
2:CC:191:THR:HB	2:CC:192:TYR:CD1	2.50	0.46
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.97	0.46
3:CD:70:GLN:HE22	3:CD:133:SER:HB3	1.80	0.46
6:CG:101:ARG:NH2	53:CA:1375:A:O2'	2.47	0.46
9:CJ:101:SER:O	9:CJ:102:LEU:HB2	2.14	0.46
12:CM:18:LEU:HD12	12:CM:18:LEU:N	2.30	0.46
13:CN:5:MET:O	13:CN:9:GLU:HG3	2.15	0.46
14:CO:69:LEU:HD11	14:CO:77:TYR:HA	1.96	0.46
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.15	0.46
53:CA:1221:G:C2	53:CA:1222:G:H1'	2.50	0.46
53:CA:1268:G:H21	53:CA:1327:C:C1'	2.19	0.46
22:DA:139:U:H3	41:DT:1:MET:HA	1.80	0.46
22:DA:374:A:N6	22:DA:401:A:C8	2.83	0.46
22:DA:419:U:H5"	57:DA:3234:HOH:O	2.13	0.46
22:DA:475:C:H2'	22:DA:476:G:N7	2.30	0.46
22:DA:563:A:C4	22:DA:2018:G:C2	3.03	0.46
22:DA:1059:G:C6	22:DA:1080:A:N1	2.83	0.46
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.63	0.46
22:DA:1690:A:H2'	22:DA:1691:C:O4'	2.15	0.46
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2053:G:H5'	25:DD:150:GLN:H	1.80	0.46
22:DA:2147:A:H5"	22:DA:2147:A:N3	2.30	0.46
22:DA:2351:G:O6	51:D3:42:HIS:HE1	1.98	0.46
22:DA:2654:A:N6	22:DA:2667:C:H41	2.13	0.46
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.15	0.46
43:DV:3:THR:HA	43:DV:62:THR:O	2.15	0.46
43:DV:7:GLU:O	43:DV:40:ILE:HG22	2.16	0.46
43:DV:77:VAL:HG23	43:DV:89:ILE:CG2	2.44	0.46
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.30	0.46
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.83	0.46
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.40	0.46
1:AB:32:GLY:HA3	1:AB:39:ILE:CB	2.44	0.46
1:AB:174:GLU:O	1:AB:178:LEU:HB2	2.14	0.46
9:AJ:33:GLY:O	9:AJ:34:ALA:HB2	2.16	0.46
14:AO:81:ILE:C	14:AO:83:ARG:H	2.23	0.46
21:AA:22:G:C5	21:AA:23:C:C5	3.03	0.46
21:AA:100:G:O6	21:AA:101:A:C6	2.69	0.46
21:AA:407:U:H2'	21:AA:408:A:H8	1.80	0.46
21:AA:460:A:O3'	21:AA:462:G:OP2	2.32	0.46
21:AA:511:C:O2'	21:AA:512:U:C5'	2.58	0.46
21:AA:1528:U:H4'	21:AA:1529:G:H5'	1.96	0.46
22:BA:197:A:H62	22:BA:2430:A:C2'	2.28	0.46
22:BA:566:U:O2'	22:BA:809:G:OP2	2.26	0.46
22:BA:580:U:H2'	22:BA:581:C:H6	1.80	0.46
22:BA:918:A:H4'	23:BB:97:C:O2	2.14	0.46
22:BA:1639:C:O2'	22:BA:2699:C:H4'	2.14	0.46
22:BA:1735:A:H2'	22:BA:1736:U:H6	1.77	0.46
22:BA:2468:A:O2'	22:BA:2469:A:P	2.73	0.46
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.30	0.46
25:BD:150:GLN:O	25:BD:150:GLN:HG3	2.14	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
32:BK:42:THR:O	32:BK:42:THR:HG23	2.15	0.46
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.46	0.46
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.45	0.46
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.30	0.46
41:BT:39:THR:HB	41:BT:42:GLU:H	1.78	0.46
48:B0:33:SER:OG	48:B0:35:GLU:HB2	2.14	0.46
1:CB:103:TRP:HB2	1:CB:106:VAL:HB	1.96	0.46
2:CC:168:ARG:NH1	53:CA:1106:G:O2'	2.47	0.46
2:CC:173:PRO:C	2:CC:175:HIS:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CD:8:LEU:HD13	3:CD:8:LEU:HA	1.83	0.46
3:CD:87:GLU:O	3:CD:88:ASN:C	2.59	0.46
4:CE:104:ILE:HA	4:CE:122:VAL:HB	1.96	0.46
8:CI:17:ARG:HB2	8:CI:65:THR:CB	2.40	0.46
12:CM:16:ILE:HG23	53:CA:1302:C:H5"	1.97	0.46
12:CM:68:LEU:O	12:CM:72:ILE:HG22	2.14	0.46
17:CR:21:ASP:HB3	17:CR:23:LYS:CG	2.46	0.46
19:CT:4:LYS:HE3	19:CT:5:SER:H	1.80	0.46
20:CU:16:ARG:NE	20:CU:16:ARG:HA	2.26	0.46
53:CA:282:A:H2'	53:CA:283:U:C6	2.50	0.46
53:CA:320:A:O2'	53:CA:1435:G:H1'	2.15	0.46
53:CA:580:C:H2'	53:CA:581:G:O4'	2.15	0.46
53:CA:672:U:H2'	53:CA:673:A:H8	1.79	0.46
53:CA:962:C:H2'	53:CA:963:G:H8	1.79	0.46
53:CA:1102:A:C8	53:CA:1102:A:H5"	2.50	0.46
53:CA:1105:A:H2'	53:CA:1106:G:H8	1.80	0.46
53:CA:1183:U:H6	53:CA:1183:U:H2'	1.32	0.46
53:CA:1417:G:N2	53:CA:1484:C:C4	2.83	0.46
22:DA:240:C:H3'	22:DA:241:A:H5"	1.96	0.46
22:DA:459:U:H2'	22:DA:460:A:H8	1.79	0.46
22:DA:804:A:H5"	22:DA:805:G:OP1	2.15	0.46
22:DA:1062:G:C4	22:DA:1063:G:N7	2.83	0.46
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.98	0.46
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.48	0.46
22:DA:1420:A:C8	22:DA:2211:A:N6	2.82	0.46
22:DA:2216:G:O2'	22:DA:2217:G:C8	2.54	0.46
22:DA:2707:U:H2'	22:DA:2708:G:H8	1.80	0.46
22:DA:2734:A:H2'	22:DA:2735:G:H5'	1.97	0.46
22:DA:2756:U:H1'	22:DA:2757:A:H5"	1.97	0.46
22:DA:2849:U:OP1	37:DP:92:ARG:NH1	2.48	0.46
54:DB:28:C:OP1	36:DO:31:THR:HG21	2.16	0.46
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.14	0.46
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.30	0.46
25:DD:148:GLN:HG2	25:DD:149:ASN:H	1.78	0.46
27:DF:37:MET:HE2	27:DF:149:ARG:HB3	1.98	0.46
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	2.29	0.46
36:DO:51:ALA:HB2	36:DO:81:ARG:HD2	1.97	0.46
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.40	0.46
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.14	0.46
46:DY:52:ARG:C	46:DY:54:LYS:N	2.73	0.46
50:D2:23:ALA:O	50:D2:24:THR:HB	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:32:GLY:HA3	1:AB:39:ILE:CG1	2.42	0.46
1:AB:40:ILE:HG21	1:AB:201:GLY:HA2	1.97	0.46
2:AC:39:ARG:CZ	2:AC:54:ILE:HD11	2.45	0.46
3:AD:116:LEU:HB3	3:AD:122:ILE:CD1	2.44	0.46
3:AD:169:TRP:CE3	3:AD:185:PRO:HB3	2.50	0.46
7:AH:66:GLN:HB3	7:AH:67:GLY:H	1.54	0.46
10:AK:22:ILE:HD11	10:AK:85:VAL:HG22	1.97	0.46
11:AL:71:HIS:ND1	11:AL:71:HIS:C	2.73	0.46
11:AL:78:VAL:O	11:AL:101:LEU:HB3	2.15	0.46
11:AL:88:ASP:CG	21:AA:523:A:H61	2.24	0.46
12:AM:2:ARG:HA	12:AM:7:ASN:O	2.15	0.46
12:AM:3:ILE:O	12:AM:5:GLY:N	2.48	0.46
21:AA:224:U:O2'	21:AA:225:C:H5'	2.15	0.46
21:AA:345:C:C3'	37:BP:33:GLU:OE1	2.63	0.46
21:AA:597:G:C2	21:AA:644:U:C2	3.04	0.46
21:AA:1533:C:H3'	21:AA:1534:A:C5'	2.45	0.46
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.15	0.46
22:BA:1157:G:O2'	22:BA:1158:C:H5'	2.15	0.46
22:BA:1416:G:O2'	22:BA:1417:C:C5'	2.64	0.46
22:BA:1600:C:OP1	41:BT:81:LYS:NZ	2.48	0.46
22:BA:1911:U:O2'	22:BA:1912:A:H5'	2.16	0.46
22:BA:2037:A:H2'	22:BA:2038:G:H8	1.80	0.46
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.95	0.46
22:BA:2365:G:C2'	22:BA:2366:A:C8	2.99	0.46
22:BA:2555:U:C5	22:BA:2556:C:N1	2.84	0.46
27:BF:7:TYR:O	27:BF:11:VAL:HB	2.15	0.46
29:BH:100:ALA:O	29:BH:102:ALA:N	2.49	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
34:BM:66:ARG:HD3	34:BM:104:GLU:OE1	2.16	0.46
36:BO:105:ALA:O	36:BO:107:ALA:N	2.48	0.46
44:BW:18:LYS:HE3	44:BW:19:ARG:HG3	1.96	0.46
45:BX:52:ALA:HA	45:BX:55:MET:HB2	1.97	0.46
46:BY:8:GLU:O	46:BY:12:GLU:HB2	2.15	0.46
1:CB:20:ARG:HG3	53:CA:831:A:OP1	2.15	0.46
1:CB:142:LYS:HA	1:CB:145:ASN:OD1	2.15	0.46
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.96	0.46
3:CD:29:THR:C	3:CD:31:CYS:N	2.74	0.46
4:CE:76:ASN:HD22	4:CE:76:ASN:HA	1.59	0.46
6:CG:9:ARG:HH22	53:CA:1346:A:N6	2.14	0.46
6:CG:115:MET:HB2	53:CA:1240:U:OP1	2.14	0.46
10:CK:55:ARG:O	10:CK:56:LYS:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:8:ARG:HD2	13:CN:12:ARG:NH2	2.30	0.46
53:CA:85:U:O4'	53:CA:85:U:O2	2.34	0.46
53:CA:344:A:H5"	53:CA:345:C:H5	1.80	0.46
53:CA:345:C:H5'	53:CA:346:G:C5	2.50	0.46
53:CA:642:A:O2'	53:CA:643:C:H5'	2.15	0.46
53:CA:951:G:H2'	53:CA:952:U:C6	2.50	0.46
53:CA:1319:A:N6	53:CA:1323:G:C2	2.84	0.46
53:CA:1399:C:O2	53:CA:1401:G:C5	2.68	0.46
53:CA:1446:A:H2'	53:CA:1447:A:H5'	1.97	0.46
22:DA:193:U:O3'	22:DA:803:U:H4'	2.15	0.46
22:DA:377:G:C6	22:DA:378:C:C4	3.03	0.46
22:DA:503:A:N3	22:DA:505:A:H2'	2.31	0.46
22:DA:568:U:O2	22:DA:570:G:H8	1.98	0.46
22:DA:597:G:H2'	22:DA:598:U:O4'	2.15	0.46
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.97	0.46
22:DA:1166:G:C2	22:DA:1184:U:O2	2.69	0.46
22:DA:1385:A:O2'	22:DA:1386:C:C6	2.64	0.46
22:DA:1491:G:C2	22:DA:1492:G:C8	3.03	0.46
22:DA:1633:G:C5	22:DA:1635:A:C5	3.04	0.46
22:DA:1653:G:O6	35:DN:10:LEU:O	2.34	0.46
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.98	0.46
22:DA:2543:G:H2'	22:DA:2544:G:C8	2.49	0.46
26:DE:76:PRO:HA	26:DE:82:GLY:O	2.16	0.46
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.16	0.46
26:DE:111:GLU:HB2	26:DE:114:ARG:HH21	1.80	0.46
27:DF:111:ARG:H	27:DF:111:ARG:NE	2.14	0.46
31:DJ:58:ASN:CG	31:DJ:127:GLY:HA2	2.40	0.46
32:DK:87:LEU:HD12	32:DK:92:GLU:CA	2.44	0.46
34:DM:72:PRO:O	34:DM:73:ILE:CB	2.60	0.46
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.28	0.46
38:DQ:111:LYS:HE3	39:DR:48:LYS:HD3	1.98	0.46
42:DU:80:ASP:N	42:DU:80:ASP:OD1	2.47	0.46
43:DV:43:ASP:HB3	43:DV:46:LYS:HB2	1.97	0.46
46:DY:52:ARG:C	46:DY:54:LYS:H	2.23	0.46
1:AB:13:VAL:HG22	1:AB:207:ARG:HH22	1.77	0.46
1:AB:40:ILE:HG21	1:AB:201:GLY:CA	2.45	0.46
4:AE:93:VAL:HG11	4:AE:139:THR:HG22	1.98	0.46
4:AE:121:ASN:CG	4:AE:122:VAL:N	2.73	0.46
10:AK:124:LYS:NZ	20:AU:33:ARG:NH2	2.62	0.46
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.98	0.46
12:AM:13:HIS:CE1	12:AM:41:ASP:HB2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.30	0.46
16:AQ:11:VAL:HB	16:AQ:55:GLY:H	1.80	0.46
17:AR:42:ARG:HG3	17:AR:43:ILE:HG12	1.95	0.46
18:AS:79:TYR:O	18:AS:80:ARG:HB3	2.16	0.46
19:AT:27:MET:SD	19:AT:66:ILE:HD13	2.55	0.46
21:AA:518:C:H4'	21:AA:519:C:H5"	1.97	0.46
21:AA:1162:C:H2'	21:AA:1163:A:O4'	2.15	0.46
21:AA:1233:G:H2'	21:AA:1234:C:H6	1.78	0.46
21:AA:1322:C:O2'	21:AA:1323:G:P	2.73	0.46
22:BA:348:A:H2'	22:BA:349:U:O4'	2.16	0.46
22:BA:449:A:H4'	38:BQ:2:ARG:NH1	2.31	0.46
22:BA:478:A:N6	22:BA:502:A:H62	2.14	0.46
22:BA:782:A:H4'	22:BA:783:A:O5'	2.15	0.46
22:BA:985:C:O5'	22:BA:985:C:H6	1.99	0.46
22:BA:1419:A:C5	22:BA:1421:G:C4	3.04	0.46
22:BA:1864:U:C2'	22:BA:1865:U:H5'	2.46	0.46
22:BA:2079:U:O2'	45:BX:22:ASN:ND2	2.47	0.46
24:BC:247:TRP:C	24:BC:249:VAL:N	2.73	0.46
25:BD:106:LYS:HD2	25:BD:106:LYS:N	2.29	0.46
29:BH:46:PHE:O	29:BH:50:ARG:NH2	2.42	0.46
30:BI:115:ASP:OD1	30:BI:115:ASP:C	2.59	0.46
32:BK:78:ARG:NH1	37:BP:70:GLU:OE2	2.48	0.46
33:BL:21:ARG:HD3	33:BL:21:ARG:HA	1.32	0.46
36:BO:7:ARG:HG2	36:BO:7:ARG:NH1	2.28	0.46
36:BO:88:LYS:HE2	36:BO:116:GLN:NE2	2.31	0.46
47:BZ:46:MET:O	47:BZ:50:VAL:HG22	2.15	0.46
2:CC:15:LYS:HG3	2:CC:16:PRO:HD2	1.97	0.46
2:CC:63:ILE:O	2:CC:63:ILE:HG23	2.15	0.46
3:CD:127:ARG:HH11	3:CD:127:ARG:HG2	1.80	0.46
4:CE:38:VAL:HG12	4:CE:39:GLY:H	1.80	0.46
5:CF:59:TYR:HE2	17:CR:66:LEU:HD21	1.80	0.46
11:CL:109:ARG:O	11:CL:110:LYS:HD2	2.16	0.46
18:CS:4:LEU:HB3	18:CS:5:LYS:H	1.52	0.46
20:CU:3:ILE:O	20:CU:4:LYS:O	2.33	0.46
53:CA:688:G:C4	53:CA:700:G:C2	3.03	0.46
53:CA:810:C:C2'	53:CA:811:C:H5'	2.45	0.46
53:CA:1064:G:HO2'	53:CA:1190:G:H22	1.52	0.46
53:CA:1446:A:C2'	53:CA:1447:A:H5"	2.46	0.46
22:DA:83:A:OP1	42:DU:91:LYS:HD2	2.15	0.46
22:DA:243:U:O2'	22:DA:244:A:H8	1.98	0.46
22:DA:327:G:H2'	22:DA:328:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:396:G:O2'	22:DA:397:U:H5'	2.16	0.46
22:DA:476:G:O2'	22:DA:477:A:H3'	2.16	0.46
22:DA:621:A:O2'	22:DA:622:G:O5'	2.34	0.46
22:DA:633:A:H5"	33:DL:70:LYS:HD3	1.98	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
22:DA:959:A:OP2	22:DA:959:A:H4'	2.15	0.46
22:DA:1582:C:H2'	22:DA:1585:C:H42	1.80	0.46
22:DA:1594:U:H2'	22:DA:1595:C:O4'	2.15	0.46
22:DA:1631:G:H1'	22:DA:1635:A:H61	1.80	0.46
22:DA:2304:G:H21	27:DF:152:ASP:HB3	1.80	0.46
22:DA:2624:G:H1'	48:D0:18:HIS:CE1	2.50	0.46
22:DA:2683:C:H2'	22:DA:2684:U:H6	1.80	0.46
22:DA:2714:G:O2'	22:DA:2715:C:C5'	2.60	0.46
22:DA:2753:A:O2'	22:DA:2754:U:H5'	2.15	0.46
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.15	0.46
24:DC:33:LEU:O	24:DC:34:GLU:HB3	2.14	0.46
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.48	0.46
26:DE:133:LEU:HD23	26:DE:133:LEU:C	2.40	0.46
29:DH:53:GLU:C	29:DH:55:GLU:H	2.24	0.46
35:DN:70:THR:HG22	35:DN:70:THR:O	2.16	0.46
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.98	0.46
39:DR:49:ILE:CG2	39:DR:54:VAL:H	2.28	0.46
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.51	0.46
42:DU:84:PHE:HA	42:DU:92:VAL:O	2.15	0.46
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.83	0.46
43:DV:44:HIS:HE2	43:DV:85:LYS:HB2	1.81	0.46
45:DX:52:ALA:C	45:DX:54:GLY:N	2.73	0.46
1:AB:183:PHE:N	1:AB:183:PHE:CD2	2.83	0.46
4:AE:43:GLY:O	4:AE:44:ARG:C	2.59	0.46
13:AN:78:LEU:HB2	13:AN:83:VAL:HG23	1.97	0.46
13:AN:79:SER:O	13:AN:80:ARG:C	2.58	0.46
14:AO:34:GLN:HA	14:AO:34:GLN:OE1	2.16	0.46
19:AT:8:LYS:HA	19:AT:11:ILE:CG2	2.43	0.46
21:AA:46:G:C6	21:AA:366:A:C2	3.03	0.46
21:AA:88:U:O2	21:AA:88:U:O2'	2.30	0.46
21:AA:264:C:H2'	21:AA:265:G:O4'	2.15	0.46
21:AA:652:U:H1'	21:AA:653:U:C5	2.51	0.46
21:AA:1348:U:O2'	21:AA:1349:A:C5'	2.63	0.46
22:BA:183:C:H1'	22:BA:433:C:H1'	1.98	0.46
22:BA:197:A:C2	22:BA:198:C:H1'	2.50	0.46
22:BA:1073:A:P	22:BA:1073:A:H8	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.50	0.46
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.88	0.46
22:BA:1394:U:P	57:BA:3414:HOH:O	2.74	0.46
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.51	0.46
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.13	0.46
23:BB:24:G:C6	23:BB:56:G:C2	3.04	0.46
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.75	0.46
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.16	0.46
29:BH:67:ALA:C	29:BH:69:ALA:N	2.73	0.46
29:BH:119:ASN:C	29:BH:121:VAL:H	2.23	0.46
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.30	0.46
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.45	0.46
37:BP:92:ARG:HH11	37:BP:92:ARG:CB	2.27	0.46
38:BQ:75:TYR:CE2	38:BQ:79:ILE:HG13	2.51	0.46
39:BR:74:ILE:HD12	39:BR:74:ILE:N	2.31	0.46
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.15	0.46
40:BS:73:LYS:CE	40:BS:73:LYS:HA	2.39	0.46
44:BW:37:VAL:CG2	44:BW:55:ASP:O	2.63	0.46
49:B1:9:LYS:N	49:B1:9:LYS:HD3	2.30	0.46
1:CB:11:ALA:C	1:CB:13:VAL:H	2.22	0.46
1:CB:31:PHE:HB2	1:CB:41:ASN:HB2	1.98	0.46
6:CG:137:ARG:HD2	6:CG:137:ARG:C	2.41	0.46
8:CI:40:ARG:HG3	8:CI:44:ARG:NH1	2.31	0.46
8:CI:58:GLU:HG3	8:CI:59:LYS:N	2.26	0.46
8:CI:127:SER:C	8:CI:129:ARG:H	2.23	0.46
9:CJ:30:LYS:HG2	9:CJ:36:VAL:HG22	1.96	0.46
9:CJ:80:THR:C	9:CJ:84:VAL:HG22	2.40	0.46
13:CN:76:PHE:CE2	13:CN:95:LEU:HD22	2.51	0.46
17:CR:37:LYS:HB3	53:CA:719:C:O2'	2.14	0.46
18:CS:35:ARG:NH2	18:CS:53:GLY:H	2.13	0.46
53:CA:177:G:H2'	53:CA:178:C:H5'	1.98	0.46
53:CA:372:C:H4'	53:CA:373:A:H5'	1.97	0.46
53:CA:499:A:C6	53:CA:547:A:C8	3.03	0.46
53:CA:705:G:O2'	53:CA:706:A:H5'	2.15	0.46
53:CA:1148:U:H2'	53:CA:1149:C:O4'	2.15	0.46
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.16	0.46
22:DA:27:G:N2	22:DA:512:G:H2'	2.31	0.46
22:DA:300:A:C5	22:DA:334:C:H4'	2.51	0.46
22:DA:579:G:C2	22:DA:1262:A:C5	3.04	0.46
22:DA:740:C:O2'	22:DA:741:U:C5'	2.62	0.46
22:DA:990:A:O2'	22:DA:991:C:H5"	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1179:G:H2'	22:DA:1180:U:C6	2.50	0.46
22:DA:2015:A:H5"	22:DA:2016:U:OP2	2.15	0.46
22:DA:2254:C:O2'	22:DA:2255:G:H5'	2.16	0.46
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	2.15	0.46
22:DA:2392:A:OP1	51:D3:30:HIS:ND1	2.48	0.46
22:DA:2394:C:OP1	33:DL:63:LYS:HG2	2.16	0.46
22:DA:2473:U:OP2	22:DA:2473:U:H6	1.97	0.46
22:DA:2533:U:H4'	22:DA:2664:G:H4'	1.97	0.46
22:DA:2550:G:O6	22:DA:2551:C:N4	2.49	0.46
22:DA:2615:U:O2'	22:DA:2616:C:H5'	2.15	0.46
22:DA:2658:C:H5"	28:DG:157:LYS:CD	2.45	0.46
22:DA:2658:C:H5"	28:DG:157:LYS:HD3	1.98	0.46
54:DB:8:C:H5'	36:DO:27:VAL:HG11	1.96	0.46
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.16	0.46
26:DE:147:LEU:HB2	26:DE:186:VAL:HA	1.98	0.46
26:DE:153:LEU:HD22	26:DE:158:PHE:HD2	1.80	0.46
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.46	0.46
29:DH:68:ARG:HG2	29:DH:71:LYS:HD3	1.97	0.46
33:DL:71:ALA:HA	33:DL:74:THR:HB	1.98	0.46
37:DP:4:ILE:HG22	37:DP:4:ILE:O	2.14	0.46
37:DP:5:LYS:HE2	37:DP:9:GLN:NE2	2.30	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.15	0.46
40:DS:2:GLU:HA	40:DS:2:GLU:OE2	2.16	0.46
40:DS:29:VAL:HG23	40:DS:69:LEU:O	2.15	0.46
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.16	0.46
42:DU:73:ASN:CB	42:DU:95:PHE:HE2	2.28	0.46
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.96	0.46
44:DW:39:GLN:O	44:DW:39:GLN:CD	2.59	0.46
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.16	0.46
46:DY:58:ASN:C	46:DY:60:LYS:H	2.24	0.46
1:AB:60:ALA:CB	1:AB:223:GLY:HA3	2.44	0.46
1:AB:148:GLY:HA2	1:AB:151:LYS:CB	2.42	0.46
3:AD:37:PRO:HD2	3:AD:41:GLY:HA2	1.97	0.46
3:AD:61:ARG:HH21	3:AD:67:LEU:HD23	1.80	0.46
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.46	0.46
11:AL:96:THR:O	11:AL:97:VAL:C	2.59	0.46
13:AN:20:PHE:O	13:AN:21:ALA:HB3	2.16	0.46
13:AN:52:ARG:C	13:AN:54:SER:H	2.22	0.46
20:AU:38:GLU:OE2	20:AU:41:THR:HG21	2.16	0.46
22:BA:359:G:H3'	22:BA:360:U:C6	2.51	0.46
22:BA:538:A:H4'	31:BJ:7:LYS:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1062:G:N9	22:BA:1088:A:N7	2.63	0.46
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.16	0.46
22:BA:1357:C:H2'	22:BA:1358:G:O4'	2.15	0.46
22:BA:1857:G:O2'	22:BA:1858:A:OP2	2.30	0.46
22:BA:1869:G:N2	22:BA:1873:G:C6	2.83	0.46
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.45	0.46
22:BA:2748:A:C2	22:BA:2757:A:C4	3.04	0.46
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.48	0.46
25:BD:45:TYR:N	25:BD:45:TYR:HD1	2.12	0.46
25:BD:53:GLY:O	25:BD:54:ALA:HB2	2.15	0.46
25:BD:101:PHE:CE2	25:BD:203:VAL:HG22	2.42	0.46
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.15	0.46
28:BG:46:ASP:OD1	28:BG:47:ASN:N	2.37	0.46
28:BG:75:VAL:O	28:BG:76:ILE:C	2.58	0.46
31:BJ:38:GLY:C	31:BJ:40:HIS:N	2.74	0.46
31:BJ:73:VAL:CG2	31:BJ:74:TYR:N	2.79	0.46
37:BP:33:GLU:C	37:BP:33:GLU:CD	2.82	0.46
37:BP:37:LYS:N	37:BP:37:LYS:CD	2.79	0.46
37:BP:50:ARG:HG2	37:BP:57:ALA:C	2.41	0.46
38:BQ:76:SER:O	38:BQ:77:LYS:C	2.56	0.46
42:BU:10:VAL:HB	42:BU:70:ALA:O	2.16	0.46
43:BV:17:SER:O	43:BV:20:LEU:HB2	2.15	0.46
44:BW:51:GLY:O	44:BW:52:CYS:O	2.33	0.46
46:BY:39:GLN:HB2	46:BY:41:HIS:HD2	1.75	0.46
52:B4:7:VAL:HG13	52:B4:38:GLY:HA2	1.97	0.46
1:CB:35:ASN:O	1:CB:37:VAL:HG12	2.15	0.46
3:CD:137:SER:CB	3:CD:138:PRO:HD2	2.45	0.46
5:CF:56:LYS:O	5:CF:57:ALA:HB2	2.15	0.46
6:CG:92:PRO:CA	6:CG:95:ARG:HB2	2.41	0.46
7:CH:65:PHE:CD2	7:CH:66:GLN:HG2	2.51	0.46
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.16	0.46
8:CI:87:MET:SD	8:CI:87:MET:N	2.89	0.46
9:CJ:15:HIS:CE1	9:CJ:70:HIS:HD2	2.32	0.46
11:CL:24:GLU:O	11:CL:25:ALA:HB3	2.15	0.46
12:CM:11:HIS:HA	12:CM:44:ILE:HB	1.98	0.46
12:CM:52:ILE:C	12:CM:54:THR:H	2.24	0.46
18:CS:45:GLY:N	18:CS:61:VAL:HB	2.28	0.46
53:CA:120:A:H2'	53:CA:121:U:H5"	1.96	0.46
53:CA:392:C:H2'	53:CA:393:A:C8	2.50	0.46
53:CA:977:A:H5"	53:CA:977:A:N3	2.31	0.46
53:CA:1084:G:H5'	53:CA:1102:A:OP2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1410:A:H2'	53:CA:1411:C:C6	2.51	0.46
22:DA:160:A:N1	22:DA:161:A:C2	2.84	0.46
22:DA:206:U:C2'	22:DA:207:A:H8	2.29	0.46
22:DA:574:A:H2	22:DA:2032:G:O2'	1.97	0.46
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.16	0.46
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.15	0.46
22:DA:1252:G:C2	22:DA:1253:A:C2	3.04	0.46
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.30	0.46
22:DA:1706:C:O2'	22:DA:1707:G:OP1	2.31	0.46
22:DA:1965:C:H6	22:DA:1965:C:H5"	1.80	0.46
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.16	0.46
54:DB:27:C:O2'	54:DB:28:C:O4'	2.31	0.46
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.16	0.46
25:DD:61:THR:HB	25:DD:63:PRO:HD2	1.96	0.46
27:DF:94:ARG:HA	27:DF:97:GLU:OE2	2.15	0.46
31:DJ:17:VAL:HG23	31:DJ:137:PRO:CB	2.41	0.46
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HA	2.46	0.46
32:DK:104:THR:O	32:DK:106:GLU:N	2.48	0.46
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.30	0.46
34:DM:17:ASN:O	34:DM:18:ARG:HG2	2.16	0.46
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.80	0.46
37:DP:102:ARG:O	37:DP:103:THR:CB	2.63	0.46
41:DT:53:VAL:HG21	41:DT:92:ASN:HD22	1.80	0.46
41:DT:69:ARG:O	41:DT:74:ILE:HD12	2.14	0.46
42:DU:34:ILE:HG12	42:DU:63:ALA:HA	1.97	0.46
48:D0:55:ALA:HB3	48:D0:56:LYS:NZ	2.31	0.46
51:D3:41:ARG:O	51:D3:41:ARG:HD2	2.16	0.46
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.16	0.46
52:D4:16:ILE:HA	52:D4:24:ARG:O	2.16	0.46
1:AB:49:PHE:HB2	1:AB:53:LEU:HD23	1.98	0.46
3:AD:7:LYS:HZ3	3:AD:21:LYS:HB2	1.79	0.46
9:AJ:88:MET:C	9:AJ:90:LEU:H	2.23	0.46
10:AK:124:LYS:HZ3	10:AK:127:ARG:NE	2.14	0.46
11:AL:62:VAL:HG21	11:AL:94:TYR:HE2	1.74	0.46
13:AN:4:SER:HB3	21:AA:1216:A:OP1	2.16	0.46
14:AO:68:TYR:CZ	14:AO:72:LYS:HG3	2.50	0.46
18:AS:19:GLU:HA	18:AS:19:GLU:OE2	2.15	0.46
20:AU:34:ARG:C	20:AU:36:PHE:H	2.23	0.46
21:AA:453:G:H2'	21:AA:454:G:H8	1.81	0.46
21:AA:781:A:C5	21:AA:802:A:C2	3.03	0.46
21:AA:1040:U:H2'	21:AA:1041:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1160:G:O6	21:AA:1181:G:C5	2.69	0.46
21:AA:1486:G:H2'	21:AA:1487:G:O4'	2.16	0.46
22:BA:42:A:H3'	22:BA:43:G:H5"	1.96	0.46
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	2.16	0.46
22:BA:996:A:C4'	38:BQ:91:ARG:HG2	2.44	0.46
22:BA:1071:G:N7	22:BA:1089:A:N6	2.64	0.46
22:BA:1579:A:O2'	22:BA:1580:A:H5'	2.15	0.46
22:BA:1654:A:H2'	22:BA:1655:A:C8	2.45	0.46
22:BA:1935:G:H1'	22:BA:1964:G:N2	2.31	0.46
22:BA:2145:C:H3'	22:BA:2146:C:H5"	1.97	0.46
22:BA:2195:U:O2'	22:BA:2196:C:H5'	2.16	0.46
22:BA:2475:C:C2'	22:BA:2476:A:H5'	2.45	0.46
22:BA:2637:U:C3'	22:BA:2638:G:H5'	2.45	0.46
22:BA:2819:G:H5"	57:BA:3810:HOH:O	2.15	0.46
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.16	0.46
22:BA:2874:C:H2'	22:BA:2875:C:H6	1.81	0.46
25:BD:157:LYS:HD2	31:BJ:79:GLY:O	2.16	0.46
29:BH:21:VAL:HG21	29:BH:25:TYR:CD2	2.47	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.80	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
32:BK:18:ARG:HA	32:BK:18:ARG:HD2	1.78	0.46
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.15	0.46
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.59	0.46
37:BP:79:VAL:O	37:BP:79:VAL:HG23	2.15	0.46
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.40	0.46
44:BW:14:ASP:O	44:BW:15:SER:HB2	2.14	0.46
47:BZ:43:ILE:O	47:BZ:47:ILE:HG13	2.15	0.46
1:CB:26:MET:HE2	1:CB:29:PHE:HD2	1.80	0.46
2:CC:148:ILE:HD12	2:CC:149:LYS:N	2.30	0.46
3:CD:79:ALA:O	3:CD:80:ARG:O	2.33	0.46
6:CG:4:ARG:CD	6:CG:5:VAL:H	2.20	0.46
12:CM:47:LEU:HD23	12:CM:48:SER:N	2.31	0.46
15:CP:1:MET:O	15:CP:1:MET:HG3	2.14	0.46
15:CP:38:PHE:CE2	15:CP:51:ARG:HB3	2.50	0.46
16:CQ:29:LYS:HE2	16:CQ:36:PHE:CE1	2.50	0.46
53:CA:90:C:C2'	53:CA:91:U:C6	2.99	0.46
53:CA:389:A:O2'	53:CA:390:U:H5'	2.16	0.46
53:CA:559:A:H4'	53:CA:560:A:C5'	2.45	0.46
53:CA:649:A:H2'	53:CA:650:G:O4'	2.16	0.46
53:CA:814:A:H2'	53:CA:816:A:H5"	1.98	0.46
53:CA:818:G:HO2'	53:CA:820:U:H6	1.57	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:834:U:H2'	53:CA:835:U:C6	2.49	0.46
53:CA:1262:C:H2'	53:CA:1263:C:H5'	1.96	0.46
53:CA:1271:A:H2'	53:CA:1272:G:C8	2.51	0.46
53:CA:1365:G:C2	53:CA:1366:C:C2	3.03	0.46
22:DA:67:U:H2'	22:DA:68:G:C8	2.47	0.46
22:DA:156:A:H2'	22:DA:157:C:H6	1.81	0.46
22:DA:230:G:O2'	22:DA:231:A:C5'	2.64	0.46
22:DA:246:C:O2'	22:DA:385:C:H4'	2.16	0.46
22:DA:271:G:C6	22:DA:272:A:N6	2.84	0.46
22:DA:388:G:H8	22:DA:388:G:H2'	1.68	0.46
22:DA:416:U:H2'	22:DA:417:C:O4'	2.16	0.46
22:DA:845:A:N1	22:DA:932:U:O2	2.48	0.46
22:DA:1007:C:OP1	31:DJ:39:LYS:HE3	2.16	0.46
22:DA:1125:G:C6	22:DA:1126:A:N6	2.84	0.46
22:DA:1195:G:O2'	22:DA:1226:A:N1	2.47	0.46
22:DA:1435:G:N2	22:DA:1558:C:N4	2.62	0.46
22:DA:1451:C:H4'	22:DA:1452:G:O5'	2.16	0.46
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.51	0.46
22:DA:1661:G:C5	22:DA:1662:U:C5	3.04	0.46
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.75	0.46
22:DA:2554:U:H2'	22:DA:2555:U:C6	2.50	0.46
22:DA:2771:C:H5"	25:DD:207:VAL:HG11	1.98	0.46
25:DD:112:THR:HG22	25:DD:113:SER:H	1.79	0.46
27:DF:110:ILE:HD13	27:DF:110:ILE:H	1.80	0.46
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.63	0.46
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.31	0.46
35:DN:99:LYS:O	48:D0:41:HIS:HB2	2.15	0.46
36:DO:63:LYS:C	36:DO:63:LYS:HD3	2.41	0.46
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.16	0.46
38:DQ:46:TYR:HD1	39:DR:74:ILE:HG23	1.80	0.46
42:DU:90:LYS:HB2	42:DU:92:VAL:HG13	1.98	0.46
44:DW:49:ASN:CG	44:DW:81:ILE:HG23	2.41	0.46
50:D2:31:LEU:CA	50:D2:34:ARG:HB2	2.39	0.46
1:AB:186:VAL:HG23	1:AB:186:VAL:O	2.16	0.46
5:AF:11:HIS:CD2	5:AF:13:ASP:HB2	2.51	0.46
5:AF:91:ARG:HG2	5:AF:93:LYS:HD3	1.97	0.46
6:AG:115:MET:HA	6:AG:118:ARG:HD3	1.98	0.46
8:AI:25:GLY:H	8:AI:58:GLU:HA	1.81	0.46
9:AJ:29:ALA:HB1	9:AJ:36:VAL:HG21	1.97	0.46
12:AM:89:ARG:HB3	12:AM:96:VAL:HG22	1.97	0.46
14:AO:81:ILE:C	14:AO:83:ARG:N	2.72	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AR:41:SER:C	17:AR:43:ILE:N	2.70	0.46
21:AA:248:C:H4'	21:AA:283:U:O2'	2.15	0.46
21:AA:487:A:H2'	21:AA:488:C:C6	2.51	0.46
21:AA:934:C:H5'	21:AA:935:A:OP1	2.15	0.46
22:BA:70:G:H2'	22:BA:113:U:O2'	2.16	0.46
22:BA:77:G:N2	22:BA:110:G:H1'	2.31	0.46
22:BA:302:C:O2'	22:BA:303:G:H5'	2.15	0.46
22:BA:446:G:OP1	38:BQ:2:ARG:HD2	2.15	0.46
22:BA:885:C:H6	22:BA:885:C:O5'	1.98	0.46
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.49	0.46
22:BA:1682:G:H2'	22:BA:1683:U:C5	2.51	0.46
22:BA:2321:U:H3'	22:BA:2322:A:C5'	2.46	0.46
22:BA:2579:C:OP1	57:BA:3547:HOH:O	2.20	0.46
22:BA:2865:U:C4	22:BA:2866:U:C4	3.03	0.46
23:BB:43:C:O2	27:BF:91:ARG:NH2	2.49	0.46
24:BC:33:LEU:HD23	24:BC:62:ARG:HD3	1.98	0.46
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.40	0.46
25:BD:34:VAL:O	25:BD:34:VAL:HG23	2.15	0.46
25:BD:90:PHE:N	25:BD:90:PHE:CD1	2.83	0.46
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.97	0.46
28:BG:97:VAL:HA	28:BG:102:ILE:HA	1.96	0.46
33:BL:93:ASN:HD22	33:BL:94:THR:CA	2.23	0.46
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.97	0.46
40:BS:28:LYS:O	40:BS:29:VAL:C	2.59	0.46
40:BS:29:VAL:HG22	40:BS:51:LEU:HD11	1.98	0.46
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.45	0.46
49:B1:29:LYS:NZ	49:B1:29:LYS:HB3	2.31	0.46
2:CC:18:ASN:HD21	2:CC:53:ARG:CZ	2.28	0.46
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.50	0.46
4:CE:33:THR:O	4:CE:33:THR:HG23	2.16	0.46
6:CG:112:ASP:HB3	6:CG:117:LEU:CB	2.45	0.46
6:CG:118:ARG:HH22	53:CA:1239:A:C3'	2.26	0.46
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.31	0.46
8:CI:6:TYR:CE2	8:CI:17:ARG:HA	2.49	0.46
9:CJ:11:LYS:HZ3	9:CJ:99:GLN:HB3	1.81	0.46
9:CJ:63:ASP:OD2	13:CN:84:ARG:NH1	2.49	0.46
12:CM:23:GLY:HA3	12:CM:64:VAL:HG13	1.96	0.46
15:CP:12:LYS:HG2	15:CP:13:LYS:HG2	1.97	0.46
20:CU:25:ALA:O	20:CU:26:GLY:C	2.59	0.46
53:CA:47:C:H4'	53:CA:48:C:O5'	2.16	0.46
53:CA:238:A:H2'	53:CA:239:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:373:A:N3	53:CA:374:A:C8	2.84	0.46
53:CA:704:A:O2'	53:CA:705:G:C5'	2.64	0.46
53:CA:759:A:H2'	53:CA:760:G:H5'	1.98	0.46
53:CA:859:G:H2'	53:CA:860:A:H8	1.78	0.46
53:CA:1032:G:N2	53:CA:1033:G:C5	2.84	0.46
53:CA:1057:G:H2'	53:CA:1058:G:O4'	2.15	0.46
53:CA:1101:A:H1'	53:CA:1102:A:O4'	2.15	0.46
53:CA:1255:G:H21	53:CA:1258:G:N2	2.14	0.46
22:DA:8:C:O2'	22:DA:9:G:H5'	2.16	0.46
22:DA:121:G:C4	22:DA:131:A:C6	3.03	0.46
22:DA:319:G:C6	22:DA:333:G:C6	3.04	0.46
22:DA:478:A:N1	22:DA:480:A:C4	2.84	0.46
22:DA:482:A:N6	22:DA:506:G:N3	2.64	0.46
22:DA:704:G:H2'	22:DA:726:G:N2	2.22	0.46
22:DA:870:U:H2'	22:DA:871:U:C5'	2.45	0.46
22:DA:1113:U:O2'	22:DA:1114:C:H6	1.98	0.46
22:DA:1204:A:C4	22:DA:1206:G:C6	3.04	0.46
22:DA:1285:A:N6	22:DA:1329:U:C5	2.84	0.46
22:DA:1290:C:O2'	22:DA:1291:C:C6	2.40	0.46
22:DA:1492:G:H3'	22:DA:1493:C:H5"	1.95	0.46
22:DA:1808:A:O3'	22:DA:1809:A:C8	2.59	0.46
22:DA:1819:A:OP1	24:DC:154:ALA:HA	2.16	0.46
22:DA:1845:G:C6	22:DA:1846:G:C5	3.04	0.46
22:DA:1954:G:O2'	22:DA:1955:U:OP2	2.34	0.46
22:DA:2039:U:H2'	22:DA:2040:G:H8	1.81	0.46
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.15	0.46
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	2.31	0.46
24:DC:211:ARG:O	24:DC:213:ARG:N	2.49	0.46
24:DC:220:ARG:HE	24:DC:220:ARG:HB2	1.52	0.46
25:DD:114:LYS:HD2	25:DD:116:LYS:CE	2.45	0.46
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.77	0.46
27:DF:102:LEU:HB3	27:DF:103:ILE:HD12	1.98	0.46
28:DG:59:ASP:O	28:DG:63:GLN:HB2	2.16	0.46
31:DJ:45:THR:H	31:DJ:46:PRO:CD	2.27	0.46
32:DK:8:LEU:HD12	32:DK:8:LEU:N	2.30	0.46
32:DK:17:ARG:O	32:DK:18:ARG:C	2.58	0.46
33:DL:79:LEU:C	33:DL:82:LEU:HD11	2.40	0.46
33:DL:142:ILE:CG2	33:DL:144:GLU:H	2.29	0.46
35:DN:24:MET:HG2	35:DN:44:LEU:HD22	1.98	0.46
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.54	0.46
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.46	0.46
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.98	0.46
1:AB:165:ALA:HB3	1:AB:190:SER:HB3	1.98	0.46
3:AD:3:TYR:HB2	3:AD:62:ARG:NH2	2.31	0.46
3:AD:53:GLN:HG3	3:AD:198:LEU:O	2.16	0.46
6:AG:53:SER:C	6:AG:55:LYS:N	2.69	0.46
6:AG:105:GLU:HG2	6:AG:105:GLU:O	2.16	0.46
21:AA:116:A:O5'	21:AA:116:A:H8	1.98	0.46
21:AA:250:A:O4'	21:AA:252:U:C6	2.68	0.46
21:AA:507:C:H3'	21:AA:508:U:H5"	1.97	0.46
21:AA:782:A:H2'	21:AA:783:C:O4'	2.16	0.46
21:AA:903:G:H2'	21:AA:904:U:C6	2.48	0.46
21:AA:1055:A:H8	21:AA:1055:A:O5'	1.98	0.46
21:AA:1062:U:O5'	21:AA:1062:U:H6	1.98	0.46
21:AA:1152:A:O2'	21:AA:1153:G:H5'	2.15	0.46
21:AA:1398:A:H8	21:AA:1398:A:C5'	2.21	0.46
22:BA:342:A:C6	22:BA:343:C:C5	3.04	0.46
22:BA:627:A:C5	22:BA:637:A:C8	3.04	0.46
22:BA:1065:U:H5	22:BA:1074:G:N2	2.13	0.46
22:BA:1282:U:H2'	22:BA:1283:G:O4'	2.16	0.46
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.96	0.46
22:BA:2428:G:H5"	22:BA:2429:G:OP1	2.16	0.46
23:BB:13:G:O2'	23:BB:14:U:H5"	2.16	0.46
23:BB:35:C:H2'	23:BB:36:C:O4'	2.16	0.46
25:BD:46:ARG:HG3	25:BD:84:LEU:HB2	1.97	0.46
26:BE:48:THR:H	26:BE:51:GLU:HG2	1.81	0.46
28:BG:123:GLU:CD	28:BG:124:CYS:H	2.23	0.46
28:BG:146:ASP:O	28:BG:147:LEU:C	2.58	0.46
28:BG:174:LYS:HD2	28:BG:174:LYS:C	2.41	0.46
29:BH:76:GLU:HB3	29:BH:103:VAL:HG12	1.96	0.46
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.19	0.46
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	1.97	0.46
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.79	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.14	0.46
40:BS:73:LYS:HA	40:BS:73:LYS:HD2	1.54	0.46
41:BT:24:MET:O	41:BT:28:ASN:O	2.34	0.46
45:BX:63:ILE:H	45:BX:63:ILE:HG13	1.41	0.46
1:CB:114:LYS:HA	1:CB:117:GLU:CG	2.35	0.46
1:CB:163:ILE:HG22	1:CB:164:ASP:N	2.31	0.46
5:CF:45:ARG:HG2	5:CF:46:GLN:H	1.81	0.46
6:CG:113:LYS:HA	53:CA:1298:U:C5	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CS:69:LYS:O	18:CS:72:GLU:HB2	2.16	0.46
53:CA:21:G:H2'	53:CA:22:G:C8	2.51	0.46
53:CA:197:A:N6	53:CA:221:C:H4'	2.31	0.46
53:CA:510:A:H5"	53:CA:511:C:P	2.55	0.46
53:CA:1258:G:H2'	53:CA:1259:C:C6	2.51	0.46
53:CA:1285:A:C4'	53:CA:1286:U:OP1	2.63	0.46
22:DA:118:A:H1'	22:DA:178:G:O4'	2.15	0.46
22:DA:122:G:N2	22:DA:123:G:H1'	2.31	0.46
22:DA:186:G:N2	22:DA:211:C:C2	2.84	0.46
22:DA:221:A:H5"	22:DA:222:A:OP1	2.16	0.46
22:DA:238:C:H2'	22:DA:239:C:O4'	2.15	0.46
22:DA:656:G:O2'	22:DA:657:U:H5'	2.15	0.46
22:DA:705:A:H2'	22:DA:706:A:H8	1.78	0.46
22:DA:752:A:C6	22:DA:1781:U:H1'	2.51	0.46
22:DA:910:A:H62	34:DM:12:MET:HA	1.81	0.46
22:DA:1078:U:H5"	22:DA:1079:C:OP1	2.16	0.46
22:DA:1945:G:H2'	22:DA:1946:U:H6	1.81	0.46
22:DA:2043:C:C2	22:DA:2044:C:C5	3.03	0.46
22:DA:2882:A:H5"	35:DN:96:ARG:HD3	1.97	0.46
25:DD:181:ASP:C	25:DD:183:GLU:N	2.72	0.46
29:DH:102:ALA:C	29:DH:104:THR:N	2.74	0.46
30:DI:90:GLY:O	30:DI:92:PRO:HD3	2.16	0.46
31:DJ:81:ILE:HB	31:DJ:82:GLY:H	1.48	0.46
34:DM:41:LEU:HD13	34:DM:96:ILE:HG12	1.98	0.46
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.96	0.46
46:DY:31:GLN:C	46:DY:33:ALA:N	2.70	0.46
3:AD:84:ASN:HB3	3:AD:87:GLU:CG	2.44	0.46
8:AI:29:ILE:HA	8:AI:64:ILE:O	2.15	0.46
15:AP:20:VAL:HG21	15:AP:32:PHE:HB2	1.97	0.46
18:AS:79:TYR:CZ	18:AS:80:ARG:HB2	2.51	0.46
21:AA:71:A:O2'	21:AA:72:A:H5"	2.15	0.46
21:AA:267:C:H2'	21:AA:268:U:C6	2.51	0.46
21:AA:355:C:C4	21:AA:356:A:N7	2.83	0.46
21:AA:612:C:O2'	21:AA:613:C:H5'	2.16	0.46
21:AA:701:U:O2	21:AA:701:U:C2'	2.60	0.46
21:AA:774:G:C4	21:AA:775:G:C8	3.04	0.46
21:AA:903:G:C4	21:AA:904:U:C6	3.04	0.46
21:AA:977:A:H1'	21:AA:982:U:O4	2.16	0.46
21:AA:1202:U:O2'	21:AA:1203:C:H5'	2.16	0.46
22:BA:340:A:H2'	22:BA:341:C:O4'	2.16	0.46
22:BA:760:G:H2'	22:BA:761:A:C5'	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:826:U:OP1	22:BA:2428:G:H3'	2.16	0.46
22:BA:898:C:H2'	22:BA:899:A:H5'	1.98	0.46
22:BA:1085:A:H1'	22:BA:1105:U:H1'	1.98	0.46
22:BA:1152:C:HO2'	22:BA:1153:C:H5'	1.80	0.46
22:BA:1695:G:H8	24:BC:7:PRO:O	1.99	0.46
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.64	0.46
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.16	0.46
22:BA:2856:A:N6	22:BA:2857:G:C6	2.84	0.46
23:BB:2:G:C6	23:BB:119:A:C2	3.04	0.46
25:BD:97:SER:H	25:BD:99:GLU:CD	2.24	0.46
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.16	0.46
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.46
32:BK:16:ALA:O	32:BK:17:ARG:HB2	2.16	0.46
36:BO:57:ALA:C	36:BO:59:ALA:N	2.74	0.46
38:BQ:93:ILE:CG2	38:BQ:94:LEU:N	2.79	0.46
41:BT:32:LEU:N	41:BT:32:LEU:CD2	2.79	0.46
44:BW:8:SER:C	44:BW:9:THR:HG22	2.41	0.46
1:CB:115:ASP:O	1:CB:119:GLN:HB2	2.16	0.46
2:CC:126:ARG:HE	2:CC:126:ARG:CA	2.28	0.46
6:CG:14:ASP:CB	6:CG:19:SER:H	2.29	0.46
6:CG:86:VAL:HA	6:CG:87:PRO:HD2	1.74	0.46
8:CI:51:LEU:HD11	8:CI:82:ILE:HG22	1.98	0.46
8:CI:61:ASP:C	8:CI:62:LEU:HD22	2.41	0.46
14:CO:41:HIS:O	14:CO:44:GLU:O	2.34	0.46
15:CP:60:TRP:O	15:CP:61:VAL:C	2.59	0.46
18:CS:52:ASN:HD22	18:CS:54:ARG:H	1.63	0.46
53:CA:155:A:C6	53:CA:156:C:C4	3.04	0.46
53:CA:181:A:O2'	53:CA:182:A:H2	1.95	0.46
53:CA:577:G:C6	53:CA:812:G:N2	2.84	0.46
53:CA:666:G:C4	53:CA:741:G:C2	3.03	0.46
53:CA:922:G:H2'	53:CA:923:A:C8	2.51	0.46
53:CA:1144:G:H5"	53:CA:1145:A:OP2	2.15	0.46
53:CA:1345:U:H5"	53:CA:1346:A:OP1	2.15	0.46
22:DA:117:G:C2	22:DA:119:A:N6	2.84	0.46
22:DA:126:A:H2'	50:D2:46:LYS:CE	2.46	0.46
22:DA:135:U:H2'	22:DA:136:G:C8	2.50	0.46
22:DA:301:G:C2	22:DA:317:G:C4	3.04	0.46
22:DA:371:A:N3	22:DA:373:U:O4	2.48	0.46
22:DA:740:C:C6	22:DA:1981:A:C2	3.04	0.46
22:DA:975:A:O2'	22:DA:976:G:C5'	2.64	0.46
22:DA:1070:A:H61	30:DI:8:VAL:HG12	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1109:C:N4	22:DA:1110:G:N1	2.64	0.46
22:DA:1204:A:O4'	22:DA:1206:G:C5	2.69	0.46
22:DA:1345:C:H5"	22:DA:1396:U:O4	2.16	0.46
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.51	0.46
22:DA:1551:A:H2'	22:DA:1552:A:O4'	2.16	0.46
22:DA:1565:C:HO2'	22:DA:1566:A:P	2.39	0.46
22:DA:2157:G:OP2	22:DA:2157:G:N2	2.49	0.46
22:DA:2307:G:H1'	22:DA:2308:G:N7	2.31	0.46
22:DA:2415:G:H2'	22:DA:2416:C:C6	2.50	0.46
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.16	0.46
22:DA:2458:G:O2'	22:DA:2460:U:C5	2.69	0.46
22:DA:2683:C:H5"	37:DP:55:HIS:HB3	1.97	0.46
22:DA:2756:U:C1'	22:DA:2757:A:H5"	2.46	0.46
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.15	0.46
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.98	0.46
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.46
31:DJ:103:ILE:HD12	31:DJ:103:ILE:O	2.16	0.46
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.16	0.46
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.31	0.46
36:DO:111:ARG:HA	36:DO:115:LEU:O	2.16	0.46
40:DS:19:LEU:HG	48:D0:21:LEU:HG	1.98	0.46
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.31	0.46
1:AB:69:VAL:HG23	1:AB:160:LEU:HD11	1.98	0.45
2:AC:128:MET:HE2	2:AC:128:MET:HB2	1.62	0.45
3:AD:185:PRO:HB2	3:AD:190:LEU:HD23	1.97	0.45
4:AE:88:HIS:O	4:AE:89:THR:C	2.59	0.45
4:AE:113:VAL:HB	4:AE:140:ILE:HD11	1.97	0.45
6:AG:14:ASP:HA	6:AG:15:PRO:HD2	1.79	0.45
7:AH:74:ILE:HD12	7:AH:128:VAL:HG22	1.98	0.45
11:AL:43:LYS:HB2	11:AL:43:LYS:NZ	2.31	0.45
19:AT:68:LYS:HB2	19:AT:68:LYS:HZ2	1.79	0.45
21:AA:77:A:H8	21:AA:77:A:OP2	1.98	0.45
21:AA:475:C:H2'	21:AA:476:U:C6	2.51	0.45
21:AA:1430:A:C2	21:AA:1471:U:C2	3.04	0.45
22:BA:117:G:C6	22:BA:119:A:N6	2.84	0.45
22:BA:264:C:O2'	22:BA:265:A:H3'	2.16	0.45
22:BA:336:C:C2'	22:BA:337:C:H5'	2.46	0.45
22:BA:391:A:C2	22:BA:411:G:C5	3.03	0.45
22:BA:497:A:H2'	22:BA:498:G:O4'	2.15	0.45
22:BA:636:G:H3'	33:BL:128:THR:HG21	1.98	0.45
22:BA:659:G:H21	26:BE:30:GLN:NE2	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.49	0.45
22:BA:1416:G:O2'	22:BA:1417:C:C6	2.57	0.45
22:BA:2226:C:O5'	22:BA:2226:C:H6	2.00	0.45
22:BA:2319:G:O2'	22:BA:2320:U:C5	2.65	0.45
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.52	0.45
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.80	0.45
28:BG:168:VAL:O	28:BG:170:THR:HG23	2.16	0.45
33:BL:131:ALA:O	33:BL:135:ILE:HD12	2.16	0.45
36:BO:58:ILE:HD11	36:BO:81:ARG:NH2	2.31	0.45
39:BR:64:VAL:O	39:BR:64:VAL:HG12	2.16	0.45
41:BT:29:THR:HA	41:BT:86:THR:CA	2.44	0.45
44:BW:24:ARG:HD3	44:BW:65:LYS:HG2	1.98	0.45
2:CC:148:ILE:CD1	2:CC:201:ILE:HG12	2.45	0.45
3:CD:124:VAL:O	3:CD:125:ASN:C	2.59	0.45
3:CD:195:ASN:O	3:CD:197:HIS:N	2.50	0.45
5:CF:52:ASN:C	5:CF:54:LEU:H	2.24	0.45
6:CG:64:ALA:HB2	6:CG:126:ALA:CB	2.43	0.45
7:CH:102:VAL:HG22	7:CH:126:CYS:SG	2.56	0.45
9:CJ:92:LEU:O	9:CJ:94:ALA:N	2.49	0.45
12:CM:11:HIS:N	12:CM:44:ILE:HD12	2.31	0.45
53:CA:86:G:O2'	53:CA:87:C:P	2.73	0.45
53:CA:238:A:H2'	53:CA:239:U:C5'	2.46	0.45
53:CA:247:G:O6	53:CA:278:G:N1	2.49	0.45
53:CA:506:G:C6	53:CA:507:C:C4	3.04	0.45
53:CA:961:U:HO2'	53:CA:962:C:H6	1.64	0.45
53:CA:1231:G:C4	53:CA:1232:U:C6	3.04	0.45
53:CA:1406:U:H2'	53:CA:1407:C:H5'	1.96	0.45
22:DA:228:C:H5'	22:DA:229:C:C5	2.51	0.45
22:DA:301:G:C6	22:DA:317:G:C6	3.04	0.45
22:DA:305:C:C2	22:DA:313:G:C2	3.04	0.45
22:DA:484:C:N4	22:DA:497:A:C2	2.84	0.45
22:DA:636:G:O5'	33:DL:128:THR:HG23	2.16	0.45
22:DA:655:A:O2'	22:DA:656:G:N7	2.48	0.45
22:DA:975:A:C5	22:DA:990:A:N7	2.84	0.45
22:DA:1072:C:O2'	22:DA:1093:G:O6	2.24	0.45
22:DA:1083:U:H1'	22:DA:1086:A:N1	2.30	0.45
22:DA:1341:G:C2	41:DT:84:TYR:CE2	3.04	0.45
22:DA:1441:G:C2	22:DA:1551:A:C2	3.04	0.45
22:DA:1775:U:C2'	22:DA:1776:G:O5'	2.64	0.45
22:DA:1837:C:O2	22:DA:1927:A:H2	1.98	0.45
22:DA:1925:C:H3'	22:DA:1925:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2030:A:N3	22:DA:2499:C:H5”	2.31	0.45
22:DA:2092:U:C6	22:DA:2225:A:O2’	2.67	0.45
22:DA:2269:G:O2’	44:DW:18:LYS:HG2	2.16	0.45
22:DA:2335:A:O2’	22:DA:2336:A:H2’	2.16	0.45
22:DA:2345:G:C6	22:DA:2347:C:N4	2.83	0.45
22:DA:2359:C:H4’	51:D3:53:ASP:OD2	2.16	0.45
22:DA:2629:U:H5”	22:DA:2630:G:OP1	2.16	0.45
22:DA:2660:A:C2	22:DA:2661:G:C5	3.04	0.45
22:DA:2726:A:O2’	22:DA:2727:A:C5’	2.59	0.45
26:DE:119:ILE:HD13	26:DE:143:LEU:HD21	1.98	0.45
27:DF:1:ALA:HA	27:DF:97:GLU:HB3	1.98	0.45
27:DF:58:ALA:HB1	27:DF:139:GLU:CG	2.46	0.45
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.45	0.45
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.31	0.45
40:DS:65:ASP:C	40:DS:67:ASP:N	2.73	0.45
41:DT:18:GLU:HA	41:DT:22:THR:HG21	1.97	0.45
41:DT:18:GLU:O	41:DT:20:ALA:N	2.49	0.45
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.16	0.45
47:DZ:38:GLU:CD	47:DZ:39:ASP:H	2.23	0.45
1:AB:30:ILE:HG23	1:AB:31:PHE:N	2.31	0.45
1:AB:110:ILE:C	1:AB:112:ARG:N	2.73	0.45
1:AB:172:ILE:HG22	1:AB:176:ASN:OD1	2.15	0.45
3:AD:34:GLU:O	3:AD:36:ALA:N	2.49	0.45
3:AD:131:ILE:C	3:AD:133:SER:H	2.24	0.45
3:AD:133:SER:O	3:AD:134:TYR:C	2.58	0.45
3:AD:191:SER:O	3:AD:192:ALA:CB	2.64	0.45
4:AE:10:LEU:HG	4:AE:11:GLN:N	2.31	0.45
4:AE:105:ILE:HG13	4:AE:105:ILE:O	2.16	0.45
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.98	0.45
6:AG:88:VAL:CG2	6:AG:89:GLU:N	2.80	0.45
6:AG:96:ASN:N	6:AG:96:ASN:OD1	2.49	0.45
7:AH:46:GLU:O	7:AH:47:ASP:HB3	2.16	0.45
13:AN:91:GLU:O	13:AN:93:PRO:HD3	2.16	0.45
18:AS:48:ILE:HD12	18:AS:48:ILE:O	2.16	0.45
19:AT:9:ARG:HD2	19:AT:12:GLN:NE2	2.31	0.45
19:AT:73:ARG:NH1	21:AA:263:A:OP1	2.44	0.45
20:AU:38:GLU:HG3	20:AU:41:THR:HG21	1.97	0.45
21:AA:212:G:N2	21:AA:213:G:C5	2.84	0.45
21:AA:428:G:H1’	21:AA:430:A:C8	2.51	0.45
21:AA:979:C:OP2	21:AA:980:C:H5	1.99	0.45
21:AA:1160:G:N2	21:AA:1161:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1342:C:H2'	21:AA:1343:G:H8	1.81	0.45
22:BA:242:G:N7	51:B3:4:LYS:HG2	2.31	0.45
22:BA:271:G:C6	22:BA:272:A:N6	2.85	0.45
22:BA:313:G:H2'	22:BA:314:C:C6	2.52	0.45
22:BA:563:A:C2	22:BA:564:C:C2	3.04	0.45
22:BA:820:A:H2'	22:BA:821:A:O4'	2.17	0.45
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.45
22:BA:1754:A:C6	22:BA:1755:A:C6	3.04	0.45
22:BA:2109:U:H2'	22:BA:2110:G:H5'	1.98	0.45
22:BA:2531:A:OP2	28:BG:174:LYS:HG3	2.16	0.45
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.52	0.45
24:BC:90:ILE:HA	24:BC:104:LEU:O	2.16	0.45
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.99	0.45
25:BD:9:VAL:CG2	25:BD:26:VAL:HB	2.42	0.45
25:BD:74:GLU:O	25:BD:75:ALA:C	2.59	0.45
26:BE:5:LEU:HD23	26:BE:120:VAL:HG13	1.98	0.45
31:BJ:44:TYR:HD2	38:BQ:63:ARG:HG2	1.71	0.45
32:BK:14:SER:O	32:BK:52:VAL:HG13	2.16	0.45
32:BK:108:ARG:HH21	37:BP:34:GLY:HA3	1.81	0.45
32:BK:114:LYS:HE2	32:BK:114:LYS:HA	1.98	0.45
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	1.98	0.45
34:BM:102:LEU:HB3	34:BM:103:TYR:CD1	2.52	0.45
36:BO:26:LEU:HD13	36:BO:39:VAL:HG23	1.98	0.45
37:BP:13:LYS:HE3	37:BP:76:HIS:C	2.41	0.45
41:BT:45:ALA:O	41:BT:48:GLN:HB2	2.17	0.45
44:BW:23:LYS:CD	44:BW:24:ARG:H	2.27	0.45
49:B1:16:THR:HB	49:B1:41:VAL:CG2	2.45	0.45
49:B1:34:GLU:CG	49:B1:49:LYS:HG3	2.46	0.45
51:B3:7:ARG:HA	51:B3:7:ARG:HD2	1.37	0.45
2:CC:42:LEU:HD12	2:CC:46:LEU:HD12	1.97	0.45
2:CC:153:SER:O	53:CA:1057:G:H5"	2.16	0.45
3:CD:144:ILE:HD12	3:CD:177:MET:SD	2.56	0.45
3:CD:176:LYS:CG	3:CD:178:GLU:HB2	2.43	0.45
4:CE:79:THR:HG23	4:CE:81:GLN:H	1.81	0.45
4:CE:114:LEU:C	4:CE:116:VAL:H	2.25	0.45
6:CG:29:LEU:O	6:CG:30:MET:O	2.33	0.45
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.31	0.45
53:CA:220:G:O2'	53:CA:221:C:H5'	2.16	0.45
53:CA:404:G:C6	53:CA:405:U:C4	3.05	0.45
53:CA:983:A:O2'	53:CA:984:C:C5'	2.59	0.45
53:CA:996:A:H2'	53:CA:997:U:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1184:G:C2	53:CA:1185:G:C8	3.04	0.45
22:DA:30:G:H2'	22:DA:31:C:O4'	2.16	0.45
22:DA:197:A:N3	22:DA:197:A:H2'	2.29	0.45
22:DA:228:C:C5'	22:DA:229:C:C5	3.00	0.45
22:DA:568:U:C2'	22:DA:570:G:OP2	2.64	0.45
22:DA:975:A:O2'	22:DA:976:G:H5'	2.17	0.45
22:DA:983:A:C6	22:DA:984:A:C2	3.04	0.45
22:DA:1085:A:H3'	22:DA:1086:A:C2	2.52	0.45
22:DA:1099:G:H5"	22:DA:1100:C:OP2	2.15	0.45
22:DA:1112:G:O2'	22:DA:1113:U:H5'	2.16	0.45
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.16	0.45
22:DA:1438:U:C4	22:DA:1555:G:N1	2.85	0.45
22:DA:1663:G:C6	22:DA:1992:G:N7	2.84	0.45
22:DA:1845:G:C5	22:DA:1846:G:N7	2.85	0.45
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.82	0.45
22:DA:2227:A:H5"	22:DA:2228:G:OP2	2.16	0.45
22:DA:2594:C:C4	22:DA:2595:G:N7	2.84	0.45
22:DA:2756:U:O2'	22:DA:2757:A:H5'	2.16	0.45
24:DC:130:PRO:C	24:DC:132:ARG:N	2.73	0.45
25:DD:5:VAL:H	25:DD:32:ASN:ND2	2.14	0.45
25:DD:169:ARG:O	25:DD:170:VAL:O	2.34	0.45
26:DE:5:LEU:HD13	26:DE:122:GLU:HB2	1.98	0.45
26:DE:118:LEU:HD21	26:DE:188:MET:HE1	1.98	0.45
27:DF:102:LEU:C	27:DF:103:ILE:HD12	2.42	0.45
27:DF:135:ILE:HD12	27:DF:135:ILE:N	2.32	0.45
28:DG:97:VAL:HG11	28:DG:123:GLU:HA	1.99	0.45
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.31	0.45
30:DI:127:SER:O	30:DI:131:THR:HG23	2.15	0.45
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.74	0.45
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.46	0.45
33:DL:66:PHE:CG	33:DL:67:THR:N	2.84	0.45
38:DQ:46:TYR:HD1	39:DR:74:ILE:CG2	2.30	0.45
39:DR:49:ILE:HD12	39:DR:51:VAL:O	2.17	0.45
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.98	0.45
42:DU:39:ASN:O	42:DU:40:LEU:C	2.59	0.45
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.98	0.45
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.30	0.45
49:D1:16:THR:CG2	49:D1:42:VAL:HG23	2.46	0.45
2:AC:35:ASP:O	2:AC:37:LYS:N	2.46	0.45
5:AF:47:LEU:HB3	17:AR:65:SER:OG	2.16	0.45
11:AL:2:THR:HB	11:AL:5:GLN:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:43:LYS:HG3	21:AA:1492:A:OP1	2.16	0.45
11:AL:80:LEU:HA	11:AL:80:LEU:HD12	1.64	0.45
12:AM:10:ASP:CG	12:AM:44:ILE:HB	2.42	0.45
12:AM:86:ARG:HA	12:AM:96:VAL:HG13	1.97	0.45
13:AN:22:LYS:CG	13:AN:23:ARG:N	2.76	0.45
13:AN:47:LEU:O	13:AN:47:LEU:HD23	2.16	0.45
15:AP:10:GLY:O	21:AA:624:C:H4'	2.16	0.45
21:AA:206:C:H2'	21:AA:207:C:C4'	2.46	0.45
21:AA:214:C:H2'	21:AA:215:C:C5	2.51	0.45
21:AA:340:U:H2'	21:AA:341:C:H6	1.81	0.45
21:AA:748:G:H2'	21:AA:749:A:C8	2.51	0.45
21:AA:821:G:H2'	21:AA:822:U:H6	1.81	0.45
21:AA:829:G:C6	21:AA:858:G:C2	3.05	0.45
21:AA:1503:A:C8	21:AA:1531:A:H1'	2.51	0.45
22:BA:324:A:H61	22:BA:338:G:H2'	1.82	0.45
22:BA:1216:G:C6	22:BA:1217:U:C4	3.04	0.45
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.16	0.45
22:BA:1445:G:C6	22:BA:1446:C:C4	3.04	0.45
22:BA:1496:A:H2'	22:BA:1498:C:C4	2.50	0.45
22:BA:1867:G:H2'	22:BA:1868:C:H5'	1.97	0.45
22:BA:2092:U:N3	22:BA:2225:A:O2'	2.49	0.45
22:BA:2364:C:H2'	22:BA:2365:G:C5'	2.45	0.45
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.16	0.45
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.95	0.45
26:BE:147:LEU:O	26:BE:148:ILE:C	2.58	0.45
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.73	0.45
28:BG:1:SER:O	28:BG:3:VAL:HG12	2.15	0.45
31:BJ:36:LEU:HD12	31:BJ:36:LEU:HA	1.67	0.45
33:BL:91:ASP:H	33:BL:94:THR:CG2	2.30	0.45
35:BN:55:ALA:HB1	35:BN:80:PHE:N	2.31	0.45
36:BO:67:ASN:O	36:BO:68:LYS:C	2.59	0.45
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.47	0.45
38:BQ:91:ARG:HE	39:BR:11:GLN:HB2	1.79	0.45
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.47	0.45
1:CB:203:ASP:C	1:CB:203:ASP:OD2	2.59	0.45
3:CD:1:ALA:HB1	53:CA:405:U:O4	2.17	0.45
3:CD:104:MET:SD	3:CD:142:VAL:HG13	2.56	0.45
7:CH:85:TYR:CD2	7:CH:123:GLU:HB2	2.51	0.45
8:CI:15:ALA:O	8:CI:66:VAL:HA	2.15	0.45
8:CI:80:HIS:O	8:CI:84:ARG:HB2	2.17	0.45
10:CK:124:LYS:O	20:CU:33:ARG:NE	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.46	0.45
15:CP:78:VAL:O	15:CP:80:LYS:N	2.48	0.45
53:CA:312:C:H2'	53:CA:313:A:O4'	2.16	0.45
53:CA:525:C:N4	53:CA:526:C:N4	2.64	0.45
53:CA:814:A:H2'	53:CA:816:A:C5'	2.46	0.45
53:CA:960:U:C4	53:CA:1225:A:H1'	2.51	0.45
53:CA:977:A:C8	53:CA:1223:C:N3	2.81	0.45
53:CA:1004:A:H2'	53:CA:1005:A:C8	2.51	0.45
53:CA:1466:C:N4	57:CA:1839:HOH:O	2.49	0.45
22:DA:370:G:OP2	22:DA:370:G:C8	2.69	0.45
22:DA:529:A:H4'	22:DA:530:G:OP1	2.15	0.45
22:DA:533:G:N2	38:DQ:44:TYR:CD1	2.78	0.45
22:DA:671:C:H6	22:DA:671:C:H2'	1.36	0.45
22:DA:747:U:H6	22:DA:747:U:H5"	1.80	0.45
22:DA:845:A:N3	22:DA:847:U:H1'	2.31	0.45
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.16	0.45
22:DA:1016:G:C2	22:DA:1147:A:C2	3.04	0.45
22:DA:1079:C:N4	22:DA:1088:A:C2	2.84	0.45
22:DA:1112:G:H2'	22:DA:1113:U:C5	2.52	0.45
22:DA:1206:G:C6	22:DA:1207:C:C4	3.03	0.45
22:DA:1430:G:O2'	22:DA:1431:A:C5'	2.65	0.45
22:DA:1437:C:N3	22:DA:1438:U:C5	2.84	0.45
22:DA:1769:U:H1'	22:DA:1984:G:N2	2.32	0.45
22:DA:1819:A:O4'	22:DA:1821:A:C5	2.68	0.45
22:DA:1845:G:C4	22:DA:1846:G:C8	3.05	0.45
22:DA:2052:A:N7	25:DD:146:ILE:HD11	2.32	0.45
22:DA:2095:A:H5'	22:DA:2096:C:OP2	2.16	0.45
22:DA:2185:U:H2'	22:DA:2186:G:H8	1.82	0.45
22:DA:2403:C:O2'	22:DA:2404:U:O4'	2.30	0.45
22:DA:2619:C:H5'	25:DD:157:LYS:HG2	1.98	0.45
22:DA:2868:A:H2'	22:DA:2869:G:H8	1.69	0.45
24:DC:28:PRO:HB3	24:DC:62:ARG:NH2	2.29	0.45
24:DC:115:ILE:HB	24:DC:126:GLY:O	2.16	0.45
25:DD:94:GLN:O	25:DD:94:GLN:HG2	2.16	0.45
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.89	0.45
27:DF:28:PRO:HA	27:DF:158:THR:OG1	2.17	0.45
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.80	0.45
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.31	0.45
34:DM:108:VAL:HA	34:DM:109:PRO:HD3	1.81	0.45
37:DP:24:THR:O	37:DP:25:VAL:C	2.59	0.45
40:DS:5:ALA:HB3	40:DS:54:ALA:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:18:GLU:HB2	41:DT:19:LYS:H	1.52	0.45
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.98	0.45
1:AB:30:ILE:HD11	1:AB:38:HIS:CG	2.52	0.45
1:AB:38:HIS:C	1:AB:39:ILE:HD13	2.41	0.45
1:AB:107:ARG:O	1:AB:110:ILE:HB	2.16	0.45
1:AB:156:LEU:O	1:AB:156:LEU:HG	2.17	0.45
2:AC:61:LYS:HD2	2:AC:61:LYS:HA	1.65	0.45
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.98	0.45
3:AD:164:ARG:O	3:AD:165:GLU:C	2.59	0.45
4:AE:109:ALA:C	4:AE:111:ARG:N	2.73	0.45
6:AG:110:ARG:HB2	6:AG:110:ARG:HH11	1.81	0.45
7:AH:9:MET:HG3	7:AH:26:MET:SD	2.56	0.45
11:AL:43:LYS:HB2	11:AL:44:PRO:HD2	1.95	0.45
16:AQ:64:ARG:HE	16:AQ:66:LEU:HD21	1.82	0.45
19:AT:4:LYS:O	19:AT:6:ALA:N	2.50	0.45
21:AA:197:A:H1'	21:AA:198:G:O4'	2.17	0.45
21:AA:267:C:O2'	21:AA:268:U:C5'	2.64	0.45
21:AA:672:U:H2'	21:AA:673:A:H8	1.81	0.45
21:AA:1052:U:H5"	21:AA:1053:G:OP2	2.16	0.45
21:AA:1272:G:C5	21:AA:1273:C:C4	3.04	0.45
21:AA:1338:G:C6	21:AA:1339:A:C6	3.05	0.45
21:AA:1432:G:H1'	21:AA:1468:A:N6	2.32	0.45
22:BA:478:A:H62	22:BA:502:A:N6	2.14	0.45
22:BA:608:A:H2'	22:BA:609:A:O4'	2.17	0.45
22:BA:783:A:H8	22:BA:783:A:H2'	1.31	0.45
22:BA:1029:A:C8	22:BA:1030:C:C6	3.04	0.45
22:BA:1312:U:H4'	22:BA:1313:U:O5'	2.16	0.45
22:BA:2092:U:C2	22:BA:2225:A:O2'	2.64	0.45
22:BA:2134:A:OP1	22:BA:2134:A:H8	1.99	0.45
22:BA:2611:C:H2'	22:BA:2612:C:H6	1.81	0.45
24:BC:83:ASP:HA	24:BC:84:PRO:HD3	1.76	0.45
27:BF:33:ILE:HG12	27:BF:155:ILE:HG12	1.98	0.45
27:BF:131:VAL:O	27:BF:132:ARG:C	2.59	0.45
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.31	0.45
41:BT:26:LYS:O	41:BT:27:SER:CB	2.65	0.45
41:BT:50:LEU:HD12	41:BT:50:LEU:N	2.17	0.45
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.60	0.45
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.14	0.45
49:B1:39:ASP:HA	49:B1:40:PRO:HD2	1.85	0.45
1:CB:90:PHE:HE1	1:CB:92:ASN:HD22	1.63	0.45
1:CB:202:ASN:HB3	1:CB:203:ASP:H	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:124:GLU:CD	2:CC:124:GLU:N	2.75	0.45
2:CC:179:ALA:O	2:CC:180:ASP:C	2.58	0.45
3:CD:106:PHE:CD1	3:CD:106:PHE:N	2.70	0.45
6:CG:99:ALA:HB3	6:CG:100:MET:HE2	1.98	0.45
12:CM:22:TYR:HB2	12:CM:65:GLU:HG2	1.99	0.45
12:CM:100:ARG:NH1	12:CM:102:LYS:HE3	2.30	0.45
18:CS:33:TRP:H	18:CS:33:TRP:HE3	1.62	0.45
53:CA:202:G:O2'	53:CA:468:A:H8	2.00	0.45
53:CA:202:G:HO2'	53:CA:468:A:H8	1.60	0.45
53:CA:765:G:C6	53:CA:812:G:C5	3.05	0.45
53:CA:888:G:O3'	53:CA:1488:G:H4'	2.17	0.45
53:CA:1441:A:H2'	53:CA:1442:G:O4'	2.17	0.45
22:DA:61:C:C4	22:DA:94:A:C2	3.05	0.45
22:DA:112:U:H5'	46:DY:58:ASN:ND2	2.30	0.45
22:DA:295:G:N3	22:DA:295:G:H2'	2.31	0.45
22:DA:300:A:N7	22:DA:334:C:H4'	2.32	0.45
22:DA:426:C:O2'	22:DA:427:U:H5'	2.17	0.45
22:DA:507:A:H2'	22:DA:507:A:OP2	2.16	0.45
22:DA:586:A:H5'	26:DE:84:THR:HG21	1.97	0.45
22:DA:1264:A:N3	22:DA:2015:A:N6	2.64	0.45
22:DA:1288:G:H2'	22:DA:1288:G:N3	2.31	0.45
22:DA:1700:A:C2'	22:DA:1701:A:H5'	2.47	0.45
22:DA:1826:G:OP2	24:DC:220:ARG:HB3	2.16	0.45
22:DA:1857:G:C1'	22:DA:1884:G:H22	2.16	0.45
22:DA:1867:G:H2'	22:DA:1868:C:C6	2.51	0.45
22:DA:2513:A:H2	25:DD:148:GLN:HE21	1.62	0.45
54:DB:42:C:C5	27:DF:65:LEU:HD22	2.51	0.45
24:DC:124:LYS:HB3	24:DC:124:LYS:HZ3	1.79	0.45
25:DD:122:VAL:HG22	25:DD:127:PHE:O	2.16	0.45
27:DF:155:ILE:H	27:DF:155:ILE:HD12	1.80	0.45
29:DH:49:ALA:HB3	29:DH:50:ARG:NH2	2.31	0.45
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.61	0.45
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.51	0.45
33:DL:40:SER:O	33:DL:41:ARG:C	2.59	0.45
34:DM:136:MET:HE1	43:DV:74:ALA:C	2.42	0.45
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.16	0.45
39:DR:48:LYS:HD2	39:DR:48:LYS:N	2.29	0.45
41:DT:25:GLU:HA	41:DT:29:THR:O	2.16	0.45
42:DU:85:ARG:HA	42:DU:85:ARG:NE	2.32	0.45
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	1.98	0.45
48:D0:6:LYS:HG2	48:D0:7:PRO:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:53:LEU:HD21	1:AB:212:TYR:OH	2.17	0.45
1:AB:148:GLY:CA	1:AB:151:LYS:HE3	2.45	0.45
2:AC:34:SER:OG	2:AC:94:ALA:HA	2.17	0.45
6:AG:3:ARG:HB2	6:AG:3:ARG:HH11	1.81	0.45
6:AG:7:GLY:O	6:AG:8:GLN:HB3	2.16	0.45
10:AK:39:ASN:O	10:AK:40:ALA:CB	2.65	0.45
10:AK:125:LYS:O	10:AK:126:ARG:HB2	2.17	0.45
12:AM:52:ILE:O	12:AM:55:LEU:HB2	2.17	0.45
13:AN:52:ARG:C	13:AN:54:SER:N	2.75	0.45
15:AP:20:VAL:HG22	15:AP:21:VAL:N	2.31	0.45
21:AA:697:U:O2	21:AA:798:U:H1'	2.17	0.45
21:AA:765:G:N1	21:AA:812:G:O2'	2.38	0.45
22:BA:435:C:O2'	22:BA:436:C:H5'	2.16	0.45
22:BA:705:A:C2	22:BA:706:A:C4	3.04	0.45
22:BA:1669:A:N3	22:BA:1669:A:C2'	2.77	0.45
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.17	0.45
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.45
22:BA:2315:G:O2'	22:BA:2316:G:H5'	2.16	0.45
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.16	0.45
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.39	0.45
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.50	0.45
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.17	0.45
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.48	0.45
26:BE:8:ALA:O	26:BE:9:GLN:C	2.60	0.45
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.48	0.45
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.84	0.45
32:BK:99:ILE:CG2	32:BK:100:PHE:N	2.78	0.45
40:BS:65:ASP:C	40:BS:67:ASP:H	2.24	0.45
1:CB:86:CYS:SG	1:CB:220:VAL:HB	2.57	0.45
4:CE:132:PRO:C	4:CE:134:ASN:N	2.74	0.45
7:CH:104:SER:OG	7:CH:109:VAL:HG22	2.17	0.45
18:CS:11:ASP:O	18:CS:14:LEU:HG	2.17	0.45
19:CT:4:LYS:HB3	19:CT:4:LYS:HE3	1.72	0.45
53:CA:166:U:C2'	53:CA:167:A:H5'	2.47	0.45
53:CA:610:U:O2	53:CA:610:U:O4'	2.35	0.45
53:CA:981:U:O4	53:CA:1222:G:O6	2.35	0.45
53:CA:1447:A:O3'	53:CA:1448:C:H6	2.00	0.45
22:DA:121:G:H2'	22:DA:122:G:H8	1.80	0.45
22:DA:313:G:O2'	22:DA:314:C:O4'	2.33	0.45
22:DA:656:G:O2'	22:DA:657:U:O4'	2.23	0.45
22:DA:855:G:C2	44:DW:23:LYS:HG2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1022:G:N2	22:DA:1142:A:C2	2.76	0.45
22:DA:1301:A:C4	22:DA:1303:G:N7	2.85	0.45
22:DA:1651:G:N2	22:DA:2007:U:C2	2.85	0.45
22:DA:1654:A:O2'	22:DA:1655:A:O5'	2.34	0.45
22:DA:2209:G:C6	22:DA:2216:G:N1	2.85	0.45
22:DA:2467:C:N4	22:DA:2468:A:C6	2.85	0.45
22:DA:2508:G:N2	22:DA:2582:G:C6	2.84	0.45
22:DA:2657:A:O2'	22:DA:2658:C:C5'	2.64	0.45
22:DA:2835:A:N6	22:DA:2879:A:C4	2.85	0.45
24:DC:171:VAL:HG23	24:DC:185:ALA:HB1	1.99	0.45
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.17	0.45
28:DG:91:VAL:O	28:DG:93:TYR:N	2.50	0.45
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.99	0.45
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.60	0.45
32:DK:73:ASP:OD1	32:DK:73:ASP:N	2.42	0.45
40:DS:19:LEU:HD11	48:D0:19:ASP:O	2.15	0.45
41:DT:40:LYS:HA	41:DT:43:ILE:CG2	2.46	0.45
46:DY:11:VAL:HG12	46:DY:11:VAL:O	2.16	0.45
1:AB:185:ILE:O	1:AB:185:ILE:CG1	2.65	0.45
3:AD:187:ARG:NH1	3:AD:190:LEU:O	2.45	0.45
8:AI:105:ARG:HE	21:AA:1118:U:P	2.39	0.45
12:AM:23:GLY:HA3	12:AM:64:VAL:HG12	1.99	0.45
15:AP:10:GLY:HA3	15:AP:15:PRO:CA	2.44	0.45
21:AA:439:U:C2'	21:AA:440:C:H5'	2.47	0.45
21:AA:1215:G:O2'	21:AA:1216:A:H5'	2.16	0.45
21:AA:1272:G:C6	21:AA:1273:C:C4	3.04	0.45
21:AA:1302:C:H6	21:AA:1302:C:H2'	1.12	0.45
21:AA:1394:A:C6	21:AA:1501:C:H4'	2.51	0.45
22:BA:283:G:N1	22:BA:284:U:C2	2.85	0.45
22:BA:300:A:H2'	22:BA:334:C:H1'	1.99	0.45
22:BA:303:G:C5	22:BA:304:U:C5	3.04	0.45
22:BA:322:A:C2	22:BA:340:A:C6	3.05	0.45
22:BA:459:U:OP2	22:BA:469:G:N1	2.42	0.45
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.51	0.45
22:BA:1274:A:N1	22:BA:1644:C:O2'	2.45	0.45
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.51	0.45
22:BA:2820:A:O2'	22:BA:2821:A:P	2.74	0.45
24:BC:131:MET:O	24:BC:132:ARG:C	2.60	0.45
33:BL:82:LEU:C	33:BL:82:LEU:HD23	2.42	0.45
34:BM:42:THR:HG22	34:BM:93:VAL:HG23	1.97	0.45
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:80:ARG:C	39:BR:81:LYS:HD3	2.42	0.45
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.16	0.45
1:CB:214:GLY:HA2	1:CB:217:ALA:HB3	1.99	0.45
2:CC:134:LYS:HD3	2:CC:138:GLN:OE1	2.17	0.45
2:CC:198:LYS:HE2	53:CA:1058:G:OP1	2.17	0.45
12:CM:77:LYS:HD3	12:CM:77:LYS:C	2.42	0.45
13:CN:6:LYS:O	13:CN:10:VAL:HG23	2.16	0.45
13:CN:16:ALA:HA	13:CN:20:PHE:HD1	1.82	0.45
13:CN:80:ARG:HG2	13:CN:81:ILE:N	2.32	0.45
18:CS:14:LEU:C	18:CS:14:LEU:HD12	2.41	0.45
53:CA:66:A:N3	53:CA:66:A:C2'	2.78	0.45
53:CA:321:A:O2'	53:CA:1436:U:H5'	2.16	0.45
53:CA:1060:U:N3	53:CA:1198:G:C6	2.84	0.45
53:CA:1129:C:H1'	53:CA:1146:A:N6	2.29	0.45
22:DA:7:G:O2'	31:DJ:15:TRP:HZ2	1.99	0.45
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.45
22:DA:279:A:C6	22:DA:280:U:N3	2.85	0.45
22:DA:319:G:O6	22:DA:333:G:C6	2.70	0.45
22:DA:487:C:H2'	22:DA:488:G:H5'	1.99	0.45
22:DA:811:U:C4	33:DL:21:ARG:NH1	2.82	0.45
22:DA:833:A:H2'	22:DA:834:G:H8	1.78	0.45
22:DA:1003:G:O2'	22:DA:1010:A:N1	2.35	0.45
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.51	0.45
22:DA:1421:G:H8	22:DA:1421:G:OP2	1.99	0.45
22:DA:1437:C:N4	22:DA:1552:A:H2	2.15	0.45
22:DA:1903:G:H2'	22:DA:1904:G:H8	1.82	0.45
22:DA:2024:G:H2'	22:DA:2025:C:C6	2.52	0.45
22:DA:2093:G:N2	22:DA:2094:A:C4	2.84	0.45
24:DC:52:HIS:HD2	24:DC:217:PRO:O	1.99	0.45
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.45	0.45
24:DC:73:ILE:HA	24:DC:74:PRO:HD2	1.78	0.45
24:DC:147:PRO:HD3	24:DC:184:GLU:CG	2.39	0.45
25:DD:193:VAL:HB	25:DD:194:PRO:HD2	1.98	0.45
26:DE:60:TRP:C	26:DE:62:GLN:H	2.23	0.45
27:DF:41:GLU:O	27:DF:42:ALA:C	2.60	0.45
28:DG:94:ARG:NH2	28:DG:111:PRO:HB3	2.31	0.45
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.29	0.45
33:DL:21:ARG:HB3	33:DL:21:ARG:CZ	2.46	0.45
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.64	0.45
36:DO:28:VAL:HG23	36:DO:106:LEU:HD23	1.97	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.79	0.45
38:DQ:71:ASN:ND2	38:DQ:106:THR:HA	2.31	0.45
43:DV:21:ARG:C	43:DV:23:ALA:H	2.24	0.45
2:AC:32:LEU:HD21	13:AN:92:ILE:HG12	1.99	0.45
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.98	0.45
6:AG:2:ARG:HB2	21:AA:1380:U:O4	2.17	0.45
6:AG:14:ASP:C	6:AG:14:ASP:OD2	2.60	0.45
10:AK:64:VAL:O	10:AK:67:GLU:HB2	2.17	0.45
12:AM:13:HIS:CG	12:AM:41:ASP:HB2	2.52	0.45
13:AN:42:ASN:HD21	13:AN:46:LYS:NZ	2.14	0.45
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.47	0.45
18:AS:78:THR:O	18:AS:78:THR:OG1	2.33	0.45
21:AA:243:A:C4'	21:AA:244:U:H5"	2.40	0.45
21:AA:265:G:C2'	21:AA:266:G:H5'	2.47	0.45
21:AA:1202:U:O2'	21:AA:1203:C:C5'	2.65	0.45
21:AA:1280:A:O2'	21:AA:1281:C:H5'	2.16	0.45
21:AA:1533:C:C3'	21:AA:1534:A:H5"	2.46	0.45
22:BA:57:C:H2'	22:BA:58:G:O4'	2.17	0.45
22:BA:90:U:H2'	22:BA:91:A:H8	1.81	0.45
22:BA:532:A:H2'	22:BA:532:A:N3	2.30	0.45
22:BA:646:U:H3'	22:BA:647:G:C5'	2.46	0.45
22:BA:792:A:N3	22:BA:2072:C:O2'	2.46	0.45
22:BA:942:G:C2'	22:BA:943:A:H5'	2.47	0.45
22:BA:974:G:C8	22:BA:989:G:C2	3.05	0.45
22:BA:976:G:C2	22:BA:977:G:C8	3.05	0.45
22:BA:1011:G:H5"	38:BQ:76:SER:OG	2.16	0.45
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.16	0.45
22:BA:1116:G:C2'	22:BA:1117:C:O5'	2.65	0.45
22:BA:1427:A:C4	22:BA:1428:C:N4	2.85	0.45
22:BA:1722:A:H61	22:BA:1738:G:H1'	1.81	0.45
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.39	0.45
22:BA:2530:A:N6	28:BG:155:PRO:HG3	2.32	0.45
22:BA:2637:U:O2'	22:BA:2638:G:H5'	2.16	0.45
22:BA:2768:U:H2'	22:BA:2769:U:O4'	2.17	0.45
22:BA:2792:A:C2	22:BA:2793:C:C2	3.05	0.45
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.79	0.45
25:BD:111:GLY:O	25:BD:169:ARG:O	2.34	0.45
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.62	0.45
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.31	0.45
28:BG:104:LEU:O	28:BG:112:VAL:HG22	2.17	0.45
29:BH:34:GLY:O	29:BH:35:LYS:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.32	0.45
32:BK:92:GLU:O	32:BK:93:GLN:O	2.35	0.45
32:BK:97:THR:O	32:BK:118:LEU:HD21	2.17	0.45
34:BM:42:THR:CG2	34:BM:93:VAL:HG23	2.46	0.45
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.31	0.45
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.47	0.45
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	1.99	0.45
3:CD:35:GLN:O	3:CD:36:ALA:HB2	2.17	0.45
6:CG:91:ARG:NH2	6:CG:92:PRO:HB2	2.32	0.45
19:CT:3:ILE:HD12	19:CT:3:ILE:H	1.82	0.45
53:CA:72:A:N6	53:CA:99:C:H1'	2.32	0.45
53:CA:335:C:O2	53:CA:1433:A:H2	1.99	0.45
53:CA:386:C:C4	53:CA:387:U:C5	3.05	0.45
53:CA:438:U:C5	53:CA:494:G:N7	2.85	0.45
53:CA:968:A:N3	53:CA:1062:U:H4'	2.32	0.45
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.52	0.45
22:DA:95:A:O2'	46:DY:41:HIS:HD2	2.00	0.45
22:DA:127:A:H5"	22:DA:128:C:C6	2.52	0.45
22:DA:222:A:H3'	22:DA:421:C:H5'	1.98	0.45
22:DA:265:A:C6	22:DA:428:A:O4'	2.69	0.45
22:DA:329:G:H4'	22:DA:330:A:OP1	2.13	0.45
22:DA:362:A:C5	22:DA:363:G:C8	3.05	0.45
22:DA:600:G:O4'	26:DE:100:MET:HE3	2.17	0.45
22:DA:675:A:N3	22:DA:2443:C:O2'	2.47	0.45
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.98	0.45
22:DA:855:G:N2	44:DW:23:LYS:HG2	2.31	0.45
22:DA:1085:A:H3'	22:DA:1086:A:N3	2.32	0.45
22:DA:1201:U:H2'	22:DA:1202:G:H8	1.81	0.45
22:DA:1274:A:C6	22:DA:1302:A:C2	3.04	0.45
22:DA:1286:A:O2'	22:DA:1288:G:N2	2.50	0.45
22:DA:1337:G:H8	22:DA:1337:G:OP2	1.99	0.45
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.47	0.45
22:DA:1721:G:HO2'	22:DA:1722:A:P	2.39	0.45
22:DA:1816:C:H2'	24:DC:61:TYR:OH	2.16	0.45
22:DA:2107:G:H2'	22:DA:2108:A:H8	1.81	0.45
22:DA:2199:A:C6	22:DA:2225:A:C4	3.04	0.45
22:DA:2394:C:H5"	33:DL:63:LYS:HE3	1.98	0.45
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.80	0.45
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.17	0.45
26:DE:122:GLU:O	26:DE:123:LYS:HB3	2.15	0.45
27:DF:103:ILE:HG21	27:DF:173:ASP:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DF:122:ASP:HB2	27:DF:126:ASN:HB2	1.99	0.45
28:DG:143:VAL:O	28:DG:147:LEU:HG	2.17	0.45
31:DJ:54:ILE:O	31:DJ:122:LEU:HD12	2.17	0.45
34:DM:2:LEU:O	34:DM:69:PRO:HG2	2.17	0.45
36:DO:18:LEU:HD21	36:DO:91:SER:HB2	1.99	0.45
36:DO:69:ASP:O	36:DO:70:ALA:C	2.59	0.45
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.27	0.45
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.79	0.45
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.17	0.45
43:DV:56:PHE:C	43:DV:56:PHE:CD1	2.95	0.45
2:AC:171:ARG:O	2:AC:202:PHE:CD2	2.69	0.45
8:AI:129:ARG:NH1	8:AI:129:ARG:HA	2.32	0.45
9:AJ:11:LYS:CG	9:AJ:97:ASP:HB3	2.45	0.45
11:AL:33:CYS:CB	11:AL:54:VAL:HG22	2.32	0.45
15:AP:14:ARG:NH1	21:AA:617:G:H21	2.15	0.45
15:AP:37:GLY:HA2	15:AP:51:ARG:NH1	2.31	0.45
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.32	0.45
20:AU:33:ARG:CD	20:AU:34:ARG:HG3	2.47	0.45
21:AA:80:A:C2	21:AA:90:C:C2	3.05	0.45
21:AA:198:G:C2	21:AA:220:G:H1'	2.52	0.45
21:AA:368:U:O2'	21:AA:369:G:P	2.74	0.45
21:AA:414:A:C2	21:AA:415:A:N9	2.85	0.45
21:AA:543:U:H2'	21:AA:544:G:O4'	2.17	0.45
21:AA:621:A:H2'	21:AA:622:A:C8	2.52	0.45
21:AA:885:G:H1'	21:AA:914:A:N1	2.32	0.45
21:AA:1319:A:C8	21:AA:1323:G:C6	3.04	0.45
21:AA:1442:G:C4	21:AA:1443:C:C5	3.05	0.45
22:BA:45:G:H5"	22:BA:46:G:OP1	2.16	0.45
22:BA:81:G:C6	22:BA:82:U:C2	3.05	0.45
22:BA:283:G:C6	22:BA:284:U:C2	3.05	0.45
22:BA:313:G:H2'	22:BA:314:C:H6	1.82	0.45
22:BA:534:U:H2'	22:BA:535:G:C8	2.52	0.45
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.61	0.45
22:BA:1198:U:O2'	38:BQ:4:LYS:HE3	2.17	0.45
22:BA:1291:C:H2'	22:BA:1292:G:O4'	2.17	0.45
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.45
22:BA:1444:G:H2'	22:BA:1445:G:H8	1.81	0.45
22:BA:1499:C:H2'	22:BA:1500:G:C8	2.40	0.45
22:BA:1582:C:C5	22:BA:1583:A:C2	3.05	0.45
22:BA:1588:G:C2	22:BA:1589:U:C6	3.05	0.45
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2320:U:H4'	22:BA:2321:U:C5'	2.47	0.45
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.17	0.45
22:BA:2630:G:H2'	22:BA:2631:G:C8	2.48	0.45
22:BA:2784:U:H4'	25:BD:42:ASN:HD21	1.82	0.45
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.81	0.45
28:BG:84:LYS:N	28:BG:84:LYS:HE2	2.32	0.45
29:BH:1:MET:HG2	29:BH:23:ALA:HA	1.98	0.45
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.62	0.45
29:BH:62:LEU:HD12	29:BH:62:LEU:C	2.41	0.45
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.47	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
31:BJ:6:ALA:O	31:BJ:48:VAL:HG21	2.16	0.45
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.99	0.45
36:BO:2:ASP:HB3	36:BO:5:SER:CB	2.47	0.45
36:BO:39:VAL:O	36:BO:39:VAL:HG12	2.16	0.45
36:BO:59:ALA:C	36:BO:61:GLN:N	2.74	0.45
37:BP:63:ILE:HG22	37:BP:63:ILE:O	2.17	0.45
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.32	0.45
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.31	0.45
41:BT:16:VAL:C	41:BT:17:SER:OG	2.58	0.45
42:BU:60:LYS:HD2	42:BU:60:LYS:HA	1.76	0.45
43:BV:64:VAL:HG12	43:BV:67:GLY:HA2	1.99	0.45
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.17	0.45
44:BW:39:GLN:NE2	44:BW:43:LYS:H	2.15	0.45
45:BX:55:MET:HE2	45:BX:55:MET:HB3	1.88	0.45
49:B1:47:ILE:H	49:B1:47:ILE:CD1	2.21	0.45
3:CD:25:ARG:NH1	3:CD:25:ARG:HG2	2.31	0.45
3:CD:187:ARG:C	3:CD:189:ASP:N	2.73	0.45
6:CG:21:LEU:O	6:CG:25:PHE:N	2.50	0.45
7:CH:33:VAL:C	7:CH:35:ILE:N	2.75	0.45
8:CI:53:LEU:O	8:CI:54:VAL:HG13	2.16	0.45
9:CJ:49:PHE:HE2	13:CN:73:LEU:HD13	1.80	0.45
10:CK:30:ILE:HG12	10:CK:45:THR:HG22	1.99	0.45
12:CM:86:ARG:HH11	12:CM:90:HIS:HD2	1.65	0.45
20:CU:18:PHE:C	20:CU:19:LYS:NZ	2.74	0.45
53:CA:157:U:C2'	53:CA:158:G:H5'	2.46	0.45
53:CA:513:C:O2'	53:CA:514:C:H6	2.00	0.45
53:CA:687:A:C2	53:CA:704:A:C5	3.05	0.45
53:CA:688:G:C5	53:CA:700:G:C2	3.05	0.45
53:CA:1357:A:C5	53:CA:1358:U:C4	3.04	0.45
53:CA:1452:C:H4'	53:CA:1453:G:C5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:85:G:O2'	22:DA:86:G:C5'	2.65	0.45
22:DA:289:G:C2	22:DA:352:A:C2	3.05	0.45
22:DA:348:A:H2'	22:DA:349:U:C6	2.52	0.45
22:DA:426:C:H2'	22:DA:427:U:H5'	1.98	0.45
22:DA:500:G:H1'	22:DA:505:A:N6	2.32	0.45
22:DA:800:A:N1	22:DA:802:A:C8	2.85	0.45
22:DA:859:G:O2'	22:DA:860:U:P	2.74	0.45
22:DA:1205:A:N7	26:DE:165:HIS:CG	2.85	0.45
22:DA:1346:G:HO2'	22:DA:1347:A:H8	1.55	0.45
22:DA:2035:G:H5"	22:DA:2036:C:C5	2.51	0.45
22:DA:2066:C:H5"	57:DA:3528:HOH:O	2.17	0.45
22:DA:2261:C:C2	22:DA:2280:G:C2	3.05	0.45
22:DA:2672:U:H6	22:DA:2672:U:O5'	1.99	0.45
22:DA:2691:C:C4	22:DA:2719:G:N2	2.85	0.45
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.51	0.45
22:DA:2812:G:N2	22:DA:2889:C:C2	2.84	0.45
24:DC:122:ALA:HB3	24:DC:127:ASN:HD21	1.80	0.45
28:DG:94:ARG:HG2	28:DG:104:LEU:HA	1.99	0.45
28:DG:103:ASN:O	28:DG:104:LEU:HD23	2.17	0.45
38:DQ:57:ARG:C	38:DQ:59:LEU:N	2.72	0.45
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.41	0.45
40:DS:13:SER:OG	40:DS:16:LYS:HD2	2.16	0.45
46:DY:33:ALA:C	46:DY:35:GLY:H	2.24	0.45
49:D1:24:LYS:HE2	49:D1:52:LYS:NZ	2.32	0.45
1:AB:136:ARG:HD2	1:AB:136:ARG:O	2.17	0.45
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.52	0.45
7:AH:4:ASP:HA	7:AH:5:PRO:HD2	1.84	0.45
8:AI:112:ARG:HH22	9:AJ:64:GLN:NE2	2.14	0.45
11:AL:1:ALA:O	11:AL:2:THR:C	2.60	0.45
21:AA:103:U:O2	21:AA:103:U:H2'	2.17	0.45
22:BA:393:C:H2'	22:BA:394:C:H6	1.82	0.45
22:BA:460:A:H2'	22:BA:461:C:O4'	2.17	0.45
22:BA:622:G:H2'	22:BA:623:C:C6	2.52	0.45
22:BA:875:G:H2'	22:BA:876:C:H5'	1.99	0.45
22:BA:1681:G:O2'	22:BA:1762:A:H1'	2.16	0.45
22:BA:1889:A:H2'	22:BA:1890:A:O4'	2.17	0.45
22:BA:2307:G:O6	27:BF:40:GLY:HA3	2.17	0.45
22:BA:2594:C:N4	57:BA:3793:HOH:O	2.50	0.45
22:BA:2777:G:O5'	22:BA:2777:G:C8	2.69	0.45
26:BE:7:ASP:CG	26:BE:8:ALA:H	2.25	0.45
26:BE:134:LEU:HD21	26:BE:161:ALA:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:39:VAL:C	27:BF:41:GLU:H	2.24	0.45
27:BF:134:GLN:O	27:BF:136:ILE:N	2.39	0.45
32:BK:40:LYS:HD2	32:BK:58:LEU:O	2.16	0.45
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.82	0.45
36:BO:88:LYS:HE2	36:BO:116:GLN:HE22	1.82	0.45
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.65	0.45
41:BT:68:LYS:O	41:BT:69:ARG:O	2.34	0.45
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.31	0.45
1:CB:9:LEU:C	1:CB:11:ALA:H	2.24	0.45
3:CD:56:GLU:HA	3:CD:56:GLU:OE1	2.17	0.45
5:CF:44:ARG:HA	5:CF:58:HIS:HA	1.99	0.45
6:CG:108:ARG:HH21	53:CA:1240:U:H5"	1.81	0.45
6:CG:140:VAL:C	6:CG:142:ARG:H	2.24	0.45
13:CN:12:ARG:NH2	53:CA:980:C:O3'	2.50	0.45
18:CS:9:PHE:C	18:CS:10:ILE:HG13	2.42	0.45
18:CS:36:ARG:HG3	53:CA:1320:C:H41	1.82	0.45
53:CA:142:G:C5	53:CA:143:A:C8	3.05	0.45
53:CA:533:A:H2'	57:CA:1850:HOH:O	2.17	0.45
53:CA:803:G:H2'	53:CA:804:U:C6	2.51	0.45
53:CA:814:A:H2'	53:CA:816:A:O5'	2.16	0.45
53:CA:982:U:C6	53:CA:983:A:C6	3.05	0.45
53:CA:1207:G:H2'	53:CA:1208:C:H6	1.82	0.45
53:CA:1366:C:O2'	53:CA:1367:C:O4'	2.35	0.45
22:DA:49:A:N6	22:DA:177:G:N7	2.65	0.45
22:DA:202:U:H3'	22:DA:203:A:C8	2.52	0.45
22:DA:229:C:O2'	22:DA:230:G:O5'	2.35	0.45
22:DA:311:A:C2	22:DA:328:U:O4	2.69	0.45
22:DA:388:G:N7	22:DA:390:U:H2'	2.32	0.45
22:DA:732:C:N4	22:DA:733:G:C6	2.85	0.45
22:DA:972:A:C2	22:DA:973:A:N6	2.85	0.45
22:DA:1027:A:N7	22:DA:1126:A:C2	2.85	0.45
22:DA:1304:A:O2'	22:DA:1305:C:O5'	2.34	0.45
22:DA:1342:A:C6	22:DA:1397:U:C5	3.04	0.45
22:DA:1426:G:H8	22:DA:1426:G:OP2	2.00	0.45
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.16	0.45
22:DA:1857:G:H1'	22:DA:1884:G:N2	2.15	0.45
22:DA:1936:A:H2	22:DA:1943:U:C5	2.35	0.45
22:DA:2094:A:O2'	22:DA:2095:A:O4'	2.18	0.45
22:DA:2290:G:H2'	22:DA:2291:U:C6	2.52	0.45
22:DA:2324:U:C5'	22:DA:2325:G:H5"	2.33	0.45
22:DA:2415:G:C5	22:DA:2416:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2620:C:H2'	22:DA:2621:G:O4'	2.17	0.45
54:DB:29:A:OP2	36:DO:32:PRO:HD2	2.17	0.45
54:DB:38:C:O2'	54:DB:39:A:H5'	2.17	0.45
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.52	0.45
28:DG:92:GLY:O	28:DG:93:TYR:C	2.60	0.45
28:DG:116:LEU:HA	28:DG:117:PRO:HD3	1.70	0.45
28:DG:148:ARG:HB2	28:DG:152:ARG:HH21	1.78	0.45
30:DI:60:VAL:HG22	30:DI:66:PHE:HE2	1.82	0.45
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.17	0.45
32:DK:87:LEU:HD23	32:DK:87:LEU:N	2.31	0.45
34:DM:97:GLN:HB2	34:DM:98:PRO:HD2	1.99	0.45
35:DN:67:PHE:CE2	35:DN:73:ASN:ND2	2.84	0.45
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.16	0.45
38:DQ:26:ALA:HA	38:DQ:29:ARG:CG	2.47	0.45
40:DS:66:ILE:H	40:DS:66:ILE:CD1	2.28	0.45
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.98	0.45
49:D1:5:ARG:HH21	49:D1:23:THR:HB	1.79	0.45
1:AB:211:LEU:O	1:AB:215:ALA:HB2	2.17	0.45
2:AC:22:PHE:CD2	2:AC:22:PHE:C	2.95	0.45
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.52	0.45
9:AJ:59:LYS:CG	21:AA:972:C:H4'	2.47	0.45
12:AM:81:ASP:OD2	27:BF:111:ARG:HD2	2.16	0.45
14:AO:3:SER:O	14:AO:7:THR:HG23	2.16	0.45
14:AO:87:ARG:O	14:AO:88:ARG:C	2.59	0.45
15:AP:6:LEU:HG	15:AP:17:TYR:CB	2.47	0.45
16:AQ:4:ILE:HD12	16:AQ:4:ILE:N	2.31	0.45
21:AA:80:A:C2	21:AA:90:C:N3	2.84	0.45
21:AA:414:A:C2	21:AA:415:A:C4	3.05	0.45
21:AA:687:A:C8	21:AA:701:U:H5	2.35	0.45
21:AA:1226:C:H4'	21:AA:1227:A:OP1	2.16	0.45
21:AA:1306:A:C2'	21:AA:1307:U:H5'	2.47	0.45
22:BA:321:U:O2'	22:BA:340:A:O2'	2.16	0.45
22:BA:571:U:C4	22:BA:575:A:C4	3.05	0.45
22:BA:623:C:H2'	22:BA:624:C:C6	2.52	0.45
22:BA:815:C:O2'	22:BA:816:C:H5'	2.17	0.45
22:BA:833:A:H2'	22:BA:834:G:C8	2.52	0.45
22:BA:1152:C:H3'	57:BA:3365:HOH:O	2.17	0.45
22:BA:1225:G:OP1	39:BR:71:LYS:HD2	2.16	0.45
22:BA:1731:G:C4	22:BA:1733:G:C8	3.05	0.45
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.65	0.45
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2383:G:H2'	22:BA:2384:U:H6	1.81	0.45
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.64	0.45
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.81	0.45
26:BE:119:ILE:HD11	26:BE:187:VAL:CG2	2.37	0.45
27:BF:87:LYS:O	27:BF:88:VAL:HG23	2.16	0.45
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.24	0.45
36:BO:103:VAL:O	36:BO:105:ALA:O	2.35	0.45
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.52	0.45
41:BT:24:MET:HG3	41:BT:29:THR:CG2	2.47	0.45
41:BT:39:THR:C	41:BT:41:ALA:N	2.74	0.45
42:BU:73:ASN:C	42:BU:75:ALA:N	2.75	0.45
49:B1:18:HIS:HE1	49:B1:20:TYR:CE2	2.35	0.45
4:CE:95:MET:CE	4:CE:114:LEU:HD21	2.46	0.45
9:CJ:9:ARG:HB3	9:CJ:71:LEU:HD11	1.99	0.45
10:CK:51:PHE:CE2	10:CK:64:VAL:HG21	2.52	0.45
18:CS:38:THR:N	18:CS:69:LYS:HD3	2.32	0.45
19:CT:35:TYR:OH	53:CA:258:G:O3'	2.34	0.45
19:CT:64:GLY:O	19:CT:65:LEU:C	2.59	0.45
53:CA:382:A:O2'	53:CA:383:A:H5'	2.17	0.45
53:CA:554:A:H2'	53:CA:555:U:C6	2.52	0.45
53:CA:611:C:C5	53:CA:612:C:H5	2.34	0.45
53:CA:683:G:C6	53:CA:708:C:N3	2.85	0.45
53:CA:794:A:H5"	53:CA:794:A:H8	1.82	0.45
53:CA:1005:A:C8	53:CA:1006:G:H1'	2.52	0.45
53:CA:1049:U:H4'	53:CA:1050:G:OP2	2.17	0.45
53:CA:1242:G:N2	53:CA:1243:C:H1'	2.32	0.45
53:CA:1348:U:H2'	53:CA:1349:A:C8	2.49	0.45
53:CA:1447:A:O2'	53:CA:1448:C:OP1	2.29	0.45
22:DA:82:U:H2'	22:DA:83:A:O4'	2.17	0.45
22:DA:605:G:N3	22:DA:657:U:O2'	2.50	0.45
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.51	0.45
22:DA:751:A:O5'	40:DS:90:LYS:HA	2.17	0.45
22:DA:811:U:H1'	22:DA:1251:C:C2	2.52	0.45
22:DA:1275:A:O2'	22:DA:1276:A:C4'	2.65	0.45
22:DA:1282:U:H2'	22:DA:1283:G:O4'	2.17	0.45
22:DA:1982:U:O5'	22:DA:1982:U:C6	2.70	0.45
22:DA:2140:G:C6	22:DA:2152:G:C6	3.05	0.45
22:DA:2216:G:O2'	22:DA:2217:G:O4'	2.35	0.45
22:DA:2401:U:H3'	22:DA:2402:U:H5"	1.99	0.45
22:DA:2497:A:H4'	22:DA:2498:C:O5'	2.16	0.45
22:DA:2652:C:H2'	22:DA:2653:U:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2835:A:C6	22:DA:2879:A:C4	3.05	0.45
25:DD:36:GLN:HE21	25:DD:38:LYS:NZ	2.14	0.45
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.82	0.45
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.99	0.45
26:DE:57:LYS:NZ	26:DE:58:LYS:H	2.15	0.45
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.17	0.45
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.82	0.45
29:DH:80:ILE:HB	29:DH:101:ASP:CG	2.42	0.45
30:DI:72:THR:HA	30:DI:73:PRO:HD2	1.85	0.45
30:DI:139:VAL:O	30:DI:140:GLU:HB2	2.17	0.45
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.16	0.45
33:DL:70:LYS:HG2	33:DL:70:LYS:O	2.17	0.45
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.99	0.45
40:DS:82:MET:HE2	40:DS:84:ARG:NH1	2.31	0.45
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.85	0.45
52:D4:16:ILE:O	52:D4:17:VAL:HG13	2.17	0.45
1:AB:209:VAL:O	1:AB:210:THR:C	2.60	0.44
4:AE:11:GLN:HG3	4:AE:116:VAL:HG12	1.99	0.44
7:AH:35:ILE:O	7:AH:36:ALA:C	2.61	0.44
12:AM:9:PRO:O	12:AM:10:ASP:HB2	2.18	0.44
14:AO:73:ASP:CB	14:AO:76:ARG:HG3	2.47	0.44
16:AQ:13:SER:O	16:AQ:20:ILE:CD1	2.65	0.44
19:AT:66:ILE:O	19:AT:67:HIS:O	2.34	0.44
20:AU:41:THR:O	20:AU:45:LYS:HB2	2.16	0.44
21:AA:126:G:H2'	21:AA:127:G:O4'	2.17	0.44
21:AA:660:C:H2'	21:AA:661:G:O4'	2.18	0.44
21:AA:966:G:H2'	21:AA:967:C:C6	2.52	0.44
22:BA:306:U:H2'	22:BA:307:G:O4'	2.17	0.44
22:BA:477:A:C6	22:BA:478:A:C6	3.04	0.44
22:BA:482:A:N6	22:BA:506:G:H1'	2.32	0.44
22:BA:693:A:HO2'	22:BA:694:U:H5'	1.83	0.44
22:BA:811:U:C2	22:BA:1251:C:C5	3.05	0.44
22:BA:1061:U:H3'	22:BA:1062:G:H5"	1.99	0.44
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.16	0.44
22:BA:1613:G:C2	22:BA:1619:G:C5	3.05	0.44
22:BA:2250:G:OP1	22:BA:2275:C:H2'	2.16	0.44
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.52	0.44
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.17	0.44
24:BC:104:LEU:HA	24:BC:104:LEU:HD12	1.59	0.44
26:BE:48:THR:O	26:BE:49:ARG:C	2.60	0.44
28:BG:120:ILE:HG21	28:BG:143:VAL:HG21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:83:GLY:O	34:BM:85:GLY:N	2.47	0.44
35:BN:16:HIS:O	35:BN:17:ARG:C	2.58	0.44
35:BN:66:ALA:O	35:BN:69:ARG:O	2.35	0.44
37:BP:19:PHE:CE2	37:BP:83:ILE:HD12	2.52	0.44
37:BP:63:ILE:CA	37:BP:68:GLY:HA2	2.37	0.44
40:BS:68:ASP:C	40:BS:70:LYS:HZ2	2.24	0.44
41:BT:29:THR:HA	41:BT:86:THR:H	1.82	0.44
43:BV:26:PHE:C	43:BV:26:PHE:CD1	2.94	0.44
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.17	0.44
1:CB:91:VAL:HG21	1:CB:95:TRP:CD1	2.52	0.44
2:CC:21:TRP:CH2	13:CN:93:PRO:HG2	2.51	0.44
3:CD:32:LYS:HD2	53:CA:429:U:OP2	2.17	0.44
3:CD:34:GLU:O	3:CD:37:PRO:HD3	2.17	0.44
3:CD:80:ARG:HB2	3:CD:81:LEU:H	1.42	0.44
4:CE:148:SER:O	4:CE:151:MET:HB3	2.16	0.44
6:CG:4:ARG:HG2	6:CG:6:ILE:HG22	1.99	0.44
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.16	0.44
9:CJ:79:PRO:HA	9:CJ:84:VAL:HG11	1.98	0.44
12:CM:27:THR:HG21	53:CA:1328:C:OP1	2.17	0.44
18:CS:5:LYS:HE3	18:CS:6:LYS:H	1.81	0.44
18:CS:72:GLU:HA	53:CA:1320:C:O2'	2.17	0.44
53:CA:106:C:C2'	53:CA:107:G:H5'	2.47	0.44
53:CA:321:A:N7	53:CA:328:C:C2	2.85	0.44
53:CA:357:G:OP2	53:CA:357:G:C8	2.67	0.44
53:CA:414:A:H2'	53:CA:415:A:H5"	1.98	0.44
53:CA:1008:U:C4	53:CA:1009:U:C4	3.05	0.44
53:CA:1089:G:H1'	53:CA:1167:A:N6	2.31	0.44
53:CA:1406:U:C2'	53:CA:1407:C:H5'	2.47	0.44
22:DA:103:A:H2'	22:DA:104:A:C8	2.52	0.44
22:DA:164:C:H2'	22:DA:165:A:O4'	2.17	0.44
22:DA:204:A:C4	22:DA:206:U:O4	2.70	0.44
22:DA:242:G:H8	51:D3:3:ILE:O	2.00	0.44
22:DA:265:A:C5	22:DA:428:A:C8	3.05	0.44
22:DA:495:G:H4'	40:DS:4:ILE:O	2.17	0.44
22:DA:749:A:H1'	22:DA:1618:A:OP1	2.17	0.44
22:DA:1063:G:H2'	22:DA:1064:C:C5	2.52	0.44
22:DA:1127:A:H8	22:DA:1127:A:H2'	1.67	0.44
22:DA:1229:C:H2'	22:DA:1230:A:H8	1.82	0.44
22:DA:1281:G:C6	22:DA:1290:C:N4	2.85	0.44
22:DA:1300:G:H5'	22:DA:1301:A:N3	2.33	0.44
22:DA:1510:G:H3'	22:DA:1510:G:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1579:A:H2'	22:DA:1580:A:C8	2.52	0.44
22:DA:1613:G:H2'	22:DA:1617:C:H42	1.81	0.44
22:DA:1655:A:H4'	25:DD:118:PHE:CE1	2.52	0.44
22:DA:1656:C:H5"	25:DD:141:ARG:HB2	1.98	0.44
22:DA:1766:G:C6	22:DA:1987:A:C6	3.05	0.44
22:DA:2297:A:O2'	22:DA:2298:A:H5'	2.17	0.44
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.16	0.44
22:DA:2491:U:H5"	22:DA:2570:G:H5"	1.99	0.44
22:DA:2520:C:H2'	22:DA:2521:C:C6	2.52	0.44
22:DA:2550:G:C6	22:DA:2551:C:C4	3.04	0.44
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.17	0.44
22:DA:2674:G:H4'	32:DK:30:ARG:HD2	1.98	0.44
22:DA:2815:C:O2	48:D0:40:HIS:CE1	2.70	0.44
24:DC:78:GLU:OE2	24:DC:94:LEU:HD22	2.18	0.44
30:DI:5:GLN:HB2	30:DI:7:TYR:CE2	2.52	0.44
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.25	0.44
30:DI:105:LEU:HD23	30:DI:105:LEU:O	2.17	0.44
32:DK:104:THR:O	32:DK:107:LEU:HD22	2.16	0.44
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.52	0.44
37:DP:104:GLY:O	37:DP:105:LYS:HB2	2.17	0.44
43:DV:8:VAL:HG13	43:DV:66:ASP:OD2	2.17	0.44
45:DX:1:SER:C	45:DX:3:VAL:N	2.74	0.44
46:DY:28:LEU:C	46:DY:28:LEU:HD13	2.42	0.44
47:DZ:29:ARG:H	47:DZ:29:ARG:CZ	2.30	0.44
1:AB:112:ARG:O	1:AB:116:LEU:HD23	2.17	0.44
1:AB:191:ASP:HA	1:AB:192:PRO:HD2	1.77	0.44
2:AC:66:THR:HG22	2:AC:68:HIS:CD2	2.52	0.44
3:AD:33:ILE:O	3:AD:33:ILE:HG23	2.17	0.44
4:AE:110:MET:O	4:AE:114:LEU:HB2	2.18	0.44
8:AI:82:ILE:O	8:AI:86:LEU:N	2.50	0.44
10:AK:53:GLY:C	10:AK:55:ARG:N	2.74	0.44
11:AL:85:ARG:HH21	11:AL:87:LYS:HD2	1.82	0.44
16:AQ:68:LYS:HB2	21:AA:266:G:O3'	2.17	0.44
19:AT:26:MET:O	19:AT:27:MET:C	2.61	0.44
21:AA:113:G:H2'	21:AA:114:U:H6	1.82	0.44
21:AA:128:G:O2'	21:AA:129:A:H5'	2.16	0.44
21:AA:260:G:H2'	21:AA:261:U:C6	2.52	0.44
21:AA:346:G:OP1	37:BP:33:GLU:OE1	2.35	0.44
21:AA:579:A:H5'	21:AA:728:A:H1'	1.98	0.44
21:AA:587:G:C2	21:AA:755:G:C6	3.06	0.44
22:BA:783:A:H8	22:BA:784:G:H4'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1335:C:C2'	22:BA:1336:A:O5'	2.65	0.44
22:BA:1469:A:H2'	22:BA:1470:A:H8	1.77	0.44
22:BA:1963:U:O5'	22:BA:1963:U:H6	2.00	0.44
22:BA:2532:G:C5	22:BA:2533:U:C5	3.05	0.44
22:BA:2576:G:C8	22:BA:2580:U:O4	2.70	0.44
23:BB:90:C:H5'	34:BM:18:ARG:HG2	2.00	0.44
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.32	0.44
27:BF:79:ARG:O	27:BF:82:TYR:HB2	2.16	0.44
28:BG:139:VAL:O	28:BG:140:ILE:C	2.56	0.44
28:BG:148:ARG:CD	28:BG:163:TYR:CE2	3.00	0.44
33:BL:109:LYS:HA	33:BL:126:ARG:O	2.17	0.44
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.99	0.44
38:BQ:97:ILE:CD1	38:BQ:105:PHE:N	2.76	0.44
46:BY:57:LEU:HD12	46:BY:57:LEU:O	2.17	0.44
1:CB:26:MET:HE2	1:CB:29:PHE:CD2	2.52	0.44
1:CB:67:LEU:HD23	1:CB:67:LEU:HA	1.82	0.44
2:CC:172:VAL:O	2:CC:174:LEU:HD23	2.17	0.44
3:CD:144:ILE:HD12	3:CD:177:MET:CB	2.47	0.44
4:CE:51:LYS:NZ	53:CA:1080:A:OP1	2.49	0.44
6:CG:116:ALA:C	6:CG:120:ALA:HB3	2.42	0.44
9:CJ:52:LEU:CD2	9:CJ:62:ARG:HG2	2.45	0.44
10:CK:104:PHE:CD1	10:CK:104:PHE:N	2.84	0.44
10:CK:121:ARG:HA	10:CK:122:PRO:HD3	1.81	0.44
12:CM:13:HIS:CD2	12:CM:14:ALA:N	2.85	0.44
13:CN:8:ARG:HH11	13:CN:12:ARG:NH2	2.15	0.44
15:CP:5:ARG:HB2	53:CA:376:G:H5"	1.99	0.44
17:CR:33:THR:HG23	17:CR:39:VAL:HG22	1.99	0.44
17:CR:35:SER:O	17:CR:71:ASP:HB2	2.17	0.44
17:CR:39:VAL:HA	17:CR:40:PRO:HD3	1.86	0.44
19:CT:70:LYS:HD2	19:CT:73:ARG:HH21	1.81	0.44
53:CA:596:A:N6	53:CA:645:G:N1	2.66	0.44
53:CA:948:C:H2'	53:CA:949:A:C8	2.52	0.44
53:CA:1134:G:N1	53:CA:1141:C:C4	2.85	0.44
53:CA:1271:A:C6	53:CA:1272:G:C6	3.05	0.44
22:DA:78:U:H2'	22:DA:79:C:C6	2.52	0.44
22:DA:163:C:O2'	22:DA:164:C:O4'	2.33	0.44
22:DA:223:A:O2'	22:DA:408:G:N3	2.48	0.44
22:DA:405:U:H3'	22:DA:406:G:H5'	1.98	0.44
22:DA:417:C:H2'	22:DA:418:C:C6	2.50	0.44
22:DA:1340:U:O2'	22:DA:1341:G:P	2.75	0.44
22:DA:1507:C:H5'	22:DA:1508:A:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.78	0.44
22:DA:2385:C:O2'	22:DA:2386:A:C8	2.38	0.44
22:DA:2415:G:C5	22:DA:2416:C:C5	3.04	0.44
22:DA:2833:U:H3'	22:DA:2834:G:C5'	2.47	0.44
26:DE:5:LEU:HD22	26:DE:122:GLU:N	2.32	0.44
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.18	0.44
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.82	0.44
26:DE:162:ARG:C	26:DE:164:LEU:H	2.24	0.44
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.41	0.44
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.98	0.44
30:DI:102:ARG:NH1	30:DI:105:LEU:HD13	2.32	0.44
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.75	0.44
31:DJ:43:GLU:O	31:DJ:43:GLU:HG2	2.16	0.44
32:DK:17:ARG:HG2	32:DK:18:ARG:H	1.82	0.44
36:DO:49:VAL:CG1	36:DO:81:ARG:HB3	2.47	0.44
38:DQ:77:LYS:HE3	38:DQ:116:LEU:HD11	1.98	0.44
41:DT:17:SER:C	41:DT:18:GLU:HG2	2.41	0.44
41:DT:29:THR:CA	41:DT:87:LEU:HB2	2.47	0.44
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.17	0.44
49:D1:3:GLY:C	49:D1:5:ARG:H	2.24	0.44
1:AB:56:LEU:C	1:AB:56:LEU:HD13	2.42	0.44
1:AB:175:ALA:O	1:AB:176:ASN:C	2.59	0.44
2:AC:54:ILE:HD12	2:AC:55:VAL:N	2.33	0.44
4:AE:28:ARG:NH1	21:AA:15:G:O4'	2.51	0.44
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.99	0.44
4:AE:94:PHE:HZ	4:AE:96:GLN:CD	2.26	0.44
4:AE:104:ILE:H	4:AE:121:ASN:C	2.25	0.44
5:AF:90:MET:HE1	17:AR:22:TYR:OH	2.17	0.44
6:AG:35:LYS:HB2	21:AA:1373:G:H5"	1.98	0.44
7:AH:31:LEU:O	7:AH:32:LYS:C	2.60	0.44
7:AH:114:ALA:O	7:AH:117:GLN:N	2.51	0.44
10:AK:28:ASN:OD1	10:AK:29:THR:N	2.38	0.44
19:AT:43:LYS:CB	19:AT:86:ALA:HB1	2.22	0.44
21:AA:1002:G:C6	21:AA:1003:G:C5	3.05	0.44
21:AA:1003:G:H21	21:AA:1005:A:H5'	1.78	0.44
21:AA:1231:G:C6	21:AA:1232:U:C4	3.06	0.44
22:BA:241:A:O2'	51:B3:2:LYS:NZ	2.49	0.44
22:BA:856:G:C1'	44:BW:23:LYS:HB3	2.38	0.44
22:BA:871:U:OP1	34:BM:5:LYS:HG3	2.17	0.44
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.98	0.44
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1510:G:O2'	22:BA:1511:G:C5'	2.64	0.44
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.32	0.44
22:BA:1753:G:H5"	37:BP:92:ARG:HE	1.82	0.44
22:BA:1815:A:H1'	22:BA:1817:G:C8	2.53	0.44
22:BA:1866:A:C2	22:BA:1876:A:C4	3.06	0.44
22:BA:2305:U:H5"	27:BF:130:GLY:HA3	1.98	0.44
22:BA:2808:G:O2'	22:BA:2890:G:O6	2.33	0.44
24:BC:115:ILE:HD12	24:BC:115:ILE:HA	1.73	0.44
24:BC:229:HIS:CG	24:BC:230:PRO:HD2	2.53	0.44
25:BD:34:VAL:HA	25:BD:50:VAL:HG12	1.99	0.44
25:BD:34:VAL:CG2	25:BD:91:THR:HA	2.48	0.44
31:BJ:37:ARG:HG3	31:BJ:118:MET:HE1	1.99	0.44
34:BM:51:ARG:O	34:BM:52:ALA:C	2.60	0.44
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.68	0.44
35:BN:71:ARG:HH21	35:BN:71:ARG:HG2	1.77	0.44
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.50	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
37:BP:19:PHE:O	37:BP:23:ASP:OD1	2.35	0.44
44:BW:24:ARG:O	44:BW:25:PHE:CB	2.65	0.44
45:BX:1:SER:O	45:BX:3:VAL:N	2.50	0.44
52:B4:9:LYS:HB3	52:B4:14:CYS:HB2	1.98	0.44
1:CB:14:HIS:CD2	1:CB:16:GLY:HA3	2.52	0.44
3:CD:12:ARG:NH2	3:CD:36:ALA:O	2.51	0.44
5:CF:66:ALA:HB1	5:CF:70:VAL:HG23	1.99	0.44
53:CA:142:G:N3	53:CA:196:A:H2	2.15	0.44
53:CA:319:G:C2	53:CA:335:C:C2	3.06	0.44
53:CA:982:U:H1'	53:CA:983:A:C8	2.52	0.44
53:CA:1049:U:O2	53:CA:1049:U:H2'	2.18	0.44
53:CA:1215:G:H2'	53:CA:1216:A:C8	2.49	0.44
22:DA:139:U:N3	41:DT:1:MET:HA	2.33	0.44
22:DA:233:A:H2'	22:DA:234:U:C6	2.53	0.44
22:DA:581:C:OP1	38:DQ:32:ARG:HB2	2.17	0.44
22:DA:975:A:N6	22:DA:989:G:H1'	2.33	0.44
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.52	0.44
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.83	0.44
22:DA:1456:G:O2'	22:DA:1457:U:H5'	2.16	0.44
22:DA:1527:G:H1'	22:DA:1546:G:H22	1.83	0.44
22:DA:1568:G:N3	24:DC:57:HIS:CE1	2.85	0.44
22:DA:1609:A:N6	22:DA:1616:A:C2	2.85	0.44
22:DA:2223:G:H2'	22:DA:2224:G:H5'	2.00	0.44
22:DA:2315:G:H5'	27:DF:156:THR:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2334:U:O3'	36:DO:13:ARG:HB2	2.17	0.44
22:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.50	0.44
22:DA:2760:C:H2'	22:DA:2760:C:O2	2.18	0.44
30:DI:20:SER:N	30:DI:21:PRO:CD	2.80	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.32	0.44
35:DN:28:LEU:O	35:DN:32:GLU:N	2.38	0.44
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.98	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.99	0.44
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.32	0.44
44:DW:35:ILE:HB	44:DW:36:ILE:H	1.47	0.44
46:DY:1:MET:O	46:DY:52:ARG:NH2	2.50	0.44
46:DY:47:ARG:O	46:DY:50:VAL:N	2.45	0.44
50:D2:27:GLY:O	50:D2:28:ARG:C	2.60	0.44
3:AD:21:LYS:O	21:AA:409:U:OP1	2.36	0.44
3:AD:33:ILE:O	3:AD:34:GLU:CB	2.62	0.44
6:AG:2:ARG:HA	21:AA:1380:U:C4	2.53	0.44
7:AH:49:LYS:O	7:AH:58:LEU:HD22	2.17	0.44
9:AJ:9:ARG:NH1	21:AA:1280:A:OP1	2.50	0.44
9:AJ:37:ARG:C	21:AA:1124:G:OP1	2.61	0.44
11:AL:101:LEU:HB3	11:AL:102:ASP:H	1.57	0.44
12:AM:10:ASP:O	12:AM:11:HIS:HB2	2.17	0.44
12:AM:13:HIS:ND1	12:AM:41:ASP:HB2	2.32	0.44
21:AA:95:C:H2'	21:AA:96:U:C6	2.53	0.44
21:AA:173:U:C2	21:AA:197:A:C2	3.05	0.44
21:AA:285:C:H2'	21:AA:285:C:O2	2.16	0.44
21:AA:292:G:N2	21:AA:309:A:C4	2.86	0.44
21:AA:633:G:O2'	21:AA:634:C:H5'	2.17	0.44
21:AA:1203:C:H2'	21:AA:1204:A:O4'	2.16	0.44
22:BA:103:A:H2'	22:BA:104:A:C8	2.53	0.44
22:BA:558:U:OP1	31:BJ:111:LYS:HE3	2.17	0.44
22:BA:656:G:H8	22:BA:656:G:O5'	2.01	0.44
22:BA:684:G:OP1	50:B2:16:HIS:CD2	2.71	0.44
22:BA:995:C:HO2'	22:BA:996:A:P	2.37	0.44
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.17	0.44
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.17	0.44
22:BA:2068:U:H6	22:BA:2068:U:C5'	2.29	0.44
22:BA:2136:G:C2	22:BA:2137:U:C4	3.05	0.44
22:BA:2235:G:H2'	22:BA:2236:U:C6	2.52	0.44
22:BA:2392:A:H4'	51:B3:27:ASN:ND2	2.31	0.44
22:BA:2746:U:H2'	22:BA:2747:G:H5'	1.98	0.44
22:BA:2748:A:C2	22:BA:2757:A:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:39:SER:C	24:BC:41:GLY:H	2.24	0.44
24:BC:254:LYS:HE3	24:BC:254:LYS:HB3	1.75	0.44
26:BE:119:ILE:O	26:BE:187:VAL:O	2.35	0.44
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.32	0.44
28:BG:39:ALA:HB1	28:BG:57:TYR:CG	2.52	0.44
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.99	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:CB	2.64	0.44
37:BP:24:THR:O	37:BP:24:THR:HG23	2.16	0.44
38:BQ:86:SER:HB3	39:BR:51:VAL:HG12	2.00	0.44
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.96	0.44
39:BR:18:GLN:O	39:BR:97:LYS:O	2.36	0.44
42:BU:38:ILE:O	42:BU:40:LEU:N	2.50	0.44
44:BW:64:GLY:HA3	44:BW:82:GLU:O	2.17	0.44
46:BY:6:LEU:O	46:BY:7:ARG:HB3	2.16	0.44
1:CB:124:THR:C	1:CB:126:ASP:H	2.25	0.44
3:CD:138:PRO:C	3:CD:140:ASP:H	2.25	0.44
4:CE:37:VAL:HG12	4:CE:38:VAL:N	2.31	0.44
4:CE:80:LEU:N	4:CE:121:ASN:HD21	2.15	0.44
5:CF:98:GLU:O	5:CF:99:ALA:CB	2.65	0.44
6:CG:88:VAL:CG2	6:CG:89:GLU:H	2.16	0.44
7:CH:29:SER:OG	7:CH:32:LYS:HB3	2.17	0.44
8:CI:79:ARG:O	8:CI:83:THR:HG22	2.18	0.44
9:CJ:11:LYS:NZ	9:CJ:99:GLN:HB3	2.31	0.44
9:CJ:17:LEU:HD23	9:CJ:96:VAL:HG13	2.00	0.44
9:CJ:77:VAL:O	9:CJ:79:PRO:HD3	2.17	0.44
10:CK:12:ARG:N	10:CK:12:ARG:HD3	2.32	0.44
53:CA:89:U:O2'	53:CA:90:C:O5'	2.35	0.44
53:CA:286:C:C2	53:CA:287:U:C6	3.06	0.44
53:CA:431:A:C2	53:CA:432:A:H1'	2.52	0.44
53:CA:513:C:HO2'	53:CA:514:C:H6	1.65	0.44
53:CA:701:U:HO2'	53:CA:702:A:P	2.40	0.44
53:CA:717:U:C2	53:CA:734:G:C8	3.05	0.44
53:CA:885:G:O2'	53:CA:886:G:H5'	2.16	0.44
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.32	0.44
53:CA:1067:A:C4'	53:CA:1068:G:O5'	2.63	0.44
53:CA:1168:U:H2'	53:CA:1168:U:O2	2.16	0.44
53:CA:1197:A:C2'	53:CA:1198:G:H5'	2.47	0.44
22:DA:70:G:H8	22:DA:70:G:OP2	2.00	0.44
22:DA:397:U:OP2	45:DX:9:LYS:HE2	2.17	0.44
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:770:G:H1'	22:DA:1379:U:C4	2.52	0.44
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.99	0.44
22:DA:815:C:OP1	39:DR:85:LYS:HE2	2.17	0.44
22:DA:862:G:H2'	22:DA:863:A:O4'	2.18	0.44
22:DA:922:C:H2'	22:DA:923:G:H8	1.82	0.44
22:DA:1021:A:H8	22:DA:1021:A:H2'	1.55	0.44
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.71	0.44
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.18	0.44
22:DA:1180:U:C4	22:DA:1181:U:C4	3.05	0.44
22:DA:1286:A:C6	22:DA:1289:C:N3	2.86	0.44
22:DA:1387:A:N3	22:DA:1388:G:C8	2.85	0.44
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.18	0.44
22:DA:1426:G:H5"	22:DA:1427:A:H3'	1.98	0.44
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.52	0.44
22:DA:1627:G:C2	22:DA:1628:G:C8	3.05	0.44
22:DA:1654:A:O2'	22:DA:1655:A:O4'	2.36	0.44
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.17	0.44
22:DA:2093:G:C2	22:DA:2094:A:N7	2.85	0.44
22:DA:2322:A:H3'	22:DA:2323:G:H8	1.81	0.44
22:DA:2425:A:H4'	22:DA:2426:A:C5'	2.47	0.44
22:DA:2652:C:N4	22:DA:2653:U:C4	2.86	0.44
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.18	0.44
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.16	0.44
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.48	0.44
31:DJ:105:VAL:O	31:DJ:109:LEU:HG	2.18	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:HH22	1.82	0.44
35:DN:72:ASP:O	35:DN:75:ILE:HG13	2.18	0.44
36:DO:99:TYR:CD1	36:DO:99:TYR:O	2.70	0.44
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.17	0.44
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.82	0.44
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.99	0.44
47:DZ:16:LEU:HD23	47:DZ:19:HIS:HD2	1.82	0.44
51:D3:41:ARG:CZ	51:D3:41:ARG:HB3	2.46	0.44
1:AB:207:ARG:C	1:AB:209:VAL:N	2.74	0.44
2:AC:42:LEU:C	2:AC:44:LYS:H	2.25	0.44
2:AC:156:LEU:C	2:AC:158:GLY:H	2.25	0.44
3:AD:117:VAL:HA	3:AD:122:ILE:HD11	1.98	0.44
3:AD:130:ASN:CB	21:AA:619:U:H3	2.24	0.44
5:AF:16:GLU:C	5:AF:18:VAL:H	2.24	0.44
5:AF:90:MET:HB3	5:AF:91:ARG:H	1.49	0.44
7:AH:4:ASP:OD1	7:AH:76:ARG:NH1	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:26:LYS:O	8:AI:62:LEU:HD23	2.16	0.44
8:AI:105:ARG:NE	21:AA:1117:A:O3'	2.51	0.44
10:AK:62:ALA:O	10:AK:65:ALA:HB3	2.16	0.44
11:AL:6:LEU:HD23	16:AQ:33:TYR:CE2	2.52	0.44
14:AO:16:ARG:O	14:AO:17:ASP:OD1	2.35	0.44
21:AA:16:A:C2'	21:AA:17:U:H5'	2.48	0.44
21:AA:140:U:H2'	21:AA:141:G:O4'	2.17	0.44
21:AA:182:A:N6	21:AA:194:C:H42	1.97	0.44
21:AA:212:G:N3	21:AA:213:G:N7	2.65	0.44
21:AA:438:U:C6	21:AA:494:G:O6	2.71	0.44
21:AA:725:G:O2'	21:AA:726:C:H5'	2.17	0.44
21:AA:928:G:O2'	21:AA:1533:C:OP1	2.36	0.44
22:BA:50:U:H4'	22:BA:51:G:OP2	2.17	0.44
22:BA:271:G:C6	22:BA:367:G:C6	3.06	0.44
22:BA:324:A:H61	22:BA:338:G:C2'	2.31	0.44
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.70	0.44
22:BA:637:A:N1	22:BA:651:G:O2'	2.45	0.44
22:BA:807:U:H2'	22:BA:808:G:H8	1.83	0.44
22:BA:864:G:C6	22:BA:865:C:N4	2.86	0.44
22:BA:1509:A:C2	22:BA:1510:G:C8	3.06	0.44
22:BA:2013:A:C2	40:BS:88:ARG:NH1	2.86	0.44
22:BA:2023:C:C6	22:BA:2023:C:H5"	2.52	0.44
22:BA:2270:A:H2'	22:BA:2271:G:O4'	2.18	0.44
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.52	0.44
27:BF:7:TYR:HD2	27:BF:11:VAL:HG11	1.82	0.44
27:BF:131:VAL:HG22	27:BF:151:LEU:O	2.18	0.44
28:BG:115:GLN:O	28:BG:116:LEU:C	2.59	0.44
29:BH:1:MET:SD	29:BH:27:ARG:NH2	2.91	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.33	0.44
34:BM:25:ASP:OD2	34:BM:25:ASP:N	2.50	0.44
37:BP:105:LYS:O	37:BP:108:ARG:HD3	2.17	0.44
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.95	0.44
42:BU:88:ASP:CG	42:BU:89:GLY:H	2.24	0.44
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.18	0.44
2:CC:88:LYS:HD3	2:CC:88:LYS:C	2.43	0.44
2:CC:133:MET:CE	2:CC:152:VAL:HG13	2.48	0.44
7:CH:85:TYR:CE2	7:CH:123:GLU:HB2	2.53	0.44
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.17	0.44
10:CK:18:GLY:O	10:CK:81:LEU:HA	2.17	0.44
15:CP:56:ARG:O	15:CP:59:HIS:HB3	2.17	0.44
19:CT:49:ALA:O	19:CT:52:GLU:HB3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:CT:61:ALA:HA	19:CT:67:HIS:HA	2.00	0.44
53:CA:178:C:H2'	53:CA:179:A:O4'	2.18	0.44
53:CA:204:G:H2'	53:CA:205:A:C8	2.53	0.44
53:CA:348:G:H2'	53:CA:349:A:C8	2.50	0.44
53:CA:408:A:C5	53:CA:409:U:C5	3.05	0.44
53:CA:927:G:N1	53:CA:1391:U:C2	2.86	0.44
53:CA:1004:A:N3	53:CA:1026:G:C5	2.86	0.44
53:CA:1062:U:H2'	53:CA:1063:C:C5	2.53	0.44
53:CA:1287:A:H2'	53:CA:1288:A:C8	2.52	0.44
22:DA:273:G:O2'	22:DA:274:C:O4'	2.33	0.44
22:DA:486:C:O5'	22:DA:486:C:H6	2.00	0.44
22:DA:627:A:O4'	22:DA:637:A:N6	2.50	0.44
22:DA:813:U:N1	22:DA:1195:G:N2	2.65	0.44
22:DA:850:U:O2'	47:DZ:46:MET:HE3	2.17	0.44
22:DA:988:A:C2	22:DA:989:G:C2	3.06	0.44
22:DA:1056:G:O5'	22:DA:1085:A:H2	2.01	0.44
22:DA:1059:G:N2	30:DI:130:GLY:C	2.76	0.44
22:DA:1325:U:O2'	22:DA:1326:U:H5'	2.17	0.44
22:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.46	0.44
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.52	0.44
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.17	0.44
22:DA:1789:A:OP2	24:DC:220:ARG:NH1	2.50	0.44
22:DA:1965:C:H5"	22:DA:1966:A:H2'	1.99	0.44
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.18	0.44
22:DA:2438:U:O2'	22:DA:2439:A:H5"	2.16	0.44
22:DA:2649:C:H2'	22:DA:2650:U:H6	1.83	0.44
22:DA:2686:G:H2'	22:DA:2687:U:C6	2.52	0.44
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.83	0.44
25:DD:16:THR:HG22	25:DD:20:VAL:N	2.32	0.44
25:DD:161:MET:O	25:DD:162:ALA:O	2.35	0.44
26:DE:6:LYS:HG2	26:DE:7:ASP:CG	2.43	0.44
27:DF:67:THR:O	27:DF:84:ILE:HG22	2.17	0.44
27:DF:107:VAL:N	27:DF:108:PRO:HD2	2.32	0.44
27:DF:137:PHE:HB2	27:DF:138:PRO:CD	2.36	0.44
30:DI:28:GLY:O	30:DI:30:GLN:N	2.51	0.44
31:DJ:64:VAL:CG1	31:DJ:65:THR:N	2.80	0.44
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	2.09	0.44
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.48	0.44
44:DW:25:PHE:CE1	44:DW:27:GLY:HA2	2.53	0.44
44:DW:31:LEU:C	44:DW:33:GLY:N	2.75	0.44
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:44:ARG:H	51:D3:45:PRO:HD2	1.82	0.44
1:AB:26:MET:HA	1:AB:26:MET:HE3	2.00	0.44
1:AB:58:LYS:NZ	1:AB:62:ARG:HG3	2.32	0.44
2:AC:131:ARG:O	2:AC:135:ARG:HG2	2.18	0.44
2:AC:155:ARG:HG2	2:AC:159:ALA:O	2.18	0.44
2:AC:196:GLY:N	21:AA:1057:G:H4'	2.29	0.44
3:AD:100:VAL:O	3:AD:100:VAL:CG1	2.65	0.44
3:AD:113:ALA:O	3:AD:116:LEU:HB2	2.16	0.44
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.33	0.44
13:AN:25:GLU:CG	13:AN:26:LEU:HD12	2.47	0.44
14:AO:34:GLN:O	14:AO:35:ILE:C	2.61	0.44
16:AQ:12:VAL:CG1	16:AQ:13:SER:N	2.79	0.44
19:AT:59:ARG:HG2	19:AT:60:GLN:N	2.32	0.44
20:AU:32:ARG:HG2	20:AU:32:ARG:O	2.18	0.44
21:AA:203:G:C2	21:AA:215:C:N3	2.85	0.44
21:AA:287:U:H2'	21:AA:288:A:H8	1.83	0.44
21:AA:820:U:H4'	21:AA:821:G:OP2	2.18	0.44
21:AA:1062:U:H2'	21:AA:1063:C:C5	2.53	0.44
21:AA:1168:U:H5"	21:AA:1169:A:OP2	2.18	0.44
21:AA:1231:G:C5	21:AA:1232:U:C5	3.05	0.44
22:BA:244:A:C2	22:BA:255:A:C4	3.05	0.44
22:BA:866:A:O2'	22:BA:867:C:H5'	2.17	0.44
22:BA:919:U:H6	22:BA:919:U:C3'	2.30	0.44
22:BA:933:A:N3	22:BA:933:A:H2'	2.32	0.44
22:BA:1057:A:C2	22:BA:1082:U:C2	3.05	0.44
22:BA:1356:G:C6	22:BA:1357:C:C4	3.06	0.44
22:BA:1419:A:N7	22:BA:1421:G:C6	2.86	0.44
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.17	0.44
22:BA:1833:C:C5	22:BA:1834:U:C5	3.06	0.44
22:BA:1964:G:C2	22:BA:1967:C:C5	3.06	0.44
22:BA:2225:A:H4'	22:BA:2226:C:H6	1.83	0.44
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.52	0.44
22:BA:2560:A:C6	22:BA:2561:U:C4	3.05	0.44
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.52	0.44
22:BA:2791:G:H8	22:BA:2791:G:C5'	2.26	0.44
22:BA:2828:G:C2	22:BA:2829:A:C8	3.05	0.44
24:BC:141:HIS:HD2	24:BC:192:GLY:C	2.24	0.44
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.18	0.44
26:BE:48:THR:O	26:BE:50:ALA:N	2.51	0.44
27:BF:172:PHE:O	27:BF:173:ASP:C	2.61	0.44
28:BG:72:ASN:C	28:BG:72:ASN:ND2	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:118:MET:HA	31:BJ:121:LYS:HE2	2.00	0.44
32:BK:2:ILE:HD12	32:BK:2:ILE:N	2.32	0.44
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.99	0.44
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.33	0.44
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.72	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CB	2.48	0.44
49:B1:14:ALA:HB3	49:B1:16:THR:HG23	1.99	0.44
2:CC:187:GLU:HB3	2:CC:188:ALA:H	1.60	0.44
3:CD:23:GLY:O	3:CD:24:VAL:HG22	2.16	0.44
6:CG:49:LEU:O	6:CG:49:LEU:HD13	2.18	0.44
10:CK:116:PRO:HB3	53:CA:676:A:H1'	2.00	0.44
12:CM:102:LYS:HA	53:CA:1226:C:C4	2.52	0.44
12:CM:106:ARG:HH21	12:CM:112:ARG:NE	2.14	0.44
20:CU:13:VAL:HG22	20:CU:15:LEU:HD23	2.00	0.44
53:CA:511:C:C2	53:CA:512:U:C5	3.06	0.44
53:CA:524:G:H2'	53:CA:525:C:C6	2.53	0.44
53:CA:764:C:N4	53:CA:812:G:C6	2.86	0.44
53:CA:1301:U:H2'	53:CA:1301:U:O2	2.16	0.44
53:CA:1494:G:N2	53:CA:1495:U:C2	2.86	0.44
22:DA:54:G:N2	22:DA:117:G:H1'	2.33	0.44
22:DA:170:U:C2	22:DA:171:U:C5	3.05	0.44
22:DA:242:G:C8	51:D3:4:LYS:HG3	2.52	0.44
22:DA:272:A:C2	22:DA:273:G:C5	3.06	0.44
22:DA:404:A:H5'	22:DA:405:U:OP1	2.18	0.44
22:DA:665:U:H2'	22:DA:666:A:C8	2.43	0.44
22:DA:704:G:C2'	22:DA:726:G:N2	2.80	0.44
22:DA:715:A:C6	22:DA:716:A:C6	3.05	0.44
22:DA:749:A:N3	22:DA:750:A:C8	2.86	0.44
22:DA:966:G:H5'	22:DA:2272:U:O2	2.17	0.44
22:DA:992:C:H5'	39:DR:87:GLN:HE22	1.82	0.44
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.36	0.44
22:DA:1497:U:H5"	22:DA:1498:C:OP2	2.17	0.44
22:DA:1515:A:H2'	22:DA:1516:G:O4'	2.17	0.44
22:DA:1568:G:H8	22:DA:1568:G:H2'	1.66	0.44
22:DA:1796:U:H2'	22:DA:1797:G:H8	1.81	0.44
22:DA:2135:A:C3'	22:DA:2136:G:C5'	2.90	0.44
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.91	0.44
22:DA:2331:G:C6	22:DA:2385:C:N4	2.86	0.44
22:DA:2378:A:H2'	22:DA:2379:G:H5'	2.00	0.44
22:DA:2456:C:H2'	22:DA:2457:U:O4'	2.18	0.44
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2657:A:O2'	22:DA:2658:C:H5'	2.17	0.44
54:DB:8:C:O3'	36:DO:25:ARG:NH1	2.51	0.44
54:DB:57:A:C2'	54:DB:58:A:H8	2.31	0.44
24:DC:170:TYR:HD2	24:DC:183:VAL:O	2.01	0.44
25:DD:22:ILE:HA	25:DD:23:PRO:HD2	1.86	0.44
27:DF:57:ALA:HB2	27:DF:64:PRO:HG2	2.00	0.44
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.23	0.44
29:DH:114:GLU:OE1	29:DH:132:PHE:HE1	2.01	0.44
30:DI:102:ARG:HH11	30:DI:105:LEU:HD13	1.82	0.44
33:DL:116:VAL:HG13	33:DL:117:THR:H	1.82	0.44
36:DO:90:VAL:HB	36:DO:91:SER:H	1.57	0.44
38:DQ:38:VAL:O	38:DQ:42:GLY:N	2.46	0.44
39:DR:19:THR:HG22	39:DR:20:VAL:H	1.83	0.44
41:DT:1:MET:O	41:DT:2:ILE:C	2.59	0.44
43:DV:4:ILE:HG21	43:DV:42:LEU:HD22	2.00	0.44
44:DW:81:ILE:C	44:DW:81:ILE:HD12	2.43	0.44
1:AB:53:LEU:C	1:AB:56:LEU:HB3	2.43	0.44
1:AB:118:THR:O	1:AB:119:GLN:HB2	2.18	0.44
2:AC:108:PRO:C	2:AC:110:LEU:N	2.76	0.44
3:AD:21:LYS:O	3:AD:22:SER:C	2.61	0.44
3:AD:68:GLU:O	3:AD:69:ARG:C	2.59	0.44
4:AE:81:GLN:CD	4:AE:81:GLN:H	2.26	0.44
8:AI:41:GLU:HB3	8:AI:42:THR:H	1.53	0.44
8:AI:57:VAL:O	8:AI:58:GLU:HG2	2.18	0.44
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.98	0.44
16:AQ:37:ILE:HD12	16:AQ:37:ILE:N	2.31	0.44
19:AT:78:LEU:HA	19:AT:78:LEU:HD23	1.74	0.44
21:AA:434:U:H2'	21:AA:435:A:O4'	2.18	0.44
21:AA:488:C:O2'	21:AA:489:C:H5'	2.17	0.44
21:AA:702:A:C1'	22:BA:1847:A:H2	2.31	0.44
22:BA:60:G:O2'	22:BA:61:C:P	2.76	0.44
22:BA:163:C:O2'	22:BA:164:C:O5'	2.35	0.44
22:BA:633:A:H3'	22:BA:633:A:H8	1.82	0.44
22:BA:743:A:C2'	22:BA:744:U:H5'	2.48	0.44
22:BA:1586:A:N7	22:BA:1587:G:C8	2.86	0.44
22:BA:1798:U:P	24:BC:255:LYS:O	2.76	0.44
22:BA:1832:C:N4	22:BA:1833:C:C4	2.86	0.44
22:BA:2688:G:H1'	22:BA:2721:A:H61	1.83	0.44
24:BC:145:MET:SD	24:BC:153:LEU:HD21	2.58	0.44
26:BE:5:LEU:HD21	26:BE:120:VAL:HG22	2.00	0.44
26:BE:121:VAL:O	26:BE:189:THR:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:114:ARG:HD2	27:BF:114:ARG:N	2.29	0.44
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.99	0.44
29:BH:39:ALA:O	29:BH:41:LYS:N	2.51	0.44
31:BJ:1:MET:O	31:BJ:2:LYS:C	2.61	0.44
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.16	0.44
33:BL:80:SER:C	33:BL:81:ASP:O	2.58	0.44
35:BN:2:ARG:O	35:BN:5:LYS:HG3	2.17	0.44
42:BU:5:ARG:O	42:BU:6:ARG:C	2.61	0.44
44:BW:39:GLN:HE21	44:BW:43:LYS:H	1.65	0.44
44:BW:72:GLY:C	44:BW:74:LYS:N	2.76	0.44
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.48	0.44
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.18	0.44
49:B1:27:ARG:C	49:B1:29:LYS:H	2.25	0.44
1:CB:21:TYR:N	1:CB:21:TYR:CD1	2.86	0.44
2:CC:11:LEU:O	2:CC:12:GLY:C	2.61	0.44
3:CD:125:ASN:N	3:CD:141:VAL:O	2.51	0.44
3:CD:166:LYS:HA	3:CD:167:PRO:HD2	1.70	0.44
4:CE:80:LEU:HD21	4:CE:143:LEU:HD21	1.98	0.44
4:CE:102:THR:HG21	53:CA:6:G:H1	1.83	0.44
6:CG:4:ARG:CG	6:CG:6:ILE:HG22	2.48	0.44
6:CG:99:ALA:HB3	6:CG:100:MET:CE	2.47	0.44
9:CJ:5:ARG:CG	9:CJ:79:PRO:HG3	2.47	0.44
11:CL:89:LEU:HA	11:CL:90:PRO:HD2	1.68	0.44
12:CM:46:GLU:O	12:CM:47:LEU:HB2	2.17	0.44
12:CM:104:ASN:CB	53:CA:948:C:H5”	2.40	0.44
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.86	0.44
14:CO:38:LEU:HG	14:CO:42:PHE:CE1	2.53	0.44
15:CP:44:SER:N	15:CP:46:LYS:HZ2	2.14	0.44
19:CT:11:ILE:H	19:CT:11:ILE:HG13	1.65	0.44
53:CA:95:C:C6	53:CA:95:C:H5”	2.53	0.44
53:CA:238:A:H2’	53:CA:239:U:C4’	2.48	0.44
53:CA:664:G:N2	53:CA:666:G:C8	2.86	0.44
53:CA:926:G:H3’	53:CA:1505:G:N2	2.32	0.44
53:CA:1217:C:H2’	53:CA:1218:C:C6	2.52	0.44
53:CA:1261:A:N7	53:CA:1274:A:C2	2.85	0.44
22:DA:30:G:C5	22:DA:31:C:C4	3.06	0.44
22:DA:167:A:H2’	22:DA:168:G:O4’	2.17	0.44
22:DA:468:G:H4’	26:DE:57:LYS:CG	2.48	0.44
22:DA:608:A:H2’	22:DA:609:A:C8	2.52	0.44
22:DA:685:A:C8	22:DA:773:U:O4	2.70	0.44
22:DA:777:G:N7	22:DA:793:A:C2	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1103:A:H3'	22:DA:1104:C:C6	2.53	0.44
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.18	0.44
22:DA:1329:U:O2'	22:DA:1330:C:OP1	2.32	0.44
22:DA:1381:G:C2'	22:DA:1382:G:H5"	2.43	0.44
22:DA:1398:C:O2'	22:DA:1399:C:H6	2.00	0.44
22:DA:1426:G:H5'	22:DA:1427:A:OP2	2.17	0.44
22:DA:1428:C:H42	22:DA:1570:A:H62	1.65	0.44
22:DA:1628:G:H2'	22:DA:1629:U:H6	1.83	0.44
22:DA:1667:G:H8	22:DA:1667:G:O5'	2.01	0.44
22:DA:1814:G:C6	22:DA:1815:A:N6	2.85	0.44
22:DA:2458:G:O2'	22:DA:2460:U:O4	2.28	0.44
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.18	0.44
22:DA:2900:A:H2'	22:DA:2901:C:H6	1.83	0.44
24:DC:62:ARG:HG2	24:DC:62:ARG:NH2	2.26	0.44
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.80	0.44
27:DF:139:GLU:CB	27:DF:142:TYR:HB3	2.46	0.44
28:DG:88:LEU:N	28:DG:128:THR:O	2.49	0.44
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.47	0.44
31:DJ:35:ARG:HA	31:DJ:40:HIS:HD2	1.82	0.44
38:DQ:69:ARG:HB2	38:DQ:69:ARG:NH2	2.32	0.44
38:DQ:87:VAL:CG1	39:DR:52:PRO:HG3	2.44	0.44
40:DS:6:LYS:HB2	40:DS:103:ILE:O	2.18	0.44
41:DT:69:ARG:NE	41:DT:70:HIS:CD2	2.86	0.44
44:DW:44:PHE:HB3	44:DW:78:PHE:HD1	1.83	0.44
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	2.00	0.44
46:DY:28:LEU:HD11	46:DY:43:LEU:CD1	2.47	0.44
47:DZ:6:ILE:HG22	47:DZ:7:THR:N	2.33	0.44
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.33	0.44
1:AB:51:GLU:HG2	1:AB:197:PHE:CE1	2.53	0.44
1:AB:70:GLY:HA2	1:AB:163:ILE:HG22	1.99	0.44
1:AB:113:LEU:HB2	1:AB:143:LEU:HD12	2.00	0.44
1:AB:156:LEU:H	1:AB:156:LEU:HD23	1.83	0.44
4:AE:28:ARG:H	4:AE:28:ARG:HG2	1.65	0.44
4:AE:132:PRO:O	4:AE:136:VAL:HG13	2.18	0.44
6:AG:101:ARG:HD3	21:AA:940:C:OP1	2.18	0.44
8:AI:62:LEU:HD23	8:AI:62:LEU:N	2.32	0.44
12:AM:79:LEU:HD22	12:AM:86:ARG:HB2	1.99	0.44
14:AO:57:ARG:HH11	14:AO:57:ARG:CB	2.28	0.44
15:AP:75:ILE:HG22	15:AP:80:LYS:NZ	2.33	0.44
18:AS:62:THR:O	18:AS:64:GLU:N	2.51	0.44
21:AA:75:G:N3	21:AA:76:G:H1'	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:518:C:H2'	21:AA:530:G:C8	2.53	0.44
21:AA:1065:U:H5"	21:AA:1190:G:N2	2.33	0.44
21:AA:1160:G:C6	21:AA:1181:G:O6	2.71	0.44
21:AA:1283:U:O2'	21:AA:1284:C:O4'	2.34	0.44
22:BA:34:U:H6	22:BA:34:U:H2'	1.53	0.44
22:BA:96:C:H4'	46:BY:41:HIS:CE1	2.53	0.44
22:BA:163:C:O2'	22:BA:164:C:P	2.75	0.44
22:BA:172:A:O2'	22:BA:173:A:H5'	2.17	0.44
22:BA:877:A:C6	22:BA:899:A:C6	3.06	0.44
22:BA:920:A:C6	22:BA:921:C:C4	3.06	0.44
22:BA:995:C:H42	31:BJ:2:LYS:HB2	1.82	0.44
22:BA:1009:A:OP2	31:BJ:39:LYS:CE	2.65	0.44
22:BA:1062:G:C6	22:BA:1063:G:C6	3.06	0.44
22:BA:1912:A:C2	22:BA:1919:A:C5	3.06	0.44
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.53	0.44
23:BB:112:G:H2'	23:BB:113:C:C6	2.53	0.44
24:BC:117:SER:CB	24:BC:128:THR:HB	2.48	0.44
24:BC:139:THR:O	24:BC:140:VAL:O	2.36	0.44
26:BE:149:ILE:HG23	26:BE:188:MET:HG3	2.00	0.44
28:BG:84:LYS:HG3	28:BG:131:VAL:C	2.37	0.44
33:BL:74:THR:HA	33:BL:107:PHE:O	2.18	0.44
34:BM:23:GLY:O	34:BM:101:VAL:HG12	2.18	0.44
34:BM:71:LYS:HB3	34:BM:93:VAL:O	2.17	0.44
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.18	0.44
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.31	0.44
41:BT:45:ALA:O	41:BT:46:ALA:C	2.61	0.44
49:B1:8:ILE:HD11	49:B1:52:LYS:HB2	1.99	0.44
1:CB:60:ALA:C	1:CB:62:ARG:N	2.75	0.44
1:CB:104:LYS:HD2	1:CB:104:LYS:N	2.32	0.44
3:CD:57:LYS:HG3	3:CD:58:GLN:N	2.32	0.44
3:CD:84:ASN:CB	3:CD:87:GLU:HG3	2.42	0.44
4:CE:114:LEU:O	4:CE:119:VAL:HG23	2.18	0.44
4:CE:154:ALA:C	4:CE:156:ARG:H	2.25	0.44
11:CL:48:LEU:HD23	11:CL:48:LEU:N	2.33	0.44
15:CP:25:ARG:O	15:CP:26:ASN:ND2	2.50	0.44
16:CQ:27:PHE:CD1	16:CQ:36:PHE:HB3	2.53	0.44
18:CS:52:ASN:C	18:CS:54:ARG:H	2.26	0.44
53:CA:210:C:O2	53:CA:210:C:H2'	2.18	0.44
53:CA:612:C:H2'	53:CA:613:C:H6	1.82	0.44
53:CA:959:A:N6	53:CA:1222:G:H4'	2.32	0.44
53:CA:1320:C:H2'	53:CA:1321:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:84:A:H2	22:DA:98:G:N3	2.14	0.44
22:DA:146:A:C6	22:DA:147:C:C4	3.06	0.44
22:DA:223:A:C5	22:DA:422:A:C8	3.06	0.44
22:DA:307:G:N1	22:DA:310:A:OP2	2.51	0.44
22:DA:310:A:C2	22:DA:330:A:C5	3.06	0.44
22:DA:310:A:O2'	22:DA:311:A:C8	2.61	0.44
22:DA:390:U:HO2'	22:DA:391:A:H8	1.60	0.44
22:DA:479:A:H1'	22:DA:480:A:H5"	2.00	0.44
22:DA:484:C:O2'	22:DA:485:C:H5'	2.17	0.44
22:DA:489:G:C5	22:DA:491:G:C5	3.06	0.44
22:DA:493:G:H4'	40:DS:8:ARG:O	2.17	0.44
22:DA:527:C:H2'	22:DA:527:C:O2	2.17	0.44
22:DA:778:G:H5"	22:DA:779:U:OP2	2.17	0.44
22:DA:1068:G:H2'	22:DA:1069:A:C8	2.52	0.44
22:DA:1264:A:H1'	22:DA:2015:A:N6	2.32	0.44
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.18	0.44
22:DA:1586:A:C4	22:DA:1587:G:C8	3.06	0.44
22:DA:1931:U:O2'	22:DA:1932:A:H5'	2.17	0.44
22:DA:1999:C:H5"	22:DA:2723:C:O2'	2.18	0.44
22:DA:2269:G:H2'	22:DA:2270:A:H8	1.83	0.44
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.51	0.44
22:DA:2507:C:H1'	22:DA:2583:G:C2	2.53	0.44
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.99	0.44
24:DC:93:VAL:HG11	24:DC:101:ARG:H	1.82	0.44
25:DD:39:ASP:CG	25:DD:40:LEU:N	2.76	0.44
27:DF:11:VAL:C	27:DF:13:LYS:H	2.25	0.44
27:DF:13:LYS:HD2	27:DF:13:LYS:N	2.33	0.44
27:DF:73:VAL:O	27:DF:73:VAL:HG12	2.17	0.44
34:DM:50:ARG:O	34:DM:53:MET:HB3	2.18	0.44
40:DS:29:VAL:O	40:DS:33:LEU:HB2	2.18	0.44
41:DT:29:THR:OG1	41:DT:85:VAL:HB	2.17	0.44
43:DV:48:MET:SD	43:DV:85:LYS:HA	2.58	0.44
44:DW:8:SER:O	44:DW:9:THR:CB	2.65	0.44
48:D0:33:SER:HB3	48:D0:34:GLY:H	1.60	0.44
1:AB:87:ASP:OD2	1:AB:87:ASP:C	2.61	0.44
1:AB:131:LYS:C	1:AB:133:ALA:N	2.76	0.44
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.18	0.44
3:AD:86:GLY:O	3:AD:89:LEU:HB3	2.18	0.44
3:AD:147:LYS:O	3:AD:149:LYS:N	2.51	0.44
4:AE:64:GLU:O	4:AE:65:LYS:C	2.61	0.44
4:AE:94:PHE:CZ	4:AE:96:GLN:HG2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:12:ARG:HH21	21:AA:826:C:H5'	1.82	0.44
7:AH:80:PRO:HG2	21:AA:878:A:C5'	2.48	0.44
9:AJ:86:ALA:O	9:AJ:87:LEU:C	2.60	0.44
11:AL:115:LYS:O	11:AL:116:TYR:CB	2.64	0.44
12:AM:65:GLU:HB3	12:AM:66:GLY:H	1.64	0.44
14:AO:68:TYR:CE2	14:AO:72:LYS:HG3	2.53	0.44
20:AU:36:PHE:CD1	20:AU:39:LYS:HB3	2.50	0.44
21:AA:46:G:O2'	21:AA:365:U:O2	2.35	0.44
21:AA:104:G:O2'	21:AA:105:G:H5'	2.18	0.44
21:AA:109:A:C4	21:AA:327:A:C2	3.06	0.44
21:AA:322:C:H5	21:AA:328:C:C5	2.36	0.44
21:AA:596:A:N6	21:AA:645:G:N1	2.66	0.44
22:BA:142:A:H2'	22:BA:143:C:C5	2.53	0.44
22:BA:621:A:H2'	22:BA:622:G:O4'	2.18	0.44
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.99	0.44
22:BA:2197:U:P	3:CD:150:LYS:HD2	2.58	0.44
22:BA:2536:G:C5	22:BA:2537:U:C4	3.06	0.44
24:BC:35:LYS:HE3	24:BC:35:LYS:HB3	1.76	0.44
24:BC:39:SER:C	24:BC:41:GLY:N	2.74	0.44
24:BC:196:ASN:OD1	24:BC:199:HIS:HB2	2.18	0.44
25:BD:57:ALA:O	25:BD:60:VAL:HG12	2.18	0.44
25:BD:105:LYS:HD2	25:BD:105:LYS:HA	1.65	0.44
25:BD:121:THR:O	25:BD:122:VAL:CB	2.66	0.44
27:BF:7:TYR:CD2	27:BF:11:VAL:HG11	2.52	0.44
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.32	0.44
27:BF:175:PRO:O	27:BF:176:PHE:HB2	2.17	0.44
28:BG:83:THR:O	28:BG:84:LYS:HB3	2.17	0.44
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.66	0.44
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.99	0.44
44:BW:73:PRO:O	44:BW:74:LYS:HB3	2.17	0.44
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.80	0.44
45:BX:34:SER:HB3	45:BX:49:ARG:HA	1.99	0.44
45:BX:46:VAL:HG11	45:BX:77:TYR:CE1	2.53	0.44
46:BY:47:ARG:HG3	46:BY:47:ARG:NH2	2.14	0.44
47:BZ:38:GLU:O	47:BZ:43:ILE:HG12	2.17	0.44
49:B1:18:HIS:CG	49:B1:19:PHE:N	2.84	0.44
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.29	0.44
1:CB:42:LEU:H	1:CB:42:LEU:HG	1.54	0.44
2:CC:149:LYS:HD2	2:CC:200:TRP:CE3	2.53	0.44
5:CF:66:ALA:HB1	5:CF:70:VAL:CG2	2.48	0.44
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:44:GLU:O	14:CO:45:HIS:C	2.59	0.44
16:CQ:28:VAL:HG11	16:CQ:39:ARG:HD3	1.99	0.44
18:CS:4:LEU:HD21	53:CA:1319:A:OP2	2.18	0.44
20:CU:24:LYS:HA	20:CU:24:LYS:HD2	1.91	0.44
53:CA:194:C:O2'	53:CA:195:A:H5'	2.17	0.44
53:CA:407:U:H2'	53:CA:408:A:C8	2.53	0.44
53:CA:634:C:H2'	53:CA:635:A:O4'	2.18	0.44
53:CA:825:A:H2'	53:CA:826:C:H6	1.83	0.44
53:CA:900:A:O2'	53:CA:901:A:H5'	2.18	0.44
53:CA:935:A:O2'	53:CA:936:C:O5'	2.35	0.44
53:CA:1399:C:O2	53:CA:1401:G:C6	2.70	0.44
53:CA:1451:U:O2	53:CA:1453:G:N7	2.51	0.44
53:CA:1504:G:C3'	53:CA:1505:G:H5'	2.47	0.44
22:DA:108:G:H2'	22:DA:109:C:H6	1.82	0.44
22:DA:246:C:H4'	22:DA:385:C:O2'	2.18	0.44
22:DA:715:A:N6	22:DA:716:A:C6	2.86	0.44
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.18	0.44
22:DA:1565:C:HO2'	22:DA:1566:A:H2'	1.81	0.44
22:DA:1694:C:H4'	22:DA:1695:G:H5"	2.00	0.44
22:DA:1814:G:C6	22:DA:1815:A:C6	3.06	0.44
22:DA:2020:A:O2'	22:DA:2021:C:H3'	2.18	0.44
22:DA:2034:U:O2'	22:DA:2035:G:O4'	2.36	0.44
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.32	0.44
22:DA:2416:C:N4	22:DA:2417:C:N4	2.66	0.44
22:DA:2442:C:O2	22:DA:2442:C:H2'	2.18	0.44
22:DA:2519:U:C2	22:DA:2542:A:C6	3.06	0.44
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.48	0.44
22:DA:2798:U:H5"	22:DA:2799:A:OP1	2.17	0.44
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.33	0.44
25:DD:113:SER:OG	25:DD:114:LYS:N	2.51	0.44
28:DG:132:LEU:HD12	28:DG:132:LEU:N	2.33	0.44
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.18	0.44
32:DK:87:LEU:HD23	32:DK:87:LEU:H	1.83	0.44
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.16	0.44
34:DM:136:MET:HE2	43:DV:57:TYR:CE2	2.52	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.48	0.44
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.32	0.44
42:DU:64:ILE:O	42:DU:65:GLN:O	2.36	0.44
45:DX:77:TYR:CD1	45:DX:77:TYR:C	2.96	0.44
1:AB:100:LEU:HB3	1:AB:174:GLU:HG2	2.00	0.43
1:AB:178:LEU:HD12	1:AB:178:LEU:HA	1.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:112:ALA:C	4:AE:114:LEU:N	2.76	0.43
5:AF:9:MET:HE3	17:AR:64:LEU:HD22	1.99	0.43
8:AI:62:LEU:HD23	8:AI:62:LEU:H	1.82	0.43
10:AK:15:VAL:HG13	10:AK:78:ILE:CG2	2.48	0.43
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.31	0.43
13:AN:50:LEU:O	13:AN:51:PRO:C	2.61	0.43
16:AQ:46:HIS:HB3	16:AQ:73:THR:HA	2.00	0.43
16:AQ:48:GLU:O	16:AQ:49:ASN:C	2.59	0.43
19:AT:25:SER:O	19:AT:28:ARG:N	2.50	0.43
20:AU:24:LYS:O	20:AU:25:ALA:C	2.61	0.43
21:AA:82:G:H2'	21:AA:83:C:H4'	1.98	0.43
21:AA:86:G:N3	21:AA:87:C:C5	2.86	0.43
21:AA:450:G:H2'	21:AA:451:A:OP1	2.18	0.43
21:AA:596:A:H2'	21:AA:597:G:C8	2.45	0.43
21:AA:652:U:O4	21:AA:752:G:H2'	2.17	0.43
21:AA:674:G:N2	21:AA:717:U:O2	2.51	0.43
21:AA:1049:U:C1'	21:AA:1201:A:N7	2.81	0.43
21:AA:1091:U:O2	21:AA:1093:A:C8	2.71	0.43
21:AA:1135:U:OP2	21:AA:1135:U:H6	2.01	0.43
21:AA:1357:A:C5	21:AA:1358:U:C4	3.06	0.43
21:AA:1413:A:C2	21:AA:1488:G:C2	3.06	0.43
21:AA:1501:C:C5	21:AA:1504:G:C4	3.06	0.43
22:BA:70:G:H5"	22:BA:112:U:O2	2.17	0.43
22:BA:78:U:O2'	22:BA:79:C:H5'	2.17	0.43
22:BA:229:C:H2'	22:BA:230:G:O4'	2.18	0.43
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.64	0.43
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.45	0.43
22:BA:2364:C:OP1	44:BW:54:ARG:HD2	2.18	0.43
22:BA:2672:U:H2'	22:BA:2673:G:O5'	2.18	0.43
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.52	0.43
23:BB:61:G:C5	23:BB:62:C:C5	3.06	0.43
24:BC:80:LEU:HA	24:BC:90:ILE:O	2.18	0.43
26:BE:134:LEU:CD2	26:BE:161:ALA:HB2	2.48	0.43
27:BF:134:GLN:C	27:BF:136:ILE:N	2.73	0.43
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.53	0.43
35:BN:117:ASP:O	35:BN:119:SER:N	2.43	0.43
44:BW:8:SER:O	44:BW:9:THR:CG2	2.65	0.43
1:CB:23:ASN:HB2	1:CB:189:ASN:O	2.18	0.43
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.18	0.43
3:CD:158:LEU:O	3:CD:162:GLU:HG3	2.18	0.43
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:77:GLU:C	15:CP:79:ASN:N	2.72	0.43
17:CR:22:TYR:CE1	17:CR:64:LEU:HD12	2.53	0.43
53:CA:582:C:C4	53:CA:583:A:N7	2.86	0.43
53:CA:739:C:O2	53:CA:739:C:H2'	2.18	0.43
53:CA:762:U:H6	53:CA:762:U:O5'	2.02	0.43
53:CA:807:A:H2'	53:CA:808:C:C6	2.53	0.43
53:CA:1048:G:N2	53:CA:1214:C:H5	2.15	0.43
53:CA:1137:C:H4'	53:CA:1138:G:C2	2.52	0.43
53:CA:1364:U:O2	53:CA:1364:U:O4'	2.37	0.43
53:CA:1418:A:H2	22:DA:1948:G:N3	2.15	0.43
22:DA:49:A:C8	22:DA:51:G:C2	3.06	0.43
22:DA:698:C:O2'	22:DA:734:A:N6	2.51	0.43
22:DA:989:G:C4'	22:DA:990:A:OP1	2.63	0.43
22:DA:1241:A:N3	22:DA:1241:A:H5'	2.32	0.43
22:DA:1249:U:H4'	38:DQ:3:VAL:CB	2.48	0.43
22:DA:1519:G:C6	22:DA:1520:U:N3	2.85	0.43
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.53	0.43
22:DA:1627:G:C2	22:DA:1628:G:N7	2.86	0.43
22:DA:1667:G:O2'	22:DA:1668:A:P	2.76	0.43
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.17	0.43
22:DA:2345:G:C6	22:DA:2381:A:C6	3.06	0.43
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.18	0.43
54:DB:116:G:H2'	54:DB:117:G:C8	2.50	0.43
27:DF:43:ILE:HG23	27:DF:44:ALA:N	2.24	0.43
27:DF:128:SER:HA	27:DF:153:ILE:O	2.18	0.43
29:DH:25:TYR:CD1	29:DH:30:LEU:HG	2.53	0.43
33:DL:64:PHE:HB3	51:D3:24:LYS:HE2	2.00	0.43
34:DM:41:LEU:HB3	34:DM:46:ILE:CG2	2.48	0.43
35:DN:46:ARG:H	35:DN:46:ARG:HG3	1.53	0.43
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	2.00	0.43
36:DO:67:ASN:CG	36:DO:68:LYS:N	2.76	0.43
42:DU:10:VAL:O	42:DU:21:ARG:HA	2.18	0.43
44:DW:23:LYS:CD	44:DW:24:ARG:N	2.72	0.43
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.33	0.43
1:AB:21:TYR:O	1:AB:22:TRP:C	2.60	0.43
1:AB:202:ASN:OD1	1:AB:203:ASP:N	2.51	0.43
2:AC:156:LEU:HD13	2:AC:163:ARG:HB2	1.99	0.43
3:AD:54:LEU:C	3:AD:54:LEU:CD2	2.91	0.43
3:AD:60:VAL:C	3:AD:63:ILE:HG22	2.43	0.43
4:AE:152:VAL:CG1	4:AE:155:LYS:HZ1	2.31	0.43
5:AF:7:VAL:HA	5:AF:60:VAL:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:15:HIS:CG	9:AJ:16:ARG:N	2.85	0.43
10:AK:125:LYS:O	20:AU:33:ARG:CZ	2.66	0.43
14:AO:73:ASP:HB3	14:AO:76:ARG:HG3	2.00	0.43
15:AP:77:GLU:C	15:AP:79:ASN:N	2.74	0.43
21:AA:212:G:C2	21:AA:213:G:C5	3.06	0.43
21:AA:1055:A:O5'	21:AA:1055:A:C8	2.71	0.43
21:AA:1160:G:O2'	21:AA:1161:C:C5'	2.66	0.43
21:AA:1426:G:H2'	21:AA:1427:C:O4'	2.17	0.43
22:BA:122:G:H2'	22:BA:123:G:O4'	2.18	0.43
22:BA:608:A:C6	22:BA:609:A:C6	3.05	0.43
22:BA:845:A:C6	22:BA:847:U:C6	3.06	0.43
22:BA:947:A:H2'	22:BA:948:C:C6	2.53	0.43
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.18	0.43
22:BA:1076:C:C2	22:BA:1077:A:C8	3.06	0.43
22:BA:1106:G:C2	22:BA:1107:G:N9	2.86	0.43
22:BA:1711:A:H2'	22:BA:1712:U:C6	2.54	0.43
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	2.18	0.43
22:BA:1964:G:O2'	22:BA:1967:C:P	2.76	0.43
22:BA:2135:A:H2'	22:BA:2136:G:C8	2.53	0.43
22:BA:2776:A:C8	22:BA:2782:G:C6	3.06	0.43
25:BD:97:SER:O	25:BD:99:GLU:CG	2.66	0.43
26:BE:174:GLY:O	26:BE:175:ILE:O	2.35	0.43
28:BG:109:SER:O	28:BG:110:HIS:CB	2.65	0.43
33:BL:68:SER:O	33:BL:69:ARG:CB	2.65	0.43
33:BL:82:LEU:C	33:BL:84:LYS:N	2.77	0.43
41:BT:8:LEU:HD13	41:BT:46:ALA:CA	2.47	0.43
41:BT:28:ASN:HA	41:BT:91:GLN:OE1	2.18	0.43
42:BU:78:LYS:HG2	42:BU:79:ALA:H	1.83	0.43
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.00	0.43
44:BW:30:VAL:HG23	44:BW:60:ALA:O	2.17	0.43
49:B1:31:GLU:HG2	49:B1:31:GLU:O	2.17	0.43
1:CB:103:TRP:HD1	1:CB:107:ARG:HB3	1.83	0.43
2:CC:149:LYS:O	2:CC:149:LYS:HD2	2.18	0.43
4:CE:48:GLY:CA	4:CE:66:ALA:HB2	2.45	0.43
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.18	0.43
6:CG:124:SER:C	6:CG:126:ALA:H	2.26	0.43
8:CI:47:VAL:C	8:CI:50:PRO:HD2	2.43	0.43
16:CQ:68:LYS:O	16:CQ:69:THR:HG23	2.18	0.43
18:CS:36:ARG:O	18:CS:36:ARG:HG2	2.17	0.43
53:CA:155:A:C5	53:CA:156:C:C4	3.06	0.43
53:CA:275:G:H2'	53:CA:276:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:596:A:C2	53:CA:597:G:C8	3.06	0.43
53:CA:1102:A:H5"	53:CA:1102:A:H8	1.83	0.43
53:CA:1113:C:O2'	53:CA:1114:C:H5'	2.19	0.43
53:CA:1136:C:C5	53:CA:1138:G:O6	2.71	0.43
53:CA:1342:C:H2'	53:CA:1343:G:C8	2.54	0.43
53:CA:1409:C:H6	53:CA:1409:C:O5'	2.01	0.43
53:CA:1442:G:H2'	53:CA:1443:C:H6	1.83	0.43
53:CA:1454:G:O2'	53:CA:1455:G:C5'	2.66	0.43
22:DA:189:G:C2'	22:DA:190:A:O5'	2.65	0.43
22:DA:206:U:O2'	22:DA:207:A:C5'	2.65	0.43
22:DA:424:G:O2'	22:DA:425:G:H5'	2.18	0.43
22:DA:476:G:O2'	22:DA:477:A:O5'	2.17	0.43
22:DA:532:A:C4	22:DA:2021:C:O2	2.70	0.43
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.66	0.43
22:DA:1087:G:C4	22:DA:1089:A:C2	3.06	0.43
22:DA:1213:A:N6	22:DA:1236:G:H1'	2.33	0.43
22:DA:1326:U:O2'	22:DA:1327:A:C5'	2.66	0.43
22:DA:1380:G:H1'	22:DA:1569:A:N6	2.33	0.43
22:DA:1386:C:O2'	22:DA:1387:A:O5'	2.33	0.43
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.53	0.43
22:DA:1620:G:C6	22:DA:1621:U:C4	3.06	0.43
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.84	0.43
22:DA:1838:C:C2	22:DA:1899:A:C2	3.06	0.43
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.18	0.43
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.19	0.43
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.52	0.43
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.33	0.43
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.81	0.43
22:DA:2874:C:H2'	22:DA:2875:C:C5	2.53	0.43
54:DB:81:G:H2'	54:DB:82:U:H6	1.83	0.43
27:DF:76:PHE:HD2	27:DF:76:PHE:N	2.03	0.43
28:DG:116:LEU:HD13	28:DG:120:ILE:O	2.18	0.43
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD11	1.99	0.43
1:AB:20:ARG:HA	1:AB:20:ARG:HH11	1.82	0.43
1:AB:27:LYS:O	1:AB:29:PHE:N	2.51	0.43
1:AB:95:TRP:CZ3	1:AB:174:GLU:OE2	2.71	0.43
4:AE:82:HIS:CE1	7:AH:95:MET:HE2	2.53	0.43
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.33	0.43
5:AF:55:HIS:O	5:AF:56:LYS:CB	2.65	0.43
6:AG:68:VAL:HG21	6:AG:103:ILE:HD11	2.00	0.43
8:AI:119:LYS:O	8:AI:120:ALA:HB3	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:33:CYS:CA	11:AL:54:VAL:HA	2.28	0.43
11:AL:43:LYS:CB	11:AL:44:PRO:CD	2.87	0.43
12:AM:25:GLY:H	21:AA:1329:A:H5"	1.83	0.43
12:AM:89:ARG:HH11	12:AM:94:LEU:HB2	1.83	0.43
18:AS:5:LYS:HD3	21:AA:1314:C:C5	2.53	0.43
18:AS:14:LEU:HD22	18:AS:34:SER:HB3	2.00	0.43
18:AS:34:SER:C	18:AS:36:ARG:H	2.25	0.43
21:AA:958:A:C5	21:AA:959:A:C6	3.06	0.43
21:AA:1187:G:N3	21:AA:1187:G:H2'	2.33	0.43
21:AA:1457:G:H2'	21:AA:1458:G:O4'	2.19	0.43
22:BA:278:A:N3	22:BA:278:A:H2'	2.32	0.43
22:BA:1064:C:O2'	30:BI:89:SER:HB2	2.18	0.43
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.18	0.43
22:BA:1205:A:H3'	22:BA:1206:G:H5'	1.99	0.43
22:BA:1321:A:H2'	22:BA:1322:A:C8	2.54	0.43
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.17	0.43
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.17	0.43
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.53	0.43
22:BA:1912:A:C2	22:BA:1919:A:C6	3.07	0.43
22:BA:2578:G:H2'	22:BA:2578:G:N3	2.32	0.43
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.43
57:BB:315:HOH:O	43:BV:14:LYS:HD2	2.17	0.43
24:BC:156:SER:HB3	24:BC:159:THR:HG21	1.99	0.43
28:BG:4:ALA:C	28:BG:6:ALA:H	2.26	0.43
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.31	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
35:BN:13:ASN:O	35:BN:14:SER:C	2.60	0.43
37:BP:7:LEU:O	37:BP:10:GLU:HG2	2.18	0.43
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.83	0.43
38:BQ:94:LEU:HD22	38:BQ:94:LEU:HA	1.84	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
40:BS:95:ARG:O	40:BS:96:ILE:HG12	2.18	0.43
44:BW:24:ARG:C	44:BW:24:ARG:CD	2.86	0.43
44:BW:36:ILE:O	44:BW:39:GLN:CD	2.61	0.43
45:BX:34:SER:CB	45:BX:49:ARG:HA	2.48	0.43
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.18	0.43
49:B1:42:VAL:O	49:B1:42:VAL:CG1	2.66	0.43
50:B2:1:MET:HE1	50:B2:2:LYS:HB3	2.00	0.43
50:B2:20:ALA:O	50:B2:23:ALA:HB3	2.18	0.43
1:CB:131:LYS:O	1:CB:131:LYS:HE3	2.18	0.43
3:CD:25:ARG:HG2	3:CD:25:ARG:HH11	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:46:GLN:OE1	5:CF:55:HIS:O	2.37	0.43
8:CI:119:LYS:O	8:CI:119:LYS:HG3	2.19	0.43
9:CJ:30:LYS:HG3	9:CJ:36:VAL:HG22	2.00	0.43
13:CN:88:MET:HE1	13:CN:97:LYS:HD2	2.01	0.43
14:CO:10:ILE:HA	14:CO:13:GLU:HB2	2.00	0.43
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.48	0.43
53:CA:237:G:C2'	53:CA:238:A:H5'	2.47	0.43
53:CA:250:A:O2'	53:CA:251:G:H5"	2.19	0.43
53:CA:650:G:N3	53:CA:650:G:H2'	2.33	0.43
53:CA:790:A:H2'	53:CA:791:G:O4'	2.18	0.43
53:CA:983:A:HO2'	53:CA:984:C:H5'	1.83	0.43
53:CA:1294:G:C8	53:CA:1294:G:OP2	2.72	0.43
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.63	0.43
53:CA:1408:A:C2	53:CA:1494:G:C2	3.06	0.43
53:CA:1451:U:C2	53:CA:1453:G:O6	2.71	0.43
22:DA:57:C:O2'	41:DT:36:LYS:HE2	2.18	0.43
22:DA:181:A:C2	22:DA:434:U:H1'	2.52	0.43
22:DA:201:C:C4	22:DA:202:U:C5	3.06	0.43
22:DA:422:A:O2'	22:DA:423:A:C5'	2.66	0.43
22:DA:447:A:C8	22:DA:473:G:C6	3.05	0.43
22:DA:775:G:OP1	24:DC:47:ARG:NH2	2.51	0.43
22:DA:1059:G:H21	30:DI:130:GLY:C	2.26	0.43
22:DA:1329:U:O2'	22:DA:1330:C:P	2.76	0.43
22:DA:1380:G:H1'	22:DA:1569:A:H61	1.83	0.43
22:DA:1441:G:C6	22:DA:1442:U:C4	3.06	0.43
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.43
22:DA:1527:G:H1'	22:DA:1546:G:N2	2.33	0.43
22:DA:1666:G:H4'	32:DK:6:THR:HG23	1.99	0.43
22:DA:1838:C:C5	22:DA:1899:A:C5	3.06	0.43
22:DA:1993:U:H4'	25:DD:133:THR:HG21	2.00	0.43
22:DA:2093:G:O2'	22:DA:2094:A:P	2.76	0.43
22:DA:2642:G:C2	22:DA:2773:C:C2	3.06	0.43
22:DA:2748:A:C2	22:DA:2749:A:C4	3.07	0.43
24:DC:76:VAL:O	24:DC:93:VAL:O	2.36	0.43
25:DD:137:SER:HB3	25:DD:138:LEU:CD2	2.40	0.43
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.00	0.43
26:DE:48:THR:C	26:DE:50:ALA:H	2.26	0.43
27:DF:65:LEU:H	27:DF:65:LEU:CD2	2.30	0.43
28:DG:126:THR:HG22	28:DG:127:GLN:N	2.28	0.43
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.42	0.43
34:DM:71:LYS:HA	34:DM:72:PRO:HD3	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.15	0.43
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.83	0.43
37:DP:83:ILE:HD13	37:DP:83:ILE:O	2.18	0.43
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.32	0.43
39:DR:49:ILE:O	39:DR:49:ILE:HG13	2.18	0.43
40:DS:59:GLU:CD	40:DS:66:ILE:HG23	2.44	0.43
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.33	0.43
43:DV:61:LEU:HD23	43:DV:61:LEU:N	2.25	0.43
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.43	0.43
49:D1:13:SER:OG	49:D1:46:VAL:HG22	2.17	0.43
1:AB:38:HIS:CD2	1:AB:38:HIS:H	2.35	0.43
1:AB:82:ALA:O	1:AB:85:SER:OG	2.37	0.43
3:AD:28:ASP:HB2	3:AD:33:ILE:HB	2.00	0.43
3:AD:84:ASN:HD22	3:AD:87:GLU:HG2	1.83	0.43
3:AD:196:GLU:C	3:AD:198:LEU:N	2.73	0.43
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.18	0.43
7:AH:77:VAL:O	7:AH:78:SER:C	2.59	0.43
11:AL:22:ALA:HB1	11:AL:56:LEU:HD12	2.00	0.43
11:AL:82:ARG:HB2	11:AL:97:VAL:HG23	2.00	0.43
11:AL:88:ASP:HB2	21:AA:523:A:H61	1.83	0.43
18:AS:50:VAL:CG2	18:AS:70:LEU:HB3	2.46	0.43
18:AS:79:TYR:CG	18:AS:80:ARG:N	2.84	0.43
20:AU:7:GLU:HB2	20:AU:11:PHE:CE1	2.53	0.43
21:AA:100:G:C6	21:AA:101:A:C6	3.06	0.43
21:AA:175:C:O2'	21:AA:176:C:H5'	2.19	0.43
21:AA:399:G:H2'	21:AA:400:C:C6	2.53	0.43
21:AA:895:G:C5	21:AA:896:C:C4	3.06	0.43
21:AA:1068:G:N7	21:AA:1094:G:H2'	2.34	0.43
21:AA:1164:G:C6	21:AA:1165:U:C4	3.06	0.43
22:BA:685:A:H2'	22:BA:773:U:O4	2.18	0.43
22:BA:1061:U:H6	22:BA:1070:A:N9	2.17	0.43
22:BA:1082:U:C2	22:BA:1083:U:O2	2.71	0.43
22:BA:1416:G:O2'	22:BA:1417:C:O5'	2.36	0.43
22:BA:1471:G:H2'	22:BA:1472:C:C6	2.53	0.43
22:BA:1733:G:O2'	22:BA:1734:G:C5'	2.67	0.43
22:BA:2134:A:C6	22:BA:2135:A:N6	2.87	0.43
22:BA:2536:G:C6	22:BA:2537:U:C4	3.06	0.43
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.53	0.43
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.53	0.43
22:BA:2825:G:H5"	22:BA:2826:A:OP2	2.18	0.43
25:BD:186:LEU:HA	25:BD:186:LEU:HD12	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:5:LEU:O	26:BE:6:LYS:C	2.61	0.43
26:BE:96:VAL:O	26:BE:96:VAL:HG12	2.14	0.43
26:BE:126:VAL:HG22	26:BE:127:GLU:H	1.82	0.43
26:BE:127:GLU:CD	26:BE:127:GLU:H	2.25	0.43
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.35	0.43
29:BH:82:SER:HA	29:BH:101:ASP:OD1	2.19	0.43
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.45	0.43
34:BM:81:ARG:HG3	34:BM:82:MET:H	1.83	0.43
37:BP:8:GLU:HB3	37:BP:54:LEU:CD2	2.48	0.43
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.53	0.43
38:BQ:77:LYS:HE2	38:BQ:116:LEU:HD23	1.99	0.43
45:BX:32:LEU:HD12	45:BX:32:LEU:H	1.83	0.43
46:BY:7:ARG:CA	46:BY:60:LYS:HZ3	2.31	0.43
50:B2:35:ARG:HG3	50:B2:42:LEU:HD11	1.99	0.43
2:CC:86:LEU:O	2:CC:90:VAL:HG13	2.18	0.43
2:CC:106:ARG:HD3	2:CC:106:ARG:H	1.83	0.43
2:CC:147:GLY:O	2:CC:202:PHE:N	2.47	0.43
3:CD:12:ARG:NE	3:CD:36:ALA:O	2.52	0.43
3:CD:195:ASN:OD1	3:CD:195:ASN:N	2.50	0.43
10:CK:79:LYS:HB3	10:CK:80:ASN:OD1	2.19	0.43
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.83	0.43
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	2.00	0.43
53:CA:375:U:C2	53:CA:376:G:C8	3.06	0.43
53:CA:1006:G:N3	53:CA:1006:G:H2'	2.32	0.43
22:DA:137:U:C4	22:DA:138:U:C2	3.07	0.43
22:DA:333:G:C2	22:DA:334:C:C5	3.06	0.43
22:DA:470:A:C6	22:DA:471:A:C6	3.06	0.43
22:DA:487:C:C2'	22:DA:488:G:H5'	2.48	0.43
22:DA:617:G:H2'	22:DA:618:G:H8	1.82	0.43
22:DA:936:A:C6	22:DA:937:C:C4	3.07	0.43
22:DA:1056:G:H21	22:DA:1102:C:H41	1.67	0.43
22:DA:1332:G:C6	22:DA:1609:A:C8	3.06	0.43
22:DA:1333:G:O2'	22:DA:1334:G:H5'	2.19	0.43
22:DA:1809:A:C2'	22:DA:1810:A:H8	2.29	0.43
22:DA:2009:A:C6	22:DA:2010:G:N7	2.86	0.43
22:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.48	0.43
22:DA:2735:G:C4	22:DA:2736:A:C8	3.06	0.43
22:DA:2884:U:P	48:D0:40:HIS:HE2	2.41	0.43
24:DC:1:ALA:O	24:DC:18:VAL:HG23	2.18	0.43
24:DC:62:ARG:CG	24:DC:62:ARG:NH2	2.81	0.43
27:DF:31:GLU:O	27:DF:95:MET:HE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.18	0.43
28:DG:48:THR:O	28:DG:49:LEU:CB	2.60	0.43
29:DH:109:GLU:HB3	29:DH:110:VAL:H	1.54	0.43
31:DJ:119:PHE:C	31:DJ:121:LYS:H	2.26	0.43
37:DP:28:LYS:O	37:DP:80:VAL:O	2.36	0.43
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.18	0.43
40:DS:96:ILE:O	40:DS:96:ILE:HG12	2.17	0.43
47:DZ:40:THR:H	47:DZ:43:ILE:CD1	2.28	0.43
1:AB:58:LYS:HD3	1:AB:58:LYS:C	2.44	0.43
1:AB:162:VAL:HG22	1:AB:184:ALA:HB2	1.99	0.43
2:AC:36:PHE:HZ	13:AN:89:ARG:HH12	1.67	0.43
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.59	0.43
9:AJ:59:LYS:HE3	21:AA:972:C:P	2.59	0.43
14:AO:21:THR:HG23	21:AA:657:U:O2	2.18	0.43
14:AO:32:THR:HG21	14:AO:84:LEU:HG	2.01	0.43
18:AS:35:ARG:HB3	18:AS:71:GLY:HA3	2.01	0.43
18:AS:54:ARG:H	18:AS:54:ARG:HG3	1.64	0.43
20:AU:23:GLU:HB3	20:AU:24:LYS:H	1.52	0.43
21:AA:11:G:C6	21:AA:12:U:C4	3.06	0.43
21:AA:71:A:O2'	21:AA:72:A:C5'	2.66	0.43
21:AA:120:A:C5	21:AA:122:G:C6	3.07	0.43
21:AA:139:A:C2'	21:AA:140:U:H5'	2.49	0.43
21:AA:372:C:C4'	21:AA:373:A:OP1	2.67	0.43
21:AA:451:A:C6	21:AA:480:U:H2'	2.53	0.43
21:AA:591:U:H2'	21:AA:592:G:H8	1.84	0.43
21:AA:719:C:H5"	21:AA:720:C:OP2	2.19	0.43
21:AA:781:A:C4	21:AA:802:A:C2	3.06	0.43
21:AA:841:C:H3'	21:AA:843:U:OP2	2.18	0.43
21:AA:935:A:C2	21:AA:936:C:C6	3.06	0.43
21:AA:1348:U:O2'	21:AA:1349:A:H5'	2.17	0.43
22:BA:250:G:H2'	22:BA:251:A:H8	1.79	0.43
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.53	0.43
22:BA:1130:U:O2'	22:BA:1131:G:H8	2.01	0.43
22:BA:1452:G:H3'	57:BA:3420:HOH:O	2.18	0.43
22:BA:1508:A:O2'	22:BA:1509:A:C8	2.65	0.43
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.34	0.43
22:BA:1911:U:O4	22:BA:1918:A:H2'	2.18	0.43
22:BA:2216:G:H2'	22:BA:2217:G:C8	2.52	0.43
22:BA:2356:U:H5"	44:BW:16:GLU:HG3	2.00	0.43
22:BA:2461:A:H2'	22:BA:2462:C:C6	2.52	0.43
24:BC:190:THR:CG2	24:BC:191:LEU:N	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:34:VAL:HG22	25:BD:94:GLN:N	2.32	0.43
25:BD:137:SER:O	25:BD:138:LEU:HB2	2.18	0.43
28:BG:36:LEU:HD13	28:BG:36:LEU:HA	1.74	0.43
28:BG:59:ASP:O	28:BG:62:ALA:HB3	2.18	0.43
32:BK:43:ILE:HG12	32:BK:56:ASP:HB2	1.99	0.43
34:BM:53:MET:HE3	34:BM:53:MET:HB2	1.60	0.43
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.82	0.43
37:BP:91:VAL:O	37:BP:92:ARG:C	2.62	0.43
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.47	0.43
39:BR:28:ALA:O	39:BR:63:VAL:HG21	2.19	0.43
41:BT:28:ASN:OD1	41:BT:29:THR:HG22	2.19	0.43
45:BX:36:ARG:HG2	45:BX:45:PHE:HB3	2.00	0.43
47:BZ:9:THR:HG23	47:BZ:10:ARG:HB2	2.00	0.43
49:B1:35:LEU:HD23	49:B1:35:LEU:C	2.43	0.43
1:CB:95:TRP:CH2	1:CB:171:ALA:HA	2.53	0.43
2:CC:76:ILE:HG12	2:CC:83:VAL:HG11	2.01	0.43
5:CF:49:TYR:HB2	5:CF:50:PRO:HD2	2.01	0.43
8:CI:59:LYS:HE2	8:CI:59:LYS:HB3	1.79	0.43
9:CJ:81:GLU:O	9:CJ:86:ALA:HB3	2.18	0.43
10:CK:15:VAL:O	10:CK:16:SER:HB2	2.19	0.43
15:CP:69:ASP:O	15:CP:70:ARG:C	2.62	0.43
53:CA:232:G:H2'	53:CA:233:C:O4'	2.18	0.43
53:CA:275:G:O2'	53:CA:276:G:H5'	2.18	0.43
53:CA:769:G:H4'	53:CA:1513:A:H4'	2.00	0.43
53:CA:923:A:O4'	53:CA:1398:A:C2	2.72	0.43
53:CA:960:U:C4'	53:CA:961:U:H5"	2.48	0.43
22:DA:95:A:HO2'	46:DY:39:GLN:HA	1.82	0.43
22:DA:206:U:H2'	22:DA:207:A:C8	2.53	0.43
22:DA:296:U:C2	22:DA:297:G:C8	3.06	0.43
22:DA:492:A:O2'	22:DA:493:G:C5'	2.67	0.43
22:DA:526:A:C6	22:DA:2626:C:C4'	3.01	0.43
22:DA:638:G:O2'	22:DA:639:U:H5'	2.19	0.43
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.49	0.43
22:DA:856:G:C2	22:DA:922:C:C2	3.07	0.43
22:DA:962:G:H2'	22:DA:963:U:C6	2.53	0.43
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.49	0.43
22:DA:1249:U:H4'	38:DQ:3:VAL:HB	2.01	0.43
22:DA:1352:U:H5	22:DA:1377:G:C6	2.34	0.43
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.17	0.43
22:DA:1439:A:C6	22:DA:1552:A:C8	3.07	0.43
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1916:A:H2'	22:DA:1917:U:H6	1.81	0.43
22:DA:2035:G:H4'	22:DA:2036:C:OP2	2.18	0.43
22:DA:2312:U:O2	22:DA:2312:U:C2'	2.65	0.43
22:DA:2388:A:H5'	22:DA:2389:G:OP2	2.18	0.43
22:DA:2734:A:H2'	22:DA:2735:G:C5'	2.49	0.43
54:DB:44:G:H3'	27:DF:91:ARG:NE	2.33	0.43
24:DC:31:PRO:C	24:DC:32:LEU:HG	2.44	0.43
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.18	0.43
24:DC:206:LYS:HG3	24:DC:209:ALA:H	1.84	0.43
25:DD:79:LEU:N	25:DD:79:LEU:HD22	2.33	0.43
27:DF:8:LYS:HG3	27:DF:12:VAL:HG21	2.01	0.43
27:DF:37:MET:CA	27:DF:151:LEU:HB3	2.49	0.43
28:DG:122:ALA:HB2	28:DG:132:LEU:HA	2.00	0.43
29:DH:38:PRO:O	29:DH:40:THR:N	2.52	0.43
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.33	0.43
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.19	0.43
34:DM:76:LYS:HG2	34:DM:80:VAL:CG1	2.48	0.43
37:DP:28:LYS:NZ	37:DP:28:LYS:H	2.17	0.43
38:DQ:25:GLY:C	38:DQ:27:ARG:H	2.26	0.43
38:DQ:57:ARG:CZ	38:DQ:92:LYS:HE2	2.48	0.43
39:DR:61:ALA:HB1	39:DR:96:VAL:HB	2.00	0.43
41:DT:19:LYS:HD3	41:DT:19:LYS:HA	1.68	0.43
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.34	0.43
50:D2:31:LEU:HA	50:D2:34:ARG:CB	2.43	0.43
51:D3:33:THR:CG2	51:D3:34:LYS:N	2.81	0.43
1:AB:209:VAL:CG2	1:AB:210:THR:H	2.26	0.43
4:AE:143:LEU:O	4:AE:146:MET:HB3	2.18	0.43
4:AE:152:VAL:HB	4:AE:156:ARG:HG3	2.00	0.43
5:AF:53:LYS:HG3	5:AF:54:LEU:N	2.33	0.43
9:AJ:36:VAL:HG13	9:AJ:76:ILE:HG12	2.00	0.43
10:AK:62:ALA:CB	10:AK:91:GLY:HA3	2.48	0.43
10:AK:110:THR:HG22	20:AU:4:LYS:HB2	1.97	0.43
12:AM:26:LYS:HD3	12:AM:26:LYS:HA	1.93	0.43
16:AQ:14:ASP:O	16:AQ:20:ILE:CD1	2.66	0.43
18:AS:22:VAL:HG12	18:AS:23:GLU:N	2.33	0.43
21:AA:382:A:O2'	21:AA:383:A:H5'	2.18	0.43
21:AA:574:A:H1'	21:AA:883:C:O4'	2.19	0.43
21:AA:642:A:C4	21:AA:643:C:C6	3.06	0.43
21:AA:1285:A:C5'	21:AA:1286:U:C4	3.00	0.43
21:AA:1508:A:H2'	21:AA:1509:C:O4'	2.18	0.43
22:BA:216:A:H2'	22:BA:217:A:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:580:U:H2'	22:BA:581:C:C6	2.52	0.43
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.48	0.43
22:BA:1421:G:C2	22:BA:1422:G:C8	3.06	0.43
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.37	0.43
22:BA:1607:C:H4'	22:BA:1608:A:O5'	2.19	0.43
22:BA:1607:C:N4	22:BA:1622:G:N7	2.65	0.43
22:BA:1670:C:H5"	22:BA:1671:U:OP2	2.19	0.43
22:BA:1866:A:O2'	22:BA:1867:G:H5'	2.18	0.43
22:BA:2199:A:C5'	22:BA:2200:C:H5	2.29	0.43
22:BA:2611:C:H2'	22:BA:2612:C:C6	2.53	0.43
22:BA:2691:C:C6	22:BA:2872:A:C2	3.06	0.43
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.36	0.43
25:BD:9:VAL:CG2	25:BD:10:GLY:N	2.81	0.43
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.51	0.43
28:BG:45:ALA:O	28:BG:46:ASP:CB	2.66	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.00	0.43
32:BK:1:MET:C	32:BK:2:ILE:HD12	2.43	0.43
32:BK:77:ILE:HD13	32:BK:105:ARG:HH12	1.83	0.43
32:BK:98:ARG:CA	32:BK:118:LEU:HD23	2.46	0.43
33:BL:28:GLY:C	33:BL:29:LYS:O	2.61	0.43
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.48	0.43
38:BQ:85:ALA:O	38:BQ:87:VAL:C	2.62	0.43
40:BS:56:ALA:O	40:BS:57:ASN:C	2.60	0.43
41:BT:68:LYS:CG	41:BT:69:ARG:H	2.31	0.43
45:BX:5:GLN:HE21	45:BX:49:ARG:H	1.63	0.43
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.47	0.43
1:CB:57:ASN:OD1	1:CB:219:THR:O	2.37	0.43
1:CB:77:GLU:C	1:CB:79:VAL:H	2.27	0.43
1:CB:130:LYS:O	1:CB:134:LEU:HG	2.17	0.43
2:CC:148:ILE:HG23	2:CC:169:GLU:HB3	2.00	0.43
2:CC:166:TRP:N	2:CC:166:TRP:CE3	2.86	0.43
4:CE:113:VAL:HG12	4:CE:114:LEU:N	2.34	0.43
5:CF:51:ILE:O	5:CF:54:LEU:HB2	2.19	0.43
9:CJ:42:LEU:HB3	9:CJ:43:PRO:HD2	2.00	0.43
10:CK:126:ARG:O	20:CU:33:ARG:CZ	2.67	0.43
11:CL:22:ALA:O	11:CL:58:ASN:ND2	2.50	0.43
11:CL:114:SER:CB	53:CA:35:G:H21	2.32	0.43
13:CN:76:PHE:CE2	13:CN:92:ILE:HD13	2.54	0.43
19:CT:59:ARG:C	19:CT:61:ALA:N	2.75	0.43
53:CA:65:A:N1	53:CA:381:C:C5	2.87	0.43
53:CA:106:C:O2'	53:CA:107:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:172:A:C5	53:CA:174:A:N7	2.87	0.43
53:CA:229:U:H2'	53:CA:230:G:O4'	2.18	0.43
53:CA:297:G:N2	53:CA:300:A:OP2	2.49	0.43
53:CA:338:A:H61	53:CA:351:G:H1	1.67	0.43
53:CA:441:A:H61	53:CA:493:A:H62	1.66	0.43
53:CA:545:C:H2'	53:CA:546:A:H5'	2.00	0.43
53:CA:962:C:H2'	53:CA:963:G:C8	2.53	0.43
53:CA:1046:A:H2'	53:CA:1047:G:O4'	2.18	0.43
53:CA:1130:A:N7	53:CA:1146:A:C6	2.87	0.43
53:CA:1278:G:H8	53:CA:1278:G:OP2	2.01	0.43
53:CA:1385:G:H2'	53:CA:1386:G:O4'	2.19	0.43
22:DA:17:G:H2'	22:DA:18:U:H6	1.83	0.43
22:DA:51:G:N3	22:DA:119:A:C2	2.87	0.43
22:DA:142:A:H2'	22:DA:143:C:H6	1.78	0.43
22:DA:185:G:C4	22:DA:212:G:N2	2.87	0.43
22:DA:496:G:H2'	22:DA:497:A:O4'	2.19	0.43
22:DA:575:A:H2'	22:DA:576:U:C5	2.53	0.43
22:DA:612:G:N2	22:DA:614:A:HO2'	2.16	0.43
22:DA:861:A:O2'	22:DA:862:G:H5'	2.18	0.43
22:DA:1092:C:H2'	22:DA:1093:G:O4'	2.19	0.43
22:DA:1608:A:O3'	22:DA:1609:A:H3'	2.18	0.43
22:DA:1944:U:O4'	22:DA:1955:U:H1'	2.19	0.43
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.54	0.43
22:DA:2436:G:C2	22:DA:2437:G:C8	3.06	0.43
22:DA:2492:U:O5'	22:DA:2492:U:H6	2.01	0.43
22:DA:2787:C:O2'	22:DA:2788:C:H5'	2.18	0.43
22:DA:2873:A:H5"	22:DA:2874:C:OP2	2.19	0.43
24:DC:44:ASN:O	24:DC:46:GLY:N	2.51	0.43
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.44	0.43
26:DE:58:LYS:O	26:DE:60:TRP:HD1	2.01	0.43
31:DJ:35:ARG:HA	31:DJ:40:HIS:CD2	2.54	0.43
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.18	0.43
36:DO:62:LEU:C	36:DO:62:LEU:HD13	2.44	0.43
39:DR:27:ILE:CG2	39:DR:28:ALA:H	2.14	0.43
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.81	0.43
45:DX:3:VAL:O	45:DX:3:VAL:HG23	2.17	0.43
45:DX:34:SER:O	45:DX:35:HIS:HB2	2.19	0.43
1:AB:16:GLY:HA2	1:AB:202:ASN:HB2	2.00	0.43
1:AB:67:LEU:HD21	1:AB:91:VAL:HG23	2.01	0.43
1:AB:103:TRP:NE1	1:AB:150:ILE:HD11	2.34	0.43
2:AC:58:ARG:HD2	2:AC:63:ILE:HG13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:59:PRO:O	2:AC:60:ALA:C	2.61	0.43
2:AC:120:THR:C	2:AC:122:GLN:N	2.76	0.43
2:AC:137:VAL:HG11	2:AC:169:GLU:HB3	2.01	0.43
2:AC:188:ALA:O	2:AC:194:VAL:HA	2.19	0.43
3:AD:8:LEU:HB2	21:AA:430:A:OP1	2.19	0.43
5:AF:5:GLU:HG3	5:AF:63:ASN:OD1	2.18	0.43
8:AI:113:LYS:HG2	8:AI:114:LYS:H	1.82	0.43
10:AK:19:VAL:HB	10:AK:34:THR:HG23	2.00	0.43
12:AM:44:ILE:HD12	12:AM:44:ILE:N	2.33	0.43
12:AM:89:ARG:HH11	12:AM:94:LEU:CB	2.31	0.43
12:AM:89:ARG:HG3	12:AM:96:VAL:HA	2.00	0.43
20:AU:18:PHE:HB3	20:AU:19:LYS:HE2	1.99	0.43
20:AU:27:VAL:O	20:AU:30:GLU:HB3	2.19	0.43
21:AA:34:C:H2'	21:AA:35:G:C8	2.50	0.43
21:AA:87:C:H2'	21:AA:88:U:O4'	2.19	0.43
21:AA:155:A:H2'	21:AA:156:C:H6	1.84	0.43
21:AA:214:C:O2'	21:AA:215:C:C5'	2.66	0.43
21:AA:258:G:C2	21:AA:259:G:H1'	2.54	0.43
21:AA:917:G:C6	21:AA:918:A:C6	3.07	0.43
21:AA:1450:U:H2'	21:AA:1452:C:C5	2.54	0.43
21:AA:1504:G:C3'	21:AA:1505:G:H5'	2.48	0.43
22:BA:684:G:OP1	50:B2:16:HIS:HD2	2.02	0.43
22:BA:1257:C:H5'	26:BE:78:TRP:CH2	2.54	0.43
22:BA:1269:A:H8	22:BA:1269:A:O5'	2.02	0.43
22:BA:1287:A:O2'	22:BA:1288:G:H5'	2.18	0.43
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.53	0.43
22:BA:1636:U:H2'	22:BA:1637:A:C8	2.53	0.43
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.19	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.43
22:BA:2665:A:C2	22:BA:2666:C:C2	3.07	0.43
22:BA:2727:A:H2'	22:BA:2728:U:C6	2.53	0.43
22:BA:2807:U:O5'	22:BA:2807:U:H6	2.02	0.43
24:BC:257:ARG:HG3	24:BC:269:ARG:NH1	2.29	0.43
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.48	0.43
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.53	0.43
27:BF:129:MET:CG	27:BF:153:ILE:CD1	2.87	0.43
28:BG:39:ALA:HB1	28:BG:57:TYR:CB	2.48	0.43
28:BG:39:ALA:HB1	28:BG:57:TYR:HB3	2.00	0.43
28:BG:59:ASP:CB	28:BG:63:GLN:HG2	2.44	0.43
28:BG:120:ILE:HD13	28:BG:120:ILE:C	2.43	0.43
29:BH:27:ARG:NH1	45:BX:59:ASP:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.43
32:BK:119:ALA:HA	32:BK:120:PRO:HD2	1.83	0.43
33:BL:85:VAL:HG21	33:BL:94:THR:HG23	1.99	0.43
34:BM:111:GLU:OE2	34:BM:111:GLU:HA	2.17	0.43
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.47	0.43
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.34	0.43
41:BT:19:LYS:O	41:BT:23:ALA:N	2.29	0.43
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.18	0.43
43:BV:68:LYS:O	43:BV:69:GLU:C	2.62	0.43
44:BW:37:VAL:HG13	44:BW:55:ASP:O	2.17	0.43
47:BZ:30:ARG:HE	47:BZ:30:ARG:HB2	1.48	0.43
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.99	0.43
2:CC:130:ARG:O	2:CC:133:MET:HG2	2.19	0.43
3:CD:150:LYS:HA	3:CD:150:LYS:HD3	1.89	0.43
4:CE:12:GLU:CG	4:CE:63:MET:HE3	2.48	0.43
10:CK:121:ARG:HH21	20:CU:35:GLU:HB2	1.84	0.43
10:CK:126:ARG:HB2	20:CU:33:ARG:CD	2.42	0.43
12:CM:8:ILE:N	12:CM:9:PRO:CD	2.82	0.43
15:CP:62:GLY:O	15:CP:63:GLN:HB2	2.18	0.43
16:CQ:46:HIS:HB2	16:CQ:70:LYS:CE	2.43	0.43
20:CU:28:LEU:C	20:CU:28:LEU:CD2	2.92	0.43
53:CA:254:G:C4	53:CA:255:G:C8	3.06	0.43
53:CA:595:A:H5"	53:CA:596:A:OP1	2.19	0.43
53:CA:607:A:N1	53:CA:608:A:C2	2.87	0.43
53:CA:734:G:H2'	53:CA:735:C:H6	1.81	0.43
53:CA:790:A:C6	53:CA:791:G:C5	3.06	0.43
53:CA:961:U:O4	53:CA:983:A:C6	2.71	0.43
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.83	0.43
53:CA:1179:A:C2'	53:CA:1180:A:H5'	2.49	0.43
53:CA:1241:G:C2	53:CA:1242:G:C5	3.07	0.43
22:DA:54:G:C5	22:DA:55:G:C8	3.07	0.43
22:DA:121:G:C2	22:DA:131:A:C5	3.06	0.43
22:DA:195:A:C5	22:DA:198:C:C5	3.06	0.43
22:DA:352:A:C6	22:DA:353:C:C2	3.07	0.43
22:DA:374:A:C6	22:DA:401:A:N7	2.86	0.43
22:DA:455:C:H3'	22:DA:456:C:H5'	1.99	0.43
22:DA:465:G:C4'	50:D2:16:HIS:CD2	3.01	0.43
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.47	0.43
22:DA:724:U:C4	22:DA:725:G:C6	3.07	0.43
22:DA:1267:U:O2'	22:DA:1268:A:C5'	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1268:A:C6	22:DA:2013:A:C8	3.07	0.43
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.62	0.43
22:DA:1695:G:C8	24:DC:7:PRO:O	2.63	0.43
22:DA:1789:A:H5"	24:DC:218:THR:O	2.18	0.43
22:DA:1793:C:H2'	22:DA:1794:A:O4'	2.19	0.43
22:DA:1867:G:O2'	22:DA:1868:C:C5'	2.67	0.43
22:DA:1925:C:C6	22:DA:1925:C:C3'	3.02	0.43
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.19	0.43
22:DA:2092:U:H4'	22:DA:2093:G:OP1	2.19	0.43
22:DA:2092:U:C5	22:DA:2225:A:O2'	2.71	0.43
22:DA:2237:G:H5"	22:DA:2238:G:OP1	2.19	0.43
22:DA:2407:A:H2'	22:DA:2408:U:C6	2.54	0.43
22:DA:2831:G:N2	22:DA:2884:U:OP2	2.52	0.43
22:DA:2837:A:N6	22:DA:2882:A:C6	2.87	0.43
54:DB:58:A:O2'	54:DB:59:A:H5'	2.19	0.43
24:DC:30:ALA:C	24:DC:32:LEU:H	2.26	0.43
24:DC:245:THR:C	24:DC:247:TRP:N	2.77	0.43
27:DF:131:VAL:O	27:DF:132:ARG:HB2	2.19	0.43
28:DG:31:GLU:O	28:DG:32:LEU:HB2	2.18	0.43
28:DG:51:PHE:CE2	28:DG:68:ARG:HA	2.52	0.43
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.19	0.43
30:DI:54:ILE:HG23	30:DI:70:THR:HG21	2.01	0.43
32:DK:103:VAL:HB	32:DK:104:THR:H	1.63	0.43
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.18	0.43
37:DP:95:LYS:HB3	37:DP:97:TYR:CE1	2.54	0.43
38:DQ:46:TYR:CE2	38:DQ:50:ARG:NH1	2.87	0.43
38:DQ:93:ILE:C	38:DQ:95:ALA:H	2.27	0.43
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.84	0.43
42:DU:3:LYS:HD3	42:DU:82:VAL:CG2	2.47	0.43
45:DX:13:THR:HA	45:DX:27:ARG:HA	2.00	0.43
45:DX:32:LEU:N	45:DX:32:LEU:HD22	2.33	0.43
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	2.01	0.43
1:AB:128:LEU:HB3	1:AB:129:THR:H	1.69	0.43
3:AD:7:LYS:HB2	3:AD:20:LEU:HB3	1.99	0.43
3:AD:19:PHE:N	3:AD:19:PHE:CD1	2.87	0.43
3:AD:144:ILE:O	3:AD:145:ARG:C	2.62	0.43
4:AE:139:THR:C	4:AE:142:GLY:H	2.27	0.43
5:AF:14:GLN:OE1	5:AF:17:GLN:HB2	2.19	0.43
7:AH:48:PHE:O	7:AH:49:LYS:HG3	2.19	0.43
10:AK:82:GLU:CD	10:AK:82:GLU:N	2.77	0.43
21:AA:97:G:H2'	21:AA:98:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:213:G:C8	21:AA:214:C:C5	3.06	0.43
21:AA:577:G:H2'	21:AA:578:C:C6	2.53	0.43
21:AA:652:U:O2'	21:AA:653:U:P	2.77	0.43
21:AA:715:A:H8	21:AA:715:A:O5'	2.00	0.43
21:AA:941:G:N2	21:AA:942:G:H1'	2.33	0.43
21:AA:1418:A:C2	21:AA:1483:A:C2	3.07	0.43
22:BA:28:A:C4	22:BA:29:U:C6	3.06	0.43
22:BA:150:U:H2'	22:BA:151:C:C6	2.54	0.43
22:BA:324:A:H2'	22:BA:325:G:C8	2.53	0.43
22:BA:391:A:C6	22:BA:411:G:C2	3.07	0.43
22:BA:641:U:H5"	22:BA:642:U:OP2	2.18	0.43
22:BA:763:G:H8	22:BA:763:G:H2'	1.52	0.43
22:BA:943:A:H2'	22:BA:944:C:O5'	2.19	0.43
22:BA:1000:A:C6	22:BA:1001:A:C6	3.07	0.43
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.19	0.43
22:BA:1262:A:H2'	22:BA:1262:A:N3	2.33	0.43
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.18	0.43
