



Full wwPDB X-ray Structure Validation Report ⓘ

May 24, 2020 – 12:48 am BST

PDB ID : 4V7T
Title : Crystal structure of the E. coli ribosome bound to chloramphenicol.
Authors : Dunkle, J.A.; Xiong, L.; Mankin, A.S.; Cate, J.H.D.
Deposited on : 2010-08-14
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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : 2.11
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.11

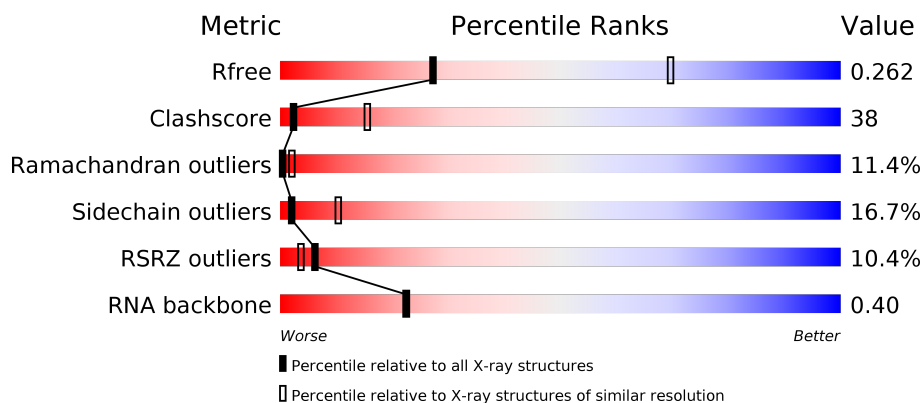
1 Overall quality at a glance i

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}	130704	1133 (3.20-3.20)
Clashscore	141614	1253 (3.20-3.20)
Ramachandran outliers	138981	1234 (3.20-3.20)
Sidechain outliers	138945	1233 (3.20-3.20)
RSRZ outliers	127900	1095 (3.20-3.20)
RNA backbone	3102	1010 (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 on 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1533	<div> <div>24%</div> <div>44%</div> <div>16%</div> <div>17%</div> </div>
2	AB	218	<div> <div>32%</div> <div>25%</div> <div>54%</div> <div>18%</div> </div>
2	CB	218	<div> <div>19%</div> <div>30%</div> <div>54%</div> <div>14%</div> </div>
3	AC	206	<div> <div>6%</div> <div>36%</div> <div>52%</div> <div>10%</div> </div>

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Mol	Chain	Length	Quality of chain
3	CC	206	
4	AD	205	
4	CD	205	
5	AE	150	
5	CE	150	
6	AF	100	
6	CF	100	
7	AG	151	
8	AH	129	
8	CH	129	
9	AI	127	
9	CI	127	
10	AJ	98	
10	CJ	98	
11	AK	117	
11	CK	117	
12	AL	123	
12	CL	123	
13	AM	114	
14	AN	100	
14	CN	100	
15	AO	88	
15	CO	88	
16	AP	82	
17	AQ	80	

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Mol	Chain	Length	Quality of chain
17	CQ	80	
18	AR	55	
18	CR	55	
19	AS	79	
19	CS	79	
20	AT	85	
20	CT	85	
21	AU	51	
21	CU	51	
22	BA	2903	
23	BB	118	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	177	
28	BG	176	
28	DG	176	
29	BH	149	
29	DH	149	
30	BI	141	
30	DI	141	
31	BJ	142	

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Mol	Chain	Length	Quality of chain
31	DJ	142	
32	BK	122	
32	DK	122	
33	BL	143	
33	DL	143	
34	BM	136	
34	DM	136	
35	BN	120	
35	DN	120	
36	BO	116	
36	DO	116	
37	BP	114	
37	DP	114	
38	BQ	117	
38	DQ	117	
39	BR	103	
39	DR	103	
40	BS	110	
40	DS	110	
41	BT	93	
41	DT	93	
42	BU	102	
42	DU	102	
43	BV	94	
43	DV	94	

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Mol	Chain	Length	Quality of chain
44	BW	79	
44	DW	79	
45	BX	77	
45	DX	77	
46	BY	63	
46	DY	63	
47	BZ	58	
47	DZ	58	
48	B0	56	
48	D0	56	
49	B1	50	
49	D1	50	
50	B2	46	
50	D2	46	
51	B3	64	
51	D3	64	
52	B4	38	
52	D4	38	
53	CA	1530	
54	CG	150	
55	CM	113	
56	CP	80	
57	DA	2904	
58	DB	117	
59	DF	178	

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
60	MG	DA	3007	-	-	-	X
60	MG	DA	3019	-	-	-	X
60	MG	DA	3025	-	-	-	X
60	MG	DA	3061	-	-	-	X
60	MG	DA	3062	-	-	-	X
60	MG	DA	3063	-	-	-	X
60	MG	DA	3073	-	-	-	X
60	MG	DA	3075	-	-	-	X
60	MG	DA	3077	-	-	-	X
60	MG	DA	3107	-	-	-	X
60	MG	DA	3124	-	-	-	X
60	MG	DA	3127	-	-	-	X
60	MG	DA	3130	-	-	-	X
60	MG	DJ	201	-	-	-	X

2 Entry composition

There are 63 unique types of molecules in this entry. The entry contains 284499 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			
21	CU	51	Total	C	N	O	S	0	0	0
			426	265	86	74	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			
32	DK	122	Total	C	N	O	S	0	0	0
			939	587	180	166	6			

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			
35	DN	120	Total	C	N	O	S	0	0	0
			961	593	196	167	5			

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			
41	DT	93	Total	C	N	O	S	0	0	0
			739	466	139	132	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O		0	0	0
			780	492	146	142				
42	DU	102	Total	C	N	O		0	0	0
			780	492	146	142				

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O	0	0	0
			410	263	75	72			
49	D1	50	Total	C	N	O	0	0	0
			410	263	75	72			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 57 is a RNA chain called 23S rRNA.

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

- Molecule 58 is a RNA chain called 5S rRNA.

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

- Molecule 59 is a protein called 50S ribosomal protein L5.

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

- Molecule 60 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

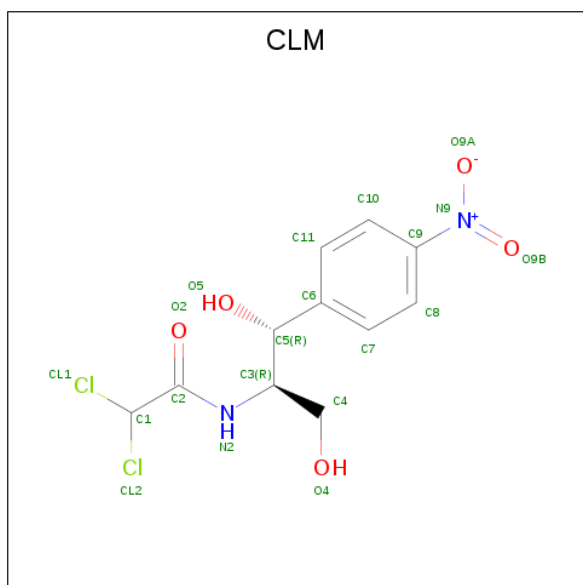
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	BB	4	Total	Mg	0	0
			4	4		
60	DE	1	Total	Mg	0	0
			1	1		
60	BA	135	Total	Mg	0	0
			135	135		
60	CA	42	Total	Mg	0	0
			42	42		
60	DJ	1	Total	Mg	0	0
			1	1		
60	BL	1	Total	Mg	0	0
			1	1		
60	DA	133	Total	Mg	0	0
			133	133		
60	AA	42	Total	Mg	0	0
			42	42		
60	AN	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	DC	1	Total	Mg	0	0
			1	1		
60	DB	1	Total	Mg	0	0
			1	1		

- Molecule 61 is CHLORAMPHENICOL (three-letter code: CLM) (formula: $C_{11}H_{12}Cl_2N_2O_5$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	BA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		

- Molecule 62 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 63 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AA	197	Total	O	0	0
			197	197		
63	AL	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
63	AN	6	Total 6	O 6	0	0
63	AT	2	Total 2	O 2	0	0
63	AU	1	Total 1	O 1	0	0
63	BA	608	Total 608	O 608	0	0
63	BB	19	Total 19	O 19	0	0
63	BC	8	Total 8	O 8	0	0
63	BD	2	Total 2	O 2	0	0
63	BE	1	Total 1	O 1	0	0
63	BL	4	Total 4	O 4	0	0
63	BN	2	Total 2	O 2	0	0
63	BQ	1	Total 1	O 1	0	0
63	BT	2	Total 2	O 2	0	0
63	BV	1	Total 1	O 1	0	0
63	B2	2	Total 2	O 2	0	0
63	B3	2	Total 2	O 2	0	0
63	B4	2	Total 2	O 2	0	0
63	CA	195	Total 195	O 195	0	0
63	CE	3	Total 3	O 3	0	0
63	CI	1	Total 1	O 1	0	0
63	CL	1	Total 1	O 1	0	0
63	CN	3	Total 3	O 3	0	0

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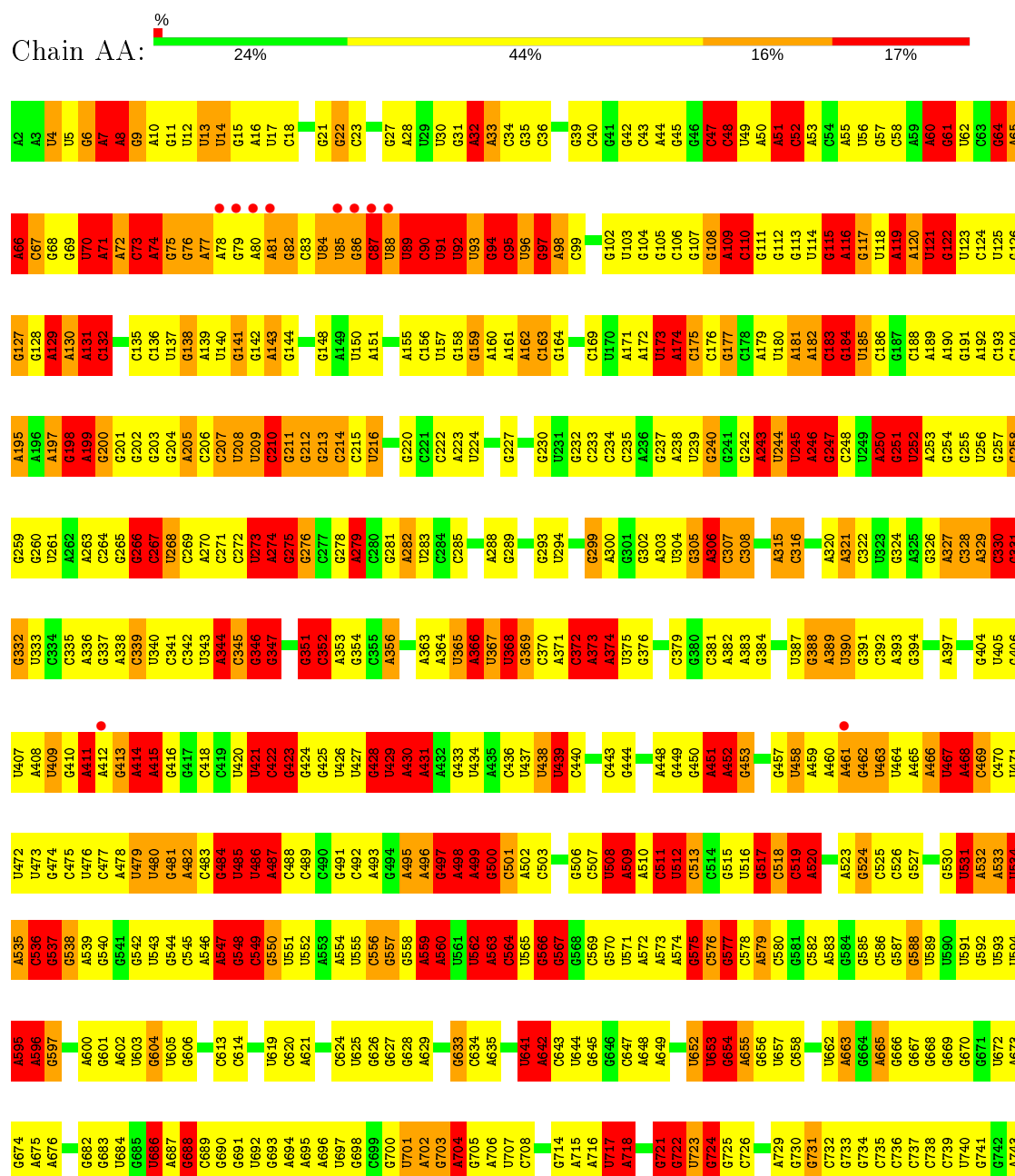
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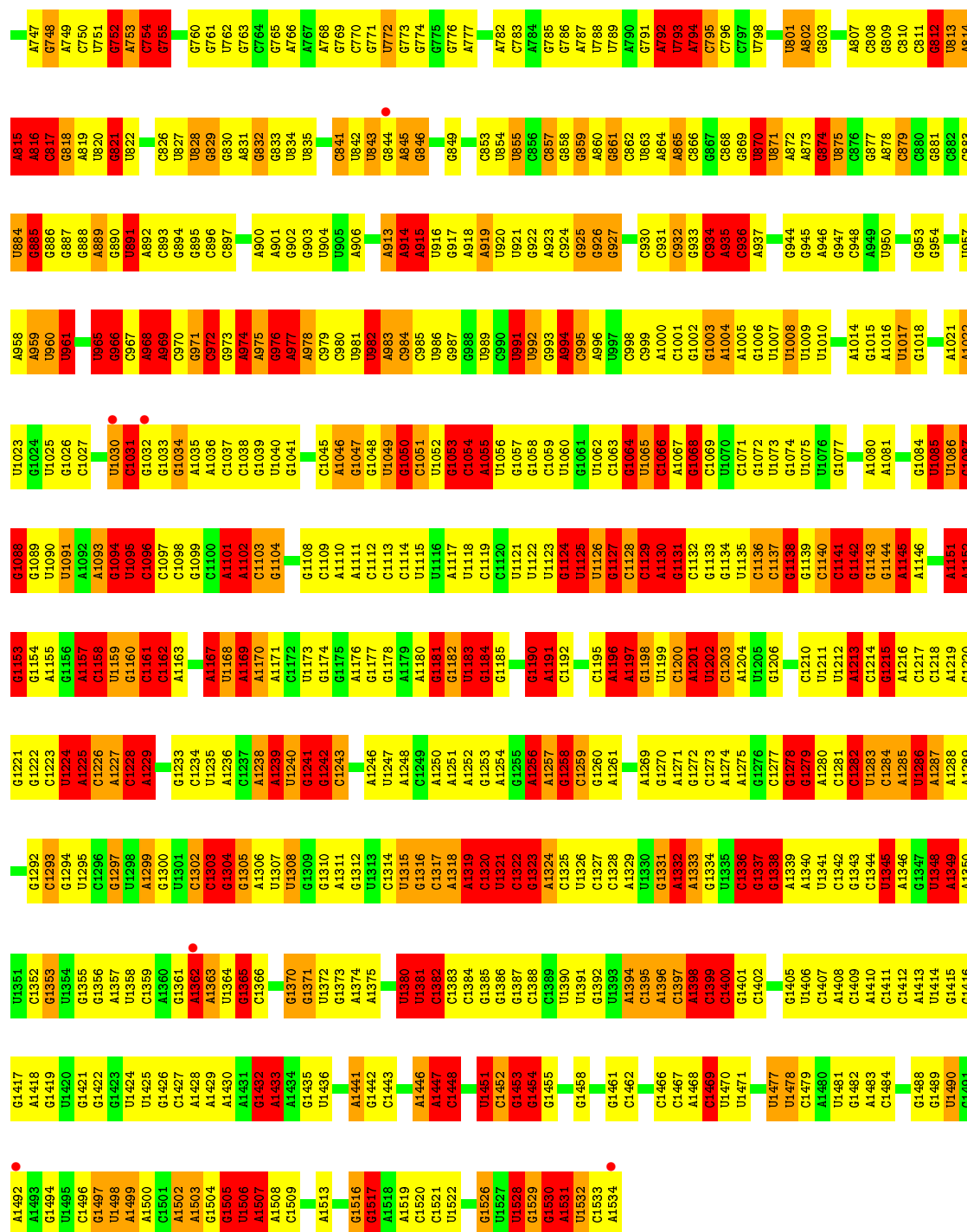
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
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63	CU	2	Total 2	O 2	0	0
63	DA	603	Total 603	O 603	0	0
63	DB	4	Total 4	O 4	0	0
63	DC	10	Total 10	O 10	0	0
63	DD	1	Total 1	O 1	0	0
63	DE	3	Total 3	O 3	0	0
63	DJ	4	Total 4	O 4	0	0
63	DL	5	Total 5	O 5	0	0
63	DN	2	Total 2	O 2	0	0
63	DT	2	Total 2	O 2	0	0
63	DU	2	Total 2	O 2	0	0
63	DV	1	Total 1	O 1	0	0
63	D2	1	Total 1	O 1	0	0
63	D3	1	Total 1	O 1	0	0
63	D4	4	Total 4	O 4	0	0

3 Residue-property plots

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

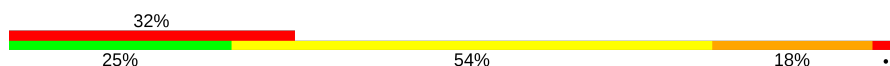
• Molecule 1: 16S rRNA

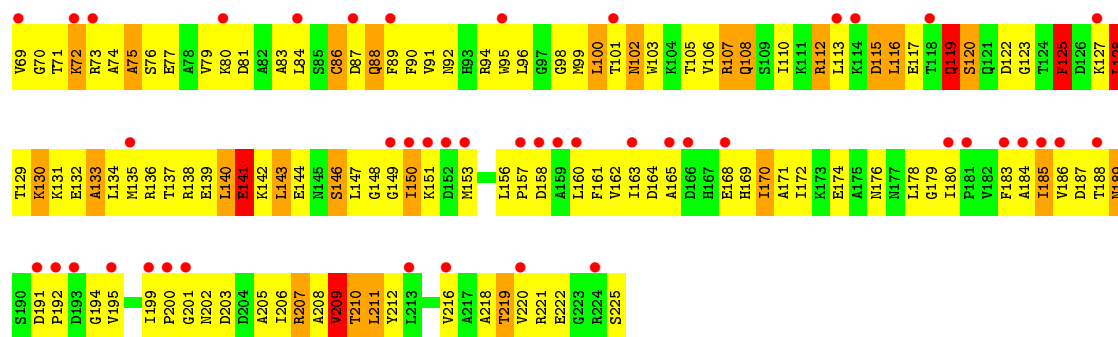




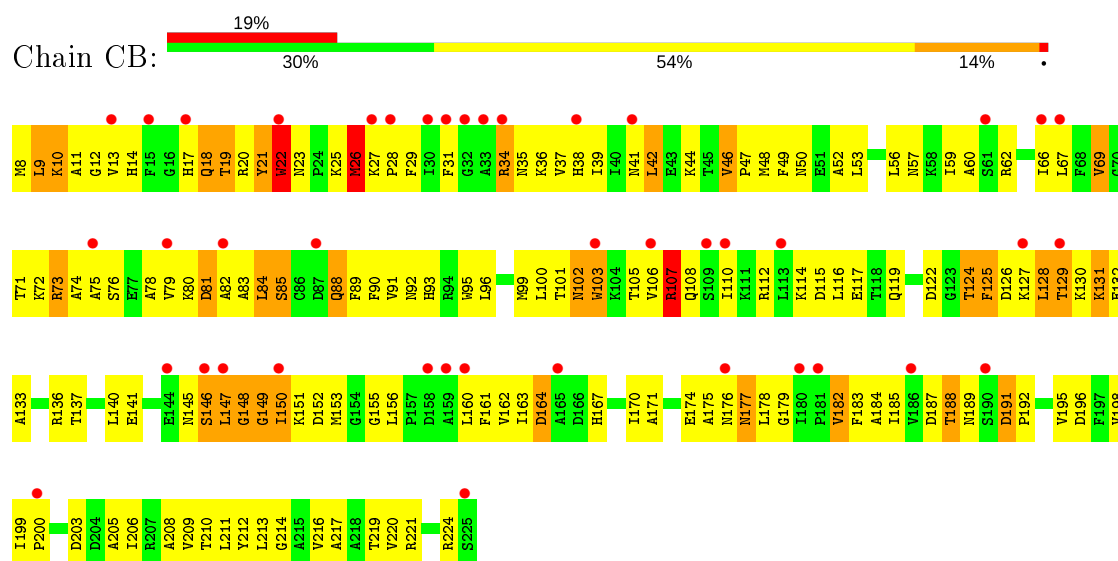
• Molecule 2: 30S ribosomal protein S2

Chain AB:

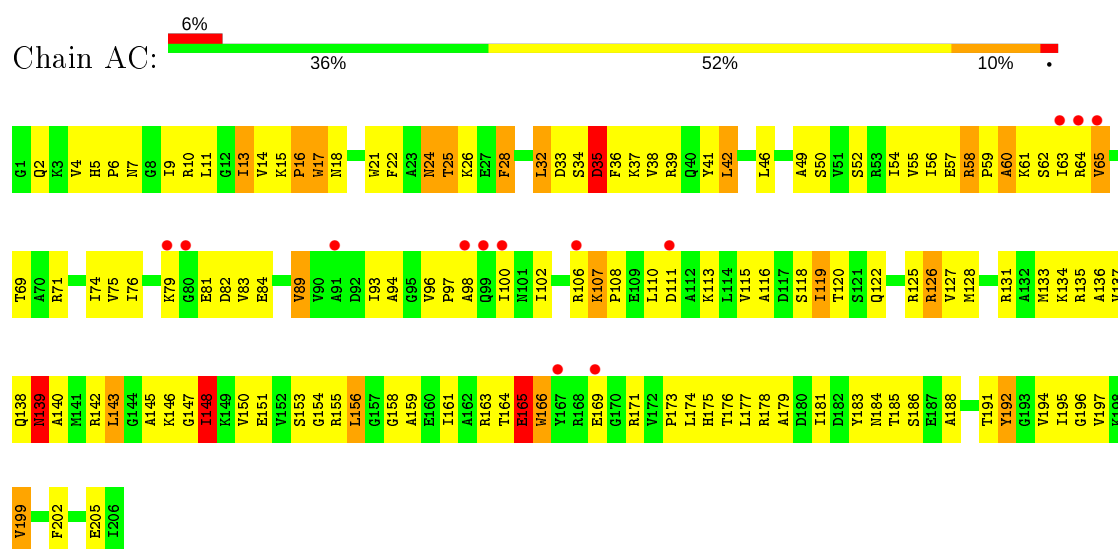




• Molecule 2: 30S ribosomal protein S2

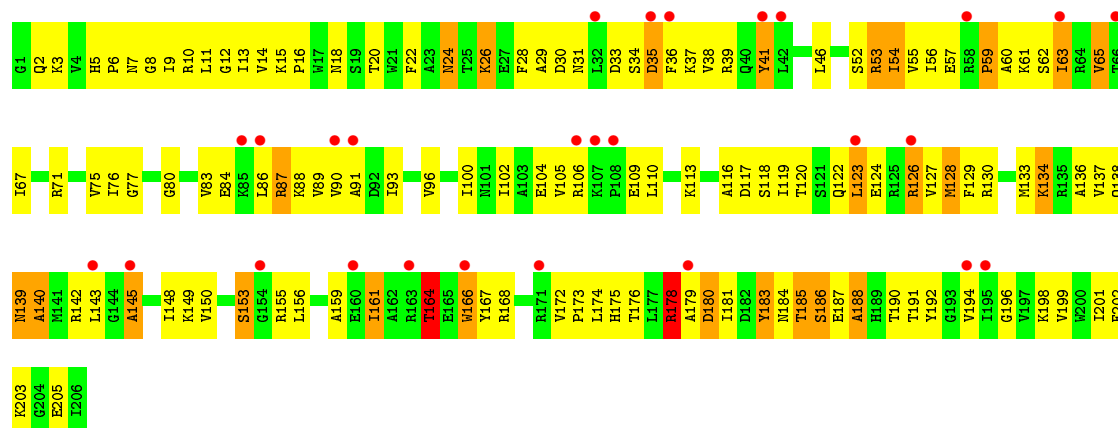


• Molecule 3: 30S ribosomal protein S3



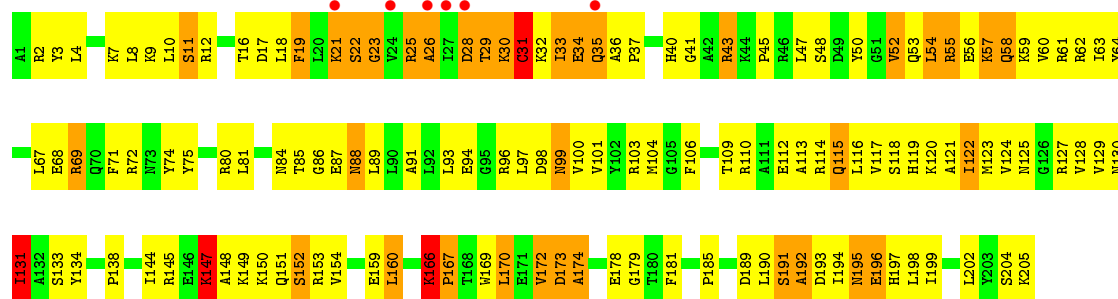
• Molecule 3: 30S ribosomal protein S3





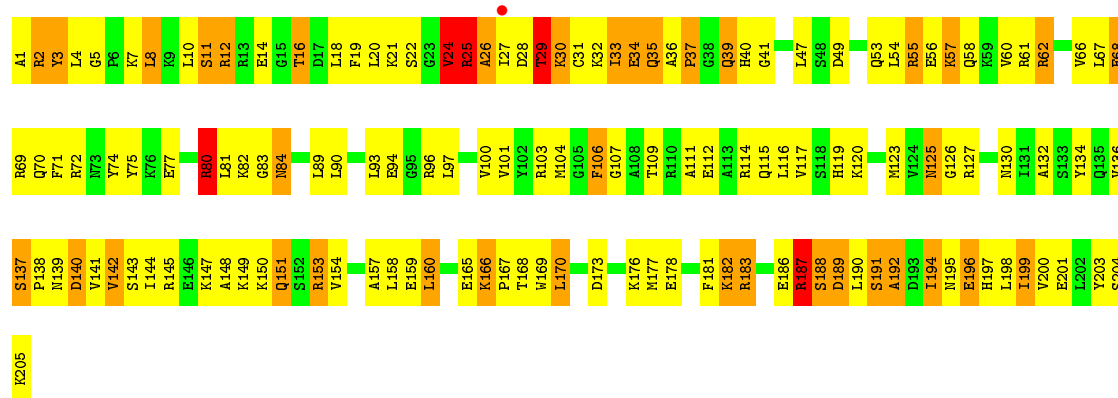
• Molecule 4: 30S ribosomal protein S4

Chain AD: 3% 34% 47% 17% •



• Molecule 4: 30S ribosomal protein S4

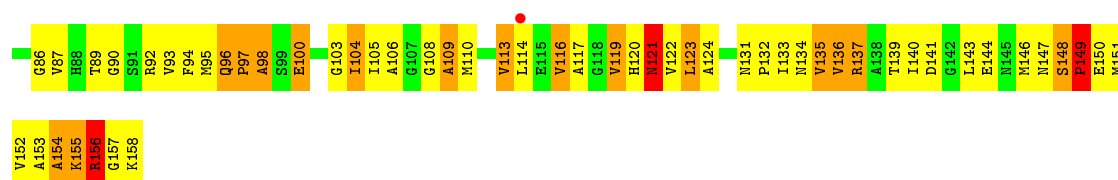
Chain CD: 32% 48% 18% •



• Molecule 5: 30S ribosomal protein S5

Chain AE: 33% 46% 18% •

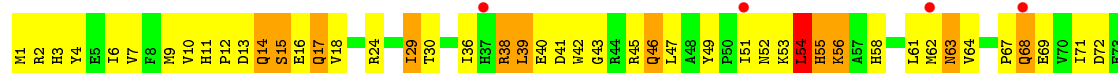




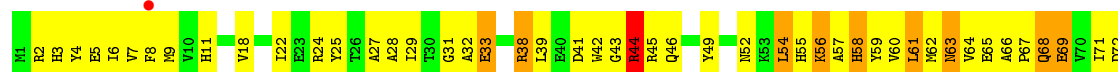
• Molecule 5: 30S ribosomal protein S5



• Molecule 6: 30S ribosomal protein S6

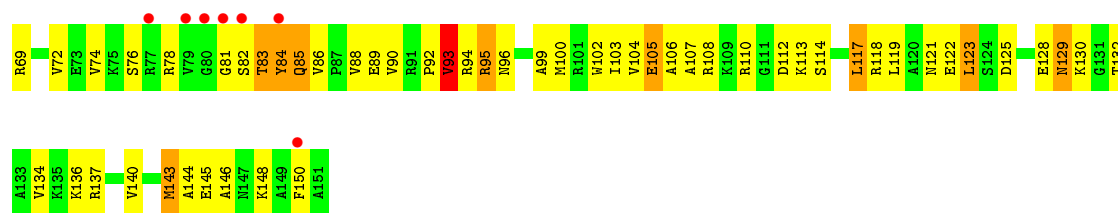


• Molecule 6: 30S ribosomal protein S6

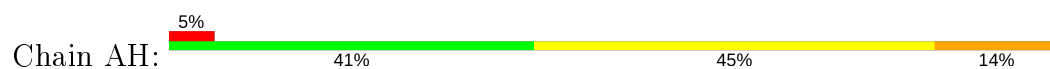


• Molecule 7: 30S ribosomal protein S7

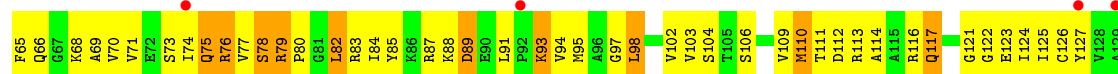
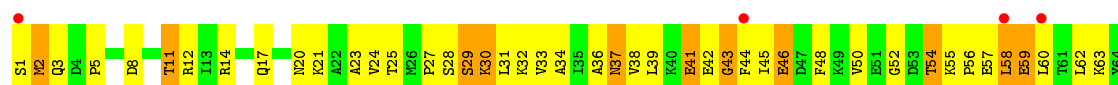




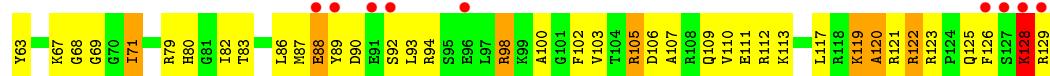
• Molecule 8: 30S ribosomal protein S8



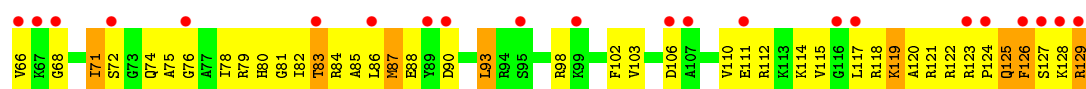
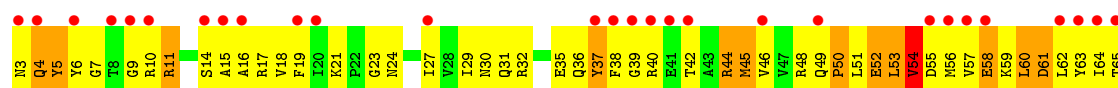
• Molecule 8: 30S ribosomal protein S8



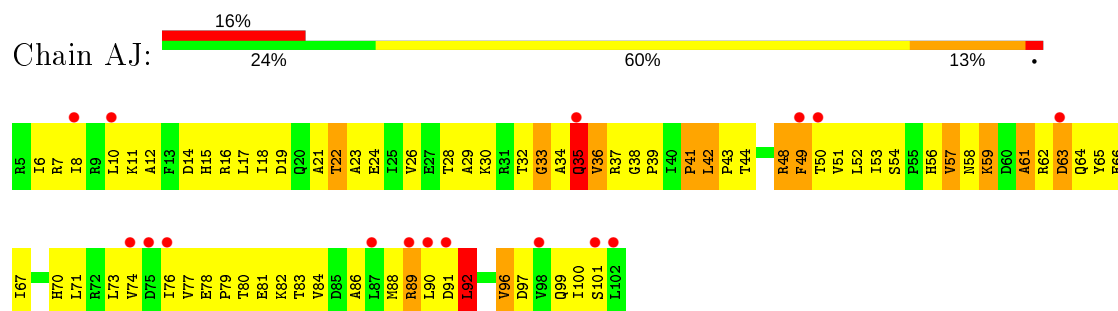
• Molecule 9: 30S ribosomal protein S9



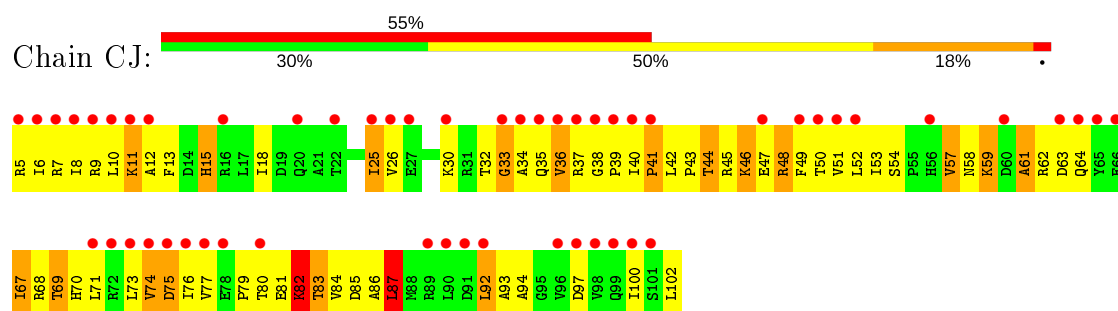
• Molecule 9: 30S ribosomal protein S9



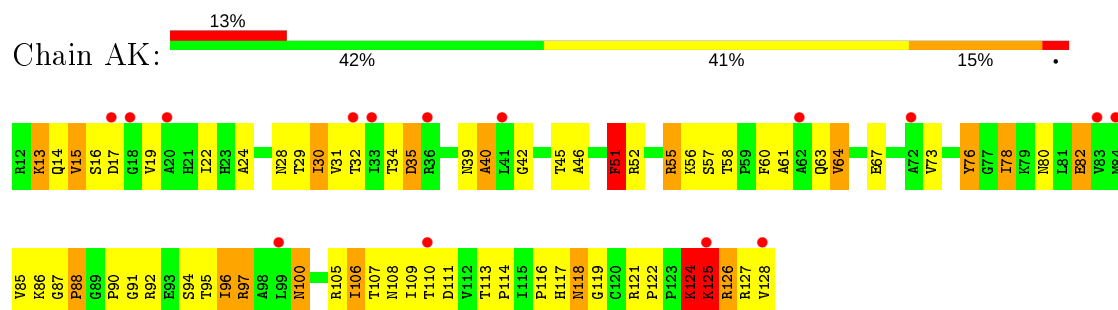
- Molecule 10: 30S ribosomal protein S10



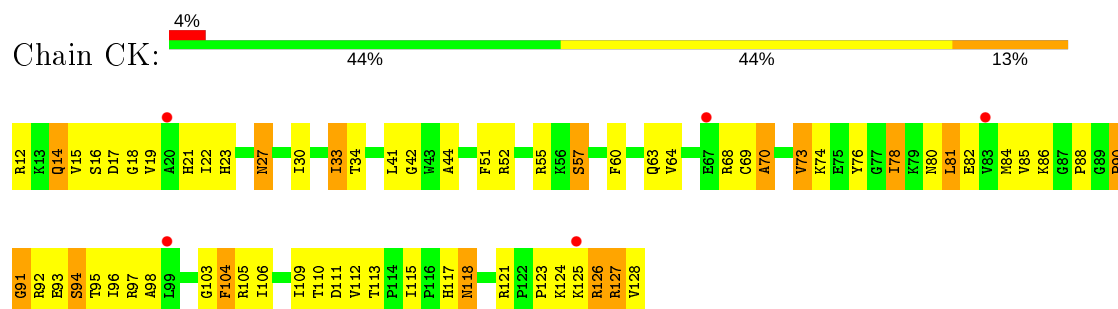
- Molecule 10: 30S ribosomal protein S10



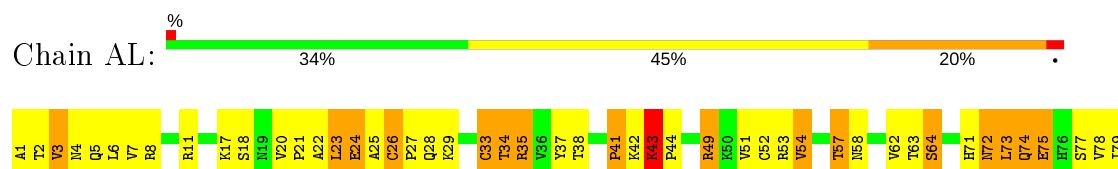
- Molecule 11: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S11

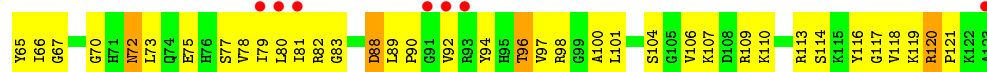


- Molecule 12: 30S ribosomal protein S12

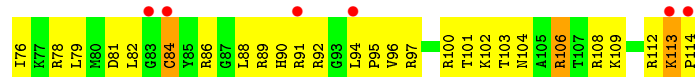
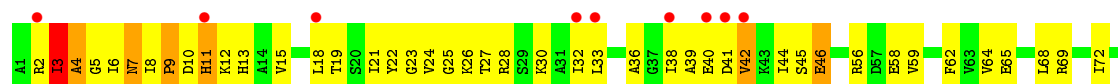




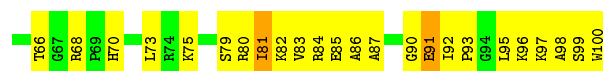
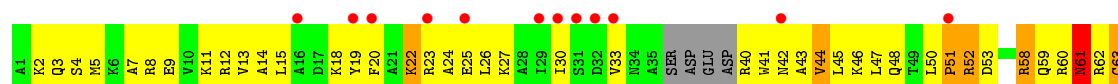
• Molecule 12: 30S ribosomal protein S12



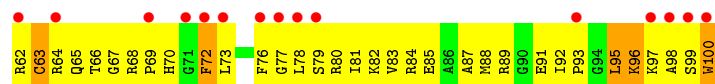
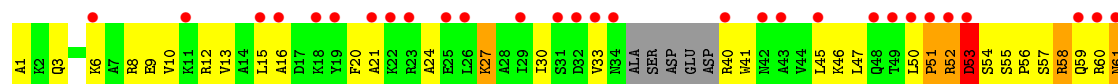
• Molecule 13: 30S ribosomal protein S13



• Molecule 14: 30S ribosomal protein S14

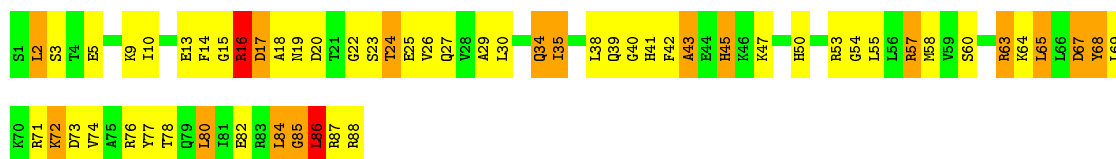


• Molecule 14: 30S ribosomal protein S14



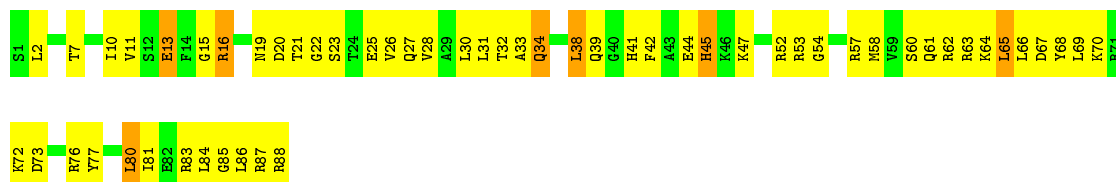
• Molecule 15: 30S ribosomal protein S15





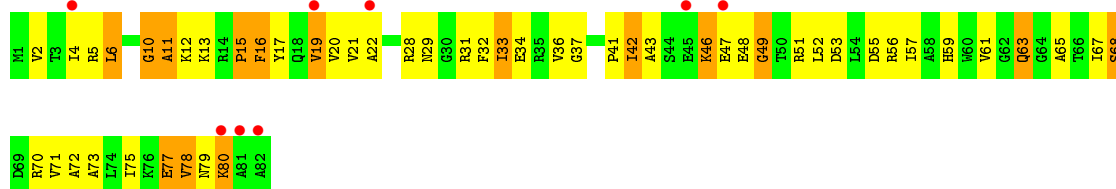
- Molecule 15: 30S ribosomal protein S15

Chain CO: 36% 56% 8%



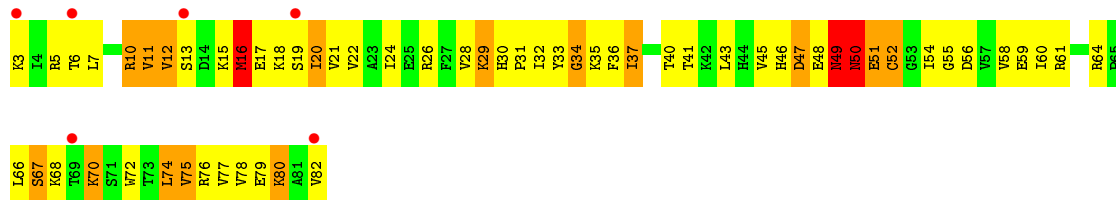
- Molecule 16: 30S ribosomal protein S16

Chain AP: 10% 38% 44% 18%



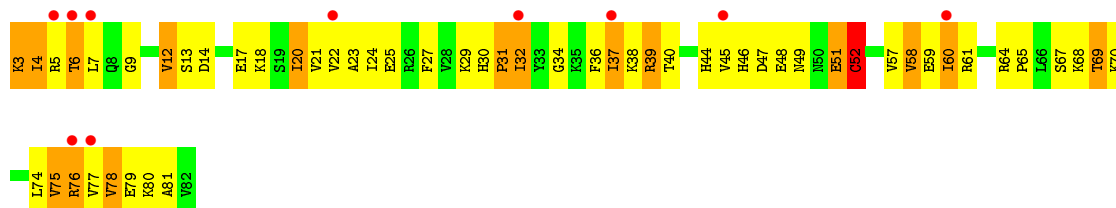
- Molecule 17: 30S ribosomal protein S17

Chain AQ: 8% 25% 53% 19%

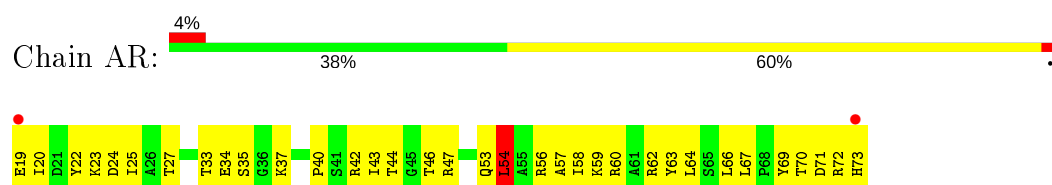


- Molecule 17: 30S ribosomal protein S17

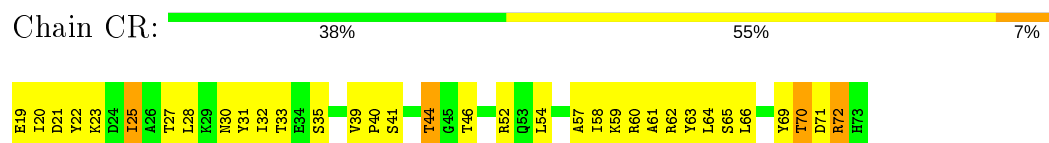
Chain CQ: 13% 31% 48% 20%



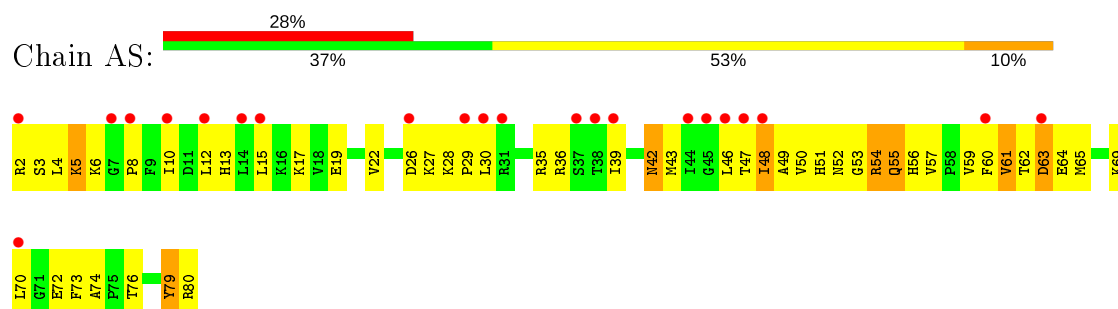
- Molecule 18: 30S ribosomal protein S18



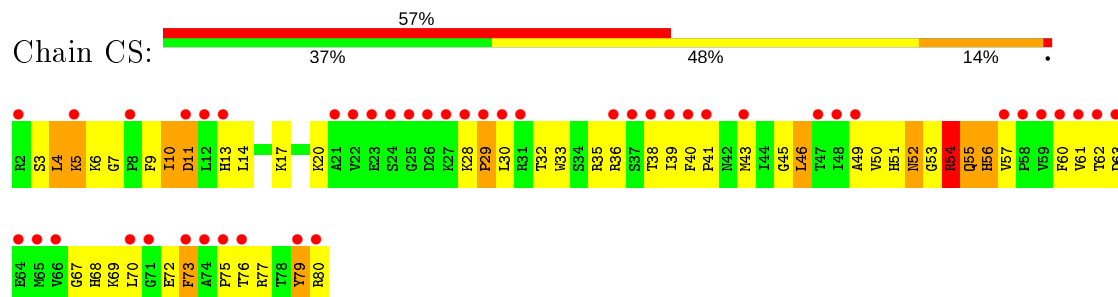
• Molecule 18: 30S ribosomal protein S18



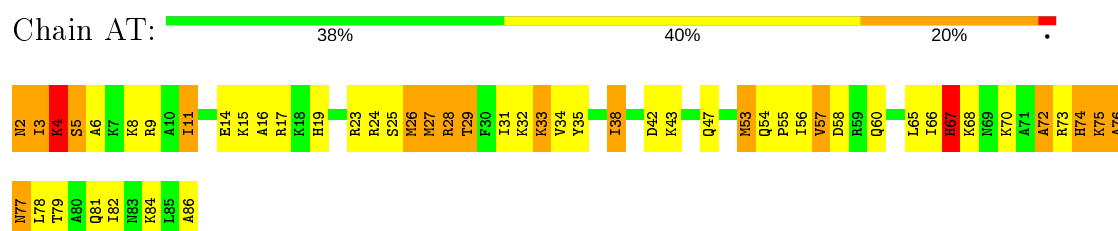
• Molecule 19: 30S ribosomal protein S19



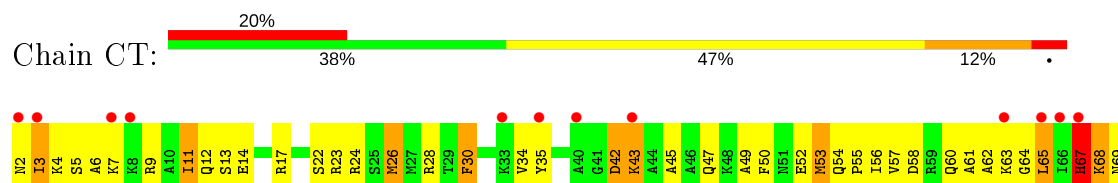
• Molecule 19: 30S ribosomal protein S19

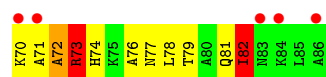


• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20

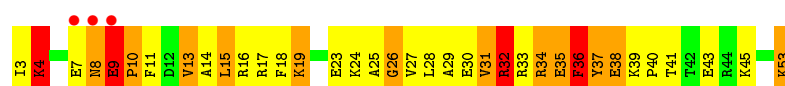




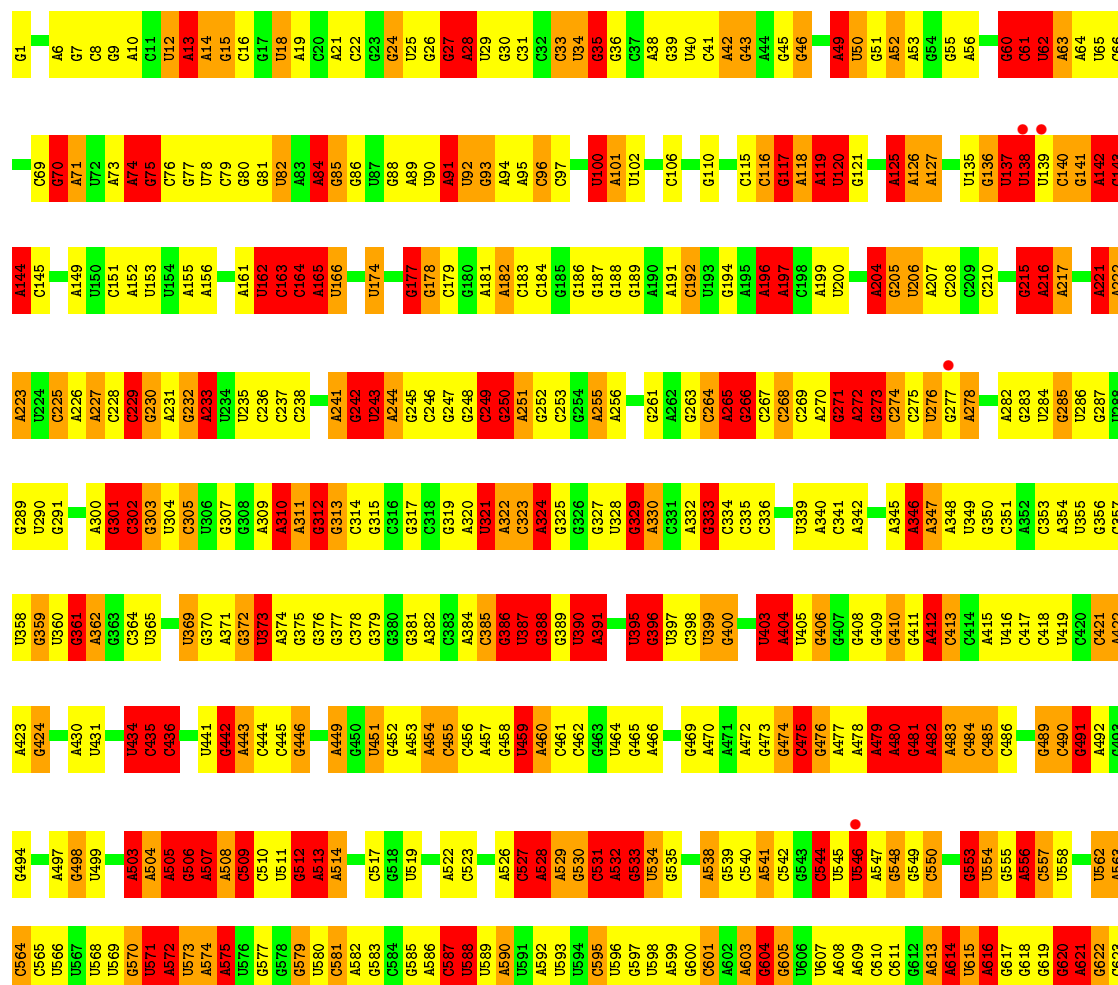
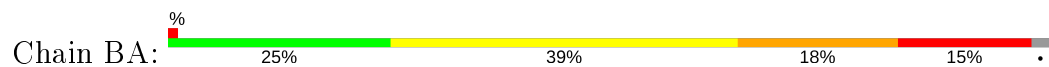
- Molecule 21: 30S ribosomal protein S21



- Molecule 21: 30S ribosomal protein S21

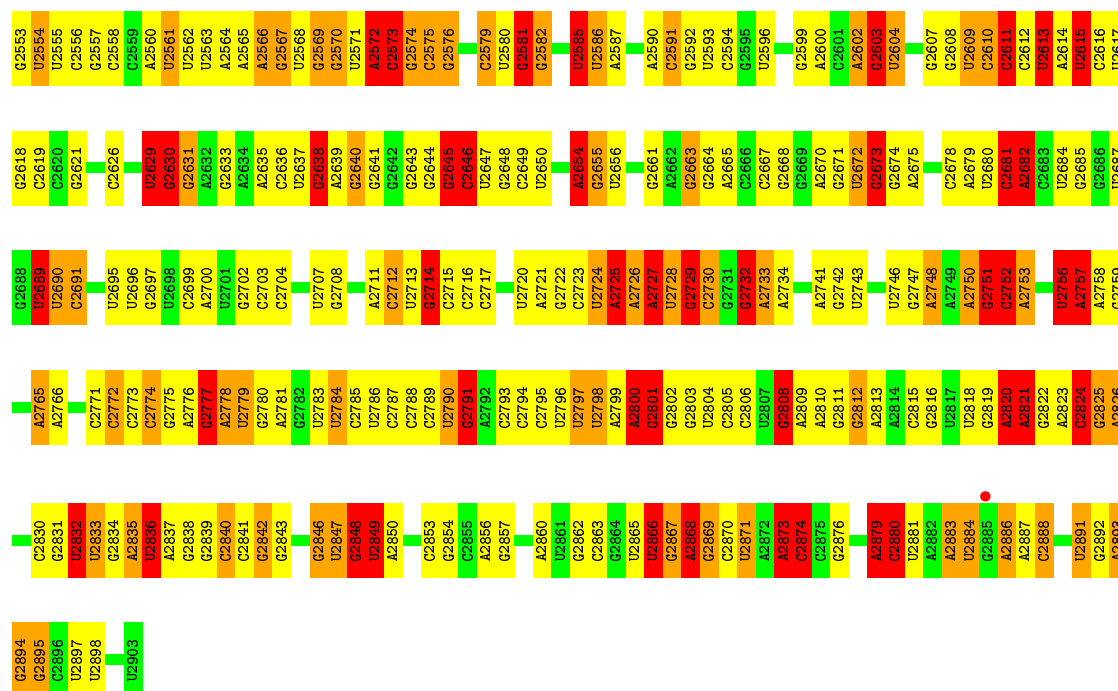


- Molecule 22: 23S rRNA

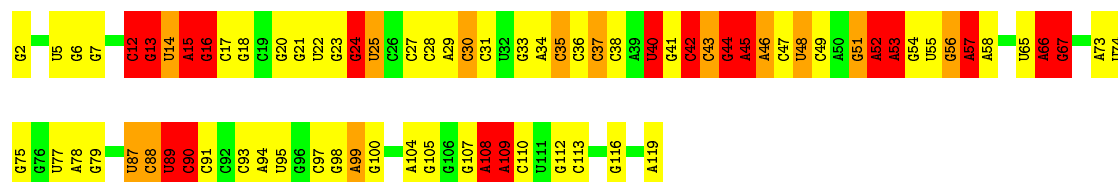




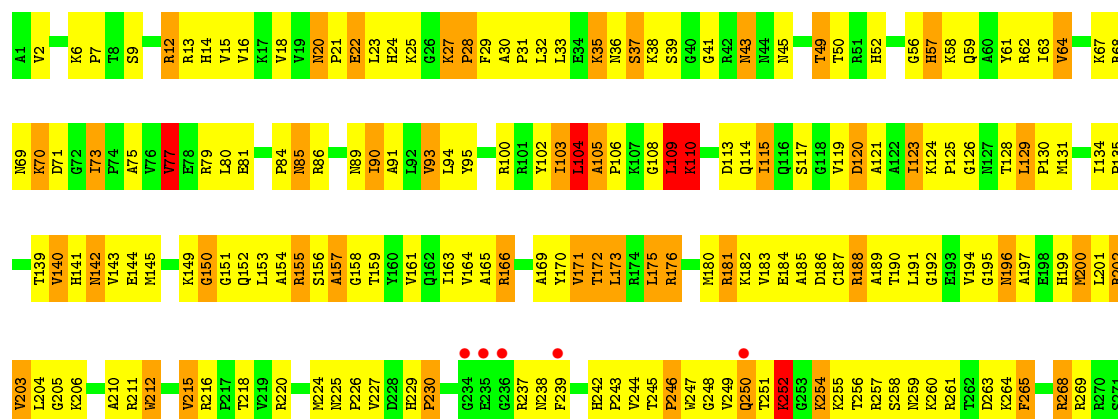
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U2489	C2424	U2356	U2291	G2223	G2157	U2092	U2027	G1958	U1886	U1817	G1749	A1616
G2490	G2357	G2223	U2292	G2223	A	U2092	U2028	G1959	U1887	U1818	G1750	C1617
U2491	A2358	A2358	G2293	G2224	G	G2093	G2029	U1960	A1889	U1819	A1754	A1618
U2492	C2427	C2359	G2294	A2225	C	A2094	A2030	C1961	U1890	U1820	A1755	G1619
U2493	G2428	G2360	G2295	G2226	C	G2095	A2031	U1962	U1891	A1821	G1756	G1622
G2494	G2429	G2361	U2296	A2227	G	G2102	G2032	U1963	U1892	C1822	A1757	G1623
G2495	A2430	G2362	G2297	G2228	A	C2103	A2033	U1964	A1899	G1823	U1758	G1624
C2496	U2431	G2363	U2298	G2229	C	C2104	U2034	C1965	A1900	U1824	A1689	U1625
C2498	A2434	G2364	U2299	G2230	C	U2105	G2035	A1966	A1901	U1825	C1760	C1626
C2499	A2435	G2365	U2300	G2231	U	U2106	C2036	U1967	C1902	G1826	C1761	A1627
U2500	G2436	G2366	U2301	G2232	U	G2107	A2037	U1968	G1905	U1827	A1762	G1628
C2501	U2437	G2367	U2302	U2233	G	A2108	G2038	A1969	G1906	G1828	G1763	G1629
A2503	G2438	G2368	G2303	G2234	A	U2109	U2039	A1970	G1907	A1829	U1764	U1630
A2504	U2439	G2369	U2304	G2235	U	G2110	U2040	U1971	U1908	G1830	U1765	G1631
G2505	C2440	G2370	U2305	G2236	A	U	A2042	G1972	C1908	G1832	G1766	G1632
U2506	U2441	G2371	U2306	G2237	U	U	C2043	U1976	G1909	C1833	U1769	A1634
G2507	G2442	G2372	U2307	G2238	A	U	C2044	U1977	G1910	U1834	G1770	A1635
G2508	U2443	G2373	U2308	U2239	A	U	G2045	U1978	U1912	G1835	C1771	U1636
C2512	G2444	G2374	U2309	U2240	C	A	C2046	G1979	G1913	C1837	C1772	C1637
A2513	G2445	G2375	U2310	U2241	C	A	G2047	U1980	A1914	U1838	C1773	C1638
U2514	G2446	G2376	U2311	U2242	A	U	C2048	U1981	C1915	G1839	C1774	G1639
A2515	G2447	G2377	U2312	U2243	C	U	G2049	U1982	U1916	G1840	G1775	A1640
C2516	U2448	G2378	U2313	U2244	U2179	A	C2050	G1983	A1917	U1841	U1776	A1641
G2517	A2449	G2379	U2314	U2245	U2180	G	A2051	C1984	U1918	G1842	U1777	G1642
A2518	U2450	G2380	U2315	U2246	U2181	U	G2052	U1985	A1919	C1843	U1778	C1643
U2519	G2451	G2381	U2316	U2247	U2182	G	A2053	G1986	C1920	U1779	U1779	G1644
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G2521	U2453	G2383	U2318	U2249	U2184	U	G2055	G1988	U1922	U1782	U1781	C1646
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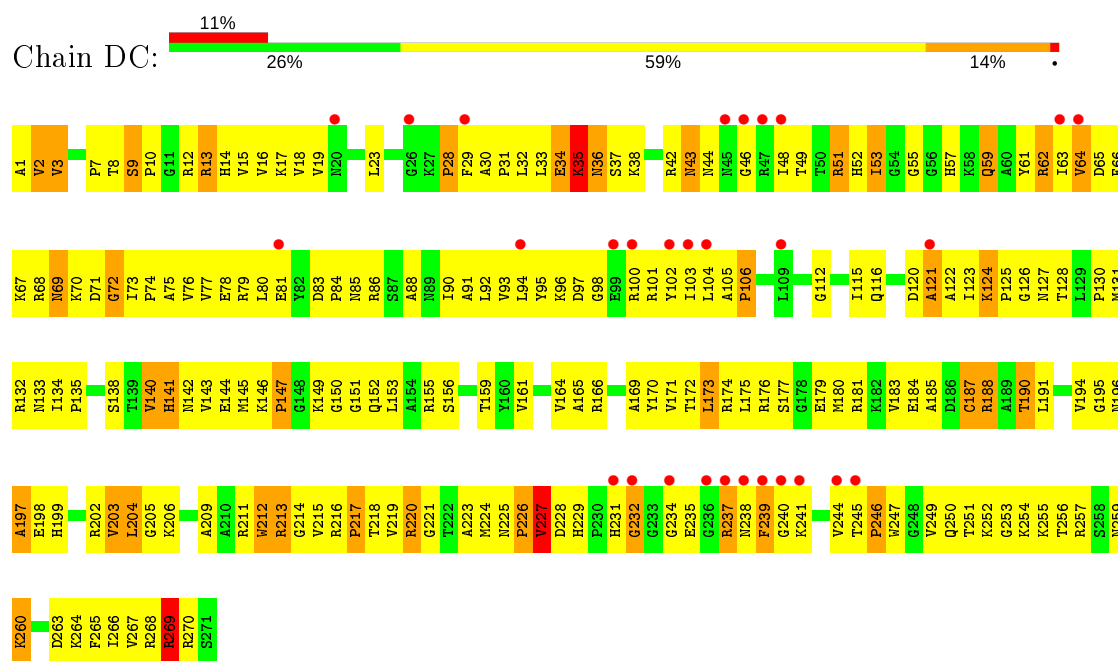
• Molecule 23: 5S rRNA