22:BA:1874:C:H2'	22:BA:1875:G:O4'	2.18	0.43
22:BA:2023:C:H5"	22:BA:2023:C:H6	1.83	0.43
22:BA:2287:A:C2	22:BA:2289:G:C6	3.07	0.43
22:BA:2504:U:O5'	22:BA:2504:U:H6	2.01	0.43
24:BC:106:PRO:HA	24:BC:141:HIS:NE2	2.34	0.43
27:BF:35:LEU:CD1	27:BF:88:VAL:HB	2.45	0.43
33:BL:100:ILE:HD12	33:BL:100:ILE:C	2.44	0.43
38:BQ:82:LEU:HD22	38:BQ:88:GLU:OE2	2.18	0.43
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.18	0.43
42:BU:13:LEU:HD12	42:BU:69:VAL:C	2.44	0.43
42:BU:27:VAL:HA	42:BU:33:VAL:HG12	2.01	0.43
44:BW:8:SER:O	44:BW:9:THR:HB	2.18	0.43
44:BW:40:ARG:NH1	44:BW:45:HIS:NE2	2.65	0.43
44:BW:46:ALA:HB2	44:BW:78:PHE:HB3	2.01	0.43
45:BX:6:VAL:HG13	45:BX:7:THR:HG23	2.01	0.43
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.48	0.43
52:B4:36:ARG:CG	52:B4:37:GLN:H	2.12	0.43
1:CB:49:PHE:O	1:CB:53:LEU:N	2.32	0.43
2:CC:39:ARG:HG2	2:CC:54:ILE:HG21	2.01	0.43
2:CC:117:ASP:HA	2:CC:120:THR:HB	1.99	0.43
3:CD:144:ILE:HD12	3:CD:177:MET:CG	2.48	0.43
9:CJ:79:PRO:C	9:CJ:84:VAL:HG21	2.43	0.43
10:CK:121:ARG:O	53:CA:778:G:O2'	2.36	0.43
13:CN:62:ARG:HB3	13:CN:68:ARG:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:75:ILE:HA	15:CP:78:VAL:CG2	2.48	0.43
20:CU:9:GLU:HB2	20:CU:11:PHE:CE2	2.53	0.43
53:CA:65:A:C2'	53:CA:382:A:H61	2.31	0.43
53:CA:160:A:O2'	53:CA:344:A:N6	2.51	0.43
53:CA:579:A:H2'	53:CA:580:C:H6	1.84	0.43
53:CA:728:A:C6	53:CA:729:A:C6	3.07	0.43
53:CA:1432:G:H1'	53:CA:1468:A:N6	2.34	0.43
22:DA:45:G:H4'	22:DA:46:G:H5'	2.00	0.43
22:DA:164:C:H6	22:DA:164:C:H5"	1.83	0.43
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.34	0.43
22:DA:255:A:H2'	22:DA:256:A:O4'	2.18	0.43
22:DA:301:G:O2'	22:DA:302:C:P	2.76	0.43
22:DA:411:G:C4'	22:DA:412:A:OP1	2.66	0.43
22:DA:503:A:C4	22:DA:506:G:N7	2.87	0.43
22:DA:528:A:H2	22:DA:2043:C:C5'	2.32	0.43
22:DA:668:A:N7	22:DA:670:A:C8	2.87	0.43
22:DA:728:G:N3	22:DA:730:A:C8	2.87	0.43
22:DA:855:G:N3	44:DW:23:LYS:HG2	2.34	0.43
22:DA:1204:A:H4'	22:DA:1205:A:H5"	1.99	0.43
22:DA:1441:G:H4'	22:DA:1628:G:OP1	2.18	0.43
22:DA:1493:C:H2'	22:DA:1493:C:O2	2.19	0.43
22:DA:1654:A:C2'	22:DA:1655:A:H8	2.31	0.43
22:DA:1812:U:H1'	24:DC:43:ASN:HD21	1.82	0.43
22:DA:1819:A:C3'	22:DA:1820:U:H5'	2.46	0.43
22:DA:2145:C:H6	22:DA:2145:C:H2'	1.72	0.43
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.54	0.43
22:DA:2839:G:N2	22:DA:2880:C:C4	2.86	0.43
22:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.99	0.43
54:DB:42:C:C4	54:DB:43:C:N4	2.87	0.43
27:DF:1:ALA:HB3	27:DF:93:GLU:OE2	2.18	0.43
28:DG:87:GLN:HA	28:DG:129:GLU:HA	2.00	0.43
30:DI:76:ALA:O	30:DI:135:MET:HE1	2.19	0.43
38:DQ:91:ARG:HH12	39:DR:10:LYS:HB3	1.75	0.43
39:DR:5:PHE:HA	39:DR:39:LEU:HD23	2.00	0.43
40:DS:70:LYS:O	40:DS:72:THR:N	2.52	0.43
50:D2:28:ARG:C	50:D2:30:VAL:N	2.77	0.43
2:AC:49:ALA:HB1	2:AC:75:VAL:HG22	2.00	0.43
4:AE:35:LEU:HD12	4:AE:35:LEU:HA	1.70	0.43
6:AG:28:ILE:HG13	6:AG:100:MET:HE3	2.01	0.43
8:AI:3:ASN:ND2	8:AI:4:GLN:H	2.16	0.43
9:AJ:49:PHE:CE1	13:AN:76:PHE:HZ	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AQ:6:THR:C	16:AQ:7:LEU:HD12	2.44	0.43
17:AR:69:TYR:CE1	21:AA:674:G:H4'	2.53	0.43
21:AA:137:U:H1'	21:AA:227:G:N2	2.33	0.43
21:AA:345:C:OP1	37:BP:35:SER:HB2	2.19	0.43
21:AA:358:U:H2'	21:AA:359:G:H8	1.83	0.43
21:AA:424:G:O2'	21:AA:425:G:H5'	2.19	0.43
21:AA:1124:G:O2'	21:AA:1125:U:C6	2.72	0.43
21:AA:1322:C:O2'	21:AA:1323:G:O5'	2.36	0.43
21:AA:1387:G:H2'	21:AA:1388:C:C6	2.54	0.43
21:AA:1462:C:H2'	21:AA:1463:U:O4'	2.18	0.43
21:AA:1526:G:H2'	21:AA:1527:U:H6	1.84	0.43
22:BA:380:G:H2'	22:BA:381:G:O4'	2.19	0.43
22:BA:449:A:C2'	22:BA:450:G:H5'	2.48	0.43
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.40	0.43
22:BA:1820:U:O2	24:BC:200:MET:HB2	2.19	0.43
22:BA:2148:G:O2'	22:BA:2149:U:O5'	2.37	0.43
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.67	0.43
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.18	0.43
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.53	0.43
26:BE:37:ALA:C	26:BE:39:ALA:N	2.76	0.43
28:BG:115:GLN:N	28:BG:115:GLN:OE1	2.52	0.43
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.34	0.43
30:BI:49:GLU:C	30:BI:50:LYS:HD3	2.44	0.43
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.47	0.43
34:BM:34:LYS:HD3	43:BV:81:PRO:O	2.19	0.43
35:BN:116:VAL:O	35:BN:117:ASP:HB3	2.19	0.43
35:BN:116:VAL:O	35:BN:116:VAL:HG22	2.18	0.43
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.80	0.43
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.34	0.43
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.54	0.43
47:BZ:8:GLN:O	47:BZ:53:MET:O	2.35	0.43
1:CB:94:ARG:HD2	53:CA:1100:C:OP2	2.19	0.43
1:CB:130:LYS:HA	1:CB:130:LYS:HD3	1.83	0.43
1:CB:132:GLU:OE1	1:CB:136:ARG:HG3	2.18	0.43
2:CC:126:ARG:HA	2:CC:126:ARG:NE	2.33	0.43
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.84	0.43
3:CD:127:ARG:CZ	3:CD:127:ARG:HB2	2.49	0.43
5:CF:1:MET:HE1	5:CF:33:GLU:O	2.18	0.43
5:CF:3:HIS:HB2	5:CF:92:THR:HA	2.00	0.43
5:CF:96:VAL:HG12	5:CF:97:THR:N	2.33	0.43
9:CJ:11:LYS:HB3	9:CJ:71:LEU:CD1	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:103:GLY:O	10:CK:104:PHE:C	2.62	0.43
12:CM:13:HIS:O	12:CM:14:ALA:C	2.60	0.43
14:CO:44:GLU:HG2	14:CO:45:HIS:CD2	2.54	0.43
53:CA:155:A:H2'	53:CA:156:C:O4'	2.19	0.43
53:CA:243:A:C4'	53:CA:244:U:H5'	2.46	0.43
53:CA:1133:G:N2	53:CA:1142:G:C4	2.87	0.43
53:CA:1181:G:H2'	53:CA:1182:G:C8	2.54	0.43
53:CA:1352:C:O2	53:CA:1371:G:C2	2.72	0.43
53:CA:1386:G:C2	53:CA:1387:G:C8	3.07	0.43
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.53	0.43
22:DA:68:G:N2	22:DA:69:C:H1'	2.34	0.43
22:DA:352:A:C2	22:DA:353:C:H1'	2.53	0.43
22:DA:469:G:OP2	26:DE:54:GLY:O	2.37	0.43
22:DA:763:G:C4	22:DA:765:C:C6	3.07	0.43
22:DA:858:G:C5	22:DA:2268:A:C2	3.07	0.43
22:DA:983:A:N6	22:DA:984:A:C2	2.87	0.43
22:DA:1441:G:C2	22:DA:1442:U:C2	3.07	0.43
22:DA:1500:G:N1	22:DA:1501:G:C5	2.87	0.43
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.17	0.43
22:DA:1549:A:H2'	22:DA:1550:C:O4'	2.19	0.43
22:DA:1596:A:C6	22:DA:1597:A:C6	3.07	0.43
22:DA:1596:A:N6	22:DA:1597:A:N6	2.66	0.43
22:DA:1744:A:H3'	22:DA:1745:A:C8	2.49	0.43
22:DA:1754:A:N6	22:DA:1755:A:C6	2.87	0.43
22:DA:1767:G:C2	22:DA:1986:C:C2	3.06	0.43
22:DA:1992:G:N2	22:DA:1995:U:C5	2.87	0.43
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.54	0.43
22:DA:2102:G:C5	22:DA:2103:C:C5	3.07	0.43
22:DA:2261:C:N1	22:DA:2280:G:N2	2.66	0.43
24:DC:131:MET:CG	24:DC:134:ILE:HD11	2.40	0.43
24:DC:174:ARG:HA	24:DC:180:MET:HG2	2.01	0.43
25:DD:184:ARG:O	25:DD:186:LEU:HD13	2.19	0.43
26:DE:129:PRO:HG3	26:DE:159:LEU:HB3	2.00	0.43
27:DF:39:VAL:HG13	27:DF:49:LEU:CD2	2.49	0.43
27:DF:41:GLU:O	27:DF:43:ILE:HG22	2.19	0.43
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	2.00	0.43
29:DH:96:THR:HA	29:DH:113:SER:OG	2.19	0.43
32:DK:107:LEU:C	32:DK:109:SER:N	2.77	0.43
33:DL:137:ALA:C	33:DL:139:GLY:H	2.26	0.43
35:DN:21:PHE:N	35:DN:21:PHE:CD1	2.87	0.43
35:DN:73:ASN:HA	35:DN:76:VAL:CG2	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:26:GLU:OE1	37:DP:28:LYS:HE2	2.19	0.43
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	2.01	0.43
40:DS:27:LYS:O	40:DS:28:LYS:C	2.62	0.43
41:DT:14:PRO:HG2	41:DT:15:HIS:H	1.84	0.43
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.67	0.43
50:D2:24:THR:O	50:D2:28:ARG:HB3	2.19	0.43
52:D4:27:CYS:CB	52:D4:33:HIS:HB2	2.49	0.43
1:AB:133:ALA:C	1:AB:137:THR:HG23	2.44	0.43
3:AD:172:VAL:HG13	3:AD:173:ASP:N	2.34	0.43
4:AE:60:GLN:C	4:AE:62:ALA:N	2.74	0.43
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.19	0.43
5:AF:85:ILE:H	5:AF:85:ILE:HG12	1.67	0.43
6:AG:21:LEU:HD23	6:AG:21:LEU:HA	1.74	0.43
12:AM:15:VAL:HG13	12:AM:40:GLU:O	2.19	0.43
12:AM:47:LEU:HD23	12:AM:51:GLN:HB3	2.01	0.43
14:AO:26:VAL:O	14:AO:27:GLN:C	2.62	0.43
14:AO:73:ASP:OD1	14:AO:73:ASP:C	2.62	0.43
19:AT:2:ASN:OD1	19:AT:2:ASN:C	2.61	0.43
21:AA:49:U:C4	21:AA:364:A:C6	3.07	0.43
21:AA:211:G:N1	21:AA:212:G:N3	2.67	0.43
21:AA:212:G:H2'	21:AA:213:G:C8	2.53	0.43
21:AA:275:G:C4	21:AA:276:G:C8	3.07	0.43
21:AA:519:C:H2'	21:AA:520:A:H8	1.82	0.43
21:AA:729:A:H2'	21:AA:730:G:O4'	2.19	0.43
21:AA:979:C:C5	21:AA:980:C:C5	3.06	0.43
21:AA:1095:U:O2'	21:AA:1096:C:H5'	2.19	0.43
21:AA:1161:C:O2'	21:AA:1162:C:C6	2.71	0.43
21:AA:1322:C:O2	21:AA:1322:C:O4'	2.35	0.43
21:AA:1365:G:H2'	21:AA:1366:C:H6	1.83	0.43
22:BA:42:A:H2'	22:BA:43:G:H5"	2.01	0.43
22:BA:167:A:H2'	22:BA:168:G:O4'	2.18	0.43
22:BA:729:G:N3	22:BA:729:G:C2'	2.80	0.43
22:BA:780:G:H2'	22:BA:782:A:N7	2.34	0.43
22:BA:962:G:H2'	22:BA:963:U:C6	2.54	0.43
22:BA:1023:U:H5'	22:BA:1023:U:C6	2.51	0.43
22:BA:1110:G:O2'	22:BA:1111:A:P	2.77	0.43
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	2.00	0.43
22:BA:1296:G:O2'	22:BA:1297:C:H5'	2.18	0.43
22:BA:1570:A:H2'	22:BA:1571:A:H8	1.82	0.43
22:BA:1597:A:H5"	22:BA:1598:A:H5'	2.00	0.43
22:BA:1735:A:H2'	22:BA:1736:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1767:G:C6	22:BA:1768:C:C5	3.07	0.43
22:BA:1797:G:C6	22:BA:1798:U:C4	3.07	0.43
22:BA:2053:G:N2	22:BA:2054:A:H1'	2.34	0.43
22:BA:2093:G:H1'	22:BA:2198:A:C2	2.53	0.43
22:BA:2860:A:C8	22:BA:2860:A:H3'	2.54	0.43
23:BB:12:C:C4	44:BW:72:GLY:HA3	2.54	0.43
23:BB:96:G:C2'	23:BB:97:C:H5'	2.49	0.43
24:BC:259:ASN:O	24:BC:260:LYS:CB	2.66	0.43
27:BF:100:GLU:O	27:BF:104:THR:N	2.52	0.43
27:BF:121:PHE:HD1	27:BF:126:ASN:O	2.01	0.43
28:BG:8:VAL:HG12	28:BG:9:VAL:H	1.84	0.43
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.80	0.43
31:BJ:40:HIS:CD2	31:BJ:40:HIS:N	2.83	0.43
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.32	0.43
41:BT:37:ASP:O	41:BT:38:ALA:C	2.62	0.43
41:BT:55:VAL:O	41:BT:55:VAL:HG12	2.19	0.43
48:B0:33:SER:O	48:B0:34:GLY:O	2.37	0.43
1:CB:141:GLU:O	1:CB:145:ASN:N	2.52	0.43
1:CB:163:ILE:HA	1:CB:185:ILE:HG12	2.01	0.43
2:CC:41:TYR:CE1	2:CC:89:VAL:HG12	2.53	0.43
3:CD:164:ARG:HB3	3:CD:165:GLU:H	1.47	0.43
8:CI:35:GLU:HA	8:CI:39:GLY:N	2.34	0.43
8:CI:45:MET:HA	8:CI:48:ARG:HB2	2.01	0.43
12:CM:95:PRO:HB3	53:CA:1308:U:OP1	2.18	0.43
53:CA:570:G:C6	53:CA:873:A:C2	3.07	0.43
53:CA:892:A:C4	53:CA:893:C:C6	3.07	0.43
53:CA:922:G:C2	53:CA:923:A:C4	3.07	0.43
53:CA:1135:U:H3'	53:CA:1137:C:O2	2.19	0.43
53:CA:1236:A:H2'	53:CA:1237:C:H6	1.83	0.43
22:DA:64:A:OP1	41:DT:77:ARG:HA	2.19	0.43
22:DA:151:C:OP1	22:DA:1359:A:O2'	2.32	0.43
22:DA:373:U:C2	22:DA:374:A:N7	2.87	0.43
22:DA:668:A:C5	22:DA:670:A:C5	3.07	0.43
22:DA:762:U:H4'	22:DA:763:G:C5'	2.49	0.43
22:DA:784:G:C2	24:DC:227:VAL:CG2	3.02	0.43
22:DA:833:A:P	33:DL:39:LYS:NZ	2.92	0.43
22:DA:868:U:C4	22:DA:869:G:N7	2.87	0.43
22:DA:953:G:O2'	22:DA:954:G:H5'	2.18	0.43
22:DA:1048:A:C6	22:DA:1111:A:C2	3.07	0.43
22:DA:1187:G:H8	22:DA:1187:G:O5'	2.02	0.43
22:DA:1671:U:O2	22:DA:1673:G:C8	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.72	0.43
22:DA:2511:U:O4	22:DA:2575:C:N3	2.52	0.43
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.19	0.43
54:DB:35:C:H2'	54:DB:36:C:H4'	2.00	0.43
24:DC:242:HIS:HA	24:DC:243:PRO:HD3	1.84	0.43
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.49	0.43
27:DF:45:ASP:HB3	27:DF:48:LEU:CD2	2.49	0.43
28:DG:145:ALA:HA	28:DG:148:ARG:HG2	2.01	0.43
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.91	0.43
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	2.00	0.43
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.87	0.43
35:DN:62:ASN:OD1	35:DN:62:ASN:N	2.49	0.43
36:DO:28:VAL:O	36:DO:28:VAL:HG13	2.18	0.43
38:DQ:27:ARG:HE	38:DQ:37:ALA:HB1	1.83	0.43
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.49	0.43
44:DW:43:LYS:CG	44:DW:79:ILE:HD11	2.49	0.43
49:D1:24:LYS:HE2	49:D1:52:LYS:HZ2	1.84	0.43
1:AB:116:LEU:HD12	1:AB:140:LEU:HD11	2.00	0.42
2:AC:88:LYS:O	2:AC:89:VAL:C	2.61	0.42
3:AD:12:ARG:HG2	3:AD:33:ILE:HD12	2.01	0.42
6:AG:86:VAL:HG22	6:AG:150:PHE:HB3	2.00	0.42
7:AH:85:TYR:O	7:AH:86:LYS:HD2	2.18	0.42
9:AJ:65:TYR:HB2	13:AN:95:LEU:HD11	2.01	0.42
9:AJ:80:THR:HG22	9:AJ:82:LYS:H	1.84	0.42
13:AN:11:LYS:HB2	13:AN:11:LYS:NZ	2.34	0.42
16:AQ:20:ILE:HG22	16:AQ:47:ASP:OD1	2.18	0.42
16:AQ:50:ASN:OD1	16:AQ:50:ASN:N	2.52	0.42
19:AT:60:GLN:NE2	19:AT:65:LEU:HD21	2.34	0.42
21:AA:1210:C:H2'	21:AA:1211:U:H5'	2.00	0.42
21:AA:1363:A:C8	21:AA:1365:G:C5	3.07	0.42
21:AA:1438:G:C2'	21:AA:1439:G:H5'	2.50	0.42
21:AA:1464:U:P	37:BP:108:ARG:HH12	2.42	0.42
21:AA:1496:C:H2'	21:AA:1497:G:O4'	2.19	0.42
21:AA:1504:G:H3'	21:AA:1505:G:H5'	2.00	0.42
22:BA:30:G:H2'	22:BA:31:C:C6	2.54	0.42
22:BA:184:C:H2'	22:BA:185:G:H8	1.83	0.42
22:BA:424:G:H2'	22:BA:425:G:O5'	2.19	0.42
22:BA:497:A:C4	22:BA:498:G:C8	3.07	0.42
22:BA:1277:G:H5'	35:BN:20:MET:HE1	2.00	0.42
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.18	0.42
22:BA:1459:G:C5	22:BA:1461:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.84	0.42
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.67	0.42
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.54	0.42
22:BA:2421:G:N7	51:B3:30:HIS:CD2	2.87	0.42
22:BA:2555:U:H5	22:BA:2556:C:C2	2.34	0.42
22:BA:2688:G:H1'	22:BA:2721:A:N6	2.34	0.42
23:BB:34:A:N3	23:BB:36:C:N4	2.55	0.42
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	2.19	0.42
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.83	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.01	0.42
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.34	0.42
31:BJ:32:LEU:CD2	31:BJ:54:ILE:HG12	2.46	0.42
33:BL:127:VAL:HG11	33:BL:142:ILE:HG21	2.01	0.42
35:BN:70:THR:O	35:BN:72:ASP:N	2.52	0.42
39:BR:49:ILE:O	39:BR:51:VAL:O	2.37	0.42
41:BT:70:HIS:HB2	41:BT:73:ARG:C	2.44	0.42
44:BW:43:LYS:HE2	44:BW:68:PHE:HE1	1.84	0.42
1:CB:125:PHE:HA	1:CB:136:ARG:NH2	2.34	0.42
2:CC:8:GLY:HA3	13:CN:88:MET:SD	2.59	0.42
4:CE:104:ILE:H	4:CE:122:VAL:N	2.02	0.42
6:CG:14:ASP:C	6:CG:14:ASP:OD2	2.62	0.42
6:CG:32:ASP:CB	6:CG:34:LYS:HD3	2.49	0.42
6:CG:37:THR:HA	6:CG:40:SER:HB2	2.00	0.42
12:CM:53:ASP:HA	12:CM:56:ARG:CZ	2.49	0.42
13:CN:60:ARG:NH2	13:CN:70:HIS:HB3	2.34	0.42
13:CN:68:ARG:NH2	53:CA:974:A:OP1	2.52	0.42
14:CO:23:SER:HB3	14:CO:26:VAL:CG2	2.49	0.42
16:CQ:4:ILE:HG22	16:CQ:5:ARG:N	2.24	0.42
16:CQ:37:ILE:HD11	16:CQ:39:ARG:NH1	2.34	0.42
53:CA:115:G:C2	53:CA:289:G:N7	2.87	0.42
53:CA:429:U:C1'	53:CA:430:A:H5"	2.44	0.42
53:CA:575:G:C6	53:CA:821:G:C5	3.07	0.42
53:CA:942:G:N2	53:CA:1342:C:H1'	2.33	0.42
53:CA:978:A:C8	53:CA:1319:A:C2	3.06	0.42
53:CA:1093:A:C5	53:CA:1095:U:O4'	2.72	0.42
53:CA:1250:A:C6	53:CA:1251:A:C5	3.07	0.42
53:CA:1346:A:C8	53:CA:1348:U:C2	3.06	0.42
22:DA:204:A:OP1	22:DA:206:U:H1'	2.18	0.42
22:DA:348:A:H2'	22:DA:349:U:H6	1.83	0.42
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.19	0.42
22:DA:483:A:OP2	22:DA:484:C:C5	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:919:U:C2	22:DA:920:A:N7	2.87	0.42
22:DA:923:G:H1'	44:DW:23:LYS:HZ1	1.81	0.42
22:DA:1208:C:O2'	22:DA:1209:U:H5'	2.19	0.42
22:DA:1286:A:C5	22:DA:1289:C:C4	3.07	0.42
22:DA:1326:U:O2'	22:DA:1327:A:H5'	2.18	0.42
22:DA:1520:U:O4	22:DA:1521:G:C6	2.71	0.42
22:DA:1809:A:C2	22:DA:1810:A:C5	3.06	0.42
22:DA:1929:G:C4'	22:DA:1930:G:OP1	2.63	0.42
22:DA:2048:G:C6	22:DA:2049:G:C5	3.07	0.42
22:DA:2748:A:C4	22:DA:2757:A:N6	2.87	0.42
22:DA:2784:U:O3'	25:DD:42:ASN:ND2	2.51	0.42
22:DA:2808:G:O2'	22:DA:2809:A:H8	2.00	0.42
54:DB:109:A:C6	54:DB:110:C:C4	3.07	0.42
25:DD:74:GLU:O	25:DD:75:ALA:C	2.61	0.42
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.53	0.42
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.99	0.42
27:DF:45:ASP:OD2	27:DF:47:LYS:HB2	2.19	0.42
29:DH:2:GLN:HB3	29:DH:18:GLN:HG2	2.01	0.42
30:DI:78:LEU:C	30:DI:80:LYS:H	2.27	0.42
31:DJ:119:PHE:C	31:DJ:121:LYS:N	2.74	0.42
35:DN:20:MET:C	35:DN:22:ARG:N	2.76	0.42
36:DO:82:ALA:HB3	36:DO:115:LEU:CD1	2.49	0.42
38:DQ:96:ASP:OD1	38:DQ:96:ASP:C	2.61	0.42
40:DS:35:ILE:HA	48:D0:24:VAL:HG21	2.00	0.42
41:DT:14:PRO:O	41:DT:32:LEU:HA	2.19	0.42
44:DW:45:HIS:HB3	44:DW:58:LEU:HD11	1.99	0.42
46:DY:45:GLN:C	46:DY:47:ARG:N	2.76	0.42
47:DZ:51:SER:C	47:DZ:53:MET:H	2.26	0.42
48:D0:28:SER:O	48:D0:36:LYS:HA	2.19	0.42
2:AC:4:VAL:HG12	21:AA:1190:G:OP1	2.19	0.42
2:AC:138:GLN:C	2:AC:140:ALA:N	2.78	0.42
4:AE:10:LEU:HG	4:AE:11:GLN:H	1.84	0.42
7:AH:30:LYS:HD2	7:AH:30:LYS:HA	1.74	0.42
7:AH:40:LYS:C	7:AH:42:GLU:H	2.26	0.42
20:AU:48:LYS:HG2	21:AA:723:U:H5"	2.00	0.42
21:AA:19:A:H2'	21:AA:20:U:H6	1.84	0.42
21:AA:88:U:O2'	21:AA:89:U:O5'	2.37	0.42
21:AA:429:U:H1'	21:AA:430:A:C5'	2.46	0.42
22:BA:63:A:C2	22:BA:64:A:C5	3.07	0.42
22:BA:322:A:OP1	26:BE:162:ARG:NE	2.53	0.42
22:BA:404:A:O2'	22:BA:405:U:P	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:548:G:O2'	22:BA:549:G:C5	2.72	0.42
22:BA:943:A:C2'	22:BA:944:C:O5'	2.67	0.42
22:BA:1050:A:C2	22:BA:2751:G:C5	3.07	0.42
22:BA:1084:A:C4	22:BA:1085:A:N7	2.86	0.42
22:BA:1300:G:H2'	22:BA:1635:A:OP1	2.19	0.42
22:BA:2285:C:P	49:B1:5:ARG:HH21	2.43	0.42
22:BA:2364:C:H4'	44:BW:55:ASP:OD1	2.19	0.42
22:BA:2502:G:H5'	22:BA:2503:A:O5'	2.19	0.42
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.49	0.42
22:BA:2834:G:O6	22:BA:2879:A:H2'	2.20	0.42
23:BB:54:G:H2'	23:BB:55:U:C6	2.54	0.42
25:BD:11:MET:HA	25:BD:24:VAL:O	2.19	0.42
25:BD:90:PHE:C	25:BD:92:VAL:H	2.25	0.42
26:BE:187:VAL:O	26:BE:188:MET:HB3	2.19	0.42
27:BF:42:ALA:HB2	27:BF:49:LEU:HB2	2.01	0.42
28:BG:45:ALA:O	28:BG:46:ASP:HB3	2.19	0.42
29:BH:75:LEU:HD22	29:BH:143:ILE:CG1	2.49	0.42
29:BH:85:GLY:HA3	29:BH:91:PHE:HB3	2.00	0.42
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.20	0.42
32:BK:113:MET:C	32:BK:115:ILE:H	2.25	0.42
36:BO:35:ILE:O	36:BO:53:THR:HG23	2.18	0.42
40:BS:12:SER:OG	40:BS:13:SER:N	2.52	0.42
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.49	0.42
45:BX:32:LEU:HD12	45:BX:32:LEU:N	2.34	0.42
45:BX:40:GLU:O	45:BX:43:LYS:HD2	2.19	0.42
46:BY:45:GLN:HA	46:BY:48:ARG:HB2	2.01	0.42
1:CB:98:GLY:N	1:CB:174:GLU:OE2	2.43	0.42
2:CC:133:MET:HB2	2:CC:150:VAL:HG21	2.01	0.42
3:CD:22:SER:OG	3:CD:23:GLY:N	2.51	0.42
3:CD:77:GLU:O	3:CD:81:LEU:HD12	2.19	0.42
5:CF:92:THR:C	5:CF:93:LYS:HG2	2.43	0.42
9:CJ:73:LEU:HD11	53:CA:1126:U:O4	2.19	0.42
10:CK:92:ARG:HD2	10:CK:92:ARG:HA	1.74	0.42
12:CM:92:ARG:HD2	18:CS:79:TYR:OH	2.19	0.42
18:CS:20:LYS:HZ3	18:CS:27:LYS:HD3	1.83	0.42
53:CA:632:U:H2'	53:CA:633:G:OP1	2.19	0.42
53:CA:1002:G:C6	53:CA:1003:G:C6	3.07	0.42
53:CA:1022:A:H2'	53:CA:1023:U:H6	1.84	0.42
53:CA:1241:G:C4	53:CA:1242:G:N7	2.87	0.42
53:CA:1403:C:H2'	53:CA:1404:C:C6	2.53	0.42
53:CA:1481:U:H2'	53:CA:1482:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:265:A:N7	22:DA:427:U:O2'	2.49	0.42
22:DA:371:A:H61	22:DA:401:A:H3'	1.85	0.42
22:DA:449:A:HO2'	22:DA:450:G:H5'	1.79	0.42
22:DA:554:U:H2'	22:DA:555:G:O4'	2.19	0.42
22:DA:693:A:C2	22:DA:770:G:C2	3.06	0.42
22:DA:799:G:P	22:DA:800:A:H3'	2.58	0.42
22:DA:818:G:H4'	22:DA:838:C:O3'	2.18	0.42
22:DA:1060:U:O4'	22:DA:1061:U:H2'	2.18	0.42
22:DA:1076:C:O2'	22:DA:1077:A:C4	2.72	0.42
22:DA:1324:G:O2'	22:DA:1616:A:N6	2.52	0.42
22:DA:1465:G:C5	22:DA:1466:U:C5	3.07	0.42
22:DA:2092:U:C4'	22:DA:2093:G:H5"	2.32	0.42
22:DA:2492:U:O2'	22:DA:2493:U:C5'	2.66	0.42
22:DA:2642:G:H5'	31:DJ:80:HIS:CE1	2.54	0.42
22:DA:2654:A:H62	22:DA:2667:C:N4	2.17	0.42
24:DC:149:LYS:HE3	24:DC:152:GLN:CD	2.44	0.42
25:DD:174:SER:O	25:DD:175:LEU:C	2.62	0.42
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.18	0.42
27:DF:147:ARG:HG2	27:DF:149:ARG:NH1	2.32	0.42
29:DH:65:ALA:O	29:DH:66:ASN:C	2.62	0.42
30:DI:44:LYS:O	30:DI:48:ILE:HG12	2.19	0.42
32:DK:20:MET:O	32:DK:41:ILE:HG13	2.20	0.42
38:DQ:21:LYS:HD2	38:DQ:21:LYS:HA	1.77	0.42
41:DT:68:LYS:O	41:DT:74:ILE:HG13	2.19	0.42
42:DU:35:VAL:CG1	42:DU:36:GLU:H	2.25	0.42
43:DV:26:PHE:CE2	43:DV:42:LEU:HB2	2.53	0.42
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.19	0.42
49:D1:8:ILE:O	49:D1:21:THR:HA	2.19	0.42
49:D1:46:VAL:HG22	49:D1:47:ILE:N	2.34	0.42
51:D3:51:LYS:O	51:D3:54:LEU:HB3	2.20	0.42
52:D4:7:VAL:HG22	52:D4:25:VAL:CG2	2.48	0.42
1:AB:40:ILE:HG21	1:AB:201:GLY:N	2.34	0.42
1:AB:150:ILE:O	1:AB:151:LYS:C	2.63	0.42
3:AD:141:VAL:HG13	3:AD:180:THR:HG23	2.00	0.42
3:AD:190:LEU:O	3:AD:191:SER:HB2	2.19	0.42
4:AE:93:VAL:HG21	4:AE:139:THR:CG2	2.49	0.42
5:AF:1:MET:CE	5:AF:67:PRO:HD3	2.47	0.42
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.83	0.42
6:AG:92:PRO:C	6:AG:93:VAL:HG22	2.44	0.42
7:AH:83:ARG:O	7:AH:84:ILE:HD13	2.18	0.42
8:AI:26:LYS:HG3	8:AI:61:ASP:CG	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:53:LEU:HD12	8:AI:53:LEU:N	2.33	0.42
8:AI:112:ARG:HH22	9:AJ:64:GLN:HE22	1.66	0.42
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	2.00	0.42
15:AP:36:VAL:HG22	15:AP:36:VAL:O	2.19	0.42
18:AS:32:THR:HB	18:AS:34:SER:H	1.84	0.42
20:AU:48:LYS:HD3	21:AA:723:U:OP1	2.20	0.42
21:AA:72:A:H2'	21:AA:73:C:H6	1.84	0.42
21:AA:122:G:H2'	21:AA:123:U:C6	2.54	0.42
21:AA:189:A:O2'	21:AA:190:A:H5'	2.19	0.42
21:AA:307:C:H5"	21:AA:308:C:OP2	2.18	0.42
21:AA:414:A:H2'	21:AA:415:A:H8	1.84	0.42
21:AA:1030:U:H5'	21:AA:1031:C:O2	2.18	0.42
22:BA:155:A:H2'	22:BA:156:A:C8	2.54	0.42
22:BA:633:A:C3'	22:BA:633:A:H8	2.31	0.42
22:BA:735:A:H3'	22:BA:736:C:C6	2.54	0.42
22:BA:792:A:C5'	22:BA:793:A:H5'	2.49	0.42
22:BA:1167:C:H2'	22:BA:1168:G:O5'	2.19	0.42
22:BA:1381:G:C2'	22:BA:1382:G:H5'	2.48	0.42
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.19	0.42
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.34	0.42
22:BA:2004:G:C2'	22:BA:2005:A:H5'	2.49	0.42
24:BC:66:PHE:HB3	24:BC:150:GLY:O	2.19	0.42
25:BD:114:LYS:HE3	25:BD:114:LYS:O	2.19	0.42
26:BE:168:ASP:OD1	26:BE:169:VAL:N	2.52	0.42
27:BF:110:ILE:O	27:BF:113:PHE:HB2	2.20	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
31:BJ:32:LEU:HD23	31:BJ:32:LEU:HA	1.80	0.42
32:BK:99:ILE:HG23	32:BK:100:PHE:N	2.35	0.42
32:BK:113:MET:O	32:BK:115:ILE:N	2.52	0.42
35:BN:90:ARG:O	35:BN:91:ALA:C	2.63	0.42
39:BR:39:LEU:C	39:BR:49:ILE:HG23	2.44	0.42
39:BR:66:HIS:CE1	39:BR:94:THR:HG21	2.54	0.42
44:BW:30:VAL:HG23	44:BW:59:PHE:CD1	2.51	0.42
45:BX:51:SER:O	45:BX:52:ALA:C	2.61	0.42
49:B1:33:LEU:N	49:B1:51:ALA:CB	2.80	0.42
2:CC:22:PHE:HD1	9:CJ:13:PHE:CE1	2.37	0.42
4:CE:56:PRO:O	4:CE:59:ILE:HG23	2.18	0.42
8:CI:98:ARG:NH2	53:CA:1178:G:H5"	2.34	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:CD1	2.49	0.42
9:CJ:82:LYS:HA	9:CJ:86:ALA:HB3	2.01	0.42
10:CK:81:LEU:N	10:CK:81:LEU:HD13	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CN:55:SER:HA	13:CN:56:PRO:HD2	1.85	0.42
15:CP:38:PHE:HZ	15:CP:48:GLU:OE1	2.02	0.42
15:CP:52:LEU:O	15:CP:53:ASP:CB	2.66	0.42
19:CT:26:MET:O	19:CT:29:THR:HB	2.18	0.42
53:CA:149:A:H2'	53:CA:150:U:C6	2.54	0.42
53:CA:164:G:H2'	53:CA:165:G:H5'	2.01	0.42
53:CA:690:G:H2'	53:CA:691:G:O4'	2.18	0.42
53:CA:1130:A:C5	53:CA:1146:A:C5	3.07	0.42
53:CA:1310:G:C6	53:CA:1311:A:C6	3.08	0.42
53:CA:1520:C:H2'	53:CA:1521:C:H6	1.78	0.42
22:DA:84:A:N1	22:DA:98:G:H2'	2.34	0.42
22:DA:103:A:O2'	22:DA:104:A:O4'	2.34	0.42
22:DA:234:U:O2'	22:DA:235:U:C5'	2.67	0.42
22:DA:243:U:O2'	22:DA:244:A:C5'	2.67	0.42
22:DA:300:A:H1'	22:DA:333:G:H21	1.85	0.42
22:DA:309:A:C2	22:DA:329:G:O2'	2.65	0.42
22:DA:782:A:H5'	22:DA:783:A:C2	2.53	0.42
22:DA:1000:A:C6	22:DA:1001:A:C6	3.07	0.42
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.42	0.42
22:DA:1290:C:HO2'	22:DA:1291:C:H6	0.67	0.42
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.66	0.42
22:DA:1500:G:C6	22:DA:1501:G:N7	2.87	0.42
22:DA:1558:C:H1'	22:DA:1560:G:N7	2.34	0.42
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.20	0.42
22:DA:1716:U:N3	22:DA:1745:A:N6	2.68	0.42
22:DA:1782:U:H6	22:DA:1782:U:O5'	2.02	0.42
22:DA:1801:A:C3'	22:DA:1802:A:H5'	2.48	0.42
22:DA:1843:C:O2'	24:DC:253:GLY:HA3	2.19	0.42
22:DA:2056:G:N2	22:DA:2057:G:N9	2.68	0.42
22:DA:2072:C:H2'	22:DA:2073:C:H5'	2.00	0.42
22:DA:2209:G:C6	22:DA:2216:G:C6	3.08	0.42
22:DA:2285:C:C5	49:D1:5:ARG:NH2	2.87	0.42
22:DA:2288:A:H4'	22:DA:2289:G:OP1	2.13	0.42
22:DA:2305:U:OP1	27:DF:132:ARG:HG3	2.19	0.42
22:DA:2390:U:OP2	51:D3:34:LYS:HE2	2.18	0.42
22:DA:2478:A:C8	22:DA:2529:G:C6	3.08	0.42
22:DA:2508:G:O3'	22:DA:2555:U:H5'	2.19	0.42
22:DA:2571:U:O4	22:DA:2574:G:C8	2.71	0.42
22:DA:2821:A:H2'	22:DA:2822:G:O4'	2.19	0.42
22:DA:2857:G:N2	22:DA:2861:U:C4	2.88	0.42
22:DA:2876:G:H4'	37:DP:2:ASN:HD21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:DB:43:C:O2'	54:DB:44:G:H5'	2.19	0.42
24:DC:95:TYR:C	24:DC:97:ASP:N	2.75	0.42
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.34	0.42
29:DH:89:LYS:HD2	29:DH:124:THR:HA	2.01	0.42
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.49	0.42
32:DK:107:LEU:C	32:DK:107:LEU:HD23	2.44	0.42
32:DK:118:LEU:O	32:DK:120:PRO:CD	2.67	0.42
36:DO:34:HIS:O	36:DO:35:ILE:HG12	2.19	0.42
39:DR:86:GLN:HE21	39:DR:86:GLN:HB2	1.63	0.42
46:DY:22:LEU:HG	46:DY:23:ARG:H	1.83	0.42
46:DY:59:GLU:C	46:DY:61:ALA:H	2.27	0.42
48:D0:28:SER:HB3	48:D0:39:ARG:CZ	2.49	0.42
49:D1:7:LYS:O	49:D1:8:ILE:HD13	2.20	0.42
3:AD:56:GLU:O	3:AD:59:LYS:HB3	2.19	0.42
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	2.02	0.42
3:AD:138:PRO:C	3:AD:140:ASP:H	2.27	0.42
6:AG:88:VAL:HG22	6:AG:89:GLU:H	1.81	0.42
8:AI:6:TYR:O	8:AI:85:ALA:HA	2.19	0.42
15:AP:48:GLU:CD	15:AP:49:GLY:H	2.26	0.42
16:AQ:58:VAL:HG22	16:AQ:59:GLU:H	1.84	0.42
21:AA:82:G:H21	21:AA:84:U:H3	1.66	0.42
21:AA:279:A:H5"	21:AA:281:G:H5'	2.02	0.42
21:AA:829:G:O2'	21:AA:830:G:H5'	2.18	0.42
21:AA:923:A:H2'	21:AA:924:C:H6	1.85	0.42
21:AA:1144:G:H2'	21:AA:1145:A:O4'	2.20	0.42
21:AA:1171:A:H2'	21:AA:1172:C:C6	2.54	0.42
22:BA:265:A:N6	22:BA:428:A:C1'	2.83	0.42
22:BA:523:C:O2	22:BA:554:U:O2'	2.35	0.42
22:BA:753:A:H2'	22:BA:754:U:C6	2.54	0.42
22:BA:1075:C:N3	22:BA:1076:C:C4	2.87	0.42
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.85	0.42
22:BA:1316:U:H2'	22:BA:1317:G:H8	1.85	0.42
22:BA:1528:A:C8	22:BA:1529:G:C8	3.07	0.42
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.49	0.42
22:BA:1799:G:H22	22:BA:1818:U:HO2'	1.62	0.42
22:BA:1851:U:C4	22:BA:1852:U:C4	3.08	0.42
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.19	0.42
22:BA:2214:C:H6	22:BA:2214:C:C5'	2.22	0.42
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.18	0.42
22:BA:2471:A:H2'	22:BA:2472:G:H5'	2.01	0.42
22:BA:2527:C:H2'	22:BA:2528:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2754:U:O3'	52:B4:19:ARG:NH2	2.53	0.42
22:BA:2805:C:C4	22:BA:2806:C:C5	3.07	0.42
28:BG:116:LEU:HA	28:BG:117:PRO:HD2	1.83	0.42
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.42
29:BH:134:VAL:HG21	29:BH:139:PHE:O	2.19	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.34	0.42
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.45	0.42
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.53	0.42
33:BL:112:LEU:HD12	33:BL:130:GLY:HA3	2.00	0.42
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CD1	2.54	0.42
42:BU:71:ILE:HD13	42:BU:82:VAL:HG23	2.01	0.42
3:CD:115:GLN:NE2	3:CD:153:ARG:HH22	2.17	0.42
4:CE:70:MET:HE3	4:CE:70:MET:HB3	1.91	0.42
9:CJ:40:ILE:HG21	53:CA:1125:U:C4	2.54	0.42
9:CJ:59:LYS:H	9:CJ:59:LYS:HG3	1.67	0.42
10:CK:19:VAL:N	10:CK:34:THR:O	2.51	0.42
10:CK:64:VAL:O	10:CK:68:ARG:CB	2.62	0.42
10:CK:86:LYS:HE3	10:CK:112:VAL:HG23	2.01	0.42
10:CK:124:LYS:HG3	20:CU:34:ARG:HD2	2.01	0.42
12:CM:65:GLU:H	12:CM:65:GLU:HG3	1.66	0.42
15:CP:69:ASP:OD2	15:CP:69:ASP:N	2.53	0.42
19:CT:30:PHE:HE2	19:CT:52:GLU:CG	2.29	0.42
20:CU:37:TYR:O	20:CU:37:TYR:HD2	2.02	0.42
53:CA:62:U:O2'	53:CA:379:C:O2	2.36	0.42
53:CA:90:C:O2'	53:CA:91:U:O4'	2.38	0.42
53:CA:163:C:H2'	53:CA:164:G:O5'	2.19	0.42
53:CA:188:C:H42	53:CA:189:A:N6	2.16	0.42
53:CA:375:U:C4	53:CA:376:G:N7	2.87	0.42
53:CA:563:A:N6	57:CA:1818:HOH:O	2.52	0.42
53:CA:847:G:C2	53:CA:848:C:C2	3.07	0.42
53:CA:961:U:O4	53:CA:983:A:N6	2.51	0.42
53:CA:1204:A:H2'	53:CA:1205:U:C6	2.54	0.42
22:DA:137:U:O5'	22:DA:137:U:H6	2.02	0.42
22:DA:308:G:C8	22:DA:501:A:H1'	2.53	0.42
22:DA:447:A:H5'	22:DA:449:A:C4	2.54	0.42
22:DA:447:A:H4'	22:DA:449:A:N7	2.35	0.42
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.42
22:DA:693:A:C6	22:DA:694:U:C4	3.07	0.42
22:DA:705:A:H61	22:DA:726:G:H1'	1.79	0.42
22:DA:818:G:C2'	22:DA:819:A:H5"	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:857:G:O2'	44:DW:19:ARG:CZ	2.67	0.42
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.20	0.42
22:DA:1010:A:O2'	22:DA:1011:G:C5'	2.67	0.42
22:DA:1283:G:N1	22:DA:1286:A:OP2	2.51	0.42
22:DA:1838:C:N4	22:DA:1898:U:H2'	2.34	0.42
22:DA:1999:C:H4'	22:DA:2723:C:O2	2.19	0.42
22:DA:2102:G:H2'	22:DA:2103:C:H5'	2.01	0.42
22:DA:2144:G:N2	22:DA:2148:G:O6	2.51	0.42
22:DA:2282:G:O2'	22:DA:2283:C:OP2	2.31	0.42
22:DA:2476:A:C2'	22:DA:2477:U:H5'	2.49	0.42
22:DA:2506:U:H3'	22:DA:2506:U:C6	2.54	0.42
22:DA:2615:U:O2'	22:DA:2616:C:C5'	2.67	0.42
26:DE:72:SER:C	26:DE:74:LYS:H	2.27	0.42
26:DE:135:ALA:C	26:DE:137:LYS:H	2.27	0.42
28:DG:116:LEU:HD13	28:DG:121:THR:HA	2.01	0.42
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	2.00	0.42
33:DL:111:ILE:HA	33:DL:128:THR:OG1	2.19	0.42
35:DN:83:LEU:HD11	35:DN:86:ARG:HH21	1.84	0.42
36:DO:115:LEU:H	36:DO:115:LEU:CD1	2.18	0.42
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.60	0.42
38:DQ:86:SER:O	38:DQ:87:VAL:C	2.63	0.42
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	2.01	0.42
40:DS:27:LYS:O	40:DS:28:LYS:O	2.37	0.42
41:DT:45:ALA:HA	41:DT:48:GLN:HG2	2.01	0.42
41:DT:68:LYS:HG3	57:DT:201:HOH:O	2.19	0.42
41:DT:69:ARG:HG3	41:DT:70:HIS:N	2.34	0.42
42:DU:100:GLU:O	42:DU:101:THR:C	2.63	0.42
43:DV:29:ILE:C	43:DV:29:ILE:HD12	2.44	0.42
43:DV:58:SER:OG	43:DV:59:GLU:N	2.53	0.42
1:AB:113:LEU:O	1:AB:117:GLU:HG3	2.18	0.42
1:AB:148:GLY:HA2	1:AB:151:LYS:CE	2.50	0.42
1:AB:170:ILE:H	1:AB:170:ILE:HG12	1.34	0.42
2:AC:5:HIS:HA	2:AC:6:PRO:HD2	1.81	0.42
2:AC:166:TRP:CE3	2:AC:166:TRP:N	2.76	0.42
3:AD:21:LYS:O	3:AD:23:GLY:N	2.53	0.42
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.34	0.42
4:AE:69:ASN:O	4:AE:69:ASN:OD1	2.37	0.42
5:AF:4:TYR:HA	5:AF:91:ARG:O	2.19	0.42
8:AI:42:THR:O	8:AI:43:ALA:HB2	2.18	0.42
8:AI:49:GLN:C	8:AI:51:LEU:N	2.76	0.42
9:AJ:40:ILE:HA	9:AJ:41:PRO:HD2	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:73:LEU:O	9:AJ:74:VAL:HB	2.19	0.42
13:AN:24:ALA:O	13:AN:25:GLU:C	2.63	0.42
14:AO:30:LEU:O	14:AO:33:ALA:HB3	2.19	0.42
14:AO:63:ARG:HH11	14:AO:67:ASP:CG	2.27	0.42
14:AO:74:VAL:O	14:AO:75:ALA:C	2.62	0.42
16:AQ:18:LYS:O	16:AQ:47:ASP:OD2	2.37	0.42
17:AR:59:LYS:O	17:AR:60:ARG:C	2.62	0.42
18:AS:62:THR:O	18:AS:63:ASP:C	2.62	0.42
19:AT:71:ALA:O	19:AT:72:ALA:C	2.63	0.42
20:AU:3:ILE:N	20:AU:19:LYS:HZ1	2.18	0.42
21:AA:341:C:H2'	21:AA:342:C:H6	1.85	0.42
21:AA:394:G:C5	21:AA:395:C:C5	3.07	0.42
21:AA:792:A:C4	21:AA:794:A:C6	3.08	0.42
21:AA:892:A:C6	21:AA:893:C:C4	3.07	0.42
21:AA:949:A:H2'	21:AA:950:U:O4'	2.20	0.42
21:AA:1287:A:H2'	21:AA:1288:A:H8	1.77	0.42
21:AA:1480:A:C6	21:AA:1481:U:C4	3.07	0.42
22:BA:298:G:C2	22:BA:339:U:C5	3.08	0.42
22:BA:610:C:H2'	22:BA:611:C:H6	1.83	0.42
22:BA:948:C:H6	22:BA:948:C:O5'	2.02	0.42
22:BA:976:G:C2	22:BA:977:G:N7	2.87	0.42
22:BA:2140:G:C4	22:BA:2152:G:N2	2.87	0.42
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.68	0.42
22:BA:2322:A:C6	22:BA:2333:A:N6	2.87	0.42
22:BA:2663:G:C4	22:BA:2664:G:C8	3.08	0.42
22:BA:2727:A:O2'	22:BA:2728:U:H5'	2.19	0.42
24:BC:20:ASN:HA	24:BC:21:PRO:HD2	1.88	0.42
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.87	0.42
28:BG:9:VAL:HA	28:BG:48:THR:HA	2.00	0.42
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.18	0.42
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	2.02	0.42
36:BO:21:LEU:HD23	36:BO:21:LEU:HA	1.83	0.42
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.67	0.42
39:BR:25:LEU:H	39:BR:94:THR:HG21	1.83	0.42
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.54	0.42
44:BW:71:LYS:HB3	44:BW:72:GLY:H	1.69	0.42
45:BX:31:ASN:OD1	45:BX:33:HIS:NE2	2.52	0.42
1:CB:9:LEU:O	1:CB:10:LYS:HB3	2.18	0.42
3:CD:97:LEU:O	3:CD:98:ASP:C	2.62	0.42
5:CF:2:ARG:HD2	5:CF:92:THR:OG1	2.19	0.42
6:CG:137:ARG:NH1	6:CG:138:GLU:HG2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CK:12:ARG:N	10:CK:12:ARG:CD	2.83	0.42
12:CM:82:LEU:HB2	18:CS:73:PHE:CE2	2.55	0.42
12:CM:106:ARG:CZ	12:CM:112:ARG:HB3	2.50	0.42
15:CP:5:ARG:HH12	15:CP:24:SER:HA	1.85	0.42
17:CR:33:THR:C	17:CR:35:SER:H	2.27	0.42
53:CA:71:A:C5	53:CA:100:G:C5	3.07	0.42
53:CA:77:A:C2	53:CA:93:U:C2	3.07	0.42
53:CA:522:C:O2'	53:CA:523:A:H5'	2.19	0.42
53:CA:1012:A:C5	53:CA:1013:G:N7	2.88	0.42
53:CA:1206:G:H2'	53:CA:1207:G:O4'	2.19	0.42
53:CA:1265:C:H2'	53:CA:1266:G:H5'	2.02	0.42
22:DA:155:A:C2	22:DA:172:A:C6	3.07	0.42
22:DA:321:U:H5'	26:DE:129:PRO:HB3	2.02	0.42
22:DA:386:G:H4'	22:DA:387:U:OP2	2.19	0.42
22:DA:397:U:O2'	22:DA:398:C:O4'	2.26	0.42
22:DA:410:G:C2	22:DA:2407:A:C6	3.07	0.42
22:DA:584:C:OP1	38:DQ:5:ARG:HD3	2.19	0.42
22:DA:1015:U:H2'	22:DA:1016:G:O4'	2.20	0.42
22:DA:1036:G:C6	22:DA:1120:G:C6	3.08	0.42
22:DA:1802:A:H2'	22:DA:1803:A:C8	2.55	0.42
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.33	0.42
22:DA:2246:G:H2'	22:DA:2247:A:C8	2.54	0.42
22:DA:2264:C:H2'	22:DA:2265:U:O4'	2.19	0.42
22:DA:2287:A:C6	22:DA:2289:G:C5	3.07	0.42
22:DA:2553:G:C2	22:DA:2554:U:H1'	2.55	0.42
22:DA:2758:A:C2'	22:DA:2759:G:H5'	2.47	0.42
54:DB:90:C:H5'	34:DM:18:ARG:HD2	2.02	0.42
24:DC:43:ASN:CG	24:DC:44:ASN:N	2.76	0.42
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	2.01	0.42
24:DC:230:PRO:HD2	24:DC:246:PRO:HA	2.00	0.42
25:DD:13:ARG:H	25:DD:13:ARG:HG2	1.69	0.42
25:DD:119:ALA:HB2	25:DD:163:GLY:C	2.45	0.42
27:DF:9:ASP:O	27:DF:10:GLU:HB3	2.19	0.42
28:DG:104:LEU:N	28:DG:112:VAL:HG23	2.34	0.42
28:DG:163:TYR:O	28:DG:164:ALA:C	2.63	0.42
29:DH:80:ILE:HB	29:DH:101:ASP:OD2	2.20	0.42
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.18	0.42
30:DI:102:ARG:HG2	30:DI:141:ASP:O	2.18	0.42
31:DJ:105:VAL:O	31:DJ:105:VAL:HG22	2.19	0.42
31:DJ:125:TYR:HE2	31:DJ:132:HIS:CD2	2.37	0.42
33:DL:105:ILE:HG22	33:DL:106:GLU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:2:ASP:O	36:DO:4:LYS:N	2.52	0.42
38:DQ:73:ILE:HD11	38:DQ:77:LYS:HB2	2.01	0.42
39:DR:30:GLY:HA2	39:DR:63:VAL:O	2.19	0.42
40:DS:4:ILE:C	40:DS:4:ILE:HD12	2.45	0.42
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.33	0.42
44:DW:83:ALA:O	44:DW:84:GLU:HB2	2.20	0.42
1:AB:207:ARG:C	1:AB:209:VAL:H	2.27	0.42
2:AC:24:ASN:HD22	2:AC:25:THR:H	1.66	0.42
3:AD:71:PHE:CE1	3:AD:199:ILE:HD11	2.54	0.42
4:AE:152:VAL:O	4:AE:155:LYS:CE	2.68	0.42
6:AG:95:ARG:HB3	6:AG:96:ASN:H	1.70	0.42
7:AH:10:LEU:HD11	7:AH:126:CYS:CB	2.49	0.42
14:AO:17:ASP:O	14:AO:20:ASP:HB3	2.19	0.42
16:AQ:60:ILE:HG22	16:AQ:61:ARG:N	2.33	0.42
19:AT:50:PHE:HA	19:AT:53:MET:HG2	2.02	0.42
20:AU:14:ALA:O	20:AU:15:LEU:HD12	2.18	0.42
21:AA:86:G:N3	21:AA:87:C:H5	2.18	0.42
21:AA:210:C:H4'	21:AA:211:G:C2	2.54	0.42
21:AA:519:C:O2'	21:AA:520:A:C5'	2.68	0.42
21:AA:582:C:C4	21:AA:583:A:N7	2.88	0.42
21:AA:900:A:N1	21:AA:901:A:C2	2.87	0.42
21:AA:1124:G:H2'	21:AA:1145:A:H61	1.85	0.42
21:AA:1157:A:H1'	21:AA:1181:G:H22	1.80	0.42
21:AA:1163:A:C2	21:AA:1174:G:C2	3.08	0.42
22:BA:271:G:O2'	22:BA:272:A:C5'	2.67	0.42
22:BA:528:A:H2'	22:BA:529:A:H5"	2.02	0.42
22:BA:747:U:O2	22:BA:2014:A:H1'	2.19	0.42
22:BA:952:G:H2'	22:BA:953:G:O5'	2.19	0.42
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.49	0.42
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.55	0.42
22:BA:1190:G:H5"	33:BL:32:GLY:HA2	2.00	0.42
22:BA:1915:U:H2'	22:BA:1916:A:C8	2.54	0.42
24:BC:69:ASN:O	24:BC:117:SER:OG	2.38	0.42
24:BC:132:ARG:HD3	24:BC:132:ARG:O	2.19	0.42
24:BC:256:THR:O	24:BC:257:ARG:C	2.62	0.42
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	2.02	0.42
29:BH:95:GLY:O	29:BH:97:ARG:N	2.51	0.42
29:BH:124:THR:HB	29:BH:125:THR:H	1.61	0.42
33:BL:38:GLN:O	33:BL:40:SER:O	2.37	0.42
34:BM:97:GLN:CD	34:BM:97:GLN:N	2.77	0.42
40:BS:4:ILE:HG21	40:BS:106:VAL:HG22	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:42:LYS:HD3	40:BS:42:LYS:C	2.44	0.42
42:BU:67:SER:O	42:BU:67:SER:OG	2.37	0.42
43:BV:88:HIS:CG	43:BV:89:ILE:N	2.88	0.42
45:BX:31:ASN:O	45:BX:51:SER:HA	2.19	0.42
46:BY:44:LYS:O	46:BY:47:ARG:HB3	2.19	0.42
47:BZ:20:LYS:O	47:BZ:23:LEU:N	2.52	0.42
51:B3:1:PRO:O	51:B3:2:LYS:C	2.62	0.42
1:CB:26:MET:O	1:CB:30:ILE:HG13	2.20	0.42
1:CB:35:ASN:O	1:CB:36:LYS:C	2.63	0.42
2:CC:33:ASP:O	2:CC:37:LYS:HG2	2.20	0.42
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.20	0.42
7:CH:58:LEU:HD22	7:CH:60:LEU:HD11	2.01	0.42
9:CJ:40:ILE:HG12	53:CA:1125:U:C6	2.53	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	2.00	0.42
11:CL:35:ARG:HD3	11:CL:35:ARG:HA	1.79	0.42
11:CL:86:VAL:C	11:CL:88:ASP:N	2.77	0.42
18:CS:10:ILE:HD12	18:CS:10:ILE:N	2.34	0.42
19:CT:57:VAL:HG12	19:CT:71:ALA:CB	2.49	0.42
53:CA:7:A:H5'	53:CA:298:A:O4'	2.20	0.42
53:CA:160:A:C2	53:CA:343:U:H1'	2.55	0.42
53:CA:734:G:N3	53:CA:735:C:C6	2.87	0.42
53:CA:1117:A:C6	53:CA:1184:G:O6	2.72	0.42
22:DA:67:U:C2	22:DA:68:G:C8	3.08	0.42
22:DA:498:G:C6	22:DA:499:U:C4	3.07	0.42
22:DA:533:G:OP1	38:DQ:23:TYR:HB3	2.19	0.42
22:DA:584:C:C4	22:DA:585:G:C5	3.07	0.42
22:DA:600:G:N2	22:DA:605:G:O3'	2.52	0.42
22:DA:1131:G:C5	22:DA:2025:C:H4'	2.55	0.42
22:DA:1206:G:O2'	22:DA:1207:C:C5'	2.68	0.42
22:DA:1353:A:H2'	22:DA:1354:A:C8	2.55	0.42
22:DA:1572:A:O5'	22:DA:1572:A:H8	2.02	0.42
22:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.19	0.42
22:DA:1663:G:C6	22:DA:1998:A:N6	2.88	0.42
22:DA:1787:A:O5'	22:DA:1787:A:C8	2.71	0.42
22:DA:1809:A:O2'	22:DA:1810:A:C8	2.72	0.42
22:DA:2869:G:C5	22:DA:2870:C:C4	3.07	0.42
22:DA:2902:C:OP2	22:DA:2902:C:H6	2.03	0.42
54:DB:23:G:C2	54:DB:61:G:C2	3.07	0.42
24:DC:52:HIS:CD2	24:DC:217:PRO:O	2.72	0.42
24:DC:184:GLU:O	24:DC:185:ALA:C	2.61	0.42
25:DD:40:LEU:H	25:DD:40:LEU:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:61:THR:CB	25:DD:63:PRO:HD2	2.49	0.42
27:DF:105:ILE:C	27:DF:108:PRO:HD2	2.45	0.42
29:DH:117:LEU:HD22	29:DH:122:LEU:HD12	2.01	0.42
34:DM:7:THR:C	34:DM:9:PHE:H	2.27	0.42
34:DM:15:GLY:O	34:DM:16:ARG:CB	2.67	0.42
35:DN:9:GLN:O	35:DN:10:LEU:O	2.37	0.42
37:DP:52:ARG:HD3	37:DP:52:ARG:HA	1.74	0.42
38:DQ:61:ILE:H	38:DQ:61:ILE:HD12	1.84	0.42
39:DR:55:ASP:CG	39:DR:56:GLY:N	2.77	0.42
41:DT:64:LYS:HD2	41:DT:64:LYS:N	2.35	0.42
45:DX:12:VAL:O	45:DX:12:VAL:HG23	2.20	0.42
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.19	0.42
46:DY:58:ASN:O	46:DY:61:ALA:HB2	2.19	0.42
47:DZ:29:ARG:H	47:DZ:29:ARG:NH2	2.17	0.42
49:D1:28:THR:C	49:D1:29:LYS:HG2	2.45	0.42
2:AC:107:LYS:HA	2:AC:108:PRO:HD2	1.78	0.42
4:AE:108:GLY:O	4:AE:109:ALA:O	2.37	0.42
8:AI:26:LYS:HG3	8:AI:61:ASP:OD1	2.18	0.42
9:AJ:91:ASP:OD1	9:AJ:91:ASP:N	2.53	0.42
13:AN:30:ILE:HG23	13:AN:44:VAL:CG1	2.50	0.42
14:AO:55:LEU:HA	14:AO:58:MET:HG3	2.01	0.42
16:AQ:45:VAL:O	16:AQ:47:ASP:OD1	2.36	0.42
21:AA:497:G:N2	21:AA:498:A:C6	2.88	0.42
21:AA:515:G:N2	21:AA:537:G:C4	2.88	0.42
21:AA:676:A:C6	21:AA:677:U:C4	3.07	0.42
21:AA:1004:A:C6	21:AA:1005:A:C4	3.08	0.42
21:AA:1082:A:H2'	21:AA:1083:U:O4'	2.19	0.42
21:AA:1157:A:C6	21:AA:1180:A:C5	3.08	0.42
21:AA:1473:G:H2'	21:AA:1474:U:C6	2.55	0.42
21:AA:1510:C:H2'	21:AA:1511:G:C8	2.54	0.42
22:BA:118:A:H2'	22:BA:120:U:O4	2.19	0.42
22:BA:246:C:C2'	22:BA:247:G:H5'	2.50	0.42
22:BA:263:G:H1'	22:BA:430:A:N3	2.34	0.42
22:BA:498:G:C2	22:BA:499:U:C5	3.07	0.42
22:BA:910:A:C4	34:BM:13:HIS:CE1	3.07	0.42
22:BA:1139:G:C2'	22:BA:1140:C:H5'	2.50	0.42
22:BA:1141:U:C4'	22:BA:1142:A:O5'	2.61	0.42
22:BA:1220:G:H2'	22:BA:1221:C:O4'	2.19	0.42
22:BA:1261:C:C2'	22:BA:1262:A:O5'	2.68	0.42
22:BA:1419:A:C6	22:BA:1421:G:C4	3.07	0.42
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1433:A:H61	22:BA:1560:G:H1	1.68	0.42
22:BA:1443:U:H2'	22:BA:1444:G:H8	1.84	0.42
22:BA:1507:C:C2	22:BA:1508:A:C2	3.07	0.42
22:BA:1984:G:C6	22:BA:1985:C:C5	3.07	0.42
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.68	0.42
22:BA:2592:G:C6	22:BA:2593:U:C4	3.08	0.42
22:BA:2665:A:H2	22:BA:2666:C:C2	2.38	0.42
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.19	0.42
23:BB:110:C:C4	23:BB:111:U:C5	3.08	0.42
26:BE:190:ALA:O	26:BE:191:ASP:C	2.63	0.42
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.50	0.42
28:BG:162:ARG:HB3	28:BG:163:TYR:H	1.65	0.42
29:BH:12:LEU:HB2	29:BH:19:VAL:CG1	2.49	0.42
29:BH:68:ARG:HH21	29:BH:69:ALA:HA	1.84	0.42
32:BK:107:LEU:C	32:BK:109:SER:N	2.73	0.42
32:BK:113:MET:O	32:BK:114:LYS:C	2.63	0.42
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.50	0.42
34:BM:49:ALA:O	34:BM:50:ARG:C	2.62	0.42
35:BN:73:ASN:CA	35:BN:76:VAL:HG12	2.38	0.42
37:BP:33:GLU:N	37:BP:36:LYS:O	2.53	0.42
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.68	0.42
42:BU:73:ASN:O	42:BU:75:ALA:N	2.53	0.42
43:BV:72:VAL:HB	43:BV:92:VAL:O	2.19	0.42
45:BX:68:ALA:C	45:BX:69:GLU:O	2.62	0.42
2:CC:181:ILE:HG12	2:CC:202:PHE:HB2	2.01	0.42
3:CD:183:ARG:HE	3:CD:183:ARG:HB2	1.49	0.42
4:CE:74:ALA:O	4:CE:75:LEU:HB2	2.19	0.42
6:CG:124:SER:C	6:CG:126:ALA:N	2.78	0.42
7:CH:21:LYS:O	7:CH:22:ALA:C	2.63	0.42
9:CJ:63:ASP:OD1	13:CN:97:LYS:HE3	2.20	0.42
9:CJ:92:LEU:HD22	9:CJ:93:ALA:N	2.35	0.42
11:CL:58:ASN:CG	11:CL:60:PHE:HD1	2.27	0.42
12:CM:105:ALA:HB1	12:CM:109:LYS:HB2	2.01	0.42
13:CN:99:SER:HB2	53:CA:1114:C:O2'	2.19	0.42
14:CO:42:PHE:CE2	14:CO:51:SER:HB2	2.55	0.42
15:CP:23:ASP:O	15:CP:25:ARG:N	2.52	0.42
16:CQ:10:ARG:HG2	16:CQ:11:VAL:O	2.19	0.42
16:CQ:23:ALA:HA	16:CQ:41:THR:O	2.20	0.42
16:CQ:52:CYS:HB2	16:CQ:53:GLY:H	1.62	0.42
19:CT:85:LEU:HA	19:CT:85:LEU:HD23	1.85	0.42
53:CA:64:G:C8	53:CA:99:C:N4	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:117:G:O2'	53:CA:118:U:H5'	2.20	0.42
53:CA:317:U:H2'	53:CA:318:G:C8	2.54	0.42
53:CA:573:A:N3	53:CA:883:C:O2'	2.51	0.42
53:CA:611:C:H2'	53:CA:612:C:H6	1.84	0.42
53:CA:994:A:C6	53:CA:1216:A:H5'	2.54	0.42
53:CA:1243:C:C2	53:CA:1244:G:N7	2.87	0.42
22:DA:46:G:C2	22:DA:47:C:C5	3.08	0.42
22:DA:116:C:O2'	22:DA:117:G:H5'	2.20	0.42
22:DA:136:G:H8	22:DA:136:G:O5'	2.03	0.42
22:DA:192:C:OP1	22:DA:2243:U:OP1	2.38	0.42
22:DA:277:G:H4'	22:DA:278:A:C8	2.53	0.42
22:DA:335:C:O2'	22:DA:336:C:O4'	2.36	0.42
22:DA:459:U:H2'	22:DA:460:A:C8	2.55	0.42
22:DA:503:A:C5	22:DA:506:G:C5	3.07	0.42
22:DA:621:A:C2'	22:DA:622:G:O5'	2.68	0.42
22:DA:630:G:N2	22:DA:633:A:OP2	2.52	0.42
22:DA:651:G:C6	22:DA:652:U:C4	3.08	0.42
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.54	0.42
22:DA:833:A:P	33:DL:39:LYS:HZ2	2.43	0.42
22:DA:1127:A:H1'	22:DA:2518:A:C2	2.55	0.42
22:DA:1220:G:C2	22:DA:1230:A:C2	3.08	0.42
22:DA:1269:A:OP2	57:DA:3392:HOH:O	2.21	0.42
22:DA:1411:U:C4	22:DA:1412:U:C4	3.07	0.42
22:DA:1411:U:H2'	22:DA:1412:U:O4'	2.20	0.42
22:DA:1661:G:H2'	22:DA:1662:U:H6	1.84	0.42
22:DA:2145:C:H2'	22:DA:2146:C:H3'	2.01	0.42
22:DA:2243:U:H2'	22:DA:2244:U:C6	2.55	0.42
22:DA:2316:G:H2'	22:DA:2317:A:C8	2.55	0.42
22:DA:2493:U:C2'	22:DA:2494:G:H5"	2.49	0.42
22:DA:2506:U:H3'	22:DA:2506:U:H6	1.85	0.42
22:DA:2543:G:C6	22:DA:2765:A:C5	3.08	0.42
22:DA:2617:U:H2'	22:DA:2618:G:H5'	2.01	0.42
54:DB:109:A:O2'	54:DB:110:C:O5'	2.38	0.42
27:DF:122:ASP:HB3	27:DF:123:GLY:H	1.58	0.42
27:DF:146:ASP:HB3	27:DF:147:ARG:H	1.55	0.42
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	2.01	0.42
31:DJ:56:VAL:HG22	31:DJ:124:VAL:HA	2.02	0.42
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.45	0.42
32:DK:40:LYS:HZ1	32:DK:89:ASN:HD21	1.67	0.42
33:DL:93:ASN:O	33:DL:94:THR:HB	2.20	0.42
33:DL:121:THR:OG1	33:DL:141:LYS:HE3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.19	0.42
40:DS:18:ARG:O	40:DS:21:ALA:HB3	2.20	0.42
40:DS:31:GLN:O	40:DS:33:LEU:N	2.53	0.42
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.84	0.42
1:AB:211:LEU:O	1:AB:215:ALA:CB	2.67	0.42
7:AH:4:ASP:HB2	7:AH:80:PRO:HG3	2.00	0.42
7:AH:21:LYS:HE2	7:AH:22:ALA:H	1.84	0.42
7:AH:62:LEU:HD13	7:AH:62:LEU:HA	1.77	0.42
10:AK:53:GLY:C	10:AK:55:ARG:H	2.27	0.42
10:AK:124:LYS:O	20:AU:33:ARG:HG2	2.20	0.42
15:AP:48:GLU:CG	15:AP:49:GLY:H	2.32	0.42
21:AA:217:C:H2'	21:AA:218:U:O4'	2.19	0.42
21:AA:1052:U:H5'	21:AA:1053:G:OP2	2.19	0.42
21:AA:1273:C:H2'	21:AA:1274:A:O4'	2.19	0.42
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.42
22:BA:518:G:H2'	22:BA:519:U:C6	2.54	0.42
22:BA:666:A:H4'	33:BL:48:ARG:HD2	2.01	0.42
22:BA:1057:A:N3	22:BA:1082:U:C2	2.88	0.42
22:BA:1341:G:H3'	22:BA:1397:U:O2	2.20	0.42
22:BA:1467:U:C4	22:BA:1546:G:C2	3.07	0.42
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.50	0.42
22:BA:1777:U:O2'	22:BA:1778:U:H5'	2.20	0.42
22:BA:2144:G:H2'	22:BA:2148:G:O6	2.19	0.42
24:BC:252:LYS:HB2	24:BC:252:LYS:NZ	2.33	0.42
26:BE:79:ARG:CG	26:BE:80:SER:N	2.82	0.42
26:BE:132:LYS:HB3	26:BE:132:LYS:HZ3	1.84	0.42
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	2.02	0.42
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.50	0.42
29:BH:133:GLN:HA	29:BH:133:GLN:OE1	2.20	0.42
32:BK:73:ASP:OD1	32:BK:74:GLY:N	2.52	0.42
34:BM:112:LEU:O	34:BM:113:ALA:C	2.62	0.42
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.45	0.42
41:BT:40:LYS:H	41:BT:43:ILE:HG23	1.84	0.42
41:BT:51:PHE:C	41:BT:52:GLU:HG2	2.45	0.42
42:BU:46:LYS:HG2	42:BU:47:PRO:HD2	2.02	0.42
45:BX:48:LEU:HD11	45:BX:67:LEU:HD21	2.01	0.42
48:B0:50:GLY:O	48:B0:51:ARG:O	2.38	0.42
51:B3:54:LEU:HD12	51:B3:54:LEU:HA	1.77	0.42
1:CB:92:ASN:OD1	1:CB:93:HIS:ND1	2.53	0.42
3:CD:84:ASN:CG	4:CE:101:GLY:HA3	2.45	0.42
4:CE:25:LYS:HB2	4:CE:25:LYS:NZ	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CG:129:ASN:OD1	6:CG:134:VAL:HG11	2.19	0.42
9:CJ:76:ILE:HG22	9:CJ:77:VAL:N	2.34	0.42
11:CL:75:GLU:C	11:CL:77:SER:N	2.77	0.42
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	2.02	0.42
15:CP:46:LYS:HZ2	15:CP:46:LYS:H	1.68	0.42
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CH2	2.55	0.42
19:CT:58:ASP:O	19:CT:61:ALA:HB3	2.19	0.42
19:CT:61:ALA:C	19:CT:63:LYS:N	2.78	0.42
19:CT:72:ALA:C	19:CT:74:HIS:H	2.28	0.42
20:CU:19:LYS:HD3	20:CU:19:LYS:HA	1.81	0.42
53:CA:302:G:C5	53:CA:303:A:N7	2.88	0.42
53:CA:1097:C:H2'	53:CA:1098:C:C6	2.55	0.42
22:DA:66:C:C4	22:DA:67:U:C4	3.08	0.42
22:DA:217:A:O2'	22:DA:218:A:H5'	2.19	0.42
22:DA:352:A:C4	22:DA:353:C:H1'	2.55	0.42
22:DA:471:A:H2'	22:DA:472:A:O4'	2.19	0.42
22:DA:749:A:H2'	22:DA:750:A:H8	1.84	0.42
22:DA:911:A:H8	22:DA:911:A:O5'	2.02	0.42
22:DA:1087:G:H1'	22:DA:1089:A:H1'	2.02	0.42
22:DA:1091:G:C2	22:DA:1101:U:N3	2.88	0.42
22:DA:1132:U:H5"	31:DJ:84:ILE:HD13	2.01	0.42
22:DA:1232:G:C5	22:DA:1233:C:C5	3.07	0.42
22:DA:1312:U:O2'	22:DA:1314:C:C5	2.73	0.42
22:DA:1417:C:O2'	22:DA:1418:G:C5'	2.67	0.42
22:DA:1427:A:H4'	22:DA:1428:C:O5'	2.19	0.42
22:DA:1799:G:OP1	24:DC:257:ARG:NH1	2.52	0.42
22:DA:1807:G:H1'	22:DA:1810:A:H62	1.84	0.42
22:DA:1824:G:O3'	24:DC:246:PRO:HD3	2.19	0.42
22:DA:1878:G:H2'	22:DA:1879:C:C6	2.53	0.42
22:DA:1942:C:H2'	22:DA:1943:U:O2	2.18	0.42
22:DA:2093:G:H4'	29:DH:24:GLY:HA3	2.01	0.42
22:DA:2199:A:C4	22:DA:2200:C:C6	3.07	0.42
22:DA:2377:A:C6	22:DA:2378:A:C6	3.08	0.42
22:DA:2674:G:H4'	32:DK:30:ARG:CG	2.50	0.42
22:DA:2734:A:N7	22:DA:2735:G:C8	2.88	0.42
22:DA:2863:C:O2'	22:DA:2864:G:H5'	2.19	0.42
54:DB:23:G:N2	54:DB:61:G:C2	2.88	0.42
54:DB:62:C:H2'	54:DB:63:C:O4'	2.20	0.42
54:DB:77:U:C2'	54:DB:78:A:H5'	2.50	0.42
54:DB:89:U:H5"	54:DB:90:C:C5	2.54	0.42
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:24:ASN:O	26:DE:28:VAL:HG13	2.20	0.42
26:DE:147:LEU:HD21	26:DE:179:SER:HB2	2.02	0.42
27:DF:43:ILE:HD13	27:DF:82:TYR:CE2	2.55	0.42
27:DF:113:PHE:O	27:DF:114:ARG:HB3	2.20	0.42
29:DH:73:ASN:C	29:DH:75:LEU:H	2.26	0.42
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.01	0.42
31:DJ:37:ARG:HG3	31:DJ:118:MET:CE	2.50	0.42
31:DJ:80:HIS:O	31:DJ:81:ILE:O	2.37	0.42
32:DK:9:ASN:O	32:DK:83:ALA:HA	2.19	0.42
32:DK:103:VAL:O	32:DK:104:THR:HB	2.19	0.42
32:DK:113:MET:O	32:DK:114:LYS:C	2.63	0.42
33:DL:79:LEU:HD23	33:DL:82:LEU:HD11	2.02	0.42
34:DM:99:GLY:O	34:DM:100:LYS:C	2.62	0.42
38:DQ:91:ARG:CZ	38:DQ:93:ILE:HG21	2.49	0.42
40:DS:6:LYS:HD2	40:DS:8:ARG:HD2	2.01	0.42
45:DX:14:GLY:HA3	45:DX:28:PHE:HE1	1.85	0.42
45:DX:15:ASN:C	45:DX:26:ARG:HG2	2.44	0.42
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.29	0.42
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.35	0.42
1:AB:153:MET:C	1:AB:155:GLY:H	2.28	0.42
2:AC:154:GLY:HA2	2:AC:162:ALA:HB1	2.02	0.42
2:AC:164:THR:O	2:AC:165:GLU:O	2.38	0.42
3:AD:60:VAL:CA	3:AD:63:ILE:HG22	2.50	0.42
3:AD:130:ASN:O	3:AD:131:ILE:C	2.62	0.42
4:AE:148:SER:O	4:AE:152:VAL:CG1	2.67	0.42
7:AH:80:PRO:HG2	21:AA:878:A:H5"	2.02	0.42
12:AM:86:ARG:NH2	12:AM:96:VAL:HG12	2.35	0.42
15:AP:20:VAL:HG21	15:AP:32:PHE:CB	2.50	0.42
15:AP:75:ILE:C	15:AP:77:GLU:H	2.27	0.42
18:AS:46:LEU:HB3	18:AS:47:THR:H	1.71	0.42
19:AT:53:MET:CE	19:AT:57:VAL:HG21	2.49	0.42
19:AT:69:ASN:OD1	19:AT:69:ASN:N	2.53	0.42
21:AA:66:A:O4'	21:AA:173:U:C4	2.73	0.42
21:AA:372:C:H5'	21:AA:373:A:OP1	2.19	0.42
21:AA:563:A:C8	21:AA:567:G:O4'	2.73	0.42
21:AA:929:G:OP1	21:AA:1533:C:N4	2.53	0.42
21:AA:1006:G:H2'	21:AA:1007:U:H6	1.83	0.42
21:AA:1279:G:N3	21:AA:1279:G:C2'	2.70	0.42
22:BA:165:A:H2'	22:BA:166:U:H6	1.85	0.42
22:BA:307:G:N2	22:BA:309:A:H3'	2.35	0.42
22:BA:424:G:C2'	22:BA:425:G:O5'	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:548:G:H3'	22:BA:548:G:C8	2.54	0.42
22:BA:841:G:H2'	22:BA:842:U:C6	2.55	0.42
22:BA:1045:C:H5"	22:BA:1047:G:H5'	2.02	0.42
22:BA:1098:A:H3'	22:BA:1099:G:C8	2.54	0.42
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.35	0.42
22:BA:1252:G:O2'	22:BA:1253:A:C8	2.72	0.42
22:BA:1316:U:H2'	22:BA:1317:G:C8	2.55	0.42
22:BA:1416:G:O2'	22:BA:1417:C:P	2.78	0.42
22:BA:1419:A:C5	22:BA:1421:G:C5	3.07	0.42
22:BA:1507:C:C4	22:BA:1508:A:C2	3.07	0.42
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.26	0.42
22:BA:2140:G:C6	22:BA:2152:G:N1	2.88	0.42
22:BA:2314:A:C2	22:BA:2315:G:C4	3.07	0.42
22:BA:2680:U:H5'	25:BD:194:PRO:HA	2.02	0.42
23:BB:74:U:O2	43:BV:29:ILE:HD12	2.20	0.42
24:BC:106:PRO:HB3	24:BC:141:HIS:NE2	2.34	0.42
24:BC:141:HIS:HB3	24:BC:142:ASN:H	1.08	0.42
27:BF:60:SER:O	27:BF:62:GLN:N	2.52	0.42
28:BG:164:ALA:C	28:BG:166:GLU:H	2.27	0.42
28:BG:174:LYS:HD2	28:BG:174:LYS:O	2.19	0.42
31:BJ:73:VAL:CG2	31:BJ:74:TYR:H	2.28	0.42
31:BJ:103:ILE:HG13	31:BJ:104:ALA:N	2.34	0.42
32:BK:47:ILE:HD12	32:BK:47:ILE:HA	1.81	0.42
33:BL:39:LYS:C	33:BL:40:SER:O	2.58	0.42
38:BQ:63:ARG:HD2	38:BQ:63:ARG:C	2.44	0.42
38:BQ:71:ASN:OD1	38:BQ:106:THR:HG23	2.20	0.42
39:BR:23:GLU:O	39:BR:25:LEU:HD13	2.20	0.42
42:BU:35:VAL:HB	42:BU:38:ILE:HG13	2.01	0.42
42:BU:100:GLU:O	42:BU:101:THR:CB	2.68	0.42
46:BY:22:LEU:O	46:BY:23:ARG:O	2.37	0.42
1:CB:182:VAL:O	1:CB:195:VAL:HG13	2.20	0.42
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.55	0.42
3:CD:98:ASP:OD1	3:CD:99:ASN:N	2.53	0.42
9:CJ:39:PRO:HA	9:CJ:74:VAL:H	1.85	0.42
9:CJ:52:LEU:CB	13:CN:80:ARG:HE	2.33	0.42
11:CL:42:LYS:HD3	11:CL:43:LYS:HZ2	1.85	0.42
12:CM:69:ARG:HD2	12:CM:69:ARG:N	2.34	0.42
12:CM:78:ARG:HH11	12:CM:78:ARG:HG2	1.83	0.42
12:CM:82:LEU:HD22	18:CS:73:PHE:HE2	1.85	0.42
12:CM:85:TYR:HE2	12:CM:96:VAL:HG13	1.85	0.42
16:CQ:59:GLU:HB3	16:CQ:76:ARG:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:60:ILE:O	16:CQ:60:ILE:HG12	2.16	0.42
18:CS:38:THR:OG1	18:CS:39:ILE:N	2.52	0.42
19:CT:46:ALA:C	19:CT:48:LYS:H	2.27	0.42
53:CA:59:A:H2'	53:CA:59:A:N3	2.34	0.42
53:CA:212:G:O2'	53:CA:213:G:H5"	2.20	0.42
53:CA:248:C:O2'	53:CA:249:U:O5'	2.37	0.42
53:CA:414:A:C2'	53:CA:415:A:H5"	2.50	0.42
53:CA:453:G:H2'	53:CA:454:G:C8	2.55	0.42
53:CA:560:A:C8	53:CA:566:G:C4	3.08	0.42
53:CA:678:U:H1'	53:CA:777:A:O3'	2.20	0.42
53:CA:818:G:H3'	53:CA:819:A:C5'	2.49	0.42
53:CA:961:U:O2'	53:CA:962:C:C5'	2.68	0.42
53:CA:1133:G:C6	53:CA:1134:G:N7	2.88	0.42
53:CA:1151:A:C2'	53:CA:1152:A:O5'	2.67	0.42
53:CA:1258:G:N2	53:CA:1259:C:C2	2.88	0.42
53:CA:1385:G:C4	53:CA:1386:G:C8	3.08	0.42
53:CA:1453:G:N3	53:CA:1453:G:C2'	2.82	0.42
22:DA:133:U:H2'	22:DA:134:G:O4'	2.20	0.42
22:DA:260:G:C6	22:DA:261:G:C5	3.08	0.42
22:DA:301:G:O3'	42:DU:81:ARG:NH1	2.53	0.42
22:DA:345:A:O2'	22:DA:346:A:C2	2.73	0.42
22:DA:366:C:H2'	22:DA:367:G:O5'	2.20	0.42
22:DA:649:G:C5	22:DA:650:C:C4	3.08	0.42
22:DA:685:A:H1'	22:DA:688:U:O4	2.18	0.42
22:DA:728:G:C4	22:DA:730:A:C8	3.07	0.42
22:DA:954:G:C5	22:DA:955:U:C5	3.07	0.42
22:DA:1070:A:H61	30:DI:8:VAL:CG1	2.32	0.42
22:DA:1683:U:H2'	22:DA:1684:G:H8	1.84	0.42
22:DA:2045:C:O3'	48:D0:14:MET:HB3	2.20	0.42
22:DA:2097:A:H2'	22:DA:2098:U:C6	2.55	0.42
22:DA:2209:G:C5	22:DA:2210:U:C5	3.08	0.42
22:DA:2370:G:O6	22:DA:2371:G:C6	2.72	0.42
22:DA:2408:U:O2'	22:DA:2409:G:C8	2.37	0.42
22:DA:2491:U:OP1	22:DA:2570:G:H4'	2.18	0.42
22:DA:2867:G:O2'	22:DA:2868:A:OP2	2.38	0.42
54:DB:42:C:H2'	54:DB:43:C:H6	1.76	0.42
54:DB:94:A:OP1	43:DV:19:ARG:HD3	2.20	0.42
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.66	0.42
24:DC:152:GLN:HA	24:DC:155:ARG:HD3	2.02	0.42
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.34	0.42
25:DD:73:VAL:HG22	25:DD:74:GLU:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:3:LEU:HD11	26:DE:113:VAL:HG21	2.01	0.42
26:DE:90:GLN:OE1	26:DE:90:GLN:HA	2.19	0.42
27:DF:15:LEU:O	27:DF:27:VAL:HG12	2.20	0.42
27:DF:110:ILE:HA	27:DF:111:ARG:HH11	1.85	0.42
27:DF:131:VAL:C	27:DF:133:GLU:N	2.76	0.42
28:DG:102:ILE:HB	28:DG:114:HIS:O	2.19	0.42
28:DG:154:GLU:C	28:DG:156:TYR:N	2.78	0.42
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	2.01	0.42
30:DI:52:LEU:HD11	30:DI:78:LEU:HD21	2.02	0.42
30:DI:98:GLY:HA2	30:DI:137:LEU:HD23	2.01	0.42
32:DK:35:VAL:HG23	32:DK:36:GLY:N	2.27	0.42
34:DM:1:MET:O	34:DM:2:LEU:C	2.62	0.42
34:DM:76:LYS:HG2	34:DM:80:VAL:HG11	2.02	0.42
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.50	0.42
35:DN:100:CYS:O	48:D0:41:HIS:CD2	2.72	0.42
37:DP:32:VAL:HB	37:DP:37:LYS:HG2	2.02	0.42
37:DP:102:ARG:HD2	37:DP:106:ALA:C	2.45	0.42
37:DP:113:LEU:HD23	37:DP:114:ASN:N	2.35	0.42
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.55	0.42
42:DU:102:ILE:HD12	42:DU:102:ILE:HA	1.93	0.42
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.20	0.42
48:D0:37:HIS:HB2	48:D0:41:HIS:CE1	2.54	0.42
1:AB:20:ARG:O	1:AB:21:TYR:C	2.61	0.42
1:AB:53:LEU:N	1:AB:53:LEU:HD22	2.35	0.42
4:AE:10:LEU:H	4:AE:10:LEU:HD23	1.84	0.42
4:AE:152:VAL:O	4:AE:153:ALA:C	2.63	0.42
7:AH:112:ASP:O	7:AH:113:ARG:C	2.62	0.42
7:AH:116:ARG:HE	7:AH:116:ARG:HB2	1.71	0.42
8:AI:99:LYS:O	8:AI:99:LYS:HG2	2.20	0.42
9:AJ:22:THR:HG22	9:AJ:23:ALA:N	2.34	0.42
10:AK:18:GLY:C	10:AK:81:LEU:HB2	2.45	0.42
11:AL:3:VAL:HG23	11:AL:4:ASN:N	2.34	0.42
13:AN:20:PHE:HA	13:AN:24:ALA:HB3	2.02	0.42
13:AN:22:LYS:CG	13:AN:23:ARG:H	2.20	0.42
19:AT:68:LYS:CD	21:AA:132:C:H5"	2.49	0.42
21:AA:513:C:H2'	21:AA:514:C:H6	1.84	0.42
21:AA:747:A:C6	21:AA:748:G:C6	3.07	0.42
21:AA:1423:G:C6	21:AA:1424:U:C4	3.08	0.42
22:BA:85:G:OP1	42:BU:27:VAL:HG11	2.19	0.42
22:BA:271:G:O2'	22:BA:272:A:H5"	2.20	0.42
22:BA:408:G:O2'	22:BA:409:G:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:568:U:O2	22:BA:570:G:C8	2.72	0.42
22:BA:657:U:H2'	22:BA:658:U:C6	2.55	0.42
22:BA:721:A:H2'	22:BA:722:A:H8	1.83	0.42
22:BA:1084:A:C2'	22:BA:1085:A:H8	2.13	0.42
22:BA:1340:U:H5	22:BA:1603:A:C8	2.37	0.42
22:BA:1384:A:H1'	22:BA:1405:U:H1'	2.02	0.42
22:BA:1416:G:O2'	22:BA:1417:C:H5"	2.20	0.42
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.50	0.42
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.55	0.42
26:BE:5:LEU:CD2	26:BE:120:VAL:HG22	2.50	0.42
26:BE:48:THR:HG22	26:BE:86:ALA:CB	2.50	0.42
27:BF:30:VAL:CG1	27:BF:96:TRP:CH2	3.03	0.42
28:BG:30:GLY:CA	28:BG:78:VAL:HG12	2.46	0.42
29:BH:24:GLY:O	29:BH:25:TYR:C	2.63	0.42
34:BM:69:PRO:O	34:BM:71:LYS:N	2.50	0.42
35:BN:31:HIS:C	35:BN:33:ILE:H	2.28	0.42
35:BN:69:ARG:C	35:BN:71:ARG:H	2.28	0.42
44:BW:37:VAL:C	44:BW:38:ARG:HG2	2.44	0.42
44:BW:55:ASP:O	44:BW:55:ASP:CG	2.63	0.42
46:BY:46:VAL:O	46:BY:47:ARG:C	2.63	0.42
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.50	0.42
1:CB:164:ASP:HB3	1:CB:167:HIS:H	1.84	0.42
1:CB:166:ASP:HB2	1:CB:190:SER:HB2	2.02	0.42
4:CE:83:PRO:HB3	4:CE:96:GLN:HG2	2.01	0.42
9:CJ:32:THR:HG23	9:CJ:83:THR:OG1	2.20	0.42
9:CJ:87:LEU:HD22	9:CJ:87:LEU:HA	1.92	0.42
10:CK:123:PRO:HB2	10:CK:125:LYS:HD3	2.02	0.42
12:CM:19:THR:HA	12:CM:25:GLY:O	2.20	0.42
16:CQ:67:SER:HA	53:CA:265:G:O2'	2.19	0.42
17:CR:27:THR:O	17:CR:30:ASN:HB3	2.20	0.42
53:CA:69:G:N2	53:CA:71:A:H62	2.18	0.42
53:CA:93:U:H2'	53:CA:95:C:C5	2.53	0.42
53:CA:522:C:O4'	53:CA:536:C:H4'	2.20	0.42
53:CA:537:G:H2'	53:CA:538:G:C8	2.54	0.42
53:CA:552:U:H2'	53:CA:553:A:C8	2.54	0.42
53:CA:701:U:O2'	53:CA:702:A:P	2.77	0.42
53:CA:791:G:C6	53:CA:792:A:N7	2.88	0.42
53:CA:996:A:C2	53:CA:997:U:C2	3.07	0.42
53:CA:1004:A:C8	53:CA:1025:U:O2'	2.73	0.42
53:CA:1055:A:C6	53:CA:1206:G:C5	3.08	0.42
22:DA:72:U:O2'	22:DA:73:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:85:G:O2'	22:DA:86:G:O4'	2.37	0.42
22:DA:124:G:H2'	50:D2:19:ARG:NE	2.35	0.42
22:DA:193:U:C2'	22:DA:194:G:H5'	2.49	0.42
22:DA:275:C:H1'	22:DA:363:G:N2	2.34	0.42
22:DA:287:G:N1	22:DA:354:A:C6	2.88	0.42
22:DA:584:C:N4	22:DA:585:G:C6	2.88	0.42
22:DA:589:U:C2	22:DA:590:A:N7	2.87	0.42
22:DA:867:C:O2'	22:DA:868:U:H6	2.03	0.42
22:DA:924:G:O2'	22:DA:925:A:H5'	2.20	0.42
22:DA:929:U:O2'	22:DA:930:G:H5'	2.20	0.42
22:DA:1144:A:H2'	22:DA:1145:C:C6	2.55	0.42
22:DA:1160:G:C6	22:DA:1161:C:C4	3.07	0.42
22:DA:1171:G:C6	22:DA:1179:G:C2	3.08	0.42
22:DA:1278:C:O2'	22:DA:1279:G:H5'	2.20	0.42
22:DA:1308:A:C6	22:DA:1309:G:C2	3.08	0.42
22:DA:1364:G:N3	22:DA:1368:G:C2	2.88	0.42
22:DA:1506:U:O5'	22:DA:1506:U:H6	2.02	0.42
22:DA:1511:G:HO2'	22:DA:1512:C:H6	1.67	0.42
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.50	0.42
22:DA:1827:U:H4'	22:DA:1970:A:O2'	2.18	0.42
22:DA:1865:U:C4	22:DA:1875:G:C2	3.08	0.42
22:DA:1971:U:H6	22:DA:1971:U:H2'	1.47	0.42
22:DA:1991:U:H5"	22:DA:1991:U:H6	1.85	0.42
22:DA:2309:A:H3'	22:DA:2310:C:C6	2.55	0.42
22:DA:2545:G:N3	22:DA:2565:A:H2	2.17	0.42
22:DA:2645:G:H3'	22:DA:2646:C:H5'	2.02	0.42
26:DE:58:LYS:O	26:DE:60:TRP:CD1	2.73	0.42
27:DF:137:PHE:O	27:DF:138:PRO:C	2.63	0.42
33:DL:96:LYS:HE2	33:DL:102:GLY:O	2.20	0.42
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.20	0.42
35:DN:82:GLU:O	35:DN:85:PRO:HD2	2.20	0.42
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.85	0.42
41:DT:68:LYS:HB3	41:DT:69:ARG:H	1.52	0.42
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.84	0.42
44:DW:20:LEU:HD11	44:DW:35:ILE:CG1	2.49	0.42
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	2.19	0.42
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.64	0.42
1:AB:75:ALA:O	1:AB:79:VAL:HG23	2.20	0.41
1:AB:138:ARG:HB2	1:AB:138:ARG:HH11	1.85	0.41
6:AG:144:ALA:C	6:AG:146:ALA:N	2.75	0.41
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:73:LEU:HA	9:AJ:73:LEU:HD22	1.81	0.41
11:AL:74:GLN:CG	11:AL:75:GLU:HG2	2.46	0.41
14:AO:37:HIS:HE1	21:AA:740:U:OP1	2.03	0.41
19:AT:66:ILE:CD1	19:AT:70:LYS:HE3	2.46	0.41
21:AA:550:G:H2'	21:AA:551:U:C6	2.54	0.41
21:AA:652:U:O2'	21:AA:653:U:O5'	2.36	0.41
22:BA:10:A:C2	22:BA:2800:A:C4	3.08	0.41
22:BA:460:A:C2	22:BA:470:A:C4	3.08	0.41
22:BA:728:G:C4	22:BA:730:A:C8	3.07	0.41
22:BA:752:A:O2'	22:BA:753:A:P	2.78	0.41
22:BA:760:G:H4'	22:BA:1776:G:OP1	2.20	0.41
22:BA:988:A:P	47:BZ:11:SER:HB3	2.60	0.41
22:BA:1178:C:O2	22:BA:1178:C:C2'	2.67	0.41
22:BA:1380:G:C2	22:BA:1381:G:C8	3.07	0.41
22:BA:1716:U:H2'	22:BA:1717:A:C8	2.56	0.41
22:BA:1798:U:C4	22:BA:1819:A:C2	3.08	0.41
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.55	0.41
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.01	0.41
22:BA:2216:G:H2'	22:BA:2217:G:H8	1.84	0.41
22:BA:2287:A:N3	22:BA:2287:A:H2'	2.35	0.41
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.35	0.41
22:BA:2496:C:OP2	34:BM:81:ARG:HD2	2.19	0.41
24:BC:90:ILE:HD13	24:BC:90:ILE:HA	1.58	0.41
25:BD:39:ASP:O	25:BD:40:LEU:C	2.63	0.41
26:BE:176:ASP:OD2	26:BE:179:SER:HB3	2.20	0.41
26:BE:187:VAL:O	26:BE:188:MET:CB	2.67	0.41
28:BG:25:ILE:HG22	28:BG:78:VAL:HG21	2.02	0.41
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.68	0.41
32:BK:2:ILE:N	32:BK:2:ILE:CD1	2.82	0.41
32:BK:18:ARG:CG	32:BK:18:ARG:NH1	2.75	0.41
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.35	0.41
37:BP:19:PHE:HE2	37:BP:83:ILE:HD12	1.85	0.41
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	2.18	0.41
40:BS:69:LEU:HD12	40:BS:108:SER:O	2.19	0.41
41:BT:39:THR:CG2	41:BT:41:ALA:HB3	2.47	0.41
42:BU:85:ARG:HG3	42:BU:86:PHE:C	2.44	0.41
43:BV:50:MET:C	43:BV:52:ALA:H	2.28	0.41
44:BW:29:SER:O	44:BW:30:VAL:CB	2.64	0.41
46:BY:8:GLU:O	46:BY:9:LYS:CB	2.68	0.41
46:BY:49:ASP:O	46:BY:53:VAL:HG23	2.20	0.41
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.84	0.41
51:B3:44:ARG:N	51:B3:45:PRO:CD	2.81	0.41
1:CB:81:ASP:CG	1:CB:82:ALA:N	2.78	0.41
3:CD:106:PHE:HD1	3:CD:158:LEU:HD21	1.84	0.41
4:CE:111:ARG:O	4:CE:112:ALA:C	2.63	0.41
5:CF:29:ILE:HG22	5:CF:34:GLY:O	2.20	0.41
8:CI:83:THR:C	8:CI:85:ALA:H	2.28	0.41
11:CL:23:LEU:O	11:CL:24:GLU:C	2.63	0.41
16:CQ:14:ASP:OD2	16:CQ:52:CYS:HB2	2.20	0.41
18:CS:4:LEU:CD1	53:CA:1319:A:H5"	2.51	0.41
53:CA:345:C:H3'	37:DP:38:ARG:NH1	2.35	0.41
53:CA:369:G:OP2	53:CA:388:G:N1	2.51	0.41
53:CA:455:G:N2	53:CA:478:A:C2	2.87	0.41
53:CA:512:U:O2'	53:CA:513:C:C5'	2.68	0.41
53:CA:512:U:O2'	53:CA:513:C:H5'	2.20	0.41
53:CA:552:U:C4	53:CA:553:A:N7	2.88	0.41
53:CA:1197:A:O2'	53:CA:1198:G:H5'	2.20	0.41
53:CA:1417:G:C6	53:CA:1482:G:C6	3.08	0.41
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.20	0.41
22:DA:15:G:H2'	22:DA:16:C:C6	2.55	0.41
22:DA:53:A:N3	50:D2:35:ARG:NH1	2.68	0.41
22:DA:119:A:H5'	22:DA:120:U:OP1	2.20	0.41
22:DA:389:G:O2'	22:DA:390:U:H5'	2.19	0.41
22:DA:518:G:C4	22:DA:519:U:C5	3.08	0.41
22:DA:523:C:O2'	22:DA:524:G:H5'	2.20	0.41
22:DA:871:U:H2'	22:DA:872:U:C6	2.55	0.41
22:DA:922:C:H2'	22:DA:923:G:O4'	2.19	0.41
22:DA:961:C:H5	22:DA:2456:C:O4'	2.03	0.41
22:DA:962:G:HO2'	22:DA:963:U:H6	1.62	0.41
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.67	0.41
22:DA:1377:G:H8	22:DA:1377:G:O5'	2.03	0.41
22:DA:1741:C:O5'	22:DA:1741:C:H6	2.02	0.41
22:DA:2478:A:C8	22:DA:2529:G:C5	3.07	0.41
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.50	0.41
22:DA:2876:G:C2	22:DA:2877:G:H1'	2.55	0.41
54:DB:5:U:H2'	54:DB:6:G:H8	1.82	0.41
54:DB:57:A:H2'	54:DB:58:A:C8	2.55	0.41
54:DB:90:C:H4'	34:DM:38:ARG:NH1	2.34	0.41
24:DC:6:LYS:HA	24:DC:7:PRO:HD3	1.79	0.41
24:DC:76:VAL:HG13	24:DC:96:LYS:HZ3	1.86	0.41
25:DD:110:THR:HG23	25:DD:171:THR:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:105:LEU:HD13	26:DE:105:LEU:O	2.20	0.41
26:DE:162:ARG:C	26:DE:164:LEU:N	2.78	0.41
27:DF:35:LEU:CD1	27:DF:153:ILE:HG23	2.49	0.41
28:DG:157:LYS:HE2	28:DG:157:LYS:HB2	1.89	0.41
29:DH:4:ILE:HG23	29:DH:17:ASP:C	2.45	0.41
30:DI:79:LEU:C	30:DI:81:LYS:H	2.28	0.41
32:DK:66:LYS:HA	32:DK:79:PHE:O	2.20	0.41
35:DN:98:LEU:CD2	48:D0:53:VAL:HG11	2.46	0.41
36:DO:7:ARG:HH21	36:DO:95:SER:HB3	1.84	0.41
39:DR:7:SER:OG	39:DR:12:HIS:CE1	2.73	0.41
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.50	0.41
40:DS:33:LEU:HD12	40:DS:51:LEU:HD23	2.01	0.41
40:DS:87:PRO:HG2	40:DS:87:PRO:O	2.20	0.41
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.34	0.41
41:DT:73:ARG:HD3	41:DT:73:ARG:HA	1.94	0.41
42:DU:12:VAL:HG11	42:DU:38:ILE:HG12	2.02	0.41
43:DV:43:ASP:C	43:DV:45:ASP:H	2.27	0.41
46:DY:30:MET:O	46:DY:30:MET:SD	2.78	0.41
1:AB:9:LEU:HB2	1:AB:42:LEU:CD1	2.51	0.41
1:AB:15:PHE:CD1	1:AB:16:GLY:N	2.87	0.41
1:AB:89:PHE:CE1	1:AB:153:MET:HB2	2.54	0.41
3:AD:121:ALA:HA	3:AD:145:ARG:HG3	2.01	0.41
4:AE:114:LEU:HG	4:AE:119:VAL:HG21	2.01	0.41
8:AI:50:PRO:HB3	8:AI:83:THR:HG22	2.02	0.41
9:AJ:71:LEU:O	9:AJ:72:ARG:CD	2.66	0.41
19:AT:26:MET:HB3	21:AA:1457:G:O3'	2.20	0.41
19:AT:39:GLU:O	19:AT:39:GLU:HG2	2.20	0.41
20:AU:38:GLU:CD	20:AU:41:THR:HG21	2.44	0.41
21:AA:122:G:O2'	21:AA:123:U:H5'	2.20	0.41
21:AA:496:A:N3	21:AA:496:A:C2'	2.72	0.41
21:AA:601:G:C2	21:AA:602:A:C4	3.08	0.41
21:AA:607:A:H2'	21:AA:608:A:C8	2.55	0.41
21:AA:652:U:O4	21:AA:752:G:C2'	2.68	0.41
21:AA:756:C:H2'	21:AA:757:U:O4'	2.20	0.41
21:AA:965:U:H4'	21:AA:969:A:C8	2.56	0.41
21:AA:1151:A:C4	21:AA:1152:A:N7	2.88	0.41
22:BA:9:G:C6	22:BA:2629:U:C6	3.08	0.41
22:BA:192:C:H5"	22:BA:193:U:OP2	2.19	0.41
22:BA:451:U:C2	22:BA:453:A:N7	2.88	0.41
22:BA:465:G:H2'	22:BA:466:A:C8	2.55	0.41
22:BA:574:A:H4'	22:BA:575:A:C5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:936:A:H2'	22:BA:937:C:C6	2.55	0.41
22:BA:1601:G:H2'	22:BA:1602:U:O4'	2.20	0.41
22:BA:2135:A:O2'	22:BA:2136:G:O5'	2.38	0.41
22:BA:2582:G:C2	22:BA:2583:G:C8	3.07	0.41
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.51	0.41
25:BD:56:LYS:HD3	25:BD:58:ASN:HD21	1.84	0.41
26:BE:23:PHE:CZ	26:BE:28:VAL:HG11	2.55	0.41
26:BE:100:MET:HE2	26:BE:100:MET:HB3	1.91	0.41
28:BG:106:LEU:O	28:BG:151:ARG:NH2	2.42	0.41
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.41
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.41
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.63	0.41
31:BJ:121:LYS:HB2	31:BJ:121:LYS:HE3	1.80	0.41
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.40	0.41
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.21	0.41
42:BU:46:LYS:HE2	42:BU:46:LYS:HB3	1.89	0.41
44:BW:43:LYS:HZ2	44:BW:43:LYS:HG2	1.47	0.41
51:B3:14:LYS:HD3	51:B3:15:LYS:O	2.20	0.41
1:CB:151:LYS:HG3	1:CB:152:ASP:N	2.34	0.41
1:CB:203:ASP:OD2	1:CB:204:ASP:HB2	2.20	0.41
2:CC:5:HIS:CD2	2:CC:183:TYR:HE2	2.38	0.41
2:CC:76:ILE:HD11	2:CC:102:ILE:CD1	2.47	0.41
3:CD:55:ARG:HH12	3:CD:58:GLN:HG2	1.85	0.41
5:CF:73:GLU:O	5:CF:74:LEU:C	2.62	0.41
9:CJ:55:PRO:HA	13:CN:81:ILE:HG21	2.02	0.41
13:CN:33:VAL:HG21	53:CA:1271:A:O2'	2.21	0.41
13:CN:89:ARG:HG3	13:CN:91:GLU:CG	2.51	0.41
15:CP:67:ILE:O	15:CP:67:ILE:HG23	2.20	0.41
16:CQ:65:PRO:HG2	53:CA:264:C:O2'	2.20	0.41
16:CQ:65:PRO:HG2	53:CA:264:C:H1'	2.02	0.41
18:CS:59:VAL:HB	18:CS:73:PHE:CD2	2.52	0.41
53:CA:214:C:H2'	53:CA:215:C:H6	1.85	0.41
53:CA:243:A:C2	53:CA:245:U:H2'	2.56	0.41
53:CA:259:G:H2'	53:CA:260:G:O4'	2.19	0.41
53:CA:363:A:H2'	53:CA:364:A:O4'	2.20	0.41
53:CA:374:A:H2'	53:CA:375:U:C6	2.55	0.41
53:CA:749:A:C2	53:CA:750:C:C2	3.08	0.41
53:CA:1215:G:N3	53:CA:1216:A:C8	2.88	0.41
53:CA:1273:C:H2'	53:CA:1274:A:C8	2.55	0.41
53:CA:1349:A:O2'	53:CA:1350:A:O4'	2.35	0.41
53:CA:1508:A:H2'	53:CA:1509:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:14:A:C6	22:DA:526:A:C2	3.09	0.41
22:DA:36:G:N1	22:DA:445:C:C4	2.88	0.41
22:DA:304:U:H2'	22:DA:305:C:H6	1.81	0.41
22:DA:310:A:C8	22:DA:312:G:C6	3.08	0.41
22:DA:481:G:O2'	22:DA:482:A:P	2.78	0.41
22:DA:503:A:C5	22:DA:506:G:C6	3.07	0.41
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	2.02	0.41
22:DA:861:A:O2'	22:DA:862:G:C5'	2.68	0.41
22:DA:1011:G:H4'	22:DA:1012:U:OP1	2.20	0.41
22:DA:1030:C:O2'	22:DA:1031:G:H5'	2.20	0.41
22:DA:1260:A:C2	22:DA:1261:C:C2	3.08	0.41
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.30	0.41
22:DA:1792:G:H5"	24:DC:203:VAL:CG2	2.50	0.41
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.34	0.41
22:DA:1981:A:H8	22:DA:1981:A:H2'	1.79	0.41
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.20	0.41
22:DA:2197:U:C5	22:DA:2224:G:C6	3.09	0.41
22:DA:2240:U:C2	22:DA:2241:A:C8	3.09	0.41
22:DA:2330:G:H1'	44:DW:38:ARG:HB3	2.01	0.41
22:DA:2531:A:H5"	28:DG:156:TYR:CZ	2.55	0.41
22:DA:2595:G:C6	22:DA:2599:G:C6	3.08	0.41
22:DA:2717:C:H2'	22:DA:2718:G:O4'	2.20	0.41
24:DC:52:HIS:O	24:DC:215:VAL:HA	2.20	0.41
27:DF:37:MET:HA	27:DF:151:LEU:HB3	2.02	0.41
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.67	0.41
28:DG:51:PHE:HE2	28:DG:68:ARG:HA	1.84	0.41
28:DG:112:VAL:O	28:DG:113:ASP:HB2	2.19	0.41
28:DG:154:GLU:HA	28:DG:155:PRO:HD2	1.84	0.41
33:DL:26:GLY:C	33:DL:27:LEU:HG	2.44	0.41
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.02	0.41
43:DV:26:PHE:HE2	43:DV:42:LEU:HD12	1.85	0.41
44:DW:36:ILE:HG22	44:DW:37:VAL:O	2.20	0.41
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.20	0.41
1:AB:65:LYS:HG2	1:AB:153:MET:HG3	2.03	0.41
2:AC:21:TRP:HZ3	2:AC:23:ALA:HB3	1.83	0.41
2:AC:49:ALA:HB1	2:AC:75:VAL:CG2	2.50	0.41
3:AD:26:ALA:O	3:AD:27:ILE:C	2.63	0.41
3:AD:109:THR:HG21	21:AA:408:A:O5'	2.20	0.41
5:AF:9:MET:HG2	5:AF:86:ARG:O	2.20	0.41
18:AS:41:PRO:C	18:AS:43:MET:H	2.29	0.41
18:AS:62:THR:HB	18:AS:65:MET:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:4:LYS:HE2	19:AT:5:SER:N	2.35	0.41
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.20	0.41
21:AA:1152:A:O2'	21:AA:1153:G:C5'	2.69	0.41
21:AA:1305:G:HO2'	21:AA:1306:A:H8	1.66	0.41
22:BA:173:A:H2'	22:BA:174:U:H6	1.84	0.41
22:BA:321:U:OP2	26:BE:130:LYS:HA	2.21	0.41
22:BA:523:C:H1'	22:BA:554:U:O2'	2.20	0.41
22:BA:928:A:H2'	22:BA:929:U:O4'	2.19	0.41
22:BA:1062:G:C4	22:BA:1088:A:N7	2.88	0.41
22:BA:1184:U:C2'	22:BA:1185:G:O5'	2.68	0.41
22:BA:1568:G:H4'	24:BC:58:LYS:HB3	2.02	0.41
22:BA:1814:G:C6	22:BA:1815:A:C6	3.08	0.41
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.65	0.41
22:BA:2311:A:O3'	22:BA:2312:U:C6	2.72	0.41
23:BB:48:U:H2'	23:BB:49:C:C6	2.55	0.41
25:BD:103:ASP:CG	25:BD:104:VAL:H	2.28	0.41
27:BF:8:LYS:HB2	27:BF:9:ASP:H	1.54	0.41
27:BF:13:LYS:C	27:BF:13:LYS:HD2	2.44	0.41
28:BG:29:ASN:OD1	28:BG:30:GLY:N	2.53	0.41
28:BG:84:LYS:CG	28:BG:132:LEU:N	2.61	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.21	0.41
31:BJ:140:LEU:HD13	31:BJ:140:LEU:C	2.46	0.41
32:BK:69:VAL:O	32:BK:76:VAL:HA	2.20	0.41
33:BL:55:MET:HE2	33:BL:56:PRO:HD3	2.02	0.41
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.68	0.41
41:BT:7:LEU:O	41:BT:9:LYS:N	2.53	0.41
43:BV:18:ARG:O	43:BV:19:ARG:C	2.63	0.41
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.50	0.41
48:B0:32:THR:OG1	48:B0:50:GLY:HA2	2.21	0.41
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.20	0.41
1:CB:83:ALA:O	1:CB:88:GLN:OE1	2.38	0.41
9:CJ:80:THR:O	9:CJ:81:GLU:C	2.64	0.41
11:CL:106:VAL:HB	11:CL:109:ARG:HG2	2.02	0.41
15:CP:32:PHE:C	15:CP:32:PHE:HD1	2.29	0.41
16:CQ:37:ILE:HD11	16:CQ:39:ARG:CZ	2.50	0.41
17:CR:61:ALA:HB1	17:CR:66:LEU:HB2	2.03	0.41
53:CA:148:G:N2	53:CA:1447:A:H2	2.18	0.41
53:CA:211:G:HO2'	53:CA:212:G:P	2.44	0.41
53:CA:275:G:O2'	53:CA:276:G:C5'	2.68	0.41
53:CA:373:A:C2	53:CA:374:A:C8	3.08	0.41
53:CA:513:C:O2'	53:CA:514:C:O5'	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:733:G:O2'	53:CA:734:G:C5'	2.68	0.41
53:CA:775:G:C2'	53:CA:776:G:H5'	2.51	0.41
53:CA:845:A:N3	53:CA:845:A:H2'	2.35	0.41
53:CA:1241:G:C2'	53:CA:1242:G:H8	2.21	0.41
53:CA:1270:G:H2'	53:CA:1271:A:C8	2.55	0.41
53:CA:1287:A:C2	53:CA:1288:A:C4	3.08	0.41
53:CA:1294:G:H2'	53:CA:1295:U:O5'	2.19	0.41
22:DA:35:G:C2'	22:DA:36:G:O5'	2.68	0.41
22:DA:74:A:H4'	22:DA:75:G:O5'	2.20	0.41
22:DA:139:U:O2	22:DA:139:U:H2'	2.19	0.41
22:DA:257:C:H2'	22:DA:258:G:O4'	2.20	0.41
22:DA:297:G:C2	22:DA:342:A:C2	3.09	0.41
22:DA:508:A:C3'	22:DA:509:C:H5'	2.51	0.41
22:DA:604:G:C6	22:DA:625:G:N1	2.89	0.41
22:DA:747:U:H3'	22:DA:748:G:C5'	2.50	0.41
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.55	0.41
22:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.20	0.41
22:DA:1339:G:N2	22:DA:1603:A:H1'	2.35	0.41
22:DA:1346:G:O2'	22:DA:1347:A:O4'	2.37	0.41
22:DA:1476:U:N3	22:DA:1516:G:C6	2.87	0.41
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.21	0.41
22:DA:1759:A:H2'	22:DA:1760:C:H6	1.83	0.41
22:DA:1825:U:H4'	24:DC:231:HIS:HE1	1.85	0.41
22:DA:1903:G:O2'	22:DA:1904:G:H5'	2.20	0.41
22:DA:2010:G:OP1	40:DS:41:LYS:HD3	2.21	0.41
22:DA:2044:C:N3	22:DA:2045:C:C5	2.89	0.41
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.20	0.41
22:DA:2474:U:O2	22:DA:2474:U:O4'	2.38	0.41
22:DA:2575:C:H4'	25:DD:148:GLN:O	2.21	0.41
22:DA:2755:C:O3'	22:DA:2756:U:C6	2.74	0.41
54:DB:11:C:H3'	54:DB:12:C:C5'	2.50	0.41
54:DB:18:G:C6	54:DB:19:C:C4	3.08	0.41
24:DC:131:MET:HE3	24:DC:131:MET:HB2	1.82	0.41
26:DE:111:GLU:CB	26:DE:114:ARG:HH21	2.33	0.41
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.20	0.41
27:DF:105:ILE:HG22	27:DF:105:ILE:O	2.20	0.41
27:DF:127:TYR:O	27:DF:155:ILE:HD11	2.21	0.41
33:DL:36:LYS:HB3	33:DL:37:GLY:H	1.68	0.41
34:DM:126:ILE:O	34:DM:127:LYS:C	2.63	0.41
35:DN:12:ARG:HG2	35:DN:16:HIS:CG	2.55	0.41
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:70:LEU:O	45:DX:74:GLY:N	2.53	0.41
51:D3:51:LYS:O	51:D3:52:GLY:C	2.63	0.41
51:D3:57:VAL:HA	51:D3:60:CYS:HB2	2.02	0.41
1:AB:116:LEU:HA	1:AB:116:LEU:HD13	1.81	0.41
2:AC:47:ALA:C	2:AC:49:ALA:H	2.28	0.41
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	2.01	0.41
3:AD:170:LEU:HD12	3:AD:170:LEU:O	2.20	0.41
4:AE:77:ASN:CG	4:AE:78:GLY:N	2.76	0.41
4:AE:83:PRO:CB	4:AE:96:GLN:HE21	2.34	0.41
5:AF:43:GLY:O	5:AF:58:HIS:HA	2.21	0.41
6:AG:71:THR:HB	6:AG:141:HIS:NE2	2.36	0.41
6:AG:77:ARG:O	6:AG:78:ARG:C	2.64	0.41
11:AL:42:LYS:O	11:AL:44:PRO:HD2	2.21	0.41
12:AM:10:ASP:OD1	12:AM:44:ILE:HB	2.21	0.41
12:AM:25:GLY:O	12:AM:26:LYS:C	2.63	0.41
14:AO:22:GLY:HA3	21:AA:656:G:N2	2.35	0.41
14:AO:68:TYR:O	14:AO:71:ARG:HG2	2.19	0.41
19:AT:53:MET:HE1	19:AT:57:VAL:HG21	2.02	0.41
21:AA:94:G:C4’	21:AA:95:C:H5”	2.35	0.41
21:AA:430:A:O2’	21:AA:431:A:H5’	2.20	0.41
21:AA:1088:G:H21	21:AA:1167:A:N6	2.18	0.41
21:AA:1438:G:O2’	21:AA:1439:G:H5’	2.20	0.41
22:BA:20:C:H2’	22:BA:21:A:H8	1.84	0.41
22:BA:265:A:N6	22:BA:428:A:N9	2.69	0.41
22:BA:356:G:C6	22:BA:357:C:C4	3.08	0.41
22:BA:393:C:H2’	22:BA:394:C:C6	2.56	0.41
22:BA:457:A:O4’	22:BA:459:U:C6	2.73	0.41
22:BA:780:G:H5”	22:BA:781:A:P	2.60	0.41
22:BA:841:G:H2’	22:BA:842:U:H6	1.85	0.41
22:BA:1960:A:H5”	22:BA:1961:C:OP2	2.21	0.41
22:BA:2316:G:H2’	22:BA:2317:A:H8	1.84	0.41
22:BA:2392:A:H4’	51:B3:27:ASN:HD21	1.85	0.41
22:BA:2846:G:OP2	37:BP:51:ASN:HB2	2.19	0.41
24:BC:147:PRO:HD2	24:BC:184:GLU:OE2	2.20	0.41
25:BD:107:VAL:N	25:BD:206:ALA:H	2.11	0.41
25:BD:133:THR:HG23	25:BD:134:HIS:HD2	1.83	0.41
31:BJ:60:ASP:HB3	31:BJ:97:PRO:HG2	2.02	0.41
31:BJ:114:LEU:O	31:BJ:117:ALA:N	2.53	0.41
34:BM:56:ALA:H	34:BM:58:LYS:H	1.67	0.41
37:BP:4:ILE:C	37:BP:7:LEU:H	2.29	0.41
37:BP:32:VAL:O	37:BP:33:GLU:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:51:LEU:O	40:BS:51:LEU:HD12	2.20	0.41
43:BV:44:HIS:O	43:BV:45:ASP:C	2.62	0.41
44:BW:37:VAL:CG1	44:BW:55:ASP:C	2.92	0.41
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.84	0.41
46:BY:19:LEU:HA	46:BY:19:LEU:HD12	1.78	0.41
1:CB:100:LEU:C	1:CB:102:ASN:H	2.26	0.41
4:CE:157:GLY:HA3	7:CH:63:LYS:NZ	2.35	0.41
6:CG:41:ILE:HG22	6:CG:41:ILE:O	2.20	0.41
6:CG:114:SER:O	6:CG:118:ARG:HG3	2.20	0.41
6:CG:116:ALA:O	6:CG:120:ALA:HB3	2.21	0.41
7:CH:28:SER:O	7:CH:29:SER:HB3	2.20	0.41
16:CQ:26:ARG:HG3	16:CQ:39:ARG:HB3	2.02	0.41
53:CA:80:A:H3'	53:CA:81:A:C4'	2.50	0.41
53:CA:204:G:C6	53:CA:465:A:C2	3.08	0.41
53:CA:1200:C:O2'	53:CA:1201:A:P	2.78	0.41
22:DA:13:A:C2	22:DA:525:U:C2	3.08	0.41
22:DA:54:G:H22	22:DA:117:G:H1'	1.85	0.41
22:DA:116:C:H2'	22:DA:117:G:O4'	2.20	0.41
22:DA:300:A:N6	57:DA:3590:HOH:O	2.53	0.41
22:DA:845:A:C2	22:DA:847:U:N1	2.88	0.41
22:DA:946:C:O2'	22:DA:947:A:C5'	2.68	0.41
22:DA:975:A:C2'	22:DA:976:G:C8	3.04	0.41
22:DA:1071:G:O6	22:DA:1089:A:C2	2.73	0.41
22:DA:1079:C:N3	22:DA:1088:A:C2	2.84	0.41
22:DA:1080:A:C5	22:DA:1081:U:C4	3.09	0.41
22:DA:1112:G:C5	22:DA:1113:U:C4	3.08	0.41
22:DA:1210:G:N7	22:DA:1237:A:N6	2.68	0.41
22:DA:1244:A:C2'	22:DA:1245:G:H5'	2.51	0.41
22:DA:1371:G:H8	22:DA:1371:G:O5'	2.02	0.41
22:DA:1429:G:O2'	22:DA:1430:G:C5'	2.68	0.41
22:DA:1567:G:H1'	22:DA:1568:G:C6	2.55	0.41
22:DA:1571:A:H8	22:DA:1571:A:O5'	2.04	0.41
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.69	0.41
22:DA:1735:A:C6	22:DA:1736:U:C4	3.08	0.41
22:DA:1898:U:O2'	22:DA:1899:A:H5'	2.20	0.41
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	2.03	0.41
22:DA:2077:A:C2	22:DA:2244:U:O2	2.74	0.41
22:DA:2099:U:O2	22:DA:2099:U:H2'	2.19	0.41
22:DA:2204:G:C2	22:DA:2205:A:C8	3.08	0.41
22:DA:2443:C:O2'	22:DA:2444:G:H5'	2.21	0.41
24:DC:144:GLU:HG3	24:DC:151:GLY:HA2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:244:VAL:HG12	24:DC:250:GLN:HA	2.01	0.41
25:DD:56:LYS:HB3	25:DD:56:LYS:HZ2	1.86	0.41
25:DD:99:GLU:O	25:DD:100:LEU:C	2.63	0.41
26:DE:5:LEU:HD23	26:DE:120:VAL:HG13	2.01	0.41
26:DE:151:GLY:HA3	26:DE:191:ASP:HB3	2.02	0.41
27:DF:93:GLU:O	27:DF:95:MET:N	2.47	0.41
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.33	0.41
35:DN:8:ARG:NH2	35:DN:39:PRO:HA	2.35	0.41
37:DP:19:PHE:N	37:DP:19:PHE:CD2	2.88	0.41
37:DP:52:ARG:HB3	37:DP:55:HIS:HB2	2.02	0.41
39:DR:2:TYR:O	39:DR:3:ALA:HB2	2.19	0.41
40:DS:82:MET:HE2	40:DS:82:MET:HB3	1.89	0.41
46:DY:1:MET:HG2	46:DY:4:LYS:NZ	2.36	0.41
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.20	0.41
46:DY:45:GLN:C	46:DY:47:ARG:H	2.27	0.41
51:D3:30:HIS:HB3	51:D3:31:ILE:H	1.44	0.41
1:AB:74:ALA:O	1:AB:75:ALA:HB2	2.20	0.41
2:AC:59:PRO:O	2:AC:60:ALA:O	2.38	0.41
6:AG:6:ILE:HB	6:AG:7:GLY:H	1.64	0.41
9:AJ:35:GLN:HG2	9:AJ:77:VAL:CB	2.46	0.41
13:AN:44:VAL:HG23	13:AN:45:LEU:N	2.29	0.41
18:AS:52:ASN:OD1	18:AS:52:ASN:C	2.63	0.41
21:AA:67:C:H4'	21:AA:172:A:O4'	2.20	0.41
21:AA:184:G:O4'	21:AA:224:U:H4'	2.20	0.41
21:AA:603:U:H2'	21:AA:604:G:H8	1.86	0.41
21:AA:860:A:H2'	21:AA:861:G:O5'	2.21	0.41
21:AA:1152:A:H2'	21:AA:1153:G:C8	2.52	0.41
21:AA:1196:A:O2'	21:AA:1197:A:P	2.78	0.41
21:AA:1241:G:C2	21:AA:1242:G:C5	3.09	0.41
21:AA:1244:G:C6	21:AA:1245:C:N4	2.88	0.41
21:AA:1409:C:H2'	21:AA:1410:A:C8	2.53	0.41
22:BA:644:A:H2'	22:BA:645:C:C4'	2.50	0.41
22:BA:734:A:C4	22:BA:735:A:C8	3.08	0.41
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.51	0.41
22:BA:1744:A:H5"	22:BA:1745:A:OP2	2.20	0.41
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.20	0.41
22:BA:2294:G:H5"	36:BO:10:ARG:HD3	2.01	0.41
23:BB:13:G:O2'	23:BB:15:A:OP2	2.38	0.41
25:BD:16:THR:HG23	25:BD:18:ASP:CG	2.42	0.41
25:BD:108:ASP:CG	25:BD:206:ALA:HA	2.45	0.41
25:BD:201:LEU:HD12	25:BD:201:LEU:HA	1.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.35	0.41
28:BG:8:VAL:HG13	28:BG:9:VAL:N	2.36	0.41
28:BG:35:THR:OG1	28:BG:74:MET:SD	2.77	0.41
29:BH:9:VAL:O	29:BH:13:GLY:N	2.51	0.41
29:BH:50:ARG:C	29:BH:52:ALA:H	2.28	0.41
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.67	0.41
36:BO:26:LEU:HD22	36:BO:115:LEU:CD2	2.50	0.41
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.73	0.41
37:BP:105:LYS:HA	37:BP:108:ARG:HD3	2.02	0.41
42:BU:57:ILE:CG2	42:BU:58:VAL:N	2.83	0.41
47:BZ:15:ARG:NH1	47:BZ:15:ARG:HG3	2.35	0.41
1:CB:17:HIS:CG	1:CB:18:GLN:H	2.38	0.41
2:CC:88:LYS:HA	2:CC:91:ALA:HB3	2.02	0.41
2:CC:179:ALA:HB1	2:CC:202:PHE:CE1	2.55	0.41
3:CD:52:VAL:HG12	3:CD:53:GLN:N	2.36	0.41
3:CD:77:GLU:O	3:CD:78:ALA:C	2.64	0.41
3:CD:94:GLU:OE1	3:CD:103:ARG:NE	2.47	0.41
4:CE:17:VAL:O	4:CE:17:VAL:HG13	2.21	0.41
4:CE:80:LEU:HD22	4:CE:80:LEU:HA	1.88	0.41
6:CG:3:ARG:HH12	53:CA:1092:A:H4'	1.86	0.41
12:CM:75:SER:HB2	12:CM:79:LEU:CD1	2.51	0.41
53:CA:98:A:C2	53:CA:99:C:C2	3.08	0.41
53:CA:127:G:N2	53:CA:235:C:C2	2.88	0.41
53:CA:198:G:C6	53:CA:220:G:C4	3.08	0.41
53:CA:330:C:H2'	53:CA:331:G:C8	2.56	0.41
53:CA:513:C:O2'	53:CA:514:C:P	2.78	0.41
53:CA:544:G:C2'	53:CA:545:C:O5'	2.68	0.41
53:CA:607:A:C6	53:CA:608:A:C6	3.08	0.41
53:CA:678:U:H2'	53:CA:679:C:O4'	2.20	0.41
53:CA:1142:G:C2	53:CA:1143:G:H1'	2.55	0.41
53:CA:1270:G:H2'	53:CA:1271:A:O4'	2.20	0.41
22:DA:35:G:O2'	22:DA:36:G:O5'	2.38	0.41
22:DA:121:G:N2	22:DA:131:A:C4	2.89	0.41
22:DA:425:G:H2'	22:DA:426:C:C6	2.56	0.41
22:DA:545:U:C4	22:DA:547:A:H4'	2.55	0.41
22:DA:954:G:O3'	34:DM:13:HIS:CD2	2.73	0.41
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.20	0.41
22:DA:1091:G:N2	22:DA:1092:C:C2	2.89	0.41
22:DA:1213:A:O2'	22:DA:1214:A:H5'	2.21	0.41
22:DA:1249:U:H4'	38:DQ:3:VAL:HG21	2.03	0.41
22:DA:1417:C:H4'	22:DA:1587:G:N2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1438:U:C5	22:DA:1552:A:N1	2.87	0.41
22:DA:1510:G:N2	22:DA:1511:G:N3	2.68	0.41
22:DA:1865:U:C5	22:DA:1875:G:C2	3.09	0.41
22:DA:2209:G:C6	22:DA:2210:U:O4	2.73	0.41
22:DA:2425:A:H1'	22:DA:2427:C:C4	2.55	0.41
22:DA:2649:C:H2'	22:DA:2650:U:C6	2.55	0.41
22:DA:2815:C:C2	22:DA:2816:G:C8	3.08	0.41
22:DA:2822:G:H5"	25:DD:164:GLN:HE22	1.86	0.41
22:DA:2837:A:H61	22:DA:2882:A:N6	2.18	0.41
54:DB:39:A:O2'	54:DB:46:A:N1	2.54	0.41
25:DD:32:ASN:HB3	25:DD:52:THR:OG1	2.21	0.41
26:DE:35:TYR:HE2	26:DE:177:PRO:HD2	1.85	0.41
26:DE:105:LEU:HD12	26:DE:200:LEU:HD21	2.02	0.41
30:DI:96:LYS:HD2	30:DI:96:LYS:HA	1.97	0.41
30:DI:102:ARG:HD2	30:DI:105:LEU:HB3	2.03	0.41
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.33	0.41
34:DM:1:MET:HB3	34:DM:2:LEU:H	1.54	0.41
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.36	0.41
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.99	0.41
38:DQ:108:LEU:HD23	38:DQ:108:LEU:O	2.20	0.41
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.69	0.41
43:DV:35:GLU:HB2	43:DV:93:ARG:NH1	2.35	0.41
43:DV:77:VAL:O	43:DV:77:VAL:HG13	2.20	0.41
44:DW:28:GLU:HG3	44:DW:29:SER:H	1.85	0.41
47:DZ:23:LEU:HD21	47:DZ:53:MET:CE	2.50	0.41
3:AD:106:PHE:HB3	3:AD:144:ILE:HD11	2.03	0.41
4:AE:114:LEU:HD12	4:AE:114:LEU:HA	1.83	0.41
5:AF:49:TYR:CD2	5:AF:49:TYR:C	2.99	0.41
6:AG:30:MET:HG2	6:AG:31:VAL:N	2.36	0.41
9:AJ:29:ALA:CB	9:AJ:36:VAL:HG21	2.51	0.41
10:AK:15:VAL:HG13	10:AK:78:ILE:HG23	2.01	0.41
10:AK:109:ILE:HB	20:AU:5:VAL:HG23	2.02	0.41
11:AL:82:ARG:O	11:AL:82:ARG:HG3	2.21	0.41
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.51	0.41
12:AM:65:GLU:O	12:AM:66:GLY:C	2.63	0.41
14:AO:61:GLN:O	14:AO:62:ARG:C	2.64	0.41
21:AA:374:A:C5'	21:AA:452:A:N1	2.75	0.41
21:AA:433:G:H2'	21:AA:434:U:H5'	2.03	0.41
21:AA:937:A:C2	21:AA:1379:G:O6	2.73	0.41
21:AA:1167:A:N7	21:AA:1169:A:C6	2.88	0.41
21:AA:1290:G:C5	21:AA:1291:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1426:G:H2'	21:AA:1427:C:C6	2.55	0.41
22:BA:6:A:O2'	22:BA:7:G:H5'	2.20	0.41
22:BA:117:G:C6	22:BA:119:A:C6	3.09	0.41
22:BA:264:C:H2'	22:BA:265:A:H5"	2.03	0.41
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.64	0.41
22:BA:960:A:H2'	22:BA:962:G:H5'	2.02	0.41
22:BA:962:G:O2'	22:BA:963:U:H5'	2.21	0.41
22:BA:1062:G:N7	22:BA:1088:A:H8	2.17	0.41
22:BA:1107:G:C6	22:BA:1108:U:C4	3.09	0.41
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.55	0.41
22:BA:1347:A:O2'	22:BA:1348:C:H5'	2.21	0.41
22:BA:1524:G:H2'	22:BA:1525:A:H8	1.86	0.41
22:BA:1782:U:O5'	22:BA:1782:U:H6	2.03	0.41
22:BA:1833:C:C4	22:BA:1834:U:C5	3.09	0.41
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.20	0.41
22:BA:1967:C:O2	22:BA:1967:C:C2'	2.68	0.41
22:BA:2269:G:C4'	44:BW:18:LYS:HE2	2.38	0.41
22:BA:2747:G:O6	22:BA:2755:C:H5"	2.20	0.41
24:BC:35:LYS:NZ	24:BC:37:SER:HB2	2.36	0.41
24:BC:129:LEU:HD22	24:BC:133:ASN:HB2	2.02	0.41
24:BC:183:VAL:HG12	24:BC:184:GLU:N	2.35	0.41
24:BC:208:GLY:O	24:BC:211:ARG:HB2	2.20	0.41
25:BD:19:GLY:HA3	37:BP:79:VAL:HG12	2.02	0.41
25:BD:25:THR:N	25:BD:191:GLY:HA2	2.36	0.41
26:BE:112:LEU:HD23	26:BE:112:LEU:HA	1.80	0.41
28:BG:90:GLY:O	28:BG:91:VAL:C	2.63	0.41
29:BH:9:VAL:O	29:BH:10:ALA:C	2.63	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	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
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.41
31:BJ:18:VAL:CG2	31:BJ:54:ILE:HD13	2.49	0.41
31:BJ:80:HIS:O	31:BJ:81:ILE:C	2.63	0.41
31:BJ:88:THR:CG2	31:BJ:91:GLU:H	2.33	0.41
34:BM:8:LYS:HD2	34:BM:8:LYS:HA	1.65	0.41
37:BP:57:ALA:CB	37:BP:73:PHE:O	2.68	0.41
39:BR:5:PHE:CE2	39:BR:7:SER:HB2	2.55	0.41
41:BT:68:LYS:HE2	41:BT:77:ARG:HD2	2.02	0.41
43:BV:51:GLN:NE2	43:BV:79:ARG:HH12	2.17	0.41
44:BW:23:LYS:CG	44:BW:24:ARG:O	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.31	0.41
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.20	0.41
1:CB:59:ILE:HD12	1:CB:59:ILE:C	2.44	0.41
2:CC:10:ARG:O	2:CC:15:LYS:HB2	2.20	0.41
2:CC:129:PHE:O	2:CC:130:ARG:C	2.64	0.41
3:CD:102:TYR:O	3:CD:104:MET:N	2.53	0.41
4:CE:20:VAL:O	4:CE:30:PHE:O	2.38	0.41
4:CE:132:PRO:C	4:CE:134:ASN:H	2.29	0.41
5:CF:41:ASP:OD2	5:CF:41:ASP:C	2.62	0.41
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.21	0.41
8:CI:37:TYR:HD1	53:CA:1248:A:HO2'	1.67	0.41
8:CI:70:GLY:O	8:CI:71:ILE:C	2.64	0.41
10:CK:17:ASP:OD2	10:CK:80:ASN:HB2	2.21	0.41
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	2.01	0.41
10:CK:101:ALA:O	10:CK:102:ALA:C	2.63	0.41
11:CL:36:VAL:HA	11:CL:52:CYS:HA	2.03	0.41
12:CM:14:ALA:HB1	12:CM:33:LEU:CD1	2.50	0.41
12:CM:35:ALA:HB3	12:CM:55:LEU:HD22	2.03	0.41
12:CM:107:THR:HG22	12:CM:107:THR:O	2.20	0.41
18:CS:40:PHE:CB	18:CS:41:PRO:CD	2.97	0.41
53:CA:115:G:H1'	53:CA:116:A:N7	2.35	0.41
53:CA:428:G:H1'	53:CA:430:A:C8	2.56	0.41
53:CA:713:G:N2	53:CA:714:G:C2	2.88	0.41
53:CA:764:C:H3'	53:CA:765:G:H21	1.85	0.41
53:CA:765:G:N7	53:CA:812:G:C4	2.89	0.41
53:CA:858:G:N7	57:CA:1821:HOH:O	2.37	0.41
53:CA:1022:A:H2'	53:CA:1023:U:C6	2.56	0.41
53:CA:1058:G:C6	53:CA:1059:C:C4	3.09	0.41
53:CA:1089:G:H1'	53:CA:1167:A:H61	1.85	0.41
53:CA:1133:G:C5	53:CA:1134:G:N7	2.89	0.41
53:CA:1492:A:C8	22:DA:1913:A:C8	3.07	0.41
22:DA:16:C:H2'	22:DA:17:G:H8	1.85	0.41
22:DA:112:U:C5	22:DA:113:U:C5	3.08	0.41
22:DA:136:G:H2'	22:DA:137:U:C6	2.55	0.41
22:DA:140:C:O2'	22:DA:141:G:OP2	2.38	0.41
22:DA:238:C:H4'	22:DA:608:A:O2'	2.20	0.41
22:DA:250:G:OP1	33:DL:59:ARG:NH1	2.53	0.41
22:DA:684:G:OP1	50:D2:16:HIS:CD2	2.74	0.41
22:DA:700:G:C6	22:DA:701:G:C5	3.08	0.41
22:DA:720:U:H2'	22:DA:721:A:H8	1.79	0.41
22:DA:843:G:C6	22:DA:844:A:N6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1059:G:H21	30:DI:131:THR:N	2.19	0.41
22:DA:1386:C:O2'	22:DA:1387:A:C8	2.72	0.41
22:DA:1494:A:O2'	22:DA:1495:A:H5'	2.20	0.41
22:DA:1495:A:H2'	22:DA:1496:A:C8	2.55	0.41
22:DA:1557:C:H2'	22:DA:1558:C:C5	2.55	0.41
22:DA:1565:C:O2'	22:DA:1566:A:O5'	2.36	0.41
22:DA:1677:A:N6	22:DA:1678:A:C6	2.88	0.41
22:DA:1702:G:C6	22:DA:1703:G:N7	2.89	0.41
22:DA:1838:C:C4	22:DA:1899:A:C4	3.09	0.41
22:DA:2068:U:H6	22:DA:2068:U:C5'	2.34	0.41
22:DA:2187:U:O2'	22:DA:2188:U:H5'	2.21	0.41
22:DA:2261:C:N4	44:DW:10:ARG:O	2.54	0.41
22:DA:2262:U:H5"	44:DW:38:ARG:HH22	1.85	0.41
22:DA:2837:A:O2'	22:DA:2838:G:O4'	2.38	0.41
24:DC:77:VAL:CG2	24:DC:112:GLY:H	2.34	0.41
24:DC:83:ASP:HA	24:DC:84:PRO:HD2	1.94	0.41
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.51	0.41
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.62	0.41
27:DF:19:PHE:HB3	27:DF:21:TYR:CZ	2.55	0.41
29:DH:49:ALA:HB3	29:DH:50:ARG:HH22	1.86	0.41
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.35	0.41
30:DI:78:LEU:O	30:DI:81:LYS:HG2	2.21	0.41
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	2.02	0.41
33:DL:95:LEU:HB3	33:DL:100:ILE:HG23	2.02	0.41
33:DL:118:THR:HG23	33:DL:120:VAL:HG23	2.03	0.41
37:DP:9:GLN:C	37:DP:11:GLN:N	2.78	0.41
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.20	0.41
39:DR:54:VAL:O	39:DR:55:ASP:C	2.64	0.41
39:DR:98:ILE:N	39:DR:98:ILE:HD12	2.36	0.41
45:DX:32:LEU:HD13	45:DX:50:VAL:O	2.21	0.41
51:D3:35:LYS:O	51:D3:40:LYS:HE2	2.21	0.41
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	2.03	0.41
1:AB:64:GLY:HA3	1:AB:158:ASP:OD2	2.21	0.41
2:AC:26:LYS:HE2	21:AA:1256:A:H5"	2.02	0.41
5:AF:68:GLN:HA	5:AF:71:ILE:HG21	2.03	0.41
12:AM:106:ARG:NH2	12:AM:112:ARG:HB3	2.28	0.41
15:AP:67:ILE:HG23	15:AP:72:ALA:HB2	1.99	0.41
16:AQ:16:MET:CG	16:AQ:20:ILE:HD12	2.50	0.41
18:AS:4:LEU:HD22	18:AS:8:PRO:HA	2.02	0.41
20:AU:10:PRO:C	20:AU:11:PHE:HD2	2.28	0.41
21:AA:113:G:C4	21:AA:114:U:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1084:G:C4	21:AA:1085:U:C5	3.08	0.41
21:AA:1294:G:C6	21:AA:1295:U:C4	3.09	0.41
21:AA:1326:U:H2'	21:AA:1327:C:H6	1.85	0.41
22:BA:189:G:H2'	22:BA:205:G:N2	2.36	0.41
22:BA:250:G:C6	22:BA:251:A:C6	3.08	0.41
22:BA:448:U:H4'	22:BA:449:A:OP2	2.21	0.41
22:BA:686:U:H2'	22:BA:788:A:N1	2.36	0.41
22:BA:1584:U:O2	22:BA:1584:U:H2'	2.21	0.41
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.53	0.41
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.20	0.41
22:BA:1936:A:N3	22:BA:1943:U:H5	2.18	0.41
22:BA:2004:G:C6	22:BA:2005:A:C4	3.08	0.41
22:BA:2252:G:H2'	22:BA:2253:G:C8	2.56	0.41
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.21	0.41
22:BA:2639:A:C2	22:BA:2778:A:C8	3.08	0.41
22:BA:2684:U:C4	22:BA:2685:G:N7	2.89	0.41
23:BB:40:U:HO2'	23:BB:43:C:H5	1.54	0.41
24:BC:106:PRO:HA	24:BC:141:HIS:HE2	1.84	0.41
27:BF:107:VAL:N	27:BF:108:PRO:HD2	2.35	0.41
28:BG:88:LEU:CD2	28:BG:161:VAL:HG22	2.49	0.41
28:BG:168:VAL:O	28:BG:168:VAL:HG23	2.21	0.41
29:BH:124:THR:O	29:BH:125:THR:C	2.64	0.41
32:BK:115:ILE:O	32:BK:115:ILE:HG23	2.21	0.41
34:BM:6:ARG:CZ	34:BM:6:ARG:HB2	2.50	0.41
39:BR:49:ILE:O	39:BR:50:GLY:C	2.64	0.41
39:BR:93:PHE:CD1	39:BR:93:PHE:C	2.98	0.41
41:BT:29:THR:HG22	41:BT:86:THR:HG22	2.02	0.41
43:BV:68:LYS:O	43:BV:69:GLU:O	2.39	0.41
50:B2:19:ARG:HH21	50:B2:19:ARG:HD3	1.75	0.41
52:B4:27:CYS:HB2	52:B4:33:HIS:HB2	2.03	0.41
1:CB:213:LEU:HD12	1:CB:213:LEU:HA	1.92	0.41
3:CD:195:ASN:O	3:CD:196:GLU:C	2.64	0.41
6:CG:119:LEU:HD23	6:CG:120:ALA:N	2.35	0.41
7:CH:60:LEU:HD12	7:CH:60:LEU:N	2.35	0.41
11:CL:114:SER:HB3	53:CA:35:G:H21	1.86	0.41
12:CM:96:VAL:C	12:CM:98:GLY:H	2.28	0.41
15:CP:19:VAL:HG13	15:CP:37:GLY:CA	2.51	0.41
18:CS:52:ASN:OD1	18:CS:57:VAL:HG13	2.21	0.41
53:CA:372:C:HO2'	53:CA:373:A:P	2.42	0.41
53:CA:552:U:C2	53:CA:553:A:C8	3.09	0.41
53:CA:677:U:H2'	53:CA:678:U:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:846:G:C2'	53:CA:847:G:H5'	2.50	0.41
53:CA:1215:G:C4	53:CA:1216:A:N7	2.88	0.41
53:CA:1296:C:O2'	53:CA:1302:C:N3	2.53	0.41
53:CA:1381:U:O2'	53:CA:1382:C:O5'	2.36	0.41
53:CA:1444:U:H2'	53:CA:1445:U:C6	2.56	0.41
22:DA:49:A:C6	22:DA:177:G:C5	3.09	0.41
22:DA:117:G:H4'	22:DA:126:A:C2	2.55	0.41
22:DA:171:U:H2'	22:DA:172:A:C8	2.54	0.41
22:DA:204:A:C4	22:DA:206:U:C4	3.08	0.41
22:DA:536:G:H2'	22:DA:537:G:O4'	2.21	0.41
22:DA:590:A:C4	22:DA:591:U:C6	3.08	0.41
22:DA:703:U:H2'	22:DA:704:G:O4'	2.21	0.41
22:DA:800:A:C4	22:DA:802:A:H5'	2.55	0.41
22:DA:947:A:N6	22:DA:971:G:C6	2.89	0.41
22:DA:1278:C:O2'	35:DN:27:SER:HB3	2.20	0.41
22:DA:1512:C:H2'	22:DA:1513:U:O4'	2.20	0.41
22:DA:1649:G:N1	22:DA:2009:A:C6	2.88	0.41
22:DA:1751:U:C2	22:DA:1752:C:C5	3.08	0.41
22:DA:1839:G:O2'	22:DA:1840:G:H5'	2.21	0.41
22:DA:2054:A:H2'	48:D0:4:GLN:OE1	2.21	0.41
22:DA:2287:A:C5	22:DA:2289:G:C8	3.08	0.41
22:DA:2313:C:O3'	27:DF:34:THR:HG21	2.21	0.41
22:DA:2369:A:O2'	22:DA:2370:G:H5'	2.21	0.41
22:DA:2412:A:H2'	22:DA:2413:G:O4'	2.21	0.41
22:DA:2458:G:H1'	22:DA:2459:A:N7	2.36	0.41
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.56	0.41
22:DA:2567:G:H2'	22:DA:2568:U:C5	2.55	0.41
22:DA:2623:G:N2	48:D0:18:HIS:CE1	2.89	0.41
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.38	0.41
54:DB:42:C:H2'	54:DB:43:C:C5	2.54	0.41
54:DB:110:C:O2'	54:DB:111:U:C5'	2.66	0.41
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.85	0.41
26:DE:124:PHE:HB3	26:DE:189:THR:HG22	2.03	0.41
26:DE:147:LEU:CB	26:DE:186:VAL:HA	2.51	0.41
27:DF:49:LEU:HD22	27:DF:49:LEU:N	2.23	0.41
27:DF:69:ALA:HB2	27:DF:82:TYR:O	2.20	0.41
27:DF:82:TYR:HA	27:DF:83:PRO:HD2	1.85	0.41
29:DH:71:LYS:CD	29:DH:71:LYS:N	2.83	0.41
30:DI:2:LYS:HB3	30:DI:3:LYS:H	1.66	0.41
37:DP:63:ILE:O	37:DP:63:ILE:HG22	2.21	0.41
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:5:GLU:CD	46:DY:18:LEU:HD21	2.45	0.41
41:DT:29:THR:HB	41:DT:86:THR:CA	2.50	0.41
1:AB:46:VAL:O	1:AB:49:PHE:CD2	2.73	0.41
1:AB:84:LEU:O	1:AB:84:LEU:HG	2.20	0.41
1:AB:130:LYS:HA	1:AB:130:LYS:NZ	2.35	0.41
2:AC:147:GLY:CA	2:AC:171:ARG:H	2.34	0.41
3:AD:47:LEU:HG	3:AD:52:VAL:HG12	2.03	0.41
3:AD:96:ARG:HH21	3:AD:114:ARG:HE	1.67	0.41
7:AH:110:MET:HE2	7:AH:114:ALA:CB	2.45	0.41
8:AI:44:ARG:H	8:AI:44:ARG:HG2	1.47	0.41
12:AM:13:HIS:HB3	12:AM:41:ASP:HA	2.03	0.41
16:AQ:11:VAL:HG12	16:AQ:13:SER:H	1.86	0.41
20:AU:16:ARG:HG2	20:AU:19:LYS:HG2	2.03	0.41
21:AA:66:A:O2'	21:AA:67:C:H5'	2.21	0.41
21:AA:132:C:H2'	21:AA:133:U:O4'	2.21	0.41
21:AA:316:C:H2'	21:AA:317:U:C6	2.56	0.41
21:AA:466:A:C4'	21:AA:467:U:OP2	2.69	0.41
21:AA:761:G:H2'	21:AA:762:U:C6	2.56	0.41
21:AA:947:G:C6	21:AA:948:C:C4	3.08	0.41
21:AA:974:A:C4'	21:AA:975:A:H5'	2.46	0.41
21:AA:1111:A:O2'	21:AA:1112:C:H5'	2.20	0.41
21:AA:1326:U:H2'	21:AA:1327:C:C6	2.56	0.41
22:BA:21:A:H2'	22:BA:22:C:C6	2.56	0.41
22:BA:756:A:H2'	22:BA:757:G:O4'	2.21	0.41
22:BA:792:A:H5"	22:BA:793:A:H5'	2.01	0.41
22:BA:806:C:O5'	22:BA:806:C:H6	2.04	0.41
22:BA:830:G:H4'	22:BA:831:G:OP2	2.21	0.41
22:BA:931:U:HO2'	22:BA:932:U:P	2.44	0.41
22:BA:1027:A:C6	22:BA:1126:A:N3	2.89	0.41
22:BA:1054:A:C6	22:BA:1106:G:O6	2.74	0.41
22:BA:1160:G:C6	22:BA:1161:C:N4	2.89	0.41
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.55	0.41
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.21	0.41
22:BA:1725:U:H2'	22:BA:1726:C:O4'	2.21	0.41
22:BA:1819:A:H1'	22:BA:1821:A:C6	2.56	0.41
22:BA:2569:G:C2	22:BA:2570:G:C8	3.09	0.41
22:BA:2577:A:H5"	22:BA:2578:G:H5'	2.02	0.41
22:BA:2682:A:C8	25:BD:11:MET:HG2	2.56	0.41
24:BC:269:ARG:HA	24:BC:269:ARG:HD3	1.84	0.41
25:BD:24:VAL:HA	25:BD:189:VAL:O	2.21	0.41
25:BD:51:THR:HB	25:BD:78:GLY:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:53:GLY:HA3	25:BD:77:ARG:N	2.24	0.41
25:BD:141:ARG:HH11	25:BD:141:ARG:HD3	1.73	0.41
25:BD:179:ARG:O	25:BD:187:LEU:HA	2.20	0.41
27:BF:19:PHE:O	27:BF:20:ASN:C	2.62	0.41
29:BH:43:ASN:C	29:BH:45:GLU:N	2.77	0.41
30:BI:90:GLY:C	30:BI:92:PRO:HD3	2.46	0.41
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.21	0.41
33:BL:92:LEU:HA	33:BL:125:LEU:CD2	2.51	0.41
35:BN:117:ASP:OD2	35:BN:118:ARG:N	2.52	0.41
36:BO:55:GLU:OE1	36:BO:58:ILE:HD11	2.20	0.41
37:BP:32:VAL:O	37:BP:33:GLU:C	2.63	0.41
38:BQ:111:LYS:NZ	39:BR:48:LYS:HD3	2.36	0.41
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.36	0.41
42:BU:87:GLU:O	42:BU:88:ASP:O	2.38	0.41
44:BW:50:VAL:C	44:BW:52:CYS:N	2.78	0.41
45:BX:33:HIS:N	45:BX:50:VAL:O	2.54	0.41
1:CB:103:TRP:CD1	1:CB:107:ARG:HB3	2.56	0.41
2:CC:196:GLY:H	53:CA:1057:G:H4'	1.85	0.41
4:CE:157:GLY:HA3	7:CH:63:LYS:CE	2.51	0.41
6:CG:59:GLU:C	6:CG:61:PHE:N	2.79	0.41
6:CG:75:LYS:HE3	6:CG:76:SER:H	1.84	0.41
8:CI:25:GLY:C	8:CI:62:LEU:HD23	2.46	0.41
9:CJ:37:ARG:HB3	9:CJ:75:ASP:HB3	2.03	0.41
10:CK:55:ARG:HD2	10:CK:55:ARG:N	2.27	0.41
10:CK:115:ILE:HD12	20:CU:23:GLU:HG2	2.01	0.41
11:CL:62:VAL:HG21	11:CL:94:TYR:CD2	2.56	0.41
11:CL:101:LEU:HB3	11:CL:102:ASP:H	1.72	0.41
12:CM:108:ARG:C	12:CM:110:GLY:H	2.26	0.41
17:CR:28:LEU:C	17:CR:30:ASN:N	2.79	0.41
17:CR:51:GLN:HA	17:CR:51:GLN:OE1	2.21	0.41
18:CS:57:VAL:HA	18:CS:58:PRO:HD2	1.83	0.41
19:CT:73:ARG:O	19:CT:77:ASN:OD1	2.38	0.41
53:CA:177:G:C2'	53:CA:178:C:H5'	2.51	0.41
53:CA:202:G:O2'	53:CA:468:A:C8	2.71	0.41
53:CA:249:U:H5'	53:CA:250:A:P	2.61	0.41
53:CA:364:A:C2	53:CA:365:U:O4	2.74	0.41
53:CA:433:G:O2'	53:CA:434:U:H5'	2.21	0.41
53:CA:438:U:H2'	53:CA:494:G:O6	2.20	0.41
53:CA:684:U:H3	53:CA:706:A:H61	1.68	0.41
53:CA:818:G:H3'	53:CA:819:A:H5"	2.02	0.41
53:CA:1137:C:O2'	53:CA:1138:G:N2	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1219:A:C6	53:CA:1220:G:C5	3.08	0.41
53:CA:1418:A:H8	53:CA:1418:A:O5'	2.03	0.41
53:CA:1461:G:C6	53:CA:1462:C:C4	3.09	0.41
22:DA:121:G:N3	22:DA:131:A:C2	2.89	0.41
22:DA:226:A:H4'	22:DA:258:G:OP1	2.21	0.41
22:DA:247:G:N7	22:DA:249:C:C2	2.89	0.41
22:DA:247:G:C4	22:DA:249:C:H1'	2.56	0.41
22:DA:686:U:H2'	22:DA:788:A:C2	2.56	0.41
22:DA:754:U:O2'	22:DA:755:U:C5'	2.69	0.41
22:DA:857:G:H1'	44:DW:19:ARG:HE	1.80	0.41
22:DA:904:G:C6	22:DA:905:A:C5	3.08	0.41
22:DA:975:A:H2'	22:DA:976:G:H8	1.85	0.41
22:DA:1059:G:C5	22:DA:1060:U:O2	2.74	0.41
22:DA:1167:C:O2'	22:DA:1168:G:H5'	2.20	0.41
22:DA:1229:C:C2	22:DA:1230:A:C8	3.09	0.41
22:DA:1256:G:N3	26:DE:77:ILE:HG22	2.36	0.41
22:DA:1290:C:O2'	22:DA:1291:C:O5'	2.39	0.41
22:DA:1455:G:O2'	22:DA:1456:G:H8	2.02	0.41
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.21	0.41
22:DA:1614:A:N6	40:DS:91:GLY:HA2	2.36	0.41
22:DA:1746:A:H2'	22:DA:1747:U:H6	1.85	0.41
22:DA:1868:C:N4	22:DA:1869:G:C6	2.89	0.41
22:DA:2136:G:C2'	22:DA:2137:U:H6	2.34	0.41
22:DA:2307:G:N1	27:DF:38:GLY:HA3	2.36	0.41
22:DA:2458:G:H2'	22:DA:2490:G:N1	2.34	0.41
22:DA:2588:G:H2'	22:DA:2589:A:O4'	2.21	0.41
22:DA:2619:C:H5'	25:DD:157:LYS:CG	2.50	0.41
22:DA:2626:C:H2'	22:DA:2627:G:O4'	2.20	0.41
22:DA:2628:C:H1'	22:DA:2781:A:C4	2.56	0.41
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.84	0.41
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.51	0.41
24:DC:212:TRP:CD1	24:DC:212:TRP:C	2.99	0.41
25:DD:146:ILE:HG13	25:DD:155:VAL:HG22	2.03	0.41
28:DG:68:ARG:C	28:DG:68:ARG:HD3	2.45	0.41
28:DG:83:THR:HB	28:DG:84:LYS:H	1.72	0.41
29:DH:50:ARG:C	29:DH:52:ALA:N	2.78	0.41
30:DI:95:ASP:HB3	30:DI:97:VAL:HG23	2.02	0.41
34:DM:72:PRO:O	34:DM:92:TRP:HA	2.20	0.41
39:DR:79:ARG:O	39:DR:80:ARG:CB	2.68	0.41
40:DS:36:LEU:O	40:DS:38:TYR:N	2.54	0.41
41:DT:14:PRO:HG2	41:DT:15:HIS:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.85	0.41
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	2.21	0.41
46:DY:21:LEU:HD23	46:DY:25:GLN:CD	2.45	0.41
1:AB:17:HIS:O	1:AB:18:GLN:O	2.39	0.41
1:AB:86:CYS:C	1:AB:88:GLN:H	2.28	0.41
1:AB:89:PHE:CE2	1:AB:153:MET:HB2	2.56	0.41
1:AB:116:LEU:HG	1:AB:140:LEU:HG	2.02	0.41
2:AC:10:ARG:O	2:AC:13:ILE:N	2.51	0.41
2:AC:89:VAL:O	2:AC:93:ILE:HG13	2.21	0.41
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.19	0.41
5:AF:67:PRO:O	5:AF:69:GLU:N	2.51	0.41
7:AH:9:MET:HE1	7:AH:35:ILE:HD12	2.03	0.41
8:AI:6:TYR:CD1	8:AI:7:GLY:N	2.88	0.41
8:AI:79:ARG:O	8:AI:83:THR:HG23	2.21	0.41
9:AJ:42:LEU:HB3	9:AJ:43:PRO:CD	2.44	0.41
9:AJ:44:THR:HG1	21:AA:1151:A:H5”	1.84	0.41
11:AL:97:VAL:O	11:AL:97:VAL:HG12	2.20	0.41
11:AL:113:ARG:O	11:AL:115:LYS:O	2.38	0.41
11:AL:121:PRO:O	11:AL:122:LYS:C	2.63	0.41
13:AN:17:ASP:O	13:AN:18:LYS:C	2.64	0.41
13:AN:40:ARG:NH1	13:AN:44:VAL:HG21	2.35	0.41
13:AN:82:LYS:HE2	13:AN:85:GLU:HG3	2.02	0.41
14:AO:2:LEU:HD22	14:AO:34:GLN:HG2	2.02	0.41
15:AP:59:HIS:HE1	15:AP:63:GLN:HE22	1.62	0.41
16:AQ:12:VAL:HG11	16:AQ:21:VAL:HG22	2.01	0.41
17:AR:58:ILE:O	17:AR:59:LYS:C	2.64	0.41
18:AS:34:SER:C	18:AS:36:ARG:N	2.79	0.41
21:AA:114:U:H2’	21:AA:115:G:C8	2.56	0.41
21:AA:197:A:O2’	21:AA:198:G:O4’	2.39	0.41
21:AA:224:U:H2’	21:AA:225:C:C6	2.56	0.41
21:AA:688:G:H2’	21:AA:689:C:H6	1.85	0.41
21:AA:788:U:H2’	21:AA:789:U:C6	2.56	0.41
21:AA:797:C:O2’	21:AA:798:U:H5’	2.21	0.41
21:AA:1084:G:C6	21:AA:1085:U:O4	2.74	0.41
21:AA:1092:A:H2’	21:AA:1093:A:C8	2.55	0.41
21:AA:1142:G:N3	21:AA:1143:G:H1’	2.35	0.41
21:AA:1245:C:H2’	21:AA:1246:A:H8	1.85	0.41
21:AA:1288:A:O2’	21:AA:1289:A:O4’	2.35	0.41
21:AA:1303:C:H2’	21:AA:1304:G:H8	1.85	0.41
21:AA:1342:C:H2’	21:AA:1343:G:C8	2.55	0.41
21:AA:1381:U:H2’	21:AA:1382:C:H6	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1423:G:C5	21:AA:1424:U:C5	3.09	0.41
22:BA:215:G:C4'	22:BA:216:A:H4'	2.50	0.41
22:BA:263:G:H2'	22:BA:264:C:O5'	2.20	0.41
22:BA:283:G:C6	22:BA:284:U:C4	3.08	0.41
22:BA:323:C:H6	22:BA:1205:A:N1	2.18	0.41
22:BA:528:A:H2	22:BA:2043:C:H5'	1.86	0.41
22:BA:547:A:H8	22:BA:548:G:N3	2.19	0.41
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.51	0.41
22:BA:581:C:O2'	22:BA:582:A:H5'	2.21	0.41
22:BA:633:A:C8	22:BA:633:A:C4'	3.03	0.41
22:BA:813:U:C2	22:BA:1195:G:N2	2.89	0.41
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.53	0.41
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.09	0.41
22:BA:1337:G:C2'	22:BA:1338:G:H5'	2.51	0.41
22:BA:1392:A:C6	22:BA:1393:A:C6	3.08	0.41
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.21	0.41
22:BA:1445:G:C5	22:BA:1446:C:C5	3.09	0.41
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.56	0.41
22:BA:1521:G:C6	22:BA:1522:A:C6	3.08	0.41
22:BA:1820:U:O2	24:BC:200:MET:N	2.53	0.41
22:BA:1832:C:H2'	22:BA:1833:C:O5'	2.21	0.41
22:BA:1912:A:O2'	22:BA:1913:A:H5"	2.21	0.41
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.21	0.41
22:BA:2196:C:C2'	22:BA:2197:U:H5'	2.51	0.41
22:BA:2217:G:H2'	22:BA:2218:G:O4'	2.19	0.41
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.21	0.41
22:BA:2511:U:O4	22:BA:2575:C:N3	2.54	0.41
22:BA:2527:C:O5'	22:BA:2527:C:H6	2.02	0.41
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.39	0.41
22:BA:2715:C:C4	22:BA:2716:C:C5	3.09	0.41
22:BA:2727:A:H2'	22:BA:2728:U:H6	1.85	0.41
22:BA:2776:A:C8	22:BA:2782:G:C5	3.09	0.41
22:BA:2799:A:C6	22:BA:2801:G:C5	3.08	0.41
22:BA:2889:C:C2'	22:BA:2890:G:H5'	2.51	0.41
23:BB:2:G:C5	23:BB:119:A:C2	3.08	0.41
23:BB:43:C:H2'	23:BB:44:G:H5'	2.01	0.41
24:BC:114:GLN:O	24:BC:115:ILE:HD12	2.20	0.41
25:BD:2:ILE:HD12	25:BD:96:ILE:HD13	2.03	0.41
26:BE:5:LEU:HA	26:BE:120:VAL:HG13	2.02	0.41
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.51	0.41
26:BE:48:THR:C	26:BE:50:ALA:H	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:190:ALA:C	26:BE:192:ALA:H	2.29	0.41
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.56	0.41
27:BF:48:LEU:HD11	27:BF:147:ARG:HH21	1.86	0.41
27:BF:161:SER:HG	27:BF:164:GLU:HG3	1.86	0.41
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	2.03	0.41
29:BH:43:ASN:C	29:BH:45:GLU:H	2.27	0.41
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.48	0.41
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.88	0.41
30:BI:124:MET:O	30:BI:124:MET:HE2	2.21	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
30:BI:135:MET:HE3	30:BI:135:MET:HB3	1.91	0.41
34:BM:41:LEU:N	34:BM:41:LEU:HD23	2.35	0.41
37:BP:24:THR:O	37:BP:25:VAL:C	2.64	0.41
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.69	0.41
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CZ	2.38	0.41
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.20	0.41
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG3	2.01	0.41
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CZ	2.55	0.41
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.36	0.41
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.56	0.41
40:BS:103:ILE:HD12	40:BS:103:ILE:N	2.36	0.41
42:BU:53:GLN:N	42:BU:54:PRO:HD2	2.33	0.41
44:BW:22:VAL:O	44:BW:23:LYS:C	2.64	0.41
49:B1:6:GLU:OE1	49:B1:52:LYS:HD2	2.21	0.41
52:B4:9:LYS:HB3	52:B4:14:CYS:CB	2.51	0.41
1:CB:34:ARG:HD3	1:CB:35:ASN:N	2.35	0.41
1:CB:114:LYS:O	1:CB:117:GLU:HG2	2.21	0.41
1:CB:119:GLN:HE22	1:CB:136:ARG:HH12	1.69	0.41
1:CB:191:ASP:HA	1:CB:192:PRO:HD2	1.97	0.41
2:CC:5:HIS:HA	2:CC:6:PRO:HD2	1.82	0.41
2:CC:9:ILE:HD12	13:CN:97:LYS:CD	2.47	0.41
2:CC:11:LEU:O	2:CC:13:ILE:N	2.53	0.41
3:CD:82:LYS:HD3	3:CD:82:LYS:HA	1.81	0.41
3:CD:96:ARG:HE	3:CD:96:ARG:HB3	1.62	0.41
4:CE:13:LYS:HD3	4:CE:13:LYS:C	2.46	0.41
4:CE:148:SER:H	4:CE:151:MET:HE2	1.85	0.41
5:CF:25:TYR:O	5:CF:29:ILE:HD13	2.20	0.41
6:CG:3:ARG:NH1	53:CA:1092:A:H4'	2.36	0.41
6:CG:22:LEU:HD23	6:CG:22:LEU:O	2.21	0.41
6:CG:25:PHE:CZ	6:CG:61:PHE:HZ	2.39	0.41
7:CH:12:ARG:NH1	7:CH:27:PRO:HD2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CH:30:LYS:O	7:CH:31:LEU:C	2.64	0.41
7:CH:77:VAL:HG12	7:CH:84:ILE:HG13	2.03	0.41
8:CI:10:ARG:HA	8:CI:14:SER:O	2.21	0.41
8:CI:51:LEU:HB2	8:CI:56:MET:HB3	2.03	0.41
10:CK:104:PHE:N	10:CK:104:PHE:HD1	2.18	0.41
10:CK:121:ARG:NH2	20:CU:35:GLU:HB2	2.36	0.41
10:CK:126:ARG:O	10:CK:127:ARG:HB2	2.21	0.41
11:CL:90:PRO:C	11:CL:92:VAL:H	2.28	0.41
12:CM:95:PRO:HG2	12:CM:99:GLN:HB3	2.03	0.41
12:CM:108:ARG:HD2	12:CM:108:ARG:HA	1.96	0.41
14:CO:66:LEU:O	14:CO:67:ASP:C	2.64	0.41
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.36	0.41
16:CQ:45:VAL:HG11	16:CQ:60:ILE:CG2	2.51	0.41
16:CQ:51:GLU:H	16:CQ:51:GLU:HG2	1.52	0.41
18:CS:32:THR:O	18:CS:32:THR:HG23	2.20	0.41
19:CT:7:LYS:O	19:CT:10:ALA:HB3	2.20	0.41
20:CU:9:GLU:OE1	20:CU:11:PHE:HE2	2.03	0.41
53:CA:28:A:H2'	53:CA:29:U:O4'	2.21	0.41
53:CA:130:A:H1'	53:CA:264:C:H5'	2.03	0.41
53:CA:159:G:H5'	53:CA:160:A:OP2	2.21	0.41
53:CA:166:U:OP2	53:CA:166:U:C6	2.72	0.41
53:CA:181:A:H4'	53:CA:182:A:OP1	2.21	0.41
53:CA:223:A:C5	53:CA:224:U:C5	3.09	0.41
53:CA:247:G:O2'	53:CA:248:C:H5'	2.21	0.41
53:CA:330:C:C2'	53:CA:331:G:H8	2.32	0.41
53:CA:372:C:O2'	53:CA:373:A:OP2	2.35	0.41
53:CA:372:C:H4'	53:CA:373:A:OP2	2.21	0.41
53:CA:570:G:H1'	53:CA:820:U:C4	2.55	0.41
53:CA:596:A:C2	53:CA:597:G:C5	3.09	0.41
53:CA:643:C:H2'	53:CA:644:U:H6	1.85	0.41
53:CA:754:C:C2'	53:CA:755:G:H5'	2.51	0.41
53:CA:865:A:H2'	53:CA:866:C:O4'	2.21	0.41
53:CA:946:A:H2'	53:CA:947:G:C8	2.56	0.41
53:CA:960:U:O2'	53:CA:1223:C:C5'	2.68	0.41
53:CA:976:G:C2	53:CA:1363:A:C2	3.09	0.41
53:CA:1073:U:H2'	53:CA:1074:G:C8	2.54	0.41
53:CA:1084:G:OP1	53:CA:1086:U:C5	2.74	0.41
53:CA:1101:A:C4'	53:CA:1102:A:O5'	2.63	0.41
53:CA:1140:C:H2'	53:CA:1141:C:C5	2.55	0.41
53:CA:1236:A:O2'	53:CA:1237:C:H5'	2.21	0.41
53:CA:1241:G:N3	53:CA:1242:G:N7	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1243:C:N4	53:CA:1244:G:O6	2.54	0.41
53:CA:1309:G:H2'	53:CA:1310:G:H8	1.86	0.41
53:CA:1328:C:H2'	53:CA:1329:A:C8	2.56	0.41
53:CA:1351:U:O2'	53:CA:1352:C:H5'	2.21	0.41
22:DA:95:A:H2'	22:DA:96:C:C4'	2.51	0.41
22:DA:100:U:O2'	22:DA:101:A:O5'	2.39	0.41
22:DA:142:A:C2	22:DA:143:C:C2	3.09	0.41
22:DA:190:A:H2'	22:DA:191:A:C8	2.55	0.41
22:DA:287:G:C2	22:DA:354:A:C2	3.09	0.41
22:DA:296:U:H2'	22:DA:297:G:O4'	2.20	0.41
22:DA:320:A:N7	26:DE:132:LYS:HB2	2.36	0.41
22:DA:426:C:H2'	22:DA:427:U:C5'	2.51	0.41
22:DA:500:G:N2	22:DA:503:A:C8	2.88	0.41
22:DA:576:U:H4'	22:DA:2502:G:C8	2.56	0.41
22:DA:584:C:C5	22:DA:585:G:N7	2.88	0.41
22:DA:782:A:OP1	22:DA:782:A:C8	2.74	0.41
22:DA:813:U:C2	22:DA:1195:G:C2	3.09	0.41
22:DA:845:A:H2	22:DA:934:U:O2	2.04	0.41
22:DA:857:G:H1'	44:DW:19:ARG:CZ	2.51	0.41
22:DA:857:G:H2'	22:DA:858:G:C4'	2.50	0.41
22:DA:971:G:H2'	22:DA:972:A:H5'	2.02	0.41
22:DA:1049:C:O2'	22:DA:1050:A:C5'	2.68	0.41
22:DA:1062:G:N2	22:DA:1077:A:H2	2.19	0.41
22:DA:1080:A:H2'	22:DA:1081:U:H6	1.78	0.41
22:DA:1146:C:N4	22:DA:1147:A:N6	2.69	0.41
22:DA:1171:G:C4	22:DA:1179:G:N2	2.89	0.41
22:DA:1287:A:O2'	22:DA:1288:G:H5'	2.21	0.41
22:DA:1468:U:O2	22:DA:1525:A:C2	2.74	0.41
22:DA:1528:A:H2'	22:DA:1529:G:O4'	2.21	0.41
22:DA:1558:C:H1'	22:DA:1560:G:C5	2.55	0.41
22:DA:1565:C:O2'	22:DA:1566:A:P	2.78	0.41
22:DA:1598:A:H2'	22:DA:1599:U:O4'	2.21	0.41
22:DA:1819:A:C4'	22:DA:1820:U:H5'	2.50	0.41
22:DA:1902:C:C5	22:DA:1903:G:C8	3.09	0.41
22:DA:2016:U:C4	22:DA:2017:U:C4	3.09	0.41
22:DA:2188:U:C4	22:DA:2189:U:C4	3.08	0.41
22:DA:2193:G:H2'	22:DA:2194:U:H6	1.86	0.41
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.88	0.41
22:DA:2461:A:H2'	22:DA:2462:C:C6	2.55	0.41
22:DA:2541:A:C2	22:DA:2765:A:N6	2.87	0.41
22:DA:2581:G:H4'	22:DA:2582:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2603:G:C6	22:DA:2604:U:C4	3.09	0.41
22:DA:2668:G:O2'	22:DA:2669:G:C5'	2.68	0.41
22:DA:2683:C:C5	22:DA:2684:U:C5	3.09	0.41
22:DA:2691:C:O2'	22:DA:2692:G:H5'	2.20	0.41
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.41
22:DA:2800:A:C2'	22:DA:2801:G:C4'	2.99	0.41
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.51	0.41
22:DA:2849:U:OP2	37:DP:92:ARG:HG3	2.20	0.41
22:DA:2897:U:H2'	22:DA:2898:U:O4'	2.20	0.41
54:DB:11:C:H2'	54:DB:15:A:H61	1.86	0.41
54:DB:35:C:H3'	54:DB:36:C:H5"	2.02	0.41
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.70	0.41
26:DE:44:ARG:HH21	26:DE:44:ARG:HG3	1.86	0.41
27:DF:45:ASP:C	27:DF:47:LYS:N	2.78	0.41
27:DF:46:LYS:HE2	27:DF:83:PRO:HG3	2.03	0.41
27:DF:48:LEU:HG	27:DF:49:LEU:CD2	2.51	0.41
30:DI:29:GLN:O	30:DI:30:GLN:HB3	2.21	0.41
31:DJ:28:LEU:O	31:DJ:29:ALA:C	2.64	0.41
32:DK:15:GLY:O	32:DK:16:ALA:O	2.39	0.41
32:DK:62:VAL:HG11	32:DK:65:THR:HG23	2.02	0.41
33:DL:4:ASN:HD22	33:DL:4:ASN:HA	1.59	0.41
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	2.03	0.41
35:DN:51:LEU:HA	35:DN:51:LEU:HD23	1.87	0.41
36:DO:62:LEU:HD21	36:DO:65:THR:HA	2.03	0.41
36:DO:95:SER:C	36:DO:97:PHE:H	2.29	0.41
37:DP:87:ARG:HG2	37:DP:88:ARG:N	2.35	0.41
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	2.20	0.41
41:DT:9:LYS:O	41:DT:9:LYS:CG	2.69	0.41
41:DT:21:SER:C	41:DT:25:GLU:HB3	2.46	0.41
44:DW:42:THR:O	44:DW:43:LYS:HG2	2.21	0.41
48:D0:47:TYR:CE2	48:D0:52:LYS:HG3	2.56	0.41
51:D3:24:LYS:HB3	51:D3:25:HIS:H	1.66	0.41
52:D4:15:LYS:O	52:D4:16:ILE:HB	2.20	0.41
1:AB:14:HIS:O	1:AB:16:GLY:N	2.54	0.41
1:AB:93:HIS:O	1:AB:94:ARG:C	2.63	0.41
1:AB:98:GLY:HA2	1:AB:101:THR:HG22	2.02	0.41
2:AC:120:THR:C	2:AC:122:GLN:H	2.27	0.41
3:AD:2:ARG:NH2	3:AD:114:ARG:HD3	2.35	0.41
3:AD:196:GLU:CA	3:AD:199:ILE:HG22	2.47	0.41
4:AE:148:SER:O	4:AE:152:VAL:N	2.54	0.41
5:AF:3:HIS:HB2	5:AF:92:THR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AK:125:LYS:O	10:AK:126:ARG:CB	2.68	0.41
14:AO:3:SER:OG	14:AO:5:GLU:HG2	2.20	0.41
16:AQ:66:LEU:O	16:AQ:67:SER:HB3	2.20	0.41
21:AA:75:G:H2'	21:AA:76:G:O4'	2.21	0.41
21:AA:270:A:H2'	21:AA:271:C:H6	1.83	0.41
21:AA:338:A:H61	21:AA:351:G:H1	1.69	0.41
21:AA:642:A:C4	21:AA:643:C:C5	3.09	0.41
21:AA:1050:G:C2	21:AA:1209:C:O2	2.74	0.41
22:BA:28:A:H2'	22:BA:29:U:C6	2.52	0.41
22:BA:41:C:H2'	22:BA:42:A:O5'	2.20	0.41
22:BA:108:G:O2'	22:BA:109:C:H5'	2.21	0.41
22:BA:407:G:O2'	22:BA:408:G:H5'	2.21	0.41
22:BA:735:A:H3'	22:BA:736:C:H6	1.86	0.41
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.21	0.41
22:BA:1274:A:H2	22:BA:1644:C:O2	2.04	0.41
22:BA:1583:A:N3	22:BA:1583:A:O4'	2.54	0.41
22:BA:1946:U:C2	22:BA:1947:C:C5	3.09	0.41
22:BA:1996:C:H5	32:BK:32:TYR:OH	2.03	0.41
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.85	0.41
22:BA:2337:G:C2	22:BA:2338:C:C6	3.09	0.41
22:BA:2468:A:HO2'	22:BA:2469:A:P	2.43	0.41
22:BA:2469:A:C6	22:BA:2482:A:C8	3.09	0.41
22:BA:2637:U:H2'	22:BA:2638:G:O4'	2.21	0.41
24:BC:211:ARG:HA	24:BC:211:ARG:HD2	1.45	0.41
24:BC:259:ASN:ND2	24:BC:262:THR:CG2	2.84	0.41
25:BD:18:ASP:OD1	25:BD:20:VAL:HB	2.20	0.41
25:BD:54:ALA:H	25:BD:77:ARG:H	1.68	0.41
25:BD:72:GLY:O	25:BD:73:VAL:O	2.38	0.41
29:BH:5:LEU:HD21	29:BH:12:LEU:HD12	2.03	0.41
29:BH:30:LEU:HD23	29:BH:30:LEU:HA	1.82	0.41
31:BJ:105:VAL:HG23	31:BJ:109:LEU:HD11	2.02	0.41
31:BJ:114:LEU:O	31:BJ:115:GLY:C	2.63	0.41
33:BL:28:GLY:O	33:BL:29:LYS:O	2.39	0.41
34:BM:52:ALA:O	34:BM:53:MET:C	2.64	0.41
37:BP:19:PHE:HB2	37:BP:20:ARG:H	1.50	0.41
37:BP:22:GLY:O	37:BP:109:ILE:HD11	2.21	0.41
40:BS:33:LEU:CD1	40:BS:48:LYS:HD3	2.51	0.41
41:BT:29:THR:H	41:BT:86:THR:HA	1.86	0.41
41:BT:49:LYS:HB2	41:BT:50:LEU:HD12	2.03	0.41
44:BW:22:VAL:CG2	44:BW:23:LYS:N	2.84	0.41
47:BZ:4:ILE:HG23	47:BZ:4:ILE:HD13	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.21	0.41
2:CC:4:VAL:HG11	2:CC:9:ILE:HD13	2.02	0.41
2:CC:22:PHE:HD1	9:CJ:13:PHE:CD1	2.39	0.41
2:CC:53:ARG:NH1	2:CC:53:ARG:HB2	2.36	0.41
2:CC:133:MET:HG2	2:CC:133:MET:H	1.76	0.41
3:CD:29:THR:O	3:CD:30:LYS:NZ	2.37	0.41
3:CD:141:VAL:HG12	3:CD:142:VAL:N	2.36	0.41
3:CD:187:ARG:O	3:CD:189:ASP:N	2.53	0.41
3:CD:187:ARG:HG3	3:CD:191:SER:OG	2.21	0.41
4:CE:80:LEU:HB3	4:CE:97:PRO:HB3	2.02	0.41
4:CE:131:ASN:HA	4:CE:132:PRO:HD2	1.85	0.41
8:CI:129:ARG:CZ	8:CI:129:ARG:HA	2.51	0.41
9:CJ:40:ILE:HA	9:CJ:41:PRO:HD2	1.84	0.41
10:CK:92:ARG:NH2	10:CK:111:ASP:OD1	2.54	0.41
10:CK:96:ILE:HD13	10:CK:109:ILE:HD13	2.03	0.41
12:CM:13:HIS:HA	12:CM:43:LYS:HA	2.02	0.41
12:CM:82:LEU:HD12	12:CM:82:LEU:N	2.36	0.41
20:CU:9:GLU:HB3	20:CU:10:PRO:HD2	2.02	0.41
53:CA:158:G:N2	53:CA:162:A:N6	2.68	0.41
53:CA:513:C:C2'	53:CA:514:C:C6	3.04	0.41
53:CA:979:C:C6	53:CA:1318:A:N1	2.89	0.41
53:CA:1006:G:N2	53:CA:1007:U:H1'	2.36	0.41
53:CA:1366:C:O2'	53:CA:1367:C:H6	2.04	0.41
53:CA:1432:G:H1'	53:CA:1468:A:H61	1.86	0.41
22:DA:142:A:C2'	22:DA:143:C:C6	2.95	0.41
22:DA:155:A:H2'	22:DA:156:A:C8	2.56	0.41
22:DA:357:C:H2'	22:DA:358:U:C6	2.53	0.41
22:DA:543:G:N2	22:DA:551:G:C4	2.88	0.41
22:DA:563:A:N3	38:DQ:36:GLN:NE2	2.68	0.41
22:DA:664:G:H4'	22:DA:941:A:P	2.61	0.41
22:DA:763:G:H8	22:DA:763:G:H2'	1.46	0.41
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.36	0.41
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.86	0.41
22:DA:1254:A:N1	26:DE:77:ILE:HD12	2.36	0.41
22:DA:1313:U:O2'	22:DA:1314:C:H5'	2.21	0.41
22:DA:1335:C:H2'	22:DA:1336:A:O4'	2.20	0.41
22:DA:1439:A:C2	22:DA:1552:A:N1	2.76	0.41
22:DA:1455:G:H2'	22:DA:1456:G:C8	2.56	0.41
22:DA:1662:U:O2	22:DA:2687:U:H5"	2.21	0.41
22:DA:1868:C:N4	22:DA:1869:G:O6	2.54	0.41
22:DA:1884:G:H2'	22:DA:1884:G:N3	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2087:G:H2'	22:DA:2088:A:H8	1.86	0.41
22:DA:2267:A:H8	22:DA:2267:A:H2'	1.23	0.41
22:DA:2305:U:H5	22:DA:2312:U:C4	2.39	0.41
22:DA:2627:G:H2'	22:DA:2628:C:C6	2.56	0.41
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.86	0.41
24:DC:29:PHE:O	24:DC:30:ALA:C	2.64	0.41
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.20	0.41
27:DF:103:ILE:H	27:DF:107:VAL:CG1	2.34	0.41
27:DF:174:PHE:CG	27:DF:175:PRO:HD2	2.56	0.41
31:DJ:72:LYS:HG3	31:DJ:89:PHE:HB2	2.03	0.41
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	2.03	0.41
33:DL:85:VAL:O	33:DL:85:VAL:HG22	2.21	0.41
33:DL:121:THR:OG1	33:DL:141:LYS:HB3	2.20	0.41
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.68	0.41
39:DR:4:VAL:O	39:DR:38:VAL:HG23	2.20	0.41
42:DU:48:VAL:HG22	42:DU:50:ALA:H	1.86	0.41
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.36	0.41
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.21	0.41
50:D2:28:ARG:C	50:D2:30:VAL:H	2.29	0.41
51:D3:9:ALA:HB1	51:D3:13:PHE:HD2	1.84	0.41
1:AB:80:LYS:HG3	1:AB:90:PHE:HE1	1.86	0.40
1:AB:118:THR:O	1:AB:119:GLN:CB	2.69	0.40
1:AB:132:GLU:O	1:AB:136:ARG:CB	2.69	0.40
3:AD:93:LEU:HD23	3:AD:93:LEU:HA	1.72	0.40
3:AD:201:GLU:O	21:AA:8:A:N6	2.52	0.40
6:AG:3:ARG:HB2	6:AG:3:ARG:NH1	2.35	0.40
8:AI:27:ILE:N	8:AI:27:ILE:HD12	2.36	0.40
9:AJ:67:ILE:CG1	13:AN:95:LEU:HD13	2.51	0.40
10:AK:125:LYS:N	10:AK:125:LYS:HD3	2.36	0.40
11:AL:87:LYS:NZ	11:AL:87:LYS:HB2	2.35	0.40
12:AM:4:ALA:H	12:AM:56:ARG:HG3	1.86	0.40
13:AN:15:LEU:O	13:AN:17:ASP:N	2.54	0.40
14:AO:31:LEU:O	14:AO:32:THR:C	2.63	0.40
15:AP:46:LYS:HB2	15:AP:47:GLU:H	1.60	0.40
20:AU:34:ARG:O	20:AU:35:GLU:C	2.64	0.40
21:AA:36:C:O2'	21:AA:501:C:OP1	2.39	0.40
21:AA:67:C:OP1	21:AA:199:A:H5"	2.21	0.40
21:AA:109:A:C6	21:AA:326:G:C6	3.09	0.40
21:AA:604:G:C2	21:AA:635:A:C2	3.08	0.40
21:AA:903:G:C6	21:AA:904:U:C4	3.09	0.40
21:AA:923:A:O2'	21:AA:924:C:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1442:G:C5	21:AA:1443:C:C5	3.09	0.40
21:AA:1492:A:H2'	21:AA:1493:A:H5"	2.03	0.40
22:BA:28:A:O2'	22:BA:29:U:H5'	2.20	0.40
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.56	0.40
22:BA:252:G:N2	22:BA:253:C:H1'	2.36	0.40
22:BA:649:G:H2'	22:BA:650:C:H6	1.85	0.40
22:BA:934:U:H2'	22:BA:935:C:C6	2.56	0.40
22:BA:996:A:C2	22:BA:997:G:C8	3.09	0.40
22:BA:1059:G:C2	22:BA:1080:A:C4	3.09	0.40
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.56	0.40
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.35	0.40
22:BA:1166:G:C2'	22:BA:1167:C:H5'	2.50	0.40
22:BA:1327:A:N6	22:BA:1328:A:C2	2.89	0.40
22:BA:1445:G:H2'	22:BA:1446:C:C6	2.56	0.40
22:BA:1671:U:H1'	25:BD:134:HIS:CE1	2.56	0.40
22:BA:1926:U:H1'	22:BA:1929:G:C6	2.57	0.40
22:BA:2274:A:H5"	22:BA:2275:C:OP2	2.21	0.40
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.86	0.40
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.34	0.40
27:BF:109:ARG:HH11	27:BF:138:PRO:CG	2.34	0.40
28:BG:86:LEU:HD12	28:BG:86:LEU:H	1.82	0.40
28:BG:86:LEU:HB3	28:BG:162:ARG:O	2.21	0.40
28:BG:115:GLN:O	28:BG:115:GLN:HG2	2.21	0.40
28:BG:175:LYS:HA	28:BG:175:LYS:HD3	1.88	0.40
29:BH:72:ILE:O	29:BH:72:ILE:HG12	2.21	0.40
29:BH:78:VAL:CG1	29:BH:145:ASN:HB3	2.50	0.40
31:BJ:19:ASP:C	31:BJ:21:THR:H	2.28	0.40
32:BK:59:LYS:HG3	32:BK:89:ASN:ND2	2.34	0.40
38:BQ:30:VAL:O	38:BQ:31:TYR:C	2.64	0.40
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.84	0.40
39:BR:37:GLU:CD	39:BR:37:GLU:H	2.30	0.40
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.69	0.40
1:CB:20:ARG:HA	1:CB:20:ARG:NE	2.36	0.40
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	2.02	0.40
2:CC:39:ARG:C	2:CC:41:TYR:H	2.28	0.40
2:CC:99:GLN:O	2:CC:100:ILE:C	2.65	0.40
2:CC:129:PHE:O	2:CC:133:MET:HG2	2.21	0.40
3:CD:167:PRO:HB3	3:CD:169:TRP:CH2	2.56	0.40
4:CE:110:MET:O	4:CE:114:LEU:HD12	2.20	0.40
6:CG:77:ARG:HD3	6:CG:77:ARG:HA	1.73	0.40
7:CH:73:SER:H	7:CH:129:ALA:HB3	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:83:THR:C	8:CI:85:ALA:N	2.79	0.40
8:CI:85:ALA:HA	8:CI:88:GLU:OE1	2.21	0.40
19:CT:64:GLY:O	19:CT:67:HIS:HB2	2.21	0.40
53:CA:36:C:H2'	53:CA:37:U:O4'	2.21	0.40
53:CA:79:G:N2	53:CA:91:U:O2	2.54	0.40
53:CA:80:A:N1	53:CA:81:A:O2'	2.55	0.40
53:CA:300:A:C2	53:CA:566:G:O6	2.74	0.40
53:CA:369:G:H2'	53:CA:370:C:H6	1.84	0.40
53:CA:583:A:H3'	53:CA:584:G:H8	1.86	0.40
53:CA:855:U:OP2	53:CA:871:U:N3	2.53	0.40
53:CA:1433:A:OP1	37:DP:105:LYS:HE2	2.20	0.40
22:DA:145:C:O5'	22:DA:145:C:H6	2.03	0.40
22:DA:167:A:C2	22:DA:168:G:H1'	2.56	0.40
22:DA:191:A:N6	22:DA:203:A:H2'	2.36	0.40
22:DA:289:G:H2'	22:DA:290:U:O4'	2.21	0.40
22:DA:585:G:H2'	22:DA:1254:A:H61	1.86	0.40
22:DA:603:A:H4'	22:DA:604:G:O5'	2.21	0.40
22:DA:676:A:H2	22:DA:2069:G:N3	2.20	0.40
22:DA:693:A:C5	22:DA:694:U:C4	3.09	0.40
22:DA:841:G:O2'	22:DA:842:U:H5'	2.20	0.40
22:DA:962:G:O2'	22:DA:963:U:O5'	2.39	0.40
22:DA:976:G:O6	22:DA:988:A:C2	2.74	0.40
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.56	0.40
22:DA:1500:G:C6	22:DA:1501:G:C5	3.09	0.40
22:DA:1527:G:H5"	22:DA:1528:A:OP1	2.21	0.40
22:DA:2095:A:C2	22:DA:2195:U:C2	3.09	0.40
22:DA:2463:C:O5'	22:DA:2463:C:H6	2.03	0.40
22:DA:2612:C:O2	48:D0:1:ALA:HB2	2.21	0.40
22:DA:2849:U:O4	22:DA:2867:G:C8	2.74	0.40
22:DA:2882:A:H5'	35:DN:96:ARG:HD3	2.02	0.40
24:DC:141:HIS:HB3	24:DC:190:THR:HB	2.02	0.40
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.49	0.40
25:DD:116:LYS:HA	25:DD:116:LYS:HD3	1.97	0.40
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.37	0.40
27:DF:4:HIS:CE1	27:DF:96:TRP:CZ2	3.09	0.40
27:DF:48:LEU:HB2	27:DF:149:ARG:NH2	2.36	0.40
27:DF:141:ASP:C	27:DF:143:ASP:H	2.28	0.40
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	2.03	0.40
29:DH:50:ARG:HA	29:DH:53:GLU:CB	2.52	0.40
29:DH:70:GLU:HB2	29:DH:71:LYS:HD2	2.02	0.40
30:DI:132:ALA:C	30:DI:134:SER:H	2.29	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:10:LEU:HD13	35:DN:10:LEU:HA	1.85	0.40
35:DN:29:VAL:O	35:DN:30:ARG:HB2	2.20	0.40
35:DN:57:THR:O	35:DN:80:PHE:HD1	2.04	0.40
44:DW:9:THR:HG23	44:DW:10:ARG:N	2.36	0.40
1:AB:185:ILE:HG12	1:AB:185:ILE:O	2.21	0.40
2:AC:35:ASP:OD1	2:AC:56:ILE:HG21	2.22	0.40
2:AC:153:SER:CB	2:AC:164:THR:HG22	2.51	0.40
4:AE:156:ARG:HH12	7:AH:113:ARG:HH12	1.69	0.40
5:AF:88:MET:HG2	5:AF:90:MET:HE2	2.03	0.40
6:AG:22:LEU:HD11	6:AG:46:LEU:CD2	2.51	0.40
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.22	0.40
16:AQ:12:VAL:HG11	16:AQ:21:VAL:H	1.86	0.40
17:AR:44:THR:C	17:AR:46:THR:H	2.29	0.40
19:AT:77:ASN:HD22	19:AT:77:ASN:C	2.24	0.40
21:AA:155:A:H2'	21:AA:156:C:C6	2.56	0.40
21:AA:369:G:OP2	21:AA:388:G:N1	2.48	0.40
21:AA:585:G:C6	21:AA:586:C:C4	3.10	0.40
21:AA:695:A:H61	21:AA:797:C:H1'	1.86	0.40
21:AA:1159:U:O2	21:AA:1159:U:O4'	2.39	0.40
21:AA:1492:A:H2'	21:AA:1492:A:N3	2.36	0.40
22:BA:223:A:O4'	22:BA:421:C:H4'	2.20	0.40
22:BA:324:A:N6	22:BA:339:U:H5'	2.36	0.40
22:BA:553:G:H2'	22:BA:554:U:O4'	2.21	0.40
22:BA:627:A:C4	22:BA:637:A:N7	2.88	0.40
22:BA:736:C:C2	22:BA:737:C:C5	3.09	0.40
22:BA:749:A:H4'	22:BA:1271:G:N3	2.36	0.40
22:BA:855:G:H21	44:BW:23:LYS:CB	2.27	0.40
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.36	0.40
22:BA:1079:C:C2	22:BA:1080:A:C8	3.09	0.40
22:BA:1208:C:C4	22:BA:1209:U:C4	3.10	0.40
22:BA:1795:C:H2'	22:BA:1796:U:C6	2.57	0.40
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.21	0.40
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.36	0.40
22:BA:2682:A:H8	25:BD:11:MET:CG	2.35	0.40
57:BA:3292:HOH:O	26:BE:98:LYS:HE2	2.20	0.40
23:BB:94:A:C2'	23:BB:95:U:H5'	2.51	0.40
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	2.03	0.40
24:BC:90:ILE:HG23	24:BC:102:TYR:CD1	2.56	0.40
25:BD:9:VAL:O	25:BD:197:THR:HG23	2.22	0.40
25:BD:12:THR:CG2	25:BD:13:ARG:H	2.34	0.40
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:174:GLY:O	26:BE:175:ILE:C	2.63	0.40
26:BE:190:ALA:O	26:BE:192:ALA:N	2.54	0.40
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.03	0.40
28:BG:36:LEU:C	28:BG:37:ASN:OD1	2.65	0.40
28:BG:166:GLU:OE2	28:BG:166:GLU:C	2.64	0.40
29:BH:131:SER:CB	29:BH:139:PHE:HD2	2.34	0.40
29:BH:134:VAL:HG23	29:BH:138:VAL:HG23	2.03	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
32:BK:99:ILE:CG2	32:BK:119:ALA:HA	2.51	0.40
34:BM:33:LEU:HD22	34:BM:128:THR:HB	2.03	0.40
35:BN:63:ARG:HA	35:BN:80:PHE:CE2	2.57	0.40
35:BN:64:ARG:O	35:BN:67:PHE:HB3	2.22	0.40
35:BN:70:THR:CG2	35:BN:75:ILE:HD11	2.52	0.40
38:BQ:63:ARG:CZ	38:BQ:96:ASP:CA	2.94	0.40
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.84	0.40
41:BT:23:ALA:C	41:BT:25:GLU:N	2.79	0.40
3:CD:4:LEU:HA	3:CD:4:LEU:HD23	1.68	0.40
3:CD:148:ALA:HB1	3:CD:151:GLN:HE22	1.86	0.40
5:CF:20:GLY:HA2	5:CF:23:GLU:HG2	2.04	0.40
6:CG:9:ARG:NH2	53:CA:1346:A:N1	2.68	0.40
8:CI:69:GLY:H	53:CA:1250:A:H4'	1.87	0.40
11:CL:34:THR:HG22	11:CL:35:ARG:HE	1.86	0.40
12:CM:64:VAL:CG1	12:CM:65:GLU:H	2.25	0.40
13:CN:15:LEU:O	13:CN:54:SER:HB2	2.21	0.40
14:CO:12:SER:O	14:CO:13:GLU:C	2.64	0.40
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.34	0.40
19:CT:9:ARG:HG3	53:CA:108:G:O6	2.22	0.40
53:CA:57:G:C5	53:CA:58:C:C4	3.09	0.40
53:CA:116:A:H2'	53:CA:117:G:H8	1.85	0.40
53:CA:148:G:C2	53:CA:149:A:C4	3.09	0.40
53:CA:168:G:H2'	53:CA:169:C:H5'	2.02	0.40
53:CA:761:G:C6	53:CA:762:U:C4	3.10	0.40
53:CA:775:G:H2'	53:CA:776:G:H5'	2.03	0.40
53:CA:818:G:C3'	53:CA:819:A:C5'	2.99	0.40
53:CA:865:A:C2	53:CA:918:A:H4'	2.56	0.40
53:CA:1167:A:O2'	53:CA:1168:U:OP1	2.33	0.40
53:CA:1175:G:O2'	53:CA:1176:A:H5'	2.20	0.40
22:DA:211:C:H2'	22:DA:212:G:O4'	2.21	0.40
22:DA:371:A:C4	22:DA:373:U:O4	2.75	0.40
22:DA:422:A:C2'	22:DA:423:A:C8	3.02	0.40
22:DA:602:A:H1'	22:DA:605:G:H5"	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:726:G:C8	22:DA:726:G:OP2	2.74	0.40
22:DA:726:G:OP2	22:DA:726:G:H8	2.03	0.40
22:DA:814:C:C2	22:DA:1194:A:C2	3.10	0.40
22:DA:855:G:C2'	44:DW:23:LYS:HD3	2.51	0.40
22:DA:976:G:O2'	22:DA:977:G:H5'	2.21	0.40
22:DA:1331:G:N3	22:DA:1333:G:C8	2.89	0.40
22:DA:1609:A:O2'	22:DA:1610:A:C5'	2.69	0.40
22:DA:1792:G:H1	22:DA:1828:G:H1'	1.86	0.40
22:DA:1896:G:N3	22:DA:1896:G:H2'	2.36	0.40
22:DA:2106:U:C4	22:DA:2107:G:N7	2.89	0.40
22:DA:2148:G:O2'	22:DA:2149:U:C5	2.73	0.40
22:DA:2185:U:H6	22:DA:2185:U:O5'	2.05	0.40
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.83	0.40
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.69	0.40
22:DA:2617:U:C2'	22:DA:2618:G:H5'	2.52	0.40
22:DA:2868:A:O2'	22:DA:2869:G:O4'	2.34	0.40
27:DF:102:LEU:N	27:DF:102:LEU:HD22	2.36	0.40
28:DG:11:PRO:O	28:DG:14:VAL:HG22	2.21	0.40
28:DG:24:THR:C	28:DG:25:ILE:HD12	2.46	0.40
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.57	0.40
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.51	0.40
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.45	0.40
34:DM:35:ALA:HB2	34:DM:100:LYS:O	2.20	0.40
37:DP:25:VAL:HG23	37:DP:25:VAL:O	2.21	0.40
39:DR:80:ARG:HE	39:DR:80:ARG:HA	1.86	0.40
39:DR:97:LYS:O	39:DR:98:ILE:C	2.64	0.40
40:DS:103:ILE:HD12	40:DS:103:ILE:N	2.36	0.40
41:DT:3:ARG:O	41:DT:4:GLU:C	2.63	0.40
42:DU:90:LYS:HB2	42:DU:92:VAL:CG1	2.51	0.40
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.61	0.40
44:DW:44:PHE:HB2	44:DW:78:PHE:H	1.85	0.40
45:DX:76:LYS:HE3	45:DX:76:LYS:HB2	1.70	0.40
1:AB:20:ARG:HB3	1:AB:21:TYR:H	1.61	0.40
1:AB:27:LYS:C	1:AB:29:PHE:N	2.79	0.40
1:AB:32:GLY:O	1:AB:38:HIS:HB3	2.22	0.40
1:AB:163:ILE:CG2	1:AB:164:ASP:N	2.74	0.40
3:AD:123:MET:HE2	3:AD:126:GLY:O	2.20	0.40
4:AE:71:ILE:HD13	4:AE:144:GLU:HB2	2.04	0.40
4:AE:132:PRO:C	4:AE:134:ASN:N	2.79	0.40
5:AF:92:THR:C	5:AF:93:LYS:HG2	2.47	0.40
10:AK:62:ALA:O	10:AK:63:GLN:C	2.64	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:2:THR:HG22	11:AL:4:ASN:N	2.37	0.40
12:AM:102:LYS:O	12:AM:103:THR:HG23	2.20	0.40
15:AP:76:LYS:HA	15:AP:76:LYS:HD3	1.79	0.40
17:AR:39:VAL:HA	17:AR:40:PRO:HD2	1.78	0.40
18:AS:17:LYS:NZ	21:AA:1014:A:OP1	2.52	0.40
18:AS:23:GLU:HG3	18:AS:23:GLU:O	2.21	0.40
18:AS:80:ARG:HG3	18:AS:80:ARG:O	2.21	0.40
19:AT:16:ALA:O	19:AT:17:ARG:C	2.65	0.40
21:AA:292:G:C2	21:AA:309:A:C2	3.10	0.40
21:AA:754:C:H3'	21:AA:755:G:H5'	2.03	0.40
21:AA:1170:A:H2'	21:AA:1171:A:O4'	2.22	0.40
21:AA:1221:G:H2'	21:AA:1222:G:C8	2.54	0.40
21:AA:1333:A:H2'	21:AA:1334:G:O4'	2.21	0.40
22:BA:718:A:H2'	22:BA:719:C:H5'	2.03	0.40
22:BA:851:C:O2'	47:BZ:45:GLY:HA3	2.22	0.40
22:BA:870:U:C2'	22:BA:871:U:H5'	2.50	0.40
22:BA:988:A:C2'	22:BA:989:G:O5'	2.69	0.40
22:BA:1031:G:H4'	52:B4:6:SER:HB2	2.04	0.40
22:BA:1059:G:C6	22:BA:1080:A:N1	2.89	0.40
22:BA:1177:G:C5	22:BA:1178:C:C5	3.09	0.40
22:BA:1334:G:O2'	22:BA:1335:C:H5'	2.22	0.40
22:BA:1555:G:H2'	22:BA:1556:C:C6	2.56	0.40
22:BA:1565:C:O2'	22:BA:1566:A:P	2.78	0.40
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.85	0.40
22:BA:1798:U:OP1	24:BC:255:LYS:O	2.40	0.40
22:BA:1842:G:O4'	24:BC:242:HIS:HE1	2.05	0.40
22:BA:2244:U:C2'	22:BA:2245:U:H5'	2.52	0.40
22:BA:2394:C:H5"	33:BL:63:LYS:HE2	2.03	0.40
22:BA:2663:G:H2'	22:BA:2664:G:H8	1.86	0.40
22:BA:2733:A:O5'	22:BA:2733:A:C8	2.66	0.40
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.87	0.40
25:BD:25:THR:OG1	25:BD:191:GLY:HA2	2.20	0.40
26:BE:69:ARG:HB2	26:BE:70:SER:H	1.60	0.40
26:BE:134:LEU:O	26:BE:135:ALA:C	2.65	0.40
26:BE:164:LEU:CB	26:BE:167:VAL:HG12	2.50	0.40
26:BE:175:ILE:O	26:BE:175:ILE:CG2	2.68	0.40
26:BE:178:VAL:O	26:BE:181:ILE:N	2.52	0.40
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.21	0.40
28:BG:30:GLY:O	28:BG:78:VAL:HG12	2.22	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
32:BK:63:VAL:HG12	32:BK:64:ARG:HG3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:9:ALA:O	33:BL:12:SER:HB3	2.22	0.40
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	2.04	0.40
33:BL:91:ASP:O	33:BL:93:ASN:O	2.39	0.40
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.44	0.40
37:BP:85:VAL:CG1	37:BP:86:LYS:N	2.77	0.40
37:BP:102:ARG:C	37:BP:103:THR:HG22	2.45	0.40
38:BQ:78:PHE:CE2	38:BQ:109:VAL:HA	2.57	0.40
44:BW:39:GLN:NE2	44:BW:43:LYS:N	2.68	0.40
45:BX:29:LEU:N	45:BX:29:LEU:HD23	2.35	0.40
45:BX:42:GLU:OE2	45:BX:44:ARG:NH2	2.53	0.40
46:BY:39:GLN:HB2	46:BY:41:HIS:NE2	2.36	0.40
47:BZ:15:ARG:HG3	47:BZ:15:ARG:HH11	1.85	0.40
52:B4:7:VAL:O	52:B4:35:GLN:OE1	2.39	0.40
1:CB:111:LYS:C	1:CB:113:LEU:N	2.79	0.40
1:CB:116:LEU:HD13	1:CB:140:LEU:HB2	2.02	0.40
3:CD:2:ARG:NE	3:CD:114:ARG:HD3	2.36	0.40
10:CK:113:THR:HA	10:CK:114:PRO:HD2	1.94	0.40
12:CM:75:SER:HB2	12:CM:79:LEU:HG	2.04	0.40
12:CM:89:ARG:HD3	12:CM:94:LEU:O	2.21	0.40
13:CN:5:MET:HE1	13:CN:8:ARG:NH2	2.37	0.40
15:CP:10:GLY:HA2	53:CA:624:C:O2'	2.20	0.40
53:CA:162:A:H3'	53:CA:163:C:H6	1.86	0.40
53:CA:216:U:C5'	53:CA:464:U:H4'	2.51	0.40
53:CA:319:G:N2	53:CA:335:C:C2	2.89	0.40
53:CA:872:A:C5	53:CA:874:G:C8	3.10	0.40
53:CA:949:A:H4'	53:CA:1364:U:O4	2.21	0.40
53:CA:1014:A:C2	53:CA:1219:A:H1'	2.56	0.40
53:CA:1124:G:O2'	53:CA:1127:G:O6	2.39	0.40
53:CA:1255:G:H2'	53:CA:1278:G:H21	1.85	0.40
53:CA:1285:A:O2'	53:CA:1286:U:H5'	2.21	0.40
53:CA:1403:C:H2'	53:CA:1404:C:H6	1.87	0.40
22:DA:55:G:N1	22:DA:116:C:C4	2.89	0.40
22:DA:224:U:OP2	22:DA:408:G:N2	2.49	0.40
22:DA:301:G:C5	22:DA:302:C:N4	2.90	0.40
22:DA:489:G:H4'	22:DA:490:C:OP1	2.21	0.40
22:DA:579:G:N2	22:DA:1262:A:C4	2.89	0.40
22:DA:595:C:O2	22:DA:663:G:C2	2.74	0.40
22:DA:735:A:C6	22:DA:736:C:C2	3.10	0.40
22:DA:784:G:O6	24:DC:227:VAL:HG11	2.21	0.40
22:DA:799:G:O6	22:DA:800:A:C6	2.74	0.40
22:DA:1014:A:N1	22:DA:1149:G:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1049:C:O2	22:DA:1113:U:H4'	2.20	0.40
22:DA:1057:A:C8	22:DA:1086:A:C8	3.09	0.40
22:DA:1328:A:H2'	22:DA:1330:C:C5	2.56	0.40
22:DA:1532:A:N1	22:DA:1540:G:C6	2.90	0.40
22:DA:1560:G:N3	22:DA:1560:G:H2'	2.37	0.40
22:DA:1675:C:H2'	22:DA:1676:A:C8	2.55	0.40
22:DA:2018:G:O2'	22:DA:2019:A:H5'	2.21	0.40
22:DA:2209:G:C4	22:DA:2210:U:C5	3.09	0.40
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.21	0.40
22:DA:2405:G:C2'	22:DA:2412:A:H61	2.34	0.40
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	3.05	0.40
22:DA:2697:G:H2'	22:DA:2698:U:O4'	2.21	0.40
22:DA:2848:G:C4	22:DA:2849:U:H5	2.39	0.40
24:DC:80:LEU:HD21	24:DC:109:LEU:HB3	2.03	0.40
24:DC:260:LYS:HA	24:DC:263:ASP:CG	2.46	0.40
25:DD:175:LEU:O	25:DD:176:ASP:HB2	2.21	0.40
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.87	0.40
26:DE:194:LYS:O	26:DE:197:GLU:HB3	2.21	0.40
29:DH:76:GLU:OE1	29:DH:102:ALA:HB2	2.22	0.40
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.47	0.40
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.86	0.40
34:DM:135:VAL:HB	34:DM:136:MET:H	1.67	0.40
35:DN:83:LEU:CD1	35:DN:86:ARG:HH21	2.34	0.40
36:DO:11:ALA:O	36:DO:15:ARG:HG3	2.21	0.40
37:DP:19:PHE:N	37:DP:19:PHE:HD2	2.19	0.40
38:DQ:75:TYR:OH	38:DQ:92:LYS:HE3	2.22	0.40
40:DS:51:LEU:HG	40:DS:55:ILE:HD13	2.02	0.40
41:DT:28:ASN:C	41:DT:29:THR:HG22	2.46	0.40
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.21	0.40
45:DX:71:ARG:C	45:DX:73:ARG:H	2.29	0.40
47:DZ:40:THR:C	47:DZ:42:ALA:H	2.29	0.40
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.75	0.40
50:D2:6:GLN:HA	50:D2:7:PRO:HD2	1.84	0.40
1:AB:156:LEU:O	1:AB:157:PRO:C	2.63	0.40
2:AC:190:THR:CG2	2:AC:195:ILE:HG13	2.50	0.40
3:AD:13:ARG:HG3	3:AD:55:ARG:HE	1.87	0.40
3:AD:27:ILE:O	3:AD:28:ASP:C	2.64	0.40
3:AD:94:GLU:OE2	3:AD:103:ARG:NE	2.54	0.40
3:AD:115:GLN:CD	3:AD:119:HIS:CE1	2.99	0.40
7:AH:87:ARG:O	7:AH:88:LYS:HB3	2.21	0.40
7:AH:104:SER:HB2	7:AH:125:ILE:CD1	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AJ:63:ASP:OD2	13:AN:97:LYS:NZ	2.55	0.40
10:AK:117:HIS:HB3	21:AA:718:A:C8	2.57	0.40
12:AM:94:LEU:O	12:AM:108:ARG:HG2	2.22	0.40
18:AS:30:LEU:O	18:AS:49:ALA:HB3	2.22	0.40
18:AS:57:VAL:HA	18:AS:58:PRO:HD2	1.95	0.40
19:AT:73:ARG:NH1	21:AA:263:A:P	2.95	0.40
21:AA:414:A:N6	21:AA:431:A:N3	2.68	0.40
21:AA:653:U:H6	21:AA:653:U:H2'	1.58	0.40
21:AA:781:A:C3'	21:AA:782:A:H5'	2.52	0.40
21:AA:1413:A:C6	21:AA:1414:U:C4	3.09	0.40
22:BA:319:G:C4	22:BA:333:G:N2	2.90	0.40
22:BA:335:C:C5'	42:BU:81:ARG:HD3	2.40	0.40
22:BA:372:G:P	45:BX:61:LYS:NZ	2.95	0.40
22:BA:548:G:H3'	22:BA:548:G:H8	1.87	0.40
22:BA:645:C:H42	22:BA:2350:C:C4'	2.35	0.40
22:BA:1135:C:H6	22:BA:1135:C:H5"	1.85	0.40
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.55	0.40
22:BA:1387:A:H5'	22:BA:1469:A:H1'	2.04	0.40
22:BA:1588:G:N3	22:BA:1589:U:C6	2.89	0.40
22:BA:1615:C:H2'	22:BA:1617:C:C5	2.56	0.40
22:BA:1655:A:C2	22:BA:1656:C:H1'	2.57	0.40
22:BA:2197:U:OP1	3:CD:150:LYS:CE	2.69	0.40
22:BA:2211:A:OP2	22:BA:2211:A:C4'	2.69	0.40
22:BA:2322:A:H2'	22:BA:2323:G:O4'	2.22	0.40
22:BA:2673:G:C2	22:BA:2674:G:C8	3.10	0.40
24:BC:94:LEU:HD13	24:BC:100:ARG:NH1	2.35	0.40
24:BC:107:LYS:O	24:BC:109:LEU:HD13	2.22	0.40
24:BC:134:ILE:O	24:BC:166:ARG:NH1	2.54	0.40
26:BE:157:LEU:O	26:BE:157:LEU:HG	2.20	0.40
28:BG:3:VAL:HG13	28:BG:4:ALA:N	2.36	0.40
29:BH:14:SER:C	29:BH:16:GLY:H	2.30	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.79	0.40
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.21	0.40
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.61	0.40
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.52	0.40
34:BM:69:PRO:CA	34:BM:94:ALA:HB2	2.51	0.40
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	2.03	0.40
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.65	0.40
41:BT:13:ALA:O	41:BT:32:LEU:HB2	2.21	0.40
41:BT:24:MET:HG3	41:BT:24:MET:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:42:LEU:HD13	43:BV:47:VAL:HG21	2.04	0.40
44:BW:55:ASP:O	44:BW:56:HIS:C	2.63	0.40
46:BY:18:LEU:HD22	46:BY:18:LEU:HA	1.80	0.40
47:BZ:24:LEU:HD23	47:BZ:24:LEU:C	2.47	0.40
1:CB:17:HIS:HB2	1:CB:37:VAL:HG21	2.04	0.40
1:CB:102:ASN:O	1:CB:102:ASN:CG	2.65	0.40
4:CE:57:ALA:O	4:CE:60:GLN:HB3	2.22	0.40
8:CI:113:LYS:HG2	8:CI:114:LYS:N	2.37	0.40
10:CK:70:ALA:HB1	10:CK:104:PHE:HZ	1.83	0.40
10:CK:96:ILE:O	10:CK:97:ARG:C	2.64	0.40
12:CM:101:THR:O	12:CM:102:LYS:C	2.63	0.40
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.21	0.40
15:CP:40:ASN:HA	15:CP:41:PRO:HD3	1.91	0.40
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG22	2.03	0.40
53:CA:213:G:N3	53:CA:213:G:H2'	2.36	0.40
53:CA:406:G:N7	53:CA:495:A:H2'	2.36	0.40
53:CA:770:C:O2'	53:CA:771:G:H5'	2.21	0.40
53:CA:821:G:H4'	57:CA:1740:HOH:O	2.21	0.40
53:CA:858:G:O6	53:CA:869:G:C8	2.75	0.40
53:CA:931:C:H2'	53:CA:932:C:H6	1.86	0.40
53:CA:967:C:H2'	53:CA:968:A:C2	2.56	0.40
53:CA:1182:G:C3'	53:CA:1183:U:H5'	2.50	0.40
22:DA:174:U:O2	22:DA:174:U:H2'	2.20	0.40
22:DA:194:G:C2	22:DA:202:U:H1'	2.56	0.40
22:DA:299:A:C2	22:DA:319:G:N3	2.90	0.40
22:DA:319:G:H2'	22:DA:320:A:O4'	2.21	0.40
22:DA:396:G:O2'	22:DA:397:U:O5'	2.39	0.40
22:DA:540:C:O2'	22:DA:541:A:H5'	2.21	0.40
22:DA:647:G:C4	22:DA:648:G:N7	2.90	0.40
22:DA:749:A:C6	22:DA:750:A:N7	2.89	0.40
22:DA:844:A:H2'	22:DA:845:A:O4'	2.22	0.40
22:DA:863:A:H2'	22:DA:864:G:H8	1.86	0.40
22:DA:864:G:C6	22:DA:865:C:C4	3.10	0.40
22:DA:876:C:O2	22:DA:876:C:O4'	2.40	0.40
22:DA:949:G:C2	22:DA:969:G:C2	3.10	0.40
22:DA:1122:G:N3	22:DA:1122:G:H2'	2.36	0.40
22:DA:1248:G:C4	38:DQ:2:ARG:HG2	2.56	0.40
22:DA:1304:A:O2'	22:DA:1305:C:O4'	2.39	0.40
22:DA:1360:G:C6	22:DA:1372:U:C2	3.09	0.40
22:DA:1530:G:OP2	22:DA:1530:G:H8	2.04	0.40
22:DA:1816:C:O3'	22:DA:1817:G:H8	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1857:G:N3	22:DA:1884:G:C2	2.90	0.40
22:DA:2149:U:O2'	22:DA:2150:C:O4'	2.40	0.40
22:DA:2403:C:H2'	22:DA:2404:U:H6	1.87	0.40
22:DA:2516:A:H2'	22:DA:2517:C:O4'	2.21	0.40
22:DA:2576:G:C8	22:DA:2580:U:O4	2.75	0.40
22:DA:2843:G:N2	22:DA:2875:C:C2	2.90	0.40
54:DB:67:G:O2'	54:DB:68:C:C6	2.61	0.40
24:DC:64:VAL:HG22	24:DC:90:ILE:HD11	2.04	0.40
25:DD:76:GLY:O	25:DD:77:ARG:C	2.64	0.40
26:DE:154:ASP:C	26:DE:156:ASN:H	2.29	0.40
27:DF:36:ASN:HA	27:DF:86:CYS:O	2.22	0.40
28:DG:11:PRO:HD2	28:DG:14:VAL:HG11	2.02	0.40
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	2.03	0.40
30:DI:61:TYR:HE2	30:DI:67:THR:N	2.18	0.40
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	2.04	0.40
33:DL:111:ILE:HD13	33:DL:111:ILE:N	2.36	0.40
34:DM:34:LYS:O	34:DM:128:THR:HB	2.22	0.40
38:DQ:87:VAL:O	38:DQ:88:GLU:O	2.38	0.40
44:DW:37:VAL:C	44:DW:39:GLN:N	2.80	0.40
45:DX:6:VAL:HG12	45:DX:50:VAL:HG12	2.02	0.40
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.52	0.40
1:AB:61:SER:C	1:AB:63:LYS:N	2.79	0.40
1:AB:66:ILE:CB	1:AB:88:GLN:HB3	2.39	0.40
1:AB:106:VAL:HA	1:AB:109:SER:OG	2.21	0.40
1:AB:139:GLU:O	1:AB:143:LEU:CD2	2.69	0.40
2:AC:13:ILE:O	2:AC:15:LYS:N	2.54	0.40
2:AC:149:LYS:HB3	2:AC:168:ARG:HA	2.03	0.40
4:AE:120:HIS:C	4:AE:121:ASN:ND2	2.69	0.40
4:AE:131:ASN:O	4:AE:135:VAL:HG12	2.22	0.40
5:AF:97:THR:O	5:AF:98:GLU:CG	2.59	0.40
7:AH:66:GLN:C	7:AH:68:LYS:H	2.29	0.40
8:AI:33:SER:OG	8:AI:35:GLU:HG2	2.21	0.40
10:AK:109:ILE:HG21	20:AU:16:ARG:NE	2.37	0.40
14:AO:19:ASN:HD22	14:AO:19:ASN:HA	1.70	0.40
21:AA:113:G:C4	21:AA:114:U:C5	3.09	0.40
21:AA:190:A:H8	21:AA:190:A:O5'	2.04	0.40
21:AA:411:A:C5	21:AA:429:U:C5	3.10	0.40
21:AA:464:U:C2	21:AA:466:A:H5"	2.57	0.40
21:AA:921:U:H2'	21:AA:922:G:O4'	2.22	0.40
22:BA:42:A:C2'	22:BA:43:G:H5"	2.52	0.40
22:BA:242:G:O2'	51:B3:5:THR:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:273:G:O2'	22:BA:274:C:O4'	2.31	0.40
22:BA:343:C:H2'	22:BA:343:C:O2	2.21	0.40
22:BA:478:A:N6	22:BA:480:A:N6	2.70	0.40
22:BA:675:A:C4	22:BA:804:A:C2	3.10	0.40
22:BA:726:G:HO2'	22:BA:727:A:P	2.39	0.40
22:BA:1069:A:N1	22:BA:1073:A:N6	2.70	0.40
22:BA:1385:A:C5	22:BA:1403:A:C6	3.10	0.40
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.21	0.40
22:BA:1916:A:O5'	22:BA:1916:A:H8	2.05	0.40
22:BA:1936:A:C2	22:BA:1943:U:O4	2.73	0.40
22:BA:2059:A:N6	22:BA:2503:A:H2'	2.37	0.40
22:BA:2107:G:O6	22:BA:2183:A:C6	2.74	0.40
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.37	0.40
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.38	0.40
22:BA:2226:C:H2'	22:BA:2227:A:C8	2.56	0.40
22:BA:2808:G:N2	22:BA:2891:U:C6	2.90	0.40
22:BA:2856:A:C2'	22:BA:2857:G:H5'	2.52	0.40
24:BC:30:ALA:N	24:BC:31:PRO:HD2	2.36	0.40
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	3.05	0.40
24:BC:115:ILE:HG13	24:BC:126:GLY:O	2.21	0.40
24:BC:161:VAL:CG1	24:BC:173:LEU:HG	2.52	0.40
25:BD:92:VAL:O	25:BD:92:VAL:HG12	2.21	0.40
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.87	0.40
27:BF:53:ALA:C	27:BF:55:ASP:N	2.79	0.40
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	2.02	0.40
28:BG:54:ARG:O	28:BG:55:ASP:C	2.64	0.40
28:BG:124:CYS:HA	28:BG:125:PRO:HD2	1.80	0.40
28:BG:169:ARG:O	28:BG:170:THR:O	2.40	0.40
29:BH:50:ARG:C	29:BH:52:ALA:N	2.79	0.40
33:BL:57:LEU:C	33:BL:59:ARG:H	2.29	0.40
33:BL:67:THR:CG2	33:BL:68:SER:N	2.84	0.40
34:BM:43:ALA:H	34:BM:46:ILE:HG23	1.87	0.40
34:BM:80:VAL:HG22	34:BM:81:ARG:N	2.36	0.40
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.36	0.40
41:BT:68:LYS:HE2	41:BT:77:ARG:CD	2.52	0.40
43:BV:38:LEU:HG	43:BV:40:ILE:HD11	2.03	0.40
44:BW:44:PHE:HD1	44:BW:45:HIS:CE1	2.40	0.40
2:CC:41:TYR:HE1	2:CC:89:VAL:CG1	2.35	0.40
2:CC:188:ALA:O	2:CC:194:VAL:HA	2.21	0.40
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.87	0.40
8:CI:81:GLY:HA2	8:CI:84:ARG:HB2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:52:LEU:HB2	13:CN:80:ARG:NE	2.34	0.40
12:CM:82:LEU:CD2	18:CS:60:PHE:HB3	2.49	0.40
14:CO:28:VAL:HG13	14:CO:62:ARG:HG3	2.04	0.40
18:CS:16:LYS:O	18:CS:17:LYS:HD3	2.22	0.40
53:CA:28:A:O2'	53:CA:296:U:H5"	2.21	0.40
53:CA:72:A:OP1	53:CA:72:A:H4'	2.22	0.40
53:CA:513:C:C2'	53:CA:514:C:H6	2.34	0.40
53:CA:611:C:C4	53:CA:612:C:C5	3.09	0.40
53:CA:677:U:H2'	53:CA:678:U:H6	1.86	0.40
53:CA:846:G:H2'	53:CA:847:G:H8	1.87	0.40
53:CA:914:A:H2'	53:CA:915:A:C8	2.57	0.40
53:CA:951:G:O2'	53:CA:952:U:H5'	2.21	0.40
53:CA:976:G:H5'	53:CA:977:A:OP2	2.21	0.40
53:CA:1472:U:C2	53:CA:1473:G:C8	3.10	0.40
22:DA:374:A:O2'	22:DA:375:G:O4'	2.40	0.40
22:DA:547:A:C8	22:DA:549:G:N2	2.90	0.40
22:DA:721:A:H8	22:DA:721:A:O5'	2.04	0.40
22:DA:754:U:H2'	22:DA:755:U:C5	2.54	0.40
22:DA:858:G:H2'	22:DA:2268:A:N3	2.36	0.40
22:DA:976:G:C5'	22:DA:1156:A:N6	2.85	0.40
22:DA:989:G:OP2	47:DZ:11:SER:HB2	2.21	0.40
22:DA:1069:A:H4'	22:DA:1070:A:C5'	2.51	0.40
22:DA:1084:A:H2	22:DA:1105:U:O2	2.05	0.40
22:DA:1287:A:H5'	35:DN:103:ARG:NH1	2.37	0.40
22:DA:1431:A:O2'	22:DA:1432:G:H5'	2.21	0.40
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.86	0.40
22:DA:1826:G:C5	22:DA:1827:U:C5	3.10	0.40
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.39	0.40
22:DA:2230:G:O4'	45:DX:31:ASN:HB3	2.22	0.40
22:DA:2458:G:O2'	22:DA:2460:U:C4	2.74	0.40
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.57	0.40
54:DB:42:C:C5	27:DF:65:LEU:HD13	2.56	0.40
54:DB:52:A:C6	36:DO:33:ARG:NH2	2.79	0.40
24:DC:12:ARG:O	24:DC:13:ARG:C	2.64	0.40
24:DC:206:LYS:HE2	24:DC:212:TRP:CH2	2.56	0.40
27:DF:103:ILE:HD12	27:DF:103:ILE:N	2.36	0.40
29:DH:125:THR:CG2	29:DH:146:VAL:HG11	2.50	0.40
31:DJ:125:TYR:HE2	31:DJ:132:HIS:HD2	1.69	0.40
32:DK:121:GLU:HB3	32:DK:122:VAL:H	1.59	0.40
33:DL:100:ILE:HD12	33:DL:101:ILE:H	1.86	0.40
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.56	0.40
48:D0:28:SER:HB3	48:D0:39:ARG:NH2	2.36	0.40
50:D2:43:THR:O	50:D2:44:VAL:C	2.65	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	AB	216/241 (90%)	131 (61%)	49 (23%)	36 (17%)	0	0
1	CB	216/241 (90%)	149 (69%)	47 (22%)	20 (9%)	0	3
2	AC	204/233 (88%)	151 (74%)	35 (17%)	18 (9%)	0	3
2	CC	204/233 (88%)	144 (71%)	41 (20%)	19 (9%)	0	3
3	AD	203/206 (98%)	140 (69%)	36 (18%)	27 (13%)	0	1
3	CD	203/206 (98%)	142 (70%)	39 (19%)	22 (11%)	0	2
4	AE	148/167 (89%)	107 (72%)	25 (17%)	16 (11%)	0	2
4	CE	148/167 (89%)	111 (75%)	21 (14%)	16 (11%)	0	2
5	AF	98/135 (73%)	74 (76%)	15 (15%)	9 (9%)	0	3
5	CF	98/135 (73%)	68 (69%)	18 (18%)	12 (12%)	0	1
6	AG	149/179 (83%)	108 (72%)	34 (23%)	7 (5%)	2	14
6	CG	148/179 (83%)	99 (67%)	35 (24%)	14 (10%)	0	3
7	AH	127/130 (98%)	93 (73%)	30 (24%)	4 (3%)	3	22
7	CH	127/130 (98%)	96 (76%)	20 (16%)	11 (9%)	0	3
8	AI	125/130 (96%)	84 (67%)	31 (25%)	10 (8%)	1	4
8	CI	125/130 (96%)	90 (72%)	21 (17%)	14 (11%)	0	2
9	AJ	96/103 (93%)	67 (70%)	18 (19%)	11 (12%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
9	CJ	96/103 (93%)	55 (57%)	24 (25%)	17 (18%)	0 0
10	AK	115/129 (89%)	85 (74%)	21 (18%)	9 (8%)	1 5
10	CK	115/129 (89%)	85 (74%)	22 (19%)	8 (7%)	1 6
11	AL	121/124 (98%)	87 (72%)	20 (16%)	14 (12%)	0 1
11	CL	121/124 (98%)	85 (70%)	29 (24%)	7 (6%)	1 10
12	AM	112/118 (95%)	89 (80%)	16 (14%)	7 (6%)	1 8
12	CM	111/118 (94%)	60 (54%)	38 (34%)	13 (12%)	0 1
13	AN	92/101 (91%)	56 (61%)	24 (26%)	12 (13%)	0 1
13	CN	91/101 (90%)	60 (66%)	26 (29%)	5 (6%)	1 11
14	AO	86/89 (97%)	63 (73%)	20 (23%)	3 (4%)	3 20
14	CO	86/89 (97%)	62 (72%)	20 (23%)	4 (5%)	2 14
15	AP	80/82 (98%)	58 (72%)	14 (18%)	8 (10%)	0 2
15	CP	78/82 (95%)	50 (64%)	17 (22%)	11 (14%)	0 1
16	AQ	78/84 (93%)	51 (65%)	15 (19%)	12 (15%)	0 0
16	CQ	78/84 (93%)	59 (76%)	10 (13%)	9 (12%)	0 1
17	AR	53/75 (71%)	40 (76%)	11 (21%)	2 (4%)	2 18
17	CR	53/75 (71%)	39 (74%)	12 (23%)	2 (4%)	2 18
18	AS	77/92 (84%)	59 (77%)	9 (12%)	9 (12%)	0 1
18	CS	77/92 (84%)	46 (60%)	24 (31%)	7 (9%)	0 3
19	AT	83/87 (95%)	56 (68%)	20 (24%)	7 (8%)	0 4
19	CT	83/87 (95%)	59 (71%)	16 (19%)	8 (10%)	0 3
20	AU	49/71 (69%)	25 (51%)	13 (26%)	11 (22%)	0 0
20	CU	49/71 (69%)	21 (43%)	11 (22%)	17 (35%)	0 0
24	BC	269/273 (98%)	194 (72%)	50 (19%)	25 (9%)	0 3
24	DC	269/273 (98%)	174 (65%)	63 (23%)	32 (12%)	0 1
25	BD	207/209 (99%)	146 (70%)	27 (13%)	34 (16%)	0 0
25	DD	207/209 (99%)	132 (64%)	43 (21%)	32 (16%)	0 0
26	BE	199/201 (99%)	155 (78%)	24 (12%)	20 (10%)	0 2
26	DE	199/201 (99%)	130 (65%)	46 (23%)	23 (12%)	0 1
27	BF	175/179 (98%)	134 (77%)	25 (14%)	16 (9%)	0 3
27	DF	176/179 (98%)	98 (56%)	43 (24%)	35 (20%)	0 0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
28	BG	174/177 (98%)	111 (64%)	38 (22%)	25 (14%)	0 1
28	DG	174/177 (98%)	106 (61%)	38 (22%)	30 (17%)	0 0
29	BH	147/149 (99%)	68 (46%)	47 (32%)	32 (22%)	0 0
29	DH	147/149 (99%)	75 (51%)	54 (37%)	18 (12%)	0 1
30	BI	139/142 (98%)	84 (60%)	41 (30%)	14 (10%)	0 2
30	DI	139/142 (98%)	81 (58%)	39 (28%)	19 (14%)	0 1
31	BJ	140/142 (99%)	107 (76%)	21 (15%)	12 (9%)	0 3
31	DJ	140/142 (99%)	91 (65%)	38 (27%)	11 (8%)	1 5
32	BK	120/123 (98%)	86 (72%)	15 (12%)	19 (16%)	0 0
32	DK	120/123 (98%)	80 (67%)	20 (17%)	20 (17%)	0 0
33	BL	141/144 (98%)	101 (72%)	32 (23%)	8 (6%)	1 11
33	DL	141/144 (98%)	81 (57%)	40 (28%)	20 (14%)	0 1
34	BM	134/136 (98%)	97 (72%)	22 (16%)	15 (11%)	0 2
34	DM	134/136 (98%)	92 (69%)	29 (22%)	13 (10%)	0 3
35	BN	118/127 (93%)	92 (78%)	17 (14%)	9 (8%)	1 5
35	DN	118/127 (93%)	72 (61%)	30 (25%)	16 (14%)	0 1
36	BO	114/117 (97%)	91 (80%)	12 (10%)	11 (10%)	0 3
36	DO	114/117 (97%)	77 (68%)	30 (26%)	7 (6%)	1 9
37	BP	112/115 (97%)	77 (69%)	18 (16%)	17 (15%)	0 0
37	DP	112/115 (97%)	68 (61%)	27 (24%)	17 (15%)	0 0
38	BQ	115/118 (98%)	100 (87%)	9 (8%)	6 (5%)	1 12
38	DQ	115/118 (98%)	80 (70%)	25 (22%)	10 (9%)	0 3
39	BR	101/103 (98%)	80 (79%)	13 (13%)	8 (8%)	1 5
39	DR	101/103 (98%)	70 (69%)	21 (21%)	10 (10%)	0 2
40	BS	108/110 (98%)	86 (80%)	16 (15%)	6 (6%)	1 11
40	DS	108/110 (98%)	76 (70%)	23 (21%)	9 (8%)	0 4
41	BT	91/100 (91%)	52 (57%)	24 (26%)	15 (16%)	0 0
41	DT	91/100 (91%)	46 (50%)	31 (34%)	14 (15%)	0 0
42	BU	100/104 (96%)	69 (69%)	15 (15%)	16 (16%)	0 0
42	DU	100/104 (96%)	51 (51%)	26 (26%)	23 (23%)	0 0
43	BV	92/94 (98%)	77 (84%)	13 (14%)	2 (2%)	5 29

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
43	DV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	0 3
44	BW	77/85 (91%)	30 (39%)	24 (31%)	23 (30%)	0 0
44	DW	77/85 (91%)	33 (43%)	27 (35%)	17 (22%)	0 0
45	BX	75/78 (96%)	56 (75%)	14 (19%)	5 (7%)	1 7
45	DX	75/78 (96%)	47 (63%)	20 (27%)	8 (11%)	0 2
46	BY	61/63 (97%)	38 (62%)	16 (26%)	7 (12%)	0 1
46	DY	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	0 4
47	BZ	56/59 (95%)	45 (80%)	9 (16%)	2 (4%)	2 19
47	DZ	56/59 (95%)	34 (61%)	16 (29%)	6 (11%)	0 2
48	B0	54/57 (95%)	41 (76%)	9 (17%)	4 (7%)	1 6
48	D0	54/57 (95%)	39 (72%)	8 (15%)	7 (13%)	0 1
49	B1	48/55 (87%)	36 (75%)	7 (15%)	5 (10%)	0 2
49	D1	48/55 (87%)	37 (77%)	7 (15%)	4 (8%)	0 4
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	5 29
50	D2	44/46 (96%)	31 (70%)	10 (23%)	3 (7%)	1 7
51	B3	62/65 (95%)	53 (86%)	5 (8%)	4 (6%)	1 8
51	D3	62/65 (95%)	39 (63%)	18 (29%)	5 (8%)	1 4
52	B4	36/38 (95%)	31 (86%)	2 (6%)	3 (8%)	0 4
52	D4	36/38 (95%)	23 (64%)	7 (19%)	6 (17%)	0 0
All	All	11238/11970 (94%)	7646 (68%)	2332 (21%)	1260 (11%)	0 2