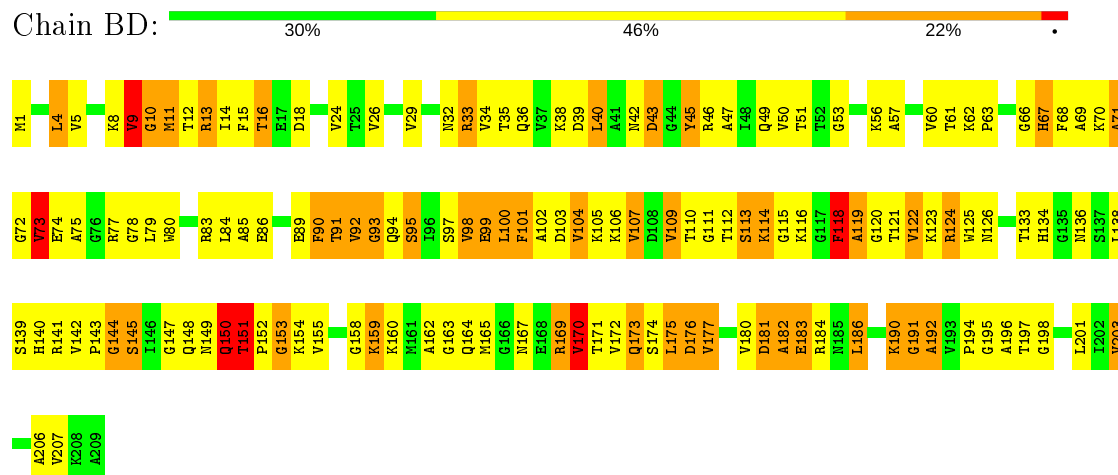
• Molecule 24: 50S ribosomal protein L2



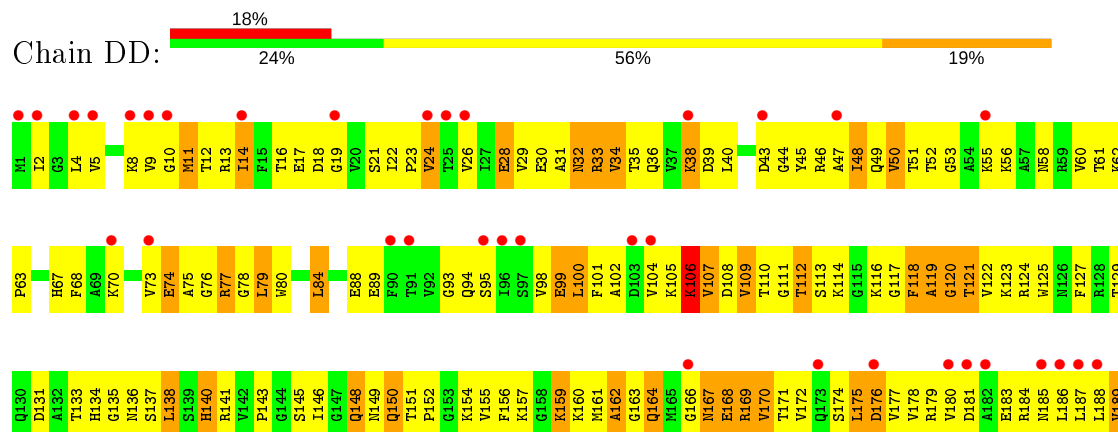
• Molecule 24: 50S ribosomal protein L2

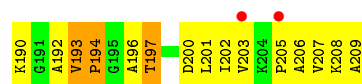


- Molecule 25: 50S ribosomal protein L3



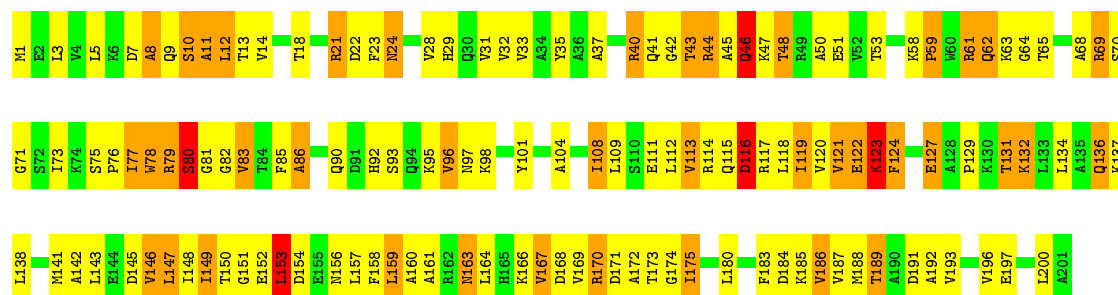
- Molecule 25: 50S ribosomal protein L3





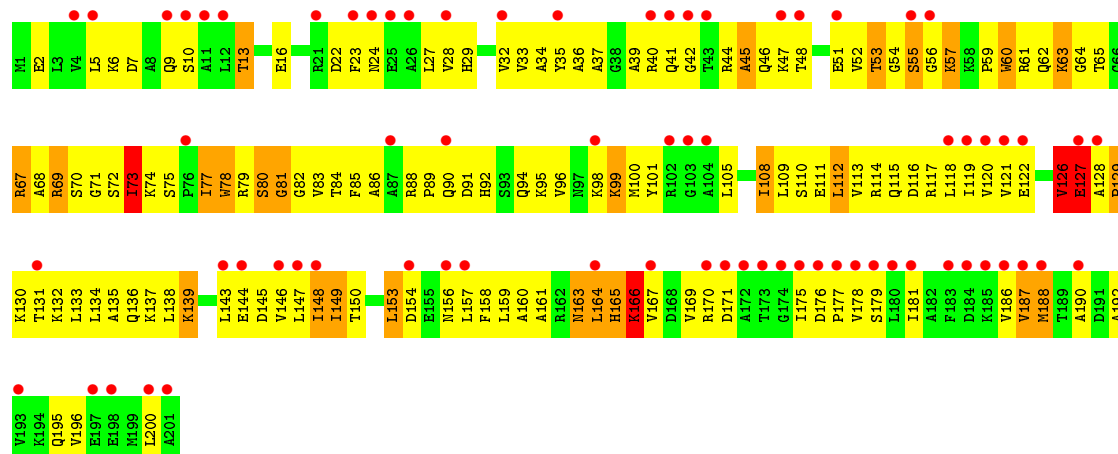
- Molecule 26: 50S ribosomal protein L4

Chain BE: 32% 45% 20%



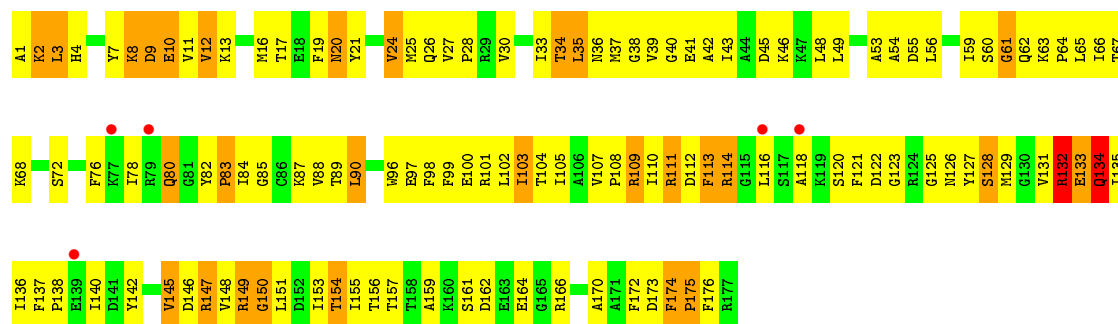
- Molecule 26: 50S ribosomal protein L4

Chain DE: 29% 56% 13%

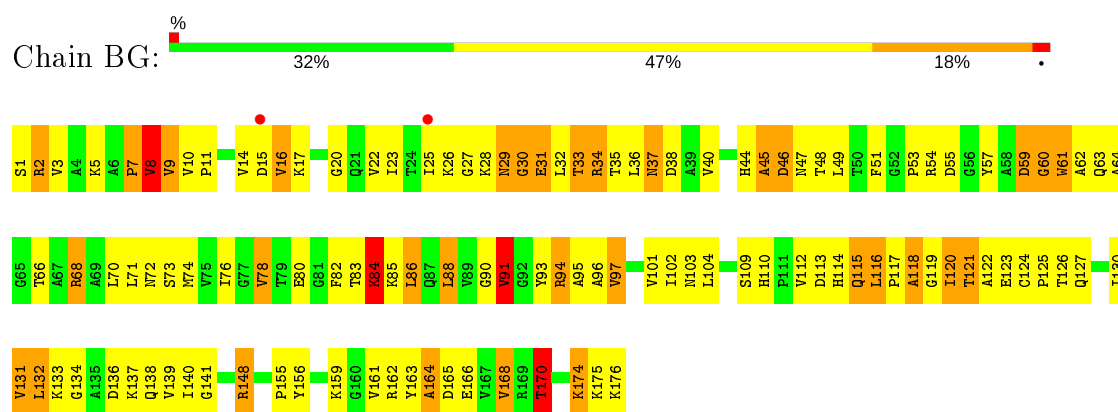


- Molecule 27: 50S ribosomal protein L5

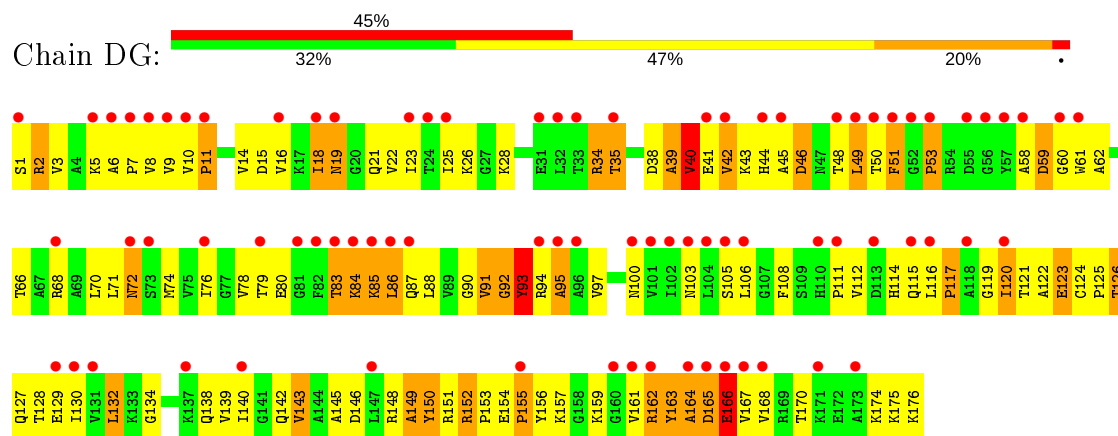
Chain BF: 3% 29% 54% 16%



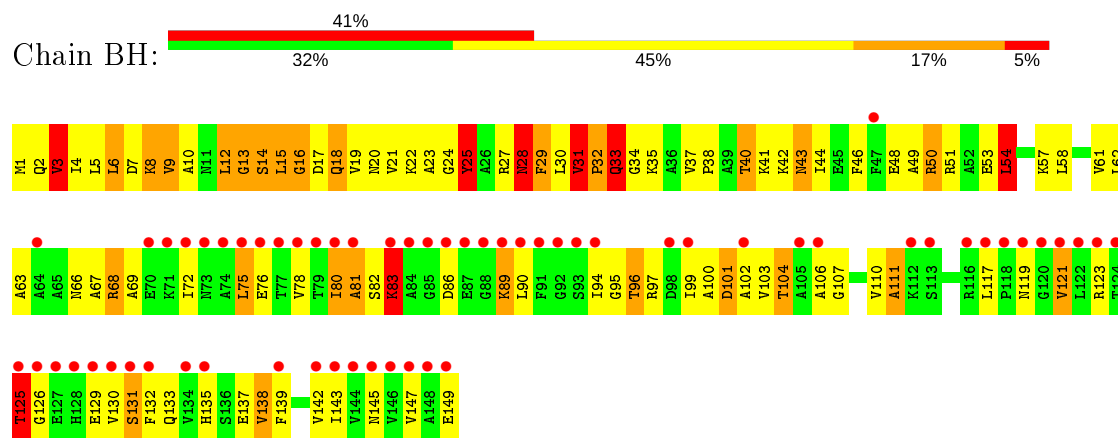
- Molecule 28: 50S ribosomal protein L6



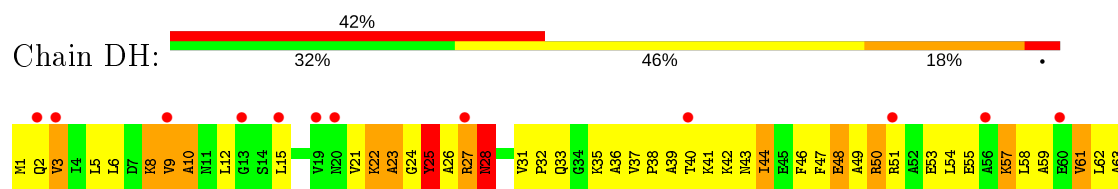
• Molecule 28: 50S ribosomal protein L6

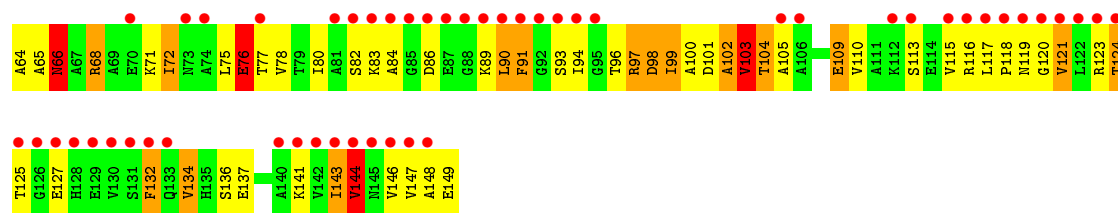


• Molecule 29: 50S ribosomal protein L9

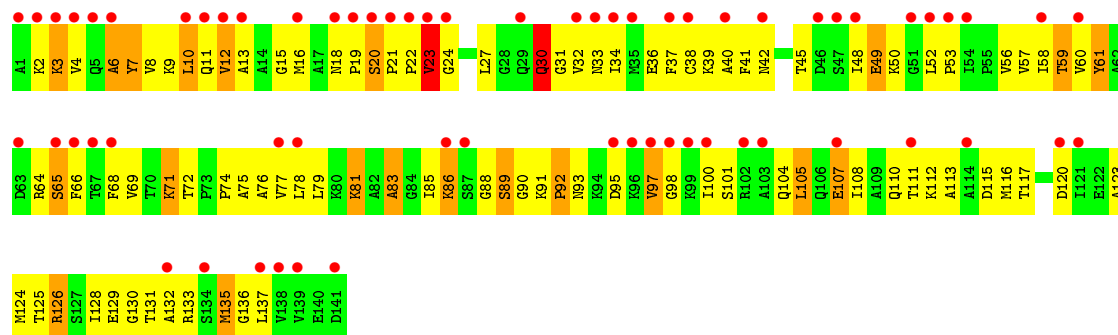


• Molecule 29: 50S ribosomal protein L9

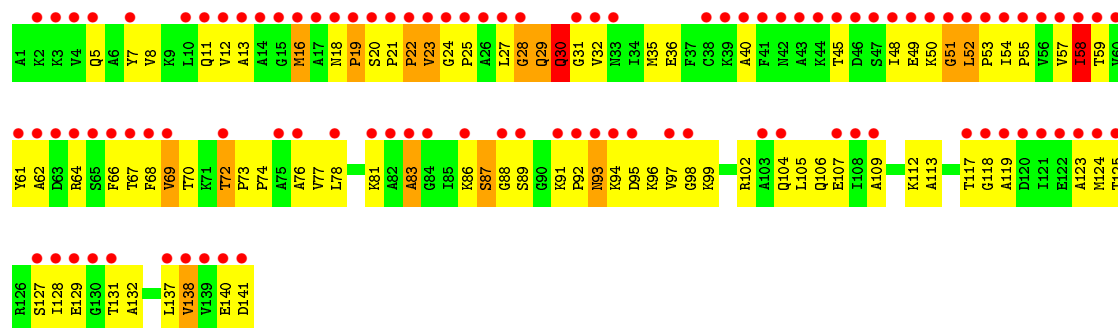
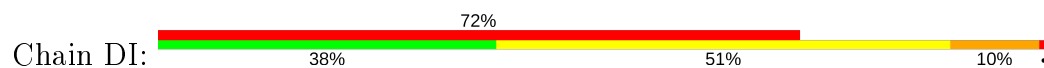




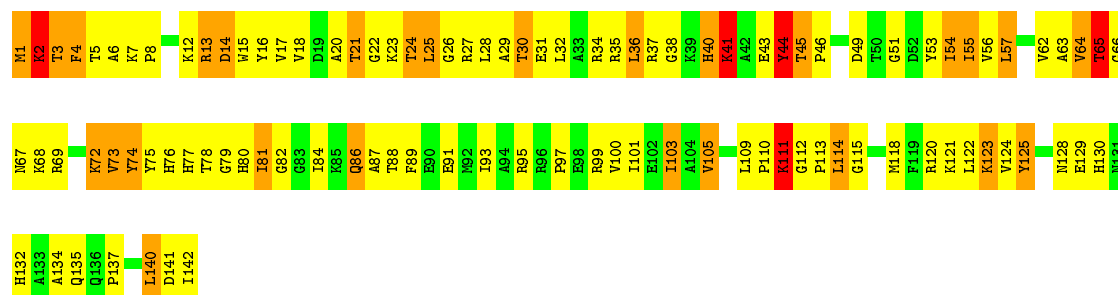
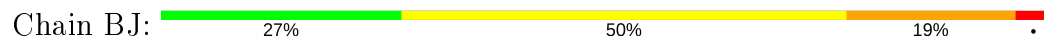
• Molecule 30: 50S ribosomal protein L11



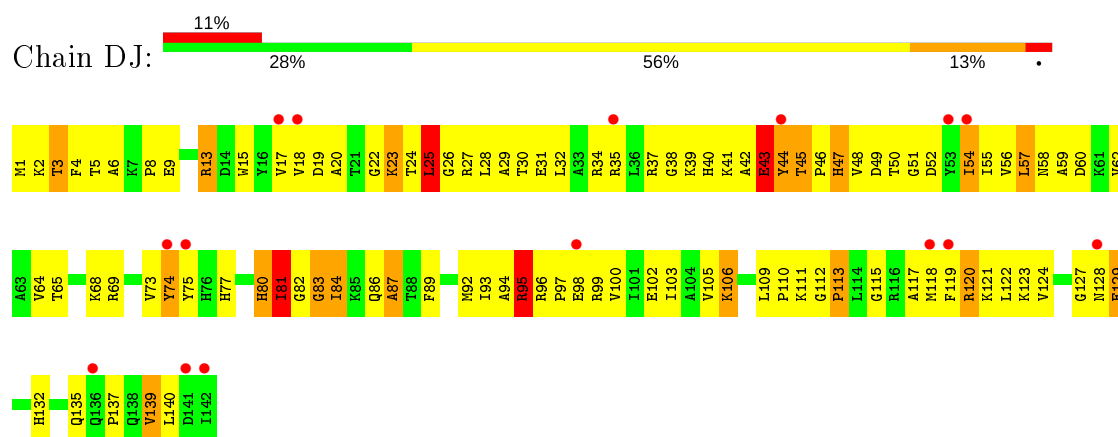
• Molecule 30: 50S ribosomal protein L11



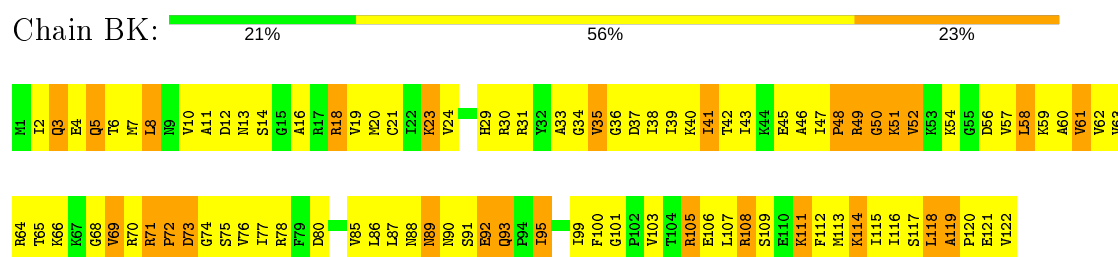
• Molecule 31: 50S ribosomal protein L13



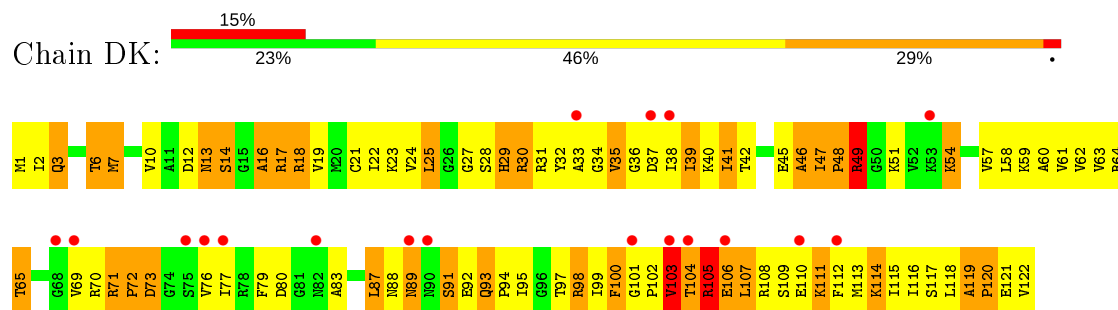
• Molecule 31: 50S ribosomal protein L13



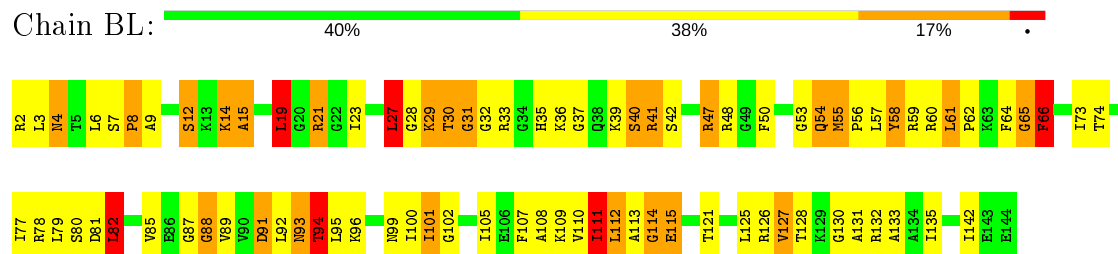
- Molecule 32: 50S ribosomal protein L14



- Molecule 32: 50S ribosomal protein L14

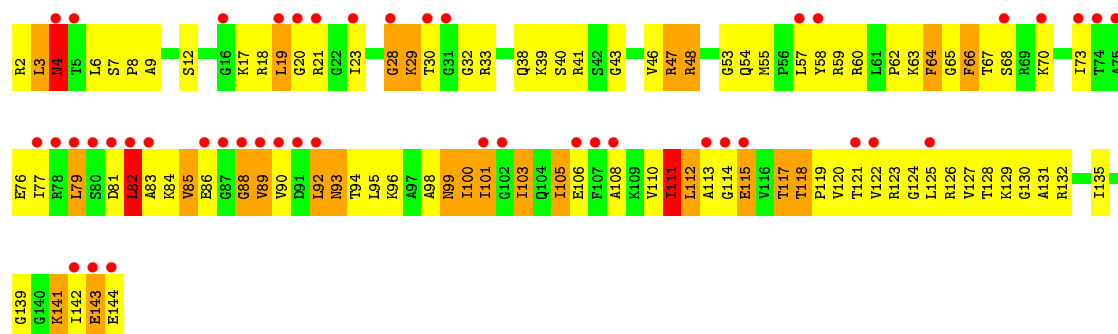


- Molecule 33: 50S ribosomal protein L15



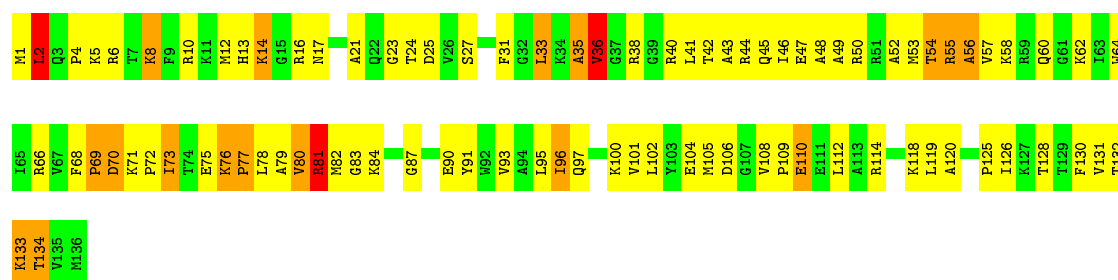
- Molecule 33: 50S ribosomal protein L15





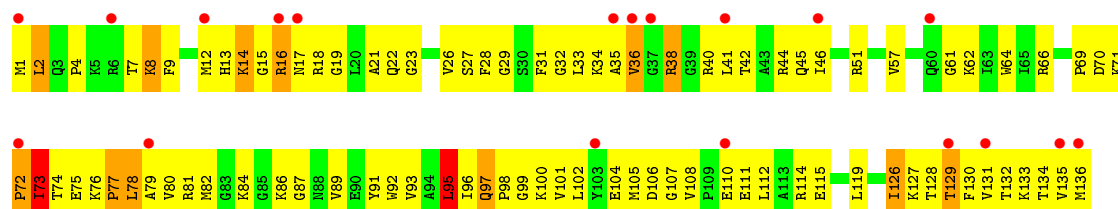
- Molecule 34: 50S ribosomal protein L16

Chain BM: 35% 51% 13%



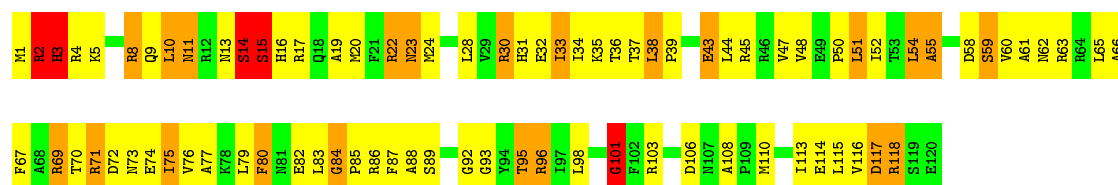
- Molecule 34: 50S ribosomal protein L16

Chain DM: 14% 33% 57% 9%



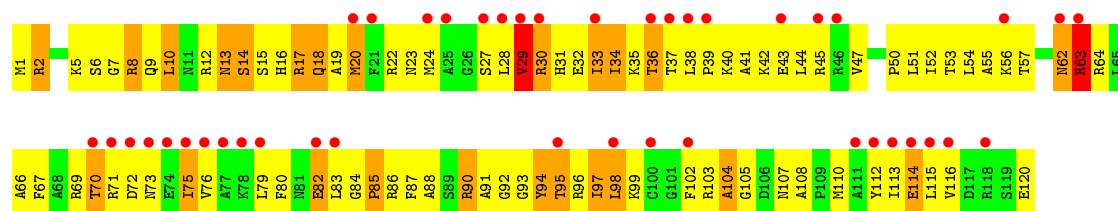
- Molecule 35: 50S ribosomal protein L17

Chain BN: 30% 48% 18%



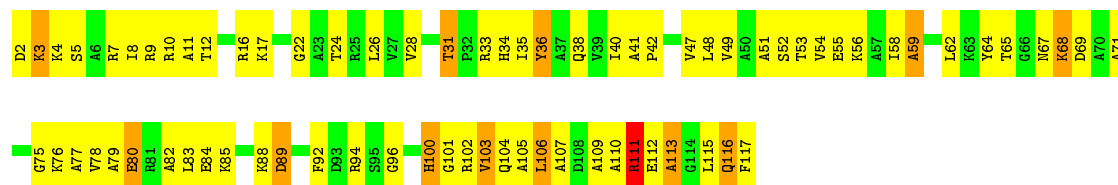
- Molecule 35: 50S ribosomal protein L17

Chain DN: 35% 23% 55% 20%



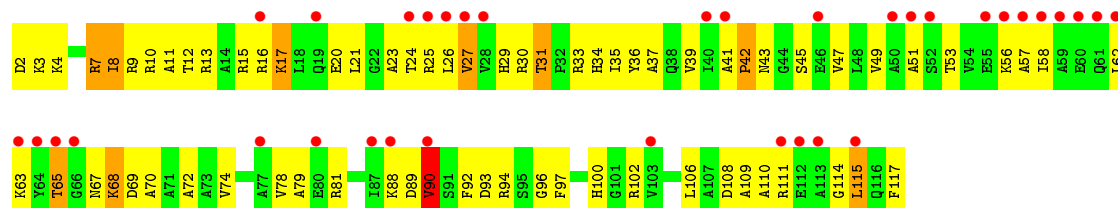
• Molecule 36: 50S ribosomal protein L18

Chain BO: 36% 53% 10% .



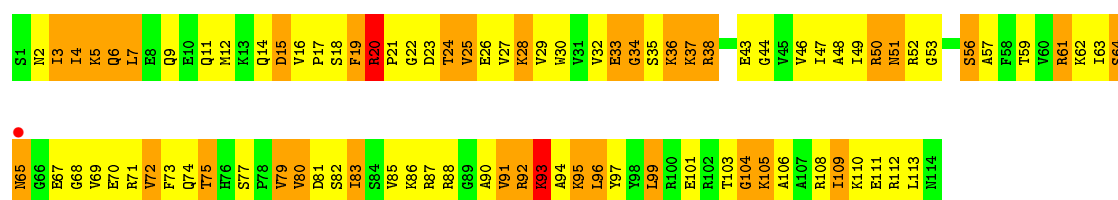
• Molecule 36: 50S ribosomal protein L18

Chain DO: 30% 40% 52% 8% .



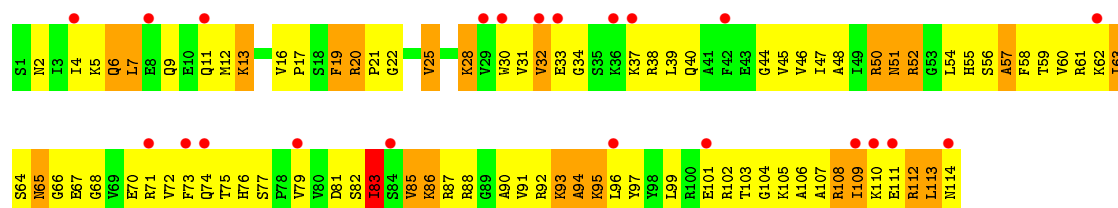
• Molecule 37: 50S ribosomal protein L19

Chain BP: 21% 47% 30% .



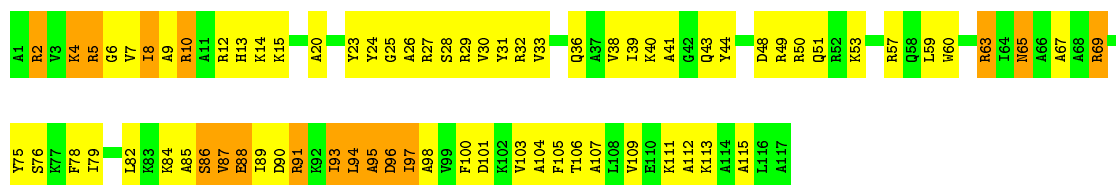
• Molecule 37: 50S ribosomal protein L19

Chain DP: 19% 23% 56% 20% .



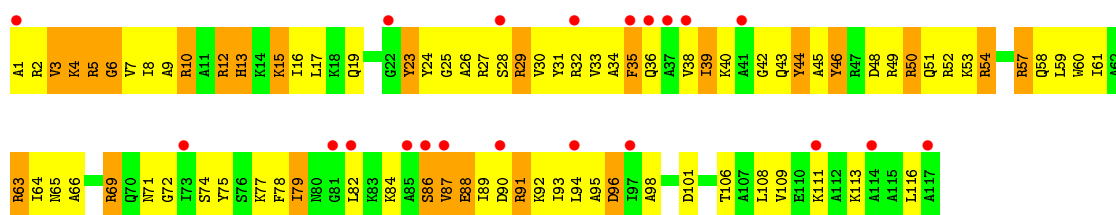
- Molecule 38: 50S ribosomal protein L20

Chain BQ: 



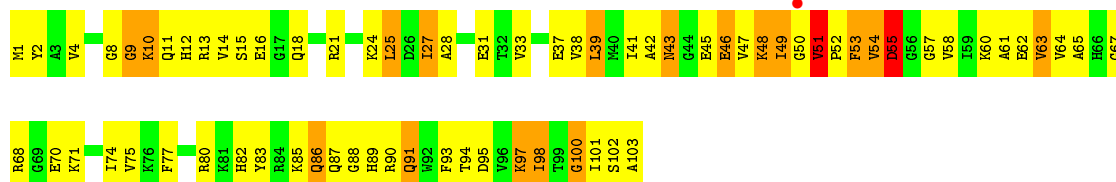
- Molecule 38: 50S ribosomal protein L20

Chain DQ: 



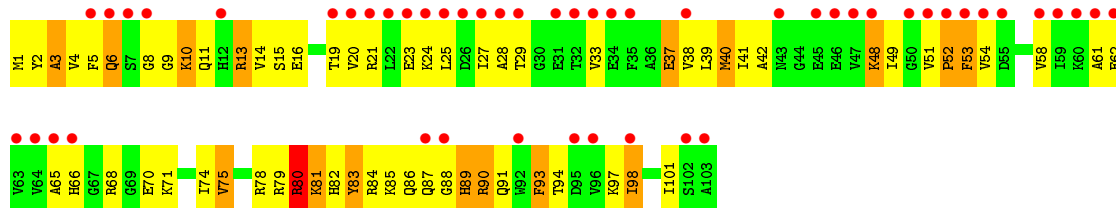
- Molecule 39: 50S ribosomal protein L21

Chain BR: 



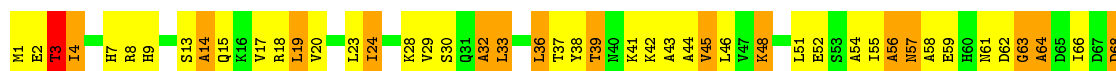
- Molecule 39: 50S ribosomal protein L21

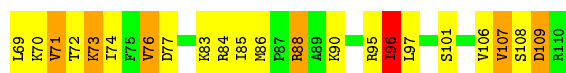
Chain DR: 



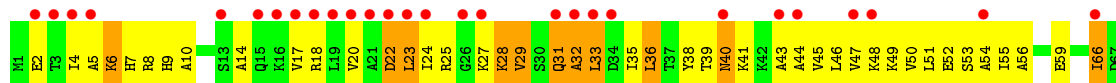
- Molecule 40: 50S ribosomal protein L22

Chain BS: 

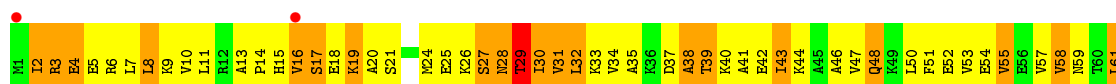
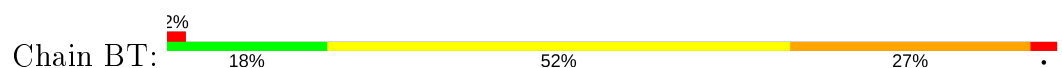


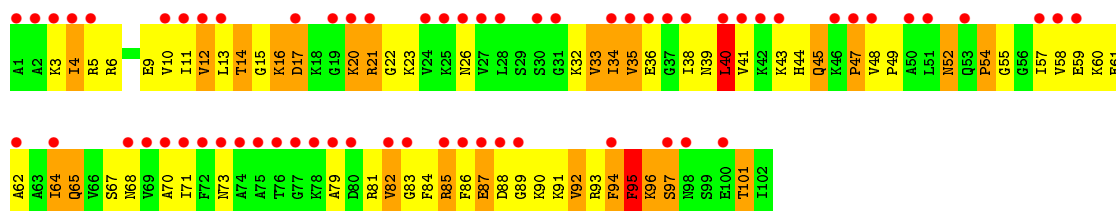


- Molecule 40: 50S ribosomal protein L22

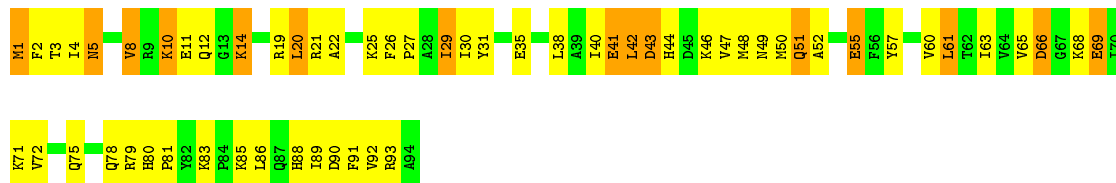


- Molecule 41: 50S ribosomal protein L23

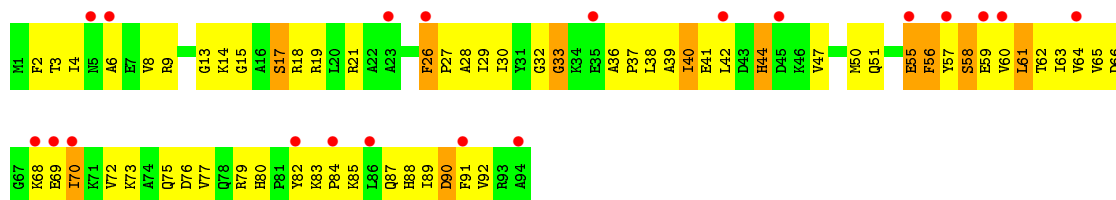




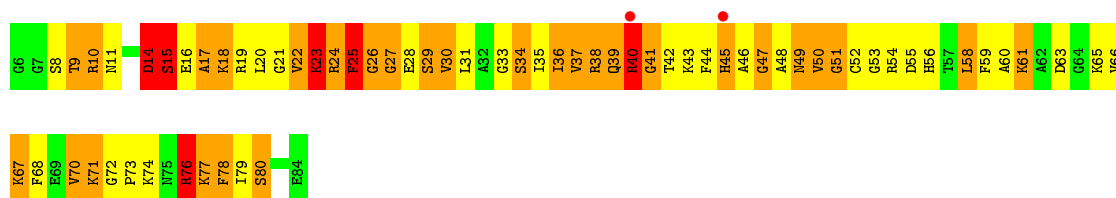
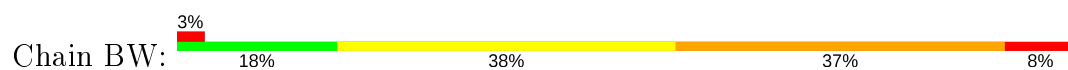
- Molecule 43: 50S ribosomal protein L25



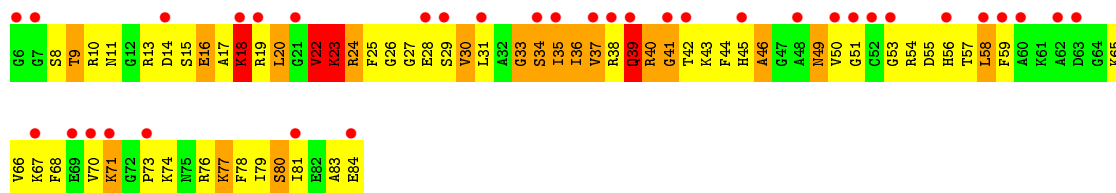
- Molecule 43: 50S ribosomal protein L25



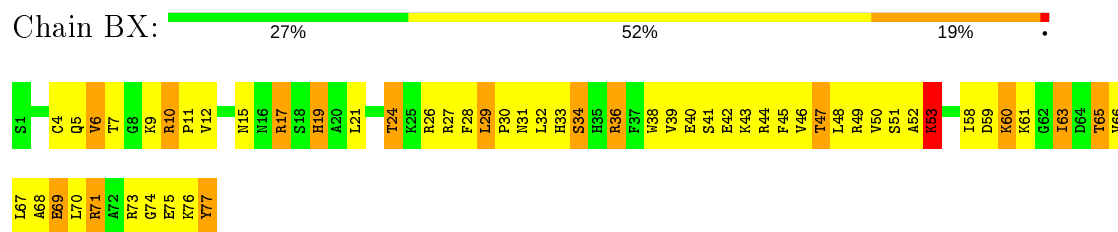
- Molecule 44: 50S ribosomal protein L27



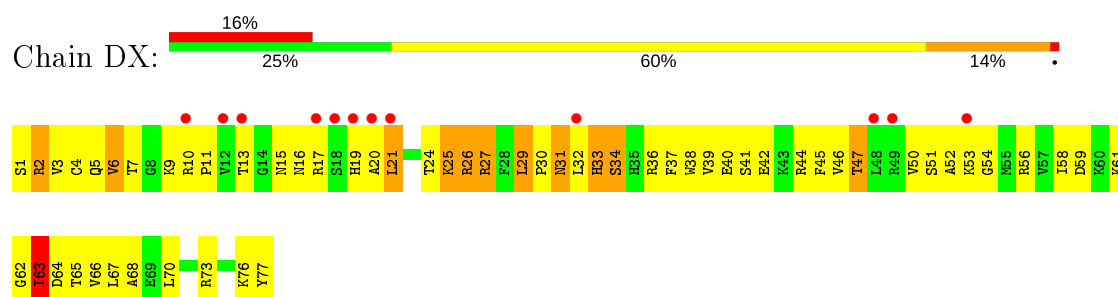
- Molecule 44: 50S ribosomal protein L27



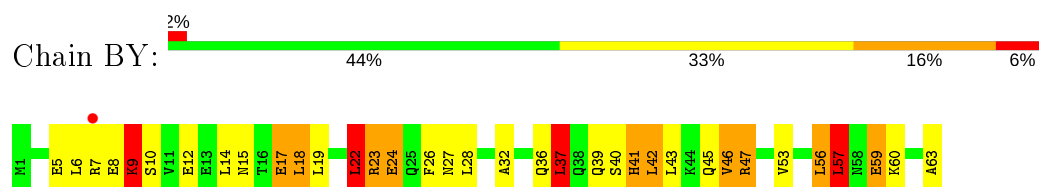
- Molecule 45: 50S ribosomal protein L28



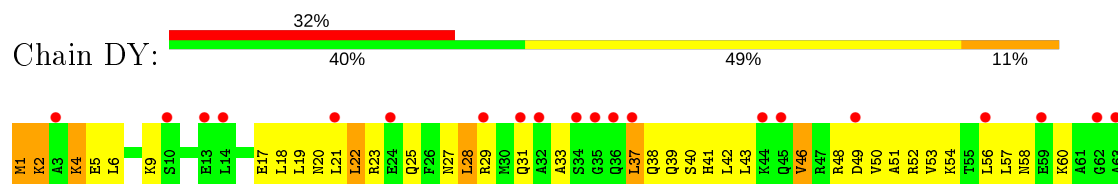
- Molecule 45: 50S ribosomal protein L28



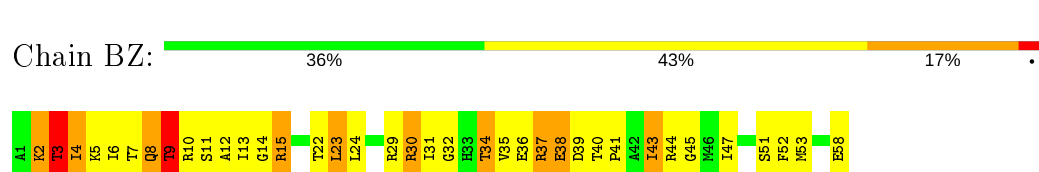
- Molecule 46: 50S ribosomal protein L29



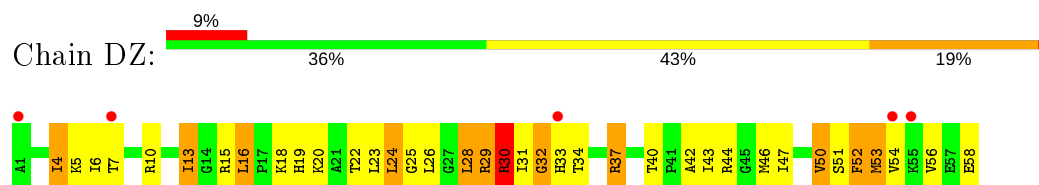
- Molecule 46: 50S ribosomal protein L29



- Molecule 47: 50S ribosomal protein L30



- Molecule 47: 50S ribosomal protein L30



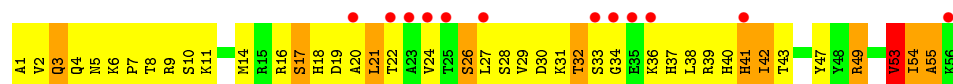
- Molecule 48: 50S ribosomal protein L32

Chain B0: 



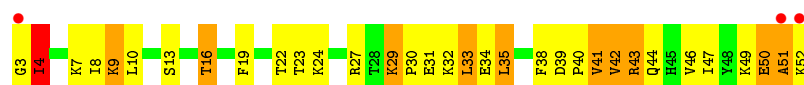
- Molecule 48: 50S ribosomal protein L32

Chain D0: 



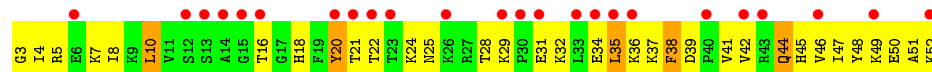
- Molecule 49: 50S ribosomal protein L33

Chain B1: 



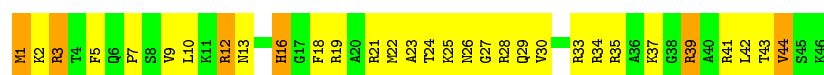
- Molecule 49: 50S ribosomal protein L33

Chain D1: 



- Molecule 50: 50S ribosomal protein L34

Chain B2: 



- Molecule 50: 50S ribosomal protein L34

Chain D2: 

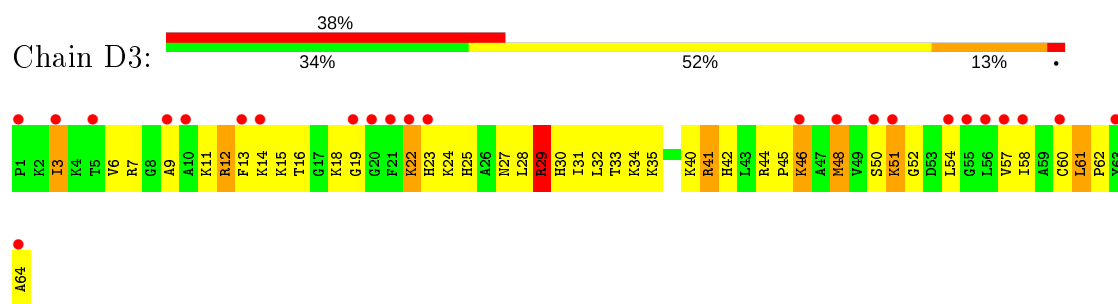


- Molecule 51: 50S ribosomal protein L35

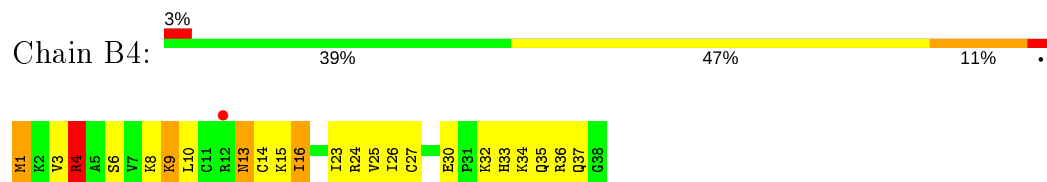
Chain B3: 



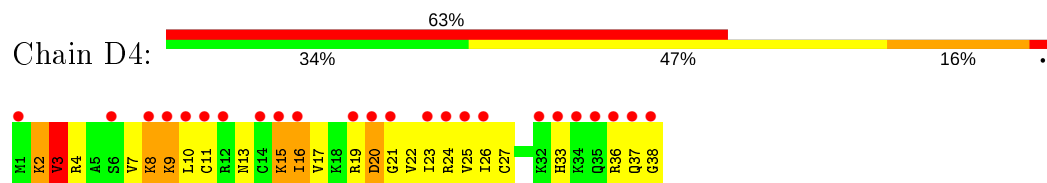
- Molecule 51: 50S ribosomal protein L35



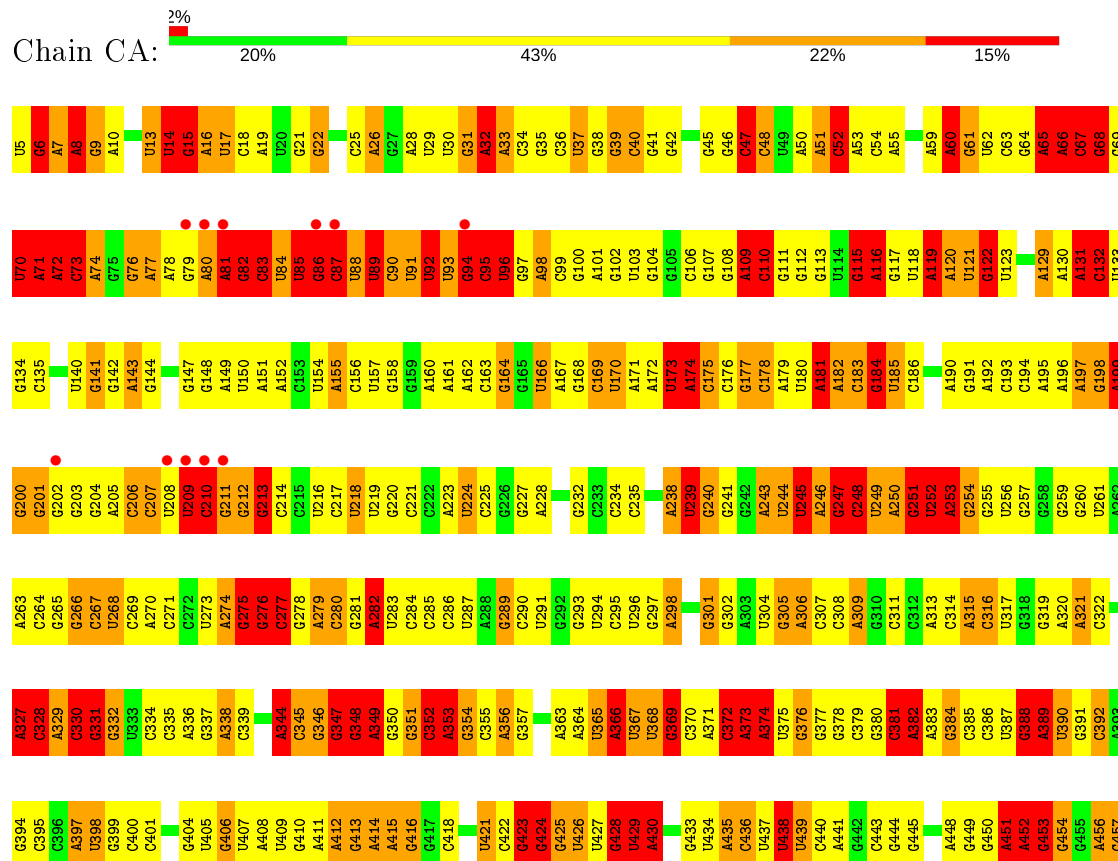
- Molecule 52: 50S ribosomal protein L36



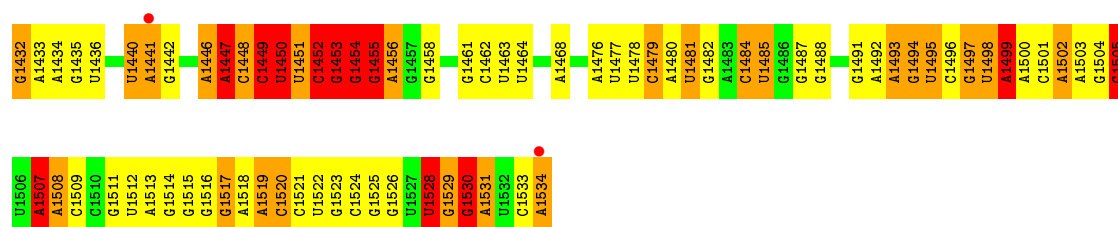
- Molecule 52: 50S ribosomal protein L36



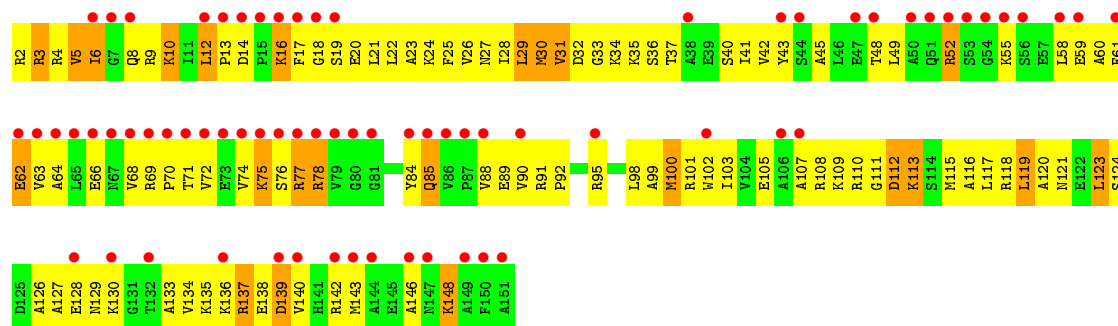
- Molecule 53: 16S rRNA



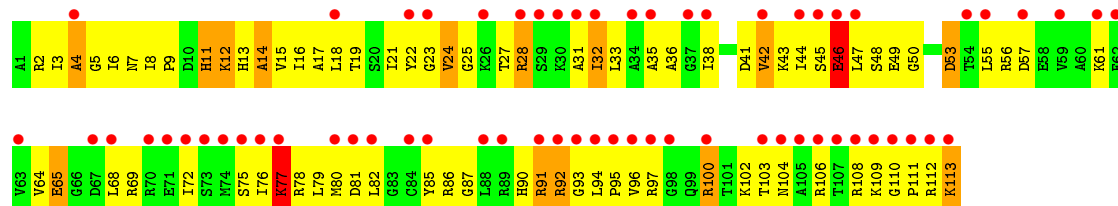
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U1364	A1299	A1238	A1176	C1112	C1051	G988	C924	C853	A784	C719	C654	C580	A520	A489
G1365	G1300	A1239	G1177	U1105	U1052	U989	G925	U854	G785	C720	A655	G581	G521	A461
C1366	U1301	U1240	G1178	C1114	G1053	C990	G926	G855	G790	G722	C658	C583	A523	G462
A1367	C1302	G1241	A1179	U991	C1054	U992	G927	G858	A790	G723	G659	G584	G524	U463
C1368	C1303	G1242	A1180	A1117	A1055	G993	C931	G859	A792	G724	C660	C587	C525	U464
C1369	G1304	C1243	G1181	U1118	U1056	A994	C932	A860	A793	G725	G661	G587	C526	U465
G1370	G1305	G1244	G1182	C1119	G1057	C995	G933	G861	U794	G726	G662	U589	G527	A466
U1371	U1306	C1245	U1183	U1123	G1058	A996	G934	C862	A795	G727	A663	C589	C528	U467
G1372	G1307	A1246	G1184	U1124	C1059	U997	A935	U863	C795	G728	G664	C590	G529	U468
G1373	A1308	U1247	G1185	G1123	U1060	C998	C936	A864	C796	A729	A665	A595	G530	C469
A1374	G1310	A1248	G1186	U1125	G1061	C999	A937	A865	U801	G730	G666	A596	U531	C470
A1375	A1311	C1249	G1187	U1126	U1062	C999	A937	A865	A802	G731	C667	G597	A532	U471
G1382	G1312	A1250	A1188	G1127	C1063	A1000	A938	C866	G803	G732	G668	U598	U534	U472
C1383	U1313	U1189	U1189	C1128	G1064	G1001	G939	G867	U804	G733	C669	C599	U534	U473
G1379	C1314	A1251	G1190	C1129	U1065	G1002	C940	C868	U804	G734	G670	A600	G535	G474
U1380	U1315	G1253	A1191	A1130	C1066	G1003	G941	G869	A807	G735	G671	C600	C536	C475
C1381	G1316	A1254	C1192	G1131	U1067	A1004	G942	U870	C808	C736	U672	G604	G537	U476
C1382	C1317	G1255	G1193	C1132	G1068	A1005	G945	U871	G809	C737	A673	U605	G538	C477
A1318	A1318	A1256	U1194	G1133	C1069	G1006	G945	A872	G809	C738	G674	U606	A539	A478
C1384	A1319	C1257	C1195	G1134	U1070	U1007	A946	A873	C810	C739	A675	G607	U540	U479
G1385	G1320	A1258	A1196	U1135	C1071	U1008	G947	G874	C811	C739	A676	A608	G541	U480
G1386	U1321	C1259	A1197	C1136	U1072	U1009	C948	U875	G812	U740	A677	G609	G542	G481
G1387	G1386	G1260	G1198	C1137	U1073	U1010	U950	C876	U813	G741	U677	U610	U543	A482
C1388	C1322	A1261	U1199	G1138	G1074	C1011	U951	G877	A814	G745	U678	C611	U544	C483
U1391	G1323	C1262	C1200	G1139	U1075	A1012	G951	A878	A815	A746	C679	C612	C545	G484
A1324	U1325	U1263	A1201	C1140	U1076	G1013	U952	C879	A816	A747	C680	C613	U546	U485
C1325	C1326	U1264	U1202	C1141	G1077	U1014	G953	C880	C817	G748	G683	C614	A547	U486
U1393	C1327	C1265	C1203	G1142	U1078	G1015	U955	G881	G818	A749	U684	G615	G548	A487
A1394	C1328	G1266	U1199	G1143	U1079	A1016	U955	C882	A819	C750	C685	G616	C549	C488
C1395	A1329	C1267	G1206	G1144	A1080	U1017	U956	C883	U820	G751	U687	C617	U550	C489
A1396	U1330	G1268	C1207	A1145	A1081	G1018	A958	U884	G821	G752	A687	C623	U552	C490
C1397	G1331	U1269	C1208	A1146	A1082	A1019	A959	G885	U822	G753	C688	C624	A553	G491
A1398	A1332	A1270	G1209	C1147	U1083	G1020	U960	G886	C823	A754	C689	C624	U553	C492
C1399	C1333	G1271	C1210	U1148	G1084	A1021	U961	G887	C824	G755	G690	C634	A554	A493
C1400	G1334	G1272	U1211	C1149	U1085	A1022	C962	G888	A825	G756	G691	A629	U555	G494
G1401	U1335	C1273	U1212	A1150	U1086	G1023	G963	A889	C826	U757	U692	A630	C556	A495
C1402	C1336	A1274	C1213	A1151	G1087	G1024	A964	G890	U827	C758	G693	U631	G557	A496
C1403	G1337	G1275	C1214	A1152	U1088	U1025	U965	A891	G828	A759	A694	U632	U558	G497
U1406	G1338	C1276	G1215	G1153	G1089	G1026	G966	A892	G829	G760	A695	G633	A559	A498
C1407	A1339	C1277	A1216	G1154	U1090	U1026	C967	C893	A830	G761	A696	A635	U561	G500
A1408	U1340	G1278	C1217	A1155	U1091	U1029	A968	C899	G832	U762	C697	U636	U562	C501
C1409	U1341	A1279	G1218	G1156	A1092	U1030	A969	A900	G833	G763	C697	U637	A563	A502
A1410	G1342	A1280	A1219	A1157	U1093	G1031	C970	A901	U834	C764	G700	U701	C564	C503
C1411	C1343	C1281	G1220	C1158	G1094	G1032	G971	C972	U835	G765	A702	U638	U565	G504
C1412	U1344	U1282	G1221	U1159	U1095	A1035	C973	A906	G836	A766	G703	A640	U566	G505
A1413	C1345	C1283	G1222	G1160	C1096	A1036	A974	A909	C840	A768	A704	U641	G567	U508
U1414	A1346	A1284	C1223	A1161	C1097	G1037	A975	C910	C841	G769	G705	A642	C568	A509
G1415	G1347	U1285	U1224	C1162	U1098	G1038	G976	C910	U842	C770	U707	U644	C569	A510
C1416	U1348	A1286	C1225	U1165	C1100	G1039	A977	A913	U843	G774	A643	G645	U571	C511
G1417	A1349	A1287	C1226	G1166	A1101	U1040	A978	A914	G844	G775	G646	G647	A572	U512
U1420	G1356	U1288	A1227	A1167	A1102	G1041	C979	A915	A845	G776	G711	C648	A573	C513
G1421	U1357	C1289	C1228	U1168	C1103	A1042	C980	A918	G846	A777	G712	C649	A574	C514
G1422	A1358	G1292	G1230	A1169	G1104	G1043	U981	A919	G847	G713	A648	A649	G575	G515
U1429	C1359	U1294	U1232	A1171	G1106	A1046	A983	A920	G848	G714	A715	G650	C576	U516
A1430	A1360	C1295	C1107	A1172	G1108	G1047	C984	U921	G849	A780	A716	C651	G577	C517
G1431	G1361	C1296	U1173	U1173	G1108	U1048	C985	U921	U850	A781	A716	C651	G577	C518
	A1362	G1297	G1174	G1174		U1049	U986	G922	G851	A782	U717	U652	C578	



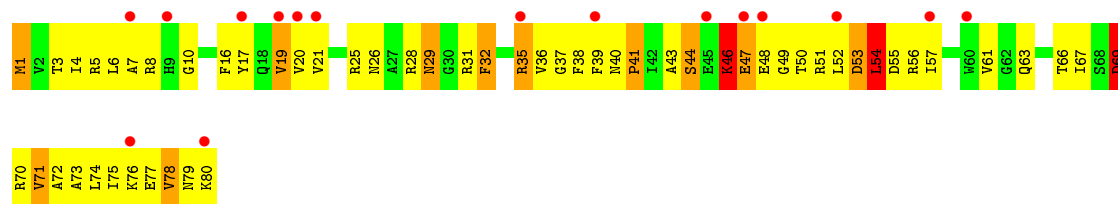
• Molecule 54: 30S ribosomal protein S7



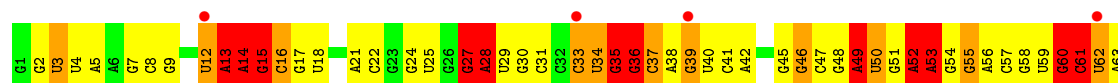
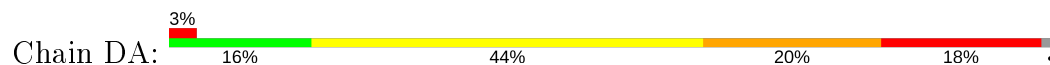
• Molecule 55: 30S ribosomal protein S13