All (1260) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	18	GLN
1	AB	20	ARG
1	AB	40	ILE
1	AB	75	ALA
1	AB	119	GLN
1	AB	133	ALA
1	AB	200	PRO
1	AB	210	THR
2	AC	16	PRO
2	AC	17	TRP
2	AC	60	ALA

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Mol	Chain	Res	Type
2	AC	165	GLU
3	AD	26	ALA
3	AD	28	ASP
3	AD	29	THR
3	AD	34	GLU
3	AD	191	SER
3	AD	192	ALA
4	AE	44	ARG
4	AE	97	PRO
4	AE	121	ASN
4	AE	137	ARG
4	AE	154	ALA
4	AE	156	ARG
5	AF	86	ARG
6	AG	93	VAL
6	AG	95	ARG
6	AG	129	ASN
7	AH	49	LYS
8	AI	8	THR
8	AI	40	ARG
8	AI	43	ALA
8	AI	55	ASP
8	AI	119	LYS
9	AJ	57	VAL
9	AJ	61	ALA
9	AJ	92	LEU
10	AK	13	LYS
10	AK	51	PHE
10	AK	125	LYS
10	AK	126	ARG
11	AL	23	LEU
11	AL	33	CYS
11	AL	43	LYS
11	AL	73	LEU
11	AL	75	GLU
11	AL	88	ASP
11	AL	97	VAL
13	AN	22	LYS
13	AN	33	VAL
13	AN	51	PRO
13	AN	52	ARG
13	AN	61	ASN

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Mol	Chain	Res	Type
14	AO	17	ASP
15	AP	80	LYS
16	AQ	12	VAL
16	AQ	16	MET
16	AQ	52	CYS
17	AR	47	ARG
18	AS	22	VAL
18	AS	63	ASP
19	AT	3	ILE
19	AT	5	SER
19	AT	67	HIS
20	AU	11	PHE
20	AU	23	GLU
24	BC	104	LEU
24	BC	105	ALA
24	BC	120	ASP
24	BC	121	ALA
24	BC	196	ASN
25	BD	43	ASP
25	BD	54	ALA
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	187	LEU
25	BD	191	GLY
25	BD	192	ALA
26	BE	8	ALA
26	BE	46	GLN
26	BE	79	ARG
26	BE	175	ILE
27	BF	8	LYS
27	BF	134	GLN
28	BG	7	PRO
28	BG	8	VAL
28	BG	28	LYS
28	BG	31	GLU
28	BG	33	THR
28	BG	45	ALA

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Mol	Chain	Res	Type
28	BG	84	LYS
28	BG	94	ARG
28	BG	118	ALA
28	BG	168	VAL
28	BG	170	THR
29	BH	3	VAL
29	BH	8	LYS
29	BH	9	VAL
29	BH	10	ALA
29	BH	14	SER
29	BH	15	LEU
29	BH	28	ASN
29	BH	32	PRO
29	BH	33	GLN
29	BH	54	LEU
29	BH	101	ASP
29	BH	121	VAL
30	BI	65	SER
30	BI	92	PRO
31	BJ	2	LYS
31	BJ	21	THR
31	BJ	44	TYR
31	BJ	45	THR
32	BK	13	ASN
32	BK	35	VAL
32	BK	49	ARG
32	BK	71	ARG
32	BK	72	PRO
32	BK	118	LEU
33	BL	15	ALA
33	BL	29	LYS
33	BL	66	PHE
33	BL	88	GLY
34	BM	14	LYS
34	BM	35	ALA
34	BM	36	VAL
34	BM	56	ALA
34	BM	77	PRO
35	BN	117	ASP
36	BO	3	LYS
36	BO	68	LYS
36	BO	111	ARG

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Mol	Chain	Res	Type
36	BO	112	GLU
37	BP	4	ILE
37	BP	5	LYS
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	65	ASN
37	BP	86	LYS
38	BQ	87	VAL
38	BQ	91	ARG
39	BR	55	ASP
40	BS	3	THR
40	BS	14	ALA
40	BS	64	ALA
41	BT	27	SER
41	BT	29	THR
41	BT	69	ARG
41	BT	70	HIS
41	BT	86	THR
41	BT	88	LYS
42	BU	6	ARG
42	BU	18	LYS
42	BU	88	ASP
42	BU	98	ASN
43	BV	69	GLU
44	BW	9	THR
44	BW	14	ASP
44	BW	23	LYS
44	BW	29	SER
44	BW	30	VAL
44	BW	47	GLY
44	BW	50	VAL
45	BX	53	LYS
46	BY	22	LEU
46	BY	23	ARG
47	BZ	3	THR
48	B0	35	GLU
48	B0	54	ILE
49	B1	4	ILE
49	B1	51	ALA
51	B3	31	ILE
52	B4	4	ARG

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Mol	Chain	Res	Type
1	CB	81	ASP
1	CB	102	ASN
1	CB	129	THR
1	CB	150	ILE
2	CC	59	PRO
2	CC	87	ARG
3	CD	24	VAL
3	CD	26	ALA
3	CD	29	THR
3	CD	35	GLN
3	CD	39	GLN
3	CD	80	ARG
3	CD	191	SER
3	CD	192	ALA
4	CE	31	SER
4	CE	68	ARG
4	CE	69	ASN
5	CF	68	GLN
5	CF	82	ASP
5	CF	92	THR
5	CF	98	GLU
6	CG	29	LEU
6	CG	30	MET
6	CG	31	VAL
6	CG	52	ARG
7	CH	29	SER
8	CI	71	ILE
9	CJ	57	VAL
9	CJ	93	ALA
10	CK	14	GLN
10	CK	70	ALA
10	CK	90	PRO
10	CK	126	ARG
10	CK	127	ARG
11	CL	8	ARG
11	CL	34	THR
12	CM	4	ALA
12	CM	14	ALA
12	CM	65	GLU
13	CN	53	ASP
13	CN	95	LEU
15	CP	63	GLN

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Mol	Chain	Res	Type
16	CQ	52	CYS
18	CS	46	LEU
19	CT	3	ILE
19	CT	43	LYS
19	CT	65	LEU
20	CU	4	LYS
20	CU	15	LEU
20	CU	23	GLU
20	CU	32	ARG
20	CU	34	ARG
20	CU	35	GLU
20	CU	36	PHE
20	CU	38	GLU
24	DC	9	SER
24	DC	28	PRO
24	DC	186	ASP
24	DC	269	ARG
25	DD	14	ILE
25	DD	74	GLU
25	DD	77	ARG
25	DD	102	ALA
25	DD	112	THR
25	DD	136	ASN
25	DD	150	GLN
25	DD	162	ALA
25	DD	164	GLN
25	DD	170	VAL
25	DD	175	LEU
25	DD	194	PRO
26	DE	41	GLN
26	DE	55	SER
26	DE	99	LYS
26	DE	116	ASP
27	DF	10	GLU
27	DF	12	VAL
27	DF	32	LYS
27	DF	36	ASN
27	DF	42	ALA
27	DF	112	ASP
27	DF	114	ARG
27	DF	120	SER
27	DF	122	ASP

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Mol	Chain	Res	Type
27	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	72	ILE
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	52	LEU
30	DI	58	ILE
30	DI	140	GLU
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	95	ARG
32	DK	16	ALA
32	DK	18	ARG
32	DK	46	ALA
32	DK	71	ARG
32	DK	93	GLN
32	DK	110	GLU
32	DK	119	ALA
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	72	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	10	LEU

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Mol	Chain	Res	Type
35	DN	30	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	108	ARG
37	DP	112	ARG
39	DR	3	ALA
40	DS	28	LYS
40	DS	33	LEU
40	DS	72	THR
41	DT	14	PRO
41	DT	15	HIS
41	DT	20	ALA
41	DT	29	THR
41	DT	56	GLU
41	DT	88	LYS
42	DU	4	ILE
42	DU	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	95	PHE
42	DU	96	LYS
43	DV	55	GLU
43	DV	56	PHE
43	DV	58	SER
44	DW	9	THR
44	DW	18	LYS
44	DW	34	SER
44	DW	35	ILE
44	DW	83	ALA
45	DX	2	ARG
47	DZ	13	ILE
48	D0	21	LEU
48	D0	54	ILE
51	D3	29	ARG
52	D4	8	LYS
52	D4	20	ASP
1	AB	17	HIS
1	AB	33	ALA

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Mol	Chain	Res	Type
1	AB	37	VAL
1	AB	41	ASN
1	AB	58	LYS
1	AB	63	LYS
1	AB	72	LYS
1	AB	125	PHE
1	AB	136	ARG
1	AB	140	LEU
1	AB	150	ILE
1	AB	169	HIS
1	AB	219	THR
2	AC	100	ILE
2	AC	126	ARG
3	AD	22	SER
3	AD	23	GLY
3	AD	31	CYS
3	AD	35	GLN
3	AD	124	VAL
3	AD	147	LYS
3	AD	148	ALA
3	AD	172	VAL
3	AD	173	ASP
3	AD	174	ALA
4	AE	11	GLN
4	AE	109	ALA
4	AE	157	GLY
5	AF	91	ARG
5	AF	98	GLU
6	AG	6	ILE
7	AH	66	GLN
7	AH	77	VAL
7	AH	88	LYS
8	AI	128	LYS
9	AJ	74	VAL
11	AL	24	GLU
12	AM	3	ILE
12	AM	46	GLU
13	AN	27	LYS
13	AN	41	TRP
13	AN	43	ALA
13	AN	81	ILE
15	AP	10	GLY