• Molecule 56: 30S ribosomal protein S16



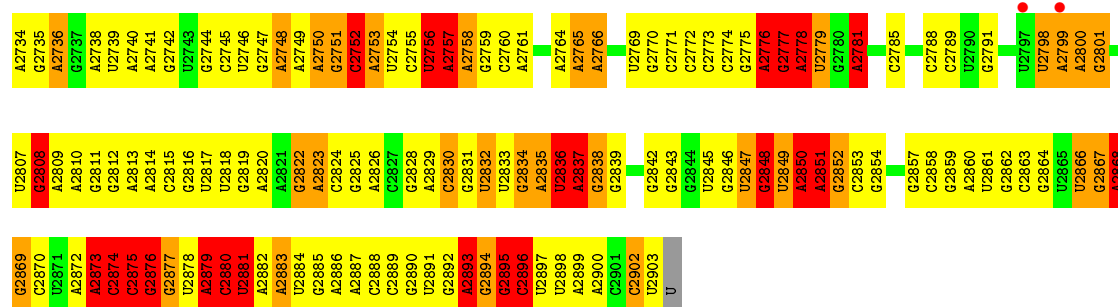
• Molecule 57: 23S rRNA



G	A819	U755	G629	U569	A497	U437	G376	G315	G247	G185	A125	A64
G	A820	A756	G630	G570	G498	G438	G377	C316	G248	G186	A126	U65
G	A821	G757	A831	U571	U499	A439	C378	C317	C249	G187	A127	G66
G	A822	A632	A632	A572	A502	C440	C379	C318	G250	G188	C128	U67
U	C823	U762	C633	U573	A503	U441	G380	G319	A251	G189	C129	G68
C	C824	G763	C634	U574	A504	G442	G381	G320	C130	A190	C130	C69
A	A825	A764	C635	U575	A504	A443	A382	U821	A320	A191	A131	G70
U	U826	C765	C636	U576	A505	C444	C383	U822	A355	A192	A132	A71
C	U827	U766	A637	G577	G506	C445	A384	C323	A256	U193	U133	U72
C	U828	G767	G638	G578	A507	G446	C385	G324	G260	G194	A73	A73
C	A829	A705	G639	G579	A508	A447	G386	G325	A262	G195	U135	A74
G	G830	A706	C640	U580	C509	U448	U387	G326	A263	G196	U136	G75
G	G831	G771	U641	C581	G510	A449	G388	G327	G263	G197	U137	G76
C	U832	C772	U642	A582	U511	G450	G389	U328	C264	C198	U138	G77
U	A833	U773	A643	G583	U512	G451	U390	G329	A265	A199	U139	U78
U	G834	U774	A644	C584	A513	G452	A391	G330	G266	U200	C79	G80
U	C835	G775	G645	G585	A514	A453	A392	C331	G141	G201	G141	G81
A	G836	G776	G646	A586	A515	A454	U392	A332	U149	U202	A142	U82
C	G837	G777	G647	C587	A516	C455	U393	G333	A270	U203	C143	U82
C	C838	G778	G648	U588	C517	C456	U394	C334	G271	A204	C144	A83
U	U839	U779	G649	U589	G518	A457	U397	C335	A272	G205	C145	A84
C	C840	G780	C650	A590	U519	G458	C398	C336	C274	U206	A146	G85
		A781	G651	U591		U459	U399	C337	C275	A207	C147	G86
		A782	U652	A592	G524	A460	G400	C338	U276	C208	U148	U87
		A783	U653	U593	U525	C461	A401	U339	G277	C209	U149	G88
		G784	A554	U594	A526	A462	A402	A340	U150	C210	U150	A89
		G785	A655	C595	C527	U403	U403	C341	C151	C211	C151	U90
		G786	G656	U596	A528	U464	A404	U342	U280	G212	A152	A91
		G787	U657	C597	A529	G465	U405	C343	C281	U153	U153	U92
		U724	U658	U598	G530	A466	G406	A344	U154	G215	U154	G93
		A789	G659	A599	C531	G467	G407	A345	A155	A216	A155	A94
		U790	C660	G600	A532	G468	G408	A346	A156	A217	A156	A95
		G791	A661	C601	A533	G469	G409	A347	C157	U158	C157	G96
		A792	G662	A602	U534	A470	G410	U348	G159	G98	U158	G97
		G793	G663	G603	G535	A471	G411	U349	A160	U99	A160	U99
		A794	G664	G604		A472	A412	G350	U161	U100	A161	U100
		C795	U665	G605		G473	C413	C351	U162	A101	U162	A101
		C796	A666	U606	A538	C474	C414	A352	U163	U102	U163	U102
		G797	U667	U607	G544	C475	A415	C353	U293	A103	C163	A103
		G798	A668	A608	U545	G476	U416	A354	A294	A104	C164	A104
		U799	G669	A609	U546	A477	C417	U355	G295	U165	A165	G105
		A800	A670	C610	A547	A478	C418	G356	U296	U166	U166	C105
		G801	C671	C611	G548	A479	U419	C357	G297	G228	A167	C106
		A802	G672	C612	C549	A480	C420	U358	G298	C229	G167	G107
		U803	C673	A613	C550	C481	C421	U359	A299	G230	G168	G108
		A804	G674	A614	G551	A482	A422	A300	A300	A231	G169	C109
		G805	A675	U615	U552	A483	A423	G301	A301	G232	U170	C109
		C806	A676	A616	G553	C484	G424	C302	G302	A233	U171	G110
		U807	A677	G617	U554	C485	G425	G303	C303	U234	A172	G111
		G808	C678	G618	G555	C486	C426	U304	U304	U235	A173	A111
		G809	C679	G619		C487	U427	C366	C305	C236	U174	U112
		U810	G682	G620	U558	G488	A428	C367	C237	C237	G175	C115
		U811	U682	A621		G489	A429	G307	U306	C238	A176	C116
		C812	U683	G622	U562	A490	A430	G308	G307	C239	G177	G117
		U813	G684	C623	A563	C491	U431	U369	G309	G178	C178	A118
		G814	A685	C624	U564	A492	A432	A371	A241	C240	C179	A119
		C815	U686	G625	C565	G493	C433	G372	A310	G242	C180	U120
		C816	C687	A626	U566	G494	U434	U373	A311	U243	A181	G121
		G817	U688	U567	G495	G495	U435	A374	G312	A244	A182	G122
		G818	A689	U568	U568	G496	C436	G375	C314	G245	C183	G123
												G124

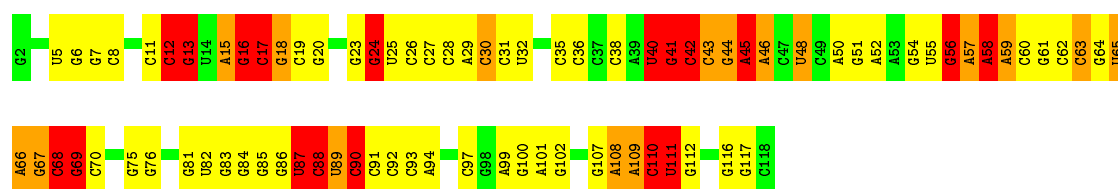
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A1773	G1707	A1637	U1576	G1514	C1451	C1386	U1326	G1266	A1205	A1143	U1078	A1014	G950
C1774	C1708	C1638	C1577	A1515	A1452	A1387	A1327	G1452	G1267	A1144	C1079	G1016	G951
U1775	U1709	A1640	U1578	G1516	A1453	C1388	A1328	A1268	C1207	C1145	U1081	G952	G952
G1776	G1710	A1645	A1579	G1517	G1455	C1389	C1329	A1269	C1208	C1146	U1082	U1019	G953
U1777	U1711	U1646	C1581	C1518	G1456	U1391	G1331	C1270	U1209	A1147	U1083	G956	G956
U1778	U1712	C1647	C1582	G1520	A1457	A1392	G1332	G1271	G1210	A1080	A1020	A1020	C957
A1779	A1713	U1647	U1583	G1521	U1458	A1393	G1333	A1272	C1212	A1084	A1084	A1021	C958
U1780	U1714	U1648	U1584	A1522	G1459	U1394	G1334	A1274	A1213	A1085	G1022	G1022	A1085
U1781	G1715	G1649	U1585	A1523	U1460	A1395	G1335	A1275	A1214	A1086	G1023	A1023	A1086
U1782	U1716	A1650	A1586	G1524	G1461	U1396	A1336	A1276	G1215	A1088	G1024	A1024	A1088
A1783	A1717	G1651	G1587	A1525	C1462	U1397	A1337	G1277	G1216	A1089	G1025	G1025	G1025
A1784	G1718	A1652	G1588	C1526	C1462	C1398	G1338	C1278	U1217	A1090	A1026	A1026	G1026
A1785	G1721	G1653	U1589	G1527	G1466	C1399	G1339	C1279	G1218	A1091	A1027	A1027	U963
A1786	U1715	A1654	A1590	A1528	U1466	U1400	U1340	G1280	U1219	C1092	A1028	A1028	C964
A1787	G1722	A1655	A1591	G1529	U1467	G1401	G1341	G1281	G1220	C1092	G1029	G1029	C965
C1788	G1723	C1656	C1592	G1530	U1468	U1402	A1342	U1282	C1221	G1093	A1032	A1032	G966
A1789	G1724	A1593	C1593	C1531	A1469	A1403	G1343	G1283	U1222	U1097	U1033	U1033	G969
U1790	U1682	U1594	U1594	A1532	A1470	C1404	U1344	A1284	U1223	A1098	U1035	U1035	U970
A1791	G1683	C1595	C1595	C1532	G1471	U1405	C1345	A1285	A1226	G1099	G1036	G1036	A972
G1792	A1684	A1596	A1596	A1534	C1472	U1406	G1346	A1286	G1227	U1101	G1037	G1037	A973
C1793	A1685	A1597	A1597	A1535	G1473	G1407	A1347	A1287	G1228	U1102	G1038	G1038	G974
A1794	G1686	U1598	A1598	C1536	U1474	G1408	C1348	G1288	G1229	A1103	A1039	A1039	A975
C1795	G1687	G1537	G1537	G1537	U1475	U1409	C1349	G1289	A1230	G1167	G1040	G1040	A984
U1796	A1688	C1600	C1600	G1538	U1476	G1410	C1350	C1290	A1231	G1168	G1041	G1041	G976
G1797	A1689	G1601	G1601	U1539	A1477	U1411	C1351	C1291	U1231	A1169	C1043	C1043	G977
U1798	C1670	U1602	G1602	G1540	G1478	U1412	U1352	G1292	G1232	U1108	U1044	U1044	A980
G1799	A1671	A1603	A1603	C1541	G1479	A1413	A1353	C1293	C1233	G1109	C1045	C1045	A981
C1800	G1672	C1604	C1604	A1544	A1480	A1414	A1354	U1294	U1234	A1046	A1046	A1046	A982
A1801	G1673	C1605	U1544	U1544	U1481	U1415	G1355	C1295	G1235	A1111	G1047	G1047	C982
A1802	A1739	C1606	A1545	A1545	G1482	G1416	G1356	G1296	G1236	U1174	A1048	A1048	A983
A1803	G1740	C1607	G1546	G1546	C1483	C1417	C1357	C1297	A1237	A1175	A1050	A1050	A984
C1804	C1741	A1608	U1547	U1547	U1484	G1418	G1358	C1298	G1238	U1176	C1049	C1049	C985
A1805	U1742	A1609	U1548	U1548	U1485	A1419	A1359	G1299	G1239	G1177	G1051	G1051	C985
G1806	G1743	A1610	C1550	C1550	C1489	A1420	G1360	G1300	U1240	C1178	C1052	C1052	A988
A1807	A1744	A1551	U1551	U1551	A1490	G1421	G1361	A1301	U1241	C1179	C1053	C1053	G989
A1808	G1681	A1552	A1552	A1552	A1491	U1422	C1362	A1302	U1242	C1118	A1054	A1054	A990
A1809	G1682	A1553	U1554	U1554	G1492	C1426	C1363	G1303	G1243	U1119	G1055	G1055	C991
A1810	U1683	U1554	C1554	C1554	C1493	A1427	A1365	C1305	A1245	U1183	G1056	G1056	C992
A1811	G1684	C1555	C1555	C1555	C1494	A1427	A1366	C1306	A1246	C1121	A1057	A1057	G993
U1812	C1685	A1616	C1556	C1556	A1494	A1427	A1367	A1307	A1247	G1185	U1058	U1058	C994
G1813	C1686	C1617	C1557	C1557	A1495	C1428	A1368	A1308	G1248	G1186	U1059	U1059	C995
A1814	G1687	A1618	U1558	U1558	A1496	G1429	G1369	G1309	U1249	G1187	U1060	U1060	A996
A1815	U1688	G1619	U1559	U1559	U1497	C1430	C1370	G1310	G1250	A1126	G1062	G1062	C997
G1816	A1689	G1620	G1560	G1560	C1498	A1431	C1371	G1311	U1251	G1127	G1063	G1063	C998
C1817	A1690	U1621	C1561	C1561	C1499	G1432	G1371	G1311	A1189	G1128	G1064	G1064	C999
U1818	G1691	U1622	U1562	U1562	G1500	A1433	U1372	U1312	G1252	A1190	U1065	U1065	A1000
A1819	U1692	G1623	U1563	U1563	G1501	A1434	A1373	U1313	A1253	U1130	C1066	C1066	A1001
U1820	U1758	U1624	C1564	C1564	A1502	G1435	G1374	C1314	A1254	G1131	U1066	U1066	G1002
A1821	C1694	C1625	C1565	C1565	A1503	G1436	U1375	C1315	U1255	U1132	A1067	A1067	G1003
C1822	G1695	A1626	A1566	A1566	A1504	C1437	C1376	U1316	G1256	A1133	G1068	G1068	U1004
G1823	G1696	G1627	G1567	G1567	A1505	U1438	G1377	G1317	G1257	A1134	C1069	C1069	U1005
A1824	G1697	G1628	U1568	U1568	U1506	A1439	A1378	U1318	U1258	G1135	A1070	A1070	C1006
U1825	A1698	U1629	A1569	A1569	C1507	U1440	U1379	C1319	G1259	G1136	G1071	G1071	C1007
G1826	G1699	A1630	U1570	U1570	A1508	G1441	G1380	C1320	A1260	G1137	C1072	C1072	A1008
U1827	A1700	A1571	A1571	A1571	A1509	U1442	G1381	A1321	G1261	G1138	A1073	A1073	A1009
G1828	G1766	G1633	G1572	G1572	G1510	U1447	G1382	A1322	A1262	G1139	G1074	G1074	A1010
A1829	G1767	A1634	G1573	G1573	C1512	C1447	A1383	C1323	U1263	G1141	G1075	G1075	G1011
C1830	G1768	A1635	C1574	C1574	C1512	G1448	A1384	G1324	A1264	U1141	C1076	C1076	U1012





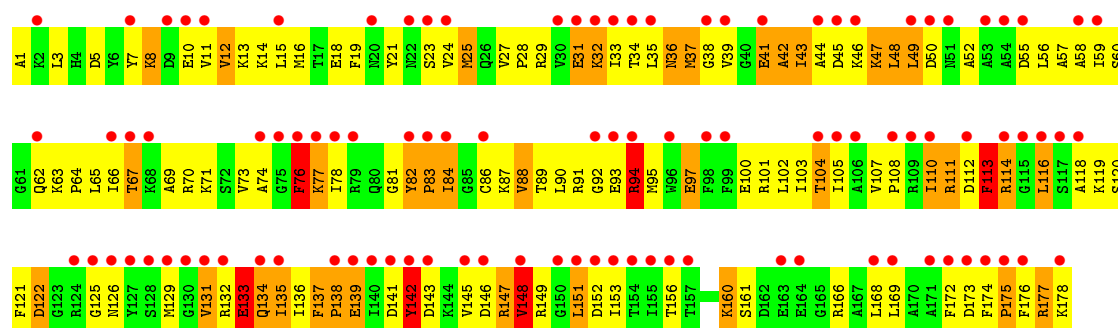
• Molecule 58: 5S rRNA

Chain DB: 29% 42% 14% 15%



• Molecule 59: 50S ribosomal protein L5

Chain DF: 26% 57% 49% 21%



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.46 Å 434.08 Å 621.23 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	82.15 – 3.19 82.15 – 3.19	Depositor EDS
% Data completeness (in resolution range)	75.8 (82.15-3.19) 75.8 (82.15-3.19)	Depositor EDS
R_{merge}	0.07	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.61 (at 3.19 Å)	Xtriage
Refinement program	PHENIX ?, PHENIX (phenix.refine)	Depositor
R, R_{free}	0.191 , 0.252 0.203 , 0.262	Depositor DCC
R_{free} test set	15290 reflections (2.01%)	wwPDB-VP
Wilson B-factor (Å ²)	62.8	Xtriage
Anisotropy	0.366	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.23 , 85.7	EDS
L-test for twinning ²	$\langle L \rangle = 0.47$, $\langle L^2 \rangle = 0.30$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.93	EDS
Total number of atoms	284499	wwPDB-VP
Average B, all atoms (Å ²)	113.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.14% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: CLM, 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	AA	0.50	6/36834 (0.0%)	1.27	532/57462 (0.9%)
2	AB	0.40	2/1736 (0.1%)	0.57	4/2338 (0.2%)
2	CB	0.37	2/1736 (0.1%)	0.54	4/2338 (0.2%)
3	AC	0.26	0/1652	0.50	0/2225
3	CC	0.23	0/1652	0.44	0/2225
4	AD	0.29	0/1665	0.52	0/2227
4	CD	0.34	0/1665	0.57	0/2227
5	AE	0.37	1/1119 (0.1%)	0.59	0/1504
5	CE	0.31	0/1119	0.55	0/1504
6	AF	0.28	0/836	0.49	0/1128
6	CF	0.27	0/836	0.50	0/1128
7	AG	0.23	0/1196	0.46	0/1602
8	AH	0.29	0/989	0.54	0/1326
8	CH	0.26	0/989	0.49	0/1326
9	AI	0.23	0/1034	0.47	0/1375
9	CI	0.22	0/1034	0.42	0/1375
10	AJ	0.24	0/797	0.49	0/1077
10	CJ	0.22	0/797	0.47	0/1077
11	AK	0.27	0/893	0.52	0/1205
11	CK	0.25	0/893	0.51	0/1205
12	AL	0.36	0/969	0.67	0/1300
12	CL	0.40	1/969 (0.1%)	0.56	0/1300
13	AM	0.22	0/893	0.47	0/1193
14	AN	0.25	0/785	0.49	0/1043
14	CN	0.21	0/780	0.39	0/1036
15	AO	0.27	0/722	0.47	0/964
15	CO	0.25	0/722	0.45	0/964
16	AP	0.28	0/659	0.49	0/884
17	AQ	0.35	0/658	0.56	0/881
17	CQ	0.27	0/658	0.51	0/881
18	AR	0.28	0/463	0.50	0/621
18	CR	0.28	0/463	0.46	0/621

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
19	AS	0.23	0/653	0.47	0/877
19	CS	0.21	0/653	0.42	0/877
20	AT	0.30	0/671	0.57	0/888
20	CT	0.25	0/671	0.50	0/888
21	AU	0.28	0/431	0.49	0/570
21	CU	0.31	0/431	0.60	0/570
22	BA	0.71	8/68626 (0.0%)	1.50	1274/107056 (1.2%)
23	BB	0.64	0/2828	1.43	38/4410 (0.9%)
24	BC	0.41	0/2122	0.69	1/2852 (0.0%)
24	DC	0.29	0/2122	0.53	0/2852
25	BD	0.48	0/1586	0.76	2/2134 (0.1%)
25	DD	0.28	0/1586	0.57	0/2134
26	BE	0.40	0/1571	0.66	1/2113 (0.0%)
26	DE	0.25	0/1571	0.47	0/2113
27	BF	0.31	0/1435	0.54	0/1926
28	BG	0.33	0/1343	0.60	0/1816
28	DG	0.22	0/1343	0.46	0/1816
29	BH	0.30	0/1122	0.50	0/1515
29	DH	0.34	1/1122 (0.1%)	0.50	0/1515
30	BI	0.23	0/1046	0.47	0/1410
30	DI	0.21	0/1046	0.43	0/1410
31	BJ	0.51	0/1152	0.75	0/1551
31	DJ	0.26	0/1152	0.57	1/1551 (0.1%)
32	BK	0.46	0/948	0.78	0/1268
32	DK	0.29	0/948	0.55	0/1268
33	BL	0.42	0/1054	0.75	1/1403 (0.1%)
33	DL	0.24	0/1054	0.51	0/1403
34	BM	0.44	0/1093	0.67	0/1460
34	DM	0.27	0/1093	0.48	0/1460
35	BN	0.45	0/974	0.70	1/1301 (0.1%)
35	DN	0.27	0/974	0.51	0/1301
36	BO	0.38	0/902	0.60	0/1209
36	DO	0.22	0/902	0.42	0/1209
37	BP	0.43	0/929	0.71	0/1242
37	DP	0.28	0/929	0.49	0/1242
38	BQ	0.52	0/960	0.76	0/1278
38	DQ	0.26	0/960	0.44	0/1278
39	BR	0.54	0/829	0.77	1/1107 (0.1%)
39	DR	0.25	0/829	0.48	0/1107
40	BS	0.50	0/864	0.73	0/1156
40	DS	0.27	0/864	0.51	0/1156
41	BT	0.43	0/745	0.71	0/994
41	DT	0.22	0/745	0.48	0/994

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
42	BU	0.39	0/788	0.70	0/1051
42	DU	0.23	0/788	0.46	0/1051
43	BV	0.39	0/766	0.61	0/1025
43	DV	0.23	0/766	0.43	0/1025
44	BW	0.53	0/603	0.82	0/797
44	DW	0.25	0/603	0.49	0/797
45	BX	0.37	0/635	0.66	0/848
45	DX	0.27	0/635	0.56	0/848
46	BY	0.33	0/510	0.62	0/677
46	DY	0.21	0/510	0.43	0/677
47	BZ	0.45	0/453	0.80	0/605
47	DZ	0.25	0/453	0.50	0/605
48	B0	0.43	0/450	0.71	0/599
48	D0	0.26	0/450	0.50	0/599
49	B1	0.31	0/417	0.57	0/554
49	D1	0.24	0/417	0.45	0/554
50	B2	0.41	0/380	0.71	0/498
50	D2	0.26	0/380	0.51	0/498
51	B3	0.43	0/513	0.66	0/676
51	D3	0.27	0/513	0.52	0/676
52	B4	0.39	0/303	0.69	0/397
52	D4	0.43	0/303	0.54	0/397
53	CA	0.47	6/36762 (0.0%)	1.24	525/57350 (0.9%)
54	CG	0.22	0/1188	0.44	0/1591
55	CM	0.19	0/885	0.41	0/1181
56	CP	0.28	0/649	0.52	0/870
57	DA	0.46	0/68314	1.28	1097/106569 (1.0%)
58	DB	0.51	1/2803 (0.0%)	1.21	38/4371 (0.9%)
59	DF	0.23	0/1444	0.48	0/1937
All	All	0.50	28/306773 (0.0%)	1.19	3520/458565 (0.8%)

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
2	CB	0	1
25	BD	0	1
35	BN	0	1
All	All	0	3

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	DB	69	G	O3'-P	-16.79	1.41	1.61
1	AA	1047	G	O3'-P	-14.49	1.43	1.61
2	AB	107	ARG	C-N	11.33	1.60	1.34
53	CA	1396	A	O3'-P	-11.26	1.47	1.61
2	CB	146	SER	C-N	10.14	1.57	1.34
1	AA	1390	U	O3'-P	9.48	1.72	1.61
53	CA	562	U	O3'-P	-9.38	1.49	1.61
53	CA	26	A	O3'-P	-8.83	1.50	1.61
53	CA	8	A	O3'-P	-8.69	1.50	1.61
12	CL	21	PRO	C-N	8.56	1.53	1.34
22	BA	901	C	O3'-P	-7.63	1.51	1.61
1	AA	557	G	O3'-P	-7.45	1.52	1.61
53	CA	1047	G	O3'-P	7.32	1.70	1.61
29	DH	48	GLU	C-N	7.26	1.50	1.34
22	BA	1905	C	O3'-P	-7.20	1.52	1.61
2	AB	146	SER	C-N	6.53	1.49	1.34
2	CB	107	ARG	C-N	6.44	1.48	1.34
22	BA	1142	A	N9-C4	-5.88	1.34	1.37
1	AA	566	G	O3'-P	5.81	1.68	1.61
1	AA	925	G	O3'-P	5.78	1.68	1.61
5	AE	149	PRO	C-N	-5.67	1.21	1.34
22	BA	2092	U	O3'-P	-5.63	1.54	1.61
1	AA	8	A	O3'-P	-5.48	1.54	1.61
22	BA	572	A	C6-N1	-5.35	1.31	1.35
22	BA	1654	A	N3-C4	-5.34	1.31	1.34
22	BA	528	A	N9-C4	-5.15	1.34	1.37
53	CA	1495	U	O3'-P	-5.13	1.54	1.61
22	BA	2448	A	N9-C4	-5.07	1.34	1.37