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Mol	Chain	Res	Type
15	AP	11	ALA
16	AQ	50	ASN
16	AQ	70	LYS
16	AQ	75	VAL
18	AS	48	ILE
18	AS	61	VAL
19	AT	4	LYS
19	AT	74	HIS
20	AU	12	ASP
20	AU	35	GLU
24	BC	35	LYS
24	BC	77	VAL
24	BC	140	VAL
24	BC	239	PHE
25	BD	17	GLU
25	BD	118	PHE
25	BD	144	GLY
25	BD	169	ARG
25	BD	190	LYS
26	BE	6	LYS
26	BE	11	ALA
26	BE	116	ASP
26	BE	153	LEU
26	BE	191	ASP
27	BF	11	VAL
27	BF	61	GLY
27	BF	111	ARG
27	BF	147	ARG
27	BF	174	PHE
27	BF	175	PRO
28	BG	9	VAL
28	BG	30	GLY
28	BG	44	HIS
28	BG	53	PRO
28	BG	164	ALA
29	BH	13	GLY
29	BH	31	VAL
29	BH	34	GLY
29	BH	35	LYS
29	BH	40	THR
29	BH	81	ALA
29	BH	83	LYS

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Mol	Chain	Res	Type
29	BH	106	ALA
29	BH	107	GLY
29	BH	111	ALA
29	BH	131	SER
30	BI	30	GLN
30	BI	105	LEU
31	BJ	14	ASP
31	BJ	39	LYS
31	BJ	41	LYS
31	BJ	81	ILE
32	BK	17	ARG
32	BK	69	VAL
32	BK	75	SER
32	BK	92	GLU
32	BK	108	ARG
33	BL	81	ASP
33	BL	111	ILE
33	BL	114	GLY
34	BM	2	LEU
34	BM	54	THR
34	BM	55	ARG
34	BM	60	GLN
35	BN	71	ARG
35	BN	80	PHE
35	BN	101	GLY
36	BO	22	GLY
36	BO	58	ILE
37	BP	2	ASN
37	BP	15	ASP
37	BP	51	ASN
37	BP	93	LYS
37	BP	103	THR
37	BP	105	LYS
38	BQ	4	LYS
38	BQ	5	ARG
38	BQ	86	SER
39	BR	49	ILE
40	BS	19	LEU
40	BS	96	ILE
41	BT	16	VAL
41	BT	39	THR
41	BT	68	LYS

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Mol	Chain	Res	Type
42	BU	51	LEU
42	BU	83	GLY
42	BU	85	ARG
42	BU	87	GLU
42	BU	92	VAL
44	BW	15	SER
44	BW	18	LYS
44	BW	27	GLY
44	BW	33	GLY
44	BW	36	ILE
44	BW	51	GLY
44	BW	52	CYS
45	BX	2	ARG
45	BX	17	ARG
45	BX	34	SER
46	BY	24	GLU
48	B0	34	GLY
48	B0	51	ARG
50	B2	44	VAL
51	B3	27	ASN
52	B4	16	ILE
1	CB	26	MET
1	CB	84	LEU
1	CB	85	SER
1	CB	128	LEU
1	CB	148	GLY
2	CC	63	ILE
2	CC	130	ARG
2	CC	140	ALA
2	CC	155	ARG
2	CC	178	ARG
2	CC	180	ASP
2	CC	188	ALA
3	CD	25	ARG
3	CD	33	ILE
3	CD	47	LEU
3	CD	82	LYS
3	CD	187	ARG
3	CD	188	SER
3	CD	196	GLU
4	CE	29	ILE
4	CE	100	GLU

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Mol	Chain	Res	Type
4	CE	143	LEU
4	CE	144	GLU
5	CF	44	ARG
5	CF	85	ILE
5	CF	99	ALA
6	CG	36	SER
6	CG	62	GLU
6	CG	113	LYS
7	CH	30	LYS
7	CH	34	ALA
7	CH	43	GLY
8	CI	44	ARG
8	CI	54	VAL
8	CI	55	ASP
8	CI	58	GLU
9	CJ	46	LYS
9	CJ	83	THR
9	CJ	87	LEU
10	CK	91	GLY
11	CL	43	LYS
12	CM	11	HIS
12	CM	45	SER
12	CM	46	GLU
12	CM	49	GLU
12	CM	76	ILE
13	CN	21	ALA
14	CO	87	ARG
15	CP	24	SER
15	CP	31	ARG
15	CP	43	ALA
15	CP	78	VAL
16	CQ	12	VAL
16	CQ	29	LYS
16	CQ	69	THR
17	CR	70	THR
18	CS	4	LEU
19	CT	67	HIS
20	CU	7	GLU
20	CU	8	ASN
20	CU	9	GLU
20	CU	31	VAL
20	CU	43	GLU

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Mol	Chain	Res	Type
24	DC	3	VAL
24	DC	37	SER
24	DC	59	GLN
24	DC	94	LEU
24	DC	121	ALA
24	DC	140	VAL
24	DC	141	HIS
24	DC	232	GLY
24	DC	239	PHE
25	DD	11	MET
25	DD	31	ALA
25	DD	48	ILE
25	DD	93	GLY
25	DD	107	VAL
25	DD	118	PHE
25	DD	119	ALA
26	DE	13	THR
26	DE	62	GLN
26	DE	69	ARG
26	DE	79	ARG
26	DE	80	SER
26	DE	127	GLU
26	DE	153	LEU
26	DE	165	HIS
27	DF	8	LYS
27	DF	37	MET
27	DF	43	ILE
27	DF	67	THR
27	DF	76	PHE
27	DF	113	PHE
27	DF	133	GLU
27	DF	138	PRO
27	DF	145	VAL
27	DF	148	VAL
28	DG	40	VAL
28	DG	59	ASP
28	DG	85	LYS
28	DG	86	LEU
28	DG	92	GLY
28	DG	93	TYR
28	DG	150	TYR
29	DH	61	VAL

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Mol	Chain	Res	Type
29	DH	66	ASN
29	DH	97	ARG
29	DH	144	VAL
30	DI	30	GLN
30	DI	51	GLY
30	DI	62	ALA
30	DI	69	VAL
31	DJ	13	ARG
31	DJ	87	ALA
31	DJ	112	GLY
32	DK	35	VAL
32	DK	49	ARG
32	DK	72	PRO
32	DK	104	THR
33	DL	88	GLY
34	DM	14	LYS
34	DM	16	ARG
34	DM	73	ILE
35	DN	63	ARG
35	DN	105	GLY
36	DO	3	LYS
36	DO	8	ILE
36	DO	72	ALA
37	DP	51	ASN
37	DP	65	ASN
37	DP	109	ILE
38	DQ	23	TYR
38	DQ	86	SER
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	15	SER
39	DR	40	MET
39	DR	98	ILE
40	DS	40	ASN
40	DS	71	VAL
41	DT	19	LYS
41	DT	38	ALA
41	DT	39	THR
41	DT	68	LYS
42	DU	8	ASP
42	DU	54	PRO
42	DU	87	GLU

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Mol	Chain	Res	Type
42	DU	88	ASP
42	DU	89	GLY
42	DU	97	SER
43	DV	33	GLY
44	DW	33	GLY
44	DW	36	ILE
44	DW	39	GLN
44	DW	53	GLY
44	DW	71	LYS
45	DX	63	ILE
45	DX	69	GLU
46	DY	9	LYS
46	DY	22	LEU
46	DY	37	LEU
47	DZ	4	ILE
47	DZ	27	GLY
48	D0	32	THR
48	D0	55	ALA
49	D1	36	LYS
50	D2	24	THR
51	D3	22	LYS
51	D3	51	LYS
52	D4	3	VAL
52	D4	4	ARG
1	AB	15	PHE
1	AB	21	TYR
1	AB	22	TRP
1	AB	73	ARG
2	AC	35	ASP
2	AC	138	GLN
2	AC	192	TYR
3	AD	131	ILE
3	AD	150	LYS
3	AD	159	GLU
3	AD	167	PRO
3	AD	196	GLU
4	AE	98	ALA
5	AF	54	LEU
5	AF	68	GLN
9	AJ	33	GLY
11	AL	122	LYS
12	AM	4	ALA

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Mol	Chain	Res	Type
12	AM	113	LYS
13	AN	28	ALA
15	AP	49	GLY
16	AQ	5	ARG
16	AQ	11	VAL
16	AQ	13	SER
16	AQ	49	ASN
18	AS	3	SER
18	AS	27	LYS
19	AT	19	HIS
20	AU	8	ASN
20	AU	37	TYR
24	BC	57	HIS
24	BC	94	LEU
24	BC	110	LYS
24	BC	141	HIS
24	BC	157	ALA
24	BC	160	TYR
24	BC	237	ARG
25	BD	100	LEU
25	BD	107	VAL
25	BD	170	VAL
25	BD	182	ALA
25	BD	184	ARG
26	BE	45	ALA
27	BF	133	GLU
28	BG	61	TRP
28	BG	110	HIS
30	BI	59	THR
31	BJ	65	THR
31	BJ	111	LYS
32	BK	48	PRO
32	BK	73	ASP
32	BK	93	GLN
32	BK	119	ALA
34	BM	69	PRO
34	BM	70	ASP
35	BN	2	ARG
35	BN	3	HIS
35	BN	15	SER
35	BN	70	THR
36	BO	56	LYS

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Mol	Chain	Res	Type
36	BO	113	ALA
37	BP	34	GLY
41	BT	49	LYS
42	BU	38	ILE
42	BU	45	GLN
44	BW	16	GLU
44	BW	34	SER
44	BW	40	ARG
44	BW	56	HIS
44	BW	74	LYS
46	BY	37	LEU
46	BY	43	LEU
49	B1	43	ARG
51	B3	22	LYS
1	CB	176	ASN
1	CB	177	ASN
1	CB	179	GLY
1	CB	203	ASP
1	CB	205	ALA
1	CB	208	ALA
2	CC	100	ILE
2	CC	128	MET
2	CC	145	ALA
2	CC	186	SER
4	CE	81	GLN
5	CF	94	HIS
6	CG	133	ALA
7	CH	2	MET
8	CI	103	VAL
9	CJ	34	ALA
9	CJ	44	THR
10	CK	88	PRO
11	CL	85	ARG
12	CM	77	LYS
14	CO	13	GLU
15	CP	47	GLU
15	CP	49	GLY
16	CQ	78	VAL
16	CQ	79	GLU
18	CS	3	SER
18	CS	7	GLY
19	CT	72	ALA

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Mol	Chain	Res	Type
19	CT	82	ILE
20	CU	10	PRO
20	CU	11	PHE
24	DC	36	ASN
24	DC	69	ASN
24	DC	195	GLY
24	DC	204	LEU
24	DC	212	TRP
24	DC	227	VAL
24	DC	237	ARG
25	DD	176	ASP
25	DD	197	THR
26	DE	96	VAL
26	DE	188	MET
27	DF	41	GLU
28	DG	9	VAL
28	DG	11	PRO
28	DG	46	ASP
28	DG	80	GLU
28	DG	83	THR
28	DG	91	VAL
28	DG	117	PRO
28	DG	123	GLU
28	DG	125	PRO
28	DG	169	ARG
29	DH	39	ALA
29	DH	86	ASP
29	DH	99	ILE
29	DH	121	VAL
30	DI	35	MET
30	DI	87	SER
32	DK	14	SER
32	DK	17	ARG
32	DK	103	VAL
32	DK	105	ARG
33	DL	9	ALA
33	DL	19	LEU
33	DL	29	LYS
33	DL	66	PHE
33	DL	99	ASN
33	DL	100	ILE
33	DL	115	GLU

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Mol	Chain	Res	Type
34	DM	69	PRO
35	DN	2	ARG
35	DN	5	LYS
35	DN	8	ARG
35	DN	13	ASN
35	DN	82	GLU
36	DO	7	ARG
37	DP	94	ALA
38	DQ	29	ARG
38	DQ	45	ALA
38	DQ	58	GLN
39	DR	29	THR
40	DS	32	ALA
42	DU	40	LEU
43	DV	79	ARG
44	DW	41	GLY
44	DW	46	ALA
44	DW	57	THR
45	DX	35	HIS
45	DX	41	SER
47	DZ	30	ARG
49	D1	35	LEU
50	D2	39	ARG
50	D2	43	THR
52	D4	16	ILE
1	AB	96	LEU
2	AC	36	PHE
2	AC	65	VAL
2	AC	139	ASN
2	AC	191	THR
3	AD	152	SER
3	AD	181	PHE
4	AE	23	THR
4	AE	102	THR
5	AF	15	SER
8	AI	71	ILE
8	AI	120	ALA
9	AJ	58	ASN
10	AK	40	ALA
10	AK	102	ALA
10	AK	124	LYS
11	AL	2	THR

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Mol	Chain	Res	Type
11	AL	72	ASN
11	AL	117	GLY
12	AM	10	ASP
14	AO	24	THR
14	AO	45	HIS
15	AP	45	GLU
17	AR	42	ARG
18	AS	5	LYS
20	AU	24	LYS
20	AU	36	PHE
20	AU	52	VAL
24	BC	109	LEU
24	BC	149	LYS
24	BC	243	PRO
24	BC	257	ARG
24	BC	264	LYS
25	BD	11	MET
25	BD	18	ASP
25	BD	40	LEU
25	BD	53	GLY
25	BD	175	LEU
26	BE	5	LEU
26	BE	69	ARG
26	BE	86	ALA
26	BE	123	LYS
27	BF	2	LYS
27	BF	113	PHE
27	BF	149	ARG
28	BG	75	VAL
28	BG	85	LYS
29	BH	16	GLY
29	BH	30	LEU
29	BH	96	THR
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
31	BJ	125	TYR
32	BK	3	GLN
32	BK	16	ALA
32	BK	46	ALA
33	BL	41	ARG
34	BM	73	ILE

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Mol	Chain	Res	Type
34	BM	110	GLU
35	BN	118	ARG
36	BO	77	ALA
36	BO	100	HIS
37	BP	20	ARG
37	BP	104	GLY
38	BQ	90	ASP
39	BR	51	VAL
41	BT	84	TYR
42	BU	8	ASP
42	BU	67	SER
42	BU	81	ARG
44	BW	25	PHE
44	BW	41	GLY
46	BY	57	LEU
47	BZ	34	THR
51	B3	30	HIS
52	B4	8	LYS
1	CB	18	GLN
1	CB	200	PRO
2	CC	173	PRO
3	CD	103	ARG
4	CE	38	VAL
4	CE	89	THR
4	CE	111	ARG
6	CG	13	PRO
7	CH	58	LEU
7	CH	66	GLN
7	CH	88	LYS
7	CH	98	LEU
7	CH	117	GLN
8	CI	11	ARG
8	CI	127	SER
9	CJ	23	ALA
9	CJ	31	ARG
9	CJ	82	LYS
11	CL	87	LYS
12	CM	42	VAL
12	CM	93	GLY
15	CP	25	ARG
15	CP	54	LEU
16	CQ	67	SER

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Mol	Chain	Res	Type
16	CQ	68	LYS
17	CR	69	TYR
18	CS	79	TYR
20	CU	22	CYS
20	CU	26	GLY
24	DC	96	LYS
24	DC	98	GLY
24	DC	106	PRO
25	DD	75	ALA
25	DD	95	SER
25	DD	145	SER
25	DD	169	ARG
26	DE	45	ALA
26	DE	60	TRP
26	DE	63	LYS
26	DE	126	VAL
26	DE	148	ILE
26	DE	187	VAL
27	DF	70	ARG
27	DF	83	PRO
27	DF	94	ARG
27	DF	104	THR
27	DF	116	LEU
28	DG	45	ALA
28	DG	119	GLY
28	DG	126	THR
29	DH	143	ILE
30	DI	19	PRO
30	DI	119	ALA
31	DJ	25	LEU
31	DJ	113	PRO
31	DJ	120	ARG
32	DK	89	ASN
32	DK	98	ARG
33	DL	28	GLY
33	DL	48	ARG
34	DM	35	ALA
34	DM	106	ASP
34	DM	111	GLU
34	DM	134	THR
35	DN	32	GLU
35	DN	71	ARG

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Mol	Chain	Res	Type
36	DO	42	PRO
37	DP	20	ARG
37	DP	32	VAL
37	DP	33	GLU
37	DP	113	LEU
38	DQ	5	ARG
38	DQ	87	VAL
39	DR	65	ALA
40	DS	3	THR
40	DS	61	ASN
41	DT	11	LEU
41	DT	18	GLU
42	DU	52	ASN
44	DW	16	GLU
44	DW	23	LYS
44	DW	26	GLY
46	DY	2	LYS
47	DZ	32	GLY
48	D0	26	SER
48	D0	33	SER
48	D0	53	VAL
49	D1	4	ILE
49	D1	50	GLU
51	D3	3	ILE
52	D4	37	GLN
1	AB	52	ALA
1	AB	141	GLU
1	AB	176	ASN
1	AB	189	ASN
1	AB	211	LEU
2	AC	88	LYS
2	AC	145	ALA
2	AC	148	ILE
3	AD	166	LYS
3	AD	197	HIS
4	AE	110	MET
5	AF	56	LYS
5	AF	63	ASN
6	AG	130	LYS
8	AI	38	PHE
8	AI	56	MET
9	AJ	36	VAL

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Mol	Chain	Res	Type
9	AJ	62	ARG
9	AJ	93	ALA
10	AK	14	GLN
11	AL	22	ALA
11	AL	77	SER
13	AN	16	ALA
13	AN	44	VAL
15	AP	46	LYS
16	AQ	17	GLU
18	AS	26	ASP
19	AT	72	ALA
20	AU	47	ALA
24	BC	37	SER
24	BC	64	VAL
24	BC	248	GLY
25	BD	71	ALA
25	BD	91	THR
25	BD	93	GLY
25	BD	145	SER
25	BD	173	GLN
26	BE	70	SER
26	BE	96	VAL
27	BF	20	ASN
27	BF	83	PRO
27	BF	92	GLY
28	BG	16	VAL
28	BG	83	THR
28	BG	97	VAL
28	BG	153	PRO
29	BH	29	PHE
29	BH	89	LYS
30	BI	3	LYS
30	BI	20	SER
31	BJ	74	TYR
32	BK	6	THR
34	BM	3	GLN
39	BR	53	PHE
39	BR	65	ALA
39	BR	91	GLN
39	BR	98	ILE
41	BT	8	LEU
41	BT	38	ALA

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Mol	Chain	Res	Type
41	BT	55	VAL
42	BU	39	ASN
43	BV	71	LYS
44	BW	39	GLN
1	CB	73	ARG
1	CB	101	THR
2	CC	24	ASN
2	CC	205	GLU
3	CD	172	VAL
4	CE	75	LEU
4	CE	115	GLU
5	CF	63	ASN
6	CG	10	LYS
6	CG	99	ALA
8	CI	52	GLU
8	CI	119	LYS
8	CI	122	ARG
9	CJ	36	VAL
9	CJ	61	ALA
9	CJ	62	ARG
10	CK	92	ARG
12	CM	43	LYS
13	CN	51	PRO
14	CO	86	LEU
16	CQ	31	PRO
18	CS	54	ARG
19	CT	61	ALA
19	CT	77	ASN
24	DC	13	ARG
24	DC	38	LYS
24	DC	45	ASN
24	DC	64	VAL
24	DC	196	ASN
24	DC	217	PRO
25	DD	44	GLY
25	DD	106	LYS
25	DD	120	GLY
25	DD	122	VAL
25	DD	143	PRO
26	DE	81	GLY
26	DE	98	LYS
27	DF	31	GLU

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Mol	Chain	Res	Type
27	DF	82	TYR
27	DF	86	CYS
27	DF	87	LYS
28	DG	152	ARG
28	DG	155	PRO
28	DG	166	GLU
29	DH	103	VAL
29	DH	124	THR
32	DK	88	ASN
33	DL	30	THR
35	DN	3	HIS
35	DN	91	ALA
38	DQ	6	GLY
39	DR	53	PHE
40	DS	96	ILE
41	DT	50	LEU
42	DU	35	VAL
42	DU	41	VAL
43	DV	88	HIS
45	DX	17	ARG
45	DX	27	ARG
45	DX	49	ARG
46	DY	46	VAL
51	D3	6	VAL
1	AB	31	PHE
1	AB	142	LYS
1	AB	163	ILE
2	AC	107	LYS
2	AC	205	GLU
4	AE	148	SER
12	AM	9	PRO
25	BD	109	VAL
26	BE	83	VAL
26	BE	148	ILE
27	BF	150	GLY
29	BH	87	GLU
29	BH	103	VAL
30	BI	7	TYR
34	BM	134	THR
42	BU	53	GLN
45	BX	76	LYS
49	B1	28	THR

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Mol	Chain	Res	Type
49	B1	50	GLU
1	CB	163	ILE
2	CC	167	TYR
2	CC	174	LEU
3	CD	34	GLU
3	CD	79	ALA
3	CD	166	LYS
4	CE	113	VAL
5	CF	57	ALA
5	CF	64	VAL
5	CF	69	GLU
8	CI	126	PHE
9	CJ	75	ASP
13	CN	56	PRO
14	CO	15	GLY
15	CP	64	GLY
24	DC	246	PRO
25	DD	99	GLU
25	DD	109	VAL
27	DF	88	VAL
27	DF	130	GLY
28	DG	39	ALA
30	DI	31	GLY
30	DI	83	ALA
31	DJ	44	TYR
32	DK	5	GLN
34	DM	70	ASP
35	DN	102	PHE
36	DO	27	VAL
37	DP	4	ILE
37	DP	63	ILE
39	DR	91	GLN
41	DT	16	VAL
42	DU	5	ARG
42	DU	12	VAL
42	DU	47	PRO
42	DU	101	THR
1	AB	28	PRO
3	AD	51	GLY
4	AE	50	GLY
4	AE	104	ILE
6	AG	5	VAL

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Mol	Chain	Res	Type
9	AJ	41	PRO
15	AP	78	VAL
16	AQ	34	GLY
18	AS	25	GLY
20	AU	26	GLY
26	BE	4	VAL
28	BG	91	VAL
29	BH	80	ILE
30	BI	97	VAL
40	BS	74	ILE
46	BY	46	VAL
2	CC	65	VAL
3	CD	27	ILE
4	CE	104	ILE
6	CG	68	VAL
9	CJ	74	VAL
12	CM	50	GLY
18	CS	29	PRO
26	DE	129	PRO
27	DF	84	ILE
30	DI	28	GLY
30	DI	138	VAL
31	DJ	96	ARG
35	DN	85	PRO
37	DP	34	GLY
39	DR	75	VAL
43	DV	84	PRO
1	AB	148	GLY
5	AF	7	VAL
24	BC	150	GLY
25	BD	151	THR
26	BE	71	GLY
39	BR	64	VAL
44	BW	70	VAL
6	CG	93	VAL
7	CH	119	GLY
11	CL	92	VAL
15	CP	42	ILE
24	DC	2	VAL
27	DF	125	GLY
27	DF	175	PRO
39	DR	27	ILE

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Mol	Chain	Res	Type
42	DU	64	ILE
3	AD	36	ALA
10	AK	88	PRO
15	AP	42	ILE
30	BI	23	VAL
37	BP	91	VAL
41	BT	90	GLY
6	CG	5	VAL
9	CJ	25	ILE
24	DC	147	PRO
30	DI	121	ILE
33	DL	65	GLY
42	DU	33	VAL
42	DU	34	ILE
43	DV	15	GLY
9	AJ	42	LEU
12	AM	23	GLY
30	BI	31	GLY
36	BO	66	GLY
3	CD	107	GLY
4	CE	90	GLY
8	CI	50	PRO
8	CI	68	GLY
9	CJ	33	GLY
28	DG	53	PRO
33	DL	114	GLY
44	DW	22	VAL
47	DZ	50	VAL
6	AG	63	VAL
29	BH	138	VAL
11	CL	121	PRO

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.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AB	180/199 (90%)	147 (82%)	33 (18%)	2 9
1	CB	180/199 (90%)	157 (87%)	23 (13%)	4 20
2	AC	170/190 (90%)	138 (81%)	32 (19%)	1 9
2	CC	170/190 (90%)	154 (91%)	16 (9%)	8 33
3	AD	172/173 (99%)	146 (85%)	26 (15%)	3 14
3	CD	172/173 (99%)	135 (78%)	37 (22%)	1 6
4	AE	113/126 (90%)	91 (80%)	22 (20%)	1 8
4	CE	113/126 (90%)	91 (80%)	22 (20%)	1 8
5	AF	87/116 (75%)	74 (85%)	13 (15%)	3 15
5	CF	87/116 (75%)	75 (86%)	12 (14%)	3 18
6	AG	124/147 (84%)	107 (86%)	17 (14%)	3 18
6	CG	123/147 (84%)	100 (81%)	23 (19%)	1 9
7	AH	104/105 (99%)	87 (84%)	17 (16%)	2 12
7	CH	104/105 (99%)	90 (86%)	14 (14%)	4 19
8	AI	105/107 (98%)	89 (85%)	16 (15%)	3 14
8	CI	105/107 (98%)	91 (87%)	14 (13%)	4 19
9	AJ	86/90 (96%)	71 (83%)	15 (17%)	2 10
9	CJ	86/90 (96%)	76 (88%)	10 (12%)	5 24
10	AK	90/99 (91%)	74 (82%)	16 (18%)	2 10
10	CK	90/99 (91%)	77 (86%)	13 (14%)	3 16
11	AL	103/104 (99%)	77 (75%)	26 (25%)	0 3
11	CL	103/104 (99%)	85 (82%)	18 (18%)	2 10
12	AM	92/96 (96%)	88 (96%)	4 (4%)	26 59
12	CM	91/96 (95%)	81 (89%)	10 (11%)	6 26
13	AN	79/84 (94%)	69 (87%)	10 (13%)	4 20
13	CN	79/84 (94%)	67 (85%)	12 (15%)	3 14
14	AO	76/77 (99%)	71 (93%)	5 (7%)	15 47
14	CO	76/77 (99%)	68 (90%)	8 (10%)	6 28
15	AP	65/65 (100%)	54 (83%)	11 (17%)	2 11
15	CP	65/65 (100%)	55 (85%)	10 (15%)	2 14

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
16	AQ	74/78 (95%)	58 (78%)	16 (22%)	1 6
16	CQ	74/78 (95%)	62 (84%)	12 (16%)	2 12
17	AR	48/65 (74%)	44 (92%)	4 (8%)	10 38
17	CR	48/65 (74%)	45 (94%)	3 (6%)	16 48
18	AS	70/79 (89%)	61 (87%)	9 (13%)	4 20
18	CS	70/79 (89%)	64 (91%)	6 (9%)	10 36
19	AT	65/66 (98%)	48 (74%)	17 (26%)	0 3
19	CT	65/66 (98%)	56 (86%)	9 (14%)	3 18
20	AU	44/61 (72%)	35 (80%)	9 (20%)	1 7
20	CU	44/61 (72%)	35 (80%)	9 (20%)	1 7
24	BC	216/218 (99%)	169 (78%)	47 (22%)	1 6
24	DC	216/218 (99%)	185 (86%)	31 (14%)	3 16
25	BD	164/164 (100%)	130 (79%)	34 (21%)	1 7
25	DD	164/164 (100%)	136 (83%)	28 (17%)	2 11
26	BE	165/165 (100%)	123 (74%)	42 (26%)	0 3
26	DE	165/165 (100%)	147 (89%)	18 (11%)	6 26
27	BF	148/150 (99%)	121 (82%)	27 (18%)	2 9
27	DF	149/150 (99%)	120 (80%)	29 (20%)	1 8
28	BG	137/138 (99%)	108 (79%)	29 (21%)	1 6
28	DG	137/138 (99%)	116 (85%)	21 (15%)	3 14
29	BH	114/114 (100%)	98 (86%)	16 (14%)	3 17
29	DH	114/114 (100%)	98 (86%)	16 (14%)	3 17
30	BI	109/110 (99%)	95 (87%)	14 (13%)	4 20
30	DI	109/110 (99%)	100 (92%)	9 (8%)	10 38
31	BJ	116/116 (100%)	86 (74%)	30 (26%)	0 3
31	DJ	116/116 (100%)	95 (82%)	21 (18%)	2 9
32	BK	103/104 (99%)	79 (77%)	24 (23%)	1 5
32	DK	103/104 (99%)	81 (79%)	22 (21%)	1 6
33	BL	102/103 (99%)	69 (68%)	33 (32%)	0 1
33	DL	102/103 (99%)	87 (85%)	15 (15%)	3 16
34	BM	109/109 (100%)	84 (77%)	25 (23%)	1 5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
34	DM	109/109 (100%)	92 (84%)	17 (16%)	2 13
35	BN	100/103 (97%)	83 (83%)	17 (17%)	2 11
35	DN	100/103 (97%)	83 (83%)	17 (17%)	2 11
36	BO	86/87 (99%)	63 (73%)	23 (27%)	0 3
36	DO	86/87 (99%)	77 (90%)	9 (10%)	6 28
37	BP	99/100 (99%)	75 (76%)	24 (24%)	1 4
37	DP	99/100 (99%)	89 (90%)	10 (10%)	7 30
38	BQ	89/90 (99%)	71 (80%)	18 (20%)	1 7
38	DQ	89/90 (99%)	74 (83%)	15 (17%)	2 11
39	BR	84/84 (100%)	64 (76%)	20 (24%)	1 4
39	DR	84/84 (100%)	72 (86%)	12 (14%)	3 16
40	BS	93/93 (100%)	70 (75%)	23 (25%)	1 3
40	DS	93/93 (100%)	74 (80%)	19 (20%)	1 7
41	BT	80/84 (95%)	59 (74%)	21 (26%)	0 3
41	DT	80/84 (95%)	74 (92%)	6 (8%)	12 42
42	BU	83/85 (98%)	65 (78%)	18 (22%)	1 6
42	DU	83/85 (98%)	69 (83%)	14 (17%)	2 11
43	BV	78/78 (100%)	62 (80%)	16 (20%)	1 7
43	DV	78/78 (100%)	68 (87%)	10 (13%)	4 20
44	BW	59/63 (94%)	41 (70%)	18 (30%)	0 1
44	DW	59/63 (94%)	46 (78%)	13 (22%)	1 6
45	BX	67/68 (98%)	51 (76%)	16 (24%)	1 4
45	DX	67/68 (98%)	59 (88%)	8 (12%)	5 23
46	BY	55/55 (100%)	41 (74%)	14 (26%)	0 3
46	DY	55/55 (100%)	50 (91%)	5 (9%)	9 34
47	BZ	48/49 (98%)	30 (62%)	18 (38%)	0 0
47	DZ	48/49 (98%)	39 (81%)	9 (19%)	1 9
48	B0	47/48 (98%)	40 (85%)	7 (15%)	3 15
48	D0	47/48 (98%)	41 (87%)	6 (13%)	4 20
49	B1	45/49 (92%)	34 (76%)	11 (24%)	1 4
49	D1	45/49 (92%)	41 (91%)	4 (9%)	9 34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
50	B2	38/38 (100%)	30 (79%)	8 (21%)	1 6
50	D2	38/38 (100%)	34 (90%)	4 (10%)	6 28
51	B3	51/52 (98%)	43 (84%)	8 (16%)	2 13
51	D3	51/52 (98%)	41 (80%)	10 (20%)	1 8
52	B4	34/34 (100%)	29 (85%)	5 (15%)	3 16
52	D4	34/34 (100%)	30 (88%)	4 (12%)	5 23
All	All	9331/9756 (96%)	7724 (83%)	1607 (17%)	2 10

All (1607) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	10	LYS
1	AB	13	VAL
1	AB	15	PHE
1	AB	19	THR
1	AB	20	ARG
1	AB	30	ILE
1	AB	36	LYS
1	AB	38	HIS
1	AB	42	LEU
1	AB	56	LEU
1	AB	67	LEU
1	AB	86	CYS
1	AB	88	GLN
1	AB	90	PHE
1	AB	100	LEU
1	AB	108	GLN
1	AB	115	ASP
1	AB	116	LEU
1	AB	119	GLN
1	AB	125	PHE
1	AB	128	LEU
1	AB	130	LYS
1	AB	141	GLU
1	AB	142	LYS
1	AB	143	LEU
1	AB	170	ILE
1	AB	185	ILE
1	AB	193	ASP
1	AB	206	ILE

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Mol	Chain	Res	Type
1	AB	207	ARG
1	AB	209	VAL
1	AB	211	LEU
1	AB	219	THR
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP
2	AC	24	ASN
2	AC	25	THR
2	AC	26	LYS
2	AC	32	LEU
2	AC	35	ASP
2	AC	36	PHE
2	AC	42	LEU
2	AC	50	SER
2	AC	54	ILE
2	AC	57	GLU
2	AC	69	THR
2	AC	79	LYS
2	AC	89	VAL
2	AC	102	ILE
2	AC	107	LYS
2	AC	119	ILE
2	AC	120	THR
2	AC	127	VAL
2	AC	139	ASN
2	AC	143	LEU
2	AC	152	VAL
2	AC	156	LEU
2	AC	161	ILE
2	AC	164	THR
2	AC	165	GLU
2	AC	166	TRP
2	AC	177	LEU
2	AC	184	ASN
2	AC	199	VAL
3	AD	2	ARG
3	AD	11	SER
3	AD	25	ARG
3	AD	32	LYS
3	AD	52	VAL
3	AD	54	LEU

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Mol	Chain	Res	Type
3	AD	55	ARG
3	AD	58	GLN
3	AD	59	LYS
3	AD	82	LYS
3	AD	88	ASN
3	AD	92	LEU
3	AD	115	GLN
3	AD	117	VAL
3	AD	122	ILE
3	AD	128	VAL
3	AD	129	VAL
3	AD	131	ILE
3	AD	141	VAL
3	AD	155	LYS
3	AD	160	LEU
3	AD	166	LYS
3	AD	170	LEU
3	AD	178	GLU
3	AD	196	GLU
3	AD	205	LYS
4	AE	11	GLN
4	AE	14	LEU
4	AE	25	LYS
4	AE	28	ARG
4	AE	45	VAL
4	AE	68	ARG
4	AE	75	LEU
4	AE	79	THR
4	AE	81	GLN
4	AE	93	VAL
4	AE	95	MET
4	AE	99	SER
4	AE	100	GLU
4	AE	113	VAL
4	AE	116	VAL
4	AE	121	ASN
4	AE	123	LEU
4	AE	135	VAL
4	AE	136	VAL
4	AE	141	ASP
4	AE	155	LYS
4	AE	156	ARG

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Mol	Chain	Res	Type
5	AF	7	VAL
5	AF	14	GLN
5	AF	29	ILE
5	AF	38	ARG
5	AF	46	GLN
5	AF	54	LEU
5	AF	55	HIS
5	AF	68	GLN
5	AF	69	GLU
5	AF	77	THR
5	AF	84	VAL
5	AF	85	ILE
5	AF	86	ARG
6	AG	3	ARG
6	AG	6	ILE
6	AG	8	GLN
6	AG	12	LEU
6	AG	20	GLU
6	AG	37	THR
6	AG	47	GLU
6	AG	62	GLU
6	AG	68	VAL
6	AG	83	THR
6	AG	93	VAL
6	AG	105	GLU
6	AG	110	ARG
6	AG	117	LEU
6	AG	123	LEU
6	AG	132	THR
6	AG	143	MET
7	AH	11	THR
7	AH	21	LYS
7	AH	25	THR
7	AH	29	SER
7	AH	41	GLU
7	AH	58	LEU
7	AH	72	GLU
7	AH	76	ARG
7	AH	79	ARG
7	AH	82	LEU
7	AH	89	ASP
7	AH	98	LEU

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Mol	Chain	Res	Type
7	AH	110	MET
7	AH	111	THR
7	AH	116	ARG
7	AH	120	LEU
7	AH	128	VAL
8	AI	4	GLN
8	AI	13	SER
8	AI	28	VAL
8	AI	44	ARG
8	AI	47	VAL
8	AI	54	VAL
8	AI	56	MET
8	AI	62	LEU
8	AI	64	ILE
8	AI	67	LYS
8	AI	86	LEU
8	AI	87	MET
8	AI	88	GLU
8	AI	98	ARG
8	AI	125	GLN
8	AI	128	LYS
9	AJ	6	ILE
9	AJ	17	LEU
9	AJ	22	THR
9	AJ	32	THR
9	AJ	35	GLN
9	AJ	36	VAL
9	AJ	48	ARG
9	AJ	50	THR
9	AJ	59	LYS
9	AJ	63	ASP
9	AJ	70	HIS
9	AJ	73	LEU
9	AJ	87	LEU
9	AJ	89	ARG
9	AJ	96	VAL
10	AK	17	ASP
10	AK	29	THR
10	AK	30	ILE
10	AK	45	THR
10	AK	51	PHE
10	AK	64	VAL

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Mol	Chain	Res	Type
10	AK	73	VAL
10	AK	76	TYR
10	AK	78	ILE
10	AK	82	GLU
10	AK	96	ILE
10	AK	100	ASN
10	AK	106	ILE
10	AK	124	LYS
10	AK	125	LYS
10	AK	128	VAL
11	AL	3	VAL
11	AL	9	LYS
11	AL	15	VAL
11	AL	18	SER
11	AL	20	VAL
11	AL	26	CYS
11	AL	32	VAL
11	AL	35	ARG
11	AL	38	THR
11	AL	43	LYS
11	AL	48	LEU
11	AL	49	ARG
11	AL	51	VAL
11	AL	63	THR
11	AL	73	LEU
11	AL	74	GLN
11	AL	77	SER
11	AL	81	ILE
11	AL	82	ARG
11	AL	87	LYS
11	AL	88	ASP
11	AL	94	TYR
11	AL	96	THR
11	AL	101	LEU
11	AL	104	SER
11	AL	109	ARG
12	AM	6	ILE
12	AM	42	VAL
12	AM	58	GLU
12	AM	106	ARG
13	AN	11	LYS
13	AN	13	VAL

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Mol	Chain	Res	Type
13	AN	27	LYS
13	AN	30	ILE
13	AN	48	GLN
13	AN	57	SER
13	AN	58	ARG
13	AN	59	GLN
13	AN	61	ASN
13	AN	83	VAL
14	AO	24	THR
14	AO	26	VAL
14	AO	34	GLN
14	AO	57	ARG
14	AO	65	LEU
15	AP	1	MET
15	AP	6	LEU
15	AP	12	LYS
15	AP	19	VAL
15	AP	28	ARG
15	AP	29	ASN
15	AP	46	LYS
15	AP	55	ASP
15	AP	61	VAL
15	AP	67	ILE
15	AP	80	LYS
16	AQ	3	LYS
16	AQ	14	ASP
16	AQ	16	MET
16	AQ	20	ILE
16	AQ	21	VAL
16	AQ	28	VAL
16	AQ	29	LYS
16	AQ	37	ILE
16	AQ	49	ASN
16	AQ	50	ASN
16	AQ	51	GLU
16	AQ	54	ILE
16	AQ	74	LEU
16	AQ	75	VAL
16	AQ	78	VAL
16	AQ	80	LYS
17	AR	20	ILE
17	AR	35	SER

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Mol	Chain	Res	Type
17	AR	41	SER
17	AR	54	LEU
18	AS	20	LYS
18	AS	42	ASN
18	AS	48	ILE
18	AS	54	ARG
18	AS	57	VAL
18	AS	59	VAL
18	AS	61	VAL
18	AS	64	GLU
18	AS	79	TYR
19	AT	4	LYS
19	AT	5	SER
19	AT	11	ILE
19	AT	14	GLU
19	AT	26	MET
19	AT	27	MET
19	AT	29	THR
19	AT	33	LYS
19	AT	35	TYR
19	AT	38	ILE
19	AT	48	LYS
19	AT	53	MET
19	AT	65	LEU
19	AT	67	HIS
19	AT	68	LYS
19	AT	75	LYS
19	AT	77	ASN
20	AU	8	ASN
20	AU	9	GLU
20	AU	15	LEU
20	AU	19	LYS
20	AU	27	VAL
20	AU	33	ARG
20	AU	39	LYS
20	AU	42	THR
20	AU	45	LYS
24	BC	2	VAL
24	BC	12	ARG
24	BC	18	VAL
24	BC	23	LEU
24	BC	27	LYS

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Mol	Chain	Res	Type
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	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	129	LEU
24	BC	132	ARG
24	BC	133	ASN
24	BC	142	ASN
24	BC	155	ARG
24	BC	163	ILE
24	BC	164	VAL
24	BC	171	VAL
24	BC	172	THR
24	BC	173	LEU
24	BC	176	ARG
24	BC	201	LEU
24	BC	202	ARG
24	BC	203	VAL
24	BC	211	ARG
24	BC	213	ARG
24	BC	215	VAL
24	BC	216	ARG
24	BC	227	VAL
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	257	ARG
24	BC	261	ARG
24	BC	268	ARG

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Mol	Chain	Res	Type
25	BD	4	LEU
25	BD	9	VAL
25	BD	14	ILE
25	BD	16	THR
25	BD	17	GLU
25	BD	42	ASN
25	BD	43	ASP
25	BD	45	TYR
25	BD	51	THR
25	BD	60	VAL
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	98	VAL
25	BD	113	SER
25	BD	114	LYS
25	BD	124	ARG
25	BD	131	ASP
25	BD	140	HIS
25	BD	146	ILE
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	169	ARG
25	BD	170	VAL
25	BD	171	THR
25	BD	183	GLU
25	BD	186	LEU
25	BD	193	VAL
25	BD	197	THR
25	BD	201	LEU
25	BD	203	VAL
25	BD	207	VAL
26	BE	12	LEU
26	BE	14	VAL
26	BE	18	THR
26	BE	21	ARG
26	BE	28	VAL
26	BE	40	ARG
26	BE	44	ARG
26	BE	48	THR

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Mol	Chain	Res	Type
26	BE	61	ARG
26	BE	65	THR
26	BE	69	ARG
26	BE	73	ILE
26	BE	77	ILE
26	BE	80	SER
26	BE	84	THR
26	BE	90	GLN
26	BE	93	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	118	LEU
26	BE	119	ILE
26	BE	121	VAL
26	BE	122	GLU
26	BE	123	LYS
26	BE	127	GLU
26	BE	132	LYS
26	BE	136	GLN
26	BE	141	MET
26	BE	144	GLU
26	BE	146	VAL
26	BE	147	LEU
26	BE	148	ILE
26	BE	153	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	171	ASP
26	BE	175	ILE
26	BE	178	VAL
26	BE	186	VAL
26	BE	189	THR
26	BE	196	VAL
27	BF	3	LEU
27	BF	8	LYS
27	BF	9	ASP
27	BF	10	GLU
27	BF	12	VAL
27	BF	14	LYS
27	BF	17	THR
27	BF	24	VAL

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Mol	Chain	Res	Type
27	BF	34	THR
27	BF	35	LEU
27	BF	36	ASN
27	BF	46	LYS
27	BF	47	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	90	LEU
27	BF	103	ILE
27	BF	105	ILE
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	136	ILE
27	BF	154	THR
27	BF	157	THR
27	BF	168	LEU
28	BG	8	VAL
28	BG	15	ASP
28	BG	18	ILE
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	40	VAL
28	BG	42	VAL
28	BG	59	ASP
28	BG	68	ARG
28	BG	78	VAL
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	91	VAL
28	BG	101	VAL
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

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Mol	Chain	Res	Type
28	BG	140	ILE
28	BG	148	ARG
28	BG	155	PRO
28	BG	159	LYS
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	14	SER
29	BH	15	LEU
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
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	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
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	7	LYS
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	28	LEU

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Mol	Chain	Res	Type
31	BJ	30	THR
31	BJ	31	GLU
31	BJ	36	LEU
31	BJ	40	HIS
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	50	THR
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	78	THR
31	BJ	86	GLN
31	BJ	88	THR
31	BJ	90	GLU
31	BJ	103	ILE
31	BJ	105	VAL
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	129	GLU
31	BJ	139	VAL
31	BJ	140	LEU
32	BK	6	THR
32	BK	8	LEU
32	BK	13	ASN
32	BK	18	ARG
32	BK	23	LYS
32	BK	28	SER
32	BK	38	ILE
32	BK	39	ILE
32	BK	41	ILE
32	BK	47	ILE
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

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Mol	Chain	Res	Type
32	BK	89	ASN
32	BK	93	GLN
32	BK	99	ILE
32	BK	107	LEU
32	BK	111	LYS
32	BK	114	LYS
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	27	LEU
33	BL	30	THR
33	BL	33	ARG
33	BL	35	HIS
33	BL	39	LYS
33	BL	46	VAL
33	BL	47	ARG
33	BL	48	ARG
33	BL	55	MET
33	BL	61	LEU
33	BL	66	PHE
33	BL	74	THR
33	BL	81	ASP
33	BL	82	LEU
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	121	THR
33	BL	122	VAL
33	BL	125	LEU
33	BL	127	VAL
33	BL	135	ILE
34	BM	2	LEU
34	BM	8	LYS
34	BM	10	ARG

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Mol	Chain	Res	Type
34	BM	12	MET
34	BM	20	LEU
34	BM	24	THR
34	BM	25	ASP
34	BM	33	LEU
34	BM	36	VAL
34	BM	41	LEU
34	BM	46	ILE
34	BM	51	ARG
34	BM	69	PRO
34	BM	70	ASP
34	BM	75	GLU
34	BM	81	ARG
34	BM	90	GLU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	102	LEU
34	BM	108	VAL
34	BM	131	VAL
34	BM	133	LYS
34	BM	134	THR
35	BN	2	ARG
35	BN	10	LEU
35	BN	11	ASN
35	BN	15	SER
35	BN	30	ARG
35	BN	33	ILE
35	BN	35	LYS
35	BN	38	LEU
35	BN	51	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	75	ILE
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	113	ILE
35	BN	118	ARG
36	BO	8	ILE
36	BO	9	ARG
36	BO	17	LYS

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Mol	Chain	Res	Type
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	39	VAL
36	BO	58	ILE
36	BO	65	THR
36	BO	74	VAL
36	BO	78	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	115	LEU
36	BO	116	GLN
37	BP	3	ILE
37	BP	6	GLN
37	BP	8	GLU
37	BP	14	GLN
37	BP	16	VAL
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	61	ARG
37	BP	67	GLU
37	BP	69	VAL
37	BP	75	THR
37	BP	77	SER
37	BP	79	VAL
37	BP	80	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	95	LYS

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Mol	Chain	Res	Type
37	BP	96	LEU
37	BP	99	LEU
38	BQ	2	ARG
38	BQ	7	VAL
38	BQ	8	ILE
38	BQ	10	ARG
38	BQ	17	LEU
38	BQ	39	ILE
38	BQ	40	LYS
38	BQ	50	ARG
38	BQ	65	ASN
38	BQ	69	ARG
38	BQ	73	ILE
38	BQ	88	GLU
38	BQ	89	ILE
38	BQ	93	ILE
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	97	ILE
38	BQ	103	VAL
39	BR	10	LYS
39	BR	13	ARG
39	BR	14	VAL
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	43	ASN
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
39	BR	86	GLN
39	BR	97	LYS
39	BR	101	ILE
40	BS	1	MET
40	BS	3	THR

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Mol	Chain	Res	Type
40	BS	4	ILE
40	BS	24	ILE
40	BS	29	VAL
40	BS	33	LEU
40	BS	36	LEU
40	BS	39	THR
40	BS	41	LYS
40	BS	45	VAL
40	BS	48	LYS
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
40	BS	107	VAL
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	11	LEU
41	BT	17	SER
41	BT	18	GLU
41	BT	19	LYS
41	BT	29	THR
41	BT	30	ILE
41	BT	31	VAL
41	BT	32	LEU
41	BT	43	ILE
41	BT	47	VAL
41	BT	48	GLN
41	BT	54	GLU
41	BT	58	VAL
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	74	ILE

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Mol	Chain	Res	Type
42	BU	4	ILE
42	BU	5	ARG
42	BU	6	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	20	LYS
42	BU	23	LYS
42	BU	30	SER
42	BU	33	VAL
42	BU	42	LYS
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	80	ASP
42	BU	82	VAL
42	BU	86	PHE
42	BU	92	VAL
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	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	42	LEU
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
44	BW	14	ASP
44	BW	15	SER
44	BW	22	VAL
44	BW	24	ARG
44	BW	28	GLU
44	BW	31	LEU
44	BW	38	ARG
44	BW	40	ARG

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Mol	Chain	Res	Type
44	BW	42	THR
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	71	LYS
44	BW	77	LYS
44	BW	80	SER
45	BX	10	ARG
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	42	GLU
45	BX	46	VAL
45	BX	47	THR
45	BX	53	LYS
45	BX	58	ILE
45	BX	63	ILE
45	BX	65	THR
45	BX	70	LEU
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	42	LEU
46	BY	47	ARG
46	BY	55	THR
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	2	LYS
47	BZ	3	THR

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Mol	Chain	Res	Type
47	BZ	4	ILE
47	BZ	5	LYS
47	BZ	6	ILE
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	36	GLU
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	43	ILE
47	BZ	56	VAL
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG
48	B0	22	THR
48	B0	24	VAL
48	B0	26	SER
48	B0	39	ARG
48	B0	42	ILE
49	B1	4	ILE
49	B1	9	LYS
49	B1	16	THR
49	B1	21	THR
49	B1	29	LYS
49	B1	33	LEU
49	B1	35	LEU
49	B1	41	VAL
49	B1	42	VAL
49	B1	43	ARG
49	B1	46	VAL
50	B2	1	MET
50	B2	3	ARG
50	B2	9	VAL
50	B2	12	ARG
50	B2	16	HIS
50	B2	21	ARG
50	B2	39	ARG
50	B2	45	SER

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Mol	Chain	Res	Type
51	B3	5	THR
51	B3	7	ARG
51	B3	22	LYS
51	B3	29	ARG
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS
51	B3	56	LEU
52	B4	1	MET
52	B4	4	ARG
52	B4	9	LYS
52	B4	13	ASN
52	B4	16	ILE
1	CB	9	LEU
1	CB	10	LYS
1	CB	14	HIS
1	CB	19	THR
1	CB	21	TYR
1	CB	26	MET
1	CB	36	LYS
1	CB	39	ILE
1	CB	42	LEU
1	CB	46	VAL
1	CB	69	VAL
1	CB	88	GLN
1	CB	103	TRP
1	CB	106	VAL
1	CB	124	THR
1	CB	125	PHE
1	CB	131	LYS
1	CB	146	SER
1	CB	147	LEU
1	CB	162	VAL
1	CB	182	VAL
1	CB	191	ASP
1	CB	196	ASP
2	CC	26	LYS
2	CC	35	ASP
2	CC	41	TYR
2	CC	53	ARG
2	CC	90	VAL
2	CC	123	LEU

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Mol	Chain	Res	Type
2	CC	134	LYS
2	CC	139	ASN
2	CC	148	ILE
2	CC	152	VAL
2	CC	161	ILE
2	CC	164	THR
2	CC	166	TRP
2	CC	174	LEU
2	CC	183	TYR
2	CC	185	THR
3	CD	2	ARG
3	CD	8	LEU
3	CD	10	LEU
3	CD	24	VAL
3	CD	29	THR
3	CD	30	LYS
3	CD	34	GLU
3	CD	52	VAL
3	CD	55	ARG
3	CD	57	LYS
3	CD	58	GLN
3	CD	80	ARG
3	CD	84	ASN
3	CD	106	PHE
3	CD	116	LEU
3	CD	120	LYS
3	CD	127	ARG
3	CD	128	VAL
3	CD	140	ASP
3	CD	142	VAL
3	CD	147	LYS
3	CD	151	GLN
3	CD	152	SER
3	CD	158	LEU
3	CD	159	GLU
3	CD	160	LEU
3	CD	165	GLU
3	CD	168	THR
3	CD	170	LEU
3	CD	172	VAL
3	CD	182	LYS
3	CD	183	ARG

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Mol	Chain	Res	Type
3	CD	184	LYS
3	CD	194	ILE
3	CD	195	ASN
3	CD	199	ILE
3	CD	204	SER
4	CE	11	GLN
4	CE	13	LYS
4	CE	24	VAL
4	CE	25	LYS
4	CE	35	LEU
4	CE	51	LYS
4	CE	55	VAL
4	CE	59	ILE
4	CE	75	LEU
4	CE	76	ASN
4	CE	80	LEU
4	CE	87	VAL
4	CE	92	ARG
4	CE	95	MET
4	CE	99	SER
4	CE	104	ILE
4	CE	113	VAL
4	CE	119	VAL
4	CE	133	ILE
4	CE	136	VAL
4	CE	139	THR
4	CE	144	GLU
5	CF	7	VAL
5	CF	33	GLU
5	CF	44	ARG
5	CF	52	ASN
5	CF	54	LEU
5	CF	56	LYS
5	CF	61	LEU
5	CF	75	GLU
5	CF	85	ILE
5	CF	86	ARG
5	CF	89	VAL
5	CF	90	MET
6	CG	3	ARG
6	CG	5	VAL
6	CG	6	ILE

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Mol	Chain	Res	Type
6	CG	10	LYS
6	CG	12	LEU
6	CG	16	LYS
6	CG	30	MET
6	CG	34	LYS
6	CG	35	LYS
6	CG	48	THR
6	CG	55	LYS
6	CG	58	LEU
6	CG	75	LYS
6	CG	78	ARG
6	CG	85	GLN
6	CG	86	VAL
6	CG	90	VAL
6	CG	100	MET
6	CG	102	TRP
6	CG	119	LEU
6	CG	123	LEU
6	CG	139	ASP
6	CG	148	LYS
7	CH	11	THR
7	CH	42	GLU
7	CH	50	VAL
7	CH	54	THR
7	CH	59	GLU
7	CH	60	LEU
7	CH	70	VAL
7	CH	75	GLN
7	CH	76	ARG
7	CH	82	LEU
7	CH	89	ASP
7	CH	93	LYS
7	CH	102	VAL
7	CH	110	MET
8	CI	4	GLN
8	CI	5	TYR
8	CI	20	ILE
8	CI	36	GLN
8	CI	37	TYR
8	CI	53	LEU
8	CI	54	VAL
8	CI	60	LEU

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Mol	Chain	Res	Type
8	CI	62	LEU
8	CI	71	ILE
8	CI	83	THR
8	CI	87	MET
8	CI	115	VAL
8	CI	125	GLN
9	CJ	5	ARG
9	CJ	15	HIS
9	CJ	59	LYS
9	CJ	60	ASP
9	CJ	64	GLN
9	CJ	67	ILE
9	CJ	69	THR
9	CJ	82	LYS
9	CJ	87	LEU
9	CJ	92	LEU
10	CK	22	ILE
10	CK	27	ASN
10	CK	33	ILE
10	CK	34	THR
10	CK	73	VAL
10	CK	78	ILE
10	CK	80	ASN
10	CK	81	LEU
10	CK	94	SER
10	CK	95	THR
10	CK	107	THR
10	CK	115	ILE
10	CK	128	VAL
11	CL	5	GLN
11	CL	9	LYS
11	CL	14	LYS
11	CL	15	VAL
11	CL	19	ASN
11	CL	28	GLN
11	CL	39	THR
11	CL	48	LEU
11	CL	57	THR
11	CL	62	VAL
11	CL	66	ILE
11	CL	72	ASN
11	CL	77	SER

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Mol	Chain	Res	Type
11	CL	88	ASP
11	CL	96	THR
11	CL	97	VAL
11	CL	107	LYS
11	CL	120	ARG
12	CM	12	LYS
12	CM	24	VAL
12	CM	28	ARG
12	CM	32	ILE
12	CM	46	GLU
12	CM	53	ASP
12	CM	72	ILE
12	CM	77	LYS
12	CM	92	ARG
12	CM	113	LYS
13	CN	3	GLN
13	CN	6	LYS
13	CN	17	ASP
13	CN	27	LYS
13	CN	41	TRP
13	CN	52	ARG
13	CN	53	ASP
13	CN	61	ASN
13	CN	72	PHE
13	CN	78	LEU
13	CN	81	ILE
13	CN	96	LYS
14	CO	13	GLU
14	CO	16	ARG
14	CO	38	LEU
14	CO	39	GLN
14	CO	45	HIS
14	CO	63	ARG
14	CO	65	LEU
14	CO	80	LEU
15	CP	1	MET
15	CP	3	THR
15	CP	6	LEU
15	CP	19	VAL
15	CP	34	GLU
15	CP	46	LYS
15	CP	54	LEU

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Mol	Chain	Res	Type
15	CP	56	ARG
15	CP	69	ASP
15	CP	71	VAL
16	CQ	6	THR
16	CQ	7	LEU
16	CQ	19	SER
16	CQ	20	ILE
16	CQ	32	ILE
16	CQ	37	ILE
16	CQ	39	ARG
16	CQ	51	GLU
16	CQ	54	ILE
16	CQ	60	ILE
16	CQ	75	VAL
16	CQ	80	LYS
17	CR	25	ILE
17	CR	49	LYS
17	CR	72	ARG
18	CS	5	LYS
18	CS	10	ILE
18	CS	52	ASN
18	CS	54	ARG
18	CS	55	GLN
18	CS	73	PHE
19	CT	11	ILE
19	CT	26	MET
19	CT	47	GLN
19	CT	53	MET
19	CT	68	LYS
19	CT	69	ASN
19	CT	73	ARG
19	CT	78	LEU
19	CT	82	ILE
20	CU	4	LYS
20	CU	9	GLU
20	CU	13	VAL
20	CU	19	LYS
20	CU	27	VAL
20	CU	32	ARG
20	CU	36	PHE
20	CU	39	LYS
20	CU	53	LYS

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Mol	Chain	Res	Type
24	DC	2	VAL
24	DC	18	VAL
24	DC	23	LEU
24	DC	35	LYS
24	DC	53	ILE
24	DC	57	HIS
24	DC	62	ARG
24	DC	90	ILE
24	DC	102	TYR
24	DC	124	LYS
24	DC	129	LEU
24	DC	152	GLN
24	DC	153	LEU
24	DC	164	VAL
24	DC	172	THR
24	DC	173	LEU
24	DC	183	VAL
24	DC	187	CYS
24	DC	190	THR
24	DC	193	GLU
24	DC	203	VAL
24	DC	212	TRP
24	DC	213	ARG
24	DC	219	VAL
24	DC	220	ARG
24	DC	227	VAL
24	DC	235	GLU
24	DC	250	GLN
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
25	DD	35	THR
25	DD	38	LYS
25	DD	50	VAL
25	DD	55	LYS
25	DD	56	LYS
25	DD	62	LYS

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Mol	Chain	Res	Type
25	DD	70	LYS
25	DD	79	LEU
25	DD	84	LEU
25	DD	100	LEU
25	DD	106	LYS
25	DD	107	VAL
25	DD	121	THR
25	DD	138	LEU
25	DD	139	SER
25	DD	141	ARG
25	DD	148	GLN
25	DD	151	THR
25	DD	159	LYS
25	DD	168	GLU
25	DD	172	VAL
25	DD	189	VAL
25	DD	193	VAL
26	DE	31	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	63	LYS
26	DE	77	ILE
26	DE	84	THR
26	DE	105	LEU
26	DE	108	ILE
26	DE	112	LEU
26	DE	113	VAL
26	DE	117	ARG
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
27	DF	8	LYS
27	DF	13	LYS
27	DF	14	LYS
27	DF	32	LYS
27	DF	48	LEU
27	DF	49	LEU
27	DF	76	PHE

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Mol	Chain	Res	Type
27	DF	77	LYS
27	DF	91	ARG
27	DF	94	ARG
27	DF	97	GLU
27	DF	110	ILE
27	DF	111	ARG
27	DF	113	PHE
27	DF	119	LYS
27	DF	131	VAL
27	DF	133	GLU
27	DF	134	GLN
27	DF	135	ILE
27	DF	139	GLU
27	DF	142	TYR
27	DF	147	ARG
27	DF	148	VAL
27	DF	151	LEU
27	DF	155	ILE
27	DF	160	LYS
27	DF	169	LEU
27	DF	172	PHE
27	DF	177	ARG
28	DG	2	ARG
28	DG	18	ILE
28	DG	19	ASN
28	DG	21	GLN
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	91	VAL
28	DG	93	TYR
28	DG	101	VAL
28	DG	120	ILE
28	DG	143	VAL
28	DG	146	ASP
28	DG	163	TYR
28	DG	166	GLU

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Mol	Chain	Res	Type
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	50	ARG
29	DH	62	LEU
29	DH	66	ASN
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	94	ILE
29	DH	98	ASP
29	DH	104	THR
29	DH	109	GLU
29	DH	144	VAL
30	DI	7	TYR
30	DI	16	MET
30	DI	30	GLN
30	DI	45	THR
30	DI	57	VAL
30	DI	58	ILE
30	DI	68	PHE
30	DI	72	THR
30	DI	93	ASN
31	DJ	2	LYS
31	DJ	3	THR
31	DJ	5	THR
31	DJ	25	LEU
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	72	LYS
31	DJ	81	ILE
31	DJ	92	MET
31	DJ	95	ARG
31	DJ	98	GLU
31	DJ	101	ILE
31	DJ	103	ILE

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Mol	Chain	Res	Type
31	DJ	106	LYS
31	DJ	108	MET
31	DJ	129	GLU
31	DJ	139	VAL
31	DJ	140	LEU
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	69	VAL
32	DK	73	ASP
32	DK	77	ILE
32	DK	87	LEU
32	DK	95	ILE
32	DK	103	VAL
32	DK	105	ARG
32	DK	107	LEU
32	DK	111	LYS
32	DK	114	LYS
32	DK	122	VAL
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	14	LYS
33	DL	40	SER
33	DL	47	ARG
33	DL	48	ARG
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	143	GLU

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Mol	Chain	Res	Type
34	DM	8	LYS
34	DM	13	HIS
34	DM	26	VAL
34	DM	38	ARG
34	DM	63	ILE
34	DM	73	ILE
34	DM	78	LEU
34	DM	96	ILE
34	DM	97	GLN
34	DM	101	VAL
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	14	SER
35	DN	18	GLN
35	DN	29	VAL
35	DN	33	ILE
35	DN	34	ILE
35	DN	53	THR
35	DN	54	LEU
35	DN	62	ASN
35	DN	69	ARG
35	DN	75	ILE
35	DN	76	VAL
35	DN	94	TYR
35	DN	95	THR
35	DN	97	ILE
35	DN	98	LEU
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

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Mol	Chain	Res	Type
36	DO	117	PHE
37	DP	7	LEU
37	DP	13	LYS
37	DP	28	LYS
37	DP	31	VAL
37	DP	69	VAL
37	DP	79	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	10	ARG
38	DQ	12	ARG
38	DQ	15	LYS
38	DQ	21	LYS
38	DQ	47	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
39	DR	6	GLN
39	DR	13	ARG
39	DR	37	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	63	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	4	ILE
40	DS	6	LYS
40	DS	23	LEU
40	DS	31	GLN

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Mol	Chain	Res	Type
40	DS	33	LEU
40	DS	36	LEU
40	DS	45	VAL
40	DS	46	LEU
40	DS	47	VAL
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	107	VAL
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	11	ILE
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	34	ILE
42	DU	40	LEU
42	DU	42	LYS
42	DU	45	GLN
42	DU	61	GLU
42	DU	71	ILE
42	DU	82	VAL
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
43	DV	26	PHE
43	DV	40	ILE
43	DV	41	GLU
43	DV	51	GLN
43	DV	53	LYS
43	DV	61	LEU
43	DV	65	VAL

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Mol	Chain	Res	Type
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	38	ARG
44	DW	40	ARG
44	DW	58	LEU
44	DW	67	LYS
44	DW	68	PHE
44	DW	77	LYS
45	DX	5	GLN
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	23	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	50	VAL
47	DZ	53	MET
47	DZ	55	LYS
47	DZ	58	GLU
48	D0	3	GLN
48	D0	5	ASN
48	D0	9	ARG
48	D0	41	HIS

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Mol	Chain	Res	Type
48	D0	42	ILE
48	D0	53	VAL
49	D1	10	LEU
49	D1	20	TYR
49	D1	33	LEU
49	D1	44	GLN
50	D2	8	SER
50	D2	26	ASN
50	D2	28	ARG
50	D2	46	LYS
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	28	LEU
51	D3	41	ARG
51	D3	46	LYS
51	D3	48	MET
51	D3	49	VAL
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 (355) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	14	HIS
1	AB	38	HIS
1	AB	41	ASN
1	AB	57	ASN
1	AB	102	ASN
1	AB	108	GLN
1	AB	119	GLN
1	AB	167	HIS
1	AB	169	HIS
2	AC	5	HIS
2	AC	24	ASN
2	AC	138	GLN
2	AC	139	ASN
2	AC	175	HIS

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Mol	Chain	Res	Type
3	AD	40	HIS
3	AD	53	GLN
3	AD	58	GLN
3	AD	84	ASN
3	AD	119	HIS
3	AD	163	GLN
4	AE	11	GLN
4	AE	42	ASN
4	AE	69	ASN
4	AE	72	ASN
4	AE	77	ASN
4	AE	81	GLN
4	AE	120	HIS
4	AE	121	ASN
4	AE	145	ASN
5	AF	11	HIS
5	AF	37	HIS
5	AF	46	GLN
5	AF	68	GLN
6	AG	85	GLN
6	AG	121	ASN
6	AG	147	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	66	GLN
7	AH	117	GLN
8	AI	3	ASN
8	AI	4	GLN
8	AI	74	GLN
8	AI	80	HIS
8	AI	125	GLN
9	AJ	20	GLN
9	AJ	35	GLN
9	AJ	58	ASN
9	AJ	64	GLN
10	AK	21	HIS
10	AK	108	ASN
10	AK	118	ASN
11	AL	45	ASN
11	AL	58	ASN
12	AM	7	ASN
13	AN	34	ASN

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Mol	Chain	Res	Type
13	AN	42	ASN
13	AN	48	GLN
13	AN	59	GLN
13	AN	61	ASN
14	AO	19	ASN
14	AO	36	ASN
14	AO	45	HIS
14	AO	49	HIS
14	AO	61	GLN
15	AP	9	HIS
15	AP	26	ASN
15	AP	29	ASN
15	AP	59	HIS
15	AP	63	GLN
16	AQ	8	GLN
16	AQ	44	HIS
16	AQ	49	ASN
17	AR	30	ASN
17	AR	53	GLN
18	AS	42	ASN
19	AT	12	GLN
19	AT	20	ASN
19	AT	54	GLN
19	AT	60	GLN
19	AT	67	HIS
19	AT	74	HIS
19	AT	77	ASN
20	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	24	HIS
24	BC	43	ASN
24	BC	59	GLN
24	BC	69	ASN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	152	GLN
24	BC	242	HIS
24	BC	250	GLN
24	BC	259	ASN
25	BD	32	ASN

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Mol	Chain	Res	Type
25	BD	49	GLN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
26	BE	30	GLN
26	BE	41	GLN
26	BE	62	GLN
26	BE	97	ASN
27	BF	22	ASN
27	BF	26	GLN
27	BF	134	GLN
28	BG	72	ASN
28	BG	114	HIS
29	BH	18	GLN
29	BH	33	GLN
29	BH	43	ASN
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	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	5	GLN
32	BK	29	HIS
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	104	GLN
34	BM	97	GLN
35	BN	11	ASN
35	BN	18	GLN
35	BN	23	ASN
35	BN	62	ASN
35	BN	73	ASN
36	BO	38	GLN

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Mol	Chain	Res	Type
36	BO	104	GLN
37	BP	9	GLN
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	66	HIS
39	BR	82	HIS
39	BR	87	GLN
40	BS	9	HIS
40	BS	15	GLN
40	BS	57	ASN
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
43	BV	51	GLN
43	BV	80	HIS
43	BV	88	HIS
44	BW	11	ASN
44	BW	39	GLN
44	BW	49	ASN
45	BX	5	GLN
45	BX	15	ASN
45	BX	22	ASN
45	BX	35	HIS
46	BY	15	ASN
46	BY	20	ASN
46	BY	27	ASN
46	BY	31	GLN
46	BY	41	HIS
47	BZ	33	HIS
48	B0	3	GLN
48	B0	4	GLN

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Mol	Chain	Res	Type
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
52	B4	13	ASN
52	B4	35	GLN
1	CB	18	GLN
1	CB	38	HIS
1	CB	108	GLN
1	CB	145	ASN
1	CB	169	HIS
1	CB	176	ASN
1	CB	177	ASN
2	CC	2	GLN
2	CC	18	ASN
2	CC	31	ASN
2	CC	68	HIS
2	CC	139	ASN
3	CD	39	GLN
3	CD	70	GLN
3	CD	84	ASN
3	CD	115	GLN
3	CD	119	HIS
3	CD	125	ASN
3	CD	163	GLN
4	CE	76	ASN
4	CE	121	ASN
4	CE	131	ASN
4	CE	147	ASN
5	CF	58	HIS
5	CF	63	ASN
5	CF	81	ASN
6	CG	8	GLN
6	CG	67	ASN
6	CG	85	GLN
7	CH	3	GLN
7	CH	17	GLN
7	CH	20	ASN
7	CH	37	ASN
8	CI	3	ASN
8	CI	4	GLN
8	CI	49	GLN
8	CI	74	GLN

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Mol	Chain	Res	Type
8	CI	109	GLN
8	CI	125	GLN
9	CJ	70	HIS
10	CK	27	ASN
10	CK	117	HIS
11	CL	5	GLN
11	CL	19	ASN
11	CL	72	ASN
11	CL	74	GLN
11	CL	111	GLN
12	CM	90	HIS
13	CN	59	GLN
13	CN	65	GLN
14	CO	27	GLN
14	CO	36	ASN
14	CO	39	GLN
14	CO	45	HIS
14	CO	49	HIS
15	CP	9	HIS
15	CP	26	ASN
15	CP	40	ASN
16	CQ	44	HIS
16	CQ	49	ASN
18	CS	51	HIS
18	CS	52	ASN
18	CS	56	HIS
19	CT	12	GLN
19	CT	69	ASN
19	CT	81	GLN
20	CU	8	ASN
24	DC	14	HIS
24	DC	43	ASN
24	DC	52	HIS
24	DC	57	HIS
24	DC	89	ASN
24	DC	133	ASN
24	DC	141	HIS
24	DC	152	GLN
24	DC	242	HIS
24	DC	250	GLN
25	DD	36	GLN
25	DD	42	ASN

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Mol	Chain	Res	Type
25	DD	49	GLN
25	DD	67	HIS
25	DD	126	ASN
25	DD	130	GLN
25	DD	140	HIS
25	DD	150	GLN
25	DD	185	ASN
27	DF	4	HIS
27	DF	80	GLN
27	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	28	ASN
29	DH	43	ASN
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	9	ASN
32	DK	13	ASN
32	DK	89	ASN
33	DL	4	ASN
33	DL	35	HIS
33	DL	38	GLN
33	DL	54	GLN
34	DM	3	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	16	HIS
35	DN	23	ASN
35	DN	73	ASN
35	DN	107	ASN
36	DO	29	HIS
36	DO	38	GLN

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Mol	Chain	Res	Type
37	DP	2	ASN
37	DP	6	GLN
37	DP	9	GLN
37	DP	11	GLN
37	DP	40	GLN
37	DP	65	ASN
37	DP	114	ASN
38	DQ	19	GLN
38	DQ	71	ASN
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
41	DT	15	HIS
41	DT	48	GLN
41	DT	91	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	53	GLN
43	DV	51	GLN
43	DV	80	HIS
43	DV	88	HIS
45	DX	15	ASN
45	DX	16	ASN
45	DX	22	ASN
45	DX	31	ASN
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
46	DY	45	GLN
46	DY	58	ASN
47	DZ	19	HIS
47	DZ	33	HIS
48	D0	5	ASN
48	D0	18	HIS
48	D0	41	HIS

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Mol	Chain	Res	Type
50	D2	6	GLN
50	D2	16	HIS
50	D2	26	ASN
51	D3	25	HIS
51	D3	27	ASN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1532/1533 (99%)	500 (32%)	241 (15%)
22	BA	2850/2903 (98%)	871 (30%)	404 (14%)
22	DA	2838/2903 (97%)	1075 (37%)	515 (18%)
23	BB	117/118 (99%)	34 (29%)	19 (16%)
53	CA	1529/1530 (99%)	534 (34%)	238 (15%)
54	DB	116/117 (99%)	39 (33%)	19 (16%)
All	All	8982/9104 (98%)	3053 (33%)	1436 (15%)

All (3053) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	5	U
21	AA	6	G
21	AA	7	A
21	AA	8	A
21	AA	9	G
21	AA	13	U
21	AA	14	U
21	AA	22	G
21	AA	31	G
21	AA	32	A
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	50	A
21	AA	51	A
21	AA	52	C
21	AA	53	A
21	AA	60	A
21	AA	61	G
21	AA	62	U
21	AA	64	G

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Mol	Chain	Res	Type
21	AA	65	A
21	AA	66	A
21	AA	67	C
21	AA	70	U
21	AA	71	A
21	AA	72	A
21	AA	73	C
21	AA	74	A
21	AA	75	G
21	AA	76	G
21	AA	77	A
21	AA	79	G
21	AA	82	G
21	AA	83	C
21	AA	85	U
21	AA	86	G
21	AA	87	C
21	AA	88	U
21	AA	89	U
21	AA	90	C
21	AA	91	U
21	AA	92	U
21	AA	94	G
21	AA	95	C
21	AA	96	U
21	AA	97	G
21	AA	98	A
21	AA	109	A
21	AA	110	C
21	AA	111	G
21	AA	116	A
21	AA	117	G
21	AA	119	A
21	AA	120	A
21	AA	121	U
21	AA	122	G
21	AA	129	A
21	AA	130	A
21	AA	131	A
21	AA	132	C
21	AA	138	G
21	AA	141	G

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Mol	Chain	Res	Type
21	AA	143	A
21	AA	159	G
21	AA	163	C
21	AA	173	U
21	AA	174	A
21	AA	175	C
21	AA	176	C
21	AA	177	G
21	AA	181	A
21	AA	182	A
21	AA	183	C
21	AA	184	G
21	AA	185	U
21	AA	197	A
21	AA	198	G
21	AA	199	A
21	AA	200	G
21	AA	205	A
21	AA	207	C
21	AA	209	U
21	AA	210	C
21	AA	211	G
21	AA	212	G
21	AA	213	G
21	AA	214	C
21	AA	215	C
21	AA	216	U
21	AA	232	G
21	AA	240	G
21	AA	243	A
21	AA	244	U
21	AA	245	U
21	AA	247	G
21	AA	248	C
21	AA	250	A
21	AA	251	G
21	AA	252	U
21	AA	253	A
21	AA	258	G
21	AA	266	G
21	AA	267	C
21	AA	268	U

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Mol	Chain	Res	Type
21	AA	269	C
21	AA	273	U
21	AA	274	A
21	AA	275	G
21	AA	276	G
21	AA	279	A
21	AA	280	C
21	AA	285	C
21	AA	289	G
21	AA	305	G
21	AA	306	A
21	AA	307	C
21	AA	315	A
21	AA	316	C
21	AA	320	A
21	AA	321	A
21	AA	328	C
21	AA	329	A
21	AA	330	C
21	AA	331	G
21	AA	332	G
21	AA	344	A
21	AA	345	C
21	AA	346	G
21	AA	347	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	356	A
21	AA	367	U
21	AA	368	U
21	AA	369	G
21	AA	370	C
21	AA	373	A
21	AA	374	A
21	AA	384	G
21	AA	388	G
21	AA	389	A
21	AA	392	C
21	AA	406	G
21	AA	411	A
21	AA	412	A

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Mol	Chain	Res	Type
21	AA	413	G
21	AA	414	A
21	AA	415	A
21	AA	421	U
21	AA	422	C
21	AA	423	G
21	AA	424	G
21	AA	428	G
21	AA	429	U
21	AA	430	A
21	AA	431	A
21	AA	439	U
21	AA	451	A
21	AA	452	A
21	AA	453	G
21	AA	454	G
21	AA	458	U
21	AA	459	A
21	AA	461	A
21	AA	462	G
21	AA	463	U
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	469	C
21	AA	478	A
21	AA	481	G
21	AA	482	A
21	AA	484	G
21	AA	485	U
21	AA	486	U
21	AA	487	A
21	AA	495	A
21	AA	496	A
21	AA	497	G
21	AA	498	A
21	AA	500	G
21	AA	501	C
21	AA	508	U
21	AA	509	A
21	AA	510	A
21	AA	511	C

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Mol	Chain	Res	Type
21	AA	512	U
21	AA	513	C
21	AA	517	G
21	AA	518	C
21	AA	519	C
21	AA	520	A
21	AA	527	G
21	AA	532	A
21	AA	533	A
21	AA	534	U
21	AA	535	A
21	AA	536	C
21	AA	537	G
21	AA	548	G
21	AA	549	C
21	AA	550	G
21	AA	559	A
21	AA	560	A
21	AA	562	U
21	AA	563	A
21	AA	564	C
21	AA	566	G
21	AA	567	G
21	AA	572	A
21	AA	573	A
21	AA	575	G
21	AA	576	C
21	AA	588	G
21	AA	595	A
21	AA	596	A
21	AA	597	G
21	AA	633	G
21	AA	642	A
21	AA	653	U
21	AA	654	G
21	AA	665	A
21	AA	688	G
21	AA	689	C
21	AA	700	G
21	AA	701	U
21	AA	702	A
21	AA	703	G

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Mol	Chain	Res	Type
21	AA	717	U
21	AA	718	A
21	AA	719	C
21	AA	721	G
21	AA	722	G
21	AA	723	U
21	AA	724	G
21	AA	725	G
21	AA	731	G
21	AA	734	G
21	AA	735	C
21	AA	748	G
21	AA	754	C
21	AA	755	G
21	AA	756	C
21	AA	776	G
21	AA	777	A
21	AA	792	A
21	AA	793	U
21	AA	794	A
21	AA	795	C
21	AA	802	A
21	AA	809	G
21	AA	812	G
21	AA	813	U
21	AA	814	A
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	818	G
21	AA	828	U
21	AA	832	G
21	AA	841	C
21	AA	843	U
21	AA	845	A
21	AA	846	G
21	AA	849	G
21	AA	855	U
21	AA	856	C
21	AA	859	G
21	AA	861	G
21	AA	870	U

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Mol	Chain	Res	Type
21	AA	871	U
21	AA	874	G
21	AA	875	U
21	AA	884	U
21	AA	885	G
21	AA	886	G
21	AA	889	A
21	AA	890	G
21	AA	910	C
21	AA	914	A
21	AA	915	A
21	AA	926	G
21	AA	927	G
21	AA	932	C
21	AA	934	C
21	AA	935	A
21	AA	936	C
21	AA	960	U
21	AA	961	U
21	AA	962	C
21	AA	966	G
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	972	C
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	982	U
21	AA	983	A
21	AA	992	U
21	AA	993	G
21	AA	994	A
21	AA	995	C
21	AA	1003	G
21	AA	1004	A
21	AA	1008	U
21	AA	1017	U
21	AA	1018	G
21	AA	1022	A
21	AA	1029	U

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Mol	Chain	Res	Type
21	AA	1030	U
21	AA	1031	C
21	AA	1032	G
21	AA	1033	G
21	AA	1034	G
21	AA	1037	C
21	AA	1046	A
21	AA	1047	G
21	AA	1050	G
21	AA	1051	C
21	AA	1052	U
21	AA	1053	G
21	AA	1054	C
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1067	A
21	AA	1068	G
21	AA	1069	C
21	AA	1085	U
21	AA	1086	U
21	AA	1087	G
21	AA	1088	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1102	A
21	AA	1103	C
21	AA	1104	G
21	AA	1113	C
21	AA	1124	G
21	AA	1125	U
21	AA	1126	U
21	AA	1127	G
21	AA	1128	C
21	AA	1129	C
21	AA	1130	A
21	AA	1131	G
21	AA	1133	G
21	AA	1135	U
21	AA	1137	C
21	AA	1138	G

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Mol	Chain	Res	Type
21	AA	1140	C
21	AA	1141	C
21	AA	1142	G
21	AA	1144	G
21	AA	1145	A
21	AA	1146	A
21	AA	1152	A
21	AA	1153	G
21	AA	1157	A
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1162	C
21	AA	1167	A
21	AA	1168	U
21	AA	1169	A
21	AA	1170	A
21	AA	1181	G
21	AA	1182	G
21	AA	1183	U
21	AA	1184	G
21	AA	1185	G
21	AA	1190	G
21	AA	1191	A
21	AA	1192	C
21	AA	1193	G
21	AA	1196	A
21	AA	1197	A
21	AA	1198	G
21	AA	1200	C
21	AA	1201	A
21	AA	1202	U
21	AA	1203	C
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1215	G
21	AA	1216	A
21	AA	1224	U
21	AA	1225	A
21	AA	1226	C

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Mol	Chain	Res	Type
21	AA	1227	A
21	AA	1228	C
21	AA	1229	A
21	AA	1238	A
21	AA	1239	A
21	AA	1240	U
21	AA	1241	G
21	AA	1242	G
21	AA	1256	A
21	AA	1257	A
21	AA	1258	G
21	AA	1259	C
21	AA	1278	G
21	AA	1279	G
21	AA	1280	A
21	AA	1282	C
21	AA	1283	U
21	AA	1284	C
21	AA	1285	A
21	AA	1286	U
21	AA	1287	A
21	AA	1288	A
21	AA	1289	A
21	AA	1293	C
21	AA	1297	G
21	AA	1298	U
21	AA	1299	A
21	AA	1303	C
21	AA	1304	G
21	AA	1305	G
21	AA	1308	U
21	AA	1315	U
21	AA	1316	G
21	AA	1317	C
21	AA	1318	A
21	AA	1320	C
21	AA	1321	U
21	AA	1322	C
21	AA	1323	G
21	AA	1324	A
21	AA	1332	A
21	AA	1333	A

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Mol	Chain	Res	Type
21	AA	1336	C
21	AA	1337	G
21	AA	1338	G
21	AA	1345	U
21	AA	1346	A
21	AA	1348	U
21	AA	1349	A
21	AA	1353	G
21	AA	1362	A
21	AA	1363	A
21	AA	1364	U
21	AA	1365	G
21	AA	1366	C
21	AA	1371	G
21	AA	1380	U
21	AA	1381	U
21	AA	1382	C
21	AA	1394	A
21	AA	1395	C
21	AA	1396	A
21	AA	1397	C
21	AA	1398	A
21	AA	1399	C
21	AA	1400	C
21	AA	1402	C
21	AA	1406	U
21	AA	1411	C
21	AA	1413	A
21	AA	1432	G
21	AA	1433	A
21	AA	1434	A
21	AA	1441	A
21	AA	1446	A
21	AA	1447	A
21	AA	1448	C
21	AA	1451	U
21	AA	1452	C
21	AA	1453	G
21	AA	1454	G
21	AA	1455	G
21	AA	1469	C
21	AA	1470	U

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Mol	Chain	Res	Type
21	AA	1476	A
21	AA	1492	A
21	AA	1494	G
21	AA	1497	G
21	AA	1499	A
21	AA	1502	A
21	AA	1503	A
21	AA	1505	G
21	AA	1506	U
21	AA	1507	A
21	AA	1508	A
21	AA	1517	G
21	AA	1528	U
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
21	AA	1532	U
22	BA	10	A
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	27	G
22	BA	28	A
22	BA	33	C
22	BA	34	U
22	BA	35	G
22	BA	42	A
22	BA	43	G
22	BA	45	G
22	BA	46	G
22	BA	49	A
22	BA	50	U
22	BA	52	A
22	BA	53	A
22	BA	61	C
22	BA	63	A
22	BA	70	G
22	BA	71	A
22	BA	73	A
22	BA	74	A
22	BA	75	G
22	BA	76	C

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Mol	Chain	Res	Type
22	BA	80	G
22	BA	82	U
22	BA	84	A
22	BA	85	G
22	BA	92	U
22	BA	93	G
22	BA	101	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	126	A
22	BA	127	A
22	BA	131	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	149	A
22	BA	162	U
22	BA	163	C
22	BA	164	C
22	BA	165	A
22	BA	177	G
22	BA	178	G
22	BA	181	A
22	BA	186	G
22	BA	188	G
22	BA	196	A
22	BA	197	A
22	BA	199	A
22	BA	200	U
22	BA	204	A
22	BA	205	G
22	BA	206	U
22	BA	207	A
22	BA	215	G

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Mol	Chain	Res	Type
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	223	A
22	BA	228	C
22	BA	229	C
22	BA	230	G
22	BA	231	A
22	BA	232	G
22	BA	233	A
22	BA	241	A
22	BA	242	G
22	BA	243	U
22	BA	244	A
22	BA	248	G
22	BA	249	C
22	BA	250	G
22	BA	255	A
22	BA	256	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
22	BA	274	C
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	285	G
22	BA	299	A
22	BA	301	G
22	BA	302	C
22	BA	303	G
22	BA	311	A
22	BA	312	G
22	BA	313	G
22	BA	322	A
22	BA	323	C
22	BA	329	G
22	BA	330	A

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Mol	Chain	Res	Type
22	BA	331	C
22	BA	345	A
22	BA	346	A
22	BA	347	A
22	BA	349	U
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	371	A
22	BA	372	G
22	BA	383	C
22	BA	386	G
22	BA	387	U
22	BA	388	G
22	BA	389	G
22	BA	390	U
22	BA	391	A
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	421	C
22	BA	422	A
22	BA	424	G
22	BA	435	C
22	BA	436	C
22	BA	443	A
22	BA	449	A
22	BA	452	G
22	BA	454	A
22	BA	455	C
22	BA	457	A
22	BA	459	U
22	BA	460	A
22	BA	475	C
22	BA	476	G
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A

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Mol	Chain	Res	Type
22	BA	483	A
22	BA	489	G
22	BA	490	C
22	BA	491	G
22	BA	492	A
22	BA	504	A
22	BA	505	A
22	BA	506	G
22	BA	507	A
22	BA	508	A
22	BA	509	C
22	BA	510	C
22	BA	512	G
22	BA	513	A
22	BA	514	A
22	BA	521	U
22	BA	528	A
22	BA	529	A
22	BA	530	G
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	534	U
22	BA	541	A
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	556	A
22	BA	563	A
22	BA	571	U
22	BA	572	A
22	BA	573	U
22	BA	574	A
22	BA	575	A
22	BA	586	A
22	BA	587	C
22	BA	588	U
22	BA	589	U
22	BA	604	G

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Mol	Chain	Res	Type
22	BA	605	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	616	A
22	BA	617	G
22	BA	619	G
22	BA	621	A
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	638	G
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	668	A
22	BA	670	A
22	BA	685	A
22	BA	686	U
22	BA	687	C
22	BA	688	U
22	BA	705	A
22	BA	706	A
22	BA	713	G
22	BA	714	U
22	BA	715	A
22	BA	717	C
22	BA	722	A
22	BA	727	A
22	BA	728	G
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	748	G
22	BA	752	A

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Mol	Chain	Res	Type
22	BA	753	A
22	BA	754	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	775	G
22	BA	776	G
22	BA	777	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	806	C
22	BA	811	U
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	829	A
22	BA	830	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	859	G
22	BA	860	U
22	BA	861	A
22	BA	865	C
22	BA	866	A
22	BA	869	G
22	BA	876	C
22	BA	878	A
22	BA	896	A
22	BA	897	C
22	BA	910	A
22	BA	913	U
22	BA	914	G
22	BA	915	C

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Mol	Chain	Res	Type
22	BA	916	G
22	BA	919	U
22	BA	932	U
22	BA	933	A
22	BA	934	U
22	BA	941	A
22	BA	945	A
22	BA	946	C
22	BA	957	C
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	962	G
22	BA	968	C
22	BA	973	A
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	989	G
22	BA	990	A
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1005	C
22	BA	1008	A
22	BA	1009	A
22	BA	1010	A
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1017	G
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1025	G
22	BA	1026	G
22	BA	1027	A
22	BA	1033	U
22	BA	1034	G

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Mol	Chain	Res	Type
22	BA	1043	C
22	BA	1044	C
22	BA	1045	C
22	BA	1046	A
22	BA	1047	G
22	BA	1048	A
22	BA	1049	C
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	1078	U
22	BA	1082	U
22	BA	1083	U
22	BA	1084	A
22	BA	1088	A
22	BA	1090	A
22	BA	1091	G
22	BA	1092	C
22	BA	1098	A
22	BA	1111	A
22	BA	1112	G
22	BA	1113	U
22	BA	1117	C
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
22	BA	1131	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1142	A

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Mol	Chain	Res	Type
22	BA	1151	A
22	BA	1156	A
22	BA	1157	G
22	BA	1158	C
22	BA	1170	C
22	BA	1172	C
22	BA	1175	A
22	BA	1176	U
22	BA	1180	U
22	BA	1181	U
22	BA	1185	G
22	BA	1186	G
22	BA	1190	G
22	BA	1204	A
22	BA	1205	A
22	BA	1206	G
22	BA	1207	C
22	BA	1210	G
22	BA	1211	C
22	BA	1212	G
22	BA	1213	A
22	BA	1236	G
22	BA	1237	A
22	BA	1238	G
22	BA	1247	A
22	BA	1248	G
22	BA	1249	U
22	BA	1250	G
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	1275	A
22	BA	1276	A
22	BA	1277	G
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1290	C
22	BA	1300	G

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Mol	Chain	Res	Type
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1320	C
22	BA	1321	A
22	BA	1322	A
22	BA	1324	G
22	BA	1325	U
22	BA	1329	U
22	BA	1330	C
22	BA	1331	G
22	BA	1333	G
22	BA	1336	A
22	BA	1341	G
22	BA	1343	G
22	BA	1344	U
22	BA	1349	C
22	BA	1352	U
22	BA	1359	A
22	BA	1360	G
22	BA	1363	C
22	BA	1365	A
22	BA	1368	G
22	BA	1371	G
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1387	A
22	BA	1395	A
22	BA	1397	U
22	BA	1398	C
22	BA	1399	C
22	BA	1416	G
22	BA	1417	C
22	BA	1418	G
22	BA	1419	A
22	BA	1420	A
22	BA	1421	G
22	BA	1425	G
22	BA	1427	A
22	BA	1428	C

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Mol	Chain	Res	Type
22	BA	1429	G
22	BA	1430	G
22	BA	1434	A
22	BA	1440	U
22	BA	1441	G
22	BA	1451	C
22	BA	1452	G
22	BA	1453	A
22	BA	1455	G
22	BA	1459	G
22	BA	1460	U
22	BA	1461	C
22	BA	1468	U
22	BA	1475	G
22	BA	1476	U
22	BA	1477	A
22	BA	1482	G
22	BA	1490	A
22	BA	1491	G
22	BA	1492	G
22	BA	1494	A
22	BA	1495	A
22	BA	1497	U
22	BA	1498	C
22	BA	1499	C
22	BA	1504	A
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1511	G
22	BA	1512	C
22	BA	1515	A
22	BA	1522	A
22	BA	1523	U
22	BA	1533	C
22	BA	1535	A
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1539	U
22	BA	1540	G
22	BA	1554	U

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Mol	Chain	Res	Type
22	BA	1555	G
22	BA	1556	C
22	BA	1558	C
22	BA	1559	U
22	BA	1565	C
22	BA	1566	A
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	1602	U
22	BA	1603	A
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A
22	BA	1615	C
22	BA	1616	A
22	BA	1627	G
22	BA	1634	A
22	BA	1635	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1653	G
22	BA	1654	A
22	BA	1655	A
22	BA	1674	G
22	BA	1675	C
22	BA	1677	A
22	BA	1682	G
22	BA	1683	U
22	BA	1695	G
22	BA	1696	G
22	BA	1698	A
22	BA	1699	G
22	BA	1707	G
22	BA	1713	A
22	BA	1714	U
22	BA	1715	G

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Mol	Chain	Res	Type
22	BA	1716	U
22	BA	1717	A
22	BA	1723	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1733	G
22	BA	1734	G
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1744	A
22	BA	1758	U
22	BA	1759	A
22	BA	1760	C
22	BA	1764	C
22	BA	1773	A
22	BA	1780	A
22	BA	1781	U
22	BA	1782	U
22	BA	1785	A
22	BA	1786	A
22	BA	1787	A
22	BA	1788	C
22	BA	1791	A
22	BA	1799	G
22	BA	1800	C
22	BA	1801	A
22	BA	1808	A
22	BA	1809	A
22	BA	1815	A
22	BA	1816	C
22	BA	1817	G
22	BA	1819	A
22	BA	1827	U
22	BA	1829	A
22	BA	1848	A
22	BA	1849	G
22	BA	1858	A
22	BA	1859	U
22	BA	1865	U
22	BA	1866	A

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Mol	Chain	Res	Type
22	BA	1867	G
22	BA	1869	G
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1885	A
22	BA	1886	U
22	BA	1897	G
22	BA	1898	U
22	BA	1900	A
22	BA	1901	A
22	BA	1906	G
22	BA	1907	G
22	BA	1913	A
22	BA	1914	C
22	BA	1918	A
22	BA	1919	A
22	BA	1920	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1942	C
22	BA	1943	U
22	BA	1944	U
22	BA	1945	G
22	BA	1946	U
22	BA	1954	G
22	BA	1955	U
22	BA	1960	A
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1966	A
22	BA	1967	C
22	BA	1968	G

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Mol	Chain	Res	Type
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1981	A
22	BA	1982	U
22	BA	1986	C
22	BA	1991	U
22	BA	1993	U
22	BA	1996	C
22	BA	1997	C
22	BA	2021	C
22	BA	2022	U
22	BA	2023	C
22	BA	2024	G
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2036	C
22	BA	2043	C
22	BA	2049	G
22	BA	2051	A
22	BA	2052	A
22	BA	2053	G
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2064	C
22	BA	2066	C
22	BA	2067	G
22	BA	2068	U
22	BA	2069	G
22	BA	2092	U
22	BA	2093	G
22	BA	2104	C
22	BA	2106	U
22	BA	2107	G
22	BA	2109	U

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Mol	Chain	Res	Type
22	BA	2110	G
22	BA	2134	A
22	BA	2135	A
22	BA	2136	G
22	BA	2137	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	2183	A
22	BA	2184	A
22	BA	2185	U
22	BA	2187	U
22	BA	2197	U
22	BA	2198	A
22	BA	2199	A
22	BA	2200	C
22	BA	2203	U
22	BA	2204	G
22	BA	2210	U
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2215	C
22	BA	2225	A
22	BA	2226	C
22	BA	2233	U
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2249	U
22	BA	2250	G
22	BA	2258	C

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Mol	Chain	Res	Type
22	BA	2259	U
22	BA	2267	A
22	BA	2268	A
22	BA	2273	A
22	BA	2275	C
22	BA	2276	G
22	BA	2278	A
22	BA	2283	C
22	BA	2284	A
22	BA	2286	G
22	BA	2287	A
22	BA	2297	A
22	BA	2305	U
22	BA	2307	G
22	BA	2308	G
22	BA	2309	A
22	BA	2310	C
22	BA	2312	U
22	BA	2317	A
22	BA	2319	G
22	BA	2320	U
22	BA	2321	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2328	A
22	BA	2333	A
22	BA	2334	U
22	BA	2335	A
22	BA	2336	A
22	BA	2337	G
22	BA	2338	C
22	BA	2344	U
22	BA	2345	G
22	BA	2347	C
22	BA	2348	U
22	BA	2350	C
22	BA	2358	A
22	BA	2361	G
22	BA	2382	G
22	BA	2383	G
22	BA	2384	U

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Mol	Chain	Res	Type
22	BA	2385	C
22	BA	2386	A
22	BA	2389	G
22	BA	2391	G
22	BA	2392	A
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2407	A
22	BA	2408	U
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2427	C
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2439	A
22	BA	2440	C
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2458	G
22	BA	2459	A
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2508	G
22	BA	2517	C
22	BA	2518	A
22	BA	2529	G
22	BA	2542	A
22	BA	2543	G

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Mol	Chain	Res	Type
22	BA	2554	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G
22	BA	2609	U
22	BA	2610	C
22	BA	2611	C
22	BA	2612	C
22	BA	2613	U
22	BA	2614	A
22	BA	2615	U
22	BA	2616	C
22	BA	2629	U
22	BA	2630	G
22	BA	2638	G
22	BA	2639	A
22	BA	2645	G
22	BA	2646	C
22	BA	2654	A
22	BA	2655	G
22	BA	2656	U
22	BA	2657	A
22	BA	2661	G
22	BA	2663	G
22	BA	2681	C
22	BA	2682	A
22	BA	2689	U
22	BA	2690	U
22	BA	2712	C
22	BA	2713	U
22	BA	2714	G
22	BA	2716	C
22	BA	2724	U
22	BA	2725	A
22	BA	2726	A
22	BA	2727	A
22	BA	2728	U

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Mol	Chain	Res	Type
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2748	A
22	BA	2750	A
22	BA	2751	G
22	BA	2752	C
22	BA	2753	A
22	BA	2756	U
22	BA	2757	A
22	BA	2758	A
22	BA	2765	A
22	BA	2771	C
22	BA	2777	G
22	BA	2778	A
22	BA	2779	U
22	BA	2781	A
22	BA	2782	G
22	BA	2790	U
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2802	G
22	BA	2812	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2832	U
22	BA	2833	U
22	BA	2835	A
22	BA	2836	U
22	BA	2849	U
22	BA	2850	A
22	BA	2866	U
22	BA	2867	G
22	BA	2868	A
22	BA	2869	G
22	BA	2874	C
22	BA	2879	A

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Mol	Chain	Res	Type
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2886	A
22	BA	2894	G
22	BA	2895	G
23	BB	12	C
23	BB	13	G
23	BB	14	U
23	BB	15	A
23	BB	16	G
23	BB	17	C
23	BB	24	G
23	BB	25	U
23	BB	26	C
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	42	C
23	BB	43	C
23	BB	44	G
23	BB	45	A
23	BB	46	A
23	BB	52	A
23	BB	53	A
23	BB	56	G
23	BB	57	A
23	BB	58	A
23	BB	66	A
23	BB	67	G
23	BB	68	C
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	98	G
23	BB	99	A
23	BB	108	A
23	BB	109	A
53	CA	6	G
53	CA	7	A

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Mol	Chain	Res	Type
53	CA	8	A
53	CA	9	G
53	CA	10	A
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	16	A
53	CA	30	U
53	CA	31	G
53	CA	32	A
53	CA	33	A
53	CA	39	G
53	CA	40	C
53	CA	47	C
53	CA	48	C
53	CA	51	A
53	CA	52	C
53	CA	53	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	74	A
53	CA	76	G
53	CA	77	A
53	CA	80	A
53	CA	81	A
53	CA	82	G
53	CA	83	C
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

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Mol	Chain	Res	Type
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	98	A
53	CA	101	A
53	CA	110	C
53	CA	115	G
53	CA	116	A
53	CA	117	G
53	CA	120	A
53	CA	121	U
53	CA	122	G
53	CA	130	A
53	CA	131	A
53	CA	132	C
53	CA	133	U
53	CA	139	A
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	174	A
53	CA	175	C
53	CA	177	G
53	CA	178	C
53	CA	181	A
53	CA	182	A
53	CA	195	A
53	CA	198	G
53	CA	199	A
53	CA	200	G
53	CA	201	G
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

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Mol	Chain	Res	Type
53	CA	213	G
53	CA	214	C
53	CA	239	U
53	CA	240	G
53	CA	241	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	249	U
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	276	G
53	CA	277	C
53	CA	280	C
53	CA	282	A
53	CA	283	U
53	CA	289	G
53	CA	298	A
53	CA	301	G
53	CA	305	G
53	CA	306	A
53	CA	315	A
53	CA	316	C
53	CA	317	U
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	344	A

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Mol	Chain	Res	Type
53	CA	345	C
53	CA	346	G
53	CA	347	G
53	CA	348	G
53	CA	349	A
53	CA	352	C
53	CA	353	A
53	CA	354	G
53	CA	357	G
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	375	U
53	CA	381	C
53	CA	382	A
53	CA	383	A
53	CA	384	G
53	CA	389	A
53	CA	390	U
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	428	G
53	CA	429	U
53	CA	430	A
53	CA	431	A
53	CA	435	A
53	CA	436	C
53	CA	452	A

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Mol	Chain	Res	Type
53	CA	453	G
53	CA	456	A
53	CA	457	G
53	CA	458	U
53	CA	459	A
53	CA	460	A
53	CA	461	A
53	CA	463	U
53	CA	464	U
53	CA	465	A
53	CA	466	A
53	CA	467	U
53	CA	468	A
53	CA	469	C
53	CA	474	G
53	CA	476	U
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	498	A
53	CA	499	A
53	CA	500	G
53	CA	501	C
53	CA	508	U
53	CA	509	A
53	CA	510	A
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	514	C
53	CA	517	G
53	CA	518	C
53	CA	519	C
53	CA	520	A

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Mol	Chain	Res	Type
53	CA	527	G
53	CA	530	G
53	CA	532	A
53	CA	533	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	537	G
53	CA	548	G
53	CA	549	C
53	CA	559	A
53	CA	560	A
53	CA	562	U
53	CA	563	A
53	CA	564	C
53	CA	565	U
53	CA	566	G
53	CA	567	G
53	CA	568	G
53	CA	572	A
53	CA	573	A
53	CA	575	G
53	CA	576	C
53	CA	577	G
53	CA	578	C
53	CA	596	A
53	CA	597	G
53	CA	610	U
53	CA	616	G
53	CA	642	A
53	CA	643	C
53	CA	644	U
53	CA	653	U
53	CA	654	G
53	CA	655	A
53	CA	665	A
53	CA	684	U
53	CA	688	G
53	CA	689	C
53	CA	695	A
53	CA	700	G
53	CA	701	U

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Mol	Chain	Res	Type
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	733	G
53	CA	734	G
53	CA	735	C
53	CA	748	G
53	CA	754	C
53	CA	755	G
53	CA	756	C
53	CA	760	G
53	CA	777	A
53	CA	781	A
53	CA	782	A
53	CA	785	G
53	CA	787	A
53	CA	792	A
53	CA	793	U
53	CA	794	A
53	CA	795	C
53	CA	799	G
53	CA	803	G
53	CA	804	U
53	CA	810	C
53	CA	812	G
53	CA	815	A
53	CA	816	A
53	CA	817	C
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	822	U
53	CA	828	U
53	CA	829	G
53	CA	841	C
53	CA	842	U

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Mol	Chain	Res	Type
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	871	U
53	CA	874	G
53	CA	875	U
53	CA	880	C
53	CA	885	G
53	CA	889	A
53	CA	890	G
53	CA	891	U
53	CA	892	A
53	CA	914	A
53	CA	915	A
53	CA	926	G
53	CA	927	G
53	CA	934	C
53	CA	935	A
53	CA	936	C
53	CA	937	A
53	CA	942	G
53	CA	945	G
53	CA	960	U
53	CA	961	U
53	CA	962	C
53	CA	963	G
53	CA	966	G
53	CA	968	A
53	CA	969	A
53	CA	972	C
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	979	C
53	CA	982	U

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Mol	Chain	Res	Type
53	CA	983	A
53	CA	984	C
53	CA	985	C
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	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	1034	G
53	CA	1036	A
53	CA	1037	C
53	CA	1049	U
53	CA	1050	G
53	CA	1051	C
53	CA	1052	U
53	CA	1053	G
53	CA	1054	C
53	CA	1055	A
53	CA	1056	U
53	CA	1064	G
53	CA	1065	U
53	CA	1066	C
53	CA	1067	A
53	CA	1068	G
53	CA	1085	U
53	CA	1086	U
53	CA	1087	G
53	CA	1088	G

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Mol	Chain	Res	Type
53	CA	1094	G
53	CA	1095	U
53	CA	1101	A
53	CA	1102	A
53	CA	1103	C
53	CA	1124	G
53	CA	1125	U
53	CA	1127	G
53	CA	1128	C
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	1153	G
53	CA	1158	C
53	CA	1159	U
53	CA	1160	G
53	CA	1161	C
53	CA	1169	A
53	CA	1181	G
53	CA	1183	U
53	CA	1184	G
53	CA	1185	G
53	CA	1190	G
53	CA	1191	A
53	CA	1192	C
53	CA	1193	G
53	CA	1196	A
53	CA	1197	A
53	CA	1198	G

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Mol	Chain	Res	Type
53	CA	1199	U
53	CA	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1203	C
53	CA	1212	U
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	1227	A
53	CA	1228	C
53	CA	1229	A
53	CA	1230	C
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	1244	G
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	1284	C
53	CA	1285	A
53	CA	1286	U
53	CA	1287	A

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Mol	Chain	Res	Type
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	1305	G
53	CA	1312	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	1346	A
53	CA	1348	U
53	CA	1349	A
53	CA	1350	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	1379	G
53	CA	1381	U
53	CA	1382	C
53	CA	1394	A
53	CA	1395	C
53	CA	1396	A
53	CA	1397	C
53	CA	1398	A
53	CA	1399	C
53	CA	1400	C
53	CA	1411	C
53	CA	1429	A
53	CA	1432	G
53	CA	1441	A
53	CA	1446	A

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Mol	Chain	Res	Type
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1450	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	1499	A
53	CA	1500	A
53	CA	1502	A
53	CA	1503	A
53	CA	1505	G
53	CA	1506	U
53	CA	1507	A
53	CA	1508	A
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1528	U
53	CA	1529	G
53	CA	1530	G
53	CA	1531	A
53	CA	1534	A
22	DA	12	U
22	DA	13	A
22	DA	14	A
22	DA	15	G
22	DA	27	G
22	DA	28	A
22	DA	29	U
22	DA	34	U
22	DA	35	G
22	DA	36	G
22	DA	37	C
22	DA	39	G
22	DA	46	G
22	DA	49	A

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Mol	Chain	Res	Type
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	54	G
22	DA	55	G
22	DA	61	C
22	DA	62	U
22	DA	70	G
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	92	U
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
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	122	G
22	DA	123	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

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Mol	Chain	Res	Type
22	DA	143	C
22	DA	144	A
22	DA	155	A
22	DA	156	A
22	DA	160	A
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	165	A
22	DA	166	U
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	198	C
22	DA	199	A
22	DA	204	A
22	DA	205	G
22	DA	206	U
22	DA	207	A
22	DA	208	C
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	225	C
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
22	DA	241	A
22	DA	242	G
22	DA	244	A
22	DA	245	G
22	DA	248	G
22	DA	249	C

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Mol	Chain	Res	Type
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	274	C
22	DA	277	G
22	DA	279	A
22	DA	280	U
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	301	G
22	DA	302	C
22	DA	303	G
22	DA	304	U
22	DA	311	A
22	DA	312	G
22	DA	313	G
22	DA	314	C
22	DA	315	G
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	351	C
22	DA	353	C
22	DA	354	A
22	DA	362	A

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Mol	Chain	Res	Type
22	DA	367	G
22	DA	370	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	375	G
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	391	A
22	DA	392	U
22	DA	395	U
22	DA	396	G
22	DA	397	U
22	DA	398	C
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	421	C
22	DA	422	A
22	DA	423	A
22	DA	424	G
22	DA	425	G
22	DA	430	A
22	DA	436	C
22	DA	437	U
22	DA	438	G
22	DA	442	G
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A

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Mol	Chain	Res	Type
22	DA	449	A
22	DA	450	G
22	DA	451	U
22	DA	455	C
22	DA	457	A
22	DA	459	U
22	DA	460	A
22	DA	461	C
22	DA	475	C
22	DA	476	G
22	DA	477	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	482	A
22	DA	483	A
22	DA	484	C
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	493	G
22	DA	498	G
22	DA	502	A
22	DA	504	A
22	DA	505	A
22	DA	506	G
22	DA	507	A
22	DA	509	C
22	DA	510	C
22	DA	511	U
22	DA	512	G
22	DA	527	C
22	DA	528	A
22	DA	529	A
22	DA	530	G
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	534	U
22	DA	544	C
22	DA	546	U
22	DA	547	A

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Mol	Chain	Res	Type
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	562	U
22	DA	563	A
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	576	U
22	DA	577	G
22	DA	586	A
22	DA	589	U
22	DA	590	A
22	DA	592	A
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	606	U
22	DA	613	A
22	DA	614	A
22	DA	615	U
22	DA	616	A
22	DA	617	G
22	DA	618	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	648	G
22	DA	649	G
22	DA	653	U
22	DA	654	A
22	DA	655	A

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Mol	Chain	Res	Type
22	DA	656	G
22	DA	657	U
22	DA	662	G
22	DA	664	G
22	DA	669	G
22	DA	671	C
22	DA	672	C
22	DA	673	C
22	DA	686	U
22	DA	687	C
22	DA	688	U
22	DA	695	G
22	DA	699	A
22	DA	705	A
22	DA	706	A
22	DA	711	G
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	739	A
22	DA	740	C
22	DA	741	U
22	DA	745	G
22	DA	746	U
22	DA	747	U
22	DA	748	G
22	DA	749	A
22	DA	751	A
22	DA	753	A
22	DA	754	U
22	DA	755	U
22	DA	757	G
22	DA	763	G
22	DA	764	A
22	DA	765	C
22	DA	766	U
22	DA	775	G
22	DA	776	G
22	DA	777	G

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Mol	Chain	Res	Type
22	DA	778	G
22	DA	782	A
22	DA	783	A
22	DA	784	G
22	DA	785	G
22	DA	788	A
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	794	A
22	DA	795	C
22	DA	800	A
22	DA	801	G
22	DA	802	A
22	DA	803	U
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	829	A
22	DA	830	G
22	DA	831	G
22	DA	832	U
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	862	G
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

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Mol	Chain	Res	Type
22	DA	910	A
22	DA	912	C
22	DA	913	U
22	DA	914	G
22	DA	915	C
22	DA	916	G
22	DA	917	A
22	DA	919	U
22	DA	922	C
22	DA	932	U
22	DA	933	A
22	DA	934	U
22	DA	941	A
22	DA	946	C
22	DA	947	A
22	DA	948	C
22	DA	953	G
22	DA	958	U
22	DA	959	A
22	DA	960	A
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	976	G
22	DA	977	G
22	DA	982	C
22	DA	983	A
22	DA	985	C
22	DA	990	A
22	DA	991	C
22	DA	992	C
22	DA	995	C
22	DA	996	A
22	DA	1005	C
22	DA	1008	A
22	DA	1009	A
22	DA	1010	A
22	DA	1011	G
22	DA	1012	U

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Mol	Chain	Res	Type
22	DA	1013	C
22	DA	1014	A
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	1034	G
22	DA	1035	U
22	DA	1044	C
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	1061	U
22	DA	1063	G
22	DA	1064	C
22	DA	1066	U
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	1088	A
22	DA	1089	A

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Mol	Chain	Res	Type
22	DA	1090	A
22	DA	1091	G
22	DA	1092	C
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A
22	DA	1111	A
22	DA	1112	G
22	DA	1113	U
22	DA	1114	C
22	DA	1115	G
22	DA	1126	A
22	DA	1127	A
22	DA	1128	G
22	DA	1129	A
22	DA	1130	U
22	DA	1132	U
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1137	G
22	DA	1139	G
22	DA	1142	A
22	DA	1144	A
22	DA	1145	C
22	DA	1156	A
22	DA	1157	G
22	DA	1158	C
22	DA	1159	U
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	1208	C
22	DA	1211	C
22	DA	1213	A

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Mol	Chain	Res	Type
22	DA	1214	A
22	DA	1227	G
22	DA	1231	U
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	1257	C
22	DA	1262	A
22	DA	1265	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	A
22	DA	1269	A
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	1277	G
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	1292	G
22	DA	1300	G
22	DA	1301	A
22	DA	1303	G
22	DA	1304	A
22	DA	1305	C
22	DA	1311	G

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Mol	Chain	Res	Type
22	DA	1313	U
22	DA	1314	C
22	DA	1315	C
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1328	A
22	DA	1329	U
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G
22	DA	1333	G
22	DA	1334	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1345	C
22	DA	1346	G
22	DA	1347	A
22	DA	1349	C
22	DA	1352	U
22	DA	1365	A
22	DA	1368	G
22	DA	1374	G
22	DA	1376	C
22	DA	1379	U
22	DA	1382	G
22	DA	1383	A
22	DA	1385	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

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Mol	Chain	Res	Type
22	DA	1404	C
22	DA	1416	G
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1421	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1439	A
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	1457	U
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1470	A
22	DA	1477	A
22	DA	1478	G
22	DA	1479	G
22	DA	1482	G
22	DA	1483	G
22	DA	1490	A
22	DA	1491	G
22	DA	1492	G
22	DA	1493	C
22	DA	1494	A
22	DA	1497	U
22	DA	1498	C
22	DA	1499	C
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	1512	C

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Mol	Chain	Res	Type
22	DA	1520	U
22	DA	1522	A
22	DA	1524	G
22	DA	1528	A
22	DA	1530	G
22	DA	1531	C
22	DA	1532	A
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	1540	G
22	DA	1541	C
22	DA	1555	G
22	DA	1556	C
22	DA	1557	C
22	DA	1558	C
22	DA	1559	U
22	DA	1560	G
22	DA	1561	C
22	DA	1565	C
22	DA	1566	A
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A
22	DA	1570	A
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1603	A
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1611	C
22	DA	1612	C
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1619	G

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Mol	Chain	Res	Type
22	DA	1620	G
22	DA	1626	A
22	DA	1635	A
22	DA	1636	U
22	DA	1637	A
22	DA	1640	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1650	A
22	DA	1653	G
22	DA	1654	A
22	DA	1655	A
22	DA	1663	G
22	DA	1667	G
22	DA	1668	A
22	DA	1669	A
22	DA	1670	C
22	DA	1674	G
22	DA	1675	C
22	DA	1676	A
22	DA	1681	G
22	DA	1682	G
22	DA	1683	U
22	DA	1684	G
22	DA	1694	C
22	DA	1695	G
22	DA	1696	G
22	DA	1697	G
22	DA	1698	A
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1707	G
22	DA	1713	A
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1718	G
22	DA	1722	A
22	DA	1723	G

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Mol	Chain	Res	Type
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
22	DA	1739	A
22	DA	1740	G
22	DA	1758	U
22	DA	1759	A
22	DA	1760	C
22	DA	1764	C
22	DA	1773	A
22	DA	1776	G
22	DA	1780	A
22	DA	1781	U
22	DA	1782	U
22	DA	1783	A
22	DA	1784	A
22	DA	1785	A
22	DA	1786	A
22	DA	1787	A
22	DA	1788	C
22	DA	1800	C
22	DA	1802	A
22	DA	1803	A
22	DA	1804	C
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1815	A
22	DA	1816	C
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1824	G
22	DA	1828	G

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Mol	Chain	Res	Type
22	DA	1829	A
22	DA	1838	C
22	DA	1839	G
22	DA	1840	G
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1858	A
22	DA	1866	A
22	DA	1867	G
22	DA	1869	G
22	DA	1870	C
22	DA	1873	G
22	DA	1876	A
22	DA	1877	A
22	DA	1884	G
22	DA	1889	A
22	DA	1900	A
22	DA	1901	A
22	DA	1902	C
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1915	U
22	DA	1916	A
22	DA	1919	A
22	DA	1920	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1931	U
22	DA	1932	A
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	1946	U

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Mol	Chain	Res	Type
22	DA	1955	U
22	DA	1956	U
22	DA	1962	C
22	DA	1963	U
22	DA	1964	G
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1968	G
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1980	G
22	DA	1981	A
22	DA	1982	U
22	DA	1983	G
22	DA	1991	U
22	DA	1993	U
22	DA	1994	C
22	DA	1996	C
22	DA	1997	C
22	DA	1998	A
22	DA	2018	G
22	DA	2020	A
22	DA	2021	C
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	2036	C
22	DA	2037	A
22	DA	2043	C
22	DA	2052	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G

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Mol	Chain	Res	Type
22	DA	2062	A
22	DA	2063	C
22	DA	2064	C
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	2095	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	2137	U
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	2149	U
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	2198	A
22	DA	2199	A
22	DA	2200	C

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Mol	Chain	Res	Type
22	DA	2203	U
22	DA	2204	G
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	2217	G
22	DA	2225	A
22	DA	2226	C
22	DA	2227	A
22	DA	2238	G
22	DA	2239	G
22	DA	2240	U
22	DA	2242	G
22	DA	2249	U
22	DA	2250	G
22	DA	2259	U
22	DA	2260	C
22	DA	2266	A
22	DA	2267	A
22	DA	2268	A
22	DA	2275	C
22	DA	2276	G
22	DA	2277	G
22	DA	2279	G
22	DA	2283	C
22	DA	2284	A
22	DA	2286	G
22	DA	2287	A
22	DA	2289	G
22	DA	2290	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

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Mol	Chain	Res	Type
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	2337	G
22	DA	2338	C
22	DA	2339	C
22	DA	2345	G
22	DA	2347	C
22	DA	2348	U
22	DA	2349	G
22	DA	2357	G
22	DA	2358	A
22	DA	2361	G
22	DA	2382	G
22	DA	2383	G
22	DA	2384	U
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2401	U
22	DA	2402	U
22	DA	2403	C
22	DA	2404	U
22	DA	2405	G
22	DA	2406	A
22	DA	2407	A
22	DA	2409	G
22	DA	2410	G
22	DA	2423	U
22	DA	2424	C
22	DA	2426	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A

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Mol	Chain	Res	Type
22	DA	2431	U
22	DA	2435	A
22	DA	2439	A
22	DA	2440	C
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2450	A
22	DA	2451	A
22	DA	2457	U
22	DA	2459	A
22	DA	2460	U
22	DA	2475	C
22	DA	2476	A
22	DA	2490	G
22	DA	2491	U
22	DA	2492	U
22	DA	2493	U
22	DA	2494	G
22	DA	2498	C
22	DA	2499	C
22	DA	2500	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2507	C
22	DA	2513	A
22	DA	2518	A
22	DA	2519	U
22	DA	2520	C
22	DA	2521	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	2567	G
22	DA	2573	C
22	DA	2578	G

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Mol	Chain	Res	Type
22	DA	2582	G
22	DA	2583	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2609	U
22	DA	2610	C
22	DA	2611	C
22	DA	2612	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2617	U
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2645	G
22	DA	2654	A
22	DA	2655	G
22	DA	2656	U
22	DA	2657	A
22	DA	2658	C
22	DA	2660	A
22	DA	2667	C
22	DA	2668	G
22	DA	2669	G
22	DA	2682	A
22	DA	2683	C
22	DA	2690	U
22	DA	2691	C
22	DA	2692	G
22	DA	2713	U
22	DA	2714	G
22	DA	2715	C
22	DA	2717	C
22	DA	2718	G
22	DA	2725	A
22	DA	2726	A
22	DA	2727	A
22	DA	2728	U
22	DA	2729	G

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Mol	Chain	Res	Type
22	DA	2732	G
22	DA	2736	A
22	DA	2739	U
22	DA	2748	A
22	DA	2750	A
22	DA	2751	G
22	DA	2752	C
22	DA	2753	A
22	DA	2754	U
22	DA	2756	U
22	DA	2757	A
22	DA	2758	A
22	DA	2765	A
22	DA	2777	G
22	DA	2778	A
22	DA	2781	A
22	DA	2782	G
22	DA	2791	G
22	DA	2799	A
22	DA	2800	A
22	DA	2801	G
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2833	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2838	G
22	DA	2848	G
22	DA	2849	U
22	DA	2850	A
22	DA	2851	A
22	DA	2852	G
22	DA	2861	U
22	DA	2866	U
22	DA	2867	G
22	DA	2868	A
22	DA	2869	G
22	DA	2872	A
22	DA	2873	A

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Mol	Chain	Res	Type
22	DA	2874	C
22	DA	2875	C
22	DA	2876	G
22	DA	2879	A
22	DA	2880	C
22	DA	2881	U
22	DA	2883	A
22	DA	2894	G
22	DA	2895	G
22	DA	2896	C
22	DA	2902	C
54	DB	12	C
54	DB	13	G
54	DB	14	U
54	DB	15	A
54	DB	16	G
54	DB	17	C
54	DB	18	G
54	DB	24	G
54	DB	25	U
54	DB	27	C
54	DB	28	C
54	DB	30	C
54	DB	35	C
54	DB	36	C
54	DB	41	G
54	DB	42	C
54	DB	43	C
54	DB	44	G
54	DB	45	A
54	DB	48	U
54	DB	57	A
54	DB	58	A
54	DB	59	A
54	DB	63	C
54	DB	64	G
54	DB	65	U
54	DB	66	A
54	DB	67	G
54	DB	68	C
54	DB	69	G
54	DB	87	U

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Mol	Chain	Res	Type
54	DB	88	C
54	DB	89	U
54	DB	90	C
54	DB	91	C
54	DB	99	A
54	DB	109	A
54	DB	110	C
54	DB	111	U

All (1436) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	7	A
21	AA	13	U
21	AA	30	U
21	AA	32	A
21	AA	47	C
21	AA	51	A
21	AA	52	C
21	AA	60	A
21	AA	61	G
21	AA	64	G
21	AA	66	A
21	AA	72	A
21	AA	73	C
21	AA	74	A
21	AA	85	U
21	AA	87	C
21	AA	90	C
21	AA	91	U
21	AA	94	G
21	AA	95	C
21	AA	96	U
21	AA	97	G
21	AA	109	A
21	AA	110	C
21	AA	115	G
21	AA	116	A
21	AA	119	A
21	AA	121	U
21	AA	129	A
21	AA	131	A

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Mol	Chain	Res	Type
21	AA	173	U
21	AA	174	A
21	AA	175	C
21	AA	181	A
21	AA	184	G
21	AA	197	A
21	AA	198	G
21	AA	199	A
21	AA	213	G
21	AA	214	C
21	AA	215	C
21	AA	243	A
21	AA	245	U
21	AA	246	A
21	AA	247	G
21	AA	250	A
21	AA	251	G
21	AA	252	U
21	AA	266	G
21	AA	267	C
21	AA	268	U
21	AA	274	A
21	AA	275	G
21	AA	279	A
21	AA	305	G
21	AA	306	A
21	AA	315	A
21	AA	327	A
21	AA	330	C
21	AA	331	G
21	AA	344	A
21	AA	346	G
21	AA	351	G
21	AA	352	C
21	AA	366	A
21	AA	368	U
21	AA	369	G
21	AA	372	C
21	AA	373	A
21	AA	388	G
21	AA	411	A
21	AA	414	A

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Mol	Chain	Res	Type
21	AA	422	C
21	AA	423	G
21	AA	428	G
21	AA	429	U
21	AA	430	A
21	AA	451	A
21	AA	452	A
21	AA	453	G
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	484	G
21	AA	486	U
21	AA	487	A
21	AA	495	A
21	AA	496	A
21	AA	497	G
21	AA	499	A
21	AA	500	G
21	AA	508	U
21	AA	509	A
21	AA	511	C
21	AA	512	U
21	AA	517	G
21	AA	519	C
21	AA	531	U
21	AA	534	U
21	AA	535	A
21	AA	536	C
21	AA	547	A
21	AA	548	G
21	AA	549	C
21	AA	559	A
21	AA	563	A
21	AA	566	G
21	AA	575	G
21	AA	595	A
21	AA	596	A
21	AA	641	U
21	AA	652	U
21	AA	654	G
21	AA	686	U

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Mol	Chain	Res	Type
21	AA	688	G
21	AA	701	U
21	AA	717	U
21	AA	718	A
21	AA	721	G
21	AA	722	G
21	AA	724	G
21	AA	734	G
21	AA	752	G
21	AA	753	A
21	AA	754	C
21	AA	755	G
21	AA	792	A
21	AA	794	A
21	AA	812	G
21	AA	813	U
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	870	U
21	AA	874	G
21	AA	884	U
21	AA	885	G
21	AA	889	A
21	AA	913	A
21	AA	914	A
21	AA	934	C
21	AA	935	A
21	AA	960	U
21	AA	961	U
21	AA	965	U
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	974	A
21	AA	976	G
21	AA	982	U
21	AA	991	U
21	AA	994	A
21	AA	1046	A
21	AA	1049	U
21	AA	1050	G

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Mol	Chain	Res	Type
21	AA	1064	G
21	AA	1066	C
21	AA	1068	G
21	AA	1085	U
21	AA	1087	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1102	A
21	AA	1125	U
21	AA	1127	G
21	AA	1129	C
21	AA	1130	A
21	AA	1136	C
21	AA	1138	G
21	AA	1141	C
21	AA	1151	A
21	AA	1152	A
21	AA	1157	A
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1168	U
21	AA	1169	A
21	AA	1181	G
21	AA	1183	U
21	AA	1184	G
21	AA	1190	G
21	AA	1191	A
21	AA	1196	A
21	AA	1197	A
21	AA	1200	C
21	AA	1201	A
21	AA	1202	U
21	AA	1213	A
21	AA	1215	G
21	AA	1224	U
21	AA	1227	A
21	AA	1228	C
21	AA	1239	A
21	AA	1241	G

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Mol	Chain	Res	Type
21	AA	1256	A
21	AA	1258	G
21	AA	1278	G
21	AA	1282	C
21	AA	1283	U
21	AA	1287	A
21	AA	1288	A
21	AA	1297	G
21	AA	1302	C
21	AA	1303	C
21	AA	1319	A
21	AA	1320	C
21	AA	1322	C
21	AA	1323	G
21	AA	1324	A
21	AA	1331	G
21	AA	1332	A
21	AA	1336	C
21	AA	1337	G
21	AA	1345	U
21	AA	1348	U
21	AA	1362	A
21	AA	1365	G
21	AA	1380	U
21	AA	1381	U
21	AA	1394	A
21	AA	1395	C
21	AA	1396	A
21	AA	1398	A
21	AA	1399	C
21	AA	1432	G
21	AA	1433	A
21	AA	1447	A
21	AA	1452	C
21	AA	1453	G
21	AA	1454	G
21	AA	1498	U
21	AA	1502	A
21	AA	1505	G
21	AA	1507	A
21	AA	1528	U
21	AA	1530	G

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Mol	Chain	Res	Type
21	AA	1531	A
22	BA	13	A
22	BA	14	A
22	BA	27	G
22	BA	33	C
22	BA	34	U
22	BA	49	A
22	BA	52	A
22	BA	60	G
22	BA	62	U
22	BA	70	G
22	BA	71	A
22	BA	73	A
22	BA	74	A
22	BA	75	G
22	BA	84	A
22	BA	91	A
22	BA	92	U
22	BA	100	U
22	BA	119	A
22	BA	125	A
22	BA	126	A
22	BA	137	U
22	BA	138	U
22	BA	142	A
22	BA	143	C
22	BA	162	U
22	BA	164	C
22	BA	177	G
22	BA	196	A
22	BA	199	A
22	BA	204	A
22	BA	206	U
22	BA	215	G
22	BA	221	A
22	BA	227	A
22	BA	229	C
22	BA	230	G
22	BA	232	G
22	BA	241	A
22	BA	243	U
22	BA	249	C

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Mol	Chain	Res	Type
22	BA	265	A
22	BA	266	G
22	BA	271	G
22	BA	273	G
22	BA	301	G
22	BA	302	C
22	BA	310	A
22	BA	312	G
22	BA	321	U
22	BA	324	A
22	BA	329	G
22	BA	345	A
22	BA	369	U
22	BA	386	G
22	BA	388	G
22	BA	390	U
22	BA	395	U
22	BA	403	U
22	BA	404	A
22	BA	411	G
22	BA	412	A
22	BA	421	C
22	BA	434	U
22	BA	435	C
22	BA	442	G
22	BA	446	G
22	BA	454	A
22	BA	459	U
22	BA	474	G
22	BA	475	C
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	489	G
22	BA	491	G
22	BA	503	A
22	BA	505	A
22	BA	506	G
22	BA	507	A
22	BA	509	C
22	BA	512	G

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Mol	Chain	Res	Type
22	BA	513	A
22	BA	527	C
22	BA	528	A
22	BA	529	A
22	BA	530	G
22	BA	531	C
22	BA	533	G
22	BA	555	G
22	BA	571	U
22	BA	572	A
22	BA	573	U
22	BA	587	C
22	BA	588	U
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	616	A
22	BA	620	G
22	BA	637	A
22	BA	638	G
22	BA	645	C
22	BA	655	A
22	BA	669	G
22	BA	685	A
22	BA	687	C
22	BA	704	G
22	BA	705	A
22	BA	726	G
22	BA	727	A
22	BA	728	G
22	BA	740	C
22	BA	746	U
22	BA	747	U
22	BA	752	A
22	BA	753	A
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	790	U
22	BA	800	A

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Mol	Chain	Res	Type
22	BA	805	G
22	BA	811	U
22	BA	829	A
22	BA	858	G
22	BA	860	U
22	BA	865	C
22	BA	913	U
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	933	A
22	BA	945	A
22	BA	957	C
22	BA	958	U
22	BA	961	C
22	BA	984	A
22	BA	988	A
22	BA	990	A
22	BA	995	C
22	BA	996	A
22	BA	1008	A
22	BA	1009	A
22	BA	1011	G
22	BA	1013	C
22	BA	1020	A
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1025	G
22	BA	1026	G
22	BA	1033	U
22	BA	1045	C
22	BA	1048	A
22	BA	1060	U
22	BA	1062	G
22	BA	1070	A
22	BA	1072	C
22	BA	1073	A
22	BA	1091	G
22	BA	1110	G
22	BA	1112	G
22	BA	1128	G

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Mol	Chain	Res	Type
22	BA	1129	A
22	BA	1130	U
22	BA	1135	C
22	BA	1141	U
22	BA	1150	C
22	BA	1157	G
22	BA	1180	U
22	BA	1184	U
22	BA	1204	A
22	BA	1206	G
22	BA	1210	G
22	BA	1236	G
22	BA	1247	A
22	BA	1249	U
22	BA	1267	U
22	BA	1272	A
22	BA	1273	U
22	BA	1275	A
22	BA	1276	A
22	BA	1286	A
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1300	G
22	BA	1303	G
22	BA	1320	C
22	BA	1321	A
22	BA	1324	G
22	BA	1329	U
22	BA	1330	C
22	BA	1340	U
22	BA	1343	G
22	BA	1378	A
22	BA	1379	U
22	BA	1385	A
22	BA	1386	C
22	BA	1396	U
22	BA	1398	C
22	BA	1416	G
22	BA	1417	C
22	BA	1427	A
22	BA	1429	G

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Mol	Chain	Res	Type
22	BA	1451	C
22	BA	1458	U
22	BA	1459	G
22	BA	1461	C
22	BA	1475	G
22	BA	1476	U
22	BA	1490	A
22	BA	1491	G
22	BA	1493	C
22	BA	1494	A
22	BA	1497	U
22	BA	1498	C
22	BA	1508	A
22	BA	1510	G
22	BA	1522	A
22	BA	1535	A
22	BA	1537	G
22	BA	1538	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1565	C
22	BA	1602	U
22	BA	1606	C
22	BA	1615	C
22	BA	1634	A
22	BA	1647	U
22	BA	1653	G
22	BA	1654	A
22	BA	1674	G
22	BA	1682	G
22	BA	1693	U
22	BA	1695	G
22	BA	1696	G
22	BA	1698	A
22	BA	1706	C
22	BA	1713	A
22	BA	1714	U
22	BA	1716	U
22	BA	1732	C
22	BA	1733	G
22	BA	1758	U

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Mol	Chain	Res	Type
22	BA	1759	A
22	BA	1780	A
22	BA	1782	U
22	BA	1784	A
22	BA	1786	A
22	BA	1787	A
22	BA	1799	G
22	BA	1808	A
22	BA	1815	A
22	BA	1816	C
22	BA	1818	U
22	BA	1819	A
22	BA	1838	C
22	BA	1847	A
22	BA	1848	A
22	BA	1857	G
22	BA	1858	A
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1884	G
22	BA	1885	A
22	BA	1900	A
22	BA	1918	A
22	BA	1919	A
22	BA	1929	G
22	BA	1931	U
22	BA	1936	A
22	BA	1941	C
22	BA	1943	U
22	BA	1945	G
22	BA	1954	G
22	BA	1962	C
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1966	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U

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Mol	Chain	Res	Type
22	BA	1981	A
22	BA	1996	C
22	BA	2021	C
22	BA	2023	C
22	BA	2030	A
22	BA	2035	G
22	BA	2036	C
22	BA	2051	A
22	BA	2052	A
22	BA	2060	A
22	BA	2063	C
22	BA	2067	G
22	BA	2068	U
22	BA	2092	U
22	BA	2135	A
22	BA	2136	G
22	BA	2146	C
22	BA	2148	G
22	BA	2149	U
22	BA	2197	U
22	BA	2199	A
22	BA	2210	U
22	BA	2214	C
22	BA	2225	A
22	BA	2238	G
22	BA	2249	U
22	BA	2258	C
22	BA	2267	A
22	BA	2275	C
22	BA	2282	G
22	BA	2283	C
22	BA	2286	G
22	BA	2296	U
22	BA	2297	A
22	BA	2307	G
22	BA	2309	A
22	BA	2311	A
22	BA	2319	G
22	BA	2321	U
22	BA	2324	U
22	BA	2325	G
22	BA	2326	C

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Mol	Chain	Res	Type
22	BA	2327	A
22	BA	2333	A
22	BA	2336	A
22	BA	2337	G
22	BA	2344	U
22	BA	2347	C
22	BA	2382	G
22	BA	2383	G
22	BA	2385	C
22	BA	2391	G
22	BA	2405	G
22	BA	2407	A
22	BA	2423	U
22	BA	2425	A
22	BA	2430	A
22	BA	2439	A
22	BA	2447	G
22	BA	2458	G
22	BA	2468	A
22	BA	2490	G
22	BA	2503	A
22	BA	2517	C
22	BA	2542	A
22	BA	2566	A
22	BA	2572	A
22	BA	2573	C
22	BA	2581	G
22	BA	2602	A
22	BA	2609	U
22	BA	2611	C
22	BA	2613	U
22	BA	2615	U
22	BA	2629	U
22	BA	2638	G
22	BA	2645	G
22	BA	2654	A
22	BA	2656	U
22	BA	2681	C
22	BA	2689	U
22	BA	2712	C
22	BA	2725	A
22	BA	2727	A

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Mol	Chain	Res	Type
22	BA	2728	U
22	BA	2729	G
22	BA	2732	G
22	BA	2750	A
22	BA	2752	C
22	BA	2756	U
22	BA	2757	A
22	BA	2777	G
22	BA	2778	A
22	BA	2781	A
22	BA	2790	U
22	BA	2791	G
22	BA	2797	U
22	BA	2800	A
22	BA	2801	G
22	BA	2808	G
22	BA	2820	A
22	BA	2832	U
22	BA	2835	A
22	BA	2848	G
22	BA	2850	A
22	BA	2866	U
22	BA	2868	A
22	BA	2873	A
22	BA	2879	A
22	BA	2893	A
22	BA	2894	G
23	BB	12	C
23	BB	13	G
23	BB	14	U
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	40	U
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	52	A
23	BB	56	G
23	BB	57	A
23	BB	66	A
23	BB	67	G

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Mol	Chain	Res	Type
23	BB	87	U
23	BB	90	C
23	BB	108	A
23	BB	109	A
53	CA	6	G
53	CA	9	G
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	30	U
53	CA	32	A
53	CA	47	C
53	CA	52	C
53	CA	60	A
53	CA	66	A
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	81	A
53	CA	82	G
53	CA	84	U
53	CA	86	G
53	CA	87	C
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	94	G
53	CA	95	C
53	CA	109	A
53	CA	115	G
53	CA	116	A
53	CA	119	A
53	CA	130	A
53	CA	131	A
53	CA	132	C
53	CA	173	U
53	CA	174	A
53	CA	181	A
53	CA	197	A
53	CA	198	G
53	CA	199	A

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Mol	Chain	Res	Type
53	CA	212	G
53	CA	239	U
53	CA	240	G
53	CA	243	A
53	CA	245	U
53	CA	247	G
53	CA	248	C
53	CA	251	G
53	CA	252	U
53	CA	274	A
53	CA	275	G
53	CA	276	G
53	CA	279	A
53	CA	282	A
53	CA	305	G
53	CA	315	A
53	CA	316	C
53	CA	327	A
53	CA	328	C
53	CA	330	C
53	CA	331	G
53	CA	344	A
53	CA	346	G
53	CA	347	G
53	CA	348	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	374	A
53	CA	382	A
53	CA	383	A
53	CA	388	G
53	CA	389	A
53	CA	411	A
53	CA	414	A
53	CA	421	U
53	CA	423	G
53	CA	424	G
53	CA	428	G

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Mol	Chain	Res	Type
53	CA	429	U
53	CA	430	A
53	CA	451	A
53	CA	452	A
53	CA	460	A
53	CA	481	G
53	CA	482	A
53	CA	484	G
53	CA	495	A
53	CA	496	A
53	CA	497	G
53	CA	499	A
53	CA	500	G
53	CA	501	C
53	CA	508	U
53	CA	509	A
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	517	G
53	CA	519	C
53	CA	531	U
53	CA	532	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	547	A
53	CA	548	G
53	CA	559	A
53	CA	563	A
53	CA	564	C
53	CA	566	G
53	CA	567	G
53	CA	575	G
53	CA	577	G
53	CA	595	A
53	CA	596	A
53	CA	641	U
53	CA	642	A
53	CA	643	C
53	CA	652	U
53	CA	654	G

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Mol	Chain	Res	Type
53	CA	686	U
53	CA	688	G
53	CA	701	U
53	CA	704	A
53	CA	721	G
53	CA	722	G
53	CA	733	G
53	CA	734	G
53	CA	753	A
53	CA	755	G
53	CA	792	A
53	CA	794	A
53	CA	803	G
53	CA	815	A
53	CA	816	A
53	CA	821	G
53	CA	870	U
53	CA	874	G
53	CA	884	U
53	CA	889	A
53	CA	891	U
53	CA	913	A
53	CA	914	A
53	CA	934	C
53	CA	935	A
53	CA	936	C
53	CA	960	U
53	CA	961	U
53	CA	962	C
53	CA	968	A
53	CA	973	G
53	CA	974	A
53	CA	975	A
53	CA	977	A
53	CA	978	A
53	CA	982	U
53	CA	983	A
53	CA	984	C
53	CA	992	U
53	CA	995	C
53	CA	1033	G
53	CA	1049	U

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Mol	Chain	Res	Type
53	CA	1050	G
53	CA	1051	C
53	CA	1055	A
53	CA	1064	G
53	CA	1066	C
53	CA	1067	A
53	CA	1085	U
53	CA	1086	U
53	CA	1087	G
53	CA	1101	A
53	CA	1102	A
53	CA	1124	G
53	CA	1127	G
53	CA	1138	G
53	CA	1140	C
53	CA	1141	C
53	CA	1142	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1151	A
53	CA	1152	A
53	CA	1157	A
53	CA	1158	C
53	CA	1160	G
53	CA	1161	C
53	CA	1184	G
53	CA	1190	G
53	CA	1191	A
53	CA	1198	G
53	CA	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1213	A
53	CA	1215	G
53	CA	1216	A
53	CA	1226	C
53	CA	1228	C
53	CA	1229	A
53	CA	1242	G
53	CA	1278	G
53	CA	1282	C

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Mol	Chain	Res	Type
53	CA	1283	U
53	CA	1285	A
53	CA	1287	A
53	CA	1299	A
53	CA	1300	G
53	CA	1345	U
53	CA	1348	U
53	CA	1349	A
53	CA	1364	U
53	CA	1365	G
53	CA	1366	C
53	CA	1380	U
53	CA	1381	U
53	CA	1394	A
53	CA	1395	C
53	CA	1396	A
53	CA	1397	C
53	CA	1398	A
53	CA	1399	C
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1498	U
53	CA	1499	A
53	CA	1502	A
53	CA	1505	G
53	CA	1507	A
53	CA	1528	U
53	CA	1530	G
22	DA	13	A
22	DA	14	A
22	DA	27	G
22	DA	33	C
22	DA	35	G
22	DA	36	G
22	DA	49	A
22	DA	52	A
22	DA	60	G
22	DA	61	C

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Mol	Chain	Res	Type
22	DA	70	G
22	DA	73	A
22	DA	75	G
22	DA	76	C
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	91	A
22	DA	100	U
22	DA	103	A
22	DA	119	A
22	DA	121	G
22	DA	122	G
22	DA	125	A
22	DA	128	C
22	DA	142	A
22	DA	143	C
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	196	A
22	DA	197	A
22	DA	204	A
22	DA	206	U
22	DA	207	A
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	227	A
22	DA	229	C
22	DA	230	G
22	DA	232	G
22	DA	233	A
22	DA	234	U
22	DA	241	A
22	DA	243	U
22	DA	244	A
22	DA	249	C
22	DA	250	G
22	DA	271	G

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Mol	Chain	Res	Type
22	DA	273	G
22	DA	301	G
22	DA	302	C
22	DA	303	G
22	DA	313	G
22	DA	321	U
22	DA	324	A
22	DA	329	G
22	DA	335	C
22	DA	370	G
22	DA	373	U
22	DA	374	A
22	DA	386	G
22	DA	388	G
22	DA	389	G
22	DA	390	U
22	DA	391	A
22	DA	395	U
22	DA	396	G
22	DA	397	U
22	DA	404	A
22	DA	406	G
22	DA	411	G
22	DA	412	A
22	DA	422	A
22	DA	424	G
22	DA	437	U
22	DA	442	G
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	449	A
22	DA	454	A
22	DA	459	U
22	DA	474	G
22	DA	475	C
22	DA	476	G
22	DA	479	A
22	DA	480	A
22	DA	482	A
22	DA	483	A

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Mol	Chain	Res	Type
22	DA	489	G
22	DA	491	G
22	DA	492	A
22	DA	503	A
22	DA	505	A
22	DA	509	C
22	DA	510	C
22	DA	527	C
22	DA	528	A
22	DA	530	G
22	DA	531	C
22	DA	533	G
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	576	U
22	DA	589	U
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	615	U
22	DA	616	A
22	DA	617	G
22	DA	620	G
22	DA	621	A
22	DA	622	G
22	DA	627	A
22	DA	628	G
22	DA	637	A
22	DA	638	G
22	DA	648	G
22	DA	655	A
22	DA	656	G
22	DA	669	G
22	DA	670	A
22	DA	672	C
22	DA	685	A
22	DA	687	C
22	DA	704	G
22	DA	705	A
22	DA	726	G

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Mol	Chain	Res	Type
22	DA	727	A
22	DA	739	A
22	DA	740	C
22	DA	746	U
22	DA	747	U
22	DA	748	G
22	DA	754	U
22	DA	762	U
22	DA	763	G
22	DA	765	C
22	DA	777	G
22	DA	782	A
22	DA	783	A
22	DA	788	A
22	DA	794	A
22	DA	800	A
22	DA	802	A
22	DA	806	C
22	DA	829	A
22	DA	831	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	865	C
22	DA	867	C
22	DA	913	U
22	DA	915	C
22	DA	916	G
22	DA	931	U
22	DA	933	A
22	DA	945	A
22	DA	946	C
22	DA	947	A
22	DA	957	C
22	DA	958	U
22	DA	959	A
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	973	A
22	DA	975	A
22	DA	976	G

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Mol	Chain	Res	Type
22	DA	989	G
22	DA	990	A
22	DA	991	C
22	DA	1008	A
22	DA	1009	A
22	DA	1010	A
22	DA	1011	G
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
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	1034	G
22	DA	1048	A
22	DA	1049	C
22	DA	1060	U
22	DA	1063	G
22	DA	1069	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1076	C
22	DA	1078	U
22	DA	1079	C
22	DA	1091	G
22	DA	1110	G
22	DA	1112	G
22	DA	1113	U
22	DA	1126	A
22	DA	1128	G
22	DA	1129	A
22	DA	1135	C
22	DA	1136	G
22	DA	1141	U
22	DA	1144	A
22	DA	1156	A
22	DA	1157	G
22	DA	1158	C

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Mol	Chain	Res	Type
22	DA	1204	A
22	DA	1206	G
22	DA	1207	C
22	DA	1210	G
22	DA	1213	A
22	DA	1247	A
22	DA	1249	U
22	DA	1254	A
22	DA	1255	U
22	DA	1256	G
22	DA	1265	A
22	DA	1267	U
22	DA	1268	A
22	DA	1272	A
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1286	A
22	DA	1289	C
22	DA	1290	C
22	DA	1291	C
22	DA	1300	G
22	DA	1303	G
22	DA	1304	A
22	DA	1312	U
22	DA	1313	U
22	DA	1314	C
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1329	U
22	DA	1333	G
22	DA	1340	U
22	DA	1345	C
22	DA	1346	G
22	DA	1385	A
22	DA	1386	C
22	DA	1387	A
22	DA	1388	G
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U

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Mol	Chain	Res	Type
22	DA	1415	U
22	DA	1417	C
22	DA	1427	A
22	DA	1429	G
22	DA	1451	C
22	DA	1455	G
22	DA	1456	G
22	DA	1477	A
22	DA	1478	G
22	DA	1489	C
22	DA	1491	G
22	DA	1492	G
22	DA	1497	U
22	DA	1498	C
22	DA	1508	A
22	DA	1510	G
22	DA	1511	G
22	DA	1536	C
22	DA	1537	G
22	DA	1539	U
22	DA	1552	A
22	DA	1554	U
22	DA	1555	G
22	DA	1556	C
22	DA	1558	C
22	DA	1560	G
22	DA	1565	C
22	DA	1568	G
22	DA	1569	A
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1611	C
22	DA	1612	C
22	DA	1615	C
22	DA	1619	G
22	DA	1634	A
22	DA	1635	A
22	DA	1636	U
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G

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Mol	Chain	Res	Type
22	DA	1653	G
22	DA	1654	A
22	DA	1667	G
22	DA	1669	A
22	DA	1674	G
22	DA	1675	C
22	DA	1681	G
22	DA	1682	G
22	DA	1683	U
22	DA	1693	U
22	DA	1695	G
22	DA	1696	G
22	DA	1698	A
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1716	U
22	DA	1717	A
22	DA	1722	A
22	DA	1731	G
22	DA	1733	G
22	DA	1734	G
22	DA	1738	G
22	DA	1739	A
22	DA	1758	U
22	DA	1759	A
22	DA	1780	A
22	DA	1782	U
22	DA	1784	A
22	DA	1785	A
22	DA	1786	A
22	DA	1787	A
22	DA	1799	G
22	DA	1802	A
22	DA	1803	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1815	A
22	DA	1816	C
22	DA	1817	G
22	DA	1818	U

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Mol	Chain	Res	Type
22	DA	1821	A
22	DA	1828	G
22	DA	1838	C
22	DA	1839	G
22	DA	1857	G
22	DA	1866	A
22	DA	1900	A
22	DA	1901	A
22	DA	1913	A
22	DA	1915	U
22	DA	1918	A
22	DA	1919	A
22	DA	1929	G
22	DA	1931	U
22	DA	1936	A
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1945	G
22	DA	1954	G
22	DA	1962	C
22	DA	1963	U
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1980	G
22	DA	1981	A
22	DA	1982	U
22	DA	1992	G
22	DA	1993	U
22	DA	1996	C
22	DA	1997	C
22	DA	2021	C
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2034	U
22	DA	2036	C
22	DA	2051	A
22	DA	2052	A
22	DA	2061	G
22	DA	2063	C

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Mol	Chain	Res	Type
22	DA	2067	G
22	DA	2068	U
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2133	G
22	DA	2135	A
22	DA	2136	G
22	DA	2143	C
22	DA	2147	A
22	DA	2148	G
22	DA	2149	U
22	DA	2197	U
22	DA	2198	A
22	DA	2199	A
22	DA	2210	U
22	DA	2214	C
22	DA	2216	G
22	DA	2225	A
22	DA	2226	C
22	DA	2238	G
22	DA	2239	G
22	DA	2249	U
22	DA	2258	C
22	DA	2259	U
22	DA	2266	A
22	DA	2275	C
22	DA	2276	G
22	DA	2282	G
22	DA	2283	C
22	DA	2286	G
22	DA	2288	A
22	DA	2289	G
22	DA	2296	U
22	DA	2297	A
22	DA	2298	A
22	DA	2310	C
22	DA	2311	A
22	DA	2313	C
22	DA	2334	U
22	DA	2335	A
22	DA	2337	G

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Mol	Chain	Res	Type
22	DA	2338	C
22	DA	2344	U
22	DA	2347	C
22	DA	2348	U
22	DA	2384	U
22	DA	2386	A
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2408	U
22	DA	2409	G
22	DA	2425	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2439	A
22	DA	2440	C
22	DA	2447	G
22	DA	2450	A
22	DA	2458	G
22	DA	2459	A
22	DA	2490	G
22	DA	2492	U
22	DA	2493	U
22	DA	2497	A
22	DA	2498	C
22	DA	2499	C
22	DA	2503	A
22	DA	2504	U
22	DA	2517	C
22	DA	2520	C
22	DA	2542	A
22	DA	2543	G
22	DA	2566	A
22	DA	2567	G
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2601	C
22	DA	2603	G
22	DA	2609	U

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Mol	Chain	Res	Type
22	DA	2611	C
22	DA	2613	U
22	DA	2615	U
22	DA	2616	C
22	DA	2654	A
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	2689	U
22	DA	2691	C
22	DA	2712	C
22	DA	2714	G
22	DA	2725	A
22	DA	2727	A
22	DA	2728	U
22	DA	2750	A
22	DA	2752	C
22	DA	2753	A
22	DA	2756	U
22	DA	2757	A
22	DA	2776	A
22	DA	2777	G
22	DA	2781	A
22	DA	2798	U
22	DA	2832	U
22	DA	2836	U
22	DA	2837	A
22	DA	2848	G
22	DA	2850	A
22	DA	2851	A
22	DA	2866	U
22	DA	2868	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C
22	DA	2879	A
22	DA	2880	C
22	DA	2893	A

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Mol	Chain	Res	Type
22	DA	2895	G
54	DB	12	C
54	DB	13	G
54	DB	16	G
54	DB	17	C
54	DB	27	C
54	DB	40	U
54	DB	41	G
54	DB	42	C
54	DB	43	C
54	DB	56	G
54	DB	58	A
54	DB	66	A
54	DB	67	G
54	DB	68	C
54	DB	88	C
54	DB	90	C
54	DB	108	A
54	DB	109	A
54	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 365 ligands modelled in this entry, 365 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

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	AB	218/241 (90%)	0.63	16 (7%) 21 13	85, 115, 146, 164	0
1	CB	218/241 (90%)	0.84	22 (10%) 12 8	90, 125, 152, 170	0
2	AC	206/233 (88%)	-0.05	5 (2%) 59 40	57, 83, 116, 147	0
2	CC	206/233 (88%)	0.70	19 (9%) 14 9	83, 129, 170, 188	0
3	AD	205/206 (99%)	0.31	12 (5%) 28 18	50, 87, 137, 176	0
3	CD	205/206 (99%)	0.35	11 (5%) 31 20	41, 63, 102, 148	0
4	AE	150/167 (89%)	0.14	2 (1%) 75 55	51, 70, 116, 147	0
4	CE	150/167 (89%)	0.80	6 (4%) 42 26	65, 87, 122, 144	0
5	AF	100/135 (74%)	0.24	4 (4%) 42 26	60, 90, 125, 142	0
5	CF	100/135 (74%)	0.72	8 (8%) 18 12	65, 113, 147, 158	0
6	AG	151/179 (84%)	0.36	8 (5%) 32 20	69, 108, 139, 157	0
6	CG	150/179 (83%)	1.64	52 (34%) 1 1	98, 173, 223, 233	0
7	AH	129/130 (99%)	0.03	2 (1%) 70 51	49, 71, 106, 133	0
7	CH	129/130 (99%)	0.47	5 (3%) 43 27	63, 100, 133, 159	0
8	AI	127/130 (97%)	0.69	13 (10%) 12 8	56, 115, 166, 189	0
8	CI	127/130 (97%)	1.86	46 (36%) 1 1	127, 174, 225, 239	0
9	AJ	98/103 (95%)	0.51	4 (4%) 41 25	59, 97, 152, 160	0
9	CJ	98/103 (95%)	1.96	43 (43%) 0 1	122, 160, 189, 201	0
10	AK	117/129 (90%)	0.32	3 (2%) 57 37	43, 88, 124, 137	0
10	CK	117/129 (90%)	0.74	9 (7%) 19 13	57, 99, 130, 151	0
11	AL	123/124 (99%)	0.11	6 (4%) 35 22	33, 54, 96, 135	0
11	CL	123/124 (99%)	0.64	7 (5%) 29 19	47, 74, 110, 135	0
12	AM	114/118 (96%)	0.59	6 (5%) 32 20	70, 117, 155, 177	0
12	CM	113/118 (95%)	2.45	65 (57%) 0 0	220, 351, 413, 434	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	AN	96/101 (95%)	0.59	9 (9%) 14 9	59, 86, 136, 158	0
13	CN	95/101 (94%)	1.63	26 (27%) 1 1	102, 191, 256, 269	0
14	AO	88/89 (98%)	0.07	1 (1%) 78 61	48, 75, 106, 128	0
14	CO	88/89 (98%)	0.88	12 (13%) 7 5	72, 109, 141, 167	0
15	AP	82/82 (100%)	0.16	2 (2%) 59 40	55, 79, 129, 174	0
15	CP	80/82 (97%)	1.00	11 (13%) 6 5	64, 96, 133, 152	0
16	AQ	80/84 (95%)	0.63	8 (10%) 12 8	38, 73, 112, 144	0
16	CQ	80/84 (95%)	0.63	4 (5%) 34 22	54, 96, 117, 131	0
17	AR	55/75 (73%)	0.39	5 (9%) 15 9	56, 80, 129, 146	0
17	CR	55/75 (73%)	0.82	6 (10%) 10 7	57, 89, 131, 170	0
18	AS	79/92 (85%)	0.63	9 (11%) 10 7	79, 110, 152, 161	0
18	CS	79/92 (85%)	2.57	49 (62%) 0 0	250, 307, 359, 371	0
19	AT	85/87 (97%)	0.40	5 (5%) 28 18	51, 81, 114, 133	0
19	CT	85/87 (97%)	1.78	27 (31%) 1 1	79, 125, 161, 177	0
20	AU	51/71 (71%)	0.97	9 (17%) 4 3	60, 104, 138, 148	0
20	CU	51/71 (71%)	1.18	10 (19%) 3 2	63, 97, 143, 153	0
21	AA	1533/1533 (100%)	-0.39	25 (1%) 70 51	34, 72, 169, 235	0
22	BA	2854/2903 (98%)	-0.68	70 (2%) 58 39	13, 33, 142, 320	0
22	DA	2841/2903 (97%)	1.13	464 (16%) 4 3	59, 119, 216, 320	0
23	BB	118/118 (100%)	-0.69	0 100 100	18, 47, 75, 99	0
24	BC	271/273 (99%)	-0.01	13 (4%) 35 22	20, 43, 83, 142	0
24	DC	271/273 (99%)	1.28	66 (24%) 2 2	63, 94, 128, 153	0
25	BD	209/209 (100%)	-0.39	1 (0%) 87 76	13, 29, 72, 96	0
25	DD	209/209 (100%)	1.35	46 (22%) 2 2	68, 108, 141, 168	0
26	BE	201/201 (100%)	-0.29	0 100 100	15, 42, 87, 124	0
26	DE	201/201 (100%)	2.16	97 (48%) 0 1	89, 191, 252, 282	0
27	BF	177/179 (98%)	0.20	4 (2%) 61 41	32, 67, 116, 132	0
27	DF	178/179 (99%)	1.57	54 (30%) 1 1	125, 209, 220, 232	0
28	BG	176/177 (99%)	-0.02	5 (2%) 55 35	27, 57, 103, 128	0
28	DG	176/177 (99%)	1.34	40 (22%) 2 2	120, 165, 207, 220	0
29	BH	149/149 (100%)	1.57	48 (32%) 1 1	42, 178, 213, 217	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
29	DH	149/149 (100%)	1.82	50 (33%) 1 1	104, 173, 208, 219	0
30	BI	141/142 (99%)	2.40	76 (53%) 0 0	199, 245, 286, 294	0
30	DI	141/142 (99%)	2.12	62 (43%) 0 1	264, 305, 323, 331	0
31	BJ	142/142 (100%)	-0.37	5 (3%) 47 29	12, 25, 57, 111	0
31	DJ	142/142 (100%)	1.27	29 (20%) 3 2	76, 110, 134, 153	0
32	BK	122/123 (99%)	-0.37	2 (1%) 70 51	20, 32, 76, 121	0
32	DK	122/123 (99%)	0.78	10 (8%) 17 11	71, 93, 127, 142	0
33	BL	143/144 (99%)	-0.26	2 (1%) 73 54	13, 38, 74, 100	0
33	DL	143/144 (99%)	2.29	77 (53%) 0 0	80, 150, 189, 202	0
34	BM	136/136 (100%)	-0.47	0 100 100	14, 30, 61, 99	0
34	DM	136/136 (100%)	1.02	22 (16%) 4 3	73, 117, 143, 161	0
35	BN	120/127 (94%)	-0.44	0 100 100	14, 28, 44, 97	0
35	DN	120/127 (94%)	1.89	49 (40%) 0 1	89, 121, 152, 171	0
36	BO	116/117 (99%)	-0.05	3 (2%) 57 37	30, 46, 73, 101	0
36	DO	116/117 (99%)	1.60	37 (31%) 1 1	146, 178, 207, 216	0
37	BP	114/115 (99%)	-0.36	2 (1%) 67 48	22, 39, 90, 131	0
37	DP	114/115 (99%)	1.04	14 (12%) 8 6	80, 108, 135, 143	0
38	BQ	117/118 (99%)	-0.39	3 (2%) 57 37	9, 22, 46, 96	0
38	DQ	117/118 (99%)	1.95	46 (39%) 1 1	87, 112, 154, 191	0
39	BR	103/103 (100%)	-0.31	3 (2%) 53 35	11, 33, 75, 91	0
39	DR	103/103 (100%)	1.93	39 (37%) 1 1	85, 135, 170, 190	0
40	BS	110/110 (100%)	-0.62	0 100 100	14, 23, 57, 118	0
40	DS	110/110 (100%)	1.60	32 (29%) 1 1	76, 120, 154, 170	0
41	BT	93/100 (93%)	0.34	5 (5%) 31 20	28, 51, 112, 140	0
41	DT	93/100 (93%)	2.95	69 (74%) 0 0	132, 189, 223, 233	0
42	BU	102/104 (98%)	0.04	2 (1%) 65 45	29, 54, 100, 155	0
42	DU	102/104 (98%)	2.78	63 (61%) 0 0	153, 202, 250, 283	0
43	BV	94/94 (100%)	-0.53	0 100 100	17, 39, 79, 105	0
43	DV	94/94 (100%)	0.97	10 (10%) 11 8	113, 143, 165, 179	0
44	BW	79/85 (92%)	0.29	6 (7%) 20 13	18, 39, 94, 127	0
44	DW	79/85 (92%)	2.17	37 (46%) 0 1	99, 157, 191, 201	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
45	BX	77/78 (98%)	-0.16	0 100 100	23, 43, 80, 104	0
45	DX	77/78 (98%)	2.11	38 (49%) 0 1	84, 124, 170, 177	0
46	BY	63/63 (100%)	0.38	5 (7%) 18 12	41, 68, 113, 128	0
46	DY	63/63 (100%)	3.10	43 (68%) 0 0	180, 226, 268, 278	0
47	BZ	58/59 (98%)	-0.47	0 100 100	13, 27, 56, 97	0
47	DZ	58/59 (98%)	1.69	20 (34%) 1 1	97, 143, 180, 187	0
48	B0	56/57 (98%)	-0.55	0 100 100	12, 29, 61, 113	0
48	D0	56/57 (98%)	1.66	14 (25%) 2 2	84, 128, 163, 172	0
49	B1	50/55 (90%)	-0.21	0 100 100	29, 50, 91, 116	0
49	D1	50/55 (90%)	1.65	14 (28%) 1 1	110, 143, 159, 168	0
50	B2	46/46 (100%)	-0.10	2 (4%) 40 24	20, 30, 49, 131	0
50	D2	46/46 (100%)	2.98	30 (65%) 0 0	87, 115, 137, 147	0
51	B3	64/65 (98%)	-0.37	0 100 100	15, 30, 43, 62	0
51	D3	64/65 (98%)	2.51	41 (64%) 0 0	93, 126, 150, 169	0
52	B4	38/38 (100%)	-0.16	0 100 100	19, 33, 62, 87	0
52	D4	38/38 (100%)	2.45	27 (71%) 0 0	84, 127, 158, 161	0
53	CA	1530/1530 (100%)	0.67	118 (7%) 19 13	44, 100, 246, 325	0
54	DB	117/117 (100%)	0.84	6 (5%) 33 21	108, 175, 209, 221	0
All	All	20431/21074 (96%)	0.53	2613 (12%) 7 6	9, 93, 219, 434	0

All (2613) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	BA	2154	A	11.4
53	CA	1224	U	11.2
27	DF	129	MET	9.9
42	DU	30	SER	9.5
3	CD	27	ILE	9.5
38	DQ	7	VAL	9.0
42	DU	4	ILE	8.7
19	CT	62	ALA	8.2
49	D1	35	LEU	8.2
50	D2	33	ARG	8.0
12	CM	97	ARG	7.7
46	DY	13	GLU	7.7
22	DA	1237	A	7.6

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Mol	Chain	Res	Type	RSRZ
12	CM	18	LEU	7.5
42	DU	66	VAL	7.5
31	DJ	44	TYR	7.4
18	CS	36	ARG	7.4
30	DI	10	LEU	7.4
21	AA	1362	A	7.4
29	BH	113	SER	7.0
30	BI	11	GLN	7.0
18	AS	2	ARG	7.0
8	CI	67	LYS	6.9
30	BI	52	LEU	6.9
22	BA	1072	C	6.9
26	DE	56	GLY	6.9
27	DF	31	GLU	6.8
46	DY	45	GLN	6.8
21	AA	86	G	6.7
29	BH	99	ILE	6.7
12	CM	98	GLY	6.7
31	DJ	1	MET	6.6
30	BI	12	VAL	6.5
30	DI	1	ALA	6.5
22	BA	2155	U	6.4
26	DE	119	ILE	6.4
50	B2	46	LYS	6.4
44	DW	52	CYS	6.4
8	CI	65	THR	6.4
46	DY	5	GLU	6.4
41	DT	62	VAL	6.3
46	DY	44	LYS	6.3
24	DC	238	ASN	6.3
33	DL	72	ALA	6.2
41	DT	36	LYS	6.2
53	CA	210	C	6.2
38	DQ	36	GLN	6.2
42	DU	77	GLY	6.2
53	CA	1322	C	6.2
39	DR	96	VAL	6.1
29	DH	99	ILE	6.1
33	DL	106	GLU	6.1
22	DA	2406	A	6.1
37	DP	109	ILE	6.1
10	AK	125	LYS	6.1

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Mol	Chain	Res	Type	RSRZ
30	BI	1	ALA	6.1
53	CA	209	U	6.0
51	D3	14	LYS	6.0
44	DW	35	ILE	6.0
24	DC	233	GLY	6.0
18	CS	38	THR	6.0
9	CJ	61	ALA	6.0
30	BI	132	ALA	6.0
38	DQ	3	VAL	6.0
3	AD	24	VAL	5.9
42	DU	14	THR	5.9
29	DH	112	LYS	5.9
30	BI	66	PHE	5.9
33	DL	81	ASP	5.9
17	AR	19	GLU	5.9
16	AQ	6	THR	5.8
21	AA	88	U	5.8
52	D4	10	LEU	5.8
7	AH	1	SER	5.8
41	DT	57	VAL	5.8
46	DY	14	LEU	5.8
41	DT	34	VAL	5.8
38	DQ	1	ALA	5.7
30	BI	10	LEU	5.7
19	AT	3	ILE	5.7
21	AA	1032	G	5.7
42	DU	70	ALA	5.7
26	DE	98	LYS	5.6
29	BH	134	VAL	5.6
38	DQ	6	GLY	5.6
8	CI	15	ALA	5.6
26	DE	175	ILE	5.6
18	CS	8	PRO	5.6
41	DT	24	MET	5.6
46	DY	46	VAL	5.6
8	CI	127	SER	5.6
42	DU	5	ARG	5.6
29	BH	112	LYS	5.6
29	DH	100	ALA	5.6
30	DI	9	LYS	5.6
47	DZ	24	LEU	5.5
8	CI	66	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
46	DY	43	LEU	5.5
24	DC	241	LYS	5.5
22	BA	2180	U	5.5
19	CT	5	SER	5.5
42	DU	12	VAL	5.5
46	DY	17	GLU	5.5
12	CM	26	LYS	5.5
29	DH	98	ASP	5.5
26	DE	81	GLY	5.5
42	DU	11	ILE	5.5
18	CS	70	LEU	5.4
3	AD	28	ASP	5.4
30	BI	13	ALA	5.4
11	AL	24	GLU	5.4
22	BA	1093	G	5.4
46	DY	21	LEU	5.4
6	AG	4	ARG	5.4
22	DA	32	C	5.4
24	DC	271	SER	5.3
27	DF	35	LEU	5.3
22	DA	331	C	5.3
22	BA	2139	U	5.3
40	DS	40	ASN	5.3
33	DL	75	ALA	5.3
45	DX	33	HIS	5.3
29	DH	115	VAL	5.2
53	CA	632	U	5.2
16	AQ	19	SER	5.2
18	CS	37	SER	5.2
30	DI	2	LYS	5.2
41	DT	35	ALA	5.2
22	BA	2138	G	5.2
41	DT	14	PRO	5.2
33	DL	104	GLN	5.2
41	DT	32	LEU	5.1
38	DQ	4	LYS	5.1
29	BH	98	ASP	5.1
42	DU	102	ILE	5.1
45	DX	2	ARG	5.1
22	DA	512	G	5.1
21	AA	87	C	5.1
53	CA	1305	G	5.1

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Mol	Chain	Res	Type	RSRZ
30	BI	2	LYS	5.1
39	DR	20	VAL	5.1
41	DT	11	LEU	5.1
24	DC	253	GLY	5.0
22	DA	2062	A	5.0
28	DG	8	VAL	5.0
50	D2	45	SER	5.0
18	CS	48	ILE	5.0
42	DU	2	ALA	5.0
41	DT	43	ILE	5.0
50	D2	36	ALA	5.0
33	DL	84	LYS	5.0
44	DW	50	VAL	5.0
51	D3	19	GLY	5.0
12	CM	3	ILE	5.0
20	CU	37	TYR	5.0
39	DR	86	GLN	5.0
22	DA	1238	G	4.9
29	DH	91	PHE	4.9
44	BW	40	ARG	4.9
25	DD	192	ALA	4.9
29	DH	105	ALA	4.9
30	BI	3	LYS	4.9
41	DT	37	ASP	4.9
46	DY	1	MET	4.9
53	CA	1362	A	4.9
33	DL	82	LEU	4.9
12	CM	16	ILE	4.9
22	DA	12	U	4.9
20	AU	37	TYR	4.9
51	D3	42	HIS	4.9
30	BI	67	THR	4.9
19	CT	3	ILE	4.9
13	AN	51	PRO	4.9
22	DA	333	G	4.9
53	CA	1241	G	4.9
13	CN	33	VAL	4.9
44	DW	42	THR	4.9
35	DN	20	MET	4.9
46	DY	49	ASP	4.9
24	DC	236	GLY	4.8
42	DU	13	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
9	CJ	71	LEU	4.8
29	DH	142	VAL	4.8
44	DW	45	HIS	4.8
29	DH	94	ILE	4.8
12	CM	31	ALA	4.8
24	DC	250	GLN	4.8
24	DC	237	ARG	4.8
12	CM	22	TYR	4.7
22	BA	2146	C	4.7
46	DY	24	GLU	4.7
9	CJ	57	VAL	4.7
12	CM	94	LEU	4.7
41	DT	46	ALA	4.7
17	CR	63	TYR	4.7
27	DF	24	VAL	4.7
41	DT	60	THR	4.7
50	D2	43	THR	4.7
33	DL	101	ILE	4.7
53	CA	974	A	4.7
33	DL	102	GLY	4.7
39	BR	50	GLY	4.7
50	D2	31	LEU	4.7
48	D0	1	ALA	4.7
26	DE	178	VAL	4.7
42	DU	78	LYS	4.7
8	CI	86	LEU	4.7
26	DE	102	ARG	4.7
33	DL	80	SER	4.7
30	DI	119	ALA	4.7
53	CA	1302	C	4.7
42	DU	80	ASP	4.6
45	DX	49	ARG	4.6
29	DH	110	VAL	4.6
30	DI	4	VAL	4.6
9	CJ	40	ILE	4.6
28	DG	140	ILE	4.6
49	D1	21	THR	4.6
30	BI	139	VAL	4.6
38	DQ	96	ASP	4.6
36	DO	52	SER	4.6
12	CM	99	GLN	4.6
22	DA	1075	C	4.6

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Mol	Chain	Res	Type	RSRZ
27	DF	30	VAL	4.6
33	DL	116	VAL	4.6
50	D2	15	SER	4.6
38	DQ	8	ILE	4.6
41	DT	93	LEU	4.6
51	D3	20	GLY	4.6
22	DA	75	G	4.6
53	CA	984	C	4.6
46	DY	63	ALA	4.6
49	D1	20	TYR	4.5
28	DG	7	PRO	4.5
46	DY	20	ASN	4.5
22	BA	2110	G	4.5
22	DA	474	G	4.5
50	D2	22	MET	4.5
8	CI	118	ARG	4.5
22	BA	2402	U	4.5
13	CN	11	LYS	4.5
22	BA	2179	C	4.5
41	DT	12	ARG	4.5
53	CA	1361	G	4.5
26	DE	164	LEU	4.5
33	DL	76	GLU	4.5
12	CM	20	SER	4.5
22	DA	509	C	4.4
24	DC	223	ALA	4.4
19	CT	2	ASN	4.4
15	CP	52	LEU	4.4
30	BI	53	PRO	4.4
30	BI	54	ILE	4.4
47	DZ	9	THR	4.4
49	D1	23	THR	4.4
22	DA	334	C	4.4
53	CA	1223	C	4.4
41	DT	82	LYS	4.4
26	DE	104	ALA	4.4
22	DA	1537	G	4.4
29	DH	80	ILE	4.4
29	DH	97	ARG	4.4
18	CS	75	PRO	4.4
53	CA	468	A	4.4
53	CA	977	A	4.4

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Mol	Chain	Res	Type	RSRZ
42	DU	79	ALA	4.4
22	BA	1094	U	4.4
35	DN	46	ARG	4.4
53	CA	212	G	4.4
41	DT	9	LYS	4.4
6	CG	3	ARG	4.4
33	DL	100	ILE	4.3
20	CU	34	ARG	4.3
31	DJ	116	ARG	4.3
44	DW	13	ARG	4.3
45	DX	17	ARG	4.3
6	CG	104	VAL	4.3
30	BI	4	VAL	4.3
50	D2	44	VAL	4.3
22	DA	355	U	4.3
40	DS	44	ALA	4.3
41	DT	81	LYS	4.3
37	DP	111	GLU	4.3
41	DT	25	GLU	4.3
30	BI	69	VAL	4.3
28	DG	83	THR	4.3
40	DS	80	PRO	4.3
21	AA	81	A	4.3
25	DD	167	ASN	4.3
36	DO	4	LYS	4.3
21	AA	121	U	4.3
30	BI	58	ILE	4.3
42	DU	82	VAL	4.3
8	CI	64	ILE	4.3
42	DU	31	GLY	4.3
51	D3	31	ILE	4.3
40	DS	45	VAL	4.3
22	DA	76	C	4.2
33	DL	16	GLY	4.2
44	DW	34	SER	4.2
44	DW	37	VAL	4.2
16	AQ	5	ARG	4.2
29	BH	72	ILE	4.2
33	DL	26	GLY	4.2
9	CJ	74	VAL	4.2
46	DY	42	LEU	4.2
50	D2	12	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
29	DH	111	ALA	4.2
8	CI	110	VAL	4.2
41	DT	10	VAL	4.2
38	DQ	10	ARG	4.2
46	DY	48	ARG	4.2
22	DA	645	C	4.2
40	DS	97	LEU	4.2
36	DO	87	ILE	4.2
52	D4	26	ILE	4.2
19	CT	8	LYS	4.2
12	CM	6	ILE	4.2
17	CR	73	HIS	4.2
26	DE	177	PRO	4.2
8	AI	129	ARG	4.2
45	DX	6	VAL	4.1
6	CG	61	PHE	4.1
12	CM	21	ILE	4.1
29	BH	100	ALA	4.1
38	DQ	89	ILE	4.1
46	DY	32	ALA	4.1
8	CI	124	PRO	4.1
19	CT	67	HIS	4.1
32	DK	122	VAL	4.1
24	BC	250	GLN	4.1
40	DS	96	ILE	4.1
29	DH	113	SER	4.1
12	CM	100	ARG	4.1
42	DU	69	VAL	4.1
6	CG	41	ILE	4.1
26	DE	108	ILE	4.1
33	DL	36	LYS	4.1
11	AL	123	ALA	4.1
41	DT	72	GLN	4.1
24	BC	238	ASN	4.1
18	CS	13	HIS	4.1
22	DA	411	G	4.1
22	DA	669	G	4.1
22	DA	29	U	4.1
30	BI	74	PRO	4.1
53	CA	532	A	4.1
22	BA	2153	C	4.1
24	BC	235	GLU	4.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2107	G	4.1
6	CG	44	SER	4.0
51	D3	50	SER	4.0
18	CS	28	LYS	4.0
26	DE	90	GLN	4.0
12	CM	5	GLY	4.0
26	DE	103	GLY	4.0
29	DH	92	GLY	4.0
35	DN	65	LEU	4.0
22	DA	30	G	4.0
31	DJ	111	LYS	4.0
18	CS	43	MET	4.0
26	DE	55	SER	4.0
26	DE	135	ALA	4.0
13	CN	50	LEU	4.0
28	DG	32	LEU	4.0
31	DJ	142	ILE	4.0
8	CI	63	TYR	4.0
29	BH	96	THR	4.0
20	CU	23	GLU	4.0
29	BH	114	GLU	4.0
22	BA	1171	G	4.0
22	DA	60	G	4.0
26	DE	187	VAL	4.0
46	DY	54	LYS	4.0
25	DD	144	GLY	4.0
44	DW	12	GLY	4.0
44	DW	21	GLY	4.0
22	DA	1214	A	4.0
42	DU	71	ILE	4.0
7	CH	1	SER	4.0
12	CM	102	LYS	4.0
36	DO	3	LYS	4.0
32	DK	68	GLY	4.0
22	DA	1236	G	4.0
38	DQ	12	ARG	4.0
3	AD	36	ALA	4.0
30	BI	9	LYS	4.0
44	DW	58	LEU	4.0
9	CJ	41	PRO	3.9
22	BA	546	U	3.9
26	DE	188	MET	3.9

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Mol	Chain	Res	Type	RSRZ
26	DE	87	ALA	3.9
51	D3	27	ASN	3.9
50	D2	10	LEU	3.9
1	CB	87	ASP	3.9
5	CF	91	ARG	3.9
18	CS	67	GLY	3.9
50	D2	14	ARG	3.9
35	DN	97	ILE	3.9
29	DH	106	ALA	3.9
41	DT	83	ALA	3.9
51	D3	24	LYS	3.9
48	D0	5	ASN	3.9
48	D0	8	THR	3.9
29	BH	115	VAL	3.9
24	DC	234	GLY	3.9
8	CI	19	PHE	3.9
53	CA	86	G	3.9
41	BT	70	HIS	3.9
42	DU	90	LYS	3.9
6	CG	149	ALA	3.9
12	CM	4	ALA	3.9
38	DQ	95	ALA	3.9
22	BA	2151	U	3.9
22	DA	114	U	3.9
12	CM	96	VAL	3.9
13	CN	52	ARG	3.9
50	D2	24	THR	3.9
50	D2	35	ARG	3.9
18	CS	29	PRO	3.9
50	D2	1	MET	3.9
19	AT	67	HIS	3.9
30	BI	78	LEU	3.9
45	DX	32	LEU	3.9
21	AA	412	A	3.9
22	DA	1205	A	3.9
29	BH	97	ARG	3.9
22	BA	2136	G	3.9
24	DC	245	THR	3.9
22	DA	290	U	3.9
22	DA	392	U	3.9
30	BI	73	PRO	3.9
51	D3	45	PRO	3.9

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Mol	Chain	Res	Type	RSRZ
27	DF	155	ILE	3.9
26	DE	138	LEU	3.9
1	AB	150	ILE	3.8
9	CJ	59	LYS	3.8
15	AP	80	LYS	3.8
22	DA	2820	A	3.8
35	DN	5	LYS	3.8
25	DD	43	ASP	3.8
34	DM	22	GLN	3.8
33	DL	61	LEU	3.8
33	DL	78	ARG	3.8
50	D2	32	ALA	3.8
39	DR	34	GLU	3.8
45	DX	47	THR	3.8
37	DP	114	ASN	3.8
9	AJ	75	ASP	3.8
42	DU	67	SER	3.8
22	BA	1065	U	3.8
26	DE	96	VAL	3.8
26	DE	186	VAL	3.8
19	CT	68	LYS	3.8
30	DI	108	ILE	3.8
41	DT	65	GLY	3.8
45	DX	45	PHE	3.8
26	DE	180	LEU	3.8
28	DG	58	ALA	3.8
3	CD	28	ASP	3.8
27	DF	152	ASP	3.8
41	BT	16	VAL	3.8
53	CA	1441	A	3.8
22	DA	2585	U	3.8
31	DJ	81	ILE	3.8
41	DT	61	LEU	3.8
1	CB	106	VAL	3.8
29	DH	108	VAL	3.8
39	DR	75	VAL	3.8
51	D3	30	HIS	3.8
5	CF	100	SER	3.8
34	DM	15	GLY	3.8
18	CS	40	PHE	3.8
22	DA	448	U	3.8
36	DO	24	THR	3.8

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Mol	Chain	Res	Type	RSRZ
53	CA	723	U	3.8
41	DT	33	LYS	3.7
52	D4	8	LYS	3.7
24	BC	242	HIS	3.7
21	AA	1033	G	3.7
22	DA	549	G	3.7
9	CJ	8	ILE	3.7
30	DI	58	ILE	3.7
18	CS	7	GLY	3.7
20	AU	35	GLU	3.7
35	DN	70	THR	3.7
50	D2	23	ALA	3.7
29	BH	142	VAL	3.7
24	DC	45	ASN	3.7
26	DE	49	ARG	3.7
28	BG	1	SER	3.7
30	DI	127	SER	3.7
35	DN	75	ILE	3.7
18	CS	12	LEU	3.7
24	BC	240	GLY	3.7
42	DU	28	LEU	3.7
30	DI	73	PRO	3.7
22	BA	1068	G	3.7
22	DA	2382	G	3.7
34	DM	12	MET	3.7
22	DA	2402	U	3.7
16	CQ	7	LEU	3.7
22	BA	2145	C	3.7
22	DA	33	C	3.7
41	DT	56	GLU	3.7
41	DT	13	ALA	3.7
30	DI	8	VAL	3.7
33	DL	69	ARG	3.7
13	CN	47	LEU	3.7
30	DI	78	LEU	3.7
30	DI	79	LEU	3.7
41	DT	8	LEU	3.7
11	CL	87	LYS	3.7
35	DN	99	LYS	3.7
51	D3	22	LYS	3.7
12	CM	19	THR	3.7
29	DH	96	THR	3.7

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Mol	Chain	Res	Type	RSRZ
41	DT	39	THR	3.7
22	DA	336	C	3.7
11	AL	14	LYS	3.7
25	DD	10	GLY	3.7
29	BH	95	GLY	3.7
18	CS	41	PRO	3.6
49	D1	40	PRO	3.6
45	DX	34	SER	3.6
12	CM	14	ALA	3.6
22	BA	1179	G	3.6
22	DA	329	G	3.6
35	DN	29	VAL	3.6
53	CA	211	G	3.6
53	CA	1242	G	3.6
21	AA	1030	U	3.6
39	DR	21	ARG	3.6
17	CR	20	ILE	3.6
34	DM	20	LEU	3.6
38	DQ	70	GLN	3.6
44	DW	36	ILE	3.6
52	D4	35	GLN	3.6
21	AA	1031	C	3.6
38	DQ	100	PHE	3.6
39	DR	8	GLY	3.6
44	BW	51	GLY	3.6
36	DO	32	PRO	3.6
44	DW	32	ALA	3.6
45	DX	66	VAL	3.6
46	DY	53	VAL	3.6
33	DL	77	ILE	3.6
35	DN	113	ILE	3.6
6	CG	136	LYS	3.6
13	CN	3	GLN	3.6
53	CA	961	U	3.6
22	DA	1215	G	3.6
22	DA	2061	G	3.6
2	CC	166	TRP	3.6
22	DA	2799	A	3.6
18	CS	42	ASN	3.6
46	DY	47	ARG	3.6
40	DS	43	ALA	3.6
42	DU	1	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
51	D3	59	ALA	3.6
41	DT	84	TYR	3.6
37	BP	1	SER	3.6
46	DY	10	SER	3.6
6	CG	46	LEU	3.6
12	CM	52	ILE	3.6
18	CS	30	LEU	3.6
19	CT	32	LYS	3.6
8	CI	125	GLN	3.6
8	CI	30	ASN	3.6
30	DI	75	ALA	3.6
53	CA	202	G	3.6
22	DA	332	A	3.6
18	CS	11	ASP	3.6
22	BA	1172	C	3.6
53	CA	1243	C	3.6
10	AK	128	VAL	3.6
30	BI	82	ALA	3.6
41	DT	58	VAL	3.6
42	DU	27	VAL	3.6
52	D4	3	VAL	3.6
22	BA	884	U	3.6
22	BA	1066	U	3.6
22	DA	1325	U	3.6
28	DG	72	ASN	3.6
33	DL	92	LEU	3.6
46	DY	56	LEU	3.6
12	CM	103	THR	3.6
24	DC	256	THR	3.6
30	BI	87	SER	3.6
13	CN	32	ASP	3.6
38	DQ	90	ASP	3.6
22	DA	805	G	3.5
53	CA	983	A	3.5
8	CI	116	GLY	3.5
33	DL	31	GLY	3.5
30	DI	12	VAL	3.5
35	DN	60	VAL	3.5
41	DT	67	VAL	3.5
1	AB	11	ALA	3.5
27	DF	153	ILE	3.5
22	BA	138	U	3.5

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Mol	Chain	Res	Type	RSRZ
51	D3	60	CYS	3.5
25	DD	128	ARG	3.5
36	DO	2	ASP	3.5
24	BC	236	GLY	3.5
11	CL	123	ALA	3.5
41	DT	40	LYS	3.5
53	CA	197	A	3.5
22	DA	51	G	3.5
25	DD	168	GLU	3.5
53	CA	207	C	3.5
26	DE	97	ASN	3.5
8	CI	13	SER	3.5
9	CJ	54	SER	3.5
26	DE	57	LYS	3.5
45	DX	19	HIS	3.5
29	DH	65	ALA	3.5
30	DI	53	PRO	3.5
46	DY	18	LEU	3.5
29	BH	80	ILE	3.5
22	BA	2150	C	3.5
22	DA	1248	G	3.5
42	DU	32	LYS	3.5
24	DC	249	VAL	3.5
29	DH	95	GLY	3.5
30	BI	127	SER	3.5
51	D3	25	HIS	3.5
8	CI	120	ALA	3.5
28	DG	118	ALA	3.5
51	D3	36	ALA	3.5
26	DE	200	LEU	3.5
53	CA	208	U	3.5
8	CI	123	ARG	3.5
18	CS	2	ARG	3.5
29	DH	27	ARG	3.5
39	DR	78	ARG	3.5
12	CM	30	LYS	3.5
18	CS	6	LYS	3.5
41	DT	66	LYS	3.5
52	D4	2	LYS	3.5
1	CB	129	THR	3.5
12	CM	17	ALA	3.5
51	D3	64	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
21	AA	1302	C	3.5
52	D4	1	MET	3.5
25	DD	131	ASP	3.5
33	DL	18	ARG	3.5
50	D2	19	ARG	3.5
51	D3	21	PHE	3.4
8	AI	42	THR	3.4
6	CG	45	ALA	3.4
51	D3	56	LEU	3.4
2	CC	195	ILE	3.4
6	CG	6	ILE	3.4
31	BJ	142	ILE	3.4
35	DN	2	ARG	3.4
46	DY	40	SER	3.4
47	DZ	31	ILE	3.4
22	DA	265	A	3.4
41	DT	79	ASP	3.4
22	BA	2140	G	3.4
26	DE	33	VAL	3.4
30	DI	27	LEU	3.4
26	DE	173	THR	3.4
35	DN	11	ASN	3.4
6	CG	151	ALA	3.4
41	DT	20	ALA	3.4
26	DE	181	ILE	3.4
24	BC	241	LYS	3.4
26	DE	95	LYS	3.4
13	AN	20	PHE	3.4
26	DE	144	GLU	3.4
11	CL	32	VAL	3.4
22	DA	2153	C	3.4
22	DA	2347	C	3.4
33	DL	43	GLY	3.4
40	DS	95	ARG	3.4
42	DU	89	GLY	3.4
47	DZ	32	GLY	3.4
3	AD	35	GLN	3.4
29	DH	28	ASN	3.4
30	DI	11	GLN	3.4
42	DU	68	ASN	3.4
9	CJ	53	ILE	3.4
30	DI	128	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
53	CA	121	U	3.4
53	CA	1086	U	3.4
9	CJ	39	PRO	3.4
5	CF	42	TRP	3.4
2	CC	90	VAL	3.4
28	DG	70	LEU	3.4
29	DH	90	LEU	3.4
46	DY	19	LEU	3.4
3	CD	26	ALA	3.4
9	CJ	76	ILE	3.4
16	AQ	69	THR	3.4
20	AU	41	THR	3.4
30	DI	93	ASN	3.4
2	CC	51	VAL	3.4
4	CE	150	GLU	3.4
30	BI	129	GLU	3.4
41	DT	6	ARG	3.4
43	DV	45	ASP	3.4
30	DI	7	TYR	3.4
33	DL	113	ALA	3.4
6	CG	109	LYS	3.4
10	CK	125	LYS	3.4
8	CI	8	THR	3.4
25	DD	91	THR	3.4
25	DD	151	THR	3.4
29	DH	104	THR	3.4
42	DU	65	GLN	3.4
22	BA	2108	A	3.3
22	DA	28	A	3.3
3	AD	152	SER	3.3
6	CG	40	SER	3.3
18	AS	36	ARG	3.3
22	DA	2150	C	3.3
28	DG	154	GLU	3.3
30	DI	23	VAL	3.3
42	DU	33	VAL	3.3
24	BC	234	GLY	3.3
29	DH	81	ALA	3.3
27	DF	66	ILE	3.3
18	CS	78	THR	3.3
26	DE	165	HIS	3.3
53	CA	976	G	3.3

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Mol	Chain	Res	Type	RSRZ
39	DR	80	ARG	3.3
39	DR	72	VAL	3.3
42	DU	41	VAL	3.3
46	DY	57	LEU	3.3
33	DL	51	GLU	3.3
37	DP	4	ILE	3.3
39	DR	50	GLY	3.3
8	CI	42	THR	3.3
28	DG	33	THR	3.3
38	DQ	58	GLN	3.3
50	D2	29	GLN	3.3
46	DY	29	ARG	3.3
9	CJ	90	LEU	3.3
24	DC	109	LEU	3.3
41	DT	7	LEU	3.3
44	DW	11	ASN	3.3
24	DC	219	VAL	3.3
30	DI	77	VAL	3.3
13	CN	6	LYS	3.3
19	CT	15	LYS	3.3
30	DI	3	LYS	3.3
40	DS	42	LYS	3.3
28	DG	39	ALA	3.3
30	BI	26	ALA	3.3
42	DU	63	ALA	3.3
53	CA	1364	U	3.3
26	DE	23	PHE	3.3
35	DN	98	LEU	3.3
42	DU	95	PHE	3.3
44	DW	31	LEU	3.3
45	DX	12	VAL	3.3
50	D2	37	LYS	3.3
26	DE	199	MET	3.3
9	AJ	34	ALA	3.3
29	BH	111	ALA	3.3
41	DT	30	ILE	3.3
17	AR	63	TYR	3.3
8	CI	31	GLN	3.3
18	AS	4	LEU	3.3
28	DG	36	LEU	3.3
29	BH	62	LEU	3.3
53	CA	973	G	3.3