All (3520) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1396	A	P-O3'-C3'	16.36	139.33	119.70
57	DA	2586	U	N1-C1'-C2'	-15.75	93.52	114.00
22	BA	2283	C	N1-C1'-C2'	-15.29	94.12	114.00
57	DA	1997	C	N1-C1'-C2'	-14.86	94.69	114.00
23	BB	90	C	N1-C1'-C2'	-14.66	94.94	114.00
22	BA	1330	C	N1-C1'-C2'	-14.51	95.13	114.00
57	DA	740	C	N1-C1'-C2'	-14.50	95.15	114.00
22	BA	995	C	O4'-C1'-N1	-14.43	96.66	108.20
22	BA	627	A	P-O3'-C3'	14.34	136.91	119.70
22	BA	1013	C	N1-C1'-C2'	-14.22	95.51	114.00
57	DA	304	U	N1-C1'-C2'	-14.18	95.57	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	52	C	N1-C1'-C2'	-14.16	95.59	114.00
22	BA	531	C	P-O3'-C3'	14.14	136.67	119.70
22	BA	1603	A	P-O3'-C3'	-14.04	102.85	119.70
22	BA	2425	A	P-O3'-C3'	14.00	136.50	119.70
53	CA	66	A	P-O3'-C3'	-13.97	102.93	119.70
53	CA	328	C	P-O3'-C3'	13.96	136.45	119.70
22	BA	2447	G	P-O3'-C3'	13.93	136.41	119.70
22	BA	1647	U	O4'-C1'-N1	13.76	119.21	108.20
53	CA	132	C	N1-C1'-C2'	-13.73	96.16	114.00
1	AA	1202	U	N1-C1'-C2'	-13.63	96.28	114.00
22	BA	2036	C	N1-C1'-C2'	-13.59	96.33	114.00
57	DA	2283	C	N1-C1'-C2'	-13.56	96.38	114.00
22	BA	728	G	P-O3'-C3'	13.53	135.94	119.70
22	BA	302	C	N1-C1'-C2'	-13.46	96.50	114.00
53	CA	891	U	N1-C1'-C2'	-13.43	96.55	114.00
22	BA	704	G	P-O3'-C3'	13.38	135.76	119.70
22	BA	249	C	P-O3'-C3'	13.38	135.75	119.70
22	BA	1967	C	N1-C1'-C2'	-13.31	96.69	114.00
53	CA	245	U	N1-C1'-C2'	-13.28	96.74	114.00
57	DA	2504	U	N1-C1'-C2'	-13.26	96.76	114.00
22	BA	1012	U	O4'-C1'-N1	13.22	118.77	108.20
22	BA	1247	A	P-O3'-C3'	13.21	135.56	119.70
22	BA	2385	C	N1-C1'-C2'	-13.09	96.98	114.00
22	BA	1461	C	N1-C1'-C2'	-13.04	97.05	114.00
58	DB	69	G	O3'-P-O5'	-13.04	79.23	104.00
57	DA	2137	U	N1-C1'-C2'	-13.03	97.06	114.00
57	DA	1023	U	N1-C1'-C2'	-12.97	97.14	114.00
22	BA	961	C	O4'-C1'-N1	12.95	118.56	108.20
57	DA	87	U	N1-C1'-C2'	-12.90	97.23	114.00
57	DA	741	U	N1-C1'-C2'	-12.89	97.24	114.00
53	CA	915	A	P-O3'-C3'	-12.76	104.39	119.70
57	DA	2214	C	N1-C1'-C2'	-12.73	97.44	114.00
57	DA	961	C	P-O3'-C3'	12.63	134.86	119.70
22	BA	249	C	N1-C1'-C2'	12.62	130.41	114.00
22	BA	2424	C	N1-C1'-C2'	-12.60	97.62	114.00
1	AA	972	C	N1-C1'-C2'	-12.58	97.65	114.00
53	CA	352	C	N1-C1'-C2'	-12.55	97.69	114.00
22	BA	1997	C	N1-C1'-C2'	-12.53	97.71	114.00
1	AA	1283	U	N1-C1'-C2'	-12.51	97.74	114.00
57	DA	1512	C	N1-C1'-C2'	-12.39	97.89	114.00
57	DA	2339	C	N1-C1'-C2'	-12.39	97.89	114.00
22	BA	865	C	P-O3'-C3'	12.38	134.56	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	805	G	P-O3'-C3'	12.38	134.56	119.70
22	BA	390	U	P-O3'-C3'	12.35	134.52	119.70
22	BA	2727	A	P-O3'-C3'	-12.34	104.89	119.70
22	BA	2023	C	N1-C1'-C2'	-12.30	98.01	114.00
57	DA	206	U	N1-C1'-C2'	-12.27	98.05	114.00
58	DB	17	C	O4'-C1'-N1	12.27	118.02	108.20
1	AA	1162	C	N1-C1'-C2'	-12.26	98.06	114.00
22	BA	2689	U	O4'-C1'-N1	12.24	117.99	108.20
22	BA	2214	C	N1-C1'-C2'	-12.20	98.14	114.00
57	DA	235	U	N1-C1'-C2'	-12.18	98.17	114.00
57	DA	1967	C	N1-C1'-C2'	-12.15	98.20	114.00
53	CA	14	U	N1-C1'-C2'	-12.15	98.21	114.00
57	DA	1968	G	P-O3'-C3'	-12.14	105.13	119.70
22	BA	2712	C	P-O3'-C3'	12.13	134.25	119.70
22	BA	858	G	P-O3'-C3'	12.12	134.24	119.70
57	DA	2646	C	N1-C1'-C2'	-12.12	98.25	114.00
22	BA	2319	G	P-O3'-C3'	12.10	134.22	119.70
22	BA	2629	U	P-O3'-C3'	12.09	134.21	119.70
57	DA	1267	U	N1-C1'-C2'	-12.09	98.28	114.00
57	DA	1956	U	N1-C1'-C2'	-12.09	98.28	114.00
57	DA	2615	U	N1-C1'-C2'	-12.08	98.29	114.00
58	DB	110	C	N1-C1'-C2'	-12.08	98.30	114.00
53	CA	330	C	N1-C1'-C2'	-12.07	98.31	114.00
1	AA	512	U	N1-C1'-C2'	-12.03	98.36	114.00
22	BA	531	C	O4'-C1'-N1	-12.02	98.59	108.20
22	BA	2137	U	N1-C1'-C2'	-11.97	98.44	114.00
22	BA	2424	C	P-O3'-C3'	-11.97	105.34	119.70
1	AA	1228	C	N1-C1'-C2'	-11.93	98.49	114.00
57	DA	859	G	P-O3'-C3'	11.93	134.02	119.70
22	BA	2848	G	P-O3'-C3'	11.92	134.00	119.70
22	BA	2068	U	N1-C1'-C2'	-11.91	98.51	114.00
22	BA	2321	U	N1-C1'-C2'	-11.90	98.53	114.00
22	BA	2645	G	P-O3'-C3'	11.90	133.98	119.70
22	BA	49	A	P-O3'-C3'	11.89	133.97	119.70
22	BA	1941	C	N1-C1'-C2'	-11.86	98.58	114.00
22	BA	2092	U	OP2-P-O3'	11.85	131.28	105.20
57	DA	533	G	P-O3'-C3'	-11.85	105.48	119.70
22	BA	1210	G	P-O3'-C3'	11.84	133.90	119.70
57	DA	2225	A	P-O3'-C3'	11.83	133.90	119.70
22	BA	373	U	N1-C1'-C2'	-11.83	98.62	114.00
22	BA	1993	U	N1-C1'-C2'	-11.81	98.65	114.00
22	BA	2286	G	P-O3'-C3'	11.80	133.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	92	U	N1-C1'-C2'	-11.80	98.66	114.00
22	BA	1023	U	N1-C1'-C2'	-11.76	98.71	114.00
22	BA	2573	C	P-O3'-C3'	-11.75	105.60	119.70
22	BA	2035	G	P-O3'-C3'	11.68	133.72	119.70
58	DB	68	C	N1-C1'-C2'	-11.65	98.86	114.00
22	BA	588	U	N1-C1'-C2'	-11.64	98.86	114.00
1	AA	1399	C	P-O3'-C3'	11.62	133.64	119.70
53	CA	65	A	P-O3'-C3'	11.60	133.62	119.70
1	AA	1047	G	P-O3'-C3'	-11.54	105.85	119.70
57	DA	1782	U	P-O3'-C3'	-11.54	105.85	119.70
58	DB	69	G	P-O3'-C3'	11.54	133.55	119.70
22	BA	1963	U	N1-C1'-C2'	-11.52	99.03	114.00
53	CA	1086	U	N1-C1'-C2'	-11.52	99.03	114.00
22	BA	1653	G	P-O3'-C3'	11.51	133.51	119.70
23	BB	40	U	P-O3'-C3'	11.51	133.51	119.70
22	BA	196	A	P-O3'-C3'	11.49	133.49	119.70
22	BA	2752	C	N1-C1'-C2'	-11.48	99.08	114.00
22	BA	667	U	P-O3'-C3'	11.46	133.46	119.70
1	AA	330	C	N1-C1'-C2'	-11.45	99.11	114.00
22	BA	1324	G	P-O3'-C3'	11.44	133.42	119.70
22	BA	2347	C	N1-C1'-C2'	-11.43	99.15	114.00
1	AA	422	C	P-O3'-C3'	11.41	133.39	119.70
58	DB	107	G	O3'-P-O5'	-11.37	82.40	104.00
22	BA	200	U	N1-C1'-C2'	-11.37	99.23	114.00
1	AA	352	C	N1-C1'-C2'	-11.34	99.25	114.00
57	DA	1013	C	N1-C1'-C2'	-11.34	99.25	114.00
57	DA	1158	C	N1-C1'-C2'	-11.34	99.25	114.00
1	AA	1303	C	N1-C1'-C2'	-11.34	99.26	114.00
1	AA	1141	C	N1-C1'-C2'	-11.33	99.27	114.00
1	AA	267	C	N1-C1'-C2'	-11.33	99.27	114.00
22	BA	2566	A	P-O3'-C3'	11.32	133.28	119.70
57	DA	1536	C	P-O3'-C3'	11.32	133.28	119.70
53	CA	1502	A	P-O3'-C3'	11.31	133.27	119.70
53	CA	643	C	N1-C1'-C2'	-11.29	99.32	114.00
22	BA	2611	C	N1-C1'-C2'	-11.29	99.32	114.00
57	DA	2037	A	P-O3'-C3'	-11.29	106.15	119.70
53	CA	1230	C	N1-C1'-C2'	-11.28	99.34	114.00
22	BA	2893	A	P-O3'-C3'	11.25	133.20	119.70
1	AA	913	A	P-O3'-C3'	11.24	133.19	119.70
22	BA	783	A	P-O3'-C3'	-11.24	106.21	119.70
57	DA	1667	G	P-O3'-C3'	11.24	133.18	119.70
57	DA	726	G	P-O3'-C3'	11.21	133.16	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	336	C	N1-C1'-C2'	-11.21	99.42	114.00
22	BA	1326	U	N1-C1'-C2'	-11.21	99.43	114.00
57	DA	2645	G	P-O3'-C3'	11.19	133.12	119.70
57	DA	1816	C	N1-C1'-C2'	-11.18	99.46	114.00
22	BA	671	C	N1-C1'-C2'	-11.18	99.47	114.00
22	BA	1265	A	P-O3'-C3'	11.18	133.11	119.70
22	BA	1648	U	N1-C1'-C2'	-11.16	99.49	114.00
22	BA	1008	A	P-O3'-C3'	11.15	133.08	119.70
53	CA	512	U	N1-C1'-C2'	-11.14	99.52	114.00
22	BA	2284	A	P-O3'-C3'	-11.13	106.34	119.70
57	DA	2137	U	P-O3'-C3'	-11.12	106.36	119.70
22	BA	2051	A	P-O3'-C3'	11.12	133.04	119.70
22	BA	957	C	P-O3'-C3'	11.11	133.04	119.70
57	DA	946	C	N1-C1'-C2'	-11.10	99.57	114.00
1	AA	431	A	P-O3'-C3'	-11.10	106.38	119.70
57	DA	991	C	N1-C1'-C2'	-11.10	99.57	114.00
22	BA	2776	A	P-O3'-C3'	11.07	132.98	119.70
1	AA	119	A	P-O3'-C3'	11.06	132.97	119.70
53	CA	992	U	P-O3'-C3'	11.05	132.97	119.70
1	AA	641	U	P-O3'-C3'	11.04	132.95	119.70
22	BA	2585	U	O4'-C1'-N1	11.03	117.03	108.20
22	BA	2613	U	O4'-C1'-N1	11.00	117.00	108.20
1	AA	1345	U	O4'-C1'-N1	10.97	116.97	108.20
22	BA	1556	C	P-O3'-C3'	-10.95	106.56	119.70
57	DA	2348	U	N1-C1'-C2'	-10.95	99.77	114.00
57	DA	765	C	N1-C1'-C2'	-10.94	99.78	114.00
22	BA	229	C	N1-C1'-C2'	-10.93	99.79	114.00
57	DA	2896	C	N1-C1'-C2'	-10.93	99.79	114.00
53	CA	1148	U	N1-C1'-C2'	-10.93	99.79	114.00
22	BA	812	C	N1-C1'-C2'	-10.93	99.80	114.00
22	BA	227	A	P-O3'-C3'	10.92	132.80	119.70
22	BA	506	G	P-O3'-C3'	10.91	132.79	119.70
1	AA	891	U	N1-C1'-C2'	-10.90	99.82	114.00
1	AA	1348	U	N1-C1'-C2'	-10.89	99.84	114.00
22	BA	1144	A	P-O3'-C3'	-10.87	106.66	119.70
57	DA	1417	C	N1-C1'-C2'	-10.85	99.90	114.00
1	AA	547	A	P-O3'-C3'	10.83	132.69	119.70
22	BA	2835	A	P-O3'-C3'	10.82	132.68	119.70
22	BA	685	A	P-O3'-C3'	10.82	132.68	119.70
53	CA	1381	U	N1-C1'-C2'	-10.82	99.94	114.00
57	DA	335	C	N1-C1'-C2'	-10.80	99.95	114.00
22	BA	1498	C	N1-C1'-C2'	-10.80	99.96	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1815	A	P-O3'-C3'	10.80	132.66	119.70
22	BA	2646	C	N1-C1'-C2'	-10.80	99.96	114.00
22	BA	2068	U	P-O3'-C3'	-10.78	106.76	119.70
22	BA	784	G	P-O3'-C3'	10.78	132.63	119.70
22	BA	915	C	N1-C1'-C2'	-10.77	99.99	114.00
22	BA	2321	U	P-O3'-C3'	-10.77	106.78	119.70
22	BA	1971	U	N1-C1'-C2'	-10.77	100.00	114.00
22	BA	404	A	P-O3'-C3'	10.75	132.60	119.70
53	CA	1401	G	P-O3'-C3'	-10.74	106.81	119.70
53	CA	1283	U	N1-C1'-C2'	-10.73	100.06	114.00
53	CA	1298	U	P-O3'-C3'	10.70	132.54	119.70
53	CA	248	C	N1-C1'-C2'	-10.70	100.09	114.00
22	BA	2498	C	N1-C1'-C2'	-10.68	100.11	114.00
57	DA	2880	C	N1-C1'-C2'	-10.67	100.13	114.00
53	CA	821	G	P-O3'-C3'	-10.66	106.91	119.70
57	DA	2881	U	N1-C1'-C2'	-10.62	100.20	114.00
22	BA	1859	U	N1-C1'-C2'	-10.61	100.20	114.00
53	CA	513	C	N1-C1'-C2'	-10.60	100.22	114.00
22	BA	2808	G	P-O3'-C3'	10.58	132.40	119.70
57	DA	1776	G	P-O3'-C3'	-10.58	107.00	119.70
57	DA	1982	U	N1-C1'-C2'	-10.57	100.25	114.00
22	BA	1236	G	P-O3'-C3'	10.55	132.36	119.70
22	BA	669	G	P-O3'-C3'	10.53	132.34	119.70
1	AA	961	U	N1-C1'-C2'	-10.53	100.31	114.00
53	CA	116	A	P-O3'-C3'	-10.52	107.08	119.70
57	DA	1565	C	P-O3'-C3'	10.52	132.32	119.70
57	DA	2458	G	P-O3'-C3'	10.52	132.32	119.70
53	CA	1068	G	P-O3'-C3'	-10.49	107.11	119.70
57	DA	1119	U	O4'-C1'-N1	10.49	116.59	108.20
57	DA	915	C	N1-C1'-C2'	-10.48	100.37	114.00
1	AA	132	C	N1-C1'-C2'	-10.48	100.38	114.00
57	DA	2498	C	N1-C1'-C2'	-10.44	100.42	114.00
58	DB	17	C	N1-C1'-C2'	-10.44	100.43	114.00
57	DA	2429	G	P-O3'-C3'	-10.43	107.19	119.70
53	CA	520	A	P-O3'-C3'	-10.42	107.20	119.70
22	BA	571	U	O4'-C1'-N1	10.42	116.53	108.20
57	DA	2249	U	P-O3'-C3'	10.42	132.20	119.70
22	BA	2572	A	P-O3'-C3'	10.41	132.19	119.70
53	CA	344	A	P-O3'-C3'	10.40	132.18	119.70
22	BA	164	C	N1-C1'-C2'	-10.40	100.48	114.00
57	DA	1064	C	N1-C1'-C2'	-10.40	100.48	114.00
58	DB	90	C	N1-C1'-C2'	-10.39	100.49	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	484	C	N1-C1'-C2'	-10.39	100.50	114.00
22	BA	1332	G	P-O3'-C3'	10.38	132.16	119.70
53	CA	1367	C	N1-C1'-C2'	-10.36	100.53	114.00
53	CA	73	C	N1-C1'-C2'	-10.36	100.54	114.00
57	DA	1145	C	N1-C1'-C2'	-10.36	100.54	114.00
57	DA	1611	C	N1-C1'-C2'	-10.34	100.55	114.00
57	DA	61	C	N1-C1'-C2'	-10.32	100.59	114.00
53	CA	1147	C	N1-C1'-C2'	-10.30	100.61	114.00
57	DA	243	U	N1-C1'-C2'	-10.30	100.61	114.00
57	DA	1613	G	P-O3'-C3'	-10.29	107.35	119.70
22	BA	995	C	P-O3'-C3'	10.29	132.05	119.70
57	DA	92	U	N1-C1'-C2'	-10.29	100.62	114.00
57	DA	375	G	P-O3'-C3'	-10.29	107.36	119.70
57	DA	2492	U	N1-C1'-C2'	-10.29	100.63	114.00
22	BA	301	G	P-O3'-C3'	10.28	132.04	119.70
22	BA	1963	U	P-O3'-C3'	-10.28	107.36	119.70
57	DA	1941	C	N1-C1'-C2'	-10.28	100.64	114.00
22	BA	1522	A	P-O3'-C3'	10.27	132.03	119.70
1	AA	173	U	O4'-C1'-N1	10.27	116.42	108.20
1	AA	1320	C	N1-C1'-C2'	-10.27	100.65	114.00
22	BA	1240	U	O4'-C1'-N1	-10.27	99.98	108.20
22	BA	2312	U	N1-C1'-C2'	-10.27	100.65	114.00
57	DA	1289	C	N1-C1'-C2'	-10.26	100.66	114.00
22	BA	1779	U	C5-C6-N1	-10.25	117.58	122.70
22	BA	403	U	P-O3'-C3'	10.24	131.99	119.70
1	AA	87	C	N1-C1'-C2'	-10.24	100.68	114.00
22	BA	1045	C	P-O3'-C3'	10.22	131.97	119.70
22	BA	143	C	N1-C1'-C2'	-10.20	100.74	114.00
22	BA	1417	C	N1-C1'-C2'	-10.20	100.75	114.00
58	DB	88	C	P-O3'-C3'	10.20	131.93	119.70
53	CA	721	G	P-O3'-C3'	10.19	131.93	119.70
1	AA	1095	U	N1-C1'-C2'	-10.17	100.78	114.00
53	CA	1449	C	N1-C1'-C2'	-10.16	100.79	114.00
22	BA	1635	A	P-O3'-C3'	-10.15	107.52	119.70
57	DA	224	U	N1-C1'-C2'	-10.14	100.82	114.00
57	DA	445	C	N1-C1'-C2'	-10.14	100.82	114.00
57	DA	2752	C	N1-C1'-C2'	-10.13	100.83	114.00
22	BA	61	C	P-O3'-C3'	-10.13	107.55	119.70
22	BA	2333	A	P-O3'-C3'	10.12	131.84	119.70
57	DA	2440	C	N1-C1'-C2'	-10.10	100.88	114.00
57	DA	1498	C	N1-C1'-C2'	-10.09	100.88	114.00
57	DA	1786	A	P-O3'-C3'	10.09	131.81	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	687	C	N1-C1'-C2'	-10.08	100.90	114.00
22	BA	233	A	P-O3'-C3'	-10.07	107.61	119.70
22	BA	2725	A	P-O3'-C3'	10.07	131.78	119.70
57	DA	1675	C	N1-C1'-C2'	-10.07	100.91	114.00
57	DA	2068	U	N1-C1'-C2'	-10.05	100.94	114.00
1	AA	984	C	N1-C1'-C2'	-10.05	100.94	114.00
53	CA	109	A	P-O3'-C3'	10.04	131.75	119.70
22	BA	2200	C	N1-C1'-C2'	-10.04	100.95	114.00
53	CA	1052	U	N1-C1'-C2'	-10.01	100.99	114.00
1	AA	1336	C	P-O3'-C3'	10.01	131.71	119.70
22	BA	790	U	P-O3'-C3'	-10.00	107.70	119.70
22	BA	1021	A	P-O3'-C3'	-9.99	107.71	119.70
57	DA	451	U	O4'-C1'-N1	9.99	116.19	108.20
57	DA	1902	C	N1-C1'-C2'	-9.99	101.02	112.00
1	AA	724	G	P-O3'-C3'	-9.98	107.72	119.70
1	AA	279	A	P-O3'-C3'	9.98	131.68	119.70
57	DA	1920	C	N1-C1'-C2'	-9.98	101.02	112.00
22	BA	241	A	P-O3'-C3'	9.97	131.67	119.70
22	BA	435	C	N1-C1'-C2'	-9.97	101.03	112.00
22	BA	2733	A	P-O3'-C3'	-9.97	107.74	119.70
57	DA	2259	U	N1-C1'-C2'	-9.97	101.04	112.00
53	CA	1217	C	N1-C1'-C2'	-9.96	101.05	112.00
1	AA	1381	U	N1-C1'-C2'	-9.95	101.05	112.00
22	BA	2613	U	P-O3'-C3'	9.95	131.64	119.70
1	AA	430	A	P-O3'-C3'	-9.94	107.77	119.70
22	BA	482	A	P-O3'-C3'	-9.94	107.78	119.70
57	DA	2052	A	P-O3'-C3'	-9.94	107.78	119.70
22	BA	2880	C	N1-C1'-C2'	-9.93	101.08	112.00
22	BA	1654	A	N9-C1'-C2'	-9.92	101.08	112.00
22	BA	2266	A	P-O3'-C3'	9.92	131.60	119.70
22	BA	2691	C	N1-C1'-C2'	-9.92	101.09	112.00
22	BA	449	A	P-O3'-C3'	-9.91	107.80	119.70
57	DA	1249	U	N1-C1'-C2'	-9.91	101.10	112.00
57	DA	2611	C	N1-C1'-C2'	-9.90	101.11	112.00
22	BA	1324	G	O4'-C1'-N9	9.89	116.11	108.20
22	BA	481	G	P-O3'-C3'	9.89	131.57	119.70
57	DA	2492	U	P-O3'-C3'	-9.88	107.85	119.70
53	CA	1161	C	N1-C1'-C2'	-9.88	101.14	112.00
57	DA	222	A	P-O3'-C3'	9.87	131.55	119.70
22	BA	1329	U	P-O3'-C3'	9.87	131.54	119.70
1	AA	536	C	N1-C1'-C2'	-9.86	101.15	112.00
1	AA	7	A	P-O3'-C3'	9.86	131.53	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	92	U	N1-C1'-C2'	-9.86	101.16	112.00
22	BA	2609	U	O4'-C1'-N1	9.86	116.09	108.20
22	BA	2781	A	P-O3'-C3'	-9.85	107.89	119.70
22	BA	614	A	P-O3'-C3'	9.84	131.51	119.70
22	BA	2691	C	P-O3'-C3'	-9.84	107.89	119.70
22	BA	2879	A	P-O3'-C3'	9.84	131.51	119.70
22	BA	531	C	N1-C1'-C2'	9.84	126.79	114.00
22	BA	1667	G	P-O3'-C3'	9.83	131.50	119.70
53	CA	96	U	N1-C1'-C2'	-9.83	101.19	112.00
57	DA	2023	C	O4'-C1'-N1	9.83	116.06	108.20
23	BB	57	A	P-O3'-C3'	-9.83	107.91	119.70
58	DB	68	C	O4'-C1'-N1	9.81	116.05	108.20
57	DA	576	U	N1-C1'-C2'	-9.80	101.22	112.00
57	DA	1275	A	P-O3'-C3'	9.80	131.47	119.70
1	AA	889	A	P-O3'-C3'	9.80	131.46	119.70
57	DA	1918	A	P-O3'-C3'	9.79	131.45	119.70
22	BA	2542	A	P-O3'-C3'	9.79	131.44	119.70
22	BA	1033	U	P-O3'-C3'	9.78	131.44	119.70
57	DA	2023	C	N1-C1'-C2'	-9.78	101.24	112.00
53	CA	173	U	O4'-C1'-N1	9.77	116.02	108.20
53	CA	316	C	N1-C1'-C2'	-9.77	101.25	112.00
57	DA	812	C	P-O3'-C3'	-9.76	107.98	119.70
57	DA	1612	C	N1-C1'-C2'	-9.76	101.26	112.00
1	AA	812	G	P-O3'-C3'	9.76	131.41	119.70
22	BA	2517	C	O4'-C1'-N1	9.75	116.00	108.20
57	DA	1815	A	P-O3'-C3'	9.75	131.40	119.70
1	AA	14	U	N1-C1'-C2'	-9.74	101.28	112.00
22	BA	2581	G	P-O3'-C3'	9.74	131.39	119.70
57	DA	860	U	N1-C1'-C2'	-9.73	101.30	112.00
1	AA	1088	G	P-O3'-C3'	-9.70	108.06	119.70
22	BA	2800	A	P-O3'-C3'	9.70	131.34	119.70
53	CA	1383	C	N1-C1'-C2'	-9.70	101.33	112.00
57	DA	76	C	N1-C1'-C2'	-9.70	101.33	112.00
53	CA	372	C	O4'-C1'-N1	9.69	115.95	108.20
57	DA	829	A	P-O3'-C3'	9.69	131.32	119.70
57	DA	1782	U	N1-C1'-C2'	-9.66	101.37	112.00
57	DA	2299	U	N1-C1'-C2'	-9.66	101.38	112.00
57	DA	444	C	O4'-C1'-N1	9.65	115.92	108.20
22	BA	934	U	P-O3'-C3'	-9.65	108.12	119.70
57	DA	2520	C	N1-C1'-C2'	-9.65	101.39	112.00
22	BA	604	G	P-O3'-C3'	-9.64	108.13	119.70
1	AA	132	C	P-O3'-C3'	-9.63	108.14	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2210	U	P-O3'-C3'	9.61	131.24	119.70
22	BA	2258	C	P-O3'-C3'	9.61	131.23	119.70
57	DA	1963	U	N1-C1'-C2'	-9.61	101.43	112.00
22	BA	1965	C	N1-C1'-C2'	-9.60	101.44	112.00
22	BA	961	C	P-O3'-C3'	9.60	131.22	119.70
57	DA	1902	C	P-O3'-C3'	-9.59	108.19	119.70
57	DA	2875	C	N1-C1'-C2'	-9.59	101.46	112.00
1	AA	115	G	P-O3'-C3'	9.58	131.19	119.70
1	AA	1282	C	N1-C1'-C2'	-9.57	101.47	112.00
22	BA	2681	C	P-O3'-C3'	9.56	131.18	119.70
57	DA	1557	C	N1-C1'-C2'	-9.56	101.48	112.00
22	BA	2226	C	N1-C1'-C2'	-9.56	101.48	112.00
1	AA	66	A	P-O3'-C3'	-9.56	108.23	119.70
22	BA	164	C	P-O3'-C3'	-9.56	108.23	119.70
22	BA	2729	G	P-O3'-C3'	-9.56	108.23	119.70
1	AA	315	A	P-O3'-C3'	9.55	131.16	119.70
57	DA	831	G	P-O3'-C3'	-9.54	108.25	119.70
53	CA	110	C	P-O3'-C3'	-9.54	108.26	119.70
53	CA	1065	U	O4'-C1'-N1	9.54	115.83	108.20
57	DA	2347	C	N1-C1'-C2'	-9.53	101.51	112.00
1	AA	642	A	P-O3'-C3'	-9.53	108.26	119.70
1	AA	969	A	P-O3'-C3'	-9.52	108.28	119.70
57	DA	2458	G	O4'-C1'-N9	9.52	115.82	108.20
57	DA	1802	A	P-O3'-C3'	-9.52	108.28	119.70
22	BA	2425	A	O4'-C1'-N9	9.51	115.81	108.20
22	BA	34	U	P-O3'-C3'	9.51	131.11	119.70
57	DA	196	A	P-O3'-C3'	9.49	131.08	119.70
57	DA	2404	U	N1-C1'-C2'	-9.46	101.60	112.00
53	CA	979	C	N1-C1'-C2'	-9.45	101.60	112.00
22	BA	946	C	N1-C1'-C2'	-9.45	101.61	112.00
57	DA	623	C	N1-C1'-C2'	-9.45	101.61	112.00
57	DA	2226	C	N1-C1'-C2'	-9.44	101.61	112.00
22	BA	765	C	N1-C1'-C2'	-9.44	101.61	112.00
53	CA	566	G	P-O3'-C3'	9.44	131.02	119.70
57	DA	1682	G	P-O3'-C3'	-9.44	108.38	119.70
22	BA	2449	U	O4'-C1'-N1	-9.44	100.65	108.20
22	BA	2458	G	P-O3'-C3'	9.43	131.02	119.70
53	CA	252	U	N1-C1'-C2'	-9.42	101.63	112.00
53	CA	985	C	N1-C1'-C2'	-9.42	101.63	112.00
22	BA	1126	A	P-O3'-C3'	9.42	131.00	119.70
53	CA	792	A	P-O3'-C3'	9.42	131.00	119.70
57	DA	976	G	P-O3'-C3'	-9.40	108.42	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1228	C	P-O3'-C3'	-9.39	108.43	119.70
22	BA	2335	A	P-O3'-C3'	-9.39	108.43	119.70
57	DA	2876	G	P-O3'-C3'	-9.39	108.43	119.70
1	AA	1053	G	P-O3'-C3'	9.38	130.96	119.70
22	BA	2296	U	P-O3'-C3'	9.36	130.93	119.70
57	DA	1804	C	N1-C1'-C2'	-9.36	101.70	112.00
1	AA	1157	A	P-O3'-C3'	9.35	130.92	119.70
57	DA	2581	G	P-O3'-C3'	9.34	130.91	119.70
57	DA	1962	C	P-O3'-C3'	9.34	130.91	119.70
22	BA	2259	U	N1-C1'-C2'	-9.34	101.73	112.00
22	BA	2613	U	O3'-P-O5'	-9.34	86.26	104.00
22	BA	687	C	P-O3'-C3'	-9.33	108.51	119.70
1	AA	1224	U	O4'-C1'-N1	9.32	115.66	108.20
22	BA	1417	C	P-O3'-C3'	-9.32	108.52	119.70
1	AA	960	U	P-O3'-C3'	9.32	130.88	119.70
1	AA	415	A	P-O3'-C3'	-9.30	108.54	119.70
1	AA	1432	G	P-O3'-C3'	9.30	130.87	119.70
22	BA	2021	C	O4'-C1'-N1	9.30	115.64	108.20
57	DA	957	C	P-O3'-C3'	9.30	130.86	119.70
53	CA	73	C	O4'-C1'-N1	9.30	115.64	108.20
57	DA	386	G	P-O3'-C3'	9.29	130.85	119.70
1	AA	1167	A	P-O3'-C3'	9.29	130.84	119.70
22	BA	451	U	O4'-C1'-N1	9.29	115.63	108.20
1	AA	1382	C	N1-C1'-C2'	-9.28	101.79	112.00
23	BB	44	G	P-O3'-C3'	9.27	130.82	119.70
22	BA	1786	A	O4'-C1'-N9	9.26	115.61	108.20
22	BA	954	G	P-O3'-C3'	9.26	130.81	119.70
53	CA	331	G	P-O3'-C3'	-9.26	108.59	119.70
53	CA	388	G	P-O3'-C3'	9.26	130.81	119.70
1	AA	109	A	P-O3'-C3'	9.25	130.80	119.70
22	BA	829	A	P-O3'-C3'	9.24	130.79	119.70
53	CA	936	C	O4'-C1'-N1	9.24	115.59	108.20
1	AA	1224	U	P-O3'-C3'	9.23	130.77	119.70
22	BA	1300	G	P-O3'-C3'	9.23	130.78	119.70
22	BA	934	U	N1-C1'-C2'	-9.22	101.86	112.00
57	DA	1267	U	O4'-C1'-N1	9.22	115.58	108.20
53	CA	519	C	N1-C1'-C2'	-9.22	101.86	112.00
57	DA	1255	U	N1-C1'-C2'	-9.19	101.89	112.00
53	CA	95	C	N1-C1'-C2'	-9.19	101.89	112.00
1	AA	874	G	P-O3'-C3'	-9.18	108.68	119.70
57	DA	812	C	N1-C1'-C2'	-9.18	101.91	112.00
22	BA	505	A	P-O3'-C3'	-9.17	108.69	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2573	C	N1-C1'-C2'	-9.16	101.92	112.00
57	DA	687	C	N1-C1'-C2'	-9.16	101.92	112.00
1	AA	915	A	P-O3'-C3'	-9.15	108.72	119.70
22	BA	2312	U	P-O3'-C3'	-9.14	108.73	119.70
57	DA	534	U	N1-C1'-C2'	-9.14	101.94	112.00
57	DA	2850	A	P-O3'-C3'	-9.14	108.73	119.70
57	DA	1818	U	O4'-C1'-N1	9.13	115.50	108.20
57	DA	2691	C	N1-C1'-C2'	-9.13	101.96	112.00
53	CA	85	U	P-O3'-C3'	9.12	130.64	119.70
53	CA	183	C	O4'-C1'-N1	9.12	115.50	108.20
22	BA	2756	U	P-O3'-C3'	9.12	130.64	119.70
23	BB	108	A	P-O3'-C3'	9.11	130.63	119.70
53	CA	1348	U	N1-C1'-C2'	-9.11	101.98	112.00
1	AA	1398	A	P-O3'-C3'	-9.10	108.78	119.70
57	DA	917	A	P-O3'-C3'	-9.10	108.78	119.70
23	BB	87	U	O4'-C1'-N1	9.10	115.48	108.20
57	DA	234	U	N1-C1'-C2'	-9.09	102.00	112.00
22	BA	1427	A	P-O3'-C3'	9.09	130.60	119.70
22	BA	475	C	N1-C1'-C2'	-9.08	102.01	112.00
53	CA	1200	C	P-O3'-C3'	9.08	130.59	119.70
53	CA	1224	U	P-O3'-C3'	9.07	130.59	119.70
57	DA	1418	G	P-O3'-C3'	-9.07	108.81	119.70
53	CA	1202	U	N1-C1'-C2'	-9.07	102.03	112.00
1	AA	1528	U	P-O3'-C3'	9.05	130.56	119.70
22	BA	163	C	O4'-C1'-N1	9.05	115.44	108.20
22	BA	740	C	N1-C1'-C2'	-9.05	102.04	112.00
22	BA	865	C	O4'-C1'-N1	9.05	115.44	108.20
22	BA	1634	A	P-O3'-C3'	9.04	130.55	119.70
22	BA	1564	C	P-O3'-C3'	9.04	130.55	119.70
1	AA	305	G	P-O3'-C3'	9.03	130.54	119.70
1	AA	1095	U	O4'-C1'-N1	9.03	115.42	108.20
22	BA	1379	U	N1-C1'-C2'	-9.02	102.08	112.00
22	BA	1556	C	N1-C1'-C2'	-9.02	102.08	112.00
57	DA	1606	C	P-O3'-C3'	9.00	130.50	119.70
1	AA	577	G	P-O3'-C3'	-9.00	108.90	119.70
1	AA	792	A	O4'-C1'-N9	9.00	115.40	108.20
22	BA	1931	U	N1-C1'-C2'	-8.99	102.11	112.00
22	BA	1954	G	P-O3'-C3'	8.98	130.47	119.70
22	BA	686	U	O4'-C1'-N1	8.98	115.38	108.20
22	BA	811	U	P-O3'-C3'	8.98	130.47	119.70
57	DA	531	C	P-O3'-C3'	8.97	130.47	119.70
22	BA	2497	A	P-O3'-C3'	8.97	130.47	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	428	G	P-O3'-C3'	8.97	130.46	119.70
57	DA	164	C	N1-C1'-C2'	-8.97	102.14	112.00
57	DA	2095	A	P-O3'-C3'	-8.97	108.94	119.70
22	BA	1971	U	P-O3'-C3'	-8.95	108.95	119.70
57	DA	1954	G	P-O3'-C3'	8.95	130.44	119.70
53	CA	753	A	P-O3'-C3'	8.94	130.43	119.70
22	BA	981	A	O3'-P-O5'	-8.94	87.02	104.00
57	DA	1428	C	O4'-C1'-N1	8.94	115.35	108.20
22	BA	2575	C	O4'-C1'-N1	8.93	115.35	108.20
22	BA	27	G	P-O3'-C3'	8.93	130.42	119.70
1	AA	1506	U	P-O3'-C3'	8.93	130.41	119.70
22	BA	421	C	P-O3'-C3'	8.90	130.38	119.70
22	BA	2638	G	P-O3'-C3'	8.89	130.37	119.70
22	BA	906	U	O4'-C1'-N1	8.88	115.31	108.20
53	CA	1528	U	P-O3'-C3'	8.88	130.35	119.70
57	DA	60	G	P-O3'-C3'	8.88	130.35	119.70
57	DA	1512	C	O4'-C1'-N1	8.88	115.30	108.20
53	CA	576	C	O4'-C1'-N1	-8.87	101.10	108.20
57	DA	1389	G	P-O3'-C3'	-8.87	109.05	119.70
1	AA	813	U	P-O3'-C3'	-8.87	109.06	119.70
22	BA	144	A	P-O3'-C3'	-8.86	109.06	119.70
22	BA	1141	U	P-O3'-C3'	8.86	130.33	119.70
57	DA	229	C	N1-C1'-C2'	-8.86	102.26	112.00
57	DA	749	A	P-O3'-C3'	-8.86	109.07	119.70
57	DA	606	U	N1-C1'-C2'	-8.85	102.26	112.00
22	BA	323	C	O4'-C1'-N1	8.85	115.28	108.20
57	DA	2043	C	O4'-C1'-N1	-8.85	101.12	108.20
53	CA	1051	C	N1-C1'-C2'	-8.84	102.27	112.00
22	BA	2801	G	P-O5'-C5'	-8.84	106.76	120.90
22	BA	646	U	N1-C1'-C2'	-8.84	102.28	112.00
22	BA	1920	C	N1-C1'-C2'	-8.83	102.29	112.00
53	CA	564	C	N1-C1'-C2'	-8.83	102.29	112.00
53	CA	577	G	P-O3'-C3'	-8.83	109.10	119.70
1	AA	1201	A	P-O3'-C3'	8.82	130.29	119.70
53	CA	701	U	P-O3'-C3'	8.82	130.28	119.70
57	DA	304	U	P-O3'-C3'	-8.81	109.13	119.70
23	BB	52	A	P-O3'-C3'	8.80	130.27	119.70
57	DA	2629	U	P-O3'-C3'	8.80	130.26	119.70
53	CA	547	A	P-O3'-C3'	8.80	130.26	119.70
53	CA	486	U	P-O3'-C3'	-8.79	109.15	119.70
53	CA	89	U	N1-C1'-C2'	-8.78	102.34	112.00
53	CA	547	A	O4'-C1'-N9	8.77	115.22	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1829	A	P-O3'-C3'	-8.77	109.18	119.70
57	DA	1207	C	N1-C1'-C2'	-8.76	102.36	112.00
57	DA	53	A	P-O3'-C3'	-8.76	109.19	119.70
58	DB	87	U	P-O3'-C3'	8.76	130.21	119.70
22	BA	1867	G	P-O3'-C3'	-8.75	109.20	119.70
57	DA	2586	U	P-O3'-C3'	-8.74	109.21	119.70
1	AA	1258	G	P-O3'-C3'	-8.74	109.21	119.70
57	DA	217	A	P-O3'-C3'	-8.74	109.21	119.70
1	AA	717	U	P-O3'-C3'	8.74	130.19	119.70
57	DA	827	U	P-O3'-C3'	8.73	130.17	119.70
22	BA	1082	U	O4'-C1'-N1	8.73	115.18	108.20
1	AA	1229	A	P-O3'-C3'	-8.72	109.23	119.70
22	BA	386	G	P-O3'-C3'	8.72	130.17	119.70
53	CA	1399	C	P-O3'-C3'	8.72	130.16	119.70
2	CB	146	SER	O-C-N	-8.71	108.76	122.70
22	BA	2225	A	P-O3'-C3'	8.71	130.15	119.70
1	AA	974	A	P-O3'-C3'	8.70	130.15	119.70
1	AA	32	A	P-O3'-C3'	-8.69	109.27	119.70
57	DA	867	C	N1-C1'-C2'	-8.70	102.44	112.00
22	BA	243	U	N1-C1'-C2'	-8.69	102.44	112.00
22	BA	727	A	P-O3'-C3'	-8.69	109.27	119.70
57	DA	2874	C	P-O3'-C3'	-8.69	109.27	119.70
22	BA	2030	A	P-O3'-C3'	8.69	130.12	119.70
22	BA	1267	U	N1-C1'-C2'	-8.69	102.45	112.00
1	AA	1064	G	P-O3'-C3'	8.68	130.11	119.70
22	BA	782	A	P-O3'-C3'	8.67	130.11	119.70
1	AA	486	U	P-O5'-C5'	-8.67	107.03	120.90
53	CA	643	C	O4'-C1'-N1	8.66	115.13	108.20
57	DA	2656	U	N1-C1'-C2'	-8.65	102.49	112.00
57	DA	162	U	P-O3'-C3'	8.65	130.08	119.70
57	DA	2063	C	N1-C1'-C2'	-8.64	102.49	112.00
57	DA	2440	C	O4'-C1'-N1	8.64	115.11	108.20
57	DA	933	A	P-O3'-C3'	-8.64	109.34	119.70
57	DA	2848	G	P-O3'-C3'	8.63	130.06	119.70
22	BA	119	A	P-O3'-C3'	8.63	130.05	119.70
53	CA	32	A	P-O3'-C3'	-8.62	109.35	119.70
57	DA	2447	G	P-O3'-C3'	8.62	130.05	119.70
22	BA	527	C	P-O3'-C3'	8.62	130.05	119.70
22	BA	2874	C	N1-C1'-C2'	-8.62	102.51	112.00
57	DA	235	U	P-O3'-C3'	-8.62	109.35	119.70
22	BA	1013	C	P-O3'-C3'	-8.61	109.36	119.70
57	DA	1699	G	P-O3'-C3'	8.61	130.03	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	512	G	O4'-C1'-N9	8.61	115.08	108.20
22	BA	454	A	P-O3'-C3'	8.60	130.02	119.70
53	CA	1499	A	P-O3'-C3'	-8.60	109.38	119.70
22	BA	1997	C	P-O3'-C3'	-8.59	109.39	119.70
22	BA	2611	C	P-O3'-C3'	-8.59	109.39	119.70
22	BA	914	G	P-O3'-C3'	-8.59	109.40	119.70
22	BA	1859	U	P-O3'-C3'	-8.59	109.40	119.70
22	BA	1681	G	P-O3'-C3'	8.58	130.00	119.70
22	BA	84	A	P-O3'-C3'	8.58	129.99	119.70
1	AA	870	U	P-O3'-C3'	8.57	129.98	119.70
1	AA	1190	G	P-O3'-C3'	8.57	129.99	119.70
22	BA	2250	G	O4'-C1'-N9	-8.57	101.34	108.20
22	BA	178	G	P-O3'-C3'	-8.56	109.43	119.70
57	DA	964	C	N1-C1'-C2'	-8.56	102.59	112.00
22	BA	1816	C	P-O3'-C3'	-8.55	109.44	119.70
22	BA	507	A	P-O3'-C3'	-8.55	109.44	119.70
22	BA	1476	U	N1-C1'-C2'	-8.55	102.60	112.00
53	CA	1152	A	P-O3'-C3'	-8.54	109.45	119.70
1	AA	1196	A	P-O3'-C3'	8.53	129.94	119.70
57	DA	527	C	P-O3'-C3'	8.53	129.94	119.70
57	DA	1276	A	P-O3'-C3'	-8.53	109.46	119.70
57	DA	2752	C	O4'-C1'-N1	8.53	115.02	108.20
22	BA	2492	U	N1-C1'-C2'	-8.53	102.62	112.00
53	CA	936	C	N1-C1'-C2'	-8.53	102.62	112.00
57	DA	2034	U	P-O3'-C3'	-8.52	109.47	119.70
22	BA	1809	A	P-O3'-C3'	-8.52	109.47	119.70
22	BA	221	A	P-O3'-C3'	8.52	129.92	119.70
22	BA	1313	U	P-O3'-C3'	-8.52	109.48	119.70
22	BA	783	A	N9-C1'-C2'	-8.51	102.64	112.00
53	CA	962	C	O4'-C1'-N1	8.50	115.00	108.20
57	DA	1803	A	P-O3'-C3'	-8.50	109.50	119.70
57	DA	1539	U	N1-C1'-C2'	-8.50	102.65	112.00
22	BA	2325	G	P-O3'-C3'	-8.49	109.51	119.70
57	DA	672	C	N1-C1'-C2'	-8.49	102.66	112.00
22	BA	1286	A	P-O3'-C3'	8.49	129.88	119.70
1	AA	991	U	P-O3'-C3'	8.49	129.88	119.70
57	DA	444	C	N1-C1'-C2'	-8.49	102.67	112.00
57	DA	1512	C	P-O3'-C3'	-8.48	109.52	119.70
57	DA	510	C	N1-C1'-C2'	-8.48	102.67	112.00
57	DA	730	A	P-O3'-C3'	-8.48	109.52	119.70
1	AA	1153	G	P-O3'-C3'	-8.48	109.53	119.70
1	AA	968	A	P-O3'-C3'	8.47	129.87	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2334	U	P-O3'-C3'	8.47	129.87	119.70
57	DA	790	U	O4'-C1'-N1	8.47	114.98	108.20
53	CA	424	G	P-O3'-C3'	-8.47	109.54	119.70
57	DA	164	C	P-O3'-C3'	-8.47	109.54	119.70
57	DA	1050	A	P-O3'-C3'	-8.46	109.55	119.70
22	BA	2832	U	P-O3'-C3'	8.46	129.85	119.70
57	DA	530	G	P-O3'-C3'	-8.45	109.56	119.70
57	DA	784	G	O4'-C1'-N9	8.45	114.96	108.20
57	DA	1386	C	O4'-C1'-N1	8.45	114.96	108.20
57	DA	1522	A	P-O3'-C3'	8.45	129.83	119.70
57	DA	15	G	P-O3'-C3'	-8.44	109.57	119.70
1	AA	512	U	P-O3'-C3'	-8.44	109.57	119.70
22	BA	138	U	N1-C1'-C2'	-8.44	102.72	112.00
1	AA	1125	U	P-O3'-C3'	8.44	129.82	119.70
58	DB	69	G	OP1-P-O3'	8.44	123.76	105.20
22	BA	1732	C	P-O3'-C3'	8.43	129.82	119.70
53	CA	962	C	N1-C1'-C2'	-8.43	102.72	112.00
1	AA	388	G	P-O3'-C3'	8.43	129.81	119.70
57	DA	1648	U	N1-C1'-C2'	-8.42	102.73	112.00
57	DA	1674	G	P-O3'-C3'	8.42	129.80	119.70
57	DA	2024	G	P-O3'-C3'	-8.42	109.60	119.70
22	BA	2385	C	P-O3'-C3'	-8.41	109.60	119.70
57	DA	1072	C	O4'-C1'-N1	8.41	114.93	108.20
57	DA	1144	A	P-O3'-C3'	-8.41	109.60	119.70
57	DA	1615	C	P-O3'-C3'	8.41	129.80	119.70
23	BB	87	U	P-O3'-C3'	8.41	129.79	119.70
22	BA	385	C	O4'-C1'-N1	-8.41	101.47	108.20
22	BA	1698	A	P-O3'-C3'	8.41	129.79	119.70
57	DA	150	U	O4'-C1'-N1	8.40	114.92	108.20
22	BA	985	C	N1-C1'-C2'	-8.40	102.76	112.00
23	BB	15	A	P-O3'-C3'	8.40	129.78	119.70
22	BA	406	G	P-O3'-C3'	-8.40	109.62	119.70
57	DA	2339	C	O4'-C1'-N1	8.39	114.91	108.20
22	BA	1784	A	P-O3'-C3'	8.39	129.77	119.70
22	BA	2894	G	P-O3'-C3'	-8.39	109.64	119.70
22	BA	1204	A	P-O3'-C3'	8.38	129.76	119.70
57	DA	1816	C	O4'-C1'-N1	8.38	114.90	108.20
57	DA	2061	G	P-O3'-C3'	8.38	129.75	119.70
22	BA	2689	U	N1-C1'-C2'	8.38	124.89	114.00
53	CA	1528	U	O4'-C1'-N1	8.37	114.90	108.20
57	DA	2669	G	P-O3'-C3'	-8.38	109.65	119.70
23	BB	25	U	P-O3'-C3'	-8.36	109.67	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2757	A	P-O3'-C3'	-8.36	109.67	119.70
57	DA	1636	U	P-O3'-C3'	-8.35	109.68	119.70
1	AA	1322	C	P-O3'-C3'	8.35	129.72	119.70
53	CA	717	U	N1-C1'-C2'	8.34	124.84	114.00
22	BA	2682	A	P-O5'-C5'	-8.33	107.57	120.90
53	CA	132	C	O4'-C1'-N1	8.33	114.86	108.20
22	BA	1611	C	P-O3'-C3'	-8.33	109.71	119.70
22	BA	1351	C	O4'-C1'-N1	8.32	114.86	108.20
1	AA	316	C	P-O3'-C3'	-8.32	109.72	119.70
57	DA	1780	A	P-O3'-C3'	8.31	129.68	119.70
57	DA	868	U	N1-C1'-C2'	-8.30	102.87	112.00
53	CA	60	A	P-O3'-C3'	8.30	129.66	119.70
53	CA	1345	U	O4'-C1'-N1	8.29	114.83	108.20
57	DA	1900	A	P-O3'-C3'	8.29	129.65	119.70
57	DA	2238	G	P-O3'-C3'	8.29	129.64	119.70
57	DA	128	C	N1-C1'-C2'	-8.28	102.89	112.00
1	AA	245	U	P-O3'-C3'	-8.28	109.77	119.70
1	AA	595	A	P-O3'-C3'	8.28	129.63	119.70
53	CA	495	A	P-O3'-C3'	8.28	129.63	119.70
22	BA	1493	C	P-O3'-C3'	8.28	129.63	119.70
57	DA	104	A	P-O3'-C3'	-8.27	109.78	119.70
1	AA	1152	A	P-O3'-C3'	-8.26	109.79	119.70
1	AA	13	U	P-O3'-C3'	8.25	129.60	119.70
1	AA	1332	A	P-O3'-C3'	-8.25	109.80	119.70
22	BA	1606	C	P-O3'-C3'	8.25	129.60	119.70
57	DA	2063	C	P-O3'-C3'	-8.25	109.80	119.70
57	DA	1647	U	P-O3'-C3'	8.24	129.59	119.70
22	BA	1063	G	P-O3'-C3'	-8.24	109.81	119.70
53	CA	439	U	N1-C1'-C2'	-8.24	102.94	112.00
57	DA	2497	A	P-O3'-C3'	8.23	129.58	119.70
57	DA	2085	U	O4'-C1'-N1	8.23	114.79	108.20
22	BA	996	A	P-O3'-C3'	-8.23	109.82	119.70
53	CA	430	A	P-O3'-C3'	-8.23	109.83	119.70
57	DA	1386	C	N1-C1'-C2'	-8.23	102.95	112.00
1	AA	531	U	P-O3'-C3'	8.21	129.55	119.70
22	BA	705	A	P-O3'-C3'	-8.21	109.85	119.70
22	BA	1273	U	P-O5'-C5'	-8.20	107.78	120.90
57	DA	1476	U	O4'-C1'-N1	8.20	114.76	108.20
57	DA	2490	G	P-O3'-C3'	8.20	129.53	119.70
22	BA	2543	G	P-O3'-C3'	-8.19	109.87	119.70
22	BA	250	G	P-O3'-C3'	-8.19	109.87	119.70
1	AA	1382	C	P-O3'-C3'	-8.19	109.88	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1565	C	N1-C1'-C2'	8.19	124.64	114.00
22	BA	1626	A	P-O3'-C3'	8.18	129.51	119.70
57	DA	2493	U	P-O3'-C3'	-8.18	109.89	119.70
22	BA	1675	C	N1-C1'-C2'	-8.18	103.01	112.00
57	DA	2034	U	N1-C1'-C2'	-8.17	103.01	112.00
22	BA	491	G	P-O3'-C3'	-8.17	109.90	119.70
22	BA	1398	C	N1-C1'-C2'	-8.16	103.03	112.00
53	CA	1455	G	P-O3'-C3'	-8.16	109.91	119.70
57	DA	985	C	N1-C1'-C2'	-8.15	103.03	112.00
53	CA	374	A	P-O3'-C3'	-8.14	109.93	119.70
57	DA	2338	C	O4'-C1'-N1	8.13	114.71	108.20
53	CA	253	A	P-O3'-C3'	-8.13	109.95	119.70
1	AA	815	A	P-O3'-C3'	8.12	129.45	119.70
22	BA	1866	A	P-O3'-C3'	-8.12	109.96	119.70
57	DA	1558	C	P-O3'-C3'	8.12	129.44	119.70
22	BA	1045	C	O4'-C1'-N1	8.12	114.69	108.20
57	DA	2150	C	N1-C1'-C2'	-8.12	103.07	112.00
57	DA	739	A	P-O3'-C3'	8.11	129.44	119.70
22	BA	1980	G	P-O3'-C3'	8.11	129.43	119.70
1	AA	1380	U	P-O3'-C3'	8.11	129.43	119.70
23	BB	67	G	P-O3'-C3'	-8.11	109.97	119.70
57	DA	704	G	P-O3'-C3'	8.11	129.43	119.70
22	BA	866	A	P-O3'-C3'	-8.10	109.98	119.70
57	DA	481	G	O4'-C1'-N9	8.10	114.68	108.20
53	CA	1447	A	P-O3'-C3'	8.10	129.42	119.70
22	BA	821	A	P-O3'-C3'	8.09	129.41	119.70
53	CA	1498	U	P-O3'-C3'	8.08	129.40	119.70
57	DA	1019	U	O4'-C1'-N1	8.08	114.67	108.20
22	BA	2250	G	C5-N7-C8	-8.08	100.26	104.30
22	BA	2250	G	C4-C5-N7	8.08	114.03	110.80
57	DA	271	G	P-O3'-C3'	8.06	129.37	119.70
57	DA	669	G	P-O3'-C3'	8.06	129.37	119.70
22	BA	242	G	P-O3'-C3'	8.05	129.36	119.70
22	BA	620	G	P-O3'-C3'	8.05	129.36	119.70
53	CA	115	G	P-O3'-C3'	8.05	129.36	119.70
22	BA	1962	C	P-O3'-C3'	8.05	129.36	119.70
57	DA	807	U	O4'-C1'-N1	8.05	114.64	108.20
57	DA	1145	C	O4'-C1'-N1	8.04	114.63	108.20
22	BA	1394	U	P-O3'-C3'	8.03	129.34	119.70
1	AA	373	A	P-O3'-C3'	-8.03	110.06	119.70
22	BA	33	C	P-O3'-C3'	8.03	129.33	119.70
22	BA	1273	U	N1-C1'-C2'	-8.02	103.17	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	336	C	P-O3'-C3'	-8.02	110.07	119.70
57	DA	2136	G	P-O3'-C3'	-8.02	110.08	119.70
23	BB	66	A	P-O3'-C3'	8.01	129.32	119.70
57	DA	2875	C	O4'-C1'-N1	8.01	114.61	108.20
53	CA	213	G	P-O3'-C3'	-8.01	110.09	119.70
1	AA	282	A	P-O3'-C3'	-8.01	110.09	119.70
22	BA	791	C	O4'-C1'-N1	8.01	114.61	108.20
57	DA	2314	A	P-O3'-C3'	-8.00	110.10	119.70
1	AA	537	G	P-O3'-C3'	-8.00	110.11	119.70
57	DA	1832	C	O4'-C1'-N1	7.99	114.59	108.20
57	DA	2036	C	N1-C1'-C2'	-7.99	103.22	112.00
1	AA	451	A	P-O3'-C3'	7.98	129.28	119.70
22	BA	310	A	P-O3'-C3'	7.97	129.27	119.70
22	BA	616	A	P-O3'-C3'	-7.97	110.14	119.70
57	DA	2836	U	N1-C1'-C2'	-7.97	103.23	112.00
1	AA	1162	C	P-O3'-C3'	-7.96	110.14	119.70
22	BA	2732	G	P-O3'-C3'	7.96	129.26	119.70
22	BA	1900	A	P-O3'-C3'	7.96	129.25	119.70
53	CA	481	G	P-O3'-C3'	7.95	129.24	119.70
53	CA	961	U	N1-C1'-C2'	-7.94	103.26	112.00
22	BA	2603	G	P-O3'-C3'	-7.94	110.17	119.70
57	DA	2143	C	P-O3'-C3'	7.94	129.23	119.70
57	DA	1136	G	P-O3'-C3'	-7.94	110.18	119.70
22	BA	1249	U	O4'-C1'-N1	-7.93	101.86	108.20
22	BA	1865	U	N1-C1'-C2'	7.93	124.30	114.00
22	BA	2800	A	O3'-P-O5'	-7.92	88.94	104.00
57	DA	2267	A	P-O3'-C3'	-7.92	110.19	119.70
1	AA	935	A	P-O3'-C3'	-7.92	110.20	119.70
22	BA	1965	C	P-O3'-C3'	-7.92	110.20	119.70
1	AA	884	U	P-O3'-C3'	7.91	129.19	119.70
57	DA	867	C	O4'-C1'-N1	7.91	114.53	108.20
57	DA	1416	G	P-O3'-C3'	7.91	129.19	119.70
1	AA	1448	C	N1-C1'-C2'	-7.91	103.30	112.00
22	BA	2520	C	P-O3'-C3'	-7.91	110.21	119.70
22	BA	2468	A	P-O3'-C3'	7.91	129.19	119.70
22	BA	1839	G	P-O3'-C3'	-7.91	110.21	119.70
53	CA	277	C	P-O3'-C3'	-7.90	110.22	119.70
22	BA	2490	G	P-O3'-C3'	7.90	129.18	119.70
57	DA	2334	U	N1-C1'-C2'	7.89	124.26	114.00
57	DA	606	U	O4'-C1'-N1	7.89	114.51	108.20
22	BA	1458	U	P-O3'-C3'	7.88	129.16	119.70
53	CA	1301	U	P-O3'-C3'	-7.88	110.24	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1347	A	P-O3'-C3'	-7.88	110.24	119.70
1	AA	821	G	P-O3'-C3'	-7.88	110.25	119.70
57	DA	224	U	P-O3'-C3'	-7.88	110.25	119.70
57	DA	1972	G	P-O3'-C3'	-7.88	110.25	119.70
57	DA	1636	U	N1-C1'-C2'	-7.88	103.34	112.00
57	DA	973	A	P-O3'-C3'	7.87	129.14	119.70
22	BA	764	A	O4'-C1'-N9	7.87	114.49	108.20
22	BA	1555	G	P-O3'-C3'	-7.86	110.26	119.70
57	DA	1998	A	P-O3'-C3'	-7.86	110.27	119.70
53	CA	13	U	P-O3'-C3'	7.86	129.13	119.70
1	AA	500	G	P-O3'-C3'	-7.86	110.27	119.70
22	BA	858	G	O4'-C1'-N9	7.86	114.49	108.20
1	AA	85	U	P-O3'-C3'	7.86	129.13	119.70
57	DA	1915	U	N1-C1'-C2'	-7.86	103.36	112.00
22	BA	1266	G	P-O3'-C3'	7.85	129.12	119.70
22	BA	774	G	P-O3'-C3'	7.85	129.12	119.70
22	BA	2543	G	P-O5'-C5'	-7.85	108.34	120.90
57	DA	1821	A	P-O3'-C3'	-7.85	110.28	119.70
1	AA	9	G	P-O3'-C3'	-7.84	110.29	119.70
22	BA	1942	C	P-O3'-C3'	-7.84	110.29	119.70
57	DA	775	G	P-O3'-C3'	7.83	129.09	119.70
1	AA	95	C	P-O3'-C3'	-7.83	110.31	119.70
1	AA	480	U	O4'-C1'-N1	7.83	114.46	108.20
22	BA	2581	G	O4'-C1'-N9	7.82	114.46	108.20
53	CA	596	A	P-O3'-C3'	-7.82	110.31	119.70
53	CA	889	A	P-O3'-C3'	7.82	129.09	119.70
22	BA	812	C	P-O3'-C3'	-7.82	110.32	119.70
22	BA	1782	U	N1-C1'-C2'	-7.82	103.40	112.00
1	AA	1320	C	P-O3'-C3'	-7.81	110.32	119.70
22	BA	52	A	P-O3'-C3'	-7.81	110.32	119.70
22	BA	1706	C	O4'-C1'-N1	7.81	114.45	108.20
57	DA	1970	A	P-O3'-C3'	7.81	129.07	119.70
57	DA	1941	C	P-O3'-C3'	-7.80	110.33	119.70
57	DA	484	C	O4'-C1'-N1	7.80	114.44	108.20
53	CA	734	G	P-O3'-C3'	-7.80	110.34	119.70
57	DA	1971	U	O4'-C1'-N1	7.80	114.44	108.20
22	BA	2517	C	P-O3'-C3'	7.79	129.05	119.70
57	DA	370	G	P-O3'-C3'	7.79	129.05	119.70
53	CA	559	A	P-O3'-C3'	7.79	129.05	119.70
1	AA	374	A	P-O3'-C3'	-7.79	110.35	119.70
1	AA	1124	G	P-O3'-C3'	7.79	129.04	119.70
1	AA	972	C	O4'-C1'-N1	7.79	114.43	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1804	C	P-O3'-C3'	-7.79	110.36	119.70
53	CA	110	C	N1-C1'-C2'	-7.78	103.44	112.00
53	CA	1141	C	N1-C1'-C2'	-7.78	103.44	112.00
57	DA	2286	G	P-O3'-C3'	7.78	129.03	119.70
57	DA	304	U	O4'-C1'-N1	7.77	114.41	108.20
22	BA	1058	U	O4'-C1'-N1	7.76	114.41	108.20
22	BA	126	A	P-O3'-C3'	-7.76	110.39	119.70
2	AB	146	SER	O-C-N	-7.75	110.29	122.70
57	DA	623	C	O4'-C1'-N1	7.75	114.40	108.20
1	AA	1362	A	O4'-C1'-N9	7.75	114.40	108.20
22	BA	1782	U	P-O3'-C3'	-7.75	110.41	119.70
57	DA	2582	G	P-O3'-C3'	-7.75	110.41	119.70
22	BA	459	U	N1-C1'-C2'	-7.74	103.48	112.00
22	BA	1802	A	P-O3'-C3'	-7.74	110.41	119.70
57	DA	121	G	P-O3'-C3'	-7.74	110.41	119.70
1	AA	1502	A	P-O3'-C3'	7.74	128.99	119.70
53	CA	348	G	P-O3'-C3'	-7.74	110.42	119.70
57	DA	1272	A	P-O3'-C3'	7.73	128.98	119.70
57	DA	1405	U	O4'-C1'-N1	7.73	114.39	108.20
22	BA	2238	G	P-O3'-C3'	7.73	128.98	119.70
22	BA	1541	C	P-O3'-C3'	-7.73	110.42	119.70
57	DA	794	A	P-O3'-C3'	-7.72	110.43	119.70
1	AA	816	A	P-O3'-C3'	-7.72	110.43	119.70
57	DA	1931	U	N1-C1'-C2'	-7.72	103.51	112.00
57	DA	774	G	P-O3'-C3'	7.71	128.96	119.70
1	AA	486	U	N1-C1'-C2'	-7.71	103.53	112.00
22	BA	790	U	O4'-C1'-N1	7.71	114.36	108.20
22	BA	613	A	P-O3'-C3'	7.70	128.94	119.70
57	DA	1304	A	P-O3'-C3'	-7.70	110.46	119.70
57	DA	990	A	P-O3'-C3'	-7.69	110.47	119.70
22	BA	1716	U	N1-C1'-C2'	-7.69	103.54	112.00
22	BA	2324	U	N1-C1'-C2'	7.69	124.00	114.00
57	DA	1265	A	P-O3'-C3'	7.69	128.93	119.70
22	BA	396	G	P-O3'-C3'	-7.69	110.47	119.70
58	DB	107	G	OP1-P-O3'	7.68	122.10	105.20
57	DA	1991	U	O4'-C1'-N1	-7.68	102.06	108.20
53	CA	575	G	P-O3'-C3'	7.68	128.92	119.70
53	CA	1332	A	P-O3'-C3'	-7.68	110.48	119.70
57	DA	1013	C	P-O3'-C3'	-7.67	110.49	119.70
22	BA	1695	G	P-O3'-C3'	-7.67	110.50	119.70
57	DA	534	U	P-O3'-C3'	-7.67	110.49	119.70
57	DA	2251	G	P-O3'-C3'	-7.67	110.50	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	216	U	P-O3'-C3'	-7.66	110.50	119.70
53	CA	247	G	P-O3'-C3'	-7.66	110.51	119.70
22	BA	62	U	P-O3'-C3'	7.65	128.88	119.70
22	BA	1499	C	P-O3'-C3'	-7.65	110.52	119.70
23	BB	25	U	N1-C1'-C2'	-7.65	103.59	112.00
53	CA	486	U	P-O5'-C5'	-7.64	108.67	120.90
1	AA	439	U	P-O3'-C3'	-7.64	110.53	119.70
22	BA	1884	G	O4'-C1'-N9	7.64	114.31	108.20
22	BA	984	A	C2-N3-C4	-7.64	106.78	110.60
53	CA	381	C	P-O3'-C3'	7.64	128.87	119.70
22	BA	215	G	P-O3'-C3'	7.63	128.86	119.70
22	BA	2673	G	P-O3'-C3'	-7.63	110.54	119.70
22	BA	587	C	N1-C1'-C2'	7.63	123.92	114.00
57	DA	1931	U	P-O3'-C3'	-7.63	110.54	119.70
23	BB	42	C	N1-C1'-C2'	-7.63	103.61	112.00
53	CA	184	G	P-O3'-C3'	-7.63	110.55	119.70
1	AA	1161	C	N1-C1'-C2'	-7.63	103.61	112.00
57	DA	1126	A	P-O3'-C3'	7.63	128.85	119.70
22	BA	2093	G	N9-C1'-C2'	-7.62	103.61	112.00
53	CA	238	A	P-O3'-C3'	7.62	128.85	119.70
22	BA	996	A	O5'-P-OP2	-7.62	98.84	105.70
1	AA	1256	A	P-O3'-C3'	7.62	128.84	119.70
22	BA	575	A	P-O3'-C3'	-7.62	110.56	119.70
53	CA	1282	C	P-O3'-C3'	-7.62	110.56	119.70
22	BA	121	G	P-O3'-C3'	-7.61	110.56	119.70
22	BA	2503	A	P-O3'-C3'	7.61	128.84	119.70
53	CA	68	G	P-O3'-C3'	-7.61	110.56	119.70
1	AA	94	G	P-O3'-C3'	7.60	128.82	119.70
57	DA	865	C	P-O3'-C3'	7.60	128.82	119.70
22	BA	741	U	P-O5'-C5'	-7.60	108.74	120.90
57	DA	2612	C	O4'-C1'-N1	7.60	114.28	108.20
57	DA	1965	C	N1-C1'-C2'	-7.60	103.64	112.00
23	BB	14	U	P-O3'-C3'	7.59	128.81	119.70
23	BB	12	C	P-O3'-C3'	7.59	128.81	119.70
22	BA	2645	G	O4'-C1'-N9	7.59	114.27	108.20
22	BA	1689	A	P-O3'-C3'	7.59	128.80	119.70
53	CA	793	U	P-O3'-C3'	-7.58	110.60	119.70
53	CA	802	A	P-O3'-C3'	7.58	128.80	119.70
53	CA	52	C	N1-C1'-C2'	-7.58	103.67	112.00
57	DA	2542	A	P-O3'-C3'	7.57	128.78	119.70
22	BA	2866	U	O4'-C1'-N1	7.57	114.25	108.20
1	AA	960	U	N1-C1'-C2'	7.56	123.83	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1416	G	P-O3'-C3'	7.56	128.77	119.70
57	DA	1483	G	P-O3'-C3'	-7.56	110.63	119.70
57	DA	913	U	P-O3'-C3'	7.55	128.76	119.70
58	DB	90	C	P-O3'-C3'	-7.55	110.64	119.70
57	DA	946	C	O4'-C1'-N1	7.55	114.24	108.20
1	AA	575	G	P-O3'-C3'	7.55	128.76	119.70
1	AA	174	A	P-O3'-C3'	-7.55	110.64	119.70
57	DA	2667	C	N1-C1'-C2'	-7.55	103.70	112.00
22	BA	1627	G	P-O3'-C3'	-7.55	110.64	119.70
53	CA	508	U	P-O3'-C3'	7.55	128.76	119.70
57	DA	763	G	P-O3'-C3'	-7.55	110.64	119.70
57	DA	1079	C	N1-C1'-C2'	-7.54	103.70	112.00
57	DA	2683	C	N1-C1'-C2'	-7.54	103.71	112.00
53	CA	218	U	O4'-C1'-N1	7.54	114.23	108.20
1	AA	347	G	P-O3'-C3'	-7.53	110.66	119.70
22	BA	2092	U	OP1-P-O3'	-7.53	88.63	105.20
57	DA	1247	A	P-O3'-C3'	7.53	128.74	119.70
57	DA	1427	A	P-O3'-C3'	7.53	128.74	119.70
57	DA	2609	U	P-O3'-C3'	7.53	128.74	119.70
58	DB	107	G	P-O3'-C3'	7.53	128.74	119.70
22	BA	739	A	P-O3'-C3'	7.53	128.74	119.70
57	DA	411	G	P-O3'-C3'	7.53	128.73	119.70
22	BA	1821	A	P-O3'-C3'	-7.52	110.67	119.70
57	DA	334	C	O4'-C1'-N1	7.52	114.22	108.20
1	AA	564	C	N1-C1'-C2'	-7.52	103.73	112.00
53	CA	641	U	P-O3'-C3'	7.52	128.72	119.70
22	BA	1956	U	N1-C1'-C2'	-7.51	103.74	112.00
57	DA	622	G	P-O3'-C3'	-7.51	110.69	119.70
22	BA	2336	A	P-O3'-C3'	7.51	128.71	119.70
22	BA	1181	U	O4'-C1'-N1	7.50	114.20	108.20
1	AA	1087	G	P-O3'-C3'	-7.50	110.70	119.70
1	AA	1200	C	P-O3'-C3'	7.50	128.70	119.70
22	BA	2200	C	P-O3'-C3'	-7.50	110.70	119.70
57	DA	2240	U	O4'-C1'-N1	7.50	114.20	108.20
22	BA	2654	A	P-O3'-C3'	7.49	128.69	119.70
53	CA	122	G	P-O3'-C3'	-7.49	110.71	119.70
57	DA	2312	U	P-O3'-C3'	-7.49	110.71	119.70
57	DA	1080	A	P-O3'-C3'	-7.49	110.71	119.70
22	BA	1615	C	P-O3'-C3'	7.49	128.69	119.70
22	BA	811	U	O4'-C1'-N1	7.49	114.19	108.20
57	DA	2217	G	P-O3'-C3'	-7.49	110.72	119.70
53	CA	1201	A	P-O3'-C3'	7.48	128.68	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	248	C	O4'-C1'-N1	7.48	114.19	108.20
1	AA	91	U	N1-C1'-C2'	-7.48	103.77	112.00
53	CA	86	G	P-O3'-C3'	7.48	128.68	119.70
22	BA	1181	U	N1-C1'-C2'	-7.48	103.77	112.00
57	DA	1291	C	N1-C1'-C2'	-7.48	103.77	112.00
53	CA	96	U	P-O3'-C3'	-7.47	110.73	119.70
22	BA	206	U	N1-C1'-C2'	-7.47	103.78	112.00
57	DA	1560	G	P-O3'-C3'	-7.47	110.73	119.70
53	CA	70	U	O4'-C1'-N1	7.47	114.18	108.20
1	AA	1433	A	P-O3'-C3'	-7.47	110.74	119.70
1	AA	275	G	P-O3'-C3'	-7.47	110.74	119.70
22	BA	1020	A	P-O3'-C3'	7.46	128.65	119.70
57	DA	2283	C	P-O3'-C3'	-7.46	110.75	119.70
57	DA	2896	C	P-O3'-C3'	-7.46	110.75	119.70
53	CA	1227	A	P-O3'-C3'	7.45	128.64	119.70
1	AA	511	C	P-O3'-C3'	7.45	128.64	119.70
22	BA	373	U	P-O3'-C3'	-7.45	110.76	119.70
57	DA	1779	U	O4'-C1'-N1	7.45	114.16	108.20
57	DA	2895	G	P-O3'-C3'	-7.45	110.76	119.70
53	CA	1167	A	P-O3'-C3'	7.45	128.64	119.70
22	BA	1185	G	P-O3'-C3'	-7.45	110.77	119.70
22	BA	2383	G	P-O3'-C3'	-7.44	110.77	119.70
53	CA	1380	U	P-O3'-C3'	7.44	128.63	119.70
22	BA	1809	A	P-O5'-C5'	-7.44	108.99	120.90
53	CA	1397	C	N1-C1'-C2'	-7.44	103.82	112.00
53	CA	486	U	N1-C1'-C2'	-7.44	103.82	112.00
53	CA	382	A	P-O3'-C3'	7.43	128.62	119.70
22	BA	1331	G	P-O3'-C3'	-7.43	110.78	119.70
22	BA	2629	U	O4'-C1'-N1	-7.43	102.26	108.20
22	BA	854	C	N1-C1'-C2'	-7.42	103.83	112.00
57	DA	1286	A	P-O3'-C3'	7.42	128.61	119.70
57	DA	1291	C	O4'-C1'-N1	7.42	114.14	108.20
1	AA	534	U	N1-C1'-C2'	-7.42	103.84	112.00
1	AA	1336	C	O4'-C1'-N1	7.42	114.13	108.20
58	DB	40	U	P-O3'-C3'	7.41	128.59	119.70
1	AA	1345	U	P-O3'-C3'	7.41	128.59	119.70
22	BA	1919	A	N9-C1'-C2'	-7.41	103.85	112.00
1	AA	1183	U	N1-C1'-C2'	-7.41	103.85	112.00
22	BA	2226	C	P-O3'-C3'	-7.41	110.81	119.70
57	DA	2392	A	P-O3'-C3'	-7.41	110.81	119.70
57	DA	2585	U	P-O3'-C3'	7.41	128.59	119.70
2	AB	107	ARG	O-C-N	-7.41	110.85	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	428	G	O4'-C1'-N9	7.40	114.12	108.20
22	BA	671	C	O4'-C1'-N1	7.40	114.12	108.20
22	BA	2504	U	N1-C1'-C2'	-7.40	103.86	112.00
22	BA	385	C	P-O3'-C3'	7.40	128.58	119.70
57	DA	2881	U	P-O3'-C3'	-7.39	110.83	119.70
1	AA	754	C	N1-C1'-C2'	-7.39	103.87	112.00
22	BA	2797	U	N1-C1'-C2'	7.39	123.61	114.00
22	BA	165	A	P-O3'-C3'	-7.39	110.84	119.70
22	BA	266	G	P-O3'-C3'	-7.38	110.84	119.70
22	BA	1249	U	N1-C1'-C2'	-7.38	103.88	112.00
22	BA	2282	G	P-O3'-C3'	7.38	128.56	119.70
57	DA	2689	U	O4'-C1'-N1	7.38	114.10	108.20
1	AA	1181	G	P-O3'-C3'	7.38	128.55	119.70
22	BA	2426	A	P-O3'-C3'	7.38	128.55	119.70
22	BA	1865	U	P-O3'-C3'	7.37	128.55	119.70
22	BA	2423	U	P-O3'-C3'	7.37	128.54	119.70
57	DA	1047	G	P-O3'-C3'	7.37	128.54	119.70
22	BA	916	G	P-O3'-C3'	-7.37	110.86	119.70
57	DA	801	G	P-O3'-C3'	7.37	128.54	119.70
22	BA	1386	C	N1-C1'-C2'	-7.36	103.90	112.00
22	BA	790	U	N1-C1'-C2'	-7.36	103.90	112.00
22	BA	1675	C	P-O3'-C3'	-7.36	110.87	119.70
57	DA	964	C	O4'-C1'-N1	7.36	114.09	108.20
22	BA	333	G	P-O3'-C3'	-7.36	110.87	119.70
22	BA	2447	G	O4'-C1'-N9	7.36	114.09	108.20
53	CA	87	C	N1-C1'-C2'	-7.36	103.91	112.00
1	AA	245	U	N1-C1'-C2'	-7.35	103.91	112.00
57	DA	606	U	P-O3'-C3'	-7.35	110.88	119.70
1	AA	1505	G	P-O3'-C3'	-7.34	110.89	119.70
53	CA	717	U	P-O3'-C3'	7.34	128.51	119.70
1	AA	1101	A	P-O3'-C3'	7.34	128.51	119.70
57	DA	1255	U	O4'-C1'-N1	7.33	114.07	108.20
22	BA	204	A	P-O3'-C3'	7.33	128.50	119.70
22	BA	1885	A	P-O3'-C3'	-7.33	110.90	119.70
22	BA	2013	A	P-O3'-C3'	-7.33	110.90	119.70
53	CA	1143	G	P-O3'-C3'	-7.32	110.91	119.70
22	BA	1333	G	P-O3'-C3'	-7.32	110.92	119.70
22	BA	2199	A	P-O3'-C3'	-7.32	110.92	119.70
22	BA	2542	A	O4'-C1'-N9	7.32	114.05	108.20
22	BA	2629	U	N1-C1'-C2'	7.32	123.51	114.00
22	BA	2053	G	O3'-P-O5'	-7.31	90.10	104.00
1	AA	722	G	P-O3'-C3'	-7.31	110.93	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	528	A	C5-N7-C8	-7.31	100.25	103.90
22	BA	382	A	P-O3'-C3'	-7.31	110.93	119.70
22	BA	1682	G	P-O3'-C3'	-7.31	110.93	119.70
57	DA	459	U	N1-C1'-C2'	-7.31	103.96	112.00
22	BA	1706	C	P-O3'-C3'	7.30	128.47	119.70
53	CA	979	C	P-O3'-C3'	-7.30	110.93	119.70
53	CA	1142	G	P-O3'-C3'	-7.30	110.94	119.70
22	BA	1654	A	C3'-C2'-C1'	7.30	107.34	101.50
53	CA	517	G	P-O3'-C3'	7.29	128.45	119.70
57	DA	916	G	P-O3'-C3'	-7.29	110.95	119.70
57	DA	2384	U	N1-C1'-C2'	7.29	123.48	114.00
57	DA	404	A	P-O3'-C3'	7.29	128.45	119.70
22	BA	1942	C	P-O5'-C5'	-7.29	109.24	120.90
57	DA	1397	U	N1-C1'-C2'	7.29	123.48	114.00
22	BA	2067	G	P-O3'-C3'	7.29	128.45	119.70
1	AA	1054	C	P-O3'-C3'	7.29	128.44	119.70
22	BA	1942	C	N1-C1'-C2'	-7.29	103.98	112.00
57	DA	961	C	N1-C1'-C2'	7.29	123.47	114.00
22	BA	1272	A	P-O3'-C3'	7.28	128.44	119.70
57	DA	2881	U	O4'-C1'-N1	7.28	114.03	108.20
53	CA	1383	C	P-O3'-C3'	-7.28	110.97	119.70
57	DA	2830	C	O4'-C1'-N1	7.28	114.02	108.20
57	DA	143	C	N1-C1'-C2'	-7.28	104.00	112.00
22	BA	2322	A	P-O3'-C3'	-7.27	110.97	119.70
22	BA	2202	U	O4'-C1'-N1	7.27	114.02	108.20
22	BA	434	U	P-O3'-C3'	7.27	128.42	119.70
22	BA	479	A	P-O3'-C3'	7.27	128.42	119.70
53	CA	1381	U	P-O3'-C3'	-7.26	110.98	119.70
53	CA	497	G	P-O3'-C3'	-7.26	110.99	119.70
22	BA	1273	U	P-O3'-C3'	-7.26	110.99	119.70
53	CA	209	U	P-O3'-C3'	7.26	128.41	119.70
57	DA	2210	U	P-O3'-C3'	7.25	128.40	119.70
1	AA	686	U	P-O3'-C3'	7.25	128.40	119.70
53	CA	173	U	P-O3'-C3'	7.25	128.40	119.70
53	CA	453	G	P-O3'-C3'	-7.24	111.01	119.70
57	DA	868	U	P-O3'-C3'	-7.24	111.01	119.70
22	BA	566	U	P-O5'-C5'	-7.24	109.32	120.90
53	CA	92	U	P-O3'-C3'	-7.24	111.01	119.70
53	CA	1383	C	O4'-C1'-N1	7.23	113.99	108.20
57	DA	991	C	P-O3'-C3'	-7.23	111.02	119.70
1	AA	1085	U	P-O3'-C3'	7.23	128.38	119.70
57	DA	573	U	O4'-C1'-N1	7.23	113.99	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1558	C	P-O3'-C3'	7.23	128.38	119.70
22	BA	2047	C	O4'-C1'-N1	-7.23	102.42	108.20
1	AA	934	C	O4'-C1'-N1	7.23	113.98	108.20
53	CA	536	C	P-O3'-C3'	-7.22	111.03	119.70
22	BA	1759	A	P-O3'-C3'	-7.22	111.03	119.70
22	BA	163	C	N1-C1'-C2'	-7.22	104.06	112.00
57	DA	1460	U	P-O3'-C3'	7.22	128.36	119.70
22	BA	1026	G	P-O3'-C3'	-7.21	111.05	119.70
53	CA	1140	C	N1-C1'-C2'	-7.21	104.07	112.00
22	BA	1538	G	P-O3'-C3'	-7.20	111.06	119.70
57	DA	2728	U	O4'-C1'-N1	7.20	113.96	108.20
1	AA	485	U	P-O3'-C3'	7.20	128.34	119.70
1	AA	519	C	N1-C1'-C2'	-7.20	104.08	112.00
53	CA	1398	A	P-O3'-C3'	-7.20	111.06	119.70
1	AA	1068	G	P-O3'-C3'	-7.20	111.07	119.70
58	DB	111	U	N1-C1'-C2'	-7.19	104.09	112.00
22	BA	474	G	P-O3'-C3'	7.19	128.33	119.70
53	CA	513	C	O4'-C1'-N1	7.19	113.95	108.20
22	BA	1700	A	P-O3'-C3'	-7.19	111.07	119.70
1	AA	73	C	N1-C1'-C2'	-7.19	104.09	112.00
57	DA	637	A	P-O3'-C3'	7.19	128.33	119.70
53	CA	132	C	P-O3'-C3'	-7.19	111.08	119.70
1	AA	467	U	O4'-C1'-N1	7.18	113.95	108.20
57	DA	1569	A	P-O3'-C3'	-7.18	111.08	119.70
1	AA	122	G	P-O3'-C3'	-7.18	111.08	119.70
22	BA	1380	G	P-O3'-C3'	-7.18	111.08	119.70
22	BA	1714	U	O4'-C1'-N1	-7.18	102.46	108.20
57	DA	2611	C	P-O3'-C3'	-7.18	111.08	119.70
1	AA	1394	A	P-O3'-C3'	7.17	128.31	119.70
57	DA	1064	C	P-O3'-C3'	-7.17	111.09	119.70
57	DA	2874	C	N1-C1'-C2'	-7.17	104.11	112.00
22	BA	1386	C	P-O3'-C3'	-7.17	111.10	119.70
22	BA	177	G	P-O3'-C3'	7.17	128.30	119.70
53	CA	248	C	P-O3'-C3'	-7.16	111.11	119.70
57	DA	2498	C	P-O3'-C3'	-7.16	111.11	119.70
53	CA	654	G	P-O3'-C3'	-7.15	111.12	119.70
22	BA	958	U	P-O5'-C5'	-7.15	109.46	120.90
53	CA	421	U	P-O3'-C3'	7.15	128.28	119.70
57	DA	2501	C	O4'-C1'-N1	7.15	113.92	108.20
57	DA	1998	A	N9-C1'-C2'	-7.15	104.14	112.00
22	BA	137	U	O4'-C1'-N1	-7.14	102.49	108.20
57	DA	1475	G	P-O3'-C3'	7.14	128.27	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1497	U	P-O3'-C3'	7.14	128.27	119.70
1	AA	173	U	P-O3'-C3'	7.14	128.26	119.70
22	BA	61	C	N1-C1'-C2'	-7.14	104.15	112.00
57	DA	846	U	O4'-C1'-N1	7.13	113.91	108.20
1	AA	961	U	P-O3'-C3'	-7.13	111.14	119.70
22	BA	1146	C	O4'-C1'-N1	7.13	113.91	108.20
57	DA	1982	U	P-O3'-C3'	-7.13	111.15	119.70
22	BA	1732	C	N1-C1'-C2'	7.12	123.26	114.00
22	BA	2836	U	N1-C1'-C2'	-7.12	104.17	112.00
1	AA	247	G	N9-C1'-C2'	-7.12	104.17	112.00
22	BA	1901	A	P-O3'-C3'	-7.12	111.16	119.70
57	DA	762	U	P-O3'-C3'	7.11	128.24	119.70
57	DA	2149	U	O4'-C1'-N1	7.11	113.89	108.20
57	DA	623	C	P-O3'-C3'	-7.11	111.17	119.70
57	DA	702	U	O4'-C1'-N1	7.10	113.88	108.20
1	AA	934	C	P-O3'-C3'	7.09	128.22	119.70
57	DA	2387	U	N1-C1'-C2'	-7.09	104.20	112.00
57	DA	2289	G	P-O3'-C3'	-7.09	111.19	119.70
57	DA	2299	U	P-O3'-C3'	-7.09	111.19	119.70
22	BA	958	U	N1-C1'-C2'	-7.09	104.20	112.00
1	AA	422	C	N1-C1'-C2'	7.09	123.21	114.00
22	BA	1918	A	P-O3'-C3'	7.09	128.20	119.70
53	CA	1064	G	P-O3'-C3'	7.08	128.20	119.70
22	BA	1734	G	P-O3'-C3'	-7.08	111.21	119.70
57	DA	2299	U	O4'-C1'-N1	7.08	113.86	108.20
53	CA	70	U	P-O3'-C3'	7.07	128.19	119.70
23	BB	88	C	O4'-C1'-N1	-7.07	102.54	108.20
53	CA	174	A	P-O3'-C3'	-7.07	111.22	119.70
22	BA	1967	C	P-O3'-C3'	-7.07	111.22	119.70
22	BA	2149	U	N1-C1'-C2'	-7.07	104.23	112.00
53	CA	1230	C	P-O3'-C3'	-7.07	111.22	119.70
23	BB	67	G	P-O5'-C5'	-7.06	109.60	120.90
25	BD	151	THR	C-N-CD	7.06	143.23	128.40
22	BA	980	A	P-O3'-C3'	-7.06	111.23	119.70
22	BA	2034	U	N1-C1'-C2'	-7.06	104.24	112.00
1	AA	439	U	N1-C1'-C2'	-7.05	104.24	112.00
22	BA	746	U	P-O3'-C3'	7.05	128.16	119.70
22	BA	498	G	P-O5'-C5'	-7.05	109.62	120.90
22	BA	2384	U	P-O3'-C3'	7.05	128.16	119.70
22	BA	2239	G	P-O5'-C5'	-7.04	109.63	120.90
22	BA	528	A	N1-C6-N6	7.04	122.83	118.60
22	BA	1330	C	P-O3'-C3'	-7.04	111.25	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1053	G	P-O3'-C3'	7.04	128.15	119.70
57	DA	1378	A	P-O3'-C3'	7.04	128.15	119.70
57	DA	1920	C	P-O3'-C3'	-7.04	111.25	119.70
53	CA	705	G	P-O3'-C3'	-7.04	111.25	119.70
57	DA	235	U	O4'-C1'-N1	7.03	113.83	108.20
22	BA	2752	C	P-O3'-C3'	-7.03	111.26	119.70
22	BA	2824	C	N3-C4-C5	-7.03	119.09	121.90
57	DA	2425	A	P-O3'-C3'	7.03	128.13	119.70
57	DA	2450	A	P-O3'-C3'	-7.03	111.27	119.70
22	BA	1603	A	P-O5'-C5'	-7.02	109.66	120.90
57	DA	1717	A	P-O3'-C3'	-7.02	111.28	119.70
57	DA	1739	A	P-O3'-C3'	-7.02	111.28	119.70
22	BA	1812	U	O4'-C1'-N1	7.01	113.81	108.20
53	CA	15	G	P-O3'-C3'	-7.01	111.29	119.70
57	DA	2150	C	O4'-C1'-N1	7.01	113.81	108.20
57	DA	1615	C	N1-C1'-C2'	7.01	123.11	114.00
57	DA	1626	A	P-O3'-C3'	7.01	128.11	119.70
1	AA	372	C	P-O3'-C3'	7.00	128.10	119.70
22	BA	1110	G	P-O3'-C3'	7.00	128.10	119.70
53	CA	240	G	P-O3'-C3'	-7.00	111.30	119.70
53	CA	1367	C	O4'-C1'-N1	7.00	113.80	108.20
57	DA	421	C	P-O3'-C3'	6.99	128.09	119.70
22	BA	528	A	P-O3'-C3'	-6.99	111.31	119.70
57	DA	1206	G	P-O3'-C3'	-6.99	111.31	119.70
1	AA	267	C	P-O5'-C5'	-6.99	109.72	120.90
53	CA	67	C	O4'-C1'-N1	6.98	113.79	108.20
53	CA	245	U	P-O3'-C3'	-6.98	111.33	119.70
57	DA	353	C	P-O3'-C3'	6.98	128.07	119.70
53	CA	1147	C	P-O3'-C3'	-6.97	111.34	119.70
22	BA	788	A	P-O3'-C3'	6.96	128.06	119.70
22	BA	1461	C	O4'-C1'-N1	6.96	113.77	108.20
53	CA	643	C	P-O3'-C3'	-6.96	111.34	119.70
22	BA	1838	C	P-O3'-C3'	6.96	128.05	119.70
53	CA	686	U	O4'-C1'-N1	6.96	113.76	108.20
22	BA	1898	U	O4'-C1'-N1	6.95	113.76	108.20
53	CA	817	C	P-O3'-C3'	6.95	128.04	119.70
1	AA	452	A	P-O3'-C3'	-6.95	111.36	119.70
1	AA	704	A	P-O3'-C3'	-6.95	111.36	119.70
57	DA	1207	C	P-O3'-C3'	-6.95	111.36	119.70
57	DA	741	U	O4'-C1'-N1	6.95	113.76	108.20
57	DA	915	C	P-O3'-C3'	-6.95	111.36	119.70
57	DA	1141	U	P-O3'-C3'	6.94	128.03	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	963	U	O4'-C1'-N1	6.94	113.75	108.20
22	BA	1206	G	P-O3'-C3'	-6.93	111.38	119.70
22	BA	2791	G	P-O3'-C3'	-6.93	111.38	119.70
22	BA	1311	G	P-O3'-C3'	6.93	128.02	119.70
22	BA	1112	G	P-O3'-C3'	-6.93	111.39	119.70
1	AA	14	U	P-O5'-C5'	-6.92	109.83	120.90
1	AA	1094	G	P-O3'-C3'	6.92	128.00	119.70
53	CA	315	A	P-O3'-C3'	6.92	128.00	119.70
57	DA	2609	U	N1-C1'-C2'	6.92	122.99	114.00
53	CA	1282	C	N1-C1'-C2'	-6.92	104.39	112.00
22	BA	1250	G	O4'-C1'-N9	-6.91	102.67	108.20
1	AA	535	A	P-O3'-C3'	6.91	127.99	119.70
22	BA	866	A	N9-C1'-C2'	-6.91	104.40	112.00
23	BB	90	C	P-O5'-C5'	-6.91	109.85	120.90
22	BA	2063	C	P-O3'-C3'	-6.90	111.42	119.70
1	AA	1297	G	P-O3'-C3'	6.90	127.98	119.70
22	BA	968	C	N1-C1'-C2'	-6.90	104.41	112.00
22	BA	2307	G	P-O3'-C3'	6.90	127.98	119.70
53	CA	792	A	O4'-C1'-N9	6.90	113.72	108.20
57	DA	784	G	P-O3'-C3'	6.90	127.98	119.70
57	DA	2408	U	O4'-C1'-N1	6.90	113.72	108.20
57	DA	3	U	O4'-C1'-N1	6.90	113.72	108.20
57	DA	1010	A	P-O3'-C3'	-6.90	111.42	119.70
1	AA	1131	G	P-O3'-C3'	-6.90	111.42	119.70
22	BA	2324	U	P-O3'-C3'	6.90	127.98	119.70
22	BA	2684	U	O5'-P-OP2	-6.90	99.49	105.70
57	DA	2419	U	O4'-C1'-N1	6.90	113.72	108.20
1	AA	1055	A	P-O3'-C3'	-6.90	111.42	119.70
57	DA	1135	C	N1-C1'-C2'	-6.89	104.42	112.00
57	DA	2348	U	O4'-C1'-N1	6.89	113.71	108.20
1	AA	110	C	N1-C1'-C2'	-6.89	104.42	112.00
22	BA	486	C	P-O3'-C3'	-6.89	111.44	119.70
22	BA	1071	G	P-O3'-C3'	6.88	127.96	119.70
22	BA	1034	G	P-O3'-C3'	-6.88	111.45	119.70
53	CA	914	A	P-O3'-C3'	-6.88	111.45	119.70
1	AA	1145	A	P-O3'-C3'	6.88	127.95	119.70
23	BB	15	A	P-O5'-C5'	-6.88	109.90	120.90
57	DA	1236	G	P-O3'-C3'	6.88	127.95	119.70
1	AA	519	C	P-O3'-C3'	-6.87	111.45	119.70
1	AA	216	U	N1-C1'-C2'	-6.87	104.44	112.00
57	DA	2712	C	O4'-C1'-N1	6.87	113.70	108.20
53	CA	1215	G	P-O3'-C3'	-6.87	111.46	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	129	C	N1-C1'-C2'	-6.87	104.44	112.00
57	DA	1655	A	P-O3'-C3'	-6.87	111.46	119.70
57	DA	1838	C	P-O3'-C3'	6.87	127.94	119.70
53	CA	349	A	P-O3'-C3'	-6.86	111.47	119.70
53	CA	1366	C	O4'-C1'-N1	6.86	113.69	108.20
22	BA	2812	G	P-O3'-C3'	-6.86	111.47	119.70
22	BA	2326	C	P-O3'-C3'	6.85	127.92	119.70
57	DA	407	G	P-O3'-C3'	-6.85	111.48	119.70
22	BA	972	A	P-O3'-C3'	6.85	127.92	119.70
22	BA	2656	U	P-O3'-C3'	-6.85	111.48	119.70
53	CA	1217	C	O4'-C1'-N1	6.85	113.68	108.20
22	BA	1265	A	O5'-P-OP2	-6.85	99.54	105.70
22	BA	1728	C	O4'-C1'-N1	6.84	113.67	108.20
53	CA	974	A	P-O3'-C3'	6.84	127.91	119.70
57	DA	2622	U	O4'-C1'-N1	6.84	113.67	108.20
22	BA	2289	G	P-O3'-C3'	-6.83	111.50	119.70
57	DA	2875	C	P-O3'-C3'	-6.83	111.50	119.70
22	BA	640	C	P-O3'-C3'	6.83	127.90	119.70
22	BA	2777	G	O4'-C1'-N9	-6.83	102.74	108.20
22	BA	931	U	P-O3'-C3'	6.83	127.89	119.70
22	BA	1693	U	O4'-C1'-N1	6.83	113.66	108.20
22	BA	2682	A	P-O3'-C3'	-6.82	111.51	119.70
22	BA	2850	A	P-O3'-C3'	-6.82	111.51	119.70
1	AA	1184	G	P-O3'-C3'	-6.82	111.52	119.70
22	BA	1966	A	P-O3'-C3'	6.82	127.88	119.70
22	BA	763	G	P-O3'-C3'	-6.82	111.52	119.70
57	DA	1942	C	P-O3'-C3'	-6.81	111.53	119.70
57	DA	2566	A	P-O3'-C3'	6.81	127.87	119.70
53	CA	512	U	P-O3'-C3'	-6.81	111.53	119.70
22	BA	1033	U	O4'-C1'-N1	6.80	113.64	108.20
22	BA	1799	G	P-O3'-C3'	6.80	127.86	119.70
1	AA	266	G	P-O3'-C3'	6.80	127.86	119.70
22	BA	1238	G	N9-C1'-C2'	-6.80	104.52	112.00
22	BA	2849	U	O4'-C1'-N1	-6.79	102.77	108.20
22	BA	1653	G	O3'-P-O5'	6.79	116.90	104.00
22	BA	2035	G	O4'-C1'-N9	6.79	113.63	108.20
57	DA	1738	G	P-O3'-C3'	6.79	127.85	119.70
1	AA	1202	U	O4'-C1'-N1	6.79	113.63	108.20
57	DA	1681	G	P-O3'-C3'	6.79	127.84	119.70
22	BA	2407	A	P-O3'-C3'	-6.79	111.56	119.70
53	CA	1349	A	P-O3'-C3'	-6.78	111.56	119.70
53	CA	451	A	P-O3'-C3'	6.78	127.84	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	792	A	P-O3'-C3'	6.78	127.84	119.70
22	BA	1512	C	P-O3'-C3'	-6.78	111.56	119.70
22	BA	2561	U	O4'-C1'-N1	6.78	113.62	108.20
57	DA	945	A	O4'-C1'-N9	6.78	113.62	108.20
22	BA	577	G	OP2-P-O3'	6.78	120.11	105.20
57	DA	424	G	P-O3'-C3'	-6.78	111.57	119.70
57	DA	2620	C	O4'-C1'-N1	-6.78	102.78	108.20
57	DA	1993	U	N1-C1'-C2'	-6.77	104.55	112.00
1	AA	509	A	P-O3'-C3'	-6.77	111.58	119.70
22	BA	503	A	P-O3'-C3'	6.77	127.82	119.70
22	BA	1766	G	P-O5'-C5'	-6.77	110.07	120.90
57	DA	1498	C	P-O3'-C3'	-6.77	111.58	119.70
1	AA	566	G	P-O3'-C3'	6.77	127.82	119.70
53	CA	534	U	N1-C1'-C2'	-6.76	104.56	112.00
57	DA	1398	C	P-O3'-C3'	-6.76	111.59	119.70
57	DA	1554	U	P-O3'-C3'	6.76	127.81	119.70
22	BA	1178	C	O4'-C1'-N1	6.76	113.61	108.20
57	DA	685	A	P-O5'-C5'	-6.76	110.09	120.90
57	DA	783	A	N9-C1'-C2'	-6.75	104.57	112.00
22	BA	2880	C	P-O5'-C5'	-6.75	110.10	120.90
22	BA	2615	U	P-O3'-C3'	-6.75	111.60	119.70
57	DA	2267	A	N9-C1'-C2'	-6.74	104.58	112.00
22	BA	2821	A	N9-C1'-C2'	-6.74	104.58	112.00
57	DA	1971	U	N1-C1'-C2'	-6.74	104.58	112.00
1	AA	1337	G	P-O3'-C3'	-6.74	111.61	119.70
53	CA	116	A	N9-C1'-C2'	-6.74	104.58	112.00
57	DA	2406	A	P-O3'-C3'	6.74	127.79	119.70
22	BA	2874	C	P-O5'-C5'	-6.74	110.12	120.90
1	AA	116	A	P-O3'-C3'	-6.74	111.62	119.70
22	BA	995	C	N1-C1'-C2'	6.73	122.75	114.00
57	DA	1758	U	P-O3'-C3'	6.73	127.78	119.70
1	AA	411	A	P-O3'-C3'	6.73	127.78	119.70
22	BA	2273	A	P-O3'-C3'	6.73	127.77	119.70
57	DA	805	G	P-O3'-C3'	6.73	127.77	119.70
22	BA	2772	C	O4'-C1'-N1	-6.72	102.82	108.20
57	DA	2039	U	O4'-C1'-N1	6.72	113.58	108.20
22	BA	2714	G	P-O3'-C3'	-6.72	111.64	119.70
57	DA	2468	A	P-O3'-C3'	6.72	127.76	119.70
57	DA	52	A	P-O3'-C3'	-6.72	111.64	119.70
53	CA	1228	C	N1-C1'-C2'	-6.71	104.61	112.00
22	BA	1858	A	P-O3'-C3'	-6.71	111.65	119.70
22	BA	1707	G	P-O3'-C3'	-6.71	111.65	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2216	G	P-O3'-C3'	-6.71	111.65	119.70
22	BA	2239	G	P-O3'-C3'	-6.71	111.65	119.70
22	BA	2582	G	P-O3'-C3'	-6.71	111.65	119.70
53	CA	1367	C	P-O3'-C3'	-6.71	111.65	119.70
53	CA	1285	A	P-O3'-C3'	6.70	127.75	119.70
57	DA	1020	A	P-O3'-C3'	6.70	127.75	119.70
1	AA	131	A	P-O3'-C3'	-6.70	111.66	119.70
22	BA	1326	U	C3'-C2'-C1'	6.70	106.86	101.50
1	AA	1399	C	O4'-C1'-N1	6.70	113.56	108.20
22	BA	2756	U	N1-C1'-C2'	6.70	122.71	114.00
53	CA	331	G	N9-C1'-C2'	-6.70	104.63	112.00
57	DA	162	U	O4'-C1'-N1	6.70	113.56	108.20
1	AA	1140	C	O4'-C1'-N1	6.70	113.56	108.20
57	DA	1759	A	P-O3'-C3'	-6.70	111.66	119.70
22	BA	1009	A	P-O5'-C5'	-6.70	110.19	120.90
22	BA	1329	U	N1-C1'-C2'	6.69	122.70	114.00
53	CA	794	A	P-O3'-C3'	-6.69	111.67	119.70
57	DA	335	C	O4'-C1'-N1	6.69	113.55	108.20
22	BA	1980	G	O4'-C1'-N9	6.69	113.55	108.20
22	BA	1385	A	P-O3'-C3'	6.68	127.72	119.70
22	BA	1944	U	P-O5'-C5'	-6.68	110.20	120.90
22	BA	1340	U	P-O3'-C3'	6.68	127.72	119.70
22	BA	2457	U	O4'-C1'-N1	6.68	113.55	108.20
53	CA	1211	U	P-O3'-C3'	6.68	127.72	119.70
57	DA	1305	C	O4'-C1'-N1	6.68	113.55	108.20
53	CA	996	A	P-O3'-C3'	-6.68	111.69	119.70
57	DA	1327	A	C3'-C2'-C1'	6.68	106.84	101.50
22	BA	434	U	O4'-C1'-N1	6.67	113.54	108.20
53	CA	94	G	P-O3'-C3'	6.67	127.71	119.70
22	BA	1023	U	C3'-C2'-C1'	6.67	106.83	101.50
57	DA	2214	C	P-O3'-C3'	-6.67	111.70	119.70
57	DA	1603	A	P-O3'-C3'	-6.67	111.70	119.70
57	DA	1320	C	P-O3'-C3'	6.66	127.70	119.70
1	AA	1395	C	P-O5'-C5'	-6.66	110.24	120.90
22	BA	2757	A	P-O3'-C3'	-6.66	111.71	119.70
1	AA	688	G	N9-C1'-C2'	-6.66	104.67	112.00
22	BA	2092	U	N1-C1'-C2'	6.66	122.66	114.00
57	DA	302	C	N1-C1'-C2'	-6.66	104.67	112.00
22	BA	786	C	C6-N1-C2	6.66	122.96	120.30
1	AA	1162	C	O4'-C1'-N1	6.65	113.52	108.20
57	DA	1113	U	O4'-C1'-N1	6.65	113.52	108.20
57	DA	1558	C	N1-C1'-C2'	6.65	122.65	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1735	A	P-O3'-C3'	-6.65	111.72	119.70
57	DA	980	A	P-O3'-C3'	6.65	127.68	119.70
57	DA	1563	U	O4'-C1'-N1	6.65	113.52	108.20
53	CA	1160	G	N9-C1'-C2'	-6.64	104.69	112.00
22	BA	783	A	C5-N7-C8	-6.64	100.58	103.90
57	DA	917	A	N9-C1'-C2'	-6.64	104.69	112.00
57	DA	1967	C	P-O3'-C3'	-6.64	111.73	119.70
22	BA	2458	G	O3'-P-O5'	-6.64	91.38	104.00
53	CA	885	G	P-O3'-C3'	-6.64	111.73	119.70
57	DA	1839	G	P-O3'-C3'	-6.64	111.73	119.70
53	CA	1297	G	P-O3'-C3'	6.64	127.67	119.70
53	CA	1288	A	P-O3'-C3'	-6.64	111.73	119.70
1	AA	306	A	P-O3'-C3'	-6.64	111.74	119.70
22	BA	1635	A	P-O5'-C5'	-6.63	110.29	120.90
1	AA	653	U	O4'-C1'-N1	6.63	113.51	108.20
22	BA	1555	G	P-O5'-C5'	-6.63	110.29	120.90
57	DA	2147	A	P-O3'-C3'	-6.63	111.74	119.70
22	BA	2474	U	O4'-C1'-N1	6.63	113.50	108.20
22	BA	196	A	O4'-C1'-N9	6.63	113.50	108.20
22	BA	2552	U	O4'-C1'-N1	-6.62	102.90	108.20
57	DA	1602	U	P-O3'-C3'	6.62	127.65	119.70
57	DA	1213	A	P-O3'-C3'	-6.62	111.75	119.70
57	DA	627	A	P-O3'-C3'	6.62	127.65	119.70
57	DA	2385	C	N1-C1'-C2'	-6.62	104.72	112.00
1	AA	344	A	P-O3'-C3'	6.62	127.64	119.70
22	BA	2874	C	P-O3'-C3'	-6.61	111.76	119.70
53	CA	931	C	O4'-C1'-N1	6.61	113.49	108.20
57	DA	1996	C	P-O3'-C3'	6.61	127.63	119.70
53	CA	95	C	P-O3'-C3'	-6.60	111.78	119.70
22	BA	2150	C	O4'-C1'-N1	6.60	113.48	108.20
57	DA	1027	A	P-O3'-C3'	-6.60	111.78	119.70
53	CA	595	A	P-O3'-C3'	6.60	127.62	119.70
58	DB	45	A	P-O3'-C3'	-6.60	111.78	119.70
1	AA	1507	A	P-O3'-C3'	-6.59	111.79	119.70
22	BA	2311	A	P-O3'-C3'	6.59	127.61	119.70
23	BB	48	U	P-O5'-C5'	-6.59	110.35	120.90
53	CA	14	U	P-O3'-C3'	-6.59	111.79	119.70
1	AA	653	U	P-O3'-C3'	6.59	127.61	119.70
22	BA	1159	U	O4'-C1'-N1	6.59	113.47	108.20
22	BA	572	A	C3'-C2'-C1'	6.59	106.77	101.50
1	AA	1530	G	N9-C1'-C2'	-6.59	104.75	112.00
1	AA	351	G	O4'-C1'-N9	6.58	113.47	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	803	G	P-O3'-C3'	-6.58	111.80	119.70
57	DA	1535	A	P-O3'-C3'	6.58	127.60	119.70
1	AA	1401	G	P-O3'-C3'	-6.58	111.80	119.70
22	BA	633	A	P-O3'-C3'	6.58	127.60	119.70
57	DA	91	A	P-O3'-C3'	6.58	127.60	119.70
1	AA	243	A	P-O3'-C3'	6.58	127.59	119.70
1	AA	755	G	P-O3'-C3'	-6.58	111.81	119.70
1	AA	14	U	P-O3'-C3'	-6.58	111.81	119.70
22	BA	2052	A	P-O3'-C3'	-6.58	111.81	119.70
53	CA	1495	U	P-O3'-C3'	6.58	127.59	119.70
57	DA	1275	A	C3'-C2'-C1'	6.58	106.76	101.50
57	DA	2656	U	P-O3'-C3'	-6.58	111.81	119.70
22	BA	2848	G	O4'-C1'-N9	6.57	113.46	108.20
22	BA	1378	A	P-O3'-C3'	6.57	127.58	119.70
57	DA	577	G	P-O3'-C3'	6.57	127.58	119.70
57	DA	375	G	N9-C1'-C2'	-6.57	104.78	112.00
57	DA	390	U	N1-C1'-C2'	6.57	122.54	114.00
57	DA	958	U	P-O3'-C3'	-6.56	111.82	119.70
1	AA	74	A	P-O3'-C3'	-6.56	111.82	119.70
22	BA	1009	A	P-O3'-C3'	-6.56	111.83	119.70
22	BA	855	G	P-O3'-C3'	-6.56	111.83	119.70
53	CA	1226	C	P-O3'-C3'	6.56	127.57	119.70
22	BA	92	U	P-O3'-C3'	-6.56	111.83	119.70
39	BR	9	GLY	N-CA-C	-6.55	96.72	113.10
22	BA	784	G	O4'-C1'-N9	-6.55	102.96	108.20
57	DA	222	A	O4'-C1'-N9	6.55	113.44	108.20
22	BA	681	G	P-O5'-C5'	-6.55	110.42	120.90
53	CA	251	G	P-O3'-C3'	6.55	127.56	119.70
1	AA	984	C	P-O3'-C3'	-6.55	111.84	119.70
57	DA	802	A	P-O3'-C3'	-6.55	111.84	119.70
22	BA	2689	U	C2-N1-C1'	-6.54	109.85	117.70
57	DA	1329	U	P-O3'-C3'	6.54	127.55	119.70
1	AA	252	U	N1-C1'-C2'	-6.54	104.80	112.00
22	BA	962	G	P-O5'-C5'	-6.54	110.43	120.90
22	BA	1848	A	P-O3'-C3'	-6.54	111.85	119.70
53	CA	531	U	O4'-C1'-N1	6.54	113.44	108.20
53	CA	381	C	N1-C1'-C2'	6.54	122.50	114.00
22	BA	628	G	P-O5'-C5'	-6.54	110.44	120.90
57	DA	589	U	O4'-C1'-N1	6.54	113.43	108.20
58	DB	40	U	N1-C1'-C2'	6.54	122.50	114.00
57	DA	2440	C	C3'-C2'-C1'	6.53	106.73	101.50
22	BA	653	U	P-O3'-C3'	6.53	127.53	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1968	G	N9-C1'-C2'	-6.52	104.83	112.00
1	AA	184	G	P-O3'-C3'	-6.52	111.88	119.70
1	AA	552	U	P-O3'-C3'	-6.52	111.88	119.70
57	DA	752	A	O4'-C1'-N9	6.51	113.41	108.20
57	DA	1980	G	P-O3'-C3'	6.51	127.52	119.70
57	DA	2023	C	P-O3'-C3'	-6.51	111.89	119.70
53	CA	486	U	O4'-C1'-N1	-6.51	102.99	108.20
57	DA	1491	G	P-O3'-C3'	-6.50	111.89	119.70
57	DA	2409	G	P-O3'-C3'	-6.50	111.89	119.70
57	DA	73	A	P-O3'-C3'	-6.50	111.90	119.70
1	AA	1213	A	P-O3'-C3'	6.50	127.50	119.70
1	AA	1447	A	P-O3'-C3'	6.50	127.50	119.70
22	BA	1325	U	O4'-C1'-N1	6.50	113.40	108.20
1	AA	801	U	O4'-C1'-N1	6.50	113.40	108.20
53	CA	72	A	P-O3'-C3'	-6.50	111.91	119.70
22	BA	1249	U	P-O3'-C3'	-6.49	111.91	119.70
57	DA	1707	G	P-O3'-C3'	-6.49	111.91	119.70
1	AA	70	U	P-O3'-C3'	6.49	127.49	119.70
22	BA	399	U	P-O3'-C3'	6.49	127.49	119.70
22	BA	1222	U	O4'-C1'-N1	6.49	113.39	108.20
57	DA	1333	G	P-O3'-C3'	-6.49	111.91	119.70
57	DA	1838	C	O4'-C1'-N1	6.49	113.39	108.20
22	BA	1213	A	P-O5'-C5'	-6.49	110.52	120.90
53	CA	575	G	C4-N9-C1'	-6.49	118.07	126.50
22	BA	729	G	P-O3'-C3'	-6.48	111.92	119.70
22	BA	2866	U	P-O3'-C3'	6.48	127.48	119.70
57	DA	1063	G	P-O3'-C3'	-6.48	111.92	119.70
22	BA	2250	G	C6-C5-N7	-6.48	126.51	130.40
22	BA	1619	G	P-O3'-C3'	-6.48	111.92	119.70
57	DA	445	C	P-O3'-C3'	-6.48	111.92	119.70
57	DA	2817	U	O4'-C1'-N1	6.48	113.38	108.20
1	AA	1066	C	N1-C1'-C2'	-6.48	104.88	112.00
57	DA	1919	A	P-O3'-C3'	-6.48	111.93	119.70
1	AA	60	A	P-O3'-C3'	6.47	127.47	119.70
22	BA	271	G	P-O3'-C3'	6.47	127.47	119.70
57	DA	1963	U	P-O3'-C3'	-6.47	111.93	119.70
22	BA	977	G	P-O3'-C3'	-6.47	111.94	119.70
22	BA	2036	C	C3'-C2'-C1'	6.47	106.67	101.50
57	DA	1114	C	O4'-C1'-N1	6.47	113.38	108.20
58	DB	56	G	P-O3'-C3'	6.47	127.46	119.70
22	BA	2447	G	O3'-P-O5'	-6.47	91.71	104.00
1	AA	1239	A	P-O3'-C3'	6.46	127.45	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	937	A	P-O3'-C3'	-6.46	111.94	119.70
57	DA	964	C	C3'-C2'-C1'	6.46	106.67	101.50
1	AA	85	U	N1-C1'-C2'	6.46	122.40	114.00
57	DA	1456	G	P-O3'-C3'	-6.46	111.95	119.70
58	DB	58	A	C3'-C2'-C1'	6.46	106.67	101.50
57	DA	87	U	O4'-C1'-N1	6.46	113.37	108.20
57	DA	776	G	C4-N9-C1'	6.46	134.90	126.50
57	DA	2667	C	P-O3'-C3'	-6.46	111.95	119.70
1	AA	891	U	P-O3'-C3'	-6.45	111.96	119.70
22	BA	1459	G	P-O3'-C3'	-6.45	111.96	119.70
57	DA	227	A	P-O3'-C3'	6.45	127.44	119.70
57	DA	2195	U	O4'-C1'-N1	6.45	113.36	108.20
22	BA	1497	U	N1-C1'-C2'	6.45	122.38	114.00
57	DA	77	G	P-O3'-C3'	-6.45	111.97	119.70
22	BA	2689	U	P-O3'-C3'	6.44	127.43	119.70
57	DA	1785	A	P-O3'-C3'	-6.44	111.97	119.70
22	BA	2356	U	O4'-C1'-N1	6.44	113.35	108.20
22	BA	1941	C	O4'-C1'-N1	-6.44	103.05	108.20
22	BA	479	A	O4'-C1'-N9	6.44	113.35	108.20
1	AA	1478	U	P-O5'-C5'	-6.43	110.61	120.90
22	BA	1265	A	OP1-P-O3'	6.43	119.35	105.20
22	BA	390	U	N1-C1'-C2'	6.43	122.36	114.00
22	BA	2249	U	P-O3'-C3'	6.43	127.42	119.70
53	CA	239	U	N1-C1'-C2'	-6.43	104.93	112.00
22	BA	2309	A	P-O3'-C3'	-6.43	111.99	119.70
22	BA	1560	G	N9-C1'-C2'	-6.42	104.93	112.00
57	DA	2069	G	N9-C1'-C2'	-6.42	104.93	112.00
53	CA	436	C	O4'-C1'-N1	-6.42	103.06	108.20
57	DA	782	A	P-O3'-C3'	6.42	127.41	119.70
1	AA	48	C	O4'-C1'-N1	6.42	113.33	108.20
2	CB	107	ARG	O-C-N	-6.42	112.43	122.70
57	DA	1856	U	O4'-C1'-N1	6.42	113.33	108.20
22	BA	975	A	N9-C1'-C2'	-6.42	104.94	112.00
22	BA	1637	A	P-O5'-C5'	-6.42	110.64	120.90
53	CA	440	C	O4'-C1'-N1	6.42	113.33	108.20
57	DA	2873	A	P-O3'-C3'	6.42	127.40	119.70
22	BA	1674	G	P-O3'-C3'	6.41	127.39	119.70
57	DA	2259	U	P-O3'-C3'	-6.41	112.01	119.70
57	DA	446	G	C3'-C2'-C1'	6.40	106.62	101.50
1	AA	331	G	P-O3'-C3'	-6.40	112.02	119.70
22	BA	2214	C	P-O3'-C3'	-6.40	112.02	119.70
57	DA	775	G	O4'-C1'-N9	6.40	113.32	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	438	U	P-O3'-C3'	6.40	127.38	119.70
1	AA	1129	C	N1-C1'-C2'	6.40	122.32	114.00
22	BA	556	A	P-O3'-C3'	-6.40	112.02	119.70
57	DA	671	C	N1-C1'-C2'	-6.40	104.96	112.00
57	DA	129	C	P-O3'-C3'	-6.39	112.03	119.70
57	DA	2226	C	C3'-C2'-C1'	6.39	106.62	101.50
57	DA	947	A	C3'-C2'-C1'	6.39	106.61	101.50
57	DA	2339	C	P-O3'-C3'	-6.39	112.03	119.70
57	DA	620	G	P-O3'-C3'	6.39	127.37	119.70
1	AA	547	A	O4'-C1'-N9	6.39	113.31	108.20
57	DA	302	C	O4'-C1'-N1	6.39	113.31	108.20
22	BA	1611	C	P-O5'-C5'	-6.38	110.69	120.90
57	DA	1400	U	N1-C1'-C2'	-6.38	104.98	112.00
53	CA	485	U	O4'-C1'-N1	-6.38	103.10	108.20
53	CA	564	C	P-O3'-C3'	-6.38	112.05	119.70
57	DA	575	A	P-O3'-C3'	-6.38	112.05	119.70
22	BA	1025	G	P-O3'-C3'	6.38	127.35	119.70
57	DA	397	U	O4'-C1'-N1	6.38	113.30	108.20
57	DA	1993	U	C3'-C2'-C1'	6.38	106.60	101.50
57	DA	1415	U	P-O3'-C3'	6.37	127.34	119.70
22	BA	763	G	C3'-C2'-C1'	6.37	106.60	101.50
57	DA	1023	U	P-O3'-C3'	-6.37	112.06	119.70
22	BA	1008	A	O3'-P-O5'	6.37	116.10	104.00
57	DA	670	A	O4'-C1'-N9	-6.37	103.11	108.20
22	BA	1568	G	P-O3'-C3'	-6.36	112.07	119.70
1	AA	428	G	P-O3'-C3'	6.36	127.33	119.70
57	DA	777	G	N9-C1'-C2'	-6.36	105.00	112.00
53	CA	995	C	N1-C1'-C2'	-6.36	105.01	112.00
57	DA	963	U	N1-C1'-C2'	-6.36	105.01	112.00
57	DA	1699	G	C3'-C2'-C1'	-6.36	96.42	101.50
22	BA	489	G	P-O3'-C3'	6.35	127.33	119.70
57	DA	1733	G	P-O3'-C3'	-6.35	112.08	119.70
1	AA	1095	U	C3'-C2'-C1'	6.35	106.58	101.50
53	CA	328	C	O4'-C1'-N1	-6.35	103.12	108.20
57	DA	1552	A	O4'-C1'-N9	6.35	113.28	108.20
57	DA	1617	C	O4'-C1'-N1	6.35	113.28	108.20
22	BA	2459	A	P-O3'-C3'	-6.35	112.08	119.70
57	DA	2572	A	P-O3'-C3'	6.35	127.32	119.70
22	BA	2137	U	P-O3'-C3'	-6.35	112.08	119.70
53	CA	68	G	N9-C1'-C2'	-6.35	105.02	112.00
22	BA	321	U	P-O3'-C3'	6.34	127.31	119.70
22	BA	2873	A	P-O3'-C3'	6.34	127.31	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	247	G	N9-C1'-C2'	-6.34	105.03	112.00
57	DA	2493	U	N1-C1'-C2'	-6.34	105.02	112.00
57	DA	2800	A	C3'-C2'-C1'	6.34	106.57	101.50
22	BA	846	U	P-O3'-C3'	6.34	127.31	119.70
1	AA	686	U	N1-C1'-C2'	6.34	122.24	114.00
22	BA	2615	U	N1-C1'-C2'	-6.33	105.03	112.00
22	BA	783	A	N1-C6-N6	6.33	122.40	118.60
57	DA	1937	A	P-O3'-C3'	6.33	127.30	119.70
1	AA	47	C	P-O3'-C3'	6.33	127.30	119.70
22	BA	2063	C	N1-C1'-C2'	-6.33	105.03	112.00
22	BA	957	C	O4'-C1'-N1	6.33	113.26	108.20
22	BA	73	A	P-O3'-C3'	-6.33	112.11	119.70
22	BA	920	A	P-O3'-C3'	-6.33	112.11	119.70
22	BA	2151	U	O4'-C1'-N1	6.33	113.26	108.20
57	DA	2520	C	C3'-C2'-C1'	6.33	106.56	101.50
57	DA	1110	G	P-O3'-C3'	6.33	127.29	119.70
22	BA	2609	U	P-O3'-C3'	6.33	127.29	119.70
57	DA	1325	U	P-O3'-C3'	6.32	127.29	119.70
57	DA	1493	C	N1-C1'-C2'	6.32	122.22	114.00
57	DA	2438	U	O4'-C1'-N1	6.32	113.26	108.20
22	BA	914	G	N9-C1'-C2'	-6.32	105.05	112.00
22	BA	2820	A	P-O3'-C3'	6.32	127.29	119.70
1	AA	688	G	P-O3'-C3'	-6.32	112.12	119.70
22	BA	197	A	P-O3'-C3'	-6.32	112.12	119.70
22	BA	1769	U	O4'-C1'-N1	6.31	113.25	108.20
1	AA	1068	G	N9-C1'-C2'	-6.31	105.06	112.00
22	BA	1627	G	C8-N9-C4	-6.31	103.88	106.40
57	DA	244	A	C3'-C2'-C1'	6.31	106.55	101.50
57	DA	230	G	P-O3'-C3'	-6.31	112.13	119.70
57	DA	2094	A	C3'-C2'-C1'	6.31	106.55	101.50
22	BA	763	G	C4-N9-C1'	6.31	134.70	126.50
22	BA	1872	A	C3'-C2'-C1'	6.31	106.55	101.50
57	DA	1458	U	P-O3'-C3'	6.31	127.27	119.70
1	AA	982	U	P-O3'-C3'	6.30	127.27	119.70
1	AA	1202	U	C3'-C2'-C1'	6.30	106.54	101.50
22	BA	588	U	C3'-C2'-C1'	6.30	106.54	101.50
22	BA	1494	A	P-O3'-C3'	-6.30	112.14	119.70
1	AA	1131	G	N9-C1'-C2'	-6.30	105.07	112.00
22	BA	1157	G	P-O3'-C3'	-6.30	112.14	119.70
22	BA	1250	G	N9-C1'-C2'	6.30	122.19	114.00
57	DA	813	U	O4'-C1'-N1	6.30	113.24	108.20
22	BA	1533	C	O4'-C1'-N1	-6.30	103.16	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	729	G	C3'-C2'-C1'	6.30	106.54	101.50
22	BA	2215	C	N1-C1'-C2'	-6.30	105.07	112.00
22	BA	2215	C	P-O3'-C3'	-6.29	112.15	119.70
22	BA	1476	U	C3'-C2'-C1'	6.29	106.53	101.50
22	BA	442	G	P-O3'-C3'	6.29	127.25	119.70
22	BA	1350	C	P-O3'-C3'	-6.29	112.15	119.70
53	CA	697	U	O4'-C1'-N1	6.29	113.23	108.20
22	BA	1034	G	P-O5'-C5'	-6.29	110.84	120.90
1	AA	977	A	P-O3'-C3'	-6.29	112.16	119.70
1	AA	1349	A	P-O3'-C3'	-6.29	112.16	119.70
22	BA	645	C	P-O5'-C5'	-6.29	110.84	120.90
22	BA	831	G	P-O3'-C3'	-6.29	112.16	119.70
22	BA	1707	G	C3'-C2'-C1'	6.29	106.53	101.50
57	DA	163	C	N1-C1'-C2'	-6.29	105.08	112.00
1	AA	90	C	O4'-C1'-N1	6.28	113.23	108.20
1	AA	721	G	P-O3'-C3'	6.28	127.24	119.70
22	BA	166	U	P-O3'-C3'	-6.28	112.16	119.70
22	BA	2498	C	P-O3'-C3'	-6.28	112.16	119.70
53	CA	316	C	O4'-C1'-N1	6.28	113.23	108.20
57	DA	1077	A	P-O3'-C3'	-6.28	112.16	119.70
1	AA	1282	C	P-O3'-C3'	-6.28	112.16	119.70
23	BB	45	A	N9-C1'-C2'	-6.28	105.09	112.00
23	BB	53	A	P-O3'-C3'	-6.28	112.17	119.70
53	CA	452	A	P-O3'-C3'	-6.28	112.17	119.70
57	DA	2392	A	N9-C1'-C2'	-6.28	105.09	112.00
57	DA	741	U	P-O3'-C3'	-6.28	112.17	119.70
22	BA	1429	G	N9-C1'-C2'	-6.27	105.10	112.00
53	CA	509	A	P-O3'-C3'	-6.27	112.17	119.70
57	DA	1290	C	O4'-C1'-N1	6.27	113.22	108.20
57	DA	76	C	O4'-C1'-N1	6.27	113.22	108.20
57	DA	788	A	P-O3'-C3'	6.27	127.22	119.70
1	AA	344	A	O4'-C1'-N9	6.26	113.21	108.20
22	BA	2517	C	C6-N1-C2	6.26	122.81	120.30
57	DA	546	U	O4'-C1'-N1	6.26	113.21	108.20
53	CA	421	U	O4'-C1'-N1	6.26	113.21	108.20
57	DA	1942	C	N1-C1'-C2'	-6.26	105.11	112.00
22	BA	2552	U	P-O3'-C3'	-6.26	112.19	119.70
22	BA	75	G	P-O3'-C3'	-6.26	112.19	119.70
57	DA	2339	C	C3'-C2'-C1'	6.26	106.50	101.50
57	DA	2868	A	C3'-C2'-C1'	6.26	106.50	101.50
53	CA	1151	A	P-O3'-C3'	6.25	127.20	119.70
1	AA	368	U	N1-C1'-C2'	-6.25	105.12	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1451	U	N1-C1'-C2'	6.25	122.13	114.00
53	CA	129	A	P-O3'-C3'	6.25	127.20	119.70
53	CA	1336	C	P-O3'-C3'	6.25	127.20	119.70
57	DA	374	A	C3'-C2'-C1'	6.25	106.50	101.50
57	DA	1612	C	C3'-C2'-C1'	6.25	106.50	101.50
1	AA	1046	A	O4'-C1'-N9	6.25	113.20	108.20
22	BA	1499	C	O4'-C1'-N1	6.25	113.20	108.20
22	BA	533	G	P-O3'-C3'	-6.24	112.21	119.70
57	DA	130	C	O4'-C1'-N1	6.24	113.19	108.20
53	CA	1161	C	P-O3'-C3'	-6.24	112.22	119.70
57	DA	959	A	C3'-C2'-C1'	6.24	106.49	101.50
53	CA	1449	C	O4'-C1'-N1	6.24	113.19	108.20
57	DA	122	G	P-O3'-C3'	-6.24	112.22	119.70
53	CA	1196	A	P-O3'-C3'	6.23	127.18	119.70
1	AA	1200	C	N1-C1'-C2'	6.23	122.10	114.00
57	DA	335	C	P-O3'-C3'	-6.23	112.22	119.70
22	BA	2847	U	P-O3'-C3'	6.23	127.18	119.70
22	BA	1129	A	C3'-C2'-C1'	6.23	106.48	101.50
53	CA	81	A	P-O3'-C3'	6.23	127.17	119.70
1	AA	1319	A	P-O3'-C3'	6.22	127.17	119.70
57	DA	959	A	P-O3'-C3'	-6.22	112.23	119.70
22	BA	120	U	P-O3'-C3'	6.22	127.17	119.70
22	BA	2880	C	P-O3'-C3'	-6.22	112.23	119.70
23	BB	13	G	P-O5'-C5'	-6.22	110.94	120.90
22	BA	395	U	N1-C1'-C2'	6.22	122.09	114.00
1	AA	120	A	O4'-C1'-N9	-6.22	103.22	108.20
53	CA	1127	G	P-O3'-C3'	-6.22	112.24	119.70
57	DA	1268	A	C3'-C2'-C1'	6.22	106.48	101.50
1	AA	559	A	P-O3'-C3'	6.21	127.16	119.70
57	DA	740	C	C3'-C2'-C1'	6.21	106.47	101.50
57	DA	2776	A	P-O3'-C3'	6.21	127.15	119.70
1	AA	81	A	P-O3'-C3'	6.21	127.15	119.70
1	AA	965	U	P-O3'-C3'	6.21	127.15	119.70
57	DA	250	G	P-O3'-C3'	-6.21	112.25	119.70
57	DA	628	G	C3'-C2'-C1'	6.21	106.47	101.50
53	CA	1160	G	P-O3'-C3'	-6.20	112.25	119.70
1	AA	1283	U	P-O3'-C3'	-6.20	112.26	119.70
22	BA	2609	U	C6-N1-C2	6.20	124.72	121.00
57	DA	765	C	C3'-C2'-C1'	6.20	106.46	101.50
57	DA	2581	G	O4'-C1'-N9	6.20	113.16	108.20
53	CA	1530	G	P-O3'-C3'	-6.20	112.26	119.70
22	BA	2427	C	P-O5'-C5'	-6.20	110.98	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	884	U	O4'-C1'-N1	6.20	113.16	108.20
57	DA	436	C	O4'-C1'-N1	6.20	113.16	108.20
57	DA	2391	G	P-O3'-C3'	6.20	127.14	119.70
22	BA	933	A	C3'-C2'-C1'	6.20	106.46	101.50
57	DA	1839	G	N9-C1'-C2'	-6.20	105.18	112.00
22	BA	451	U	P-O3'-C3'	6.20	127.13	119.70
22	BA	1135	C	C3'-C2'-C1'	6.19	106.45	101.50
1	AA	1498	U	P-O3'-C3'	6.19	127.13	119.70
22	BA	740	C	O5'-P-OP2	-6.19	100.13	105.70
1	AA	1127	G	P-O3'-C3'	-6.19	112.27	119.70
22	BA	125	A	P-O3'-C3'	6.19	127.12	119.70
22	BA	740	C	P-O5'-C5'	-6.19	111.00	120.90
22	BA	1693	U	P-O3'-C3'	6.19	127.12	119.70
1	AA	1064	G	O4'-C1'-N9	6.18	113.15	108.20
22	BA	1498	C	P-O3'-C3'	-6.18	112.28	119.70
22	BA	1993	U	C3'-C2'-C1'	6.18	106.45	101.50
57	DA	49	A	P-O3'-C3'	6.18	127.12	119.70
1	AA	365	U	C5-C6-N1	-6.18	119.61	122.70
53	CA	83	C	O4'-C1'-N1	6.18	113.14	108.20
53	CA	499	A	P-O3'-C3'	6.18	127.11	119.70
57	DA	2716	C	O4'-C1'-N1	6.18	113.14	108.20
1	AA	1129	C	P-O3'-C3'	6.17	127.11	119.70
23	BB	45	A	C3'-C2'-C1'	6.17	106.44	101.50
1	AA	914	A	C3'-C2'-C1'	6.17	106.44	101.50
22	BA	1602	U	P-O3'-C3'	6.17	127.10	119.70
53	CA	914	A	C3'-C2'-C1'	6.17	106.44	101.50
53	CA	1308	U	O4'-C1'-N1	6.17	113.14	108.20
22	BA	2454	G	P-O5'-C5'	-6.16	111.04	120.90
22	BA	2640	G	P-O5'-C5'	-6.16	111.04	120.90
57	DA	116	C	O4'-C1'-N1	6.16	113.13	108.20
58	DB	41	G	P-O3'-C3'	-6.16	112.31	119.70
22	BA	2249	U	N1-C1'-C2'	6.16	122.01	114.00
22	BA	637	A	P-O3'-C3'	6.16	127.09	119.70
57	DA	28	A	C3'-C2'-C1'	6.16	106.43	101.50
57	DA	1674	G	C4-N9-C1'	6.16	134.51	126.50
53	CA	414	A	P-O3'-C3'	-6.16	112.31	119.70
57	DA	1247	A	O4'-C1'-N9	6.16	113.13	108.20
22	BA	61	C	P-O5'-C5'	-6.16	111.05	120.90
57	DA	391	A	C3'-C2'-C1'	6.16	106.42	101.50
1	AA	1141	C	O4'-C1'-N1	6.15	113.12	108.20
22	BA	406	G	N9-C1'-C2'	-6.15	105.23	112.00
22	BA	1944	U	O5'-P-OP2	-6.15	100.16	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1682	G	N9-C1'-C2'	-6.15	105.23	112.00
22	BA	628	G	P-O3'-C3'	-6.15	112.32	119.70
22	BA	321	U	O4'-C1'-N1	6.15	113.12	108.20
1	AA	971	G	O4'-C1'-N9	6.15	113.12	108.20
22	BA	1237	A	P-O3'-C3'	6.15	127.08	119.70
22	BA	747	U	N1-C1'-C2'	-6.14	105.24	112.00
22	BA	2284	A	P-O5'-C5'	-6.14	111.07	120.90
1	AA	91	U	C3'-C2'-C1'	6.14	106.41	101.50
1	AA	169	C	O4'-C1'-N1	6.14	113.11	108.20
22	BA	475	C	C3'-C2'-C1'	6.14	106.41	101.50
57	DA	2879	A	P-O3'-C3'	6.14	127.07	119.70
22	BA	1920	C	P-O3'-C3'	-6.14	112.33	119.70
22	BA	2250	G	N7-C8-N9	6.14	116.17	113.10
22	BA	2047	C	P-O5'-C5'	-6.14	111.08	120.90
57	DA	687	C	C3'-C2'-C1'	6.13	106.41	101.50
57	DA	531	C	N1-C1'-C2'	6.13	121.97	114.00
22	BA	2393	U	O4'-C1'-N1	6.13	113.11	108.20
53	CA	995	C	P-O3'-C3'	-6.13	112.34	119.70
22	BA	2891	U	O4'-C1'-N1	-6.13	103.30	108.20
53	CA	1094	G	P-O3'-C3'	6.13	127.06	119.70
57	DA	412	A	C3'-C2'-C1'	6.13	106.40	101.50
57	DA	1803	A	C3'-C2'-C1'	6.13	106.40	101.50
1	AA	1302	C	N1-C1'-C2'	-6.12	105.26	112.00
57	DA	335	C	C3'-C2'-C1'	6.12	106.40	101.50
22	BA	13	A	P-O3'-C3'	6.12	127.05	119.70
1	AA	97	G	C3'-C2'-C1'	6.12	106.40	101.50
22	BA	1255	U	P-O3'-C3'	6.12	127.04	119.70
22	BA	435	C	C3'-C2'-C1'	6.12	106.39	101.50
22	BA	762	U	P-O3'-C3'	6.12	127.04	119.70
22	BA	1429	G	C3'-C2'-C1'	6.12	106.39	101.50
23	BB	90	C	P-O3'-C3'	-6.12	112.36	119.70
57	DA	858	G	P-O3'-C3'	6.12	127.04	119.70
57	DA	1089	A	P-O3'-C3'	6.12	127.04	119.70
57	DA	1401	G	P-O3'-C3'	-6.12	112.36	119.70
57	DA	611	C	O4'-C1'-N1	6.12	113.09	108.20
57	DA	1993	U	P-O3'-C3'	-6.12	112.36	119.70
57	DA	2498	C	C3'-C2'-C1'	6.12	106.39	101.50
22	BA	206	U	P-O3'-C3'	-6.11	112.36	119.70
53	CA	356	A	O4'-C1'-N9	6.11	113.09	108.20
53	CA	875	U	O4'-C1'-N1	6.11	113.09	108.20
57	DA	605	G	C3'-C2'-C1'	6.11	106.39	101.50
57	DA	2036	C	P-O3'-C3'	-6.11	112.36	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1794	A	O4'-C1'-N9	6.11	113.09	108.20
53	CA	982	U	P-O3'-C3'	6.11	127.03	119.70
57	DA	974	G	P-O3'-C3'	6.11	127.03	119.70
1	AA	198	G	C3'-C2'-C1'	6.10	106.38	101.50
57	DA	449	A	C3'-C2'-C1'	6.10	106.38	101.50
57	DA	1455	G	P-O3'-C3'	-6.10	112.38	119.70
57	DA	1008	A	P-O3'-C3'	6.10	127.02	119.70
57	DA	2021	C	N1-C1'-C2'	6.10	121.93	114.00
22	BA	116	C	P-O3'-C3'	6.09	127.01	119.70
22	BA	2086	U	O4'-C1'-N1	6.09	113.08	108.20
53	CA	765	G	P-O3'-C3'	-6.09	112.39	119.70
22	BA	527	C	N1-C1'-C2'	6.09	121.92	114.00
22	BA	962	G	P-O3'-C3'	-6.09	112.39	119.70
53	CA	555	U	P-O3'-C3'	-6.09	112.39	119.70
53	CA	960	U	P-O3'-C3'	6.09	127.01	119.70
57	DA	477	A	C3'-C2'-C1'	6.09	106.37	101.50
57	DA	2727	A	P-O3'-C3'	-6.09	112.39	119.70
1	AA	559	A	O4'-C1'-N9	6.09	113.07	108.20
53	CA	1507	A	P-O3'-C3'	-6.09	112.39	119.70
53	CA	1184	G	C3'-C2'-C1'	6.09	106.37	101.50
57	DA	1158	C	P-O3'-C3'	-6.09	112.40	119.70
57	DA	2069	G	P-O3'-C3'	-6.09	112.40	119.70
57	DA	2384	U	P-O3'-C3'	6.09	127.00	119.70
1	AA	479	U	O4'-C1'-N1	6.08	113.07	108.20
22	BA	557	C	P-O5'-C5'	-6.08	111.16	120.90
57	DA	60	G	C4-N9-C1'	-6.08	118.59	126.50
22	BA	1130	U	N1-C1'-C2'	6.08	121.90	114.00
22	BA	1524	G	N9-C1'-C2'	-6.08	105.32	112.00
22	BA	2656	U	N1-C1'-C2'	-6.08	105.32	112.00
53	CA	1244	G	C3'-C2'-C1'	6.08	106.36	101.50
57	DA	2311	A	P-O3'-C3'	6.08	126.99	119.70
57	DA	1396	U	P-O3'-C3'	6.07	126.99	119.70
57	DA	1919	A	N9-C1'-C2'	-6.07	105.32	112.00
22	BA	2384	U	N1-C1'-C2'	6.07	121.89	114.00
53	CA	704	A	C3'-C2'-C1'	6.07	106.36	101.50
57	DA	1817	G	P-O3'-C3'	-6.07	112.42	119.70
1	AA	279	A	O4'-C1'-N9	-6.07	103.34	108.20
53	CA	1202	U	P-O3'-C3'	-6.07	112.42	119.70
57	DA	1822	C	O4'-C1'-N1	6.07	113.06	108.20
22	BA	2250	G	N1-C6-O6	6.07	123.54	119.90
53	CA	985	C	O4'-C1'-N1	6.07	113.05	108.20
1	AA	429	U	P-O3'-C3'	6.07	126.98	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1142	G	P-O3'-C3'	-6.07	112.42	119.70
1	AA	1320	C	O4'-C1'-N1	6.07	113.05	108.20
57	DA	638	G	P-O3'-C3'	-6.07	112.42	119.70
22	BA	913	U	P-O3'-C3'	6.06	126.98	119.70
22	BA	2001	C	O5'-P-OP2	-6.06	100.24	105.70
57	DA	61	C	C3'-C2'-C1'	6.06	106.35	101.50
57	DA	1399	C	N1-C1'-C2'	-6.06	105.33	112.00
1	AA	508	U	P-O3'-C3'	6.06	126.97	119.70
22	BA	1062	G	C3'-C2'-C1'	6.06	106.35	101.50
22	BA	1396	U	O3'-P-O5'	-6.06	92.48	104.00
22	BA	1734	G	C3'-C2'-C1'	6.06	106.35	101.50
1	AA	884	U	O4'-C1'-N1	6.06	113.05	108.20
1	AA	1506	U	O4'-C1'-N1	6.06	113.05	108.20
57	DA	2225	A	O4'-C1'-N9	6.06	113.05	108.20
53	CA	438	U	P-O3'-C3'	6.06	126.97	119.70
22	BA	946	C	C3'-C2'-C1'	6.05	106.34	101.50
22	BA	2759	G	P-O5'-C5'	-6.05	111.21	120.90
53	CA	170	U	O4'-C1'-N1	6.05	113.04	108.20
53	CA	1217	C	C3'-C2'-C1'	6.05	106.34	101.50
53	CA	1319	A	P-O3'-C3'	6.05	126.97	119.70
57	DA	2060	A	P-O3'-C3'	6.05	126.97	119.70
22	BA	1858	A	C3'-C2'-C1'	6.05	106.34	101.50
22	BA	1784	A	N1-C6-N6	6.05	122.23	118.60
57	DA	1902	C	O4'-C1'-N1	6.05	113.04	108.20
53	CA	63	C	O4'-C1'-N1	6.05	113.04	108.20
1	AA	1365	G	P-O3'-C3'	-6.05	112.44	119.70
22	BA	554	U	O4'-C1'-N1	6.05	113.04	108.20
22	BA	1394	U	O4'-C1'-N1	-6.05	103.36	108.20
22	BA	1524	G	P-O3'-C3'	-6.05	112.44	119.70
53	CA	239	U	P-O3'-C3'	-6.05	112.44	119.70
1	AA	935	A	C3'-C2'-C1'	6.04	106.34	101.50
57	DA	2386	A	P-O3'-C3'	-6.04	112.44	119.70
57	DA	273	G	C3'-C2'-C1'	6.04	106.34	101.50
22	BA	2043	C	O4'-C1'-N1	-6.04	103.37	108.20
22	BA	2343	U	O4'-C1'-N1	-6.04	103.37	108.20
1	AA	95	C	N1-C1'-C2'	-6.04	105.36	112.00
57	DA	1024	G	C3'-C2'-C1'	6.04	106.33	101.50
22	BA	1118	C	P-O5'-C5'	-6.04	111.24	120.90
1	AA	654	G	C3'-C2'-C1'	6.04	106.33	101.50
22	BA	1310	G	P-O5'-C5'	-6.04	111.24	120.90
22	BA	1490	A	P-O3'-C3'	6.04	126.94	119.70
22	BA	2483	C	C6-N1-C2	6.04	122.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	52	C	P-O3'-C3'	-6.03	112.46	119.70
53	CA	71	A	C3'-C2'-C1'	6.03	106.33	101.50
53	CA	428	G	C4-N9-C1'	-6.03	118.66	126.50
58	DB	111	U	P-O3'-C3'	-6.03	112.47	119.70
22	BA	794	A	P-O3'-C3'	-6.03	112.47	119.70
53	CA	654	G	C3'-C2'-C1'	6.03	106.32	101.50
53	CA	1345	U	P-O3'-C3'	6.03	126.93	119.70
57	DA	1568	G	P-O3'-C3'	-6.03	112.47	119.70
22	BA	386	G	O4'-C1'-N9	6.03	113.02	108.20
22	BA	562	U	O4'-C1'-N1	-6.03	103.38	108.20
22	BA	1330	C	C3'-C2'-C1'	6.03	106.32	101.50
22	BA	2034	U	P-O3'-C3'	-6.03	112.47	119.70
22	BA	2307	G	O4'-C1'-N9	6.03	113.02	108.20
23	BB	12	C	N1-C1'-C2'	6.03	121.83	114.00
57	DA	1304	A	C3'-C2'-C1'	6.03	106.32	101.50
1	AA	794	A	P-O3'-C3'	-6.02	112.47	119.70
22	BA	2427	C	C3'-C2'-C1'	6.02	106.32	101.50
57	DA	103	A	C3'-C2'-C1'	6.02	106.32	101.50
22	BA	412	A	N9-C1'-C2'	-6.02	105.38	112.00
57	DA	14	A	C3'-C2'-C1'	6.02	106.31	101.50
57	DA	576	U	C3'-C2'-C1'	6.02	106.32	101.50
57	DA	1916	A	P-O3'-C3'	-6.02	112.48	119.70
57	DA	2239	G	C3'-C2'-C1'	6.02	106.32	101.50
22	BA	144	A	N9-C1'-C2'	-6.02	105.38	112.00
23	BB	24	G	P-O3'-C3'	6.02	126.92	119.70
57	DA	1458	U	O4'-C1'-N1	6.02	113.01	108.20
1	AA	184	G	C3'-C2'-C1'	6.01	106.31	101.50
53	CA	210	C	N1-C1'-C2'	6.01	121.82	114.00
57	DA	2712	C	P-O3'-C3'	6.01	126.92	119.70
22	BA	208	C	C6-N1-C2	6.01	122.70	120.30
53	CA	513	C	C3'-C2'-C1'	6.01	106.31	101.50
1	AA	976	G	C3'-C2'-C1'	6.01	106.31	101.50
57	DA	13	A	P-O3'-C3'	6.01	126.91	119.70
57	DA	1539	U	C3'-C2'-C1'	6.01	106.31	101.50
22	BA	556	A	P-O5'-C5'	-6.01	111.28	120.90
23	BB	40	U	O4'-C1'-N1	6.01	113.01	108.20
22	BA	1009	A	O5'-P-OP2	-6.01	100.29	105.70
57	DA	2593	U	P-O3'-C3'	-6.01	112.49	119.70
1	AA	816	A	C3'-C2'-C1'	6.00	106.30	101.50
22	BA	2423	U	O4'-C1'-N1	-6.00	103.40	108.20
1	AA	654	G	P-O3'-C3'	-6.00	112.50	119.70
22	BA	324	A	N9-C1'-C2'	-6.00	105.39	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2239	G	P-O3'-C3'	-6.00	112.50	119.70
22	BA	1022	G	P-O3'-C3'	6.00	126.90	119.70
57	DA	234	U	C3'-C2'-C1'	6.00	106.30	101.50
1	AA	500	G	N9-C1'-C2'	-6.00	105.40	112.00
22	BA	1250	G	P-O3'-C3'	6.00	126.90	119.70
57	DA	1828	G	P-O3'-C3'	6.00	126.89	119.70
57	DA	2657	A	C3'-C2'-C1'	6.00	106.30	101.50
57	DA	2851	A	C3'-C2'-C1'	6.00	106.30	101.50
1	AA	520	A	P-O3'-C3'	-6.00	112.51	119.70
22	BA	1933	G	P-O3'-C3'	5.99	126.89	119.70
57	DA	484	C	P-O3'-C3'	-5.99	112.51	119.70
1	AA	199	A	C3'-C2'-C1'	5.99	106.29	101.50
22	BA	2297	A	P-O3'-C3'	-5.99	112.51	119.70
53	CA	1160	G	C3'-C2'-C1'	5.99	106.29	101.50
57	DA	1654	A	C3'-C2'-C1'	5.99	106.29	101.50
1	AA	1323	G	C3'-C2'-C1'	5.99	106.29	101.50
57	DA	1733	G	N9-C1'-C2'	-5.99	105.41	112.00
1	AA	517	G	P-O3'-C3'	5.99	126.89	119.70
57	DA	588	U	O4'-C1'-N1	-5.99	103.41	108.20
57	DA	1693	U	N1-C1'-C2'	5.99	121.78	114.00
57	DA	2866	U	O4'-C1'-N1	5.99	112.99	108.20
1	AA	1282	C	C3'-C2'-C1'	5.99	106.29	101.50
22	BA	671	C	C3'-C2'-C1'	5.99	106.29	101.50
22	BA	951	C	N3-C2-O2	5.99	126.09	121.90
53	CA	277	C	N1-C1'-C2'	-5.99	105.42	112.00
53	CA	643	C	C3'-C2'-C1'	5.99	106.29	101.50
57	DA	2364	C	O4'-C1'-N1	5.99	112.99	108.20
22	BA	1072	C	N1-C1'-C2'	-5.98	105.42	112.00
53	CA	885	G	C3'-C2'-C1'	5.98	106.29	101.50
57	DA	2143	C	O4'-C1'-N1	5.98	112.99	108.20
22	BA	2635	A	P-O5'-C5'	-5.98	111.33	120.90
53	CA	996	A	C3'-C2'-C1'	5.98	106.28	101.50
57	DA	2250	G	O4'-C1'-N9	-5.98	103.42	108.20
22	BA	1289	C	N1-C1'-C2'	-5.98	105.42	112.00
1	AA	966	G	P-O3'-C3'	-5.98	112.53	119.70
57	DA	2051	A	P-O3'-C3'	5.98	126.87	119.70
1	AA	793	U	P-O3'-C3'	-5.98	112.53	119.70
1	AA	1380	U	O4'-C1'-N1	5.97	112.98	108.20
22	BA	2368	C	P-O3'-C3'	-5.97	112.53	119.70
57	DA	2272	U	O4'-C1'-N1	-5.97	103.42	108.20
57	DA	2496	C	O4'-C1'-N1	5.97	112.98	108.20
57	DA	265	A	O4'-C1'-N9	5.97	112.98	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1451	C	N1-C1'-C2'	5.97	121.76	114.00
1	AA	423	G	C3'-C2'-C1'	5.97	106.27	101.50
53	CA	615	G	O4'-C1'-N9	5.97	112.97	108.20
22	BA	802	A	P-O3'-C3'	-5.97	112.54	119.70
22	BA	1654	A	P-O3'-C3'	-5.97	112.54	119.70
57	DA	1901	A	C3'-C2'-C1'	5.97	106.27	101.50
1	AA	1169	A	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	273	G	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	528	A	N9-C1'-C2'	-5.96	105.44	112.00
22	BA	1707	G	N9-C1'-C2'	-5.96	105.44	112.00
22	BA	142	A	C3'-C2'-C1'	5.96	106.27	101.50
57	DA	2462	C	O4'-C1'-N1	5.96	112.97	108.20
53	CA	122	G	N9-C1'-C2'	-5.96	105.44	112.00
23	BB	42	C	C3'-C2'-C1'	5.96	106.27	101.50
53	CA	1052	U	P-O3'-C3'	-5.96	112.55	119.70
1	AA	1091	U	O4'-C1'-N1	5.96	112.97	108.20
22	BA	528	A	C6-C5-N7	-5.95	128.13	132.30
22	BA	2808	G	O5'-P-OP2	-5.95	100.34	105.70
57	DA	2052	A	N9-C1'-C2'	-5.95	105.45	112.00
1	AA	1453	G	P-O3'-C3'	-5.95	112.56	119.70
57	DA	1717	A	C3'-C2'-C1'	5.95	106.26	101.50
1	AA	330	C	P-O3'-C3'	-5.95	112.56	119.70
57	DA	1021	A	C3'-C2'-C1'	5.95	106.26	101.50
57	DA	1034	G	C3'-C2'-C1'	5.95	106.26	101.50
1	AA	794	A	C3'-C2'-C1'	5.95	106.26	101.50
22	BA	208	C	N3-C2-O2	5.95	126.06	121.90
22	BA	1091	G	O4'-C1'-N9	5.95	112.96	108.20
1	AA	596	A	C3'-C2'-C1'	5.95	106.26	101.50
22	BA	1181	U	C3'-C2'-C1'	5.95	106.26	101.50
57	DA	2777	G	C3'-C2'-C1'	5.95	106.26	101.50
31	DJ	25	LEU	CA-CB-CG	5.95	128.98	115.30
53	CA	199	A	C3'-C2'-C1'	5.94	106.25	101.50
57	DA	861	A	C3'-C2'-C1'	5.94	106.25	101.50
57	DA	1523	U	O4'-C1'-N1	5.94	112.95	108.20
57	DA	2682	A	C3'-C2'-C1'	5.94	106.25	101.50
1	AA	162	A	P-O3'-C3'	5.93	126.82	119.70
22	BA	1828	G	P-O3'-C3'	5.93	126.82	119.70
57	DA	369	U	O4'-C1'-N1	5.93	112.95	108.20
57	DA	2603	G	P-O3'-C3'	-5.93	112.58	119.70
22	BA	18	U	P-O5'-C5'	-5.93	111.41	120.90
22	BA	528	A	N7-C8-N9	5.93	116.77	113.80
22	BA	2797	U	P-O3'-C3'	5.93	126.82	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1288	A	C3'-C2'-C1'	5.93	106.25	101.50
57	DA	2808	G	P-O3'-C3'	5.93	126.82	119.70
1	AA	497	G	C3'-C2'-C1'	5.93	106.24	101.50
1	AA	718	A	P-O3'-C3'	-5.93	112.58	119.70
22	BA	1476	U	O4'-C1'-N1	5.93	112.94	108.20
22	BA	74	A	P-O3'-C3'	5.93	126.81	119.70
22	BA	2211	A	O4'-C1'-N9	5.93	112.94	108.20
1	AA	121	U	N1-C1'-C2'	-5.93	105.48	112.00
1	AA	372	C	O4'-C1'-N1	5.93	112.94	108.20
22	BA	1779	U	P-O5'-C5'	-5.92	111.42	120.90
53	CA	575	G	C8-N9-C1'	5.92	134.70	127.00
1	AA	1323	G	P-O3'-C3'	-5.92	112.59	119.70
22	BA	579	G	P-O3'-C3'	5.92	126.81	119.70
57	DA	231	A	P-O3'-C3'	-5.92	112.60	119.70
22	BA	1963	U	C3'-C2'-C1'	5.92	106.23	101.50
22	BA	2547	A	P-O3'-C3'	5.92	126.80	119.70
53	CA	1299	A	P-O3'-C3'	-5.92	112.60	119.70
57	DA	1396	U	O4'-C1'-N1	5.92	112.94	108.20
57	DA	1695	G	C3'-C2'-C1'	5.92	106.23	101.50
57	DA	2893	A	P-O3'-C3'	5.92	126.80	119.70
53	CA	519	C	C3'-C2'-C1'	5.92	106.23	101.50
57	DA	2214	C	C3'-C2'-C1'	5.92	106.23	101.50
53	CA	131	A	P-O3'-C3'	-5.91	112.60	119.70
1	AA	213	G	P-O3'-C3'	5.91	126.79	119.70
22	BA	2297	A	O4'-C1'-N9	-5.91	103.47	108.20
1	AA	1151	A	P-O3'-C3'	5.91	126.79	119.70
22	BA	1742	U	P-O3'-C3'	5.91	126.79	119.70
22	BA	2149	U	C3'-C2'-C1'	5.91	106.23	101.50
57	DA	2150	C	C3'-C2'-C1'	5.91	106.23	101.50
57	DA	87	U	C3'-C2'-C1'	5.91	106.22	101.50
57	DA	1929	G	OP1-P-O3'	5.91	118.19	105.20
57	DA	1997	C	C3'-C2'-C1'	5.90	106.22	101.50
1	AA	1381	U	C3'-C2'-C1'	5.90	106.22	101.50
57	DA	1839	G	C3'-C2'-C1'	5.90	106.22	101.50
53	CA	291	U	O4'-C1'-N1	5.90	112.92	108.20
22	BA	1497	U	O4'-C1'-N1	5.90	112.92	108.20
1	AA	468	A	P-O3'-C3'	-5.90	112.62	119.70
22	BA	2012	G	O5'-P-OP2	-5.89	100.39	105.70
57	DA	1451	C	P-O3'-C3'	5.89	126.77	119.70
57	DA	2578	G	P-O3'-C3'	-5.89	112.63	119.70
53	CA	884	U	P-O3'-C3'	5.89	126.77	119.70
53	CA	1381	U	C3'-C2'-C1'	5.89	106.21	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	77	G	C3'-C2'-C1'	5.89	106.21	101.50
53	CA	331	G	C3'-C2'-C1'	5.89	106.21	101.50
57	DA	1079	C	P-O3'-C3'	-5.89	112.63	119.70
22	BA	919	U	O4'-C1'-N1	-5.89	103.49	108.20
22	BA	1254	A	C3'-C2'-C1'	5.89	106.21	101.50
53	CA	1127	G	C3'-C2'-C1'	5.89	106.21	101.50
22	BA	391	A	P-O3'-C3'	-5.89	112.64	119.70
57	DA	1669	A	C3'-C2'-C1'	5.89	106.21	101.50
22	BA	748	G	O4'-C1'-N9	5.88	112.91	108.20
53	CA	816	A	C3'-C2'-C1'	5.88	106.21	101.50
22	BA	671	C	P-O3'-C3'	-5.88	112.64	119.70
1	AA	1241	G	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1451	C	P-O3'-C3'	5.88	126.76	119.70
53	CA	47	C	P-O3'-C3'	5.88	126.76	119.70
57	DA	60	G	C8-N9-C1'	5.88	134.64	127.00
22	BA	1234	U	O4'-C1'-N1	5.88	112.90	108.20
22	BA	2504	U	P-O3'-C3'	-5.88	112.65	119.70
57	DA	916	G	C3'-C2'-C1'	5.88	106.20	101.50
57	DA	1400	U	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1379	U	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1658	C	O4'-C1'-N1	-5.88	103.50	108.20
57	DA	1206	G	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1287	A	C3'-C2'-C1'	5.87	106.20	101.50
57	DA	1722	A	P-O3'-C3'	-5.87	112.65	119.70
57	DA	2615	U	C3'-C2'-C1'	5.87	106.20	101.50
1	AA	89	U	O4'-C1'-N1	5.87	112.89	108.20
22	BA	1565	C	P-O3'-C3'	5.87	126.74	119.70
57	DA	231	A	C3'-C2'-C1'	5.87	106.19	101.50
57	DA	1735	A	C3'-C2'-C1'	5.87	106.19	101.50
57	DA	1157	G	P-O3'-C3'	-5.87	112.66	119.70
22	BA	2148	G	C3'-C2'-C1'	5.86	106.19	101.50
57	DA	1956	U	C3'-C2'-C1'	5.86	106.19	101.50
53	CA	448	A	O4'-C1'-N9	5.86	112.89	108.20
57	DA	142	A	P-O3'-C3'	5.86	126.73	119.70
57	DA	1430	G	C3'-C2'-C1'	5.86	106.19	101.50
22	BA	2440	C	C3'-C2'-C1'	5.86	106.19	101.50
53	CA	247	G	C3'-C2'-C1'	5.86	106.19	101.50
53	CA	253	A	C3'-C2'-C1'	5.86	106.19	101.50
53	CA	1395	C	P-O3'-C3'	-5.86	112.67	119.70
57	DA	2150	C	P-O3'-C3'	-5.86	112.67	119.70
22	BA	91	A	P-O3'-C3'	5.86	126.73	119.70
22	BA	485	C	P-O3'-C3'	-5.86	112.67	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	70	G	P-O3'-C3'	5.85	126.72	119.70
57	DA	217	A	C3'-C2'-C1'	5.85	106.18	101.50
22	BA	1303	G	P-O3'-C3'	-5.85	112.68	119.70
53	CA	1449	C	C3'-C2'-C1'	5.85	106.18	101.50
22	BA	2774	C	P-O5'-C5'	-5.85	111.54	120.90
53	CA	1202	U	C3'-C2'-C1'	5.85	106.18	101.50
57	DA	1217	U	O4'-C1'-N1	5.85	112.88	108.20
53	CA	567	G	C3'-C2'-C1'	5.85	106.18	101.50
1	AA	972	C	P-O3'-C3'	-5.85	112.69	119.70
57	DA	571	U	P-O3'-C3'	5.85	126.72	119.70
57	DA	2409	G	C3'-C2'-C1'	5.85	106.18	101.50
1	AA	1087	G	C3'-C2'-C1'	5.84	106.17	101.50
1	AA	1158	C	N1-C1'-C2'	-5.84	105.57	112.00
1	AA	1531	A	P-O3'-C3'	-5.84	112.69	119.70
57	DA	2266	A	P-O3'-C3'	5.84	126.72	119.70
1	AA	368	U	C3'-C2'-C1'	5.84	106.17	101.50
22	BA	243	U	P-O3'-C3'	-5.84	112.69	119.70
1	AA	567	G	C3'-C2'-C1'	5.84	106.17	101.50
22	BA	2267	A	C3'-C2'-C1'	5.84	106.17	101.50
57	DA	492	A	P-O3'-C3'	-5.84	112.69	119.70
57	DA	604	G	C3'-C2'-C1'	5.84	106.17	101.50
22	BA	2021	C	O3'-P-O5'	-5.84	92.91	104.00
53	CA	423	G	C3'-C2'-C1'	5.84	106.17	101.50
2	CB	146	SER	C-N-CA	5.84	136.29	121.70
57	DA	1576	U	O4'-C1'-N1	5.83	112.87	108.20
1	AA	132	C	O4'-C1'-N1	5.83	112.87	108.20
1	AA	414	A	C3'-C2'-C1'	5.83	106.17	101.50
1	AA	972	C	C3'-C2'-C1'	5.83	106.17	101.50
22	BA	35	G	C3'-C2'-C1'	5.83	106.17	101.50
53	CA	652	U	P-O3'-C3'	5.83	126.70	119.70
53	CA	885	G	N9-C1'-C2'	-5.83	105.59	112.00
57	DA	861	A	P-O3'-C3'	-5.83	112.70	119.70
22	BA	655	A	P-O3'-C3'	5.83	126.70	119.70
53	CA	733	G	P-O3'-C3'	5.83	126.69	119.70
53	CA	1505	G	C3'-C2'-C1'	5.83	106.16	101.50
22	BA	781	A	P-O3'-C3'	5.83	126.69	119.70
22	BA	1289	C	C3'-C2'-C1'	5.83	106.16	101.50
22	BA	807	U	P-O5'-C5'	-5.83	111.58	120.90
22	BA	1537	G	C3'-C2'-C1'	5.83	106.16	101.50
57	DA	492	A	C3'-C2'-C1'	5.83	106.16	101.50
57	DA	2573	C	N1-C1'-C2'	-5.83	105.59	112.00
1	AA	90	C	N1-C1'-C2'	-5.82	105.59	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	549	C	C3'-C2'-C1'	5.82	106.16	101.50
22	BA	1733	G	P-O3'-C3'	-5.82	112.71	119.70
53	CA	969	A	P-O3'-C3'	-5.82	112.71	119.70
1	AA	857	C	O4'-C1'-N1	5.82	112.86	108.20
57	DA	995	C	P-O3'-C3'	5.82	126.69	119.70
1	AA	51	A	P-O3'-C3'	5.82	126.69	119.70
22	BA	302	C	P-O3'-C3'	-5.82	112.72	119.70
57	DA	2348	U	C3'-C2'-C1'	5.82	106.16	101.50
57	DA	397	U	C3'-C2'-C1'	5.82	106.16	101.50
22	BA	2267	A	P-O3'-C3'	-5.82	112.72	119.70
53	CA	500	G	N9-C1'-C2'	-5.82	105.60	112.00
1	AA	366	A	P-O3'-C3'	5.82	126.68	119.70
22	BA	553	G	P-O3'-C3'	-5.82	112.72	119.70
22	BA	2836	U	P-O3'-C3'	-5.82	112.72	119.70
22	BA	1992	G	C4-N9-C1'	-5.81	118.94	126.50
22	BA	2136	G	C3'-C2'-C1'	5.81	106.15	101.50
22	BA	2615	U	C3'-C2'-C1'	5.81	106.15	101.50
57	DA	230	G	C3'-C2'-C1'	5.81	106.15	101.50
57	DA	1649	G	P-O3'-C3'	-5.81	112.72	119.70
57	DA	1734	G	C3'-C2'-C1'	5.81	106.15	101.50
22	BA	268	C	P-O3'-C3'	-5.81	112.73	119.70
1	AA	247	G	P-O3'-C3'	-5.81	112.73	119.70
1	AA	1469	C	P-O5'-C5'	-5.81	111.61	120.90
22	BA	2630	G	P-O3'-C3'	-5.81	112.73	119.70
53	CA	353	A	O4'-C1'-N9	5.81	112.85	108.20
53	CA	497	G	C3'-C2'-C1'	5.81	106.15	101.50
22	BA	2327	A	C3'-C2'-C1'	5.81	106.15	101.50
57	DA	1649	G	C3'-C2'-C1'	5.81	106.15	101.50
57	DA	1653	G	P-O3'-C3'	5.81	126.67	119.70
22	BA	346	A	P-O3'-C3'	-5.80	112.73	119.70
22	BA	570	G	P-O5'-C5'	-5.80	111.61	120.90
53	CA	821	G	N9-C1'-C2'	-5.80	105.62	112.00
53	CA	1148	U	C3'-C2'-C1'	5.80	106.14	101.50
53	CA	891	U	C3'-C2'-C1'	5.80	106.14	101.50
53	CA	1367	C	C3'-C2'-C1'	5.80	106.14	101.50
22	BA	482	A	C3'-C2'-C1'	5.80	106.14	101.50
58	DB	17	C	P-O3'-C3'	-5.80	112.74	119.70
22	BA	410	G	P-O3'-C3'	5.80	126.66	119.70
22	BA	229	C	C3'-C2'-C1'	5.80	106.14	101.50
1	AA	950	U	O4'-C1'-N1	5.79	112.84	108.20
57	DA	1555	G	N9-C1'-C2'	-5.79	105.63	112.00
22	BA	2570	G	P-O3'-C3'	-5.79	112.75	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	248	C	C3'-C2'-C1'	5.79	106.13	101.50
57	DA	1961	C	O4'-C1'-N1	5.79	112.83	108.20
22	BA	1694	C	P-O3'-C3'	5.79	126.64	119.70
22	BA	2470	G	P-O3'-C3'	5.79	126.64	119.70
53	CA	1244	G	P-O3'-C3'	-5.79	112.76	119.70
57	DA	670	A	P-O3'-C3'	5.79	126.64	119.70
22	BA	436	C	O4'-C1'-N1	5.78	112.83	108.20
53	CA	452	A	C3'-C2'-C1'	5.78	106.12	101.50
22	BA	2062	A	N9-C1'-C2'	-5.78	105.64	112.00
53	CA	870	U	N1-C1'-C2'	5.78	121.51	114.00
1	AA	13	U	O4'-C1'-N1	5.78	112.82	108.20
1	AA	210	C	P-O3'-C3'	5.78	126.63	119.70
22	BA	1929	G	P-O3'-C3'	5.78	126.63	119.70
57	DA	777	G	P-O3'-C3'	-5.78	112.77	119.70
1	AA	1365	G	N9-C1'-C2'	-5.78	105.65	112.00
53	CA	1452	C	P-O3'-C3'	5.78	126.63	119.70
57	DA	303	G	C3'-C2'-C1'	5.78	106.12	101.50
57	DA	353	C	O4'-C1'-N1	-5.78	103.58	108.20
57	DA	2458	G	C4-N9-C1'	5.78	134.01	126.50
57	DA	2459	A	C3'-C2'-C1'	5.78	106.12	101.50
22	BA	1493	C	O4'-C1'-N1	5.77	112.82	108.20
22	BA	2385	C	C3'-C2'-C1'	5.77	106.12	101.50
23	BB	45	A	P-O3'-C3'	-5.77	112.77	119.70
2	CB	146	SER	CA-C-N	5.77	129.90	117.20
57	DA	143	C	C3'-C2'-C1'	5.77	106.12	101.50
57	DA	1386	C	P-O3'-C3'	-5.77	112.77	119.70
53	CA	1031	C	P-O3'-C3'	5.77	126.62	119.70
53	CA	1168	U	C3'-C2'-C1'	5.77	106.12	101.50
57	DA	638	G	C3'-C2'-C1'	5.77	106.11	101.50
1	AA	116	A	N9-C1'-C2'	-5.77	105.66	112.00
1	AA	266	G	O3'-P-O5'	5.77	114.96	104.00
22	BA	1250	G	P-O5'-C5'	-5.77	111.67	120.90
53	CA	439	U	P-O5'-C5'	-5.77	111.67	120.90
57	DA	1010	A	C3'-C2'-C1'	5.77	106.11	101.50
22	BA	456	C	O4'-C1'-N1	-5.76	103.59	108.20
22	BA	1615	C	O3'-P-O5'	-5.76	93.05	104.00
22	BA	1022	G	N9-C4-C5	5.76	107.70	105.40
58	DB	110	C	P-O3'-C3'	-5.76	112.78	119.70
1	AA	652	U	P-O3'-C3'	5.76	126.61	119.70
53	CA	210	C	P-O3'-C3'	5.76	126.61	119.70
57	DA	1388	G	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	346	A	N9-C1'-C2'	-5.76	105.67	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	562	U	O4'-C1'-N1	-5.76	103.59	108.20
57	DA	2136	G	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	96	C	C6-N1-C2	5.76	122.60	120.30
22	BA	1062	G	P-O3'-C3'	-5.76	112.79	119.70
57	DA	1274	A	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	1538	G	C3'-C2'-C1'	5.75	106.10	101.50
22	BA	763	G	C8-N9-C1'	-5.75	119.52	127.00
22	BA	783	A	C4-C5-N7	5.75	113.58	110.70
22	BA	329	G	P-O3'-C3'	5.75	126.60	119.70
22	BA	1119	U	P-O3'-C3'	-5.75	112.80	119.70
53	CA	82	G	C3'-C2'-C1'	5.75	106.10	101.50
53	CA	1366	C	N1-C1'-C2'	-5.75	105.67	112.00
57	DA	92	U	C3'-C2'-C1'	5.75	106.10	101.50
22	BA	728	G	O4'-C1'-N9	5.75	112.80	108.20
22	BA	2062	A	C3'-C2'-C1'	5.75	106.10	101.50
53	CA	686	U	P-O3'-C3'	5.75	126.60	119.70
57	DA	510	C	C3'-C2'-C1'	5.75	106.10	101.50
57	DA	1821	A	C3'-C2'-C1'	5.75	106.10	101.50
1	AA	1047	G	OP2-P-O3'	5.75	117.84	105.20
22	BA	2417	C	P-O5'-C5'	-5.75	111.71	120.90
22	BA	2492	U	C3'-C2'-C1'	5.75	106.10	101.50
57	DA	945	A	P-O3'-C3'	5.75	126.59	119.70
57	DA	860	U	P-O3'-C3'	-5.75	112.81	119.70
57	DA	1274	A	P-O3'-C3'	-5.75	112.81	119.70
22	BA	1276	A	P-O3'-C3'	-5.74	112.81	119.70
53	CA	984	C	O4'-C1'-N1	5.74	112.79	108.20
53	CA	1217	C	P-O3'-C3'	-5.74	112.81	119.70
57	DA	2683	C	C3'-C2'-C1'	5.74	106.09	101.50
1	AA	74	A	N9-C1'-C2'	-5.74	105.68	112.00
57	DA	1077	A	C3'-C2'-C1'	5.74	106.09	101.50
1	AA	251	G	O4'-C1'-N9	-5.74	103.61	108.20
22	BA	1060	U	P-O3'-C3'	5.74	126.59	119.70
53	CA	536	C	N1-C1'-C2'	-5.74	105.69	112.00
57	DA	1274	A	N9-C1'-C2'	-5.74	105.69	112.00
57	DA	2756	U	P-O3'-C3'	5.74	126.59	119.70
53	CA	1139	G	P-O3'-C3'	5.74	126.59	119.70
57	DA	2880	C	C3'-C2'-C1'	5.74	106.09	101.50
57	DA	2896	C	O4'-C1'-N1	5.74	112.79	108.20
22	BA	390	U	O4'-C1'-N1	-5.74	103.61	108.20
22	BA	1993	U	P-O3'-C3'	-5.74	112.81	119.70
57	DA	1340	U	P-O3'-C3'	5.74	126.58	119.70
1	AA	1424	U	O4'-C1'-N1	5.73	112.79	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1145	C	P-O3'-C3'	-5.73	112.82	119.70
22	BA	919	U	C5-C6-N1	5.73	125.57	122.70
22	BA	1696	G	P-O3'-C3'	-5.73	112.82	119.70
53	CA	224	U	O4'-C1'-N1	5.73	112.78	108.20
22	BA	1885	A	C3'-C2'-C1'	5.73	106.08	101.50
57	DA	527	C	N1-C1'-C2'	5.73	121.45	114.00
53	CA	686	U	N1-C1'-C2'	5.73	121.45	114.00
1	AA	1141	C	C3'-C2'-C1'	5.73	106.08	101.50
53	CA	509	A	C3'-C2'-C1'	5.73	106.08	101.50
57	DA	1158	C	C3'-C2'-C1'	5.73	106.08	101.50
58	DB	16	G	C3'-C2'-C1'	5.73	106.08	101.50
1	AA	1055	A	N9-C1'-C2'	-5.73	105.70	112.00
22	BA	1931	U	P-O3'-C3'	-5.73	112.83	119.70
1	AA	984	C	C3'-C2'-C1'	5.72	106.08	101.50
1	AA	1066	C	P-O3'-C3'	-5.72	112.83	119.70
22	BA	1499	C	C3'-C2'-C1'	5.72	106.08	101.50
57	DA	1204	A	P-O3'-C3'	5.72	126.57	119.70
57	DA	1492	G	C3'-C2'-C1'	5.72	106.08	101.50
22	BA	571	U	P-O3'-C3'	5.72	126.56	119.70
22	BA	2836	U	P-O5'-C5'	-5.72	111.75	120.90
57	DA	1025	G	P-O3'-C3'	5.72	126.56	119.70
22	BA	2405	G	P-O3'-C3'	5.72	126.56	119.70
23	BB	57	A	P-O5'-C5'	-5.72	111.75	120.90
53	CA	914	A	N9-C1'-C2'	-5.72	105.71	112.00
23	BB	16	G	P-O3'-C3'	-5.72	112.84	119.70
57	DA	229	C	O4'-C1'-N1	5.72	112.77	108.20
57	DA	442	G	P-O3'-C3'	5.72	126.56	119.70
1	AA	914	A	P-O3'-C3'	-5.71	112.84	119.70
22	BA	1130	U	P-O3'-C3'	5.71	126.56	119.70
57	DA	639	U	C3'-C2'-C1'	5.71	106.07	101.50
57	DA	2603	G	N9-C1'-C2'	-5.71	105.71	112.00
22	BA	944	C	O4'-C1'-N1	5.71	112.77	108.20
22	BA	1013	C	C3'-C2'-C1'	5.71	106.07	101.50
53	CA	316	C	C3'-C2'-C1'	5.71	106.07	101.50
57	DA	406	G	P-O3'-C3'	-5.71	112.84	119.70
57	DA	491	G	C3'-C2'-C1'	5.71	106.07	101.50
57	DA	1157	G	C3'-C2'-C1'	5.71	106.07	101.50
22	BA	1648	U	P-O3'-C3'	-5.71	112.85	119.70
57	DA	1633	G	P-O3'-C3'	5.71	126.55	119.70
57	DA	1557	C	C3'-C2'-C1'	5.71	106.07	101.50
57	DA	1997	C	P-O3'-C3'	-5.71	112.85	119.70
57	DA	2459	A	P-O3'-C3'	-5.71	112.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2756	U	N1-C1'-C2'	5.71	121.42	114.00
22	BA	1494	A	C3'-C2'-C1'	5.71	106.06	101.50
57	DA	2063	C	C3'-C2'-C1'	5.71	106.07	101.50
1	AA	92	U	P-O3'-C3'	-5.71	112.85	119.70
22	BA	120	U	P-O5'-C5'	-5.71	111.77	120.90
22	BA	746	U	N1-C1'-C2'	5.71	121.42	114.00
57	DA	2386	A	C3'-C2'-C1'	5.71	106.06	101.50
22	BA	1045	C	N1-C1'-C2'	5.70	121.41	114.00
53	CA	347	G	C3'-C2'-C1'	5.70	106.06	101.50
53	CA	688	G	N9-C1'-C2'	-5.70	105.72	112.00
57	DA	575	A	C3'-C2'-C1'	5.70	106.06	101.50
1	AA	9	G	N9-C1'-C2'	-5.70	105.73	112.00
1	AA	1283	U	O4'-C1'-N1	5.70	112.76	108.20
57	DA	618	G	P-O3'-C3'	-5.70	112.86	119.70
22	BA	2440	C	P-O3'-C3'	-5.70	112.86	119.70
53	CA	353	A	C3'-C2'-C1'	5.70	106.06	101.50
57	DA	1132	U	O4'-C1'-N1	-5.70	103.64	108.20
1	AA	486	U	P-O3'-C3'	-5.70	112.86	119.70
57	DA	229	C	P-O3'-C3'	-5.70	112.86	119.70
22	BA	1647	U	P-O3'-C3'	5.70	126.53	119.70
57	DA	1635	A	N9-C1'-C2'	-5.70	105.74	112.00
57	DA	2333	A	P-O3'-C3'	5.70	126.53	119.70
1	AA	1184	G	N9-C1'-C2'	-5.69	105.74	112.00
22	BA	672	C	O5'-P-OP2	-5.69	100.58	105.70
22	BA	2631	G	P-O5'-C5'	-5.69	111.80	120.90
33	BL	82	LEU	CA-CB-CG	5.69	128.39	115.30
57	DA	459	U	C3'-C2'-C1'	5.69	106.05	101.50
57	DA	1385	A	P-O3'-C3'	5.69	126.53	119.70
57	DA	2216	G	C3'-C2'-C1'	5.69	106.05	101.50
57	DA	2699	C	O4'-C1'-N1	5.69	112.75	108.20
53	CA	577	G	C3'-C2'-C1'	5.69	106.05	101.50
57	DA	484	C	C3'-C2'-C1'	5.69	106.05	101.50
57	DA	2382	G	P-O3'-C3'	5.69	126.53	119.70
1	AA	1283	U	C3'-C2'-C1'	5.69	106.05	101.50
22	BA	621	A	P-O5'-C5'	-5.69	111.80	120.90
22	BA	1785	A	C3'-C2'-C1'	5.69	106.05	101.50
22	BA	1027	A	P-O3'-C3'	-5.69	112.88	119.70
22	BA	1499	C	N1-C1'-C2'	-5.68	105.75	112.00
53	CA	92	U	C3'-C2'-C1'	5.68	106.05	101.50
1	AA	564	C	P-O3'-C3'	-5.68	112.88	119.70
22	BA	2752	C	C3'-C2'-C1'	5.68	106.05	101.50
1	AA	772	U	P-O3'-C3'	-5.68	112.89	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1326	U	O4'-C1'-N1	5.68	112.74	108.20
57	DA	141	G	P-O3'-C3'	5.68	126.52	119.70
1	AA	468	A	C3'-C2'-C1'	5.68	106.04	101.50
53	CA	816	A	P-O3'-C3'	-5.68	112.89	119.70
1	AA	686	U	O4'-C1'-N1	5.68	112.74	108.20
22	BA	1181	U	P-O3'-C3'	-5.68	112.89	119.70
53	CA	366	A	P-O3'-C3'	5.68	126.51	119.70
1	AA	1095	U	P-O3'-C3'	-5.67	112.89	119.70
57	DA	2492	U	C3'-C2'-C1'	5.67	106.04	101.50
1	AA	865	A	P-O3'-C3'	5.67	126.51	119.70
57	DA	1510	G	C3'-C2'-C1'	5.67	106.04	101.50
57	DA	1784	A	P-O3'-C3'	5.67	126.51	119.70
22	BA	379	G	P-O5'-C5'	-5.67	111.83	120.90
57	DA	424	G	N9-C1'-C2'	-5.67	105.76	112.00
57	DA	2611	C	C3'-C2'-C1'	5.67	106.04	101.50
22	BA	369	U	N1-C1'-C2'	5.67	121.37	114.00
57	DA	1060	U	N1-C1'-C2'	5.67	121.37	114.00
57	DA	1009	A	C3'-C2'-C1'	5.67	106.03	101.50
57	DA	1114	C	N1-C1'-C2'	-5.67	105.77	112.00
22	BA	1986	C	P-O3'-C3'	-5.66	112.90	119.70
53	CA	1146	A	C3'-C2'-C1'	5.66	106.03	101.50
53	CA	1161	C	O4'-C1'-N1	5.66	112.73	108.20
57	DA	1027	A	C3'-C2'-C1'	5.66	106.03	101.50
57	DA	1857	G	P-O3'-C3'	5.66	126.50	119.70
53	CA	642	A	P-O3'-C3'	-5.66	112.91	119.70
57	DA	407	G	C3'-C2'-C1'	5.66	106.03	101.50
22	BA	1313	U	O4'-C1'-N1	5.66	112.73	108.20
53	CA	199	A	P-O3'-C3'	-5.66	112.91	119.70
57	DA	105	C	O4'-C1'-N1	5.66	112.73	108.20
22	BA	1249	U	C3'-C2'-C1'	5.66	106.03	101.50
57	DA	490	C	O4'-C1'-N1	-5.66	103.67	108.20
57	DA	1739	A	C3'-C2'-C1'	5.66	106.03	101.50
57	DA	2199	A	P-O3'-C3'	-5.66	112.91	119.70
22	BA	1821	A	P-O5'-C5'	-5.65	111.85	120.90
1	AA	915	A	O4'-C1'-N9	5.65	112.72	108.20
22	BA	1919	A	C3'-C2'-C1'	5.65	106.02	101.50
57	DA	1291	C	C3'-C2'-C1'	5.65	106.02	101.50
57	DA	1457	U	O4'-C1'-N1	5.65	112.72	108.20
53	CA	1349	A	C3'-C2'-C1'	5.65	106.02	101.50
57	DA	783	A	C3'-C2'-C1'	5.65	106.02	101.50
58	DB	68	C	P-O3'-C3'	-5.65	112.92	119.70
1	AA	267	C	C3'-C2'-C1'	5.65	106.02	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1073	A	C3'-C2'-C1'	5.65	106.02	101.50
22	BA	1288	G	O5'-P-OP2	-5.65	100.62	105.70
57	DA	206	U	P-O3'-C3'	-5.65	112.92	119.70
22	BA	2086	U	P-O3'-C3'	5.65	126.47	119.70
57	DA	2217	G	N9-C1'-C2'	-5.65	105.79	112.00
22	BA	2849	U	P-O5'-C5'	-5.64	111.87	120.90
53	CA	915	A	N9-C1'-C2'	-5.64	105.79	112.00
57	DA	1682	G	C3'-C2'-C1'	5.64	106.02	101.50
1	AA	817	C	N1-C1'-C2'	5.64	121.33	114.00
22	BA	1866	A	C3'-C2'-C1'	5.64	106.01	101.50
53	CA	1332	A	N9-C1'-C2'	-5.64	105.79	112.00
57	DA	727	A	C3'-C2'-C1'	5.64	106.01	101.50
57	DA	1415	U	O4'-C1'-N1	5.64	112.71	108.20
22	BA	593	U	O4'-C1'-N1	5.64	112.71	108.20
23	BB	42	C	P-O3'-C3'	-5.64	112.93	119.70
53	CA	965	U	P-O3'-C3'	5.64	126.47	119.70
22	BA	958	U	C3'-C2'-C1'	5.64	106.01	101.50
22	BA	2504	U	P-O5'-C5'	-5.64	111.88	120.90
57	DA	2543	G	P-O3'-C3'	-5.64	112.93	119.70
53	CA	66	A	O4'-C1'-N9	-5.64	103.69	108.20
1	AA	813	U	N1-C1'-C2'	-5.64	105.80	112.00
22	BA	763	G	N9-C1'-C2'	-5.64	105.80	112.00
53	CA	6	G	P-O3'-C3'	-5.64	112.94	119.70
53	CA	37	U	O4'-C1'-N1	5.64	112.71	108.20
53	CA	87	C	O4'-C1'-N1	5.63	112.71	108.20
53	CA	1145	A	P-O3'-C3'	5.63	126.46	119.70
57	DA	2683	C	O4'-C1'-N1	5.63	112.71	108.20
58	DB	68	C	C3'-C2'-C1'	5.63	106.01	101.50
58	DB	110	C	C3'-C2'-C1'	5.63	106.01	101.50
22	BA	1926	U	P-O3'-C3'	-5.63	112.94	119.70
1	AA	1383	C	C6-N1-C2	5.63	122.55	120.30
22	BA	412	A	C3'-C2'-C1'	5.63	106.00	101.50
22	BA	1459	G	C3'-C2'-C1'	5.63	106.01	101.50
53	CA	520	A	C3'-C2'-C1'	5.63	106.00	101.50
57	DA	656	G	C3'-C2'-C1'	5.63	106.01	101.50
1	AA	439	U	C3'-C2'-C1'	5.63	106.00	101.50
22	BA	387	U	P-O5'-C5'	-5.63	111.89	120.90
53	CA	429	U	P-O3'-C3'	5.63	126.45	119.70
57	DA	1114	C	C3'-C2'-C1'	5.63	106.00	101.50
57	DA	1401	G	C3'-C2'-C1'	5.63	106.00	101.50
22	BA	2424	C	C5-C6-N1	-5.63	118.19	121.00
22	BA	656	G	C8-N9-C4	-5.63	104.15	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1367	A	P-O3'-C3'	5.63	126.45	119.70
1	AA	198	G	P-O3'-C3'	-5.62	112.95	119.70
1	AA	436	C	O4'-C1'-N1	5.62	112.70	108.20
1	AA	509	A	C3'-C2'-C1'	5.62	106.00	101.50
22	BA	1491	G	P-O3'-C3'	-5.62	112.95	119.70
57	DA	389	G	C3'-C2'-C1'	5.62	106.00	101.50
57	DA	475	C	O4'-C1'-N1	-5.62	103.70	108.20
57	DA	1491	G	C3'-C2'-C1'	5.62	106.00	101.50
53	CA	184	G	C3'-C2'-C1'	5.62	106.00	101.50
53	CA	1450	U	O4'-C1'-N1	5.62	112.70	108.20
1	AA	173	U	N1-C1'-C2'	5.62	121.30	114.00
22	BA	906	U	P-O5'-C5'	-5.62	111.91	120.90
57	DA	2299	U	C3'-C2'-C1'	5.62	105.99	101.50
1	AA	487	A	P-O3'-C3'	-5.62	112.96	119.70
22	BA	687	C	P-O5'-C5'	-5.62	111.91	120.90
57	DA	35	G	C3'-C2'-C1'	5.62	105.99	101.50
1	AA	498	A	C3'-C2'-C1'	5.61	105.99	101.50
1	AA	998	C	O4'-C1'-N1	5.61	112.69	108.20
1	AA	1477	U	P-O5'-C5'	-5.61	111.92	120.90
53	CA	414	A	C3'-C2'-C1'	5.61	105.99	101.50
57	DA	479	A	P-O3'-C3'	5.61	126.44	119.70
57	DA	1680	U	O4'-C1'-N1	5.61	112.69	108.20
22	BA	1510	G	P-O3'-C3'	-5.61	112.97	119.70
22	BA	2512	C	O4'-C1'-N1	5.61	112.69	108.20
57	DA	1144	A	C3'-C2'-C1'	5.61	105.99	101.50
57	DA	1333	G	C3'-C2'-C1'	5.61	105.99	101.50
57	DA	1825	U	P-O3'-C3'	-5.61	112.97	119.70
53	CA	821	G	C3'-C2'-C1'	5.61	105.99	101.50
57	DA	2729	G	C3'-C2'-C1'	5.61	105.99	101.50
22	BA	2309	A	C3'-C2'-C1'	5.61	105.99	101.50
57	DA	1996	C	N1-C1'-C2'	5.61	121.29	114.00
57	DA	2450	A	C3'-C2'-C1'	5.61	105.98	101.50
22	BA	2846	G	P-O5'-C5'	-5.61	111.93	120.90
53	CA	119	A	P-O3'-C3'	5.61	126.43	119.70
1	AA	1168	U	O4'-C1'-N1	5.60	112.68	108.20
22	BA	16	C	P-O3'-C3'	-5.60	112.98	119.70
53	CA	1245	C	O4'-C1'-N1	5.60	112.68	108.20
57	DA	1034	G	P-O3'-C3'	-5.60	112.98	119.70
22	BA	528	A	C4-C5-N7	5.60	113.50	110.70
22	BA	2319	G	O4'-C1'-N9	5.60	112.68	108.20
22	BA	2297	A	N9-C1'-C2'	-5.60	105.84	112.00
22	BA	2430	A	O4'-C1'-N9	5.60	112.68	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1561	C	C3'-C2'-C1'	5.60	105.98	101.50
57	DA	2259	U	C3'-C2'-C1'	5.60	105.98	101.50
58	DB	12	C	P-O3'-C3'	5.60	126.42	119.70
22	BA	814	C	O5'-P-OP2	-5.60	100.66	105.70
22	BA	1981	A	P-O3'-C3'	-5.60	112.98	119.70
57	DA	811	U	P-O3'-C3'	5.60	126.42	119.70
57	DA	2036	C	C3'-C2'-C1'	5.60	105.98	101.50
57	DA	104	A	C3'-C2'-C1'	5.59	105.98	101.50
57	DA	2459	A	N9-C1'-C2'	-5.59	105.85	112.00
22	BA	182	A	P-O5'-C5'	-5.59	111.95	120.90
53	CA	1300	G	P-O3'-C3'	-5.59	112.99	119.70
57	DA	73	A	C3'-C2'-C1'	5.59	105.97	101.50
1	AA	316	C	P-O5'-C5'	-5.59	111.95	120.90
22	BA	621	A	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	1374	G	O4'-C1'-N9	-5.59	103.73	108.20
22	BA	2044	C	P-O5'-C5'	-5.59	111.95	120.90
53	CA	688	G	P-O3'-C3'	-5.59	112.99	119.70
57	DA	207	A	C3'-C2'-C1'	5.59	105.97	101.50
57	DA	1829	A	N9-C1'-C2'	-5.59	105.85	112.00
22	BA	324	A	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	459	U	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	1437	C	P-O5'-C5'	-5.59	111.95	120.90
22	BA	2001	C	P-O3'-C3'	-5.59	112.99	119.70
53	CA	1283	U	P-O3'-C3'	-5.59	112.99	119.70
57	DA	1256	G	C3'-C2'-C1'	5.59	105.97	101.50
1	AA	519	C	C3'-C2'-C1'	5.59	105.97	101.50
1	AA	1088	G	N9-C1'-C2'	-5.59	105.85	112.00
53	CA	508	U	O4'-C1'-N1	5.59	112.67	108.20
22	BA	117	G	P-O5'-C5'	-5.59	111.96	120.90
22	BA	192	C	P-O5'-C5'	-5.59	111.96	120.90
53	CA	132	C	C3'-C2'-C1'	5.59	105.97	101.50
57	DA	671	C	C2-N1-C1'	5.59	124.95	118.80
57	DA	2874	C	C3'-C2'-C1'	5.59	105.97	101.50
1	AA	110	C	C3'-C2'-C1'	5.58	105.97	101.50
22	BA	645	C	P-O3'-C3'	5.58	126.40	119.70
53	CA	511	C	N1-C1'-C2'	5.58	121.26	114.00
1	AA	718	A	C3'-C2'-C1'	5.58	105.97	101.50
1	AA	1031	C	P-O3'-C3'	5.58	126.40	119.70
22	BA	1260	A	P-O3'-C3'	5.58	126.40	119.70
22	BA	1386	C	C3'-C2'-C1'	5.58	105.97	101.50
53	CA	276	G	C3'-C2'-C1'	5.58	105.97	101.50
57	DA	2337	G	C3'-C2'-C1'	5.58	105.97	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	512	U	C3'-C2'-C1'	5.58	105.96	101.50
53	CA	96	U	C3'-C2'-C1'	5.58	105.97	101.50
57	DA	230	G	N9-C1'-C2'	-5.58	105.86	112.00
1	AA	497	G	P-O3'-C3'	-5.58	113.00	119.70
22	BA	948	C	P-O5'-C5'	-5.58	111.98	120.90
22	BA	1967	C	C3'-C2'-C1'	5.58	105.96	101.50
53	CA	1499	A	N9-C1'-C2'	-5.58	105.86	112.00
57	DA	1758	U	N1-C1'-C2'	5.58	121.25	114.00
1	AA	1215	G	P-O3'-C3'	-5.58	113.01	119.70
53	CA	14	U	C3'-C2'-C1'	5.58	105.96	101.50
57	DA	1108	U	O4'-C1'-N1	5.58	112.66	108.20
53	CA	1440	U	P-O3'-C3'	5.57	126.39	119.70
57	DA	2876	G	C3'-C2'-C1'	5.57	105.96	101.50
22	BA	513	A	C3'-C2'-C1'	5.57	105.96	101.50
22	BA	747	U	C3'-C2'-C1'	5.57	105.96	101.50
53	CA	6	G	C3'-C2'-C1'	5.57	105.96	101.50
57	DA	976	G	C3'-C2'-C1'	5.57	105.96	101.50
57	DA	1888	G	O4'-C1'-N9	5.57	112.66	108.20
22	BA	386	G	O3'-P-O5'	-5.57	93.42	104.00
22	BA	2071	A	P-O3'-C3'	5.57	126.38	119.70
22	BA	2821	A	P-O3'-C3'	-5.57	113.02	119.70
23	BB	51	G	P-O3'-C3'	5.57	126.38	119.70
53	CA	1484	C	O4'-C1'-N1	5.57	112.66	108.20
57	DA	2314	A	C3'-C2'-C1'	5.57	105.95	101.50
22	BA	638	G	P-O3'-C3'	-5.57	113.02	119.70
53	CA	131	A	C3'-C2'-C1'	5.57	105.95	101.50
53	CA	1284	C	P-O3'-C3'	5.56	126.38	119.70
1	AA	704	A	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	1200	C	C6-N1-C2	5.56	122.53	120.30
53	CA	734	G	C3'-C2'-C1'	5.56	105.95	101.50
57	DA	1636	U	C3'-C2'-C1'	5.56	105.95	101.50
24	BC	109	LEU	CA-CB-CG	5.56	128.09	115.30
57	DA	995	C	N1-C1'-C2'	5.56	121.23	114.00
22	BA	951	C	C6-N1-C2	5.56	122.52	120.30
22	BA	2543	G	C8-N9-C4	-5.56	104.18	106.40
57	DA	122	G	C3'-C2'-C1'	5.56	105.95	101.50
1	AA	379	C	O4'-C1'-N1	5.56	112.64	108.20
1	AA	1054	C	P-O5'-C5'	-5.56	112.01	120.90
1	AA	1395	C	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	388	G	P-O5'-C5'	-5.56	112.01	120.90
22	BA	904	G	P-O3'-C3'	-5.56	113.03	119.70
22	BA	1912	A	O4'-C1'-N9	5.56	112.65	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2757	A	N9-C1'-C2'	-5.56	105.89	112.00
53	CA	1485	U	O4'-C1'-N1	5.56	112.65	108.20
22	BA	2311	A	P-O5'-C5'	-5.56	112.01	120.90
1	AA	971	G	C4-N9-C1'	-5.55	119.28	126.50
22	BA	1943	U	P-O3'-C3'	5.55	126.37	119.70
22	BA	1976	U	O4'-C1'-N1	-5.55	103.76	108.20
53	CA	1449	C	P-O3'-C3'	-5.55	113.03	119.70
57	DA	2276	G	C3'-C2'-C1'	5.55	105.94	101.50
57	DA	2781	A	C3'-C2'-C1'	5.55	105.94	101.50
53	CA	368	U	N1-C1'-C2'	-5.55	105.89	112.00
57	DA	1167	C	O4'-C1'-N1	5.55	112.64	108.20
22	BA	783	A	N7-C8-N9	5.55	116.58	113.80
57	DA	1812	U	O4'-C1'-N1	5.55	112.64	108.20
1	AA	1348	U	P-O3'-C3'	-5.55	113.04	119.70
22	BA	2335	A	C3'-C2'-C1'	5.55	105.94	101.50
1	AA	61	G	C3'-C2'-C1'	5.54	105.94	101.50
22	BA	162	U	P-O3'-C3'	5.54	126.35	119.70
22	BA	2346	A	P-O3'-C3'	5.54	126.36	119.70
53	CA	15	G	C3'-C2'-C1'	5.54	105.94	101.50
1	AA	641	U	N1-C1'-C2'	5.54	121.21	114.00
22	BA	2024	G	P-O5'-C5'	-5.54	112.03	120.90
57	DA	1346	G	P-O3'-C3'	-5.54	113.05	119.70
57	DA	1945	G	C3'-C2'-C1'	5.54	105.93	101.50
57	DA	2646	C	P-O3'-C3'	-5.54	113.05	119.70
57	DA	2868	A	P-O3'-C3'	-5.54	113.05	119.70
22	BA	388	G	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	1905	C	O4'-C1'-N1	5.54	112.63	108.20
22	BA	2888	C	P-O3'-C3'	-5.54	113.05	119.70
57	DA	1398	C	N1-C1'-C2'	-5.54	105.90	112.00
22	BA	1184	U	O4'-C1'-N1	-5.54	103.77	108.20
53	CA	1191	A	C3'-C2'-C1'	5.54	105.93	101.50
57	DA	1456	G	C3'-C2'-C1'	5.54	105.93	101.50
57	DA	2313	C	N1-C1'-C2'	-5.54	105.91	112.00
57	DA	2725	A	P-O3'-C3'	5.54	126.35	119.70
1	AA	537	G	N9-C1'-C2'	-5.54	105.91	112.00
1	AA	1242	G	P-O3'-C3'	-5.54	113.06	119.70
22	BA	1524	G	P-O5'-C5'	-5.54	112.04	120.90
57	DA	2404	U	C3'-C2'-C1'	5.54	105.93	101.50
1	AA	1152	A	C3'-C2'-C1'	5.53	105.93	101.50
22	BA	1447	C	N1-C1'-C2'	-5.53	105.91	112.00
53	CA	1051	C	O4'-C1'-N1	5.53	112.63	108.20
22	BA	2296	U	N1-C1'-C2'	5.53	121.19	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2359	C	O4'-C1'-N1	5.53	112.62	108.20
57	DA	2407	A	C3'-C2'-C1'	5.53	105.93	101.50
22	BA	942	G	OP1-P-O3'	5.53	117.37	105.20
57	DA	273	G	P-O3'-C3'	-5.53	113.06	119.70
57	DA	2567	G	P-O3'-C3'	-5.53	113.06	119.70
22	BA	1157	G	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	2210	U	N1-C1'-C2'	5.53	121.19	114.00
22	BA	2840	C	O5'-P-OP2	-5.53	100.72	105.70
57	DA	336	C	O4'-C1'-N1	5.53	112.62	108.20
57	DA	828	U	C3'-C2'-C1'	5.53	105.92	101.50
57	DA	2387	U	C3'-C2'-C1'	5.53	105.92	101.50
57	DA	2638	G	P-O3'-C3'	5.53	126.33	119.70
58	DB	24	G	P-O3'-C3'	5.53	126.33	119.70
1	AA	1349	A	C3'-C2'-C1'	5.53	105.92	101.50
1	AA	1365	G	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	1912	A	P-O3'-C3'	5.53	126.33	119.70
57	DA	2493	U	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	2063	C	C3'-C2'-C1'	5.52	105.92	101.50
1	AA	1530	G	P-O3'-C3'	-5.52	113.07	119.70
57	DA	915	C	C3'-C2'-C1'	5.52	105.92	101.50
57	DA	1026	G	C3'-C2'-C1'	5.52	105.92	101.50
25	BD	10	GLY	N-CA-C	5.52	126.90	113.10
1	AA	339	C	O4'-C1'-N1	5.52	112.62	108.20
57	DA	1255	U	C2-N1-C1'	5.52	124.32	117.70
1	AA	275	G	N9-C1'-C2'	-5.52	105.93	112.00
53	CA	511	C	P-O3'-C3'	5.52	126.32	119.70
57	DA	324	A	P-O3'-C3'	-5.52	113.08	119.70
57	DA	1722	A	C3'-C2'-C1'	5.52	105.91	101.50
57	DA	1782	U	C3'-C2'-C1'	5.52	105.92	101.50
53	CA	722	G	C3'-C2'-C1'	5.52	105.91	101.50
1	AA	1228	C	C3'-C2'-C1'	5.51	105.91	101.50
22	BA	590	A	P-O5'-C5'	-5.51	112.08	120.90
22	BA	2751	G	P-O5'-C5'	-5.51	112.08	120.90
53	CA	1396	A	OP2-P-O3'	5.51	117.33	105.20
22	BA	959	A	P-O3'-C3'	-5.51	113.08	119.70
57	DA	2282	G	P-O3'-C3'	5.51	126.31	119.70
57	DA	2428	G	P-O3'-C3'	-5.51	113.08	119.70
22	BA	507	A	N9-C1'-C2'	-5.51	105.94	112.00
22	BA	1941	C	C3'-C2'-C1'	5.51	105.91	101.50
57	DA	621	A	C3'-C2'-C1'	5.51	105.91	101.50
1	AA	870	U	N1-C1'-C2'	5.51	121.16	114.00
57	DA	78	U	O4'-C1'-N1	5.51	112.61	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	324	A	C3'-C2'-C1'	5.51	105.91	101.50
1	AA	306	A	C3'-C2'-C1'	5.51	105.91	101.50
53	CA	1395	C	C3'-C2'-C1'	5.51	105.91	101.50
57	DA	746	U	N1-C1'-C2'	5.51	121.16	114.00
22	BA	1282	U	P-O5'-C5'	-5.51	112.09	120.90
22	BA	1901	A	C3'-C2'-C1'	5.51	105.91	101.50
53	CA	832	G	O4'-C1'-N9	5.51	112.61	108.20
57	DA	1557	C	P-O3'-C3'	-5.51	113.09	119.70
57	DA	1675	C	C3'-C2'-C1'	5.51	105.91	101.50
22	BA	1392	A	P-O3'-C3'	5.50	126.31	119.70
22	BA	1535	A	O4'-C1'-N9	5.50	112.60	108.20
57	DA	2428	G	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	660	C	P-O3'-C3'	-5.50	113.10	119.70
57	DA	424	G	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	534	U	C3'-C2'-C1'	5.50	105.90	101.50
1	AA	1258	G	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	2734	A	P-O3'-C3'	-5.50	113.10	119.70
22	BA	2800	A	N9-C1'-C2'	-5.50	105.95	112.00
53	CA	1066	C	N1-C1'-C2'	-5.50	105.95	112.00
57	DA	505	A	C3'-C2'-C1'	5.50	105.90	101.50
57	DA	1700	A	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	443	A	P-O5'-C5'	-5.50	112.10	120.90
22	BA	572	A	O4'-C1'-N9	-5.50	103.80	108.20
53	CA	1499	A	P-O5'-C5'	-5.50	112.10	120.90
57	DA	615	U	N1-C1'-C2'	5.50	121.15	114.00
57	DA	617	G	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	783	A	C6-C5-N7	-5.50	128.45	132.30
22	BA	1301	A	P-O5'-C5'	-5.50	112.11	120.90
22	BA	1461	C	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	1396	U	P-O3'-C3'	5.49	126.29	119.70
53	CA	389	A	C3'-C2'-C1'	5.49	105.90	101.50
57	DA	1112	G	C3'-C2'-C1'	5.49	105.89	101.50
57	DA	53	A	N9-C1'-C2'	-5.49	105.96	112.00
57	DA	390	U	P-O3'-C3'	5.49	126.29	119.70
1	AA	110	C	P-O3'-C3'	-5.49	113.11	119.70
22	BA	1322	A	P-O3'-C3'	5.49	126.29	119.70
22	BA	2337	G	P-O3'-C3'	-5.49	113.11	119.70
58	DB	13	G	C3'-C2'-C1'	5.49	105.89	101.50
1	AA	131	A	C3'-C2'-C1'	5.49	105.89	101.50
57	DA	1181	U	O4'-C1'-N1	5.49	112.59	108.20
22	BA	1343	G	C3'-C2'-C1'	5.49	105.89	101.50
22	BA	1996	C	P-O3'-C3'	5.49	126.28	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	369	G	C3'-C2'-C1'	5.49	105.89	101.50
57	DA	128	C	P-O3'-C3'	-5.49	113.12	119.70
57	DA	1554	U	N1-C1'-C2'	5.49	121.13	114.00
57	DA	2405	G	P-O3'-C3'	5.49	126.28	119.70
1	AA	1338	G	P-O3'-C3'	-5.48	113.12	119.70
53	CA	1184	G	P-O3'-C3'	-5.48	113.12	119.70
1	AA	724	G	N9-C1'-C2'	-5.48	105.97	112.00
22	BA	2873	A	O4'-C1'-N9	5.48	112.58	108.20
53	CA	252	U	C3'-C2'-C1'	5.48	105.88	101.50
57	DA	1972	G	N9-C1'-C2'	-5.48	105.97	112.00
57	DA	2832	U	O4'-C1'-N1	5.48	112.58	108.20
1	AA	250	A	P-O3'-C3'	5.48	126.27	119.70
22	BA	601	C	P-O3'-C3'	-5.48	113.12	119.70
53	CA	365	U	P-O3'-C3'	5.48	126.28	119.70
57	DA	958	U	N1-C1'-C2'	-5.48	105.97	112.00
22	BA	312	G	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	765	C	C3'-C2'-C1'	5.48	105.88	101.50
53	CA	316	C	P-O3'-C3'	-5.48	113.13	119.70
57	DA	1314	C	C3'-C2'-C1'	5.48	105.88	101.50
1	AA	74	A	C3'-C2'-C1'	5.48	105.88	101.50
53	CA	276	G	N9-C1'-C2'	-5.48	105.98	112.00
1	AA	752	G	P-O3'-C3'	5.47	126.27	119.70
22	BA	100	U	P-O3'-C3'	5.47	126.27	119.70
22	BA	443	A	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	669	G	P-O5'-C5'	5.47	129.66	120.90
22	BA	1856	U	O4'-C1'-N1	5.47	112.58	108.20
53	CA	352	C	C3'-C2'-C1'	5.47	105.88	101.50
57	DA	36	G	C3'-C2'-C1'	5.47	105.88	101.50
57	DA	1080	A	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	528	A	C2-N3-C4	-5.47	107.87	110.60
22	BA	572	A	C4-C5-C6	5.47	119.73	117.00
57	DA	1613	G	N9-C1'-C2'	-5.47	105.98	112.00
57	DA	2836	U	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	422	A	P-O3'-C3'	-5.47	113.14	119.70
53	CA	962	C	P-O3'-C3'	-5.47	113.14	119.70
1	AA	549	C	N1-C1'-C2'	-5.47	105.99	112.00
22	BA	1135	C	N1-C1'-C2'	-5.47	105.99	112.00
57	DA	1695	G	P-O3'-C3'	-5.47	113.14	119.70
57	DA	1945	G	P-O3'-C3'	-5.47	113.14	119.70
22	BA	1398	C	C3'-C2'-C1'	5.46	105.87	101.50
57	DA	946	C	C3'-C2'-C1'	5.46	105.87	101.50
57	DA	1023	U	C3'-C2'-C1'	5.46	105.87	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1555	G	C3'-C2'-C1'	5.46	105.87	101.50
22	BA	2211	A	P-O3'-C3'	5.46	126.26	119.70
53	CA	979	C	C3'-C2'-C1'	5.46	105.87	101.50
1	AA	1169	A	P-O3'-C3'	-5.46	113.15	119.70
22	BA	302	C	C3'-C2'-C1'	5.46	105.87	101.50
22	BA	1455	G	P-O3'-C3'	-5.46	113.15	119.70
1	AA	414	A	P-O3'-C3'	-5.46	113.15	119.70
1	AA	1530	G	C3'-C2'-C1'	5.46	105.86	101.50
22	BA	1222	U	P-O3'-C3'	-5.46	113.15	119.70
22	BA	2383	G	C3'-C2'-C1'	5.46	105.86	101.50
57	DA	199	A	O4'-C1'-N9	5.46	112.56	108.20
1	AA	64	G	P-O3'-C3'	5.45	126.24	119.70
22	BA	480	A	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	1765	U	P-O5'-C5'	-5.45	112.18	120.90
57	DA	128	C	C3'-C2'-C1'	5.45	105.86	101.50
1	AA	92	U	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	1837	C	O4'-C1'-N1	5.45	112.56	108.20
22	BA	2195	U	O4'-C1'-N1	5.45	112.56	108.20
57	DA	606	U	C3'-C2'-C1'	5.45	105.86	101.50
1	AA	87	C	C3'-C2'-C1'	5.45	105.86	101.50
1	AA	1243	C	O4'-C1'-N1	5.45	112.56	108.20
22	BA	2347	C	C3'-C2'-C1'	5.45	105.86	101.50
57	DA	119	A	P-O3'-C3'	5.45	126.24	119.70
57	DA	1942	C	C3'-C2'-C1'	5.45	105.86	101.50
57	DA	774	G	C8-N9-C1'	5.45	134.08	127.00
53	CA	1161	C	C3'-C2'-C1'	5.45	105.86	101.50
1	AA	755	G	C3'-C2'-C1'	5.44	105.86	101.50
53	CA	828	U	O4'-C1'-N1	5.44	112.56	108.20
57	DA	2489	U	O4'-C1'-N1	5.44	112.56	108.20
53	CA	1157	A	P-O3'-C3'	5.44	126.23	119.70
57	DA	2585	U	N1-C1'-C2'	5.44	121.08	114.00
22	BA	1379	U	O5'-P-OP2	-5.44	100.81	105.70
1	AA	499	A	P-O3'-C3'	5.44	126.22	119.70
1	AA	1454	G	C3'-C2'-C1'	5.44	105.85	101.50
22	BA	1992	G	C8-N9-C1'	5.44	134.07	127.00
22	BA	1816	C	C3'-C2'-C1'	5.43	105.85	101.50
57	DA	373	U	N1-C1'-C2'	-5.43	106.02	112.00
57	DA	443	A	C3'-C2'-C1'	5.43	105.85	101.50
57	DA	2447	G	O4'-C1'-N9	5.43	112.55	108.20
57	DA	2866	U	P-O3'-C3'	5.43	126.22	119.70
58	DB	45	A	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	238	C	P-O3'-C3'	-5.43	113.19	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	346	A	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	2011	U	P-O3'-C3'	-5.43	113.19	119.70
57	DA	118	A	P-O3'-C3'	5.43	126.21	119.70
57	DA	989	G	P-O3'-C3'	5.43	126.21	119.70
57	DA	1213	A	N9-C1'-C2'	-5.43	106.03	112.00
22	BA	2712	C	N1-C1'-C2'	5.43	121.05	114.00
57	DA	1207	C	C3'-C2'-C1'	5.43	105.84	101.50
57	DA	1919	A	C3'-C2'-C1'	5.43	105.84	101.50
1	AA	982	U	N1-C1'-C2'	5.42	121.05	114.00
1	AA	1241	G	N9-C1'-C2'	-5.42	106.03	112.00
22	BA	2449	U	C5-C6-N1	-5.42	119.99	122.70
22	BA	2603	G	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	336	C	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	991	C	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	991	C	O4'-C1'-N1	5.42	112.54	108.20
57	DA	1498	C	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	1915	U	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	2024	G	C3'-C2'-C1'	5.42	105.84	101.50
22	BA	1111	A	P-O3'-C3'	5.42	126.21	119.70
22	BA	1867	G	N9-C1'-C2'	-5.42	106.03	112.00
1	AA	1142	G	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	1865	U	N1-C1'-C2'	5.42	121.05	114.00
57	DA	2298	A	C3'-C2'-C1'	5.42	105.84	101.50
57	DA	1455	G	C3'-C2'-C1'	5.42	105.84	101.50
22	BA	1714	U	C3'-C2'-C1'	5.42	105.84	101.50
1	AA	52	C	C3'-C2'-C1'	5.42	105.83	101.50
1	AA	274	A	O4'-C1'-N9	5.42	112.53	108.20
22	BA	1336	A	P-O3'-C3'	-5.42	113.20	119.70
53	CA	84	U	O4'-C1'-N1	5.42	112.53	108.20
53	CA	1283	U	C3'-C2'-C1'	5.42	105.83	101.50
57	DA	811	U	O4'-C1'-N1	5.42	112.53	108.20
1	AA	116	A	C3'-C2'-C1'	5.42	105.83	101.50
22	BA	2587	A	P-O5'-C5'	-5.42	112.24	120.90
22	BA	951	C	N1-C2-O2	-5.41	115.65	118.90
22	BA	1655	A	O5'-P-OP2	-5.41	100.83	105.70
22	BA	2609	U	C5-C6-N1	-5.41	119.99	122.70
1	AA	1304	G	C3'-C2'-C1'	5.41	105.83	101.50
1	AA	1381	U	P-O3'-C3'	-5.41	113.20	119.70
1	AA	1451	U	P-O3'-C3'	5.41	126.19	119.70
22	BA	2275	C	N1-C1'-C2'	5.41	121.03	114.00
57	DA	741	U	C3'-C2'-C1'	5.41	105.83	101.50
57	DA	2543	G	C3'-C2'-C1'	5.41	105.83	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	805	G	O4'-C1'-N9	5.41	112.53	108.20
57	DA	2504	U	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	532	A	N7-C8-N9	5.40	116.50	113.80
57	DA	2646	C	P-O5'-C5'	-5.40	112.25	120.90
22	BA	174	U	P-O3'-C3'	-5.40	113.22	119.70
22	BA	446	G	P-O3'-C3'	5.40	126.18	119.70
22	BA	2437	G	O5'-P-OP2	-5.40	100.84	105.70
57	DA	395	U	O4'-C1'-N1	5.40	112.52	108.20
57	DA	491	G	P-O3'-C3'	-5.40	113.22	119.70
53	CA	985	C	C3'-C2'-C1'	5.40	105.82	101.50
57	DA	1716	U	N1-C1'-C2'	-5.40	106.06	112.00
1	AA	365	U	O4'-C1'-N1	5.40	112.52	108.20
22	BA	1156	A	P-O3'-C3'	5.40	126.18	119.70
22	BA	1839	G	C3'-C2'-C1'	5.40	105.82	101.50
57	DA	1288	G	P-O3'-C3'	5.40	126.18	119.70
1	AA	1348	U	C3'-C2'-C1'	5.40	105.82	101.50
22	BA	2044	C	P-O3'-C3'	-5.39	113.23	119.70
57	DA	2567	G	C3'-C2'-C1'	5.39	105.82	101.50
57	DA	86	G	P-O3'-C3'	-5.39	113.23	119.70
57	DA	1050	A	C3'-C2'-C1'	5.39	105.81	101.50
57	DA	2079	U	P-O3'-C3'	5.39	126.17	119.70
1	AA	885	G	C3'-C2'-C1'	5.39	105.81	101.50
1	AA	994	A	C3'-C2'-C1'	5.39	105.81	101.50
53	CA	718	A	P-O3'-C3'	-5.39	113.23	119.70
22	BA	915	C	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	1260	A	OP2-P-O3'	5.39	117.06	105.20
57	DA	249	C	P-O3'-C3'	5.39	126.17	119.70
57	DA	1810	A	C3'-C2'-C1'	5.39	105.81	101.50
57	DA	1944	U	O4'-C1'-N1	5.39	112.51	108.20
26	BE	46	GLN	N-CA-C	5.39	125.55	111.00
1	AA	1303	C	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	727	A	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	813	U	P-O3'-C3'	-5.38	113.24	119.70
53	CA	194	C	O4'-C1'-N1	-5.38	103.89	108.20
57	DA	572	A	C3'-C2'-C1'	5.38	105.81	101.50
57	DA	2778	A	P-O3'-C3'	5.38	126.16	119.70
22	BA	480	A	O5'-P-OP2	-5.38	100.86	105.70
53	CA	1453	G	C3'-C2'-C1'	5.38	105.81	101.50
57	DA	2632	A	P-O3'-C3'	5.38	126.16	119.70
22	BA	1272	A	P-O5'-C5'	-5.38	112.29	120.90
22	BA	1330	C	O4'-C1'-N1	5.38	112.50	108.20
57	DA	1388	G	P-O3'-C3'	-5.38	113.24	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1455	G	P-O5'-C5'	-5.38	112.29	120.90
53	CA	68	G	C3'-C2'-C1'	5.38	105.80	101.50
22	BA	243	U	C3'-C2'-C1'	5.38	105.80	101.50
22	BA	1932	A	P-O3'-C3'	-5.38	113.25	119.70
22	BA	2199	A	P-O5'-C5'	-5.38	112.30	120.90
22	BA	400	G	P-O3'-C3'	5.38	126.15	119.70
22	BA	2497	A	P-O5'-C5'	5.38	129.50	120.90
22	BA	1786	A	P-O3'-C3'	5.37	126.15	119.70
57	DA	1663	G	P-O3'-C3'	5.37	126.15	119.70
57	DA	1916	A	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	2398	U	P-O3'-C3'	5.37	126.15	119.70
22	BA	2695	U	P-O3'-C3'	5.37	126.14	119.70
57	DA	1674	G	C8-N9-C1'	-5.37	120.02	127.00
22	BA	2136	G	P-O3'-C3'	-5.37	113.26	119.70
22	BA	2498	C	P-O5'-C5'	-5.37	112.31	120.90
57	DA	2876	G	N9-C1'-C2'	-5.37	106.10	112.00
22	BA	1664	A	O3'-P-O5'	-5.37	93.81	104.00
53	CA	1129	C	P-O3'-C3'	5.37	126.14	119.70
53	CA	1366	C	P-O3'-C3'	-5.37	113.26	119.70
57	DA	2727	A	C3'-C2'-C1'	5.37	105.79	101.50
22	BA	251	A	O3'-P-O5'	-5.36	93.81	104.00
22	BA	860	U	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	1498	C	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	1508	A	P-O3'-C3'	5.36	126.14	119.70
22	BA	1956	U	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	2820	A	O3'-P-O5'	-5.36	93.81	104.00
53	CA	1481	U	O4'-C1'-N1	5.36	112.49	108.20
57	DA	860	U	C3'-C2'-C1'	5.36	105.79	101.50
57	DA	985	C	P-O3'-C3'	-5.36	113.27	119.70
57	DA	1785	A	C3'-C2'-C1'	5.36	105.79	101.50
57	DA	2275	C	P-O3'-C3'	5.36	126.14	119.70
53	CA	705	G	C3'-C2'-C1'	5.36	105.79	101.50
57	DA	53	A	C3'-C2'-C1'	5.36	105.79	101.50
57	DA	510	C	P-O3'-C3'	-5.36	113.27	119.70
58	DB	111	U	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	2060	A	O4'-C1'-N9	5.36	112.49	108.20
53	CA	327	A	P-O3'-C3'	5.36	126.13	119.70
22	BA	223	A	C3'-C2'-C1'	5.36	105.78	101.50
57	DA	1345	C	N1-C1'-C2'	-5.36	106.11	112.00
53	CA	428	G	C8-N9-C1'	5.35	133.96	127.00
22	BA	1036	G	P-O5'-C5'	-5.35	112.34	120.90
22	BA	2613	U	OP2-P-O3'	5.35	116.98	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	275	G	C3'-C2'-C1'	5.35	105.78	101.50
53	CA	1317	C	O4'-C1'-N1	5.35	112.48	108.20
57	DA	1267	U	C3'-C2'-C1'	5.35	105.78	101.50
57	DA	1324	G	O4'-C1'-N9	5.35	112.48	108.20
57	DA	1569	A	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	2344	U	O4'-C1'-N1	-5.35	103.92	108.20
57	DA	2847	U	P-O3'-C3'	5.35	126.12	119.70
22	BA	1992	G	N3-C4-N9	-5.35	122.79	126.00
53	CA	309	A	P-O3'-C3'	-5.35	113.28	119.70
57	DA	61	C	O4'-C1'-N1	5.35	112.48	108.20
22	BA	1021	A	C3'-C2'-C1'	5.35	105.78	101.50
1	AA	1130	A	P-O3'-C3'	-5.34	113.29	119.70
22	BA	989	G	P-O3'-C3'	5.34	126.11	119.70
53	CA	939	G	O4'-C1'-N9	5.34	112.47	108.20
22	BA	2708	G	P-O3'-C3'	-5.34	113.29	119.70
22	BA	305	C	P-O5'-C5'	-5.34	112.36	120.90
22	BA	805	G	O4'-C1'-N9	-5.34	103.93	108.20
22	BA	1695	G	C3'-C2'-C1'	5.34	105.77	101.50
57	DA	2683	C	P-O3'-C3'	-5.34	113.29	119.70
1	AA	411	A	O4'-C1'-N9	5.34	112.47	108.20
22	BA	484	C	O4'-C1'-N1	-5.34	103.93	108.20
22	BA	2791	G	N9-C1'-C2'	-5.34	106.13	112.00
57	DA	1136	G	N9-C1'-C2'	-5.34	106.13	112.00
57	DA	406	G	C3'-C2'-C1'	5.34	105.77	101.50
57	DA	1713	A	P-O3'-C3'	5.34	126.11	119.70
57	DA	2836	U	P-O3'-C3'	-5.34	113.30	119.70
22	BA	2591	C	P-O5'-C5'	-5.34	112.36	120.90
57	DA	223	A	C3'-C2'-C1'	5.34	105.77	101.50
57	DA	1312	U	P-O3'-C3'	5.34	126.10	119.70
22	BA	2569	G	P-O3'-C3'	5.33	126.10	119.70
57	DA	1769	U	O4'-C1'-N1	5.33	112.47	108.20
1	AA	885	G	N9-C1'-C2'	-5.33	106.13	112.00
22	BA	1716	U	C3'-C2'-C1'	5.33	105.77	101.50
22	BA	2431	U	P-O5'-C5'	-5.33	112.37	120.90
22	BA	2582	G	N3-C4-C5	-5.33	125.93	128.60
57	DA	2423	U	P-O3'-C3'	5.33	126.10	119.70
22	BA	948	C	O4'-C1'-N1	-5.33	103.94	108.20
22	BA	1060	U	N1-C1'-C2'	5.33	120.93	114.00
22	BA	1943	U	N1-C1'-C2'	5.33	120.93	114.00
53	CA	81	A	O4'-C1'-N9	5.33	112.46	108.20
57	DA	1511	G	P-O3'-C3'	-5.33	113.31	119.70
57	DA	1648	U	C3'-C2'-C1'	5.33	105.76	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1158	C	C3'-C2'-C1'	5.33	105.76	101.50
22	BA	200	U	P-O5'-C5'	-5.33	112.38	120.90
22	BA	600	G	P-O5'-C5'	-5.33	112.38	120.90
22	BA	1221	C	P-O3'-C3'	-5.33	113.31	119.70
1	AA	891	U	P-O5'-C5'	-5.33	112.38	120.90
53	CA	239	U	C5-C6-N1	5.33	125.36	122.70
57	DA	2895	G	C3'-C2'-C1'	5.33	105.76	101.50
22	BA	1759	A	P-O5'-C5'	-5.32	112.38	120.90
22	BA	2868	A	P-O5'-C5'	-5.32	112.38	120.90
53	CA	765	G	C4-N9-C1'	5.32	133.42	126.50
57	DA	1303	G	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	60	G	P-O3'-C3'	5.32	126.09	119.70
22	BA	685	A	P-O5'-C5'	-5.32	112.38	120.90
1	AA	919	A	P-O3'-C3'	5.32	126.08	119.70
22	BA	509	C	C6-N1-C2	-5.32	118.17	120.30
22	BA	2424	C	N3-C4-N4	-5.32	114.28	118.00
57	DA	224	U	C3'-C2'-C1'	5.32	105.76	101.50
57	DA	604	G	N9-C1'-C2'	-5.32	106.15	112.00
22	BA	1317	G	P-O3'-C3'	-5.32	113.32	119.70
53	CA	439	U	P-O3'-C3'	-5.32	113.32	119.70
57	DA	1076	C	O4'-C1'-N1	5.32	112.45	108.20
57	DA	1733	G	C3'-C2'-C1'	5.32	105.75	101.50
1	AA	421	U	P-O3'-C3'	5.32	126.08	119.70
1	AA	1303	C	P-O3'-C3'	-5.32	113.32	119.70
57	DA	2714	G	N9-C1'-C2'	-5.32	106.15	112.00
22	BA	266	G	N9-C1'-C2'	-5.32	106.15	112.00
22	BA	1370	C	P-O3'-C3'	5.32	126.08	119.70
22	BA	1651	G	O3'-P-O5'	-5.32	93.90	104.00
22	BA	2730	C	P-O3'-C3'	-5.32	113.32	119.70
57	DA	480	A	C3'-C2'-C1'	5.32	105.75	101.50
57	DA	618	G	C3'-C2'-C1'	5.32	105.75	101.50
57	DA	1329	U	N1-C1'-C2'	5.32	120.91	114.00
57	DA	2752	C	C3'-C2'-C1'	5.31	105.75	101.50
1	AA	1153	G	C3'-C2'-C1'	5.31	105.75	101.50
22	BA	1328	A	P-O3'-C3'	5.31	126.08	119.70
22	BA	1927	A	P-O3'-C3'	5.31	126.08	119.70
53	CA	26	A	P-O3'-C3'	5.31	126.07	119.70
57	DA	765	C	P-O3'-C3'	-5.31	113.33	119.70
57	DA	1399	C	C3'-C2'-C1'	5.31	105.75	101.50
57	DA	2572	A	O4'-C1'-N9	5.31	112.45	108.20
22	BA	807	U	P-O3'-C3'	5.31	126.07	119.70
53	CA	169	C	O4'-C1'-N1	5.31	112.45	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2215	C	P-O3'-C3'	-5.31	113.33	119.70
1	AA	977	A	C3'-C2'-C1'	5.31	105.75	101.50
22	BA	764	A	P-O3'-C3'	5.31	126.07	119.70
22	BA	2342	C	P-O5'-C5'	-5.31	112.41	120.90
22	BA	2419	U	N1-C1'-C2'	-5.31	106.16	112.00
22	BA	2540	C	P-O5'-C5'	-5.31	112.41	120.90
1	AA	816	A	N9-C1'-C2'	-5.31	106.16	112.00
22	BA	1986	C	P-O5'-C5'	-5.31	112.41	120.90
1	AA	430	A	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	1956	U	P-O3'-C3'	-5.30	113.33	119.70
22	BA	2440	C	N1-C1'-C2'	-5.30	106.17	112.00
57	DA	396	G	N9-C1'-C2'	-5.30	106.17	112.00
58	DB	42	C	P-O3'-C3'	-5.30	113.33	119.70
22	BA	517	C	P-O3'-C3'	-5.30	113.34	119.70
22	BA	583	G	P-O3'-C3'	-5.30	113.34	119.70
22	BA	833	A	P-O3'-C3'	-5.30	113.34	119.70
53	CA	1358	U	O4'-C1'-N1	5.30	112.44	108.20
57	DA	1515	A	O4'-C1'-N9	5.30	112.44	108.20
1	AA	61	G	P-O3'-C3'	-5.30	113.34	119.70
2	AB	146	SER	CA-C-N	5.30	128.86	117.20
22	BA	639	U	N1-C1'-C2'	5.30	120.89	114.00
53	CA	534	U	C3'-C2'-C1'	5.30	105.74	101.50
53	CA	1102	A	N9-C1'-C2'	-5.30	106.17	112.00
57	DA	1817	G	C3'-C2'-C1'	5.30	105.74	101.50
1	AA	1337	G	C3'-C2'-C1'	5.30	105.74	101.50
53	CA	794	A	C3'-C2'-C1'	5.30	105.74	101.50
57	DA	2289	G	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	607	U	N1-C1'-C2'	-5.29	106.17	112.00
1	AA	1478	U	O4'-C1'-N1	-5.29	103.97	108.20
22	BA	2052	A	O5'-P-OP2	-5.29	100.94	105.70
22	BA	739	A	C4'-C3'-C2'	5.29	107.89	102.60
53	CA	389	A	N9-C1'-C2'	-5.29	106.18	112.00
53	CA	534	U	P-O3'-C3'	-5.29	113.35	119.70
1	AA	452	A	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	637	A	O4'-C1'-N9	5.29	112.43	108.20
53	CA	32	A	C3'-C2'-C1'	5.29	105.73	101.50
57	DA	423	A	P-O3'-C3'	5.29	126.05	119.70
1	AA	438	U	O4'-C1'-N1	5.29	112.43	108.20
22	BA	361	G	P-O3'-C3'	5.29	126.05	119.70
53	CA	689	C	O4'-C1'-N1	-5.29	103.97	108.20
53	CA	883	C	N1-C1'-C2'	5.29	120.87	114.00
1	AA	246	A	P-O3'-C3'	5.29	126.04	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2519	U	O4'-C1'-N1	5.29	112.43	108.20
57	DA	2544	G	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	802	A	C3'-C2'-C1'	5.28	105.73	101.50
53	CA	282	A	C3'-C2'-C1'	5.28	105.73	101.50
53	CA	1479	C	O4'-C1'-N1	5.28	112.43	108.20
57	DA	975	A	P-O3'-C3'	-5.28	113.36	119.70
57	DA	2148	G	P-O3'-C3'	-5.28	113.36	119.70
22	BA	52	A	C3'-C2'-C1'	5.28	105.72	101.50
22	BA	2682	A	C8-N9-C4	-5.28	103.69	105.80
57	DA	639	U	N1-C1'-C2'	-5.28	106.19	112.00
53	CA	1052	U	P-O5'-C5'	5.28	129.35	120.90
57	DA	445	C	O4'-C1'-N1	5.28	112.42	108.20
1	AA	53	A	O5'-P-OP2	-5.28	100.95	105.70
1	AA	874	G	C3'-C2'-C1'	5.28	105.72	101.50
1	AA	1286	U	N1-C1'-C2'	5.28	120.86	114.00
1	AA	1318	A	P-O3'-C3'	5.28	126.03	119.70
57	DA	1901	A	P-O3'-C3'	-5.28	113.37	119.70
22	BA	809	G	N3-C4-C5	-5.28	125.96	128.60
22	BA	1848	A	C3'-C2'-C1'	5.28	105.72	101.50
35	BN	101	GLY	N-CA-C	5.28	126.29	113.10
22	BA	2824	C	P-O3'-C3'	5.27	126.03	119.70
53	CA	803	G	C3'-C2'-C1'	5.27	105.72	101.50
1	AA	537	G	C3'-C2'-C1'	5.27	105.72	101.50
53	CA	174	A	C3'-C2'-C1'	5.27	105.72	101.50
53	CA	388	G	O3'-P-O5'	-5.27	93.98	104.00
53	CA	913	A	P-O3'-C3'	5.27	126.03	119.70
53	CA	960	U	O4'-C1'-N1	5.27	112.42	108.20
57	DA	603	A	P-O3'-C3'	5.27	126.03	119.70
58	DB	12	C	O4'-C1'-N1	-5.27	103.98	108.20
57	DA	2037	A	N9-C1'-C2'	-5.27	106.20	112.00
57	DA	2429	G	C3'-C2'-C1'	5.27	105.72	101.50
1	AA	717	U	N1-C1'-C2'	5.27	120.85	114.00
1	AA	1321	U	P-O3'-C3'	-5.27	113.38	119.70
1	AA	352	C	C3'-C2'-C1'	5.27	105.71	101.50
57	DA	1820	U	O4'-C1'-N1	-5.27	103.99	108.20
1	AA	351	G	C4-N9-C1'	5.26	133.34	126.50
1	AA	467	U	N1-C1'-C2'	-5.26	106.21	112.00
22	BA	509	C	P-O3'-C3'	-5.26	113.38	119.70
53	CA	1085	U	P-O3'-C3'	5.26	126.02	119.70
1	AA	267	C	P-O3'-C3'	-5.26	113.39	119.70
1	AA	500	G	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	127	A	P-O3'-C3'	5.26	126.02	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	439	U	C3'-C2'-C1'	5.26	105.71	101.50
1	AA	129	A	P-O3'-C3'	5.26	126.01	119.70
22	BA	1654	A	C1'-O4'-C4'	5.26	114.11	109.90
53	CA	276	G	P-O3'-C3'	-5.26	113.39	119.70
22	BA	265	A	P-O3'-C3'	5.26	126.01	119.70
1	AA	1127	G	C3'-C2'-C1'	5.26	105.71	101.50
1	AA	1225	A	P-O5'-C5'	-5.26	112.49	120.90
53	CA	1301	U	C3'-C2'-C1'	5.26	105.70	101.50
57	DA	622	G	C3'-C2'-C1'	5.26	105.70	101.50
57	DA	1406	U	O4'-C1'-N1	5.26	112.41	108.20
22	BA	1709	U	O4'-C1'-N1	-5.25	104.00	108.20
53	CA	969	A	C3'-C2'-C1'	5.25	105.70	101.50
57	DA	27	G	P-O3'-C3'	5.25	126.01	119.70
22	BA	225	C	O4'-C1'-N1	5.25	112.40	108.20
22	BA	506	G	O4'-C1'-N9	5.25	112.40	108.20
22	BA	645	C	N1-C1'-C2'	5.25	120.83	114.00
22	BA	2630	G	C3'-C2'-C1'	5.25	105.70	101.50
1	AA	174	A	C3'-C2'-C1'	5.25	105.70	101.50
1	AA	1362	A	P-O3'-C3'	5.25	126.00	119.70
57	DA	2207	C	O4'-C1'-N1	5.25	112.40	108.20
53	CA	475	C	P-O3'-C3'	-5.25	113.40	119.70
1	AA	1448	C	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	1779	U	C6-N1-C2	5.25	124.15	121.00
53	CA	1451	U	O4'-C1'-N1	5.25	112.40	108.20
57	DA	1759	A	C3'-C2'-C1'	5.25	105.70	101.50
53	CA	32	A	N9-C1'-C2'	-5.25	106.23	112.00
1	AA	306	A	N9-C1'-C2'	-5.24	106.23	112.00
1	AA	511	C	N1-C1'-C2'	5.24	120.82	114.00
22	BA	223	A	P-O3'-C3'	-5.24	113.41	119.70
22	BA	1324	G	O3'-P-O5'	-5.24	94.04	104.00
22	BA	2276	G	P-O3'-C3'	-5.24	113.41	119.70
22	BA	2382	G	P-O3'-C3'	5.24	125.99	119.70
53	CA	213	G	C3'-C2'-C1'	5.24	105.69	101.50
57	DA	1757	A	P-O3'-C3'	5.24	125.99	119.70
22	BA	996	A	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	2260	C	P-O5'-C5'	-5.24	112.52	120.90
53	CA	277	C	O4'-C1'-N1	5.24	112.39	108.20
1	AA	536	C	C3'-C2'-C1'	5.24	105.69	101.50
53	CA	1086	U	C3'-C2'-C1'	5.24	105.69	101.50
57	DA	1389	G	C3'-C2'-C1'	5.24	105.69	101.50
57	DA	1967	C	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	574	A	P-O3'-C3'	5.24	125.98	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1026	G	C3'-C2'-C1'	5.24	105.69	101.50
53	CA	110	C	O4'-C1'-N1	5.24	112.39	108.20
53	CA	210	C	C2-N1-C1'	5.24	124.56	118.80
22	BA	932	U	N1-C1'-C2'	-5.23	106.24	112.00
22	BA	2194	U	P-O3'-C3'	-5.23	113.42	119.70
57	DA	1291	C	P-O3'-C3'	-5.23	113.42	119.70
22	BA	142	A	P-O3'-C3'	-5.23	113.42	119.70
22	BA	1635	A	C3'-C2'-C1'	5.23	105.69	101.50
57	DA	1417	C	O4'-C1'-N1	5.23	112.39	108.20
22	BA	1931	U	C3'-C2'-C1'	5.23	105.68	101.50
22	BA	456	C	O5'-P-OP2	-5.23	100.99	105.70
22	BA	1320	C	P-O3'-C3'	5.23	125.97	119.70
22	BA	1996	C	C4'-C3'-C2'	5.23	107.83	102.60
1	AA	879	C	N1-C1'-C2'	-5.23	106.25	112.00
1	AA	1400	C	O4'-C1'-N1	-5.23	104.02	108.20
53	CA	392	C	O4'-C1'-N1	5.23	112.38	108.20
53	CA	874	G	C3'-C2'-C1'	5.23	105.68	101.50
53	CA	1282	C	C3'-C2'-C1'	5.23	105.68	101.50
57	DA	477	A	P-O3'-C3'	-5.23	113.43	119.70
57	DA	2403	C	O4'-C1'-N1	5.23	112.38	108.20
53	CA	1141	C	P-O3'-C3'	-5.23	113.43	119.70
57	DA	1275	A	O4'-C1'-N9	5.23	112.38	108.20
57	DA	2307	G	P-O3'-C3'	5.23	125.97	119.70
57	DA	2873	A	O4'-C1'-N9	5.23	112.38	108.20
1	AA	548	G	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	2137	U	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	2264	C	P-O5'-C5'	-5.22	112.54	120.90
53	CA	1507	A	C3'-C2'-C1'	5.22	105.68	101.50
57	DA	396	G	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	980	A	OP1-P-O3'	5.22	116.69	105.20
22	BA	2689	U	C6-N1-C1'	5.22	128.51	121.20
53	CA	874	G	P-O3'-C3'	-5.22	113.43	119.70
57	DA	2324	U	P-O3'-C3'	5.22	125.97	119.70
22	BA	616	A	C3'-C2'-C1'	5.22	105.68	101.50
57	DA	52	A	C3'-C2'-C1'	5.22	105.68	101.50
57	DA	730	A	N9-C1'-C2'	-5.22	106.26	112.00
22	BA	422	A	C3'-C2'-C1'	5.22	105.68	101.50
1	AA	373	A	C3'-C2'-C1'	5.22	105.67	101.50
1	AA	1152	A	N9-C1'-C2'	-5.22	106.26	112.00
53	CA	1401	G	N9-C1'-C2'	-5.22	106.26	112.00
22	BA	831	G	N9-C1'-C2'	-5.21	106.27	112.00
22	BA	2492	U	P-O3'-C3'	-5.21	113.44	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1078	U	O4'-C1'-N1	5.21	112.37	108.20
57	DA	1992	G	P-O3'-C3'	5.21	125.95	119.70
22	BA	682	G	O4'-C1'-N9	-5.21	104.03	108.20
22	BA	1145	C	P-O3'-C3'	-5.21	113.45	119.70
22	BA	1358	G	P-O5'-C5'	-5.21	112.56	120.90
22	BA	2353	G	P-O5'-C5'	-5.21	112.56	120.90
53	CA	1052	U	C3'-C2'-C1'	5.21	105.67	101.50
57	DA	1397	U	P-O3'-C3'	5.21	125.95	119.70
53	CA	1066	C	P-O3'-C3'	-5.21	113.45	119.70
1	AA	1197	A	P-O3'-C3'	-5.21	113.45	119.70
22	BA	505	A	C8-N9-C4	-5.21	103.72	105.80
22	BA	1677	A	P-O3'-C3'	-5.21	113.45	119.70
57	DA	2347	C	C3'-C2'-C1'	5.21	105.67	101.50
1	AA	936	C	P-O3'-C3'	-5.21	113.45	119.70
22	BA	1326	U	P-O3'-C3'	-5.21	113.45	119.70
57	DA	16	C	O4'-C1'-N1	5.21	112.37	108.20
57	DA	763	G	C3'-C2'-C1'	5.21	105.67	101.50
53	CA	719	C	O4'-C1'-N1	5.21	112.36	108.20
57	DA	617	G	P-O3'-C3'	-5.21	113.45	119.70
57	DA	623	C	C3'-C2'-C1'	5.21	105.66	101.50
22	BA	1971	U	C3'-C2'-C1'	5.20	105.66	101.50
57	DA	1145	C	C3'-C2'-C1'	5.20	105.66	101.50
57	DA	1635	A	P-O5'-C5'	-5.20	112.58	120.90
57	DA	1714	U	O4'-C1'-N1	-5.20	104.04	108.20
1	AA	567	G	P-O5'-C5'	-5.20	112.58	120.90
22	BA	531	C	O3'-P-O5'	-5.20	94.12	104.00
22	BA	2611	C	C3'-C2'-C1'	5.20	105.66	101.50
57	DA	1675	C	P-O5'-C5'	-5.20	112.58	120.90
1	AA	331	G	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	1672	A	P-O5'-C5'	-5.20	112.58	120.90
22	BA	2519	U	O3'-P-O5'	-5.20	94.13	104.00
1	AA	1050	G	N9-C1'-C2'	-5.20	106.29	112.00
22	BA	2500	U	O5'-P-OP1	5.20	116.94	110.70
57	DA	776	G	N3-C4-C5	-5.19	126.00	128.60
57	DA	868	U	C3'-C2'-C1'	5.19	105.66	101.50
57	DA	1135	C	C3'-C2'-C1'	5.19	105.66	101.50
1	AA	267	C	O4'-C1'-N1	5.19	112.36	108.20
22	BA	2880	C	C3'-C2'-C1'	5.19	105.65	101.50
1	AA	552	U	O4'-C1'-N1	5.19	112.35	108.20
22	BA	581	C	P-O3'-C3'	5.19	125.93	119.70
22	BA	2200	C	C3'-C2'-C1'	5.19	105.65	101.50
53	CA	13	U	O4'-C1'-N1	5.19	112.35	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	181	A	P-O3'-C3'	5.19	125.93	119.70
53	CA	596	A	C3'-C2'-C1'	5.19	105.65	101.50
53	CA	1191	A	P-O3'-C3'	-5.19	113.47	119.70
57	DA	2199	A	C3'-C2'-C1'	5.19	105.65	101.50
1	AA	252	U	P-O3'-C3'	-5.19	113.47	119.70
2	AB	146	SER	C-N-CA	5.19	134.67	121.70
22	BA	2518	A	O4'-C1'-N9	-5.19	104.05	108.20
57	DA	374	A	P-O3'-C3'	-5.19	113.47	119.70
57	DA	705	A	P-O3'-C3'	-5.19	113.47	119.70
57	DA	1938	A	P-O3'-C3'	5.19	125.92	119.70
22	BA	544	C	O4'-C1'-N1	-5.19	104.05	108.20
23	BB	67	G	C3'-C2'-C1'	5.19	105.65	101.50
22	BA	1183	U	O3'-P-O5'	-5.18	94.15	104.00
22	BA	2259	U	P-O3'-C3'	-5.18	113.48	119.70
22	BA	1733	G	N9-C1'-C2'	-5.18	106.30	112.00
22	BA	2017	U	O4'-C1'-N1	5.18	112.35	108.20
53	CA	1184	G	N9-C1'-C2'	-5.18	106.30	112.00
22	BA	946	C	P-O3'-C3'	-5.18	113.48	119.70
22	BA	1606	C	P-O5'-C5'	-5.18	112.61	120.90
22	BA	24	G	P-O3'-C3'	5.18	125.91	119.70
57	DA	2148	G	C3'-C2'-C1'	5.18	105.64	101.50
57	DA	2350	C	O4'-C1'-N1	5.18	112.34	108.20
1	AA	346	G	P-O5'-C5'	-5.18	112.62	120.90
22	BA	829	A	C8-N9-C4	5.18	107.87	105.80
22	BA	1560	G	C3'-C2'-C1'	5.18	105.64	101.50
57	DA	615	U	P-O3'-C3'	5.18	125.91	119.70
57	DA	2584	U	O4'-C1'-N1	5.18	112.34	108.20
22	BA	143	C	C3'-C2'-C1'	5.17	105.64	101.50
22	BA	794	A	P-O5'-C5'	-5.17	112.62	120.90
22	BA	1157	G	OP1-P-OP2	5.17	127.36	119.60
22	BA	1669	A	C3'-C2'-C1'	5.17	105.64	101.50
53	CA	374	A	C3'-C2'-C1'	5.17	105.64	101.50
1	AA	330	C	C3'-C2'-C1'	5.17	105.64	101.50
22	BA	2325	G	C3'-C2'-C1'	5.17	105.64	101.50
53	CA	937	A	N9-C1'-C2'	-5.17	106.31	112.00
57	DA	232	G	P-O3'-C3'	5.17	125.91	119.70
57	DA	129	C	O4'-C1'-N1	5.17	112.34	108.20
57	DA	1600	C	O4'-C1'-N1	-5.17	104.06	108.20
57	DA	2851	A	P-O3'-C3'	-5.17	113.50	119.70
22	BA	1357	C	P-O3'-C3'	-5.17	113.50	119.70
53	CA	500	G	P-O3'-C3'	-5.17	113.50	119.70
53	CA	1453	G	P-O3'-C3'	-5.17	113.50	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	236	C	O4'-C1'-N1	5.17	112.33	108.20
1	AA	1321	U	N1-C1'-C2'	-5.17	106.32	112.00
22	BA	1838	C	N1-C1'-C2'	5.17	120.72	114.00
22	BA	2283	C	C3'-C2'-C1'	5.17	105.63	101.50
22	BA	2431	U	O4'-C1'-N1	-5.17	104.07	108.20
53	CA	936	C	P-O3'-C3'	-5.17	113.50	119.70
57	DA	1034	G	N9-C1'-C2'	-5.17	106.32	112.00
57	DA	1625	C	O4'-C1'-N1	5.17	112.33	108.20
1	AA	84	U	N1-C1'-C2'	5.17	120.72	114.00
22	BA	272	A	O4'-C1'-N9	5.17	112.33	108.20
22	BA	35	G	P-O5'-C5'	-5.16	112.64	120.90
57	DA	250	G	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	1558	C	O3'-P-O5'	5.16	113.81	104.00
22	BA	1777	U	P-O5'-C5'	-5.16	112.64	120.90
1	AA	497	G	N9-C1'-C2'	-5.16	106.33	112.00
1	AA	1050	G	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	2487	G	P-O3'-C3'	5.16	125.89	119.70
22	BA	1648	U	C3'-C2'-C1'	5.16	105.62	101.50
22	BA	1941	C	P-O3'-C3'	-5.16	113.51	119.70
22	BA	2391	G	O4'-C1'-N9	5.16	112.33	108.20
22	BA	2423	U	N1-C1'-C2'	5.16	120.70	114.00
53	CA	84	U	N1-C1'-C2'	5.16	120.70	114.00
53	CA	794	A	N9-C1'-C2'	-5.16	106.33	112.00
57	DA	2137	U	O4'-C1'-N1	5.16	112.33	108.20
22	BA	742	A	P-O3'-C3'	-5.16	113.51	119.70
53	CA	1348	U	C3'-C2'-C1'	5.16	105.62	101.50
57	DA	776	G	C8-N9-C1'	-5.16	120.30	127.00
57	DA	990	A	C3'-C2'-C1'	5.16	105.62	101.50
57	DA	1483	G	C3'-C2'-C1'	5.16	105.62	101.50
1	AA	108	G	O4'-C1'-N9	5.15	112.32	108.20
22	BA	1398	C	P-O3'-C3'	-5.15	113.52	119.70
1	AA	1161	C	P-O3'-C3'	-5.15	113.52	119.70
53	CA	1225	A	P-O3'-C3'	5.15	125.88	119.70
1	AA	273	U	P-O3'-C3'	-5.15	113.52	119.70
1	AA	1229	A	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	1185	G	P-O5'-C5'	-5.15	112.66	120.90
23	BB	109	A	N9-C1'-C2'	-5.15	106.33	112.00
53	CA	482	A	P-O3'-C3'	-5.15	113.52	119.70
57	DA	36	G	P-O3'-C3'	-5.15	113.52	119.70
57	DA	1606	C	O4'-C1'-N1	5.15	112.32	108.20
1	AA	1398	A	N9-C1'-C2'	-5.15	106.34	112.00
57	DA	1561	C	N1-C1'-C2'	-5.15	106.34	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	564	C	C3'-C2'-C1'	5.15	105.62	101.50
57	DA	1326	U	N1-C1'-C2'	-5.15	106.34	112.00
57	DA	1613	G	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	70	G	C4'-C3'-C2'	5.14	107.74	102.60
22	BA	509	C	C2-N1-C1'	5.14	124.46	118.80
22	BA	2150	C	N1-C1'-C2'	-5.14	106.34	112.00
1	AA	1184	G	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	854	C	O4'-C1'-N1	5.14	112.31	108.20
22	BA	938	G	P-O3'-C3'	-5.14	113.53	119.70
22	BA	1689	A	P-O5'-C5'	-5.14	112.67	120.90
53	CA	980	C	O4'-C1'-N1	5.14	112.31	108.20
53	CA	1283	U	O4'-C1'-N1	5.14	112.31	108.20
1	AA	1096	C	O4'-C1'-N1	5.14	112.31	108.20
22	BA	1128	G	O5'-P-OP2	-5.14	101.07	105.70
57	DA	164	C	C3'-C2'-C1'	5.14	105.61	101.50
1	AA	1153	G	N9-C1'-C2'	-5.14	106.35	112.00
57	DA	1510	G	P-O3'-C3'	-5.14	113.53	119.70
22	BA	1331	G	N9-C1'-C2'	-5.14	106.35	112.00
1	AA	1505	G	C3'-C2'-C1'	5.14	105.61	101.50
53	CA	718	A	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	782	A	P-O5'-C5'	5.13	129.12	120.90
22	BA	2626	C	C6-N1-C2	5.13	122.35	120.30
53	CA	72	A	C3'-C2'-C1'	5.13	105.61	101.50
53	CA	1454	G	C3'-C2'-C1'	5.13	105.61	101.50
22	BA	1063	G	C3'-C2'-C1'	5.13	105.61	101.50
53	CA	536	C	C3'-C2'-C1'	5.13	105.61	101.50
57	DA	2668	G	P-O3'-C3'	-5.13	113.54	119.70
22	BA	459	U	P-O3'-C3'	-5.13	113.54	119.70
53	CA	401	C	P-O5'-C5'	-5.13	112.69	120.90
1	AA	1102	A	C3'-C2'-C1'	5.13	105.60	101.50
22	BA	398	C	P-O5'-C5'	-5.13	112.69	120.90
53	CA	373	A	N9-C1'-C2'	-5.13	106.36	112.00
57	DA	1276	A	C3'-C2'-C1'	5.13	105.60	101.50
57	DA	2757	A	C3'-C2'-C1'	5.13	105.60	101.50
22	BA	490	C	N1-C1'-C2'	-5.12	106.36	112.00
57	DA	206	U	C3'-C2'-C1'	5.12	105.60	101.50
57	DA	729	G	N9-C4-C5	5.12	107.45	105.40
57	DA	1787	A	C3'-C2'-C1'	5.12	105.60	101.50
1	AA	117	G	O5'-P-OP2	-5.12	101.09	105.70
1	AA	1191	A	C3'-C2'-C1'	5.12	105.60	101.50
22	BA	2227	A	O5'-P-OP2	-5.12	101.09	105.70
57	DA	2837	A	C3'-C2'-C1'	5.12	105.60	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1311	G	N3-C4-C5	5.12	131.16	128.60
22	BA	2214	C	C3'-C2'-C1'	5.12	105.60	101.50
57	DA	2489	U	P-O3'-C3'	5.12	125.84	119.70
1	AA	1453	G	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	1829	A	N9-C1'-C2'	-5.12	106.37	112.00
22	BA	1936	A	C2-N3-C4	-5.12	108.04	110.60
22	BA	2847	U	O4'-C1'-N1	5.12	112.30	108.20
22	BA	272	A	P-O3'-C3'	-5.12	113.56	119.70
22	BA	2750	A	P-O3'-C3'	5.12	125.84	119.70
57	DA	763	G	N9-C1'-C2'	-5.12	106.37	112.00
57	DA	2544	G	P-O3'-C3'	-5.12	113.56	119.70
1	AA	245	U	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	177	G	O4'-C1'-N9	5.12	112.29	108.20
23	BB	89	U	P-O5'-C5'	-5.12	112.71	120.90
53	CA	96	U	O4'-C1'-N1	5.12	112.29	108.20
53	CA	512	U	C3'-C2'-C1'	5.12	105.59	101.50
53	CA	977	A	P-O3'-C3'	-5.12	113.56	119.70
57	DA	2896	C	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	1135	C	O4'-C1'-N1	-5.11	104.11	108.20
22	BA	2633	G	O3'-P-O5'	-5.11	94.28	104.00
22	BA	1866	A	N9-C1'-C2'	-5.11	106.38	112.00
57	DA	1388	G	N9-C1'-C2'	-5.11	106.38	112.00
1	AA	722	G	C3'-C2'-C1'	5.11	105.59	101.50
1	AA	1406	U	P-O3'-C3'	-5.11	113.57	119.70
1	AA	1526	G	P-O5'-C5'	-5.11	112.72	120.90
22	BA	534	U	O5'-P-OP2	-5.11	101.10	105.70
22	BA	2481	G	P-O5'-C5'	-5.11	112.72	120.90
53	CA	812	G	P-O3'-C3'	5.11	125.83	119.70
53	CA	1383	C	C3'-C2'-C1'	5.11	105.59	101.50
57	DA	2068	U	C3'-C2'-C1'	5.11	105.59	101.50
22	BA	1808	A	P-O3'-C3'	5.11	125.83	119.70
53	CA	85	U	N1-C1'-C2'	5.11	120.64	114.00
1	AA	534	U	P-O3'-C3'	-5.11	113.57	119.70
22	BA	2670	A	P-O5'-C5'	-5.11	112.73	120.90
1	AA	51	A	C3'-C2'-C1'	5.11	105.58	101.50
57	DA	407	G	O4'-C1'-N9	5.11	112.28	108.20
57	DA	992	C	O4'-C1'-N1	5.11	112.28	108.20
57	DA	1489	C	P-O3'-C3'	5.11	125.83	119.70
57	DA	2024	G	N9-C1'-C2'	-5.11	106.38	112.00
22	BA	1714	U	P-O3'-C3'	-5.10	113.58	119.70
57	DA	828	U	O4'-C1'-N1	5.10	112.28	108.20
57	DA	2289	G	N9-C1'-C2'	-5.10	106.39	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	183	C	O4'-C1'-N1	5.10	112.28	108.20
1	AA	431	A	P-O5'-C5'	-5.10	112.74	120.90
1	AA	801	U	P-O3'-C3'	-5.10	113.58	119.70
1	AA	817	C	P-O3'-C3'	5.10	125.82	119.70
53	CA	644	U	O4'-C1'-N1	5.10	112.28	108.20
57	DA	764	A	P-O5'-C5'	-5.10	112.73	120.90
57	DA	1777	U	O5'-P-OP2	-5.10	101.11	105.70
57	DA	2656	U	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	2150	C	P-O3'-C3'	-5.10	113.58	119.70
1	AA	891	U	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	919	U	C2-N1-C1'	5.10	123.82	117.70
57	DA	749	A	C3'-C2'-C1'	5.10	105.58	101.50
57	DA	2714	G	P-O3'-C3'	-5.10	113.58	119.70
22	BA	373	U	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	509	C	C5-C6-N1	5.10	123.55	121.00
22	BA	727	A	P-O5'-C5'	-5.10	112.74	120.90
22	BA	2389	G	P-O3'-C3'	5.10	125.82	119.70
57	DA	1063	G	C3'-C2'-C1'	5.10	105.58	101.50
57	DA	1313	U	C3'-C2'-C1'	5.10	105.58	101.50
57	DA	1619	G	N9-C1'-C2'	-5.10	106.39	112.00
1	AA	4	U	C2-N1-C1'	5.10	123.81	117.70
22	BA	705	A	N9-C1'-C2'	-5.10	106.39	112.00
53	CA	1398	A	N9-C1'-C2'	-5.10	106.39	112.00
22	BA	475	C	P-O5'-C5'	-5.09	112.75	120.90
22	BA	1142	A	C2-N3-C4	-5.09	108.05	110.60
57	DA	1048	A	P-O3'-C3'	5.09	125.81	119.70
22	BA	396	G	N9-C1'-C2'	-5.09	106.40	112.00
53	CA	73	C	C3'-C2'-C1'	5.09	105.58	101.50
53	CA	968	A	O4'-C1'-N9	5.09	112.27	108.20
53	CA	1213	A	P-O3'-C3'	5.09	125.81	119.70
57	DA	794	A	C3'-C2'-C1'	5.09	105.58	101.50
22	BA	1288	G	O4'-C1'-N9	5.09	112.27	108.20
22	BA	1634	A	C4'-C3'-C2'	5.09	107.69	102.60
22	BA	2491	U	O5'-P-OP2	-5.09	101.12	105.70
53	CA	1382	C	O4'-C1'-N1	5.09	112.27	108.20
22	BA	1406	U	N1-C1'-C2'	5.09	120.61	114.00
22	BA	2181	U	O4'-C1'-N1	-5.09	104.13	108.20
22	BA	2801	G	P-O3'-C3'	-5.09	113.59	119.70
22	BA	2842	G	N1-C6-O6	5.09	122.95	119.90
57	DA	197	A	C3'-C2'-C1'	5.09	105.57	101.50
57	DA	1207	C	O4'-C1'-N1	5.09	112.27	108.20
1	AA	560	A	P-O3'-C3'	-5.09	113.59	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	585	G	O5'-P-OP2	-5.09	101.12	105.70
22	BA	1151	A	P-O3'-C3'	-5.09	113.60	119.70
22	BA	1616	A	P-O5'-C5'	-5.09	112.76	120.90
22	BA	2025	C	P-O3'-C3'	5.09	125.80	119.70
53	CA	245	U	C3'-C2'-C1'	5.09	105.57	101.50
57	DA	1635	A	P-O3'-C3'	-5.09	113.60	119.70
57	DA	2023	C	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	1971	U	O3'-P-O5'	-5.08	94.34	104.00
22	BA	1273	U	C3'-C2'-C1'	5.08	105.57	101.50
57	DA	1915	U	P-O3'-C3'	-5.08	113.60	119.70
22	BA	1142	A	C5-N7-C8	-5.08	101.36	103.90
22	BA	1263	U	C5-C4-O4	-5.08	122.85	125.90
22	BA	2784	U	P-O5'-C5'	-5.08	112.77	120.90
1	AA	835	U	P-O3'-C3'	-5.08	113.60	119.70
22	BA	75	G	N9-C1'-C2'	-5.08	106.41	112.00
22	BA	143	C	O4'-C1'-N1	5.08	112.26	108.20
53	CA	970	C	O4'-C1'-N1	5.08	112.26	108.20
57	DA	984	A	P-O3'-C3'	5.08	125.79	119.70
22	BA	636	G	P-O3'-C3'	5.08	125.79	119.70
57	DA	1931	U	C3'-C2'-C1'	5.08	105.56	101.50
1	AA	373	A	N9-C1'-C2'	-5.08	106.42	112.00
22	BA	33	C	C6-N1-C2	5.07	122.33	120.30
22	BA	1665	A	P-O5'-C5'	-5.07	112.78	120.90
53	CA	815	A	P-O3'-C3'	5.07	125.79	119.70
57	DA	1882	U	O4'-C1'-N1	5.07	112.26	108.20
57	DA	2615	U	P-O3'-C3'	-5.07	113.61	119.70
22	BA	252	G	O4'-C1'-N9	-5.07	104.14	108.20
22	BA	595	C	O5'-P-OP2	-5.07	101.14	105.70
22	BA	872	U	P-O3'-C3'	-5.07	113.61	119.70
58	DB	90	C	C3'-C2'-C1'	5.07	105.56	101.50
53	CA	808	C	O4'-C1'-N1	5.07	112.25	108.20
22	BA	805	G	P-O5'-C5'	-5.07	112.79	120.90
1	AA	959	A	P-O3'-C3'	5.07	125.78	119.70
22	BA	1555	G	C3'-C2'-C1'	5.07	105.55	101.50
22	BA	2656	U	C3'-C2'-C1'	5.07	105.55	101.50
57	DA	397	U	N1-C1'-C2'	-5.07	106.43	112.00
57	DA	1429	G	C3'-C2'-C1'	5.07	105.55	101.50
57	DA	1647	U	O4'-C1'-N1	5.07	112.25	108.20
57	DA	2021	C	P-O3'-C3'	5.07	125.78	119.70
57	DA	2069	G	C3'-C2'-C1'	5.07	105.55	101.50
57	DA	2149	U	N1-C1'-C2'	-5.07	106.43	112.00
57	DA	2691	C	C3'-C2'-C1'	5.07	105.55	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	642	A	N9-C1'-C2'	-5.06	106.43	112.00
1	AA	1278	G	P-O3'-C3'	5.06	125.77	119.70
57	DA	2850	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	984	A	N3-C4-C5	5.06	130.34	126.80
53	CA	977	A	C3'-C2'-C1'	5.06	105.55	101.50
57	DA	528	A	P-O3'-C3'	-5.06	113.63	119.70
1	AA	71	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	1144	A	C3'-C2'-C1'	5.06	105.55	101.50
53	CA	1394	A	P-O3'-C3'	5.06	125.77	119.70
57	DA	1982	U	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	435	C	P-O3'-C3'	-5.06	113.63	119.70
22	BA	2714	G	P-O5'-C5'	-5.06	112.81	120.90
22	BA	2892	G	O5'-P-OP1	-5.06	101.15	105.70
53	CA	1073	U	O4'-C1'-N1	5.06	112.25	108.20
57	DA	1655	A	C3'-C2'-C1'	5.06	105.55	101.50
57	DA	2681	C	P-O3'-C3'	5.06	125.77	119.70
53	CA	95	C	C3'-C2'-C1'	5.06	105.55	101.50
57	DA	339	U	O4'-C1'-N1	5.06	112.25	108.20
53	CA	1140	C	P-O3'-C3'	-5.05	113.64	119.70
57	DA	604	G	P-O3'-C3'	-5.05	113.63	119.70
57	DA	1802	A	C3'-C2'-C1'	5.05	105.54	101.50
57	DA	2837	A	P-O3'-C3'	-5.05	113.64	119.70
53	CA	381	C	C2-N1-C1'	5.05	124.36	118.80
53	CA	199	A	N9-C1'-C2'	-5.05	106.44	112.00
57	DA	235	U	C3'-C2'-C1'	5.05	105.54	101.50
1	AA	794	A	N9-C1'-C2'	-5.05	106.44	112.00
1	AA	1517	G	P-O3'-C3'	-5.05	113.64	119.70
53	CA	1101	A	P-O3'-C3'	5.05	125.76	119.70
22	BA	970	U	OP2-P-O3'	5.05	116.30	105.20
22	BA	1152	C	N1-C1'-C2'	-5.04	106.45	112.00
22	BA	1597	A	P-O3'-C3'	5.04	125.75	119.70
22	BA	2312	U	O4'-C1'-N1	5.04	112.23	108.20
53	CA	1287	A	C3'-C2'-C1'	5.04	105.53	101.50
57	DA	774	G	C4-N9-C1'	-5.04	119.94	126.50
57	DA	783	A	C4-N9-C1'	5.04	135.38	126.30
22	BA	216	A	P-O3'-C3'	-5.04	113.65	119.70
22	BA	2199	A	O4'-C1'-N9	-5.04	104.17	108.20
57	DA	616	A	P-O3'-C3'	-5.04	113.65	119.70
57	DA	1078	U	P-O3'-C3'	5.04	125.75	119.70
57	DA	121	G	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	1224	U	N1-C1'-C2'	5.04	120.55	114.00
1	AA	422	C	O4'-C1'-N1	5.04	112.23	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1279	G	P-O3'-C3'	-5.04	113.66	119.70
22	BA	30	G	P-O5'-C5'	-5.04	112.84	120.90
22	BA	137	U	P-O3'-C3'	5.04	125.74	119.70
22	BA	2067	G	O4'-C1'-N9	5.04	112.23	108.20
22	BA	2031	A	C5-C6-N6	-5.03	119.67	123.70
57	DA	730	A	C3'-C2'-C1'	5.03	105.53	101.50
58	DB	88	C	N1-C1'-C2'	5.03	120.54	114.00
22	BA	1281	G	O3'-P-O5'	-5.03	94.44	104.00
22	BA	1560	G	P-O3'-C3'	-5.03	113.66	119.70
53	CA	1399	C	O4'-C1'-N1	5.03	112.22	108.20
22	BA	28	A	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	2258	C	C4'-C3'-C2'	5.03	107.63	102.60
22	BA	533	G	C3'-C2'-C1'	5.03	105.52	101.50
57	DA	476	G	P-O3'-C3'	-5.03	113.67	119.70
1	AA	1516	G	P-O3'-C3'	5.03	125.73	119.70
22	BA	958	U	P-O3'-C3'	-5.03	113.67	119.70
57	DA	2275	C	N1-C1'-C2'	5.03	120.53	114.00
1	AA	484	G	P-O3'-C3'	5.02	125.73	119.70
22	BA	2689	U	C1'-O4'-C4'	-5.02	105.88	109.90
57	DA	1808	A	P-O3'-C3'	5.02	125.73	119.70
1	AA	1168	U	P-O3'-C3'	5.02	125.73	119.70
22	BA	532	A	C8-N9-C4	-5.02	103.79	105.80
22	BA	990	A	P-O3'-C3'	-5.02	113.67	119.70
22	BA	990	A	N9-C1'-C2'	-5.02	106.48	112.00
22	BA	2020	A	O5'-P-OP2	-5.02	101.18	105.70
57	DA	566	U	P-O3'-C3'	-5.02	113.67	119.70
57	DA	1654	A	P-O3'-C3'	-5.02	113.67	119.70
22	BA	265	A	O4'-C1'-N9	5.02	112.22	108.20
22	BA	2250	G	C2-N3-C4	-5.02	109.39	111.90
53	CA	52	C	C3'-C2'-C1'	5.02	105.52	101.50
53	CA	1066	C	C3'-C2'-C1'	5.02	105.52	101.50
53	CA	1146	A	P-O3'-C3'	-5.02	113.68	119.70
1	AA	467	U	P-O3'-C3'	-5.02	113.68	119.70
1	AA	563	A	C3'-C2'-C1'	5.02	105.52	101.50
1	AA	916	U	C2-N1-C1'	5.02	123.72	117.70
22	BA	729	G	P-O5'-C5'	-5.02	112.87	120.90
57	DA	210	C	O4'-C1'-N1	5.02	112.21	108.20
57	DA	1537	G	C3'-C2'-C1'	5.02	105.51	101.50
57	DA	2217	G	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	28	A	N9-C1'-C2'	-5.01	106.48	112.00
22	BA	919	U	C4-C5-C6	-5.01	116.69	119.70
22	BA	2894	G	C3'-C2'-C1'	5.01	105.51	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	92	U	P-O3'-C3'	-5.01	113.68	119.70
57	DA	1965	C	P-O3'-C3'	-5.01	113.68	119.70
1	AA	1138	G	C3'-C2'-C1'	5.01	105.51	101.50
22	BA	673	C	P-O5'-C5'	-5.01	112.88	120.90
22	BA	1209	U	O4'-C1'-N1	5.01	112.21	108.20
53	CA	87	C	C3'-C2'-C1'	5.01	105.51	101.50
53	CA	973	G	P-O3'-C3'	5.01	125.72	119.70
1	AA	1338	G	C3'-C2'-C1'	5.01	105.51	101.50
22	BA	490	C	P-O5'-C5'	-5.01	112.88	120.90
57	DA	163	C	C3'-C2'-C1'	5.01	105.51	101.50
57	DA	1079	C	C3'-C2'-C1'	5.01	105.51	101.50
57	DA	1699	G	O4'-C1'-N9	5.01	112.21	108.20
22	BA	546	U	P-O3'-C3'	5.01	125.71	119.70
22	BA	1668	A	P-O3'-C3'	5.01	125.71	119.70
22	BA	620	G	O4'-C1'-N9	5.00	112.20	108.20
57	DA	831	G	C3'-C2'-C1'	5.00	105.50	101.50
22	BA	1952	A	P-O3'-C3'	5.00	125.70	119.70
22	BA	2871	U	O5'-P-OP2	-5.00	101.20	105.70
22	BA	1992	G	C4'-C3'-C2'	5.00	107.60	102.60
53	CA	500	G	C3'-C2'-C1'	5.00	105.50	101.50
53	CA	559	A	O4'-C1'-N9	5.00	112.20	108.20
53	CA	567	G	P-O3'-C3'	-5.00	113.70	119.70
57	DA	963	U	P-O3'-C3'	-5.00	113.70	119.70

There are no chirality outliers.

All (3) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
25	BD	9	VAL	Peptide
35	BN	101	GLY	Peptide
2	CB	107	ARG	Mainchain

5.2 Too-close contacts ⓘ

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32895	0	16553	1473	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	AB	1705	0	1732	195	0
2	CB	1705	0	1732	176	0
3	AC	1625	0	1699	121	0
3	CC	1625	0	1699	127	0
4	AD	1643	0	1710	166	0
4	CD	1643	0	1710	177	0
5	AE	1106	0	1147	146	0
5	CE	1106	0	1148	123	0
6	AF	818	0	808	76	0
6	CF	818	0	808	74	0
7	AG	1182	0	1240	89	0
8	AH	979	0	1034	102	0
8	CH	979	0	1034	115	0
9	AI	1022	0	1070	91	0
9	CI	1022	0	1070	108	0
10	AJ	787	0	828	83	0
10	CJ	787	0	828	93	0
11	AK	877	0	887	91	0
11	CK	877	0	887	79	0
12	AL	955	0	1019	92	0
12	CL	955	0	1019	100	0
13	AM	884	0	944	70	0
14	AN	774	0	827	81	0
14	CN	769	0	822	85	0
15	AO	714	0	737	59	0
15	CO	714	0	737	58	0
16	AP	649	0	666	62	0
17	AQ	649	0	691	81	0
17	CQ	649	0	691	70	0
18	AR	456	0	478	31	0
18	CR	456	0	478	47	0
19	AS	638	0	665	47	0
19	CS	638	0	665	64	0
20	AT	665	0	714	65	0
20	CT	665	0	714	61	0
21	AU	426	0	449	79	0
21	CU	426	0	449	80	0
22	BA	61274	0	30819	2356	0
23	BB	2529	0	1281	83	0
24	BC	2083	0	2157	223	0
24	DC	2083	0	2157	262	0
25	BD	1565	0	1616	223	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
25	DD	1565	0	1616	197	0
26	BE	1552	0	1619	152	0
26	DE	1552	0	1619	179	0
27	BF	1411	0	1447	140	0
28	BG	1323	0	1374	147	0
28	DG	1323	0	1374	131	0
29	BH	1111	0	1148	107	0
29	DH	1111	0	1148	115	0
30	BI	1032	0	1088	109	0
30	DI	1032	0	1088	76	0
31	BJ	1129	0	1162	171	0
31	DJ	1129	0	1162	133	0
32	BK	939	0	1012	113	0
32	DK	939	0	1012	128	0
33	BL	1045	0	1117	122	0
33	DL	1045	0	1117	117	0
34	BM	1074	0	1157	99	0
34	DM	1074	0	1157	107	0
35	BN	961	0	1000	96	0
35	DN	961	0	1000	134	0
36	BO	892	0	923	75	0
36	DO	892	0	923	71	0
37	BP	917	0	965	139	0
37	DP	917	0	965	130	0
38	BQ	947	0	1022	153	0
38	DQ	947	0	1022	124	0
39	BR	816	0	839	116	0
39	DR	816	0	839	87	0
40	BS	857	0	922	81	0
40	DS	857	0	922	78	0
41	BT	739	0	807	112	0
41	DT	739	0	807	108	0
42	BU	780	0	834	52	0
42	DU	780	0	834	92	0
43	BV	753	0	780	70	0
43	DV	753	0	780	71	0
44	BW	596	0	610	201	0
44	DW	596	0	610	117	0
45	BX	625	0	655	67	0
45	DX	625	0	655	85	0
46	BY	509	0	543	44	0
46	DY	509	0	543	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	BZ	449	0	491	39	0
47	DZ	449	0	491	42	0
48	B0	444	0	461	33	0
48	D0	444	0	461	64	0
49	B1	410	0	440	38	0
49	D1	410	0	440	38	0
50	B2	377	0	418	37	0
50	D2	377	0	418	31	0
51	B3	504	0	574	46	0
51	D3	504	0	574	56	0
52	B4	302	0	340	39	0
52	D4	302	0	343	36	0
53	CA	32831	0	16521	1811	0
54	CG	1175	0	1230	125	0
55	CM	877	0	937	97	0
56	CP	639	0	656	71	0
57	DA	60995	0	30679	3815	0
58	DB	2507	0	1270	168	0
59	DF	1420	0	1460	194	0
60	AA	42	0	0	0	0
60	AN	1	0	0	0	0
60	BA	135	0	0	0	0
60	BB	4	0	0	0	0
60	BL	1	0	0	0	0
60	CA	42	0	0	0	0
60	DA	133	0	0	0	0
60	DB	1	0	0	0	0
60	DC	1	0	0	0	0
60	DE	1	0	0	0	0
60	DJ	1	0	0	0	0
61	BA	20	0	11	1	0
62	B4	1	0	0	0	0
62	D4	1	0	0	0	0
63	AA	197	0	0	11	0
63	AL	2	0	0	0	0
63	AN	6	0	0	1	0
63	AT	2	0	0	0	0
63	AU	1	0	0	0	0
63	B2	2	0	0	0	0
63	B3	2	0	0	0	0
63	B4	2	0	0	0	0
63	BA	608	0	0	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
63	BB	19	0	0	0	0
63	BC	8	0	0	0	0
63	BD	2	0	0	3	0
63	BE	1	0	0	0	0
63	BL	4	0	0	1	0
63	BN	2	0	0	0	0
63	BQ	1	0	0	0	0
63	BT	2	0	0	1	0
63	BV	1	0	0	1	0
63	CA	195	0	0	7	0
63	CE	3	0	0	1	0
63	CI	1	0	0	0	0
63	CL	1	0	0	0	0
63	CN	3	0	0	0	0
63	CT	2	0	0	0	0
63	CU	2	0	0	0	0
63	D2	1	0	0	1	0
63	D3	1	0	0	0	0
63	D4	4	0	0	0	0
63	DA	603	0	0	19	0
63	DB	4	0	0	0	0
63	DC	10	0	0	0	0
63	DD	1	0	0	0	0
63	DE	3	0	0	0	0
63	DJ	4	0	0	0	0
63	DL	5	0	0	0	0
63	DN	2	0	0	0	0
63	DT	2	0	0	0	0
63	DU	2	0	0	0	0
63	DV	1	0	0	0	0
All	All	284499	0	190851	17927	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 38.

All (17927) 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)
57:DA:2092:U:H1'	57:DA:2093:G:C8	1.52	1.43
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.44	1.29
57:DA:2092:U:O2'	57:DA:2093:G:H5''	1.08	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.55	1.20
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.57	1.19
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	1.22	1.16
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.09	1.16
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.18	1.14
12:AL:49:ARG:HH11	12:AL:49:ARG:HG2	1.06	1.14
22:BA:855:G:H21	44:BW:23:LYS:HG2	1.11	1.13
57:DA:197:A:H62	57:DA:2430:A:H2'	1.11	1.13
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.24	1.13
58:DB:58:A:H2'	58:DB:59:A:H8	1.13	1.13
21:CU:16:ARG:HG3	21:CU:19:LYS:HG2	1.29	1.13
44:BW:9:THR:HG23	44:BW:10:ARG:HD3	1.28	1.13
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.20	1.13
57:DA:2216:G:O2'	57:DA:2217:G:H8	1.32	1.12
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.31	1.12
53:CA:254:G:H21	17:CQ:17:GLU:HG3	1.10	1.12
58:DB:58:A:H2'	58:DB:59:A:C8	1.85	1.12
20:AT:43:LYS:HB3	20:AT:86:ALA:HB1	1.31	1.12
57:DA:2092:U:O2'	57:DA:2093:G:C5'	1.98	1.12
53:CA:986:U:H2'	53:CA:987:G:C8	1.84	1.11
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.14	1.11
57:DA:2135:A:H3'	57:DA:2136:G:H5''	1.33	1.11
5:CE:29:ILE:HG23	5:CE:30:PHE:H	1.09	1.11
57:DA:2296:U:H4'	57:DA:2297:A:OP1	1.39	1.11
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.31	1.10
44:DW:40:ARG:HG2	44:DW:40:ARG:HH11	1.02	1.10
5:AE:80:LEU:HD23	5:AE:122:VAL:HG11	1.27	1.09
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.29	1.09
32:BK:51:LYS:HG3	32:BK:95:ILE:HD11	1.30	1.09
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.04	1.09
1:AA:1129:C:H5''	9:AI:17:ARG:HH22	1.07	1.09
57:DA:1915:U:H2'	57:DA:1916:A:C8	1.87	1.09
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.32	1.09
6:AF:6:ILE:HG12	6:AF:89:VAL:HG23	1.31	1.09
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.16	1.09
38:BQ:69:ARG:HB2	38:BQ:69:ARG:HH21	1.12	1.09
57:DA:1024:G:H3'	57:DA:1025:G:H5''	1.33	1.09
57:DA:604:G:O2'	57:DA:605:G:H5'	1.53	1.09
53:CA:279:A:H5''	53:CA:280:C:H3'	1.35	1.08
57:DA:2092:U:C1'	57:DA:2093:G:H8	1.65	1.08
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.15	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:16:GLU:CG	4:CD:191:SER:HB2	1.84	1.08
17:AQ:16:MET:HB2	17:AQ:19:SER:HB3	1.28	1.08
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.16	1.08
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.67	1.07
57:DA:216:A:O2'	57:DA:217:A:H8	1.37	1.07
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.15	1.07
22:BA:762:U:H4'	22:BA:763:G:O5'	1.52	1.07
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.16	1.07
21:AU:9:GLU:HG3	21:AU:10:PRO:HD3	1.30	1.07
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.25	1.07
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.35	1.06
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.19	1.06
32:BK:18:ARG:HG3	32:BK:18:ARG:HH11	1.17	1.06
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.37	1.06
2:CB:114:LYS:HE3	2:CB:151:LYS:HB2	1.36	1.06
12:CL:43:LYS:HB3	12:CL:44:PRO:HD2	1.10	1.06
57:DA:2092:U:H4'	57:DA:2093:G:OP1	1.29	1.06
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.37	1.05
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.05
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	1.91	1.05
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.34	1.05
57:DA:668:A:H2'	57:DA:670:A:H62	1.20	1.05
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.37	1.05
53:CA:1213:A:O2'	53:CA:1214:C:H5'	1.55	1.05
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.70	1.05
53:CA:1067:A:H1'	53:CA:1068:G:C8	1.90	1.05
53:CA:1182:G:H4'	53:CA:1183:U:H5'	1.31	1.05
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.17	1.05
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.38	1.05
53:CA:373:A:O2'	53:CA:374:A:H5'	1.53	1.04
6:AF:16:GLU:HG2	4:CD:191:SER:CB	1.87	1.04
57:DA:2093:G:O6	57:DA:2225:A:H3'	1.58	1.04
57:DA:589:U:O2'	57:DA:590:A:H5'	1.55	1.04
57:DA:1784:A:H4'	57:DA:1785:A:O5'	1.55	1.04
4:CD:2:ARG:HH21	4:CD:114:ARG:HD3	1.20	1.04
1:AA:243:A:H4'	1:AA:244:U:H5''	1.35	1.04
54:CG:22:LEU:HA	54:CG:25:PHE:HB3	1.39	1.04
8:CH:28:SER:HA	8:CH:58:LEU:HD12	1.36	1.03
57:DA:2439:A:H4'	57:DA:2440:C:O5'	1.58	1.03
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.21	1.03
12:AL:82:ARG:HH11	12:AL:82:ARG:HG2	1.20	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1117:C:O2'	57:DA:1118:C:H5'	1.57	1.02
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.42	1.02
4:AD:109:THR:HG23	4:AD:112:GLU:H	1.23	1.02
57:DA:33:C:O2'	57:DA:34:U:H5'	1.58	1.02
35:DN:35:LYS:HZ2	35:DN:112:TYR:HE1	1.07	1.02
10:CJ:84:VAL:HG23	10:CJ:85:ASP:H	1.23	1.01
57:DA:2092:U:C1'	57:DA:2093:G:C8	2.38	1.01
1:AA:1239:A:H62	1:AA:1299:A:N6	1.56	1.01
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.39	1.01
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.38	1.01
2:AB:40:ILE:HD13	2:AB:201:GLY:HA2	1.39	1.01
57:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.39	1.01
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.43	1.01
53:CA:1183:U:H3'	53:CA:1184:G:H5''	1.40	1.01
58:DB:112:G:H21	36:DO:45:SER:HA	1.21	1.01
57:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.23	1.00
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.58	1.00
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.60	1.00
2:AB:89:PHE:HB3	2:AB:149:GLY:HA2	1.39	1.00
53:CA:407:U:H2'	53:CA:408:A:H8	1.24	1.00
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.43	1.00
53:CA:32:A:H2'	53:CA:33:A:C8	1.96	1.00
1:AA:975:A:H4'	1:AA:976:G:H5''	1.38	1.00
54:CG:74:VAL:HG13	54:CG:140:VAL:HG13	1.42	0.99
22:BA:84:A:H62	22:BA:101:A:H2	1.00	0.99
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB2	1.38	0.99
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.45	0.99
57:DA:1387:A:HO2'	57:DA:1388:G:H8	1.01	0.99
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.28	0.99
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.27	0.99
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.43	0.99
53:CA:664:G:H22	53:CA:741:G:H1	1.08	0.99
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD13	1.42	0.99
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.44	0.98
12:CL:43:LYS:HB3	12:CL:44:PRO:CD	1.93	0.98
57:DA:302:C:O2'	57:DA:303:G:H8	1.45	0.98
9:CI:51:LEU:HG	9:CI:86:LEU:HD22	1.45	0.98
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.58	0.98
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.43	0.98
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.26	0.98
57:DA:2093:G:C6	57:DA:2225:A:H2'	1.97	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.29	0.98
53:CA:764:C:H2'	53:CA:765:G:H5'	1.44	0.98
1:AA:654:G:H2'	1:AA:655:A:H8	1.27	0.98
25:BD:12:THR:HG22	25:BD:13:ARG:N	1.78	0.98
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.27	0.98
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.64	0.97
22:BA:265:A:H4'	22:BA:266:G:OP1	1.63	0.97
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.44	0.97
57:DA:2880:C:H1'	35:DN:93:GLY:H	1.25	0.97
57:DA:647:G:H2'	57:DA:648:G:H8	1.26	0.97
1:AA:1338:G:H2'	1:AA:1339:A:C8	1.99	0.97
57:DA:2321:U:H3'	57:DA:2321:U:O2	1.64	0.97
58:DB:69:G:H3'	58:DB:70:C:H6	1.29	0.97
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	1.95	0.97
1:AA:204:G:H3'	1:AA:205:A:H5''	1.46	0.97
34:BM:35:ALA:O	34:BM:128:THR:HA	1.64	0.97
2:CB:114:LYS:HA	2:CB:117:GLU:HG2	1.46	0.97
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.46	0.97
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	1.64	0.97
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	2.00	0.97
43:BV:80:HIS:HD2	43:BV:83:LYS:H	1.09	0.97
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.78	0.97
57:DA:2051:A:H4'	57:DA:2052:A:OP1	1.64	0.97
57:DA:2093:G:C5	57:DA:2225:A:H2'	2.00	0.97
57:DA:2149:U:HO2'	57:DA:2150:C:H6	1.09	0.97
15:AO:63:ARG:HG2	15:AO:87:ARG:HH12	1.30	0.96
1:AA:243:A:H4'	1:AA:244:U:C5'	1.95	0.96
58:DB:110:C:O2'	58:DB:111:U:H5'	1.65	0.96
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.30	0.96
57:DA:1537:G:H2'	57:DA:1538:G:H4'	1.44	0.96
57:DA:2215:C:HO2'	57:DA:2216:G:H8	1.07	0.96
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.45	0.96
3:AC:166:TRP:H	3:AC:166:TRP:HE3	1.10	0.96
57:DA:2092:U:HO2'	57:DA:2093:G:H5''	1.29	0.96
57:DA:674:G:O2'	26:DE:69:ARG:HG2	1.66	0.96
58:DB:24:G:H1'	58:DB:27:C:N4	1.81	0.96
1:AA:92:U:H2'	1:AA:93:U:C6	2.01	0.96
3:AC:56:ILE:HG12	3:AC:65:VAL:HG22	1.46	0.96
22:BA:2062:A:O2'	22:BA:2063:C:H5'	1.66	0.96
22:BA:728:G:HO2'	22:BA:730:A:H8	1.08	0.96
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:16:GLU:HG2	4:CD:191:SER:HB2	0.98	0.96
4:CD:25:ARG:HH12	4:CD:30:LYS:HG2	1.29	0.96
57:DA:1079:C:H41	57:DA:1088:A:H5''	1.28	0.96
57:DA:1676:A:C2	57:DA:1993:U:H5'	2.01	0.96
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.64	0.96
53:CA:1074:G:H4'	2:CB:102:ASN:HB2	1.47	0.96
54:CG:91:ARG:HG2	54:CG:92:PRO:HD2	1.48	0.96
57:DA:2313:C:HO2'	57:DA:2314:A:H8	0.96	0.96
57:DA:1207:C:HO2'	57:DA:1208:C:H6	1.01	0.95
57:DA:1716:U:O2'	57:DA:1717:A:H8	1.47	0.95
57:DA:61:C:O2'	57:DA:62:U:H5'	1.66	0.95
57:DA:665:U:H2'	57:DA:666:A:H8	1.31	0.95
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.64	0.95
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.48	0.95
4:AD:145:ARG:HH11	4:AD:147:LYS:HE3	1.31	0.95
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.01	0.95
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	1.95	0.95
53:CA:560:A:H4'	53:CA:561:U:H5''	1.48	0.95
5:CE:29:ILE:HG23	5:CE:30:PHE:N	1.81	0.95
57:DA:1060:U:H4'	57:DA:1061:U:O5'	1.67	0.95
57:DA:2214:C:O2'	57:DA:2215:C:H5'	1.65	0.95
57:DA:2060:A:H2'	26:DE:63:LYS:NZ	1.80	0.95
52:B4:9:LYS:H	52:B4:9:LYS:HD3	1.28	0.95
25:BD:5:VAL:H	25:BD:32:ASN:HD21	1.10	0.95
41:BT:67:VAL:HG12	41:BT:76:ARG:HG3	1.47	0.95
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.46	0.95
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.27	0.95
53:CA:986:U:H2'	53:CA:987:G:H8	1.22	0.95
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.49	0.95
57:DA:1676:A:H2	57:DA:1993:U:H5'	1.31	0.95
57:DA:2847:U:H2'	57:DA:2848:G:H5'	1.48	0.95
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.44	0.95
53:CA:1228:C:HO2'	53:CA:1229:A:H8	0.96	0.95
53:CA:407:U:H2'	53:CA:408:A:C8	2.01	0.95
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.47	0.95
53:CA:335:C:H2'	53:CA:336:A:C8	2.01	0.95
53:CA:348:G:H2'	53:CA:349:A:H8	1.32	0.95
4:AD:25:ARG:HH11	4:AD:30:LYS:HE3	1.31	0.95
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.31	0.95
24:BC:12:ARG:HG2	24:BC:12:ARG:HH11	1.32	0.95
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.31	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1313:U:H2'	57:DA:1313:U:O2	1.64	0.95
57:DA:1915:U:H2'	57:DA:1916:A:H8	1.25	0.95
38:BQ:69:ARG:CB	38:BQ:69:ARG:HH21	1.79	0.94
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.49	0.94
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.30	0.94
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.85	0.94
57:DA:1401:G:H2'	57:DA:1402:U:C6	2.01	0.94
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.49	0.94
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.45	0.94
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	0.79	0.94
4:CD:77:GLU:HG3	4:CD:81:LEU:HD11	1.50	0.94
57:DA:1387:A:H5'	57:DA:1469:A:H1'	1.50	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
46:BY:47:ARG:HG3	46:BY:47:ARG:HH21	1.28	0.94
1:AA:842:U:H3'	1:AA:843:U:H5''	1.48	0.94
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.49	0.94
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.50	0.94
57:DA:2385:C:HO2'	57:DA:2386:A:H8	1.13	0.94
7:AG:12:LEU:H	7:AG:12:LEU:HD22	1.33	0.94
5:CE:103:GLY:O	5:CE:104:ILE:HG22	1.65	0.94
8:CH:103:VAL:HG12	8:CH:124:ILE:HA	1.47	0.94
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.47	0.94
38:BQ:69:ARG:NH2	38:BQ:69:ARG:HB2	1.83	0.94
39:BR:51:VAL:HB	39:BR:52:PRO:CD	1.98	0.94
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.64	0.94
53:CA:82:G:O2'	53:CA:83:C:H4'	1.65	0.94
57:DA:1021:A:O2'	57:DA:1022:G:H4'	1.68	0.94
23:BB:90:C:H6	23:BB:90:C:H5''	1.32	0.94
57:DA:2544:G:H2'	57:DA:2545:G:H8	1.32	0.94
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.48	0.94
57:DA:1695:G:C8	24:DC:7:PRO:HB2	2.03	0.94
22:BA:509:C:H5''	22:BA:509:C:H6	1.32	0.94
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.64	0.94
53:CA:1299:A:N3	53:CA:1299:A:H2'	1.83	0.94
2:CB:110:ILE:HD13	2:CB:151:LYS:HA	1.50	0.94
1:AA:1238:A:H5'	1:AA:1336:C:H41	1.32	0.94
2:CB:206:ILE:HA	2:CB:209:VAL:HG22	1.50	0.94
53:CA:1329:A:H5''	55:CM:25:GLY:H	1.31	0.93
8:CH:68:LYS:HD3	8:CH:69:ALA:H	1.32	0.93
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.48	0.93
3:AC:128:MET:HB3	3:AC:131:ARG:HG3	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.03	0.93
57:DA:1429:G:O2'	57:DA:1430:G:H8	1.48	0.93
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.49	0.93
1:AA:373:A:O2'	1:AA:374:A:H5'	1.68	0.93
1:AA:6:G:HO2'	1:AA:7:A:H8	0.97	0.93
20:CT:23:ARG:HB3	20:CT:60:GLN:NE2	1.83	0.93
53:CA:519:C:H2'	53:CA:520:A:C8	2.04	0.93
11:CK:27:ASN:HD22	11:CK:27:ASN:N	1.66	0.93
57:DA:1669:A:H2'	57:DA:1669:A:N3	1.80	0.93
57:DA:2324:U:H5'	57:DA:2325:G:H5''	1.49	0.93
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.13	0.93
9:AI:23:GLY:H	9:AI:60:LEU:HA	1.34	0.93
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.02	0.93
53:CA:1168:U:H2'	53:CA:1168:U:O2	1.64	0.93
57:DA:2875:C:O2'	57:DA:2876:G:H8	1.49	0.93
21:AU:52:VAL:HG13	21:AU:53:LYS:H	1.34	0.93
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.04	0.93
57:DA:2725:A:O2'	57:DA:2726:A:H2'	1.69	0.93
57:DA:508:A:H62	40:DS:9:HIS:CE1	1.85	0.93
25:BD:12:THR:CG2	25:BD:13:ARG:H	1.82	0.93
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.04	0.93
35:BN:23:ASN:H	35:BN:23:ASN:HD22	1.17	0.92
22:BA:1733:G:HO2'	22:BA:1734:G:H8	0.96	0.92
20:CT:73:ARG:HG2	20:CT:73:ARG:HH11	1.34	0.92
21:CU:24:LYS:HG3	21:CU:25:ALA:H	1.32	0.92
1:AA:1441:A:H62	1:AA:1461:G:H21	1.10	0.92
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.34	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
31:BJ:2:LYS:H	31:BJ:2:LYS:HD3	1.33	0.92
57:DA:374:A:H2'	57:DA:375:G:C8	2.03	0.92
6:CF:86:ARG:NH1	18:CR:63:TYR:HB3	1.84	0.92
2:AB:69:VAL:HB	2:AB:162:VAL:HG12	1.51	0.92
57:DA:1324:G:H1'	57:DA:1616:A:N6	1.83	0.92
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.35	0.92
8:AH:105:THR:HG21	8:AH:120:LEU:HD13	1.49	0.92
15:AO:63:ARG:HD3	15:AO:87:ARG:HH22	1.35	0.92
22:BA:1073:A:C3'	22:BA:1074:G:H5''	1.99	0.92
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.68	0.92
2:AB:9:LEU:HD12	2:AB:42:LEU:HD13	1.52	0.92
21:AU:16:ARG:HH11	21:AU:19:LYS:HG3	1.32	0.92
27:BF:134:GLN:HE21	27:BF:134:GLN:H	1.13	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:2:ASN:N	20:CT:7:LYS:HZ3	1.66	0.92
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.04	0.91
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.51	0.91
45:DX:31:ASN:HD22	45:DX:31:ASN:H	1.18	0.91
5:AE:155:LYS:HA	5:AE:158:LYS:NZ	1.83	0.91
22:BA:1929:G:H4'	22:BA:1930:G:OP1	1.66	0.91
4:AD:36:ALA:HA	4:AD:41:GLY:HA3	1.52	0.91
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	1.84	0.91
53:CA:522:C:H41	12:CL:49:ARG:HH22	1.11	0.91
57:DA:232:G:H4'	57:DA:233:A:OP1	1.68	0.91
2:AB:108:GLN:H	2:AB:108:GLN:HE21	1.13	0.91
32:BK:51:LYS:HG3	32:BK:95:ILE:CD1	2.01	0.91
57:DA:1036:G:H2'	57:DA:1037:G:H5'	1.52	0.91
57:DA:1731:G:O2'	57:DA:1732:C:H5''	1.69	0.91
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.52	0.91
22:BA:932:U:H4'	22:BA:933:A:H5''	1.53	0.91
27:BF:35:LEU:HB3	27:BF:153:ILE:CG2	1.99	0.91
1:AA:94:G:H4'	1:AA:95:C:C5'	1.99	0.91
3:AC:156:LEU:H	3:AC:156:LEU:HD12	1.35	0.91
57:DA:1166:G:H22	57:DA:1184:U:H1'	1.33	0.91
57:DA:2023:C:HO2'	57:DA:2024:G:H8	0.96	0.91
57:DA:297:G:H5''	42:DU:84:PHE:HB2	1.52	0.91
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.34	0.91
11:AK:22:ILE:HD13	11:AK:95:THR:HG21	1.52	0.91
29:BH:31:VAL:HB	29:BH:32:PRO:CD	2.00	0.91
57:DA:2093:G:N2	57:DA:2094:A:N7	2.19	0.91
57:DA:249:C:H5''	57:DA:2394:C:O2'	1.71	0.91
53:CA:6:G:N3	53:CA:6:G:H2'	1.85	0.91
55:CM:95:PRO:HD3	55:CM:108:ARG:HG2	1.50	0.91
57:DA:1469:A:H2'	57:DA:1470:A:C8	2.05	0.91
57:DA:217:A:H2'	57:DA:218:A:C8	2.05	0.91
59:DF:74:ALA:HB3	59:DF:78:ILE:HB	1.53	0.91
53:CA:876:C:H1'	8:CH:11:THR:HG21	1.51	0.90
57:DA:2401:U:H3'	57:DA:2402:U:H5''	1.53	0.90
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.36	0.90
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.54	0.90
53:CA:94:G:H4'	53:CA:95:C:OP1	1.70	0.90
54:CG:28:ILE:HG21	54:CG:100:MET:HG3	1.53	0.90
57:DA:1326:U:HO2'	57:DA:1327:A:H8	1.14	0.90
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.53	0.90
38:BQ:43:GLN:HE21	39:BR:77:PHE:HB3	1.35	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:134:VAL:HB	54:CG:137:ARG:HH21	1.37	0.90
22:BA:1188:U:O2'	22:BA:1189:A:H5'	1.71	0.90
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.72	0.90
1:AA:566:G:H4'	1:AA:567:G:OP1	1.68	0.90
53:CA:135:C:O2	56:CP:1:MET:HB2	1.70	0.90
1:AA:274:A:O2'	1:AA:275:G:C8	2.24	0.90
22:BA:1885:A:H2'	22:BA:1886:U:C6	2.07	0.90
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.34	0.90
1:AA:563:A:H2'	1:AA:563:A:N3	1.85	0.90
57:DA:1141:U:H4'	57:DA:1142:A:O5'	1.72	0.90
57:DA:1662:U:H2'	57:DA:1663:G:H5''	1.52	0.90
5:AE:109:ALA:O	5:AE:110:MET:HG2	1.70	0.90
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.54	0.90
1:AA:620:C:C2	4:AD:131:ILE:HG21	2.07	0.90
22:BA:859:G:H22	22:BA:916:G:H2'	1.36	0.90
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	1.20	0.90
55:CM:33:LEU:HB3	55:CM:38:ILE:HB	1.51	0.90
57:DA:1440:U:H2'	57:DA:1441:G:H8	1.35	0.90
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.36	0.90
53:CA:738:C:H2'	53:CA:739:C:H6	1.33	0.90
57:DA:1565:C:O2'	57:DA:1566:A:H2'	1.70	0.90
57:DA:1307:A:H62	57:DA:1606:C:H6	1.20	0.90
57:DA:2503:A:H4'	57:DA:2504:U:OP1	1.72	0.90
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.54	0.90
1:AA:6:G:O6	5:AE:98:ALA:HB1	1.71	0.89
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.02	0.89
14:AN:40:ARG:HH12	14:AN:44:VAL:HG11	1.36	0.89
17:CQ:3:LYS:NZ	17:CQ:6:THR:HG21	1.86	0.89
18:CR:72:ARG:H	18:CR:72:ARG:HE	1.17	0.89
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.72	0.89
53:CA:1159:U:H5	53:CA:1182:G:HO2'	1.07	0.89
57:DA:1458:U:O3'	57:DA:1459:G:H4'	1.71	0.89
12:AL:49:ARG:NH1	12:AL:49:ARG:HG2	1.80	0.89
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.54	0.89
6:CF:18:VAL:HG21	6:CF:58:HIS:CD2	2.08	0.89
43:BV:10:LYS:H	43:BV:10:LYS:HD3	1.38	0.89
57:DA:959:A:H2'	57:DA:960:A:C8	2.08	0.89
12:AL:34:THR:HB	12:AL:35:ARG:HG2	1.54	0.89
53:CA:1182:G:C4'	53:CA:1183:U:H5'	2.03	0.89
2:CB:99:MET:HA	2:CB:106:VAL:HG21	1.52	0.89
57:DA:1537:G:C2'	57:DA:1538:G:H4'	2.02	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1124:G:H4'	53:CA:1125:U:OP1	1.67	0.89
57:DA:834:G:H1'	57:DA:2358:A:N3	1.88	0.89
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.73	0.89
53:CA:1268:G:H21	53:CA:1327:C:H1'	1.36	0.89
57:DA:1026:G:O2'	57:DA:1027:A:H5'	1.72	0.89
57:DA:774:G:HO2'	57:DA:775:G:H8	1.21	0.89
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.07	0.89
1:AA:877:G:H21	8:AH:1:SER:HB2	1.35	0.89
9:AI:40:ARG:HA	9:AI:44:ARG:HB3	1.53	0.89
11:CK:44:ALA:HB3	11:CK:69:CYS:HB2	1.53	0.89
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.38	0.88
20:CT:4:LYS:HE3	20:CT:5:SER:H	1.37	0.88
57:DA:1345:C:HO2'	57:DA:1346:G:H8	0.93	0.88
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.37	0.88
1:AA:1441:A:N6	1:AA:1461:G:H21	1.71	0.88
9:AI:51:LEU:HB3	9:AI:56:MET:HG2	1.56	0.88
53:CA:982:U:H4'	53:CA:983:A:O5'	1.72	0.88
2:CB:163:ILE:HG23	2:CB:185:ILE:HD11	1.54	0.88
1:AA:1007:U:H2'	1:AA:1008:U:H5''	1.53	0.88
2:AB:66:ILE:HB	2:AB:88:GLN:HB3	1.53	0.88
22:BA:232:G:H4'	22:BA:233:A:OP1	1.73	0.88
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.73	0.88
1:AA:1129:C:H5''	9:AI:17:ARG:NH2	1.87	0.88
54:CG:110:ARG:HG3	54:CG:111:GLY:H	1.37	0.88
59:DF:137:PHE:HB2	59:DF:138:PRO:HD2	1.55	0.88
1:AA:1021:A:H2'	1:AA:1022:A:H5''	1.55	0.88
22:BA:272:A:HO2'	22:BA:273:G:H8	0.94	0.88
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.53	0.88
53:CA:1143:G:H2'	53:CA:1144:G:C8	2.07	0.88
53:CA:16:A:O2'	53:CA:17:U:H5'	1.73	0.88
4:CD:30:LYS:HD3	4:CD:30:LYS:N	1.89	0.88
57:DA:2304:G:H22	57:DA:2312:U:H3	1.18	0.88
57:DA:2544:G:H2'	57:DA:2545:G:C8	2.08	0.88
1:AA:202:G:H21	1:AA:466:A:H61	1.20	0.88
8:CH:52:GLY:HA3	8:CH:56:PRO:HA	1.56	0.88
1:AA:1241:G:HO2'	1:AA:1242:G:H8	0.92	0.88
1:AA:94:G:H4'	1:AA:95:C:O5'	1.72	0.88
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.37	0.88
25:BD:91:THR:O	25:BD:93:GLY:N	2.04	0.88
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.86	0.88
53:CA:1218:C:H2'	53:CA:1219:A:C8	2.09	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1365:G:O2'	53:CA:1366:C:H5'	1.73	0.88
57:DA:2346:A:H3'	57:DA:2347:C:H5''	1.53	0.88
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.56	0.88
53:CA:961:U:HO2'	53:CA:962:C:H6	0.89	0.88
4:CD:109:THR:HG22	4:CD:111:ALA:H	1.38	0.88
57:DA:649:G:H2'	57:DA:650:C:H6	1.38	0.88
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.18	0.88
34:BM:57:VAL:HA	34:BM:112:LEU:HD21	1.56	0.88
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.56	0.88
53:CA:1458:G:O3'	20:CT:22:SER:HA	1.74	0.88
57:DA:2728:U:HO2'	57:DA:2729:G:H8	1.19	0.88
22:BA:1941:C:H5'	22:BA:1941:C:C6	2.09	0.87
24:BC:166:ARG:HG3	24:BC:166:ARG:O	1.72	0.87
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.03	0.87
31:BJ:64:VAL:O	31:BJ:65:THR:HB	1.72	0.87
53:CA:1226:C:H41	55:CM:102:LYS:HA	1.36	0.87
28:DG:93:TYR:H	28:DG:93:TYR:HD2	1.22	0.87
44:DW:40:ARG:NH1	44:DW:40:ARG:HG2	1.81	0.87
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.56	0.87
53:CA:1054:C:O2'	53:CA:1055:A:H5''	1.73	0.87
1:AA:511:C:O2'	1:AA:512:U:H5''	1.74	0.87
2:AB:110:ILE:HD12	2:AB:147:LEU:HD13	1.56	0.87
2:AB:110:ILE:CD1	2:AB:147:LEU:HD13	2.03	0.87
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.54	0.87
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.22	0.87
57:DA:1290:C:O2'	57:DA:1291:C:H6	1.57	0.87
57:DA:1709:U:H2'	57:DA:1710:G:C8	2.09	0.87
25:BD:107:VAL:H	25:BD:206:ALA:H	1.17	0.87
57:DA:616:A:O2'	57:DA:617:G:H8	1.56	0.87
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.37	0.87
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.75	0.87
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.37	0.87
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.56	0.87
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.55	0.87
22:BA:2813:A:H2	22:BA:2887:A:N6	1.72	0.87
53:CA:519:C:O2'	53:CA:520:A:H5'	1.74	0.87
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.88	0.87
1:AA:1063:C:H2'	1:AA:1064:G:C8	2.09	0.87
33:BL:27:LEU:N	33:BL:27:LEU:HD12	1.88	0.87
46:BY:32:ALA:HB2	46:BY:37:LEU:HD12	1.54	0.87
5:CE:104:ILE:H	5:CE:122:VAL:H	1.20	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1508:A:H4'	57:DA:1509:A:OP1	1.73	0.87
57:DA:1951:U:H2'	57:DA:1953:A:OP2	1.73	0.87
57:DA:84:A:H4'	57:DA:85:G:O5'	1.73	0.87
1:AA:1398:A:H8	1:AA:1398:A:H5''	1.37	0.87
3:AC:76:ILE:HA	3:AC:83:VAL:HG23	1.56	0.87
22:BA:2389:G:H5''	22:BA:2390:U:H5'	1.55	0.87
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.90	0.87
53:CA:335:C:H2'	53:CA:336:A:H8	1.38	0.87
15:CO:63:ARG:HH22	57:DA:715:A:C5'	1.86	0.87
57:DA:335:C:HO2'	57:DA:336:C:H6	0.93	0.87
57:DA:374:A:H2'	57:DA:375:G:H8	1.40	0.87
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.56	0.87
21:AU:16:ARG:NH1	21:AU:19:LYS:HG3	1.89	0.86
53:CA:668:G:O2'	15:CO:45:HIS:HB3	1.75	0.86
57:DA:1919:A:O2'	57:DA:1920:C:H5'	1.74	0.86
1:AA:439:U:O2'	1:AA:440:C:H5'	1.74	0.86
4:AD:43:ARG:O	4:AD:45:PRO:HD3	1.75	0.86
22:BA:2093:G:O2'	22:BA:2094:A:H5'	1.74	0.86
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.39	0.86
53:CA:91:U:HO2'	53:CA:92:U:H6	1.18	0.86
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.56	0.86
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.40	0.86
23:BB:30:C:H2'	23:BB:31:C:H5'	1.57	0.86
23:BB:45:A:H2'	23:BB:46:A:H8	1.40	0.86
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.57	0.86
53:CA:330:C:HO2'	53:CA:331:G:H8	0.92	0.86
58:DB:69:G:H3'	58:DB:70:C:C6	2.10	0.86
1:AA:1468:A:C2'	1:AA:1469:C:H5''	2.04	0.86
1:AA:1328:C:H5''	13:AM:27:THR:HG21	1.54	0.86
22:BA:780:G:H21	22:BA:783:A:H62	1.21	0.86
57:DA:616:A:HO2'	57:DA:617:G:H8	0.92	0.86
57:DA:873:C:H4'	34:DM:64:TRP:NE1	1.90	0.86
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.56	0.86
10:AJ:51:VAL:HB	14:AN:80:ARG:HB2	1.55	0.86
14:AN:60:ARG:O	14:AN:61:ASN:HB2	1.75	0.86
22:BA:655:A:O2'	22:BA:656:G:C8	2.27	0.86
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.55	0.86
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.58	0.86
1:AA:1277:C:HO2'	1:AA:1279:G:H8	0.91	0.86
1:AA:560:A:H5'	1:AA:566:G:N2	1.91	0.86
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.58	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1857:G:H1'	57:DA:1884:G:H22	1.41	0.86
1:AA:1151:A:O2'	1:AA:1152:A:H5''	1.76	0.86
22:BA:2214:C:H6	22:BA:2214:C:H5'	1.40	0.86
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	1.91	0.86
53:CA:32:A:H2'	53:CA:33:A:H8	1.39	0.86
53:CA:801:U:H2'	53:CA:802:A:H8	1.39	0.86
4:CD:55:ARG:HH11	4:CD:55:ARG:HA	1.41	0.86
57:DA:143:C:H2'	57:DA:144:A:C8	2.11	0.86
57:DA:464:U:H1'	57:DA:686:U:H5	1.39	0.86
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.05	0.86
57:DA:234:U:O2'	57:DA:235:U:H5'	1.76	0.86
22:BA:1780:A:O2'	22:BA:1781:U:C5	2.27	0.86
3:CC:109:GLU:HG2	3:CC:139:ASN:HB2	1.57	0.86
57:DA:1038:G:H2'	57:DA:1039:A:H5'	1.56	0.86
57:DA:2800:A:O2'	57:DA:2801:G:H4'	1.75	0.86
57:DA:2868:A:H2'	57:DA:2869:G:C8	2.11	0.86
58:DB:17:C:H42	58:DB:68:C:H42	1.21	0.86
1:AA:16:A:O2'	1:AA:17:U:H5'	1.76	0.86
22:BA:2728:U:O2'	22:BA:2729:G:H5''	1.75	0.86
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.06	0.86
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.20	0.86
39:BR:28:ALA:O	39:BR:63:VAL:HG21	1.75	0.86
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.38	0.86
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.89	0.85
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.57	0.85
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.56	0.85
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.04	0.85
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.91	0.85
53:CA:366:A:O2'	53:CA:394:G:N2	2.09	0.85
53:CA:694:A:H3'	53:CA:695:A:H5''	1.58	0.85
2:CB:79:VAL:HA	2:CB:213:LEU:HD21	1.58	0.85
58:DB:44:G:H5''	59:DF:91:ARG:CZ	2.06	0.85
1:AA:826:C:H5'	8:AH:12:ARG:HH21	1.41	0.85
44:BW:19:ARG:NH2	44:BW:22:VAL:HG21	1.91	0.85
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.58	0.85
12:AL:62:VAL:HG21	12:AL:94:TYR:CE2	2.11	0.85
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.57	0.85
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.57	0.85
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.12	0.85
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.56	0.85
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.39	0.85
53:CA:977:A:O2'	53:CA:978:A:H5''	1.76	0.85
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.23	0.85
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.58	0.85
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.76	0.85
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.12	0.85
28:BG:84:LYS:CG	28:BG:132:LEU:H	1.88	0.85
25:BD:104:VAL:O	25:BD:177:VAL:HG21	1.77	0.85
57:DA:1931:U:H2'	57:DA:1932:A:H8	1.40	0.85
47:DZ:16:LEU:CD2	47:DZ:16:LEU:H	1.88	0.85
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.59	0.85
53:CA:990:C:H2'	53:CA:991:U:O4'	1.76	0.85
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.42	0.85
41:DT:29:THR:HB	41:DT:87:LEU:H	1.40	0.85
12:AL:24:GLU:HB2	12:AL:26:CYS:SG	2.17	0.85
22:BA:84:A:H4'	22:BA:85:G:O5'	1.76	0.85
24:BC:180:MET:HG3	24:BC:268:ARG:HH11	1.41	0.85
12:CL:43:LYS:CB	12:CL:44:PRO:HD2	2.03	0.85
12:CL:3:VAL:HG23	12:CL:4:ASN:H	1.42	0.85
57:DA:1654:A:O2'	57:DA:1655:A:H8	1.59	0.85
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.42	0.85
2:AB:148:GLY:HA2	2:AB:151:LYS:HB3	1.58	0.84
4:AD:16:THR:HG22	4:AD:17:ASP:H	1.42	0.84
22:BA:1022:G:N2	22:BA:1142:A:C2	2.45	0.84
17:CQ:30:HIS:HE1	17:CQ:32:ILE:HG13	1.42	0.84
57:DA:1156:A:H8	57:DA:1156:A:OP1	1.60	0.84
57:DA:2699:C:H2'	57:DA:2700:A:C8	2.12	0.84
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.76	0.84
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.59	0.84
57:DA:1639:C:H2'	57:DA:1640:A:H5''	1.59	0.84
38:DQ:40:LYS:HD2	38:DQ:44:TYR:CE2	2.12	0.84
20:AT:66:ILE:HD11	20:AT:70:LYS:HE3	1.59	0.84
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.85	0.84
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.92	0.84
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.74	0.84
57:DA:1166:G:N2	57:DA:1184:U:H1'	1.92	0.84
57:DA:118:A:N3	57:DA:178:G:H1'	1.93	0.84
57:DA:2776:A:H4'	57:DA:2777:G:O5'	1.77	0.84
1:AA:1142:G:H2'	1:AA:1143:G:O4'	1.77	0.84
22:BA:1779:U:H5	22:BA:1784:A:N7	1.74	0.84
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.77	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:62:ARG:HG2	24:DC:62:ARG:HH21	1.42	0.84
1:AA:415:A:H2'	1:AA:416:G:C8	2.12	0.84
22:BA:100:U:H4'	22:BA:101:A:O5'	1.77	0.84
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.75	0.84
22:BA:802:A:H2'	22:BA:803:U:C6	2.13	0.84
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.89	0.84
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.59	0.84
4:CD:143:SER:HB3	4:CD:178:GLU:HG3	1.58	0.84
4:CD:176:LYS:HG3	4:CD:178:GLU:HB2	1.57	0.84
6:CF:11:HIS:CD2	6:CF:54:LEU:HD21	2.11	0.84
54:CG:88:VAL:HG22	54:CG:89:GLU:H	1.41	0.84
57:DA:1275:A:H2'	57:DA:1275:A:N3	1.90	0.84
57:DA:802:A:H2'	57:DA:803:U:C6	2.12	0.84
57:DA:2748:A:H1'	28:DG:66:THR:HG22	1.59	0.84
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.42	0.84
1:AA:539:A:H2'	1:AA:540:G:C8	2.12	0.84
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.21	0.84
53:CA:1452:C:H4'	53:CA:1453:G:O5'	1.74	0.84
58:DB:57:A:O2'	58:DB:58:A:H8	1.59	0.84
58:DB:75:G:H1	58:DB:102:G:H22	1.23	0.84
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.42	0.84
22:BA:571:U:H4'	22:BA:572:A:OP1	1.77	0.84
53:CA:1157:A:H4'	53:CA:1158:C:O5'	1.77	0.84
6:CF:92:THR:HG22	6:CF:94:HIS:H	1.42	0.84
8:CH:11:THR:HG22	8:CH:14:ARG:NH1	1.92	0.84
8:CH:57:GLU:HG3	8:CH:58:LEU:H	1.41	0.84
57:DA:197:A:N6	57:DA:2430:A:H2'	1.93	0.84
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.24	0.84
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.60	0.84
4:CD:25:ARG:NH1	4:CD:30:LYS:HG2	1.91	0.84
10:CJ:47:GLU:HB2	10:CJ:67:ILE:HG13	1.59	0.84
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.76	0.84
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.43	0.84
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.07	0.84
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.60	0.84
53:CA:936:C:HO2'	53:CA:937:A:H8	0.88	0.84
9:CI:71:ILE:HD12	9:CI:72:SER:H	1.41	0.84
57:DA:127:A:N7	50:D2:46:LYS:HE3	1.93	0.84
57:DA:1913:A:H4'	57:DA:1914:C:OP1	1.77	0.84
57:DA:2091:C:N4	57:DA:2092:U:C4	2.46	0.84
57:DA:2092:U:C4'	57:DA:2093:G:OP1	2.21	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2517:C:O2'	57:DA:2518:A:H3'	1.77	0.84
57:DA:777:G:N7	57:DA:793:A:H2	1.74	0.84
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.58	0.84
1:AA:198:G:HO2'	1:AA:199:A:H8	0.87	0.84
22:BA:750:A:O2'	22:BA:752:A:OP1	1.96	0.84
28:BG:86:LEU:HB3	28:BG:162:ARG:O	1.78	0.84
54:CG:45:ALA:HB1	54:CG:120:ALA:HB2	1.60	0.84
15:CO:23:SER:O	15:CO:26:VAL:HB	1.77	0.84
57:DA:2093:G:N2	57:DA:2094:A:C5	2.46	0.84
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.39	0.84
12:AL:28:GLN:HB2	12:AL:81:ILE:O	1.78	0.83
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.42	0.83
22:BA:1967:C:O2'	22:BA:1968:G:H5'	1.76	0.83
53:CA:120:A:C3'	53:CA:121:U:H5''	2.07	0.83
57:DA:704:G:H2'	57:DA:726:G:H22	1.40	0.83
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.60	0.83
57:DA:2757:A:N1	28:DG:66:THR:HG21	1.93	0.83
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.56	0.83
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.93	0.83
8:AH:25:THR:O	8:AH:26:MET:HB3	1.77	0.83
22:BA:74:A:H4'	22:BA:75:G:O5'	1.76	0.83
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.92	0.83
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.58	0.83
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.60	0.83
57:DA:96:C:H4'	46:DY:41:HIS:CD2	2.13	0.83
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.77	0.83
6:CF:86:ARG:HD3	18:CR:63:TYR:O	1.77	0.83
53:CA:1458:G:O2'	20:CT:22:SER:HB3	1.76	0.83
21:CU:24:LYS:CG	21:CU:25:ALA:H	1.90	0.83
57:DA:822:G:O6	57:DA:943:A:H2	1.62	0.83
12:AL:82:ARG:HG2	12:AL:82:ARG:NH1	1.93	0.83
22:BA:2150:C:H2'	22:BA:2151:U:C5	2.13	0.83
22:BA:2420:C:OP1	51:B3:33:THR:HB	1.78	0.83
53:CA:330:C:O2'	53:CA:331:G:H8	1.60	0.83
53:CA:1221:G:H4'	19:CS:35:ARG:NH2	1.93	0.83
21:CU:38:GLU:H	21:CU:40:PRO:HD2	1.42	0.83
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.57	0.83
25:BD:150:GLN:HG3	25:BD:150:GLN:O	1.79	0.83
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.78	0.83
53:CA:822:U:H2'	53:CA:823:C:H6	1.43	0.83
57:DA:873:C:H4'	34:DM:64:TRP:CD1	2.14	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:57:A:HO2'	58:DB:58:A:H8	0.84	0.83
1:AA:1319:A:H4'	1:AA:1320:C:OP1	1.79	0.83
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.60	0.83
53:CA:932:C:H5''	54:CG:2:ARG:HD3	1.61	0.83
24:DC:59:GLN:HE21	24:DC:84:PRO:HB2	1.42	0.83
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	1.93	0.83
57:DA:2513:A:H2	25:DD:148:GLN:HE21	1.25	0.83
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.60	0.83
5:AE:106:ALA:HB2	5:AE:124:ALA:HB3	1.59	0.83
22:BA:869:G:O2'	34:BM:8:LYS:HD3	1.78	0.83
34:BM:72:PRO:O	34:BM:91:TYR:O	1.95	0.83
57:DA:637:A:H4'	57:DA:638:G:O5'	1.78	0.83
37:BP:4:ILE:HG22	37:BP:5:LYS:N	1.93	0.83
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.59	0.83
24:DC:68:ARG:HH12	24:DC:115:ILE:HD12	1.43	0.83
1:AA:1151:A:O2'	1:AA:1152:A:H8	1.62	0.83
3:CC:110:LEU:HD21	3:CC:203:LYS:HD2	1.60	0.83
33:DL:47:ARG:HG2	33:DL:47:ARG:HH21	1.42	0.83
1:AA:1138:G:H2'	1:AA:1138:G:N3	1.92	0.83
1:AA:887:G:H2'	1:AA:888:G:H5'	1.61	0.83
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.61	0.83
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.22	0.83
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.59	0.83
53:CA:33:A:H2'	53:CA:34:C:H6	1.44	0.83
57:DA:1492:G:H3'	57:DA:1493:C:C5'	2.09	0.83
1:AA:198:G:O2'	1:AA:199:A:H8	1.62	0.82
5:AE:155:LYS:HA	5:AE:158:LYS:HZ1	1.42	0.82
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.09	0.82
25:BD:46:ARG:HG3	25:BD:84:LEU:HB2	1.59	0.82
28:BG:83:THR:HA	28:BG:84:LYS:HZ2	1.42	0.82
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.41	0.82
57:DA:2091:C:N4	57:DA:2092:U:O4	2.12	0.82
57:DA:647:G:H2'	57:DA:648:G:C8	2.14	0.82
58:DB:16:G:O2'	58:DB:17:C:H5'	1.79	0.82
1:AA:531:U:H4'	1:AA:532:A:O5'	1.79	0.82
1:AA:747:A:H5'	1:AA:748:G:OP2	1.79	0.82
22:BA:1011:G:O2'	22:BA:1013:C:H5''	1.79	0.82
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	1.61	0.82
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.60	0.82
53:CA:1067:A:H1'	53:CA:1068:G:H8	1.40	0.82
53:CA:721:G:H4'	53:CA:722:G:O5'	1.77	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:56:G:H4'	58:DB:57:A:O5'	1.78	0.82
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.79	0.82
45:DX:31:ASN:ND2	45:DX:31:ASN:H	1.77	0.82
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.45	0.82
20:CT:73:ARG:CG	20:CT:73:ARG:HH11	1.92	0.82
57:DA:1346:G:HO2'	57:DA:1347:A:H8	1.25	0.82
57:DA:141:G:H3'	57:DA:142:A:O4'	1.79	0.82
57:DA:1490:A:H5'	57:DA:1490:A:N3	1.94	0.82
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.44	0.82
57:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.60	0.82
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.60	0.82
57:DA:1799:G:H8	24:DC:179:GLU:OE1	1.60	0.82
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.42	0.82
8:AH:17:GLN:HE21	8:AH:71:VAL:HG23	1.43	0.82
11:AK:28:ASN:OD1	11:AK:46:ALA:HB3	1.80	0.82
14:AN:19:TYR:O	14:AN:22:LYS:HB3	1.79	0.82
35:BN:71:ARG:CG	35:BN:71:ARG:HH21	1.93	0.82
22:BA:1429:G:O2'	22:BA:1430:G:H5'	1.80	0.82
22:BA:2492:U:O2'	22:BA:2493:U:H5'	1.78	0.82
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.62	0.82
53:CA:665:A:H2'	53:CA:725:G:N2	1.94	0.82
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.43	0.82
1:AA:338:A:N1	1:AA:351:G:O6	2.13	0.82
1:AA:32:A:H2'	1:AA:33:A:C8	2.13	0.82
1:AA:366:A:O2'	1:AA:394:G:N2	2.13	0.82
22:BA:729:G:N3	22:BA:729:G:H2'	1.95	0.82
53:CA:65:A:H2'	53:CA:382:A:H61	1.43	0.82
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.62	0.82
57:DA:2468:A:O2'	57:DA:2469:A:H8	1.61	0.82
59:DF:49:LEU:H	59:DF:49:LEU:HD22	1.44	0.82
35:DN:5:LYS:HG2	35:DN:6:SER:H	1.45	0.82
7:AG:121:ASN:O	7:AG:125:ASP:HB2	1.80	0.82
22:BA:2573:C:OP1	63:BA:3715:HOH:O	1.97	0.82
57:DA:1552:A:O2'	57:DA:1553:A:H5'	1.80	0.82
57:DA:1807:G:H2'	57:DA:1808:A:H5'	1.62	0.82
57:DA:2092:U:C2'	57:DA:2093:G:H8	1.92	0.82
57:DA:95:A:H1'	46:DY:40:SER:HB2	1.61	0.82
1:AA:116:A:H2'	1:AA:117:G:C8	2.15	0.82
21:AU:13:VAL:HG13	21:AU:15:LEU:HG	1.62	0.82
22:BA:1867:G:O2'	22:BA:1868:C:H5'	1.79	0.82
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.79	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:CR:62:ARG:HB3	18:CR:69:TYR:CE1	2.14	0.82
57:DA:2408:U:O2'	57:DA:2409:G:H8	1.61	0.82
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.79	0.82
22:BA:197:A:N6	22:BA:2430:A:H2'	1.95	0.82
53:CA:1347:G:N2	53:CA:1373:G:H2'	1.95	0.82
53:CA:702:A:H8	53:CA:702:A:OP1	1.62	0.82
53:CA:920:U:H2'	53:CA:921:U:C6	2.15	0.82
58:DB:44:G:H3'	59:DF:91:ARG:HE	1.45	0.82
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.44	0.82
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.79	0.82
57:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.62	0.82
9:AI:28:VAL:HB	9:AI:63:TYR:HD2	1.44	0.81
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.77	0.81
37:BP:50:ARG:CD	37:BP:51:ASN:H	1.93	0.81
57:DA:1069:A:N6	57:DA:1073:A:H5''	1.94	0.81
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.62	0.81
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.62	0.81
21:CU:24:LYS:HG3	21:CU:25:ALA:N	1.94	0.81
57:DA:533:G:H2'	57:DA:534:U:C6	2.15	0.81
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.62	0.81
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.16	0.81
53:CA:1101:A:H4'	53:CA:1102:A:O5'	1.80	0.81
53:CA:1278:G:H4'	53:CA:1279:G:O5'	1.80	0.81
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.28	0.81
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.62	0.81
53:CA:374:A:H5''	53:CA:452:A:N1	1.95	0.81
10:CJ:64:GLN:HB2	14:CN:98:ALA:HB3	1.62	0.81
57:DA:1275:A:O2'	57:DA:1276:A:O4'	1.96	0.81
57:DA:1792:G:H5''	24:DC:203:VAL:HG22	1.62	0.81
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.80	0.81
35:DN:71:ARG:HB2	35:DN:71:ARG:HH21	1.43	0.81
50:B2:43:THR:O	50:B2:44:VAL:HG23	1.81	0.81
24:BC:123:ILE:HG12	24:BC:123:ILE:O	1.79	0.81
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.79	0.81
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.45	0.81
57:DA:2875:C:HO2'	57:DA:2876:G:H8	0.87	0.81
57:DA:915:C:H2'	57:DA:916:G:C8	2.15	0.81
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.63	0.81
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.15	0.81
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.44	0.81
1:AA:451:A:H4'	1:AA:452:A:O5'	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.15	0.81
53:CA:532:A:C8	3:CC:192:TYR:HE2	1.99	0.81
57:DA:33:C:N4	57:DA:446:G:O2'	2.13	0.81
57:DA:91:A:O2'	57:DA:92:U:H5''	1.80	0.81
58:DB:88:C:OP2	58:DB:88:C:H3'	1.81	0.81
58:DB:42:C:H41	59:DF:87:LYS:NZ	1.78	0.81
1:AA:109:A:H2'	1:AA:326:G:N2	1.96	0.81
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.60	0.81
57:DA:528:A:O2'	57:DA:529:A:H5''	1.81	0.81
57:DA:861:A:H2'	57:DA:862:G:H8	1.45	0.81
32:DK:111:LYS:HE3	32:DK:111:LYS:H	1.46	0.81
1:AA:96:U:HO2'	1:AA:97:G:H8	1.28	0.81
16:AP:28:ARG:NE	16:AP:29:ASN:HD21	1.79	0.81
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.80	0.81
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.80	0.81
53:CA:254:G:N2	17:CQ:17:GLU:HG3	1.93	0.81
57:DA:2093:G:O6	57:DA:2225:A:C3'	2.27	0.81
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.62	0.81
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.80	0.81
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.46	0.81
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	1.95	0.81
53:CA:337:G:H2'	53:CA:338:A:C8	2.15	0.81
57:DA:1554:U:H5''	57:DA:1555:G:OP2	1.79	0.81
57:DA:1586:A:H2'	57:DA:1587:G:H8	1.46	0.81
57:DA:867:C:O2'	57:DA:868:U:H6	1.64	0.81
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.45	0.81
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.62	0.81
5:AE:89:THR:HG22	5:AE:90:GLY:N	1.96	0.81
11:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.62	0.81
22:BA:1073:A:H2'	22:BA:1074:G:H5''	1.60	0.81
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.61	0.81
57:DA:310:A:HO2'	57:DA:311:A:H8	0.83	0.81
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.45	0.81
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	1.78	0.81
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.45	0.81
4:AD:25:ARG:NH1	4:AD:30:LYS:HE3	1.96	0.80
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.63	0.80
22:BA:1416:G:HO2'	22:BA:1417:C:H6	1.26	0.80
22:BA:1941:C:H2'	22:BA:1942:C:C6	2.16	0.80
25:BD:151:THR:CG2	25:BD:152:PRO:HD3	2.09	0.80
57:DA:2190:G:H5'	57:DA:2191:A:OP2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.62	0.80
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.61	0.80
19:AS:28:LYS:HB3	19:AS:29:PRO:HD2	1.62	0.80
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.45	0.80
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.11	0.80
22:BA:2801:G:O2'	22:BA:2802:G:H5'	1.80	0.80
25:BD:4:LEU:HD22	25:BD:101:PHE:CE1	2.16	0.80
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.46	0.80
21:CU:39:LYS:N	21:CU:40:PRO:HD2	1.97	0.80
57:DA:15:G:OP1	48:D0:20:ALA:HB2	1.82	0.80
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.46	0.80
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.16	0.80
22:BA:545:U:H2'	22:BA:546:U:H4'	1.62	0.80
53:CA:245:U:O2'	53:CA:246:A:H5'	1.80	0.80
57:DA:142:A:H2'	57:DA:143:C:C6	2.16	0.80
1:AA:204:G:H3'	1:AA:205:A:C5'	2.11	0.80
1:AA:94:G:H4'	1:AA:95:C:H5''	1.61	0.80
19:AS:6:LYS:HE2	19:AS:6:LYS:HA	1.64	0.80
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.81	0.80
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.47	0.80
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.45	0.80
53:CA:338:A:H61	53:CA:351:G:H1	1.29	0.80
53:CA:496:A:N3	53:CA:496:A:H2'	1.95	0.80
3:CC:18:ASN:HA	3:CC:55:VAL:HG12	1.61	0.80
3:CC:63:ILE:HG12	3:CC:65:VAL:HG23	1.64	0.80
4:CD:3:TYR:O	4:CD:4:LEU:HB2	1.80	0.80
5:CE:95:MET:HB3	5:CE:124:ALA:HB2	1.63	0.80
21:CU:38:GLU:HA	21:CU:41:THR:OG1	1.81	0.80
57:DA:2716:C:H2'	57:DA:2717:C:H6	1.44	0.80
57:DA:714:U:H2'	57:DA:716:A:OP2	1.82	0.80
57:DA:861:A:H2'	57:DA:862:G:C8	2.15	0.80
1:AA:1256:A:H1'	1:AA:1258:G:C5	2.16	0.80
9:AI:32:ARG:HG2	9:AI:36:GLN:HB3	1.64	0.80
13:AM:2:ARG:O	13:AM:3:ILE:HG12	1.82	0.80
22:BA:2834:G:H2'	22:BA:2879:A:H61	1.47	0.80
53:CA:1347:G:H22	53:CA:1373:G:H2'	1.45	0.80
57:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.62	0.80
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.12	0.80
57:DA:2092:U:O2'	57:DA:2093:G:H8	1.64	0.80
57:DA:649:G:H2'	57:DA:650:C:C6	2.15	0.80
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:67:VAL:HG23	41:DT:75:GLY:O	1.81	0.80
8:AH:17:GLN:NE2	8:AH:71:VAL:HG23	1.96	0.80
22:BA:684:G:OP1	50:B2:16:HIS:HD2	1.64	0.80
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	1.97	0.80
26:BE:79:ARG:HG2	26:BE:80:SER:H	1.47	0.80
27:BF:9:ASP:O	27:BF:10:GLU:HB2	1.80	0.80
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.63	0.80
53:CA:794:A:H2'	53:CA:795:C:C6	2.17	0.80
2:CB:19:THR:HG22	2:CB:37:VAL:HG23	1.63	0.80
4:CD:61:ARG:HH21	4:CD:67:LEU:HA	1.46	0.80
57:DA:1012:U:O4	31:DJ:30:THR:HG21	1.80	0.80
57:DA:1056:G:H1'	57:DA:1103:A:H61	1.45	0.80
57:DA:1126:A:H4'	57:DA:1127:A:O5'	1.81	0.80
57:DA:2851:A:H2'	57:DA:2852:G:C8	2.16	0.80
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.16	0.80
42:DU:33:VAL:O	42:DU:34:ILE:HG13	1.82	0.80
1:AA:977:A:H2'	1:AA:977:A:N3	1.96	0.80
1:AA:982:U:H4'	1:AA:983:A:O5'	1.79	0.80
22:BA:2198:A:OP2	22:BA:2198:A:H3'	1.82	0.80
36:BO:40:ILE:HG12	36:BO:47:VAL:HG12	1.63	0.80
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.64	0.80
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.62	0.80
57:DA:1359:A:C2	57:DA:1360:G:H1'	2.16	0.80
59:DF:91:ARG:HH21	59:DF:91:ARG:HB3	1.46	0.80
1:AA:596:A:H2'	1:AA:597:G:H8	1.47	0.80
1:AA:654:G:H2'	1:AA:655:A:C8	2.17	0.80
4:AD:117:VAL:N	4:AD:122:ILE:HD11	1.97	0.80
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	1.97	0.80
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	1.63	0.80
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.45	0.80
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	1.81	0.80
11:CK:111:ASP:H	21:CU:3:ILE:N	1.79	0.80
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.62	0.80
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.62	0.80
1:AA:1065:U:H5''	1:AA:1190:G:N2	1.97	0.80
1:AA:1336:C:O2'	1:AA:1337:G:OP2	2.00	0.80
4:AD:96:ARG:HB3	4:AD:98:ASP:OD1	1.81	0.80
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.64	0.80
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.63	0.80
57:DA:397:U:OP1	45:DX:30:PRO:HA	1.81	0.80
57:DA:922:C:H1'	44:DW:22:VAL:HG21	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:10:LEU:HD22	4:AD:62:ARG:HG3	1.64	0.79
5:AE:153:ALA:HA	5:AE:156:ARG:HB2	1.64	0.79
9:AI:112:ARG:HH22	10:AJ:64:GLN:HE22	1.28	0.79
22:BA:1050:A:C2	22:BA:2751:G:C5	2.69	0.79
22:BA:2573:C:H2'	63:BA:3714:HOH:O	1.81	0.79
22:BA:459:U:O2'	22:BA:460:A:H5'	1.81	0.79
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.63	0.79
44:BW:49:ASN:HA	44:BW:61:LYS:HB2	1.61	0.79
53:CA:15:G:H2'	53:CA:16:A:C8	2.16	0.79
57:DA:1388:G:O2'	57:DA:1389:G:H5'	1.81	0.79
59:DF:43:ILE:HG23	59:DF:44:ALA:H	1.48	0.79
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.96	0.79
1:AA:15:G:O4'	5:AE:28:ARG:NH1	2.15	0.79
11:AK:126:ARG:HB2	21:AU:33:ARG:NH1	1.96	0.79
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.16	0.79
57:DA:2135:A:H8	57:DA:2135:A:OP2	1.66	0.79
42:DU:95:PHE:H	42:DU:95:PHE:HD1	1.24	0.79
44:DW:40:ARG:CG	44:DW:40:ARG:HH11	1.91	0.79
1:AA:721:G:H4'	1:AA:722:G:O5'	1.81	0.79
10:AJ:49:PHE:HE1	10:AJ:67:ILE:HG13	1.47	0.79
22:BA:859:G:N2	22:BA:916:G:H2'	1.97	0.79
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.63	0.79
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.46	0.79
53:CA:764:C:C2'	53:CA:765:G:H5'	2.13	0.79
57:DA:867:C:HO2'	57:DA:868:U:H6	0.82	0.79
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.64	0.79
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.46	0.79
1:AA:1157:A:H1'	1:AA:1181:G:N2	1.98	0.79
2:AB:163:ILE:HG23	2:AB:164:ASP:H	1.46	0.79
22:BA:1287:A:O2'	22:BA:1288:G:H5'	1.82	0.79
57:DA:1352:U:H5	57:DA:1377:G:C6	2.01	0.79
57:DA:1474:U:H2'	57:DA:1475:G:H5'	1.63	0.79
57:DA:2752:C:H2'	57:DA:2753:A:C8	2.17	0.79
57:DA:575:A:O2'	57:DA:576:U:H5'	1.82	0.79
57:DA:95:A:H4'	46:DY:38:GLN:O	1.80	0.79
59:DF:177:ARG:NE	59:DF:178:LYS:H	1.79	0.79
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.12	0.79
57:DA:1364:G:C5	45:DX:1:SER:HB2	2.18	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.11	0.79
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:66:VAL:HG22	4:CD:96:ARG:NH1	1.97	0.79
11:CK:55:ARG:H	11:CK:55:ARG:HD2	1.47	0.79
57:DA:1511:G:HO2'	57:DA:1512:C:H6	1.28	0.79
57:DA:2092:U:O2'	57:DA:2093:G:C8	2.35	0.79
57:DA:2135:A:C3'	57:DA:2136:G:H5''	2.12	0.79
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.18	0.79
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.62	0.79
53:CA:1245:C:H2'	53:CA:1246:A:H8	1.48	0.79
57:DA:1387:A:N6	57:DA:1401:G:C6	2.50	0.79
57:DA:1817:G:O2'	57:DA:1818:U:H5'	1.83	0.79
57:DA:2104:C:O2	57:DA:2105:U:H5	1.65	0.79
57:DA:2286:G:H4'	57:DA:2287:A:O4'	1.83	0.79
57:DA:616:A:C2'	57:DA:617:G:H8	1.96	0.79
2:AB:137:THR:HA	2:AB:140:LEU:HD13	1.64	0.79
22:BA:1056:G:H5''	22:BA:1057:A:H5'	1.64	0.79
37:BP:50:ARG:HB3	37:BP:57:ALA:N	1.94	0.79
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.18	0.79
53:CA:982:U:H1'	53:CA:983:A:N7	1.98	0.79
51:D3:41:ARG:HH21	51:D3:41:ARG:HG3	1.48	0.79
57:DA:1069:A:O2'	57:DA:1070:A:H5'	1.83	0.79
57:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.48	0.79
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	1.98	0.79
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.17	0.79
1:AA:116:A:H2'	1:AA:117:G:H8	1.46	0.79
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.13	0.79
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.64	0.79
53:CA:1349:A:H2'	53:CA:1350:A:C8	2.17	0.79
53:CA:78:A:H2'	53:CA:79:G:C8	2.18	0.79
15:CO:63:ARG:HH22	57:DA:715:A:H5'	1.46	0.79
57:DA:1069:A:H4'	57:DA:1070:A:O5'	1.83	0.79
57:DA:2214:C:H2'	57:DA:2215:C:C6	2.18	0.79
58:DB:24:G:H1'	58:DB:27:C:H42	1.42	0.79
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.64	0.79
4:AD:129:VAL:HG13	4:AD:131:ILE:HD12	1.63	0.79
25:BD:182:ALA:C	25:BD:184:ARG:H	1.85	0.79
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.17	0.79
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.64	0.79
6:CF:54:LEU:HD12	6:CF:56:LYS:O	1.83	0.79
55:CM:64:VAL:HG12	55:CM:65:GLU:H	1.47	0.79
17:CQ:3:LYS:HZ3	17:CQ:6:THR:HG21	1.43	0.79
57:DA:1237:A:C2	57:DA:1238:G:H1'	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1326:U:O2'	57:DA:1327:A:H8	1.65	0.79
57:DA:2319:G:O2'	57:DA:2321:U:O4	2.00	0.79
1:AA:1361:G:H2'	1:AA:1362:A:H5'	1.63	0.78
22:BA:18:U:O2'	22:BA:19:A:H5'	1.83	0.78
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.78
25:BD:186:LEU:HD11	37:BP:3:ILE:HD11	1.62	0.78
41:BT:50:LEU:HD12	41:BT:50:LEU:H	1.47	0.78
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.63	0.78
53:CA:801:U:H2'	53:CA:802:A:C8	2.18	0.78
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.83	0.78
57:DA:1277:G:H5'	35:DN:20:MET:HE3	1.65	0.78
57:DA:207:A:H2'	57:DA:208:C:C6	2.18	0.78
57:DA:668:A:H2'	57:DA:670:A:N6	1.96	0.78
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.65	0.78
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.31	0.78
2:AB:163:ILE:O	2:AB:185:ILE:HG12	1.83	0.78
22:BA:2757:A:N1	28:BG:66:THR:HG21	1.98	0.78
53:CA:113:G:H21	53:CA:353:A:H8	1.28	0.78
57:DA:1038:G:C2'	57:DA:1039:A:H5'	2.13	0.78
57:DA:2136:G:H2'	57:DA:2137:U:C6	2.19	0.78
57:DA:2291:U:H2'	57:DA:2292:U:C6	2.17	0.78
57:DA:2542:A:H4'	57:DA:2543:G:C5'	2.12	0.78
57:DA:2612:C:H5''	57:DA:2613:U:OP1	1.83	0.78
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.63	0.78
1:AA:842:U:H3'	1:AA:843:U:C5'	2.13	0.78
22:BA:1141:U:H4'	22:BA:1142:A:O5'	1.82	0.78
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.17	0.78
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.65	0.78
53:CA:948:C:H5''	55:CM:104:ASN:HB3	1.63	0.78
57:DA:1492:G:H3'	57:DA:1493:C:H5'	1.66	0.78
57:DA:1491:G:O2'	57:DA:1492:G:H5'	1.83	0.78
57:DA:1635:A:O2'	57:DA:1636:U:H5'	1.82	0.78
57:DA:1993:U:H2'	57:DA:1994:C:C6	2.18	0.78
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.13	0.78
1:AA:121:U:H5''	1:AA:121:U:H6	1.47	0.78
2:AB:100:LEU:HD12	2:AB:178:LEU:HD23	1.64	0.78
57:DA:491:G:H2'	57:DA:492:A:H8	1.48	0.78
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.65	0.78
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	1.99	0.78
5:AE:79:THR:HB	5:AE:121:ASN:ND2	1.99	0.78
15:AO:63:ARG:HD3	15:AO:87:ARG:NH2	1.96	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.99	0.78
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.64	0.78
53:CA:1430:A:H2'	53:CA:1431:A:O4'	1.83	0.78
53:CA:238:A:H2'	53:CA:239:U:H5''	1.64	0.78
53:CA:481:G:H4'	53:CA:482:A:OP1	1.84	0.78
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.65	0.78
3:CC:36:PHE:HE1	14:CN:91:GLU:HB3	1.48	0.78
57:DA:915:C:H2'	57:DA:916:G:H8	1.48	0.78
58:DB:57:A:C6	59:DF:25:MET:HG2	2.19	0.78
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.12	0.78
22:BA:1286:A:H4'	22:BA:1287:A:OP1	1.84	0.78
22:BA:1734:G:HO2'	22:BA:1735:A:H8	1.28	0.78
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.66	0.78
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.83	0.78
53:CA:560:A:C5	5:CE:127:TYR:CE2	2.71	0.78
57:DA:762:U:H4'	57:DA:763:G:O5'	1.83	0.78
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.65	0.78
1:AA:1055:A:H1'	3:AC:155:ARG:HH21	1.48	0.78
12:AL:23:LEU:HB2	12:AL:58:ASN:ND2	1.98	0.78
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.32	0.78
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.64	0.78
33:BL:112:LEU:HD12	33:BL:130:GLY:HA3	1.64	0.78
53:CA:1387:G:H2'	53:CA:1388:C:H6	1.48	0.78
57:DA:2056:G:H21	48:D0:1:ALA:H3	1.30	0.78
57:DA:443:A:H61	26:DE:36:ALA:HB1	1.47	0.78
58:DB:42:C:H2'	58:DB:43:C:C6	2.18	0.78
1:AA:587:G:H4'	8:AH:3:GLN:HA	1.66	0.78
6:AF:71:ILE:HD11	6:AF:89:VAL:HG21	1.63	0.78
22:BA:1060:U:H4'	22:BA:1061:U:C5'	2.14	0.78
24:BC:20:ASN:HD22	24:BC:20:ASN:C	1.86	0.78
53:CA:704:A:H2'	53:CA:705:G:C8	2.19	0.78
9:CI:17:ARG:HB2	9:CI:65:THR:HB	1.65	0.78
57:DA:1036:G:C2'	57:DA:1037:G:H5'	2.14	0.78
57:DA:310:A:O2'	57:DA:311:A:H8	1.65	0.78
57:DA:593:U:H2'	57:DA:594:U:C6	2.18	0.78
57:DA:1789:A:H5''	24:DC:218:THR:O	1.84	0.78
22:BA:78:U:H2'	22:BA:79:C:C6	2.17	0.78
28:BG:115:GLN:H	28:BG:115:GLN:CD	1.87	0.78
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.47	0.78
53:CA:120:A:C2'	53:CA:121:U:H5''	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1241:G:H2'	53:CA:1242:G:H8	1.48	0.78
53:CA:1125:U:C5	10:CJ:40:ILE:HG12	2.18	0.78
57:DA:2468:A:O2'	57:DA:2469:A:C8	2.37	0.78
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.47	0.78
3:AC:76:ILE:HD11	3:AC:102:ILE:HG12	1.65	0.78
4:AD:16:THR:HG22	4:AD:17:ASP:N	1.98	0.78
22:BA:2388:A:H5'	22:BA:2389:G:OP2	1.84	0.78
22:BA:357:C:H2'	22:BA:358:U:C6	2.18	0.78
22:BA:914:G:H8	22:BA:914:G:H5''	1.48	0.78
25:BD:101:PHE:HE2	25:BD:203:VAL:HG22	1.47	0.78
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.78
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.20	0.78
11:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.65	0.78
57:DA:919:U:H2'	57:DA:920:A:C8	2.18	0.78
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.66	0.78
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.82	0.78
24:BC:173:LEU:HD22	24:BC:183:VAL:HG21	1.66	0.77
53:CA:1144:G:H21	53:CA:1146:A:H62	1.31	0.77
53:CA:1382:C:O2'	53:CA:1383:C:H5'	1.83	0.77
57:DA:2149:U:O2'	57:DA:2150:C:H6	1.65	0.77
58:DB:5:U:H2'	58:DB:6:G:C8	2.18	0.77
26:DE:126:VAL:HG21	26:DE:134:LEU:HD13	1.66	0.77
1:AA:259:G:H2'	1:AA:260:G:H8	1.48	0.77
1:AA:497:G:O2'	1:AA:498:A:H5'	1.84	0.77
22:BA:250:G:H2'	22:BA:251:A:C8	2.18	0.77
22:BA:513:A:O2'	22:BA:514:A:H5'	1.83	0.77
53:CA:495:A:H4'	53:CA:496:A:O5'	1.81	0.77
53:CA:77:A:H2'	53:CA:78:A:C8	2.19	0.77
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.66	0.77
57:DA:2091:C:C4	57:DA:2092:U:C4	2.73	0.77
57:DA:449:A:O2'	57:DA:450:G:H5'	1.84	0.77
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.64	0.77
5:AE:81:GLN:HG2	5:AE:149:PRO:HG3	1.67	0.77
22:BA:276:U:O2'	22:BA:278:A:N7	2.17	0.77
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.15	0.77
53:CA:120:A:H3'	53:CA:121:U:H5''	1.65	0.77
12:CL:79:ILE:HD12	12:CL:96:THR:HG21	1.64	0.77
57:DA:1024:G:H3'	57:DA:1025:G:C5'	2.14	0.77
57:DA:1097:U:H2'	57:DA:1098:A:O4'	1.85	0.77
57:DA:1117:C:O2'	57:DA:1118:C:C5'	2.33	0.77
57:DA:2143:C:H5'	57:DA:2144:G:OP2	1.83	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2384:U:H5''	57:DA:2386:A:OP1	1.83	0.77
57:DA:2728:U:O2'	57:DA:2729:G:H8	1.67	0.77
57:DA:921:C:C2'	57:DA:922:C:H5'	2.14	0.77
58:DB:57:A:C4	59:DF:25:MET:HB2	2.19	0.77
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.14	0.77
57:DA:2232:C:P	45:DX:26:ARG:HH12	2.06	0.77
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.19	0.77
17:AQ:51:GLU:HG3	17:AQ:74:LEU:HD21	1.67	0.77
21:AU:39:LYS:H	21:AU:40:PRO:HD2	1.49	0.77
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.82	0.77
22:BA:1784:A:H4'	22:BA:1785:A:O5'	1.81	0.77
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	1.83	0.77
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.18	0.77
53:CA:983:A:O2'	53:CA:984:C:H5'	1.83	0.77
57:DA:67:U:H2'	57:DA:68:G:H8	1.49	0.77
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	1.98	0.77
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.23	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.48	0.77
32:BK:18:ARG:NH1	32:BK:18:ARG:HG3	1.91	0.77
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	1.82	0.77
44:BW:8:SER:O	44:BW:9:THR:HG22	1.83	0.77
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.48	0.77
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.64	0.77
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.65	0.77
1:AA:619:U:H3	4:AD:130:ASN:HB3	1.49	0.77
4:AD:172:VAL:HG22	4:AD:173:ASP:H	1.48	0.77
7:AG:26:VAL:HG12	7:AG:42:VAL:HG21	1.65	0.77
38:BQ:111:LYS:HE3	39:BR:50:GLY:HA2	1.65	0.77
53:CA:239:U:C5'	53:CA:239:U:H6	1.97	0.77
53:CA:858:G:N7	63:CA:1822:HOH:O	2.18	0.77
11:CK:81:LEU:HD11	11:CK:104:PHE:CD2	2.18	0.77
57:DA:1181:U:H2'	57:DA:1182:G:H8	1.49	0.77
57:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.67	0.77
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.49	0.77
2:AB:46:VAL:HB	2:AB:47:PRO:HD3	1.67	0.77
4:AD:53:GLN:HE21	4:AD:202:LEU:HA	1.49	0.77
12:AL:43:LYS:HB2	12:AL:44:PRO:CD	2.15	0.77
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.65	0.77
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.14	0.77
22:BA:321:U:HO2'	22:BA:340:A:HO2'	1.32	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:313:A:H2'	53:CA:314:C:C6	2.20	0.77
2:CB:130:LYS:HA	2:CB:133:ALA:HB3	1.65	0.77
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.85	0.77
57:DA:1049:C:O2'	57:DA:1050:A:H5'	1.85	0.77
2:AB:89:PHE:HB3	2:AB:149:GLY:CA	2.14	0.77
15:AO:29:ALA:HA	15:AO:84:LEU:HD21	1.66	0.77
22:BA:284:U:H2'	22:BA:285:G:H8	1.49	0.77
22:BA:973:A:O4'	22:BA:1188:U:C6	2.37	0.77
24:BC:212:TRP:O	24:BC:212:TRP:HD1	1.67	0.77
53:CA:1285:A:H4'	53:CA:1286:U:OP1	1.84	0.77
53:CA:1391:U:H2'	53:CA:1392:G:C8	2.20	0.77
3:CC:140:ALA:O	3:CC:145:ALA:HB3	1.85	0.77
57:DA:279:A:N6	57:DA:361:G:H1'	2.00	0.77
57:DA:320:A:H4'	57:DA:322:A:N7	2.00	0.77
58:DB:65:U:H3'	58:DB:108:A:N6	1.99	0.77
26:DE:149:ILE:O	26:DE:188:MET:HA	1.83	0.77
38:DQ:60:TRP:O	38:DQ:63:ARG:HG2	1.85	0.77
1:AA:1441:A:H62	1:AA:1461:G:N2	1.83	0.77
1:AA:57:G:H2'	1:AA:58:C:C6	2.20	0.77
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.66	0.77
53:CA:79:G:H2'	53:CA:80:A:H8	1.49	0.77
57:DA:1967:C:H6	57:DA:1967:C:H5''	1.49	0.77
57:DA:915:C:O2'	57:DA:916:G:H5'	1.84	0.77
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.49	0.77
57:DA:1364:G:N7	45:DX:1:SER:HB2	1.99	0.77
53:CA:209:U:H5''	53:CA:210:C:OP2	1.85	0.77
4:CD:2:ARG:NH2	4:CD:114:ARG:HD3	1.98	0.77
8:CH:75:GLN:O	8:CH:126:CYS:HB2	1.85	0.77
57:DA:1346:G:O2'	57:DA:1347:A:H8	1.66	0.77
57:DA:2420:C:OP1	51:D3:33:THR:HB	1.85	0.77
57:DA:83:A:H61	57:DA:101:A:H5'	1.48	0.77
1:AA:87:C:H2'	1:AA:88:U:H6	1.50	0.76
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.67	0.76
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.20	0.76
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.66	0.76
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.19	0.76
28:BG:84:LYS:HD2	28:BG:133:LYS:HG2	1.65	0.76
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	1.85	0.76
2:CB:184:ALA:O	2:CB:199:ILE:HG12	1.86	0.76
5:CE:103:GLY:HA3	5:CE:121:ASN:HA	1.68	0.76
57:DA:1534:U:H6	57:DA:1538:G:H1	1.32	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2752:C:H2'	57:DA:2753:A:H8	1.48	0.76
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.67	0.76
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.80	0.76
7:AG:110:ARG:NH1	7:AG:122:GLU:HG2	2.01	0.76
22:BA:1558:C:H4'	22:BA:1559:U:O5'	1.83	0.76
22:BA:587:C:H42	33:BL:33:ARG:HD3	1.49	0.76
22:BA:946:C:O2'	22:BA:947:A:H5'	1.85	0.76
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.67	0.76
54:CG:14:ASP:HB3	54:CG:18:GLY:H	1.49	0.76
9:CI:23:GLY:H	9:CI:60:LEU:HA	1.50	0.76
28:DG:162:ARG:HD2	28:DG:162:ARG:H	1.49	0.76
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.66	0.76
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.85	0.76
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	2.00	0.76
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.66	0.76
1:AA:270:A:H2'	1:AA:271:C:C6	2.19	0.76
22:BA:1060:U:O4'	22:BA:1062:G:H5''	1.84	0.76
22:BA:1069:A:O2'	22:BA:1070:A:H5''	1.85	0.76
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	1.67	0.76
53:CA:792:A:O2'	53:CA:794:A:N7	2.18	0.76
2:CB:46:VAL:HG13	2:CB:47:PRO:HD3	1.67	0.76
21:CU:39:LYS:H	21:CU:40:PRO:HD2	1.50	0.76
57:DA:1027:A:O2'	57:DA:1028:A:C8	2.38	0.76
57:DA:1905:C:O4'	57:DA:1928:A:C2	2.39	0.76
57:DA:1993:U:H2'	57:DA:1994:C:H6	1.50	0.76
57:DA:2136:G:H2'	57:DA:2137:U:C5	2.20	0.76
57:DA:2311:A:H3'	57:DA:2312:U:H6	1.50	0.76
57:DA:379:G:C6	57:DA:396:G:O6	2.39	0.76
57:DA:781:A:H5''	57:DA:782:A:OP1	1.86	0.76
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.84	0.76
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.85	0.76
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.50	0.76
1:AA:923:A:H5''	5:AE:25:LYS:HE2	1.65	0.76
2:AB:185:ILE:HA	2:AB:199:ILE:HB	1.68	0.76
3:AC:143:LEU:H	3:AC:143:LEU:HD22	1.51	0.76
22:BA:2579:C:OP1	63:BA:3541:HOH:O	2.02	0.76
22:BA:323:C:H2'	26:BE:163:ASN:OD1	1.85	0.76
22:BA:767:U:O2'	22:BA:768:G:H5'	1.86	0.76
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.11	0.76
53:CA:251:G:H4'	53:CA:252:U:C5'	2.15	0.76
53:CA:274:A:O2'	53:CA:275:G:H8	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1081:A:H5'	5:CE:22:LYS:HD2	1.68	0.76
8:CH:68:LYS:HD3	8:CH:69:ALA:N	2.01	0.76
57:DA:1490:A:C8	24:DC:73:ILE:HD12	2.20	0.76
58:DB:86:G:H2'	58:DB:87:U:H5''	1.67	0.76
24:DC:106:PRO:HB3	24:DC:141:HIS:HE1	1.49	0.76
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.50	0.76
37:DP:57:ALA:HA	37:DP:75:THR:HB	1.64	0.76
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.51	0.76
1:AA:475:C:H2'	1:AA:476:U:H6	1.50	0.76
9:AI:34:LEU:HD11	9:AI:47:VAL:HG21	1.67	0.76
14:AN:44:VAL:HG23	14:AN:45:LEU:H	1.51	0.76
22:BA:2352:A:N1	44:BW:30:VAL:HG11	2.01	0.76
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.85	0.76
26:BE:44:ARG:HH21	26:BE:44:ARG:HG3	1.50	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
34:BM:66:ARG:NH1	34:BM:101:VAL:HG11	2.01	0.76
40:BS:96:ILE:HG13	40:BS:96:ILE:O	1.85	0.76
44:BW:30:VAL:O	44:BW:30:VAL:HG22	1.84	0.76
2:CB:185:ILE:HG22	2:CB:199:ILE:HG13	1.66	0.76
54:CG:71:THR:HG23	54:CG:72:VAL:HG23	1.68	0.76
12:CL:19:ASN:H	12:CL:19:ASN:HD22	1.33	0.76
15:CO:38:LEU:O	15:CO:41:HIS:HB3	1.86	0.76
56:CP:48:GLU:HG3	56:CP:51:ARG:HH21	1.50	0.76
21:CU:36:PHE:HD1	21:CU:40:PRO:HB3	1.50	0.76
57:DA:206:U:HO2'	57:DA:207:A:H8	1.30	0.76
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	2.00	0.76
47:DZ:16:LEU:HD22	47:DZ:16:LEU:N	2.00	0.76
1:AA:519:C:H2'	1:AA:520:A:C8	2.20	0.76
22:BA:272:A:O2'	22:BA:273:G:H8	1.67	0.76
23:BB:45:A:H2'	23:BB:46:A:C8	2.20	0.76
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.84	0.76
38:BQ:109:VAL:HG12	38:BQ:113:LYS:HD2	1.68	0.76
53:CA:575:G:H