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Mol	Chain	Res	Type	RSRZ
30	DI	69	VAL	3.3
22	BA	1073	A	3.3
22	DA	101	A	3.3
22	DA	504	A	3.3
45	DX	55	MET	3.3
53	CA	962	C	3.3
9	CJ	62	ARG	3.2
42	DU	81	ARG	3.2
24	DC	258	SER	3.2
30	DI	87	SER	3.2
52	D4	6	SER	3.2
29	BH	90	LEU	3.2
38	DQ	40	LYS	3.2
30	DI	72	THR	3.2
12	CM	38	ILE	3.2
40	DS	85	ILE	3.2
43	DV	94	ALA	3.2
52	D4	23	ILE	3.2
20	AU	23	GLU	3.2
22	BA	1071	G	3.2
29	DH	149	GLU	3.2
53	CA	1222	G	3.2
22	BA	2147	A	3.2
26	DE	88	ARG	3.2
53	CA	65	A	3.2
53	CA	1219	A	3.2
11	AL	37	TYR	3.2
53	CA	206	C	3.2
53	CA	1217	C	3.2
1	CB	186	VAL	3.2
36	DO	27	VAL	3.2
39	DR	51	VAL	3.2
40	DS	94	ASP	3.2
9	CJ	6	ILE	3.2
41	BT	24	MET	3.2
26	DE	50	ALA	3.2
41	DT	3	ARG	3.2
21	AA	85	U	3.2
22	DA	266	G	3.2
22	DA	311	A	3.2
22	DA	446	G	3.2
22	DA	2136	G	3.2

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Mol	Chain	Res	Type	RSRZ
24	BC	37	SER	3.2
24	BC	239	PHE	3.2
30	DI	56	VAL	3.2
33	DL	66	PHE	3.2
53	CA	1324	A	3.2
4	AE	102	THR	3.2
9	CJ	80	THR	3.2
13	CN	53	ASP	3.2
22	DA	61	C	3.2
22	DA	318	C	3.2
53	CA	1027	C	3.2
30	BI	116	MET	3.2
30	BI	128	ILE	3.2
12	CM	28	ARG	3.2
25	DD	75	ALA	3.2
28	BG	169	ARG	3.2
28	DG	173	ALA	3.2
27	DF	81	GLY	3.2
34	DM	41	LEU	3.2
18	CS	73	PHE	3.2
29	BH	121	VAL	3.2
22	DA	387	U	3.2
30	BI	65	SER	3.2
30	BI	16	MET	3.2
30	BI	85	ILE	3.2
40	DS	100	THR	3.2
22	DA	1420	A	3.2
6	CG	34	LYS	3.2
30	DI	71	LYS	3.2
22	DA	11	C	3.2
12	CM	15	VAL	3.2
12	CM	111	PRO	3.2
25	DD	118	PHE	3.2
30	BI	7	TYR	3.2
29	BH	103	VAL	3.2
29	BH	110	VAL	3.2
16	CQ	5	ARG	3.2
31	DJ	40	HIS	3.2
27	DF	33	ILE	3.2
30	DI	89	SER	3.2
42	DU	29	SER	3.2
29	BH	84	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
9	CJ	46	LYS	3.1
12	CM	57	ASP	3.1
19	CT	4	LYS	3.1
25	DD	8	LYS	3.1
27	DF	87	LYS	3.1
41	DT	64	LYS	3.1
51	D3	35	LYS	3.1
3	AD	23	GLY	3.1
34	DM	83	GLY	3.1
53	CA	412	A	3.1
53	CA	1201	A	3.1
33	DL	62	PRO	3.1
22	DA	584	C	3.1
22	DA	946	C	3.1
22	DA	1430	G	3.1
8	CI	10	ARG	3.1
29	DH	123	ARG	3.1
36	DO	7	ARG	3.1
50	D2	21	ARG	3.1
42	DU	34	ILE	3.1
12	AM	4	ALA	3.1
33	DL	74	THR	3.1
33	DL	19	LEU	3.1
2	CC	172	VAL	3.1
9	CJ	49	PHE	3.1
27	DF	131	VAL	3.1
30	BI	77	VAL	3.1
17	AR	50	TYR	3.1
18	CS	10	ILE	3.1
21	AA	1441	A	3.1
18	CS	69	LYS	3.1
27	DF	54	ALA	3.1
31	DJ	42	ALA	3.1
38	DQ	67	ALA	3.1
5	AF	92	THR	3.1
53	CA	94	G	3.1
54	DB	23	G	3.1
3	CD	146	GLU	3.1
12	CM	59	VAL	3.1
30	BI	22	PRO	3.1
30	DI	21	PRO	3.1
12	CM	85	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
19	AT	35	TYR	3.1
6	CG	103	ILE	3.1
8	CI	119	LYS	3.1
44	DW	77	LYS	3.1
30	BI	75	ALA	3.1
33	DL	15	ALA	3.1
36	DO	26	LEU	3.1
29	BH	92	GLY	3.1
29	DH	85	GLY	3.1
6	CG	102	TRP	3.1
24	DC	47	ARG	3.1
31	BJ	73	VAL	3.1
37	DP	8	GLU	3.1
37	DP	91	VAL	3.1
38	DQ	21	LYS	3.1
45	DX	53	LYS	3.1
8	CI	71	ILE	3.1
22	DA	1216	G	3.1
27	DF	59	ILE	3.1
43	DV	48	MET	3.1
38	DQ	94	LEU	3.1
39	DR	22	LEU	3.1
24	DC	46	GLY	3.1
34	DM	23	GLY	3.1
45	DX	1	SER	3.1
6	CG	150	PHE	3.1
26	DE	85	PHE	3.1
30	DI	66	PHE	3.1
6	CG	35	LYS	3.1
24	DC	38	LYS	3.1
36	BO	58	ILE	3.1
43	DV	84	PRO	3.1
22	DA	105	C	3.0
1	AB	156	LEU	3.0
7	CH	129	ALA	3.0
9	CJ	52	LEU	3.0
13	CN	26	LEU	3.0
33	DL	99	ASN	3.0
35	DN	38	LEU	3.0
2	CC	189	HIS	3.0
22	BA	2133	G	3.0
22	BA	2152	G	3.0

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Mol	Chain	Res	Type	RSRZ
22	DA	325	G	3.0
27	DF	29	ARG	3.0
29	DH	107	GLY	3.0
1	AB	220	VAL	3.0
21	AA	842	U	3.0
22	BA	1078	U	3.0
29	DH	130	VAL	3.0
53	CA	950	U	3.0
54	DB	87	U	3.0
41	DT	80	TRP	3.0
3	AD	27	ILE	3.0
26	DE	143	LEU	3.0
47	DZ	28	LEU	3.0
21	AA	80	A	3.0
22	DA	800	A	3.0
22	DA	2154	A	3.0
6	AG	108	ARG	3.0
6	CG	101	ARG	3.0
32	DK	18	ARG	3.0
18	CS	71	GLY	3.0
46	DY	31	GLN	3.0
22	DA	16	C	3.0
16	CQ	6	THR	3.0
22	BA	2149	U	3.0
22	DA	234	U	3.0
24	DC	243	PRO	3.0
30	DI	74	PRO	3.0
43	DV	37	PRO	3.0
22	BA	2107	G	3.0
27	DF	65	LEU	3.0
33	DL	27	LEU	3.0
25	DD	31	ALA	3.0
30	DI	76	ALA	3.0
33	DL	71	ALA	3.0
22	DA	1213	A	3.0
28	DG	35	THR	3.0
14	CO	25	GLU	3.0
22	DA	335	C	3.0
6	CG	29	LEU	3.0
30	DI	13	ALA	3.0
22	DA	1066	U	3.0
1	CB	17	HIS	3.0

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Mol	Chain	Res	Type	RSRZ
40	DS	9	HIS	3.0
45	DX	35	HIS	3.0
50	D2	25	LYS	3.0
6	CG	74	VAL	3.0
22	DA	46	G	3.0
22	DA	259	G	3.0
22	DA	308	G	3.0
22	DA	2409	G	3.0
22	DA	2447	G	3.0
53	CA	993	G	3.0
53	CA	1323	G	3.0
1	CB	15	PHE	3.0
30	BI	70	THR	3.0
47	DZ	7	THR	3.0
7	AH	2	MET	3.0
33	DL	103	ILE	3.0
40	DS	82	MET	3.0
8	CI	111	GLU	3.0
20	AU	38	GLU	3.0
30	DI	22	PRO	3.0
1	AB	52	ALA	3.0
30	BI	134	SER	3.0
44	DW	17	ALA	3.0
19	CT	35	TYR	3.0
22	BA	885	C	3.0
49	D1	36	LYS	3.0
26	DE	54	GLY	3.0
30	BI	60	VAL	3.0
44	DW	70	VAL	3.0
22	DA	790	U	3.0
22	DA	932	U	3.0
53	CA	1240	U	3.0
44	DW	25	PHE	3.0
29	DH	124	THR	3.0
30	DI	52	LEU	2.9
33	DL	79	LEU	2.9
6	CG	108	ARG	2.9
10	CK	67	GLU	2.9
41	DT	42	GLU	2.9
22	DA	88	G	2.9
45	DX	30	PRO	2.9
53	CA	1139	G	2.9

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Mol	Chain	Res	Type	RSRZ
13	AN	43	ALA	2.9
30	DI	112	LYS	2.9
14	CO	1	SER	2.9
26	DE	101	TYR	2.9
28	DG	1	SER	2.9
51	D3	63	TYR	2.9
26	DE	52	VAL	2.9
30	BI	57	VAL	2.9
44	DW	22	VAL	2.9
18	CS	9	PHE	2.9
22	DA	128	C	2.9
53	CA	972	C	2.9
22	BA	1180	U	2.9
24	DC	51	ARG	2.9
27	DF	34	THR	2.9
44	DW	9	THR	2.9
3	CD	159	GLU	2.9
12	CM	12	LYS	2.9
33	DL	13	LYS	2.9
34	DM	72	PRO	2.9
39	DR	46	GLU	2.9
51	D3	26	ALA	2.9
26	DE	80	SER	2.9
30	DI	97	VAL	2.9
8	CI	68	GLY	2.9
33	DL	11	GLY	2.9
42	DU	55	GLY	2.9
22	BA	2144	G	2.9
22	BA	2885	G	2.9
22	DA	1250	G	2.9
22	DA	2383	G	2.9
28	DG	51	PHE	2.9
30	BI	37	PHE	2.9
49	D1	18	HIS	2.9
26	DE	73	ILE	2.9
26	DE	77	ILE	2.9
22	DA	1090	A	2.9
22	DA	1322	A	2.9
33	DL	70	LYS	2.9
40	DS	83	LYS	2.9
3	CD	34	GLU	2.9
22	DA	343	C	2.9

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Mol	Chain	Res	Type	RSRZ
22	DA	587	C	2.9
22	DA	1289	C	2.9
26	DE	172	ALA	2.9
37	BP	111	GLU	2.9
53	CA	1218	C	2.9
22	BA	2181	U	2.9
6	CG	31	VAL	2.9
31	DJ	73	VAL	2.9
52	D4	22	VAL	2.9
26	DE	93	SER	2.9
29	BH	82	SER	2.9
41	DT	51	PHE	2.9
47	DZ	52	PHE	2.9
8	CI	17	ARG	2.9
30	DI	85	ILE	2.9
35	DN	115	LEU	2.9
8	AI	61	ASP	2.9
27	DF	32	LYS	2.9
39	DR	55	ASP	2.9
39	DR	73	LYS	2.9
6	CG	64	ALA	2.9
22	DA	117	G	2.9
22	DA	2867	G	2.9
26	DE	182	ALA	2.9
35	DN	107	ASN	2.9
32	DK	4	GLU	2.9
46	DY	3	ALA	2.9
53	CA	108	G	2.9
54	DB	2	G	2.9
22	DA	345	A	2.9
22	DA	1285	A	2.9
15	CP	39	PHE	2.9
22	DA	1209	U	2.9
22	DA	1390	U	2.9
29	BH	132	PHE	2.9
44	DW	51	GLY	2.9
1	AB	26	MET	2.9
26	DE	12	LEU	2.9
29	BH	83	LYS	2.9
8	CI	109	GLN	2.9
30	BI	46	ASP	2.9
15	AP	81	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
29	BH	69	ALA	2.9
6	CG	73	GLU	2.9
25	DD	126	ASN	2.9
13	CN	100	TRP	2.9
6	CG	72	VAL	2.9
26	DE	146	VAL	2.9
5	CF	86	ARG	2.9
41	DT	76	ARG	2.9
22	DA	327	G	2.9
22	DA	1210	G	2.9
22	DA	1407	G	2.9
22	DA	2032	G	2.9
22	DA	2894	G	2.9
36	DO	100	HIS	2.8
19	CT	12	GLN	2.8
22	DA	72	U	2.8
38	DQ	55	GLN	2.8
9	CJ	93	ALA	2.8
25	BD	151	THR	2.8
26	DE	59	PRO	2.8
24	DC	34	GLU	2.8
2	CC	194	VAL	2.8
25	DD	170	VAL	2.8
42	DU	10	VAL	2.8
40	DS	11	ARG	2.8
44	DW	54	ARG	2.8
18	CS	27	LYS	2.8
24	DC	264	LYS	2.8
25	DD	166	GLY	2.8
26	DE	132	LYS	2.8
29	BH	122	LEU	2.8
33	DL	65	GLY	2.8
42	DU	56	GLY	2.8
50	D2	18	PHE	2.8
52	D4	18	LYS	2.8
33	DL	23	ILE	2.8
5	AF	100	SER	2.8
22	DA	104	A	2.8
22	DA	125	A	2.8
24	DC	39	SER	2.8
53	CA	1363	A	2.8
6	CG	116	ALA	2.8

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Mol	Chain	Res	Type	RSRZ
24	DC	60	ALA	2.8
30	BI	113	ALA	2.8
21	AA	89	U	2.8
21	AA	844	G	2.8
22	DA	489	G	2.8
22	DA	1271	G	2.8
30	DI	67	THR	2.8
33	DL	5	THR	2.8
22	DA	130	C	2.8
22	DA	268	C	2.8
22	DA	302	C	2.8
22	DA	2666	C	2.8
46	BY	13	GLU	2.8
46	DY	50	VAL	2.8
3	AD	21	LYS	2.8
42	DU	3	LYS	2.8
42	DU	64	ILE	2.8
45	DX	29	LEU	2.8
8	AI	89	TYR	2.8
39	DR	82	HIS	2.8
47	DZ	33	HIS	2.8
26	DE	72	SER	2.8
39	DR	103	ALA	2.8
50	D2	20	ALA	2.8
34	DM	16	ARG	2.8
18	CS	47	THR	2.8
25	DD	60	VAL	2.8
36	BO	2	ASP	2.8
41	DT	29	THR	2.8
22	DA	505	A	2.8
22	DA	1057	A	2.8
22	DA	1626	A	2.8
53	CA	196	A	2.8
2	CC	206	ILE	2.8
4	CE	30	PHE	2.8
5	CF	39	LEU	2.8
12	CM	88	LEU	2.8
22	BA	2137	U	2.8
22	DA	328	U	2.8
50	D2	42	LEU	2.8
41	BT	2	ILE	2.8
17	CR	50	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
22	BA	2148	G	2.8
22	DA	1087	G	2.8
22	DA	2133	G	2.8
18	AS	55	GLN	2.8
29	BH	65	ALA	2.8
13	CN	60	ARG	2.8
38	DQ	2	ARG	2.8
44	DW	19	ARG	2.8
45	DX	36	ARG	2.8
29	BH	93	SER	2.8
32	DK	103	VAL	2.8
33	DL	42	SER	2.8
52	D4	7	VAL	2.8
17	CR	19	GLU	2.8
30	BI	105	LEU	2.8
30	BI	117	THR	2.8
30	DI	111	THR	2.8
26	DE	60	TRP	2.8
29	BH	94	ILE	2.8
35	DN	72	ASP	2.8
1	AB	12	GLY	2.8
27	DF	130	GLY	2.8
52	D4	21	GLY	2.8
22	DA	100	U	2.8
22	DA	1077	A	2.8
22	DA	1406	U	2.8
53	CA	382	A	2.8
17	CR	56	ARG	2.8
34	DM	38	ARG	2.8
36	DO	30	ARG	2.8
22	DA	228	C	2.8
22	DA	1536	C	2.8
39	DR	87	GLN	2.8
41	DT	23	ALA	2.8
41	DT	38	ALA	2.8
35	DN	78	LYS	2.8
53	CA	381	C	2.8
53	CA	1149	C	2.8
4	CE	113	VAL	2.8
22	DA	1074	G	2.8
49	D1	46	VAL	2.8
13	AN	45	LEU	2.8

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Mol	Chain	Res	Type	RSRZ
24	DC	251	THR	2.8
30	DI	135	MET	2.7
30	BI	130	GLY	2.7
37	DP	30	TRP	2.7
29	BH	73	ASN	2.7
27	DF	127	TYR	2.7
25	DD	140	HIS	2.7
35	DN	96	ARG	2.7
40	DS	99	ARG	2.7
46	DY	52	ARG	2.7
12	AM	1	ALA	2.7
15	CP	27	ALA	2.7
25	DD	196	ALA	2.7
30	BI	114	ALA	2.7
51	D3	51	LYS	2.7
22	BA	2142	A	2.7
22	DA	675	A	2.7
22	DA	783	A	2.7
22	DA	2297	A	2.7
22	DA	2632	A	2.7
13	CN	51	PRO	2.7
9	AJ	49	PHE	2.7
24	DC	63	ILE	2.7
33	DL	107	PHE	2.7
39	DR	19	THR	2.7
46	DY	16	THR	2.7
35	DN	105	GLY	2.7
22	DA	476	G	2.7
22	DA	1212	G	2.7
26	DE	171	ASP	2.7
53	CA	104	G	2.7
34	DM	40	ARG	2.7
20	CU	53	LYS	2.7
34	DM	84	LYS	2.7
42	DU	42	LYS	2.7
47	DZ	55	LYS	2.7
27	DF	106	ALA	2.7
28	DG	135	ALA	2.7
40	DS	102	HIS	2.7
16	AQ	82	VAL	2.7
29	BH	108	VAL	2.7
35	DN	116	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
41	DT	47	VAL	2.7
41	DT	55	VAL	2.7
19	CT	65	LEU	2.7
34	DM	119	LEU	2.7
45	DX	48	LEU	2.7
5	AF	51	ILE	2.7
28	DG	82	PHE	2.7
36	DO	117	PHE	2.7
40	DS	86	MET	2.7
29	DH	93	SER	2.7
30	DI	59	THR	2.7
31	DJ	107	GLY	2.7
33	DL	28	GLY	2.7
38	BQ	86	SER	2.7
51	D3	17	GLY	2.7
52	D4	38	GLY	2.7
18	CS	77	ARG	2.7
51	D3	39	ARG	2.7
8	AI	128	LYS	2.7
51	D3	38	LYS	2.7
22	DA	116	C	2.7
22	DA	510	C	2.7
27	DF	7	TYR	2.7
28	DG	150	TYR	2.7
38	DQ	46	TYR	2.7
6	CG	97	ALA	2.7
17	AR	73	HIS	2.7
26	DE	26	ALA	2.7
38	DQ	34	ALA	2.7
44	DW	75	ASN	2.7
24	DC	244	VAL	2.7
30	BI	79	LEU	2.7
22	DA	180	G	2.7
22	DA	801	G	2.7
30	BI	55	PRO	2.7
47	DZ	8	GLN	2.7
36	DO	40	ILE	2.7
49	D1	47	ILE	2.7
8	CI	121	ARG	2.7
9	CJ	72	ARG	2.7
20	CU	46	ARG	2.7
27	DF	68	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
41	DT	19	LYS	2.7
45	DX	76	LYS	2.7
51	D3	33	THR	2.7
33	DL	68	SER	2.7
22	BA	1061	U	2.7
22	DA	34	U	2.7
22	DA	113	U	2.7
22	DA	73	A	2.7
22	DA	391	A	2.7
22	DA	515	A	2.7
22	DA	1156	A	2.7
2	CC	192	TYR	2.7
25	DD	200	ASP	2.7
30	BI	115	ASP	2.7
30	DI	115	ASP	2.7
38	DQ	26	ALA	2.7
42	DU	8	ASP	2.7
48	D0	20	ALA	2.7
27	BF	36	ASN	2.7
30	BI	137	LEU	2.7
41	DT	31	VAL	2.7
9	CJ	58	ASN	2.7
22	BA	1170	C	2.7
22	DA	786	C	2.7
22	DA	1330	C	2.7
53	CA	330	C	2.7
53	CA	1237	C	2.7
30	BI	68	PHE	2.7
8	AI	84	ARG	2.7
49	D1	43	ARG	2.7
52	D4	36	ARG	2.7
12	CM	65	GLU	2.7
35	DN	74	GLU	2.7
22	DA	356	G	2.7
22	DA	1538	G	2.7
39	DR	92	TRP	2.7
38	DQ	28	SER	2.7
28	DG	6	ALA	2.7
33	DL	108	ALA	2.7
13	AN	33	VAL	2.7
24	DC	201	LEU	2.7
29	BH	144	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
36	DO	28	VAL	2.7
44	BW	45	HIS	2.7
3	CD	35	GLN	2.6
22	DA	429	A	2.6
22	DA	430	A	2.6
3	AD	62	ARG	2.6
12	CM	89	ARG	2.6
38	DQ	32	ARG	2.6
40	DS	92	ARG	2.6
34	DM	14	LYS	2.6
38	DQ	92	LYS	2.6
45	DX	9	LYS	2.6
22	DA	1319	C	2.6
15	CP	66	THR	2.6
30	BI	72	THR	2.6
8	AI	43	ALA	2.6
9	CJ	73	LEU	2.6
19	CT	36	ALA	2.6
30	BI	62	ALA	2.6
36	DO	5	SER	2.6
29	DH	25	TYR	2.6
41	DT	15	HIS	2.6
9	CJ	79	PRO	2.6
12	CM	95	PRO	2.6
22	DA	408	G	2.6
22	DA	914	G	2.6
30	DI	120	ASP	2.6
26	DE	183	PHE	2.6
39	DR	13	ARG	2.6
49	D1	38	PHE	2.6
51	D3	13	PHE	2.6
52	D4	31	PRO	2.6
22	DA	431	U	2.6
22	DA	646	U	2.6
22	DA	1468	U	2.6
39	DR	88	GLY	2.6
22	DA	83	A	2.6
22	DA	1073	A	2.6
22	DA	1552	A	2.6
22	DA	1654	A	2.6
53	CA	461	A	2.6
30	BI	8	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
35	DN	25	ALA	2.6
41	DT	85	VAL	2.6
48	D0	2	VAL	2.6
22	DA	97	C	2.6
22	DA	393	C	2.6
33	DL	12	SER	2.6
2	AC	167	TYR	2.6
19	CT	23	ARG	2.6
36	DO	68	LYS	2.6
38	DQ	5	ARG	2.6
42	BU	78	LYS	2.6
42	DU	18	LYS	2.6
51	D3	46	LYS	2.6
20	CU	36	PHE	2.6
27	DF	172	PHE	2.6
35	DN	109	PRO	2.6
9	CJ	75	ASP	2.6
11	CL	4	ASN	2.6
16	CQ	8	GLN	2.6
24	DC	36	ASN	2.6
27	DF	22	ASN	2.6
22	DA	388	G	2.6
2	AC	174	LEU	2.6
1	CB	95	TRP	2.6
24	BC	251	THR	2.6
26	DE	34	ALA	2.6
29	DH	39	ALA	2.6
33	DL	121	THR	2.6
49	D1	22	THR	2.6
50	D2	30	VAL	2.6
16	AQ	64	ARG	2.6
18	CS	5	LYS	2.6
22	DA	219	A	2.6
22	DA	1067	A	2.6
22	DA	1321	A	2.6
26	DE	69	ARG	2.6
35	DN	17	ARG	2.6
46	DY	2	LYS	2.6
53	CA	223	A	2.6
9	CJ	65	TYR	2.6
18	AS	3	SER	2.6
18	CS	34	SER	2.6

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Mol	Chain	Res	Type	RSRZ
29	BH	143	ILE	2.6
29	DH	82	SER	2.6
30	DI	134	SER	2.6
33	DL	40	SER	2.6
38	DQ	24	TYR	2.6
8	AI	31	GLN	2.6
21	AA	841	C	2.6
22	BA	1092	C	2.6
22	DA	1320	C	2.6
22	DA	1348	C	2.6
26	DE	94	GLN	2.6
38	DQ	43	GLN	2.6
53	CA	1320	C	2.6
9	CJ	38	GLY	2.6
40	DS	79	GLY	2.6
1	CB	128	LEU	2.6
26	DE	51	GLU	2.6
33	DL	10	GLU	2.6
35	DN	10	LEU	2.6
9	CJ	50	THR	2.6
18	CS	76	THR	2.6
22	DA	1329	U	2.6
22	DA	2137	U	2.6
22	DA	2151	U	2.6
22	DA	2903	U	2.6
24	DC	218	THR	2.6
25	DD	132	ALA	2.6
28	DG	12	ALA	2.6
31	DJ	6	ALA	2.6
35	DN	111	ALA	2.6
46	DY	11	VAL	2.6
51	D3	57	VAL	2.6
22	DA	150	U	2.6
22	DA	846	U	2.6
22	DA	931	U	2.6
35	DN	4	ARG	2.6
39	DR	79	ARG	2.6
47	DZ	47	ILE	2.6
6	CG	115	MET	2.6
22	DA	68	G	2.6
22	DA	215	G	2.6
22	DA	389	G	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	619	G	2.6
22	DA	2286	G	2.6
22	DA	2828	G	2.6
24	DC	239	PHE	2.6
31	DJ	47	HIS	2.6
53	CA	1276	G	2.6
3	AD	151	GLN	2.6
22	DA	1276	A	2.6
22	DA	2147	A	2.6
22	DA	2266	A	2.6
53	CA	456	A	2.6
53	CA	994	A	2.6
53	CA	1019	A	2.6
27	BF	162	ASP	2.6
27	DF	141	ASP	2.6
39	DR	95	ASP	2.6
6	CG	123	LEU	2.6
26	DE	147	LEU	2.6
41	DT	87	LEU	2.6
22	DA	610	C	2.6
22	DA	671	C	2.6
33	BL	115	GLU	2.6
38	BQ	87	VAL	2.6
24	DC	58	LYS	2.6
33	DL	17	LYS	2.6
37	DP	110	LYS	2.6
26	DE	48	THR	2.6
9	CJ	25	ILE	2.5
22	BA	1058	U	2.5
32	DK	32	TYR	2.5
53	CA	219	U	2.5
6	CG	7	GLY	2.5
46	DY	39	GLN	2.5
20	AU	15	LEU	2.5
33	DL	125	LEU	2.5
1	CB	13	VAL	2.5
22	BA	1087	G	2.5
22	DA	363	G	2.5
22	DA	604	G	2.5
22	DA	974	G	2.5
22	DA	1185	G	2.5
25	DD	26	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
28	DG	136	ASP	2.5
29	BH	130	VAL	2.5
32	BK	71	ARG	2.5
42	DU	7	ASP	2.5
42	DU	93	ARG	2.5
38	DQ	88	GLU	2.5
45	DX	3	VAL	2.5
47	DZ	30	ARG	2.5
50	D2	28	ARG	2.5
52	D4	12	ARG	2.5
53	CA	457	G	2.5
6	CG	60	ALA	2.5
10	CK	20	ALA	2.5
19	CT	40	ALA	2.5
22	DA	233	A	2.5
31	BJ	20	ALA	2.5
36	DO	37	ALA	2.5
41	DT	41	ALA	2.5
47	DZ	12	ALA	2.5
1	CB	99	MET	2.5
22	DA	31	C	2.5
53	CA	183	C	2.5
13	CN	19	TYR	2.5
32	DK	29	HIS	2.5
39	DR	52	PRO	2.5
6	CG	49	LEU	2.5
8	CI	53	LEU	2.5
18	CS	3	SER	2.5
9	AJ	35	GLN	2.5
22	DA	511	U	2.5
22	DA	1375	U	2.5
25	DD	79	LEU	2.5
30	DI	44	LYS	2.5
40	DS	98	LYS	2.5
44	BW	74	LYS	2.5
45	DX	44	ARG	2.5
8	CI	47	VAL	2.5
8	CI	103	VAL	2.5
6	AG	105	GLU	2.5
24	DC	179	GLU	2.5
29	BH	148	ALA	2.5
29	DH	114	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
33	DL	97	ALA	2.5
42	DU	62	ALA	2.5
25	DD	96	ILE	2.5
30	BI	100	ILE	2.5
24	DC	247	TRP	2.5
22	DA	53	A	2.5
22	DA	412	A	2.5
22	DA	508	A	2.5
22	DA	2060	A	2.5
53	CA	1016	A	2.5
22	BA	277	G	2.5
22	DA	319	G	2.5
22	DA	1171	G	2.5
22	DA	1235	G	2.5
22	DA	1358	G	2.5
7	CH	120	LEU	2.5
12	CM	43	LYS	2.5
13	CN	15	LEU	2.5
14	CO	47	LYS	2.5
19	CT	63	LYS	2.5
22	DA	1251	C	2.5
27	DF	150	GLY	2.5
30	BI	71	LYS	2.5
35	DN	63	ARG	2.5
38	DQ	50	ARG	2.5
44	DW	38	ARG	2.5
47	DZ	14	GLY	2.5
48	D0	6	LYS	2.5
51	D3	41	ARG	2.5
53	CA	1336	C	2.5
25	DD	174	SER	2.5
35	DN	9	GLN	2.5
52	D4	37	GLN	2.5
28	DG	22	VAL	2.5
41	DT	63	VAL	2.5
22	DA	102	U	2.5
22	DA	589	U	2.5
22	DA	1217	U	2.5
14	CO	19	ASN	2.5
1	CB	103	TRP	2.5
15	CP	3	THR	2.5
24	DC	222	THR	2.5

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Mol	Chain	Res	Type	RSRZ
30	BI	59	THR	2.5
44	DW	57	THR	2.5
2	AC	192	TYR	2.5
6	CG	15	PRO	2.5
44	DW	73	PRO	2.5
13	CN	62	ARG	2.5
14	CO	57	ARG	2.5
29	BH	117	LEU	2.5
36	DO	62	LEU	2.5
41	DT	44	LYS	2.5
22	DA	330	A	2.5
22	DA	342	A	2.5
22	DA	990	A	2.5
22	DA	2135	A	2.5
22	DA	2602	A	2.5
25	DD	6	GLY	2.5
13	AN	48	GLN	2.5
3	CD	36	ALA	2.5
12	CM	84	CYS	2.5
22	BA	2157	G	2.5
22	DA	43	G	2.5
22	DA	220	G	2.5
22	DA	798	G	2.5
22	DA	1093	G	2.5
22	DA	1341	G	2.5
22	DA	1355	G	2.5
24	DC	30	ALA	2.5
42	DU	74	ALA	2.5
53	CA	941	G	2.5
22	DA	264	C	2.5
22	DA	1072	C	2.5
22	DA	2021	C	2.5
46	BY	1	MET	2.5
6	AG	150	PHE	2.5
33	DL	117	THR	2.5
26	DE	99	LYS	2.5
27	DF	91	ARG	2.5
30	BI	81	LYS	2.5
24	DC	31	PRO	2.5
31	DJ	46	PRO	2.5
51	D3	1	PRO	2.5
39	DR	83	TYR	2.5

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Mol	Chain	Res	Type	RSRZ
9	CJ	51	VAL	2.5
30	DI	57	VAL	2.5
42	DU	35	VAL	2.5
26	DE	9	GLN	2.5
12	CM	39	ALA	2.4
13	AN	35	ALA	2.4
12	CM	29	SER	2.4
27	DF	23	SER	2.4
1	CB	153	MET	2.4
12	CM	40	GLU	2.4
22	DA	428	A	2.4
22	DA	528	A	2.4
22	DA	626	A	2.4
22	DA	947	A	2.4
38	DQ	35	PHE	2.4
1	AB	50	ASN	2.4
3	CD	150	LYS	2.4
8	CI	84	ARG	2.4
33	DL	14	LYS	2.4
41	DT	59	ASN	2.4
42	DU	17	ASP	2.4
42	DU	91	LYS	2.4
48	D0	9	ARG	2.4
52	D4	4	ARG	2.4
21	AA	79	G	2.4
22	BA	1074	G	2.4
22	DA	289	G	2.4
22	DA	490	C	2.4
22	DA	625	G	2.4
22	DA	1022	G	2.4
22	DA	1137	G	2.4
22	DA	1475	G	2.4
26	DE	131	THR	2.4
27	DF	90	LEU	2.4
31	DJ	3	THR	2.4
53	CA	63	C	2.4
53	CA	1047	G	2.4
53	CA	1281	C	2.4
22	BA	1081	U	2.4
22	DA	2818	U	2.4
53	CA	1148	U	2.4
6	CG	42	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
12	CM	93	GLY	2.4
24	DC	232	GLY	2.4
52	D4	17	VAL	2.4
6	CG	107	ALA	2.4
13	CN	98	ALA	2.4
16	AQ	8	GLN	2.4
29	BH	74	ALA	2.4
29	BH	140	ALA	2.4
29	DH	69	ALA	2.4
13	CN	81	ILE	2.4
31	DJ	9	GLU	2.4
45	DX	75	GLU	2.4
1	CB	131	LYS	2.4
14	CO	88	ARG	2.4
27	DF	124	ARG	2.4
29	BH	27	ARG	2.4
33	DL	29	LYS	2.4
26	DE	24	ASN	2.4
1	AB	87	ASP	2.4
22	DA	300	A	2.4
22	DA	1086	A	2.4
22	DA	2058	A	2.4
29	DH	86	ASP	2.4
35	DN	37	THR	2.4
45	DX	24	THR	2.4
28	DG	155	PRO	2.4
6	CG	26	VAL	2.4
25	DD	147	GLY	2.4
29	BH	85	GLY	2.4
31	DJ	112	GLY	2.4
33	DL	122	VAL	2.4
44	DW	53	GLY	2.4
22	DA	57	C	2.4
22	DA	106	C	2.4
22	DA	444	C	2.4
22	DA	2045	C	2.4
22	DA	2601	C	2.4
28	DG	4	ALA	2.4
51	D3	58	ILE	2.4
53	CA	95	C	2.4
53	CA	1147	C	2.4
21	AA	209	U	2.4

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Mol	Chain	Res	Type	RSRZ
22	BA	846	U	2.4
22	DA	98	G	2.4
22	DA	286	U	2.4
22	DA	326	G	2.4
22	DA	859	G	2.4
22	DA	2320	U	2.4
53	CA	64	G	2.4
53	CA	1039	G	2.4
53	CA	1270	G	2.4
50	B2	1	MET	2.4
3	CD	2	ARG	2.4
11	CL	13	ARG	2.4
25	DD	59	ARG	2.4
26	DE	58	LYS	2.4
49	D1	37	LYS	2.4
18	CS	72	GLU	2.4
35	DN	32	GLU	2.4
12	CM	33	LEU	2.4
18	CS	15	LEU	2.4
26	DE	134	LEU	2.4
6	AG	96	ASN	2.4
9	CJ	69	THR	2.4
12	AM	104	ASN	2.4
42	DU	101	THR	2.4
12	CM	41	ASP	2.4
26	DE	193	VAL	2.4
28	DG	101	VAL	2.4
18	AS	79	TYR	2.4
24	DC	242	HIS	2.4
30	BI	98	GLY	2.4
30	DI	51	GLY	2.4
38	DQ	25	GLY	2.4
18	CS	39	ILE	2.4
29	BH	81	ALA	2.4
30	BI	83	ALA	2.4
33	DL	138	ALA	2.4
45	DX	20	ALA	2.4
22	DA	103	A	2.4
22	DA	218	A	2.4
22	DA	354	A	2.4
22	DA	501	A	2.4
22	DA	1525	A	2.4

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Mol	Chain	Res	Type	RSRZ
9	CJ	88	MET	2.4
10	AK	37	GLN	2.4
26	DE	136	GLN	2.4
38	BQ	4	LYS	2.4
44	DW	18	LYS	2.4
46	DY	25	GLN	2.4
50	D2	34	ARG	2.4
22	BA	901	C	2.4
22	DA	995	C	2.4
22	DA	1102	C	2.4
53	CA	1037	C	2.4
16	AQ	13	SER	2.4
22	DA	261	G	2.4
22	DA	784	G	2.4
22	DA	2152	G	2.4
22	DA	2238	G	2.4
8	AI	110	VAL	2.4
10	CK	64	VAL	2.4
25	DD	121	THR	2.4
27	DF	39	VAL	2.4
29	BH	146	VAL	2.4
33	DL	127	VAL	2.4
51	D3	49	VAL	2.4
24	DC	20	ASN	2.4
1	AB	169	HIS	2.4
12	AM	11	HIS	2.4
8	CI	6	TYR	2.4
18	CS	63	ASP	2.4
25	DD	135	GLY	2.4
30	BI	84	GLY	2.4
31	DJ	49	ASP	2.4
31	DJ	141	ASP	2.4
33	DL	45	GLY	2.4
36	DO	96	GLY	2.4
30	BI	14	ALA	2.4
48	D0	54	ILE	2.4
50	D2	2	LYS	2.4
28	DG	169	ARG	2.4
31	DJ	35	ARG	2.4
6	CG	119	LEU	2.4
18	CS	14	LEU	2.4
30	DI	137	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
34	DM	2	LEU	2.4
21	AA	461	A	2.4
22	BA	1089	A	2.4
22	DA	344	A	2.4
22	DA	1085	A	2.4
22	DA	1808	A	2.4
26	DE	75	SER	2.4
29	BH	136	SER	2.4
6	CG	5	VAL	2.4
13	AN	41	TRP	2.4
22	DA	62	U	2.4
22	DA	235	U	2.4
22	DA	1094	U	2.4
22	DA	2106	U	2.4
22	DA	2245	U	2.4
22	DA	2491	U	2.4
24	DC	64	VAL	2.4
53	CA	1049	U	2.4
2	CC	43	THR	2.3
22	DA	1076	C	2.3
28	BG	83	THR	2.3
33	DL	30	THR	2.3
53	CA	995	C	2.3
8	CI	20	ILE	2.3
27	DF	69	ALA	2.3
28	BG	171	LYS	2.3
33	DL	134	ALA	2.3
36	DO	35	ILE	2.3
42	BU	46	LYS	2.3
50	D2	13	ASN	2.3
52	D4	15	LYS	2.3
15	CP	25	ARG	2.3
18	CS	79	TYR	2.3
24	DC	211	ARG	2.3
25	DD	77	ARG	2.3
47	DZ	29	ARG	2.3
22	DA	15	G	2.3
22	DA	54	G	2.3
22	DA	583	G	2.3
22	DA	622	G	2.3
22	DA	1091	G	2.3
22	DA	1731	G	2.3

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Mol	Chain	Res	Type	RSRZ
53	CA	1331	G	2.3
2	CC	40	GLN	2.3
27	DF	80	GLN	2.3
29	DH	133	GLN	2.3
33	DL	3	LEU	2.3
38	DQ	82	LEU	2.3
40	DS	46	LEU	2.3
48	D0	3	GLN	2.3
13	CN	41	TRP	2.3
13	CN	56	PRO	2.3
15	CP	15	PRO	2.3
22	DA	1089	A	2.3
30	DI	20	SER	2.3
18	AS	32	THR	2.3
27	DF	89	THR	2.3
30	BI	15	GLY	2.3
33	DL	49	GLY	2.3
51	D3	34	LYS	2.3
34	DM	52	ALA	2.3
35	DN	34	ILE	2.3
41	DT	2	ILE	2.3
44	DW	46	ALA	2.3
48	D0	55	ALA	2.3
51	D3	3	ILE	2.3
22	BA	139	U	2.3
22	DA	82	U	2.3
24	DC	102	TYR	2.3
31	DJ	53	TYR	2.3
31	DJ	118	MET	2.3
53	CA	1235	U	2.3
11	AL	108	ASP	2.3
22	DA	257	C	2.3
22	DA	2313	C	2.3
22	DA	2830	C	2.3
52	D4	20	ASP	2.3
2	AC	36	PHE	2.3
26	DE	30	GLN	2.3
27	DF	99	PHE	2.3
30	DI	5	GLN	2.3
9	CJ	66	GLU	2.3
24	DC	235	GLU	2.3
35	DN	114	GLU	2.3

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Mol	Chain	Res	Type	RSRZ
12	CM	42	VAL	2.3
22	DA	690	G	2.3
22	DA	1138	G	2.3
22	DA	1389	G	2.3
22	DA	2046	G	2.3
54	DB	41	G	2.3
24	DC	35	LYS	2.3
26	DE	47	LYS	2.3
42	DU	96	LYS	2.3
8	CI	122	ARG	2.3
12	CM	108	ARG	2.3
19	CT	28	ARG	2.3
27	DF	83	PRO	2.3
47	DZ	15	ARG	2.3
2	CC	13	ILE	2.3
8	AI	127	SER	2.3
10	CK	106	ILE	2.3
26	DE	78	TRP	2.3
41	DT	74	ILE	2.3
30	DI	131	THR	2.3
29	BH	135	HIS	2.3
35	DN	24	MET	2.3
46	DY	30	MET	2.3
28	DG	57	TYR	2.3
45	DX	16	ASN	2.3
46	DY	37	LEU	2.3
6	CG	25	PHE	2.3
21	AA	78	A	2.3
22	BA	1057	A	2.3
22	DA	1095	A	2.3
22	DA	2288	A	2.3
30	DI	68	PHE	2.3
42	DU	86	PHE	2.3
53	CA	81	A	2.3
13	AN	32	ASP	2.3
26	DE	176	ASP	2.3
12	CM	51	GLN	2.3
22	DA	1199	U	2.3
53	CA	1025	U	2.3
22	DA	41	C	2.3
22	DA	1556	C	2.3
22	DA	2264	C	2.3

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Mol	Chain	Res	Type	RSRZ
30	BI	112	LYS	2.3
42	DU	20	LYS	2.3
31	BJ	96	ARG	2.3
33	DL	73	ILE	2.3
42	DU	57	ILE	2.3
25	DD	125	TRP	2.3
52	D4	29	ALA	2.3
1	AB	8	MET	2.3
1	CB	109	SER	2.3
8	CI	104	THR	2.3
14	CO	24	THR	2.3
34	DM	1	MET	2.3
12	CM	11	HIS	2.3
41	DT	27	SER	2.3
18	CS	46	LEU	2.3
52	D4	33	HIS	2.3
1	AB	29	PHE	2.3
5	CF	8	PHE	2.3
19	CT	30	PHE	2.3
22	DA	1	G	2.3
22	DA	70	G	2.3
22	DA	110	G	2.3
22	DA	377	G	2.3
22	DA	379	G	2.3
22	DA	620	G	2.3
22	DA	777	G	2.3
45	DX	77	TYR	2.3
53	CA	1255	G	2.3
36	BO	98	GLN	2.3
7	CH	107	LYS	2.3
19	CT	33	LYS	2.3
26	DE	166	LYS	2.3
22	DA	422	A	2.3
22	DA	878	A	2.3
22	DA	1327	A	2.3
24	BC	237	ARG	2.3
26	DE	32	VAL	2.3
53	CA	1285	A	2.3
22	DA	395	U	2.3
22	DA	1409	U	2.3
22	DA	1602	U	2.3
39	DR	74	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
42	DU	47	PRO	2.3
27	DF	125	GLY	2.3
27	DF	25	MET	2.3
36	DO	6	ALA	2.3
51	D3	9	ALA	2.3
22	DA	267	C	2.3
22	DA	565	C	2.3
22	DA	1323	C	2.3
22	DA	1600	C	2.3
22	DA	1606	C	2.3
22	DA	2000	C	2.3
22	DA	2874	C	2.3
53	CA	87	C	2.3
1	CB	147	LEU	2.3
6	CG	65	LEU	2.3
8	AI	65	THR	2.3
39	DR	25	LEU	2.3
29	DH	135	HIS	2.3
40	DS	60	HIS	2.3
37	DP	1	SER	2.3
37	DP	73	PHE	2.3
12	CM	7	ASN	2.3
27	DF	51	ASN	2.3
42	DU	26	ASN	2.3
36	DO	33	ARG	2.3
10	CK	128	VAL	2.3
35	DN	117	ASP	2.3
39	DR	33	VAL	2.3
9	CJ	47	GLU	2.2
35	DN	43	GLU	2.2
22	BA	1177	G	2.2
22	DA	659	G	2.2
22	DA	774	G	2.2
22	DA	775	G	2.2
22	DA	1377	G	2.2
22	DA	1524	G	2.2
22	DA	1622	G	2.2
22	DA	2631	G	2.2
22	DA	2885	G	2.2
27	DF	135	ILE	2.2
31	DJ	54	ILE	2.2
12	CM	9	PRO	2.2

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Mol	Chain	Res	Type	RSRZ
1	CB	33	ALA	2.2
4	AE	157	GLY	2.2
13	CN	69	PRO	2.2
8	CI	107	ALA	2.2
12	CM	60	ALA	2.2
26	DE	201	ALA	2.2
35	DN	19	ALA	2.2
50	D2	38	GLY	2.2
22	DA	118	A	2.2
22	DA	477	A	2.2
22	DA	613	A	2.2
22	DA	829	A	2.2
22	DA	919	U	2.2
22	DA	945	A	2.2
22	DA	1084	A	2.2
22	DA	1247	A	2.2
22	DA	1275	A	2.2
22	DA	1396	U	2.2
22	DA	1522	A	2.2
22	DA	2229	U	2.2
22	DA	2882	A	2.2
32	DK	58	LEU	2.2
9	CJ	70	HIS	2.2
33	DL	64	PHE	2.2
51	D3	23	HIS	2.2
6	CG	113	LYS	2.2
15	CP	13	LYS	2.2
29	DH	131	SER	2.2
44	DW	74	LYS	2.2
51	D3	11	LYS	2.2
1	CB	138	ARG	2.2
22	DA	337	C	2.2
22	DA	364	C	2.2
29	BH	68	ARG	2.2
41	DT	77	ARG	2.2
11	CL	15	VAL	2.2
25	DD	73	VAL	2.2
30	BI	104	GLN	2.2
36	DO	98	GLN	2.2
41	DT	16	VAL	2.2
46	DY	15	ASN	2.2
9	CJ	60	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
26	DE	127	GLU	2.2
26	DE	168	ASP	2.2
28	DG	165	ASP	2.2
8	CI	27	ILE	2.2
12	CM	87	GLY	2.2
13	CN	7	ALA	2.2
18	CS	58	PRO	2.2
19	AT	6	ALA	2.2
20	CU	40	PRO	2.2
30	BI	31	GLY	2.2
33	BL	114	GLY	2.2
33	DL	8	PRO	2.2
34	DM	56	ALA	2.2
45	DX	21	LEU	2.2
19	CT	50	PHE	2.2
31	DJ	12	LYS	2.2
34	DM	127	LYS	2.2
42	DU	72	PHE	2.2
2	CC	190	THR	2.2
22	DA	375	G	2.2
22	DA	376	G	2.2
22	DA	1107	G	2.2
22	DA	1334	G	2.2
35	DN	57	THR	2.2
6	AG	3	ARG	2.2
20	AU	34	ARG	2.2
22	BA	2106	U	2.2
22	DA	1647	U	2.2
22	DA	2449	U	2.2
22	DA	2884	U	2.2
26	DE	35	TYR	2.2
32	DK	49	ARG	2.2
38	DQ	44	TYR	2.2
21	AA	532	A	2.2
22	BA	1069	A	2.2
22	BA	2134	A	2.2
22	DA	74	A	2.2
22	DA	529	A	2.2
40	DS	81	SER	2.2
54	DB	29	A	2.2
24	DC	227	VAL	2.2
29	DH	134	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
39	BR	51	VAL	2.2
14	CO	61	GLN	2.2
45	DX	5	GLN	2.2
1	AB	51	GLU	2.2
12	AM	84	CYS	2.2
24	DC	48	ILE	2.2
34	DM	73	ILE	2.2
36	DO	8	ILE	2.2
22	BA	2143	C	2.2
22	DA	353	C	2.2
22	DA	420	C	2.2
22	DA	795	C	2.2
22	DA	1172	C	2.2
22	DA	1644	C	2.2
1	CB	217	ALA	2.2
6	CG	146	ALA	2.2
8	AI	69	GLY	2.2
26	DE	86	ALA	2.2
27	DF	92	GLY	2.2
30	DI	118	GLY	2.2
31	DJ	117	ALA	2.2
33	DL	112	LEU	2.2
43	DV	22	ALA	2.2
44	DW	33	GLY	2.2
45	DX	23	ALA	2.2
45	DX	70	LEU	2.2
11	AL	43	LYS	2.2
28	DG	137	LYS	2.2
38	DQ	77	LYS	2.2
45	DX	61	LYS	2.2
52	D4	9	LYS	2.2
27	DF	98	PHE	2.2
36	DO	81	ARG	2.2
38	DQ	60	TRP	2.2
39	DR	84	ARG	2.2
18	AS	38	THR	2.2
35	DN	36	THR	2.2
48	D0	18	HIS	2.2
33	DL	58	TYR	2.2
9	CJ	36	VAL	2.2
30	DI	60	VAL	2.2
38	DQ	87	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
41	DT	78	SER	2.2
22	DA	390	U	2.2
40	DS	15	GLN	2.2
53	CA	88	U	2.2
19	CT	66	ILE	2.2
13	CN	42	ASN	2.2
15	CP	54	LEU	2.2
20	CU	15	LEU	2.2
22	BA	654	A	2.2
22	BA	1067	A	2.2
22	DA	287	G	2.2
22	DA	317	G	2.2
22	DA	338	G	2.2
22	DA	866	A	2.2
22	DA	1071	G	2.2
22	DA	1277	G	2.2
22	DA	1469	A	2.2
22	DA	1653	G	2.2
22	DA	2391	G	2.2
46	BY	6	LEU	2.2
6	AG	7	GLY	2.2
9	CJ	43	PRO	2.2
12	CM	50	GLY	2.2
24	DC	55	GLY	2.2
26	DE	36	ALA	2.2
33	DL	34	GLY	2.2
33	DL	114	GLY	2.2
39	DR	65	ALA	2.2
46	BY	3	ALA	2.2
6	CG	148	LYS	2.2
19	CT	7	LYS	2.2
1	CB	94	ARG	2.2
14	CO	14	PHE	2.2
14	CO	63	ARG	2.2
22	DA	517	C	2.2
22	DA	1278	C	2.2
53	CA	316	C	2.2
53	CA	979	C	2.2
53	CA	1209	C	2.2
8	CI	83	THR	2.2
24	DC	231	HIS	2.2
29	DH	128	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
36	DO	65	THR	2.2
41	DT	22	THR	2.2
20	CU	27	VAL	2.2
29	DH	144	VAL	2.2
36	DO	103	VAL	2.2
42	DU	58	VAL	2.2
45	DX	57	VAL	2.2
6	CG	28	ILE	2.2
15	CP	57	ILE	2.2
15	CP	67	ILE	2.2
27	DF	62	GLN	2.2
28	BG	115	GLN	2.2
29	DH	143	ILE	2.2
40	DS	13	SER	2.2
40	DS	74	ILE	2.2
45	DX	63	ILE	2.2
25	DD	186	LEU	2.2
8	CI	3	ASN	2.2
13	CN	34	ASN	2.2
19	CT	72	ALA	2.2
20	CU	7	GLU	2.2
27	DF	53	ALA	2.2
30	BI	18	ASN	2.2
30	DI	123	ALA	2.2
33	DL	131	ALA	2.2
21	AA	1286	U	2.2
22	DA	1340	U	2.2
22	DA	2344	U	2.2
22	DA	2629	U	2.2
22	DA	2817	U	2.2
24	DC	26	GLY	2.2
24	DC	246	PRO	2.2
52	D4	32	LYS	2.2
53	CA	467	U	2.2
13	CN	40	ARG	2.2
34	DM	70	ASP	2.2
39	DR	26	ASP	2.2
22	DA	278	A	2.2
22	DA	502	A	2.2
22	DA	586	A	2.2
22	DA	911	A	2.2
22	DA	975	A	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	2211	A	2.2
53	CA	353	A	2.2
22	BA	2156	G	2.2
22	DA	81	G	2.2
22	DA	107	G	2.2
22	DA	396	G	2.2
22	DA	491	G	2.2
22	DA	1197	G	2.2
22	DA	1239	G	2.2
22	DA	1734	G	2.2
22	DA	2069	G	2.2
22	DA	2290	G	2.2
22	DA	2345	G	2.2
28	DG	61	TRP	2.2
53	CA	942	G	2.2
18	CS	68	HIS	2.2
46	DY	41	HIS	2.2
12	CM	107	THR	2.1
26	DE	53	THR	2.1
26	DE	120	VAL	2.1
27	DF	158	THR	2.1
30	BI	56	VAL	2.1
31	DJ	45	THR	2.1
22	DA	281	C	2.1
22	DA	2295	C	2.1
38	DQ	64	ILE	2.1
53	CA	1226	C	2.1
6	CG	21	LEU	2.1
42	DU	51	LEU	2.1
43	DV	38	LEU	2.1
51	D3	32	LEU	2.1
18	AS	5	LYS	2.1
19	AT	7	LYS	2.1
19	CT	71	ALA	2.1
24	BC	271	SER	2.1
28	DG	157	LYS	2.1
37	DP	12	MET	2.1
38	DQ	53	LYS	2.1
29	DH	70	GLU	2.1
31	BJ	42	ALA	2.1
40	DS	32	ALA	2.1
41	DT	5	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
41	DT	45	ALA	2.1
42	DU	97	SER	2.1
44	DW	29	SER	2.1
35	DN	49	GLU	2.1
2	CC	12	GLY	2.1
25	DD	87	GLY	2.1
28	DG	56	GLY	2.1
30	DI	55	PRO	2.1
39	DR	35	PHE	2.1
44	DW	59	PHE	2.1
22	BA	2182	U	2.1
22	DA	50	U	2.1
22	DA	2680	U	2.1
1	AB	13	VAL	2.1
20	AU	13	VAL	2.1
24	DC	212	TRP	2.1
26	DE	121	VAL	2.1
27	DF	96	TRP	2.1
28	DG	9	VAL	2.1
31	DJ	48	VAL	2.1
36	DO	29	HIS	2.1
52	D4	25	VAL	2.1
18	CS	32	THR	2.1
25	DD	197	THR	2.1
29	BH	79	THR	2.1
22	DA	111	A	2.1
22	DA	794	A	2.1
22	DA	1009	A	2.1
22	DA	1597	A	2.1
22	DA	2346	A	2.1
22	DA	2448	A	2.1
24	DC	82	TYR	2.1
30	BI	61	TYR	2.1
38	DQ	16	ILE	2.1
44	BW	36	ILE	2.1
47	DZ	43	ILE	2.1
53	CA	101	A	2.1
4	CE	35	LEU	2.1
18	CS	4	LEU	2.1
25	DD	175	LEU	2.1
6	CG	100	MET	2.1
1	CB	20	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	177	G	2.1
22	DA	291	G	2.1
22	DA	830	G	2.1
22	DA	1051	G	2.1
22	DA	1115	G	2.1
22	DA	1374	G	2.1
22	DA	2110	G	2.1
22	DA	2410	G	2.1
22	DA	2732	G	2.1
4	CE	34	ALA	2.1
9	CJ	34	ALA	2.1
12	CM	36	ALA	2.1
18	CS	74	ALA	2.1
24	DC	220	ARG	2.1
30	BI	6	ALA	2.1
30	BI	109	ALA	2.1
39	DR	61	ALA	2.1
3	AD	146	GLU	2.1
12	CM	46	GLU	2.1
22	DA	246	C	2.1
22	DA	1208	C	2.1
22	DA	1314	C	2.1
22	DA	2146	C	2.1
26	DE	89	PRO	2.1
30	DI	65	SER	2.1
53	CA	1129	C	2.1
53	CA	1314	C	2.1
29	DH	119	ASN	2.1
36	DO	67	ASN	2.1
18	CS	66	VAL	2.1
25	DD	9	VAL	2.1
31	DJ	11	VAL	2.1
2	CC	100	ILE	2.1
12	CM	61	LYS	2.1
12	CM	109	LYS	2.1
14	CO	55	LEU	2.1
22	DA	280	U	2.1
22	DA	2783	U	2.1
27	DF	154	THR	2.1
28	DG	18	ILE	2.1
30	DI	117	THR	2.1
33	DL	109	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
37	DP	96	LEU	2.1
40	DS	3	THR	2.1
41	DT	50	LEU	2.1
42	DU	16	LYS	2.1
47	DZ	6	ILE	2.1
26	DE	44	ARG	2.1
30	DI	116	MET	2.1
31	DJ	96	ARG	2.1
5	AF	68	GLN	2.1
6	CG	38	ALA	2.1
26	DE	45	ALA	2.1
26	DE	190	ALA	2.1
29	BH	67	ALA	2.1
35	DN	18	GLN	2.1
38	DQ	11	ALA	2.1
39	DR	6	GLN	2.1
6	CG	57	GLU	2.1
22	DA	423	A	2.1
22	DA	503	A	2.1
22	DA	1008	A	2.1
22	DA	2764	A	2.1
22	DA	2829	A	2.1
24	DC	208	GLY	2.1
25	DD	143	PRO	2.1
36	DO	66	GLY	2.1
53	CA	383	A	2.1
53	CA	975	A	2.1
8	CI	95	SER	2.1
29	DH	29	PHE	2.1
47	DZ	11	SER	2.1
43	DV	5	ASN	2.1
6	CG	88	VAL	2.1
22	DA	258	G	2.1
22	DA	682	G	2.1
22	DA	1252	G	2.1
22	DA	1627	G	2.1
22	DA	1723	G	2.1
22	DA	2405	G	2.1
27	DF	73	VAL	2.1
36	DO	78	VAL	2.1
53	CA	1312	G	2.1
22	DA	184	C	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	351	C	2.1
22	DA	865	C	2.1
22	DA	1200	C	2.1
53	CA	1303	C	2.1
5	CF	93	LYS	2.1
6	CG	32	ASP	2.1
11	CL	17	LYS	2.1
18	CS	17	LYS	2.1
24	DC	252	LYS	2.1
26	DE	105	LEU	2.1
26	DE	109	LEU	2.1
26	DE	157	LEU	2.1
41	BT	93	LEU	2.1
6	CG	43	TYR	2.1
9	CJ	44	THR	2.1
12	AM	86	ARG	2.1
12	CM	54	THR	2.1
12	CM	105	ALA	2.1
20	AU	14	ALA	2.1
30	BI	119	ALA	2.1
37	DP	94	ALA	2.1
22	DA	67	U	2.1
22	DA	1599	U	2.1
48	D0	4	GLN	2.1
1	CB	16	GLY	2.1
24	DC	56	GLY	2.1
25	DD	153	GLY	2.1
28	DG	134	GLY	2.1
5	CF	40	GLU	2.1
29	DH	109	GLU	2.1
39	DR	53	PHE	2.1
45	DX	28	PHE	2.1
46	BY	24	GLU	2.1
24	DC	37	SER	2.1
26	DE	10	SER	2.1
24	DC	76	VAL	2.1
39	DR	63	VAL	2.1
22	BA	1090	A	2.1
22	DA	71	A	2.1
22	DA	221	A	2.1
22	DA	877	A	2.1
22	DA	1359	A	2.1

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Mol	Chain	Res	Type	RSRZ
22	DA	2851	A	2.1
24	DC	70	LYS	2.1
25	DD	38	LYS	2.1
25	DD	114	LYS	2.1
30	BI	80	LYS	2.1
51	D3	15	LYS	2.1
1	AB	211	LEU	2.1
2	CC	54	ILE	2.1
8	CI	94	ARG	2.1
19	CT	56	ILE	2.1
33	DL	21	ARG	2.1
35	DN	30	ARG	2.1
36	DO	9	ARG	2.1
36	DO	58	ILE	2.1
24	DC	57	HIS	2.1
2	CC	41	TYR	2.1
35	DN	112	TYR	2.1
4	CE	52	ALA	2.1
22	DA	806	C	2.1
22	DA	2047	C	2.1
22	DA	2676	C	2.1
22	DA	45	G	2.1
22	DA	121	G	2.1
22	DA	498	G	2.1
22	DA	559	G	2.1
22	DA	561	G	2.1
22	DA	1166	G	2.1
22	DA	1416	G	2.1
24	DC	105	ALA	2.1
46	DY	51	ALA	2.1
53	CA	204	G	2.1
53	CA	971	G	2.1
53	CA	1138	G	2.1
28	DG	107	GLY	2.1
28	DG	119	GLY	2.1
8	CI	126	PHE	2.1
24	DC	66	PHE	2.1
42	DU	9	GLU	2.1
8	AI	28	VAL	2.0
8	CI	46	VAL	2.0
22	DA	546	U	2.0
22	DA	2690	U	2.0

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Mol	Chain	Res	Type	RSRZ
30	BI	138	VAL	2.0
31	DJ	39	LYS	2.0
36	DO	90	VAL	2.0
40	DS	27	LYS	2.0
40	DS	73	LYS	2.0
53	CA	458	U	2.0
1	AB	146	SER	2.0
13	CN	99	SER	2.0
25	DD	145	SER	2.0
32	DK	75	SER	2.0
44	DW	15	SER	2.0
9	CJ	100	ILE	2.0
12	CM	44	ILE	2.0
18	CS	54	ARG	2.0
25	DD	202	ILE	2.0
27	DF	70	ARG	2.0
33	DL	48	ARG	2.0
34	DM	81	ARG	2.0
35	DN	118	ARG	2.0
36	DO	48	LEU	2.0
38	DQ	49	ARG	2.0
44	BW	75	ASN	2.0
46	DY	27	ASN	2.0
47	DZ	26	LEU	2.0
1	CB	165	ALA	2.0
3	AD	26	ALA	2.0
12	CM	10	ASP	2.0
22	BA	2886	A	2.0
22	DA	213	A	2.0
22	DA	575	A	2.0
22	DA	654	A	2.0
22	DA	1029	A	2.0
22	DA	1286	A	2.0
22	DA	1328	A	2.0
22	DA	2059	A	2.0
26	DE	161	ALA	2.0
27	BF	118	ALA	2.0
29	DH	140	ALA	2.0
35	DN	53	THR	2.0
36	DO	36	TYR	2.0
37	DP	41	ALA	2.0
43	DV	3	THR	2.0

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Mol	Chain	Res	Type	RSRZ
43	DV	23	ALA	2.0
48	D0	22	THR	2.0
53	CA	1271	A	2.0
9	CJ	13	PHE	2.0
10	CK	42	GLY	2.0
27	DF	165	GLY	2.0
45	DX	37	PHE	2.0
3	CD	147	LYS	2.0
30	BI	99	LYS	2.0
38	DQ	14	LYS	2.0
39	BR	46	GLU	2.0
12	CM	24	VAL	2.0
19	CT	34	VAL	2.0
22	BA	140	C	2.0
22	DA	109	C	2.0
22	DA	421	C	2.0
22	DA	816	C	2.0
22	DA	1612	C	2.0
22	DA	2066	C	2.0
22	DA	2300	C	2.0
22	DA	2712	C	2.0
32	BK	35	VAL	2.0
35	DN	48	VAL	2.0
10	CK	36	ARG	2.0
12	CM	86	ARG	2.0
14	CO	16	ARG	2.0
22	DA	242	G	2.0
22	DA	277	G	2.0
22	DA	409	G	2.0
22	DA	638	G	2.0
22	DA	916	G	2.0
22	DA	1106	G	2.0
22	DA	1311	G	2.0
22	DA	2831	G	2.0
53	CA	203	G	2.0
53	CA	765	G	2.0
53	CA	1304	G	2.0
2	AC	206	ILE	2.0
8	CI	29	ILE	2.0
35	DN	14	SER	2.0
7	CH	2	MET	2.0
10	CK	118	ASN	2.0

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Mol	Chain	Res	Type	RSRZ
12	CM	104	ASN	2.0
22	DA	2504	U	2.0
24	DC	24	HIS	2.0
39	DR	12	HIS	2.0
2	CC	185	THR	2.0
25	DD	129	THR	2.0
27	BF	154	THR	2.0
33	DL	67	THR	2.0
51	D3	10	ALA	2.0
44	DW	14	ASP	2.0
6	AG	81	GLY	2.0
30	BI	51	GLY	2.0
26	DE	130	LYS	2.0
27	DF	26	GLN	2.0
27	DF	28	PRO	2.0
48	D0	11	LYS	2.0
22	DA	10	A	2.0
22	DA	563	A	2.0
22	DA	572	A	2.0
22	DA	1307	A	2.0
22	DA	2030	A	2.0
26	DE	162	ARG	2.0
28	DG	14	VAL	2.0
53	CA	174	A	2.0
53	CA	1236	A	2.0
14	AO	16	ARG	2.0
46	DY	23	ARG	2.0
2	CC	110	LEU	2.0
9	CJ	92	LEU	2.0
17	AR	20	ILE	2.0
49	D1	4	ILE	2.0
22	DA	413	C	2.0
22	DA	426	C	2.0
22	DA	436	C	2.0
22	DA	1461	C	2.0
22	DA	1615	C	2.0
22	DA	1961	C	2.0
54	DB	3	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
55	MG	DA	3063	1/1	0.16	0.47	191,191,191,191	0
55	MG	DJ	201	1/1	0.26	0.33	242,242,242,242	0
55	MG	DA	3003	1/1	0.30	0.27	210,210,210,210	0
55	MG	DA	3064	1/1	0.42	0.77	204,204,204,204	0
55	MG	DA	3065	1/1	0.51	0.40	221,221,221,221	0
55	MG	DA	3042	1/1	0.53	0.15	139,139,139,139	0
55	MG	DA	3075	1/1	0.54	0.69	207,207,207,207	0
55	MG	DA	3134	1/1	0.56	0.14	198,198,198,198	0
55	MG	DA	3006	1/1	0.57	0.16	200,200,200,200	0
55	MG	DA	3005	1/1	0.58	0.35	208,208,208,208	0
55	MG	DA	3060	1/1	0.58	0.20	198,198,198,198	0
55	MG	DA	3013	1/1	0.61	0.41	211,211,211,211	0
55	MG	DA	3002	1/1	0.61	0.38	179,179,179,179	0
55	MG	CA	1617	1/1	0.61	0.15	220,220,220,220	0
55	MG	DA	3010	1/1	0.62	0.34	200,200,200,200	0
55	MG	DA	3132	1/1	0.65	0.20	216,216,216,216	0
55	MG	DA	3110	1/1	0.66	0.30	181,181,181,181	0
55	MG	CA	1624	1/1	0.66	0.32	120,120,120,120	0
55	MG	DA	3026	1/1	0.67	0.25	145,145,145,145	0
55	MG	DA	3109	1/1	0.67	0.14	165,165,165,165	0
55	MG	DA	3074	1/1	0.68	0.09	194,194,194,194	0
55	MG	DA	3007	1/1	0.69	0.12	198,198,198,198	0
55	MG	DA	3015	1/1	0.69	0.32	183,183,183,183	0
55	MG	DA	3129	1/1	0.69	0.43	194,194,194,194	0
55	MG	DA	3027	1/1	0.70	0.35	195,195,195,195	0
55	MG	CA	1636	1/1	0.70	0.18	171,171,171,171	0
55	MG	DA	3020	1/1	0.71	0.21	207,207,207,207	0
55	MG	DA	3079	1/1	0.72	0.25	184,184,184,184	0
55	MG	DA	3050	1/1	0.73	0.09	209,209,209,209	0
55	MG	DA	3070	1/1	0.74	0.28	209,209,209,209	0
55	MG	DA	3018	1/1	0.74	0.15	194,194,194,194	0
55	MG	DA	3124	1/1	0.75	0.28	165,165,165,165	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3132	1/1	0.76	0.54	202,202,202,202	0
55	MG	CA	1629	1/1	0.76	0.09	174,174,174,174	0
55	MG	DA	3037	1/1	0.77	0.15	176,176,176,176	0
55	MG	BA	3048	1/1	0.77	0.15	144,144,144,144	0
55	MG	DA	3126	1/1	0.78	0.17	164,164,164,164	0
55	MG	DA	3059	1/1	0.78	0.23	188,188,188,188	0
55	MG	CA	1616	1/1	0.78	0.12	192,192,192,192	0
55	MG	BA	3026	1/1	0.78	0.23	152,152,152,152	0
55	MG	CA	1619	1/1	0.78	0.17	180,180,180,180	0
55	MG	DA	3058	1/1	0.79	0.41	171,171,171,171	0
55	MG	AA	1619	1/1	0.79	0.24	165,165,165,165	0
55	MG	CA	1615	1/1	0.80	0.12	136,136,136,136	0
55	MG	AA	1611	1/1	0.80	0.23	176,176,176,176	0
55	MG	CA	1620	1/1	0.80	0.16	172,172,172,172	0
55	MG	DA	3084	1/1	0.81	0.13	178,178,178,178	0
55	MG	BA	3070	1/1	0.82	0.12	164,164,164,164	0
55	MG	DA	3131	1/1	0.82	0.39	204,204,204,204	0
55	MG	CA	1612	1/1	0.82	0.21	117,117,117,117	0
55	MG	DA	3046	1/1	0.82	0.15	173,173,173,173	0
55	MG	DA	3089	1/1	0.82	0.15	169,169,169,169	0
55	MG	CA	1603	1/1	0.83	0.11	169,169,169,169	0
55	MG	DA	3029	1/1	0.83	0.21	205,205,205,205	0
55	MG	DA	3092	1/1	0.83	0.13	157,157,157,157	0
55	MG	BA	3062	1/1	0.83	0.36	193,193,193,193	0
55	MG	DA	3016	1/1	0.83	0.13	169,169,169,169	0
55	MG	DA	3083	1/1	0.83	0.14	144,144,144,144	0
55	MG	DA	3115	1/1	0.84	0.17	151,151,151,151	0
55	MG	BA	3004	1/1	0.84	0.19	155,155,155,155	0
55	MG	DA	3061	1/1	0.84	0.34	160,160,160,160	0
55	MG	CA	1628	1/1	0.84	0.20	204,204,204,204	0
55	MG	DA	3116	1/1	0.85	0.19	154,154,154,154	0
55	MG	DA	3019	1/1	0.85	0.16	161,161,161,161	0
55	MG	DA	3100	1/1	0.85	0.12	171,171,171,171	0
55	MG	DA	3107	1/1	0.85	0.23	169,169,169,169	0
55	MG	BA	3015	1/1	0.85	0.18	221,221,221,221	0
55	MG	DA	3039	1/1	0.85	0.12	220,220,220,220	0
55	MG	DA	3111	1/1	0.85	0.10	166,166,166,166	0
55	MG	DA	3028	1/1	0.85	0.11	162,162,162,162	0
55	MG	BB	201	1/1	0.86	0.17	187,187,187,187	0
55	MG	BA	3049	1/1	0.86	0.12	104,104,104,104	0
55	MG	CA	1610	1/1	0.86	0.12	145,145,145,145	0
55	MG	DA	3034	1/1	0.86	0.12	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	DA	3025	1/1	0.86	0.15	108,108,108,108	0
55	MG	DA	3009	1/1	0.86	0.17	107,107,107,107	0
55	MG	DA	3098	1/1	0.86	0.21	158,158,158,158	0
55	MG	AA	1636	1/1	0.87	0.19	164,164,164,164	0
55	MG	CA	1632	1/1	0.87	0.13	160,160,160,160	0
55	MG	DA	3121	1/1	0.87	0.14	97,97,97,97	0
55	MG	DA	3073	1/1	0.87	0.11	141,141,141,141	0
55	MG	CA	1602	1/1	0.87	0.10	120,120,120,120	0
55	MG	CA	1614	1/1	0.88	0.25	178,178,178,178	0
55	MG	DA	3048	1/1	0.88	0.15	128,128,128,128	0
55	MG	DA	3135	1/1	0.88	0.17	162,162,162,162	0
55	MG	DA	3099	1/1	0.88	0.15	142,142,142,142	0
55	MG	DA	3076	1/1	0.89	0.24	167,167,167,167	0
55	MG	CA	1639	1/1	0.89	0.12	149,149,149,149	0
55	MG	BA	3112	1/1	0.89	0.12	121,121,121,121	0
55	MG	DA	3108	1/1	0.89	0.09	103,103,103,103	0
55	MG	CA	1607	1/1	0.89	0.10	154,154,154,154	0
55	MG	DA	3044	1/1	0.89	0.09	138,138,138,138	0
55	MG	CA	1634	1/1	0.89	0.10	112,112,112,112	0
55	MG	DA	3094	1/1	0.89	0.14	172,172,172,172	0
55	MG	AA	1630	1/1	0.89	0.09	163,163,163,163	0
55	MG	CA	1622	1/1	0.90	0.10	169,169,169,169	0
55	MG	DA	3096	1/1	0.90	0.14	107,107,107,107	0
55	MG	DA	3087	1/1	0.90	0.12	87,87,87,87	0
55	MG	DA	3088	1/1	0.90	0.09	160,160,160,160	0
55	MG	AA	1618	1/1	0.90	0.08	68,68,68,68	0
55	MG	DA	3106	1/1	0.90	0.14	69,69,69,69	0
55	MG	DA	3119	1/1	0.90	0.09	86,86,86,86	0
55	MG	BA	3091	1/1	0.90	0.07	47,47,47,47	0
55	MG	DA	3011	1/1	0.91	0.16	126,126,126,126	0
55	MG	CA	1625	1/1	0.91	0.16	118,118,118,118	0
55	MG	DA	3101	1/1	0.91	0.18	127,127,127,127	0
55	MG	BA	3011	1/1	0.91	0.13	120,120,120,120	0
55	MG	DA	3072	1/1	0.91	0.14	80,80,80,80	0
55	MG	AA	1628	1/1	0.91	0.15	96,96,96,96	0
55	MG	CA	1638	1/1	0.91	0.14	155,155,155,155	0
55	MG	DA	3112	1/1	0.92	0.07	148,148,148,148	0
55	MG	DA	3030	1/1	0.92	0.17	144,144,144,144	0
55	MG	DA	3077	1/1	0.92	0.17	159,159,159,159	0
55	MG	DA	3033	1/1	0.92	0.10	113,113,113,113	0
55	MG	DA	3081	1/1	0.92	0.13	141,141,141,141	0
55	MG	DA	3123	1/1	0.92	0.09	99,99,99,99	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3056	1/1	0.92	0.15	187,187,187,187	0
55	MG	DA	3102	1/1	0.92	0.10	83,83,83,83	0
55	MG	DA	3049	1/1	0.92	0.10	99,99,99,99	0
55	MG	DA	3130	1/1	0.92	0.27	102,102,102,102	0
55	MG	DA	3035	1/1	0.92	0.11	87,87,87,87	0
55	MG	DA	3051	1/1	0.92	0.07	140,140,140,140	0
55	MG	CA	1627	1/1	0.92	0.15	166,166,166,166	0
55	MG	BA	3060	1/1	0.92	0.18	129,129,129,129	0
55	MG	BA	3113	1/1	0.92	0.10	60,60,60,60	0
55	MG	BA	3077	1/1	0.93	0.12	90,90,90,90	0
55	MG	DA	3127	1/1	0.93	0.14	97,97,97,97	0
55	MG	DA	3128	1/1	0.93	0.15	153,153,153,153	0
55	MG	DA	3004	1/1	0.93	0.16	118,118,118,118	0
55	MG	CA	1631	1/1	0.93	0.12	92,92,92,92	0
55	MG	DA	3120	1/1	0.93	0.10	84,84,84,84	0
55	MG	CA	1608	1/1	0.93	0.13	60,60,60,60	0
55	MG	AA	1620	1/1	0.93	0.07	107,107,107,107	0
55	MG	DA	3031	1/1	0.93	0.09	113,113,113,113	0
55	MG	DA	3125	1/1	0.93	0.11	77,77,77,77	0
55	MG	CA	1601	1/1	0.94	0.09	124,124,124,124	0
55	MG	BA	3057	1/1	0.94	0.24	219,219,219,219	0
55	MG	DA	3066	1/1	0.94	0.07	94,94,94,94	0
55	MG	AA	1616	1/1	0.94	0.08	126,126,126,126	0
55	MG	BA	3092	1/1	0.94	0.10	75,75,75,75	0
55	MG	DA	3008	1/1	0.94	0.10	100,100,100,100	0
55	MG	AA	1640	1/1	0.94	0.07	109,109,109,109	0
55	MG	AA	1615	1/1	0.94	0.13	164,164,164,164	0
55	MG	DA	3040	1/1	0.94	0.07	117,117,117,117	0
55	MG	CA	1630	1/1	0.94	0.07	121,121,121,121	0
55	MG	CA	1611	1/1	0.94	0.09	108,108,108,108	0
55	MG	BA	3120	1/1	0.94	0.17	156,156,156,156	0
55	MG	DA	3047	1/1	0.94	0.08	82,82,82,82	0
55	MG	BA	3125	1/1	0.94	0.37	162,162,162,162	0
55	MG	DA	3085	1/1	0.94	0.22	169,169,169,169	0
55	MG	DA	3086	1/1	0.94	0.11	122,122,122,122	0
55	MG	BA	3071	1/1	0.94	0.14	132,132,132,132	0
55	MG	CA	1637	1/1	0.94	0.11	100,100,100,100	0
55	MG	BA	3134	1/1	0.94	0.22	137,137,137,137	0
55	MG	DA	3091	1/1	0.94	0.06	95,95,95,95	0
55	MG	DA	3057	1/1	0.94	0.08	104,104,104,104	0
55	MG	DA	3093	1/1	0.94	0.12	121,121,121,121	0
55	MG	BA	3136	1/1	0.94	0.20	150,150,150,150	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1640	1/1	0.94	0.18	161,161,161,161	0
55	MG	DA	3001	1/1	0.94	0.06	109,109,109,109	0
55	MG	BA	3137	1/1	0.94	0.30	188,188,188,188	0
55	MG	BA	3072	1/1	0.94	0.23	94,94,94,94	0
55	MG	CA	1623	1/1	0.95	0.10	96,96,96,96	0
55	MG	DA	3014	1/1	0.95	0.15	151,151,151,151	0
55	MG	BA	3117	1/1	0.95	0.09	23,23,23,23	0
55	MG	AA	1609	1/1	0.95	0.16	71,71,71,71	0
55	MG	DA	3114	1/1	0.95	0.05	95,95,95,95	0
55	MG	DA	3038	1/1	0.95	0.10	97,97,97,97	0
55	MG	DA	3062	1/1	0.95	0.09	113,113,113,113	0
55	MG	DA	3117	1/1	0.95	0.10	67,67,67,67	0
55	MG	BA	3035	1/1	0.95	0.18	168,168,168,168	0
55	MG	AA	1641	1/1	0.95	0.17	131,131,131,131	0
55	MG	DA	3041	1/1	0.95	0.09	77,77,77,77	0
55	MG	BA	3003	1/1	0.95	0.07	63,63,63,63	0
55	MG	DA	3043	1/1	0.95	0.08	104,104,104,104	0
55	MG	AA	1631	1/1	0.95	0.07	165,165,165,165	0
55	MG	DA	3097	1/1	0.95	0.09	110,110,110,110	0
55	MG	AA	1613	1/1	0.95	0.08	102,102,102,102	0
55	MG	BA	3100	1/1	0.95	0.07	47,47,47,47	0
55	MG	BA	3105	1/1	0.95	0.15	16,16,16,16	0
55	MG	BA	3014	1/1	0.95	0.11	64,64,64,64	0
55	MG	AA	1639	1/1	0.95	0.07	96,96,96,96	0
55	MG	DA	3105	1/1	0.95	0.13	62,62,62,62	0
55	MG	CA	1606	1/1	0.95	0.07	64,64,64,64	0
55	MG	DA	3052	1/1	0.95	0.08	110,110,110,110	0
55	MG	DA	3082	1/1	0.95	0.09	83,83,83,83	0
56	ZN	D4	101	1/1	0.95	0.06	156,156,156,156	0
55	MG	CA	1605	1/1	0.96	0.10	48,48,48,48	0
55	MG	BA	3119	1/1	0.96	0.10	88,88,88,88	0
55	MG	DA	3017	1/1	0.96	0.08	86,86,86,86	0
55	MG	AA	1624	1/1	0.96	0.07	101,101,101,101	0
55	MG	BA	3088	1/1	0.96	0.11	81,81,81,81	0
55	MG	BA	3127	1/1	0.96	0.13	43,43,43,43	0
55	MG	DA	3022	1/1	0.96	0.08	155,155,155,155	0
55	MG	DA	3023	1/1	0.96	0.06	71,71,71,71	0
55	MG	AA	1603	1/1	0.96	0.07	124,124,124,124	0
55	MG	BA	3058	1/1	0.96	0.18	164,164,164,164	0
55	MG	BA	3032	1/1	0.96	0.05	31,31,31,31	0
55	MG	BA	3007	1/1	0.96	0.06	67,67,67,67	0
55	MG	BA	3106	1/1	0.96	0.08	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	CA	1633	1/1	0.96	0.06	61,61,61,61	0
55	MG	DA	3104	1/1	0.96	0.12	109,109,109,109	0
55	MG	DA	3080	1/1	0.96	0.08	74,74,74,74	0
55	MG	BA	3037	1/1	0.96	0.23	171,171,171,171	0
55	MG	DA	3054	1/1	0.96	0.13	75,75,75,75	0
55	MG	DA	3032	1/1	0.96	0.07	71,71,71,71	0
55	MG	CA	1618	1/1	0.96	0.07	90,90,90,90	0
55	MG	DB	201	1/1	0.96	0.08	117,117,117,117	0
55	MG	AA	1608	1/1	0.96	0.07	106,106,106,106	0
55	MG	AA	1623	1/1	0.96	0.10	70,70,70,70	0
55	MG	BA	3063	1/1	0.97	0.05	42,42,42,42	0
55	MG	CA	1604	1/1	0.97	0.05	71,71,71,71	0
55	MG	BA	3047	1/1	0.97	0.10	20,20,20,20	0
55	MG	BA	3110	1/1	0.97	0.13	11,11,11,11	0
55	MG	AA	1607	1/1	0.97	0.07	62,62,62,62	0
55	MG	DA	3045	1/1	0.97	0.14	102,102,102,102	0
55	MG	BA	3002	1/1	0.97	0.11	81,81,81,81	0
55	MG	BA	3116	1/1	0.97	0.09	133,133,133,133	0
55	MG	CA	1635	1/1	0.97	0.06	76,76,76,76	0
55	MG	BA	3075	1/1	0.97	0.19	119,119,119,119	0
55	MG	AA	1602	1/1	0.97	0.07	121,121,121,121	0
55	MG	CA	1613	1/1	0.97	0.05	96,96,96,96	0
55	MG	BA	3084	1/1	0.97	0.08	58,58,58,58	0
55	MG	BA	3124	1/1	0.97	0.06	39,39,39,39	0
55	MG	DA	3056	1/1	0.97	0.08	103,103,103,103	0
55	MG	DA	3122	1/1	0.97	0.15	113,113,113,113	0
55	MG	BA	3085	1/1	0.97	0.08	116,116,116,116	0
55	MG	BA	3029	1/1	0.97	0.05	43,43,43,43	0
55	MG	BA	3089	1/1	0.97	0.10	134,134,134,134	0
55	MG	AA	1627	1/1	0.97	0.11	86,86,86,86	0
55	MG	AA	1621	1/1	0.97	0.06	139,139,139,139	0
55	MG	DA	3095	1/1	0.97	0.07	114,114,114,114	0
55	MG	CA	1621	1/1	0.97	0.11	40,40,40,40	0
55	MG	BA	3093	1/1	0.97	0.11	110,110,110,110	0
55	MG	BA	3094	1/1	0.97	0.05	37,37,37,37	0
55	MG	DA	3036	1/1	0.97	0.10	97,97,97,97	0
55	MG	DA	3133	1/1	0.97	0.06	84,84,84,84	0
55	MG	BB	203	1/1	0.97	0.06	37,37,37,37	0
55	MG	DA	3067	1/1	0.97	0.05	70,70,70,70	0
55	MG	BA	3098	1/1	0.97	0.08	60,60,60,60	0
55	MG	DA	3103	1/1	0.97	0.10	62,62,62,62	0
55	MG	AA	1629	1/1	0.97	0.05	58,58,58,58	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3076	1/1	0.98	0.05	16,16,16,16	0
55	MG	DA	3055	1/1	0.98	0.04	75,75,75,75	0
55	MG	BA	3121	1/1	0.98	0.04	12,12,12,12	0
55	MG	BA	3031	1/1	0.98	0.06	11,11,11,11	0
55	MG	BA	3078	1/1	0.98	0.06	26,26,26,26	0
55	MG	BA	3079	1/1	0.98	0.06	99,99,99,99	0
55	MG	DA	3021	1/1	0.98	0.15	66,66,66,66	0
55	MG	CA	1626	1/1	0.98	0.13	40,40,40,40	0
55	MG	BA	3080	1/1	0.98	0.04	31,31,31,31	0
55	MG	DA	3024	1/1	0.98	0.04	85,85,85,85	0
55	MG	BA	3133	1/1	0.98	0.12	103,103,103,103	0
55	MG	BA	3081	1/1	0.98	0.04	32,32,32,32	0
55	MG	BA	3083	1/1	0.98	0.07	42,42,42,42	0
55	MG	AA	1606	1/1	0.98	0.09	38,38,38,38	0
55	MG	DA	3069	1/1	0.98	0.05	79,79,79,79	0
55	MG	AA	1601	1/1	0.98	0.06	82,82,82,82	0
55	MG	DA	3113	1/1	0.98	0.04	59,59,59,59	0
55	MG	BB	202	1/1	0.98	0.05	67,67,67,67	0
55	MG	BA	3086	1/1	0.98	0.06	45,45,45,45	0
55	MG	AA	1642	1/1	0.98	0.12	40,40,40,40	0
55	MG	BA	3001	1/1	0.98	0.07	109,109,109,109	0
55	MG	DA	3118	1/1	0.98	0.09	77,77,77,77	0
55	MG	AA	1614	1/1	0.98	0.05	55,55,55,55	0
55	MG	AA	1604	1/1	0.98	0.06	98,98,98,98	0
55	MG	AA	1605	1/1	0.98	0.07	123,123,123,123	0
55	MG	AA	1632	1/1	0.98	0.04	81,81,81,81	0
55	MG	CA	1641	1/1	0.98	0.06	68,68,68,68	0
55	MG	BA	3095	1/1	0.98	0.05	38,38,38,38	0
55	MG	AA	1633	1/1	0.98	0.09	78,78,78,78	0
55	MG	CA	1609	1/1	0.98	0.06	83,83,83,83	0
55	MG	AA	1635	1/1	0.98	0.05	64,64,64,64	0
55	MG	BA	3061	1/1	0.98	0.16	171,171,171,171	0
55	MG	AA	1617	1/1	0.98	0.04	83,83,83,83	0
55	MG	BA	3108	1/1	0.98	0.09	30,30,30,30	0
55	MG	BA	3019	1/1	0.98	0.05	39,39,39,39	0
55	MG	DA	3090	1/1	0.98	0.09	90,90,90,90	0
55	MG	BA	3111	1/1	0.98	0.05	47,47,47,47	0
55	MG	BA	3024	1/1	0.98	0.04	16,16,16,16	0
55	MG	AA	1638	1/1	0.98	0.05	29,29,29,29	0
55	MG	BA	3028	1/1	0.98	0.09	100,100,100,100	0
55	MG	BA	3074	1/1	0.98	0.05	59,59,59,59	0
56	ZN	B4	101	1/1	0.98	0.04	51,51,51,51	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	AA	1625	1/1	0.98	0.05	67,67,67,67	0
55	MG	DA	3068	1/1	0.99	0.06	65,65,65,65	0
55	MG	BA	3018	1/1	0.99	0.03	35,35,35,35	0
55	MG	AA	1626	1/1	0.99	0.17	39,39,39,39	0
55	MG	DA	3071	1/1	0.99	0.05	64,64,64,64	0
55	MG	BA	3022	1/1	0.99	0.03	37,37,37,37	0
55	MG	BA	3090	1/1	0.99	0.04	28,28,28,28	0
55	MG	BA	3126	1/1	0.99	0.04	21,21,21,21	0
55	MG	BA	3064	1/1	0.99	0.04	38,38,38,38	0
55	MG	BA	3129	1/1	0.99	0.04	31,31,31,31	0
55	MG	BA	3131	1/1	0.99	0.04	17,17,17,17	0
55	MG	DA	3078	1/1	0.99	0.10	68,68,68,68	0
55	MG	BA	3067	1/1	0.99	0.04	21,21,21,21	0
55	MG	DA	3012	1/1	0.99	0.07	75,75,75,75	0
55	MG	BA	3039	1/1	0.99	0.04	9,9,9,9	0
55	MG	BA	3040	1/1	0.99	0.04	27,27,27,27	0
55	MG	BA	3044	1/1	0.99	0.04	34,34,34,34	0
55	MG	BA	3046	1/1	0.99	0.05	23,23,23,23	0
55	MG	BA	3099	1/1	0.99	0.06	82,82,82,82	0
55	MG	BA	3010	1/1	0.99	0.04	29,29,29,29	0
55	MG	BA	3102	1/1	0.99	0.03	36,36,36,36	0
55	MG	BB	204	1/1	0.99	0.04	40,40,40,40	0
55	MG	DA	3053	1/1	0.99	0.04	59,59,59,59	0
55	MG	BA	3103	1/1	0.99	0.07	60,60,60,60	0
55	MG	BA	3025	1/1	0.99	0.05	21,21,21,21	0
55	MG	AA	1643	1/1	0.99	0.03	35,35,35,35	0
55	MG	BA	3051	1/1	0.99	0.04	71,71,71,71	0
55	MG	BA	3053	1/1	0.99	0.05	30,30,30,30	0
55	MG	AA	1637	1/1	0.99	0.05	85,85,85,85	0
55	MG	BA	3005	1/1	0.99	0.05	86,86,86,86	0
55	MG	BA	3082	1/1	0.99	0.04	30,30,30,30	0
55	MG	BA	3114	1/1	0.99	0.07	86,86,86,86	0
55	MG	BA	3115	1/1	0.99	0.04	49,49,49,49	0
55	MG	BA	3030	1/1	0.99	0.07	57,57,57,57	0
55	MG	CA	1642	1/1	0.99	0.06	78,78,78,78	0
55	MG	BA	3059	1/1	0.99	0.03	36,36,36,36	0
55	MG	BA	3016	1/1	0.99	0.07	64,64,64,64	0
55	MG	BA	3068	1/1	1.00	0.05	11,11,11,11	0
55	MG	BA	3104	1/1	1.00	0.04	22,22,22,22	0
55	MG	BA	3069	1/1	1.00	0.02	14,14,14,14	0
55	MG	AA	1634	1/1	1.00	0.05	59,59,59,59	0
55	MG	BA	3107	1/1	1.00	0.06	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	MG	BA	3041	1/1	1.00	0.10	19,19,19,19	0
55	MG	BA	3109	1/1	1.00	0.07	13,13,13,13	0
55	MG	BA	3042	1/1	1.00	0.08	18,18,18,18	0
55	MG	BA	3073	1/1	1.00	0.04	12,12,12,12	0
55	MG	BA	3043	1/1	1.00	0.03	17,17,17,17	0
55	MG	BA	3023	1/1	1.00	0.03	11,11,11,11	0
55	MG	BA	3045	1/1	1.00	0.11	21,21,21,21	0
55	MG	AA	1622	1/1	1.00	0.07	30,30,30,30	0
55	MG	BA	3012	1/1	1.00	0.04	8,8,8,8	0
55	MG	BA	3013	1/1	1.00	0.04	8,8,8,8	0
55	MG	BA	3118	1/1	1.00	0.05	13,13,13,13	0
55	MG	BA	3027	1/1	1.00	0.07	31,31,31,31	0
55	MG	BA	3050	1/1	1.00	0.02	16,16,16,16	0
55	MG	AA	1612	1/1	1.00	0.04	60,60,60,60	0
55	MG	BA	3122	1/1	1.00	0.04	64,64,64,64	0
55	MG	BA	3123	1/1	1.00	0.04	10,10,10,10	0
55	MG	BA	3052	1/1	1.00	0.02	25,25,25,25	0
55	MG	BA	3006	1/1	1.00	0.01	32,32,32,32	0
55	MG	BA	3054	1/1	1.00	0.02	14,14,14,14	0
55	MG	BA	3055	1/1	1.00	0.02	25,25,25,25	0
55	MG	BA	3128	1/1	1.00	0.04	18,18,18,18	0
55	MG	BA	3087	1/1	1.00	0.04	13,13,13,13	0
55	MG	BA	3130	1/1	1.00	0.04	8,8,8,8	0
55	MG	AA	1610	1/1	1.00	0.04	33,33,33,33	0
55	MG	BA	3017	1/1	1.00	0.02	9,9,9,9	0
55	MG	BA	3008	1/1	1.00	0.06	17,17,17,17	0
55	MG	BA	3033	1/1	1.00	0.03	9,9,9,9	0
55	MG	BA	3135	1/1	1.00	0.02	12,12,12,12	0
55	MG	BA	3034	1/1	1.00	0.07	8,8,8,8	0
55	MG	BA	3009	1/1	1.00	0.03	13,13,13,13	0
55	MG	BA	3036	1/1	1.00	0.06	11,11,11,11	0
55	MG	BA	3020	1/1	1.00	0.19	16,16,16,16	0
55	MG	BA	3096	1/1	1.00	0.04	40,40,40,40	0
55	MG	BA	3097	1/1	1.00	0.02	18,18,18,18	0
55	MG	BA	3038	1/1	1.00	0.06	30,30,30,30	0
55	MG	BA	3065	1/1	1.00	0.02	26,26,26,26	0
55	MG	BA	3066	1/1	1.00	0.03	18,18,18,18	0
55	MG	BA	3101	1/1	1.00	0.03	27,27,27,27	0
55	MG	BA	3021	1/1	1.00	0.06	17,17,17,17	0

6.5 Other polymers (i)

There are no such residues in this entry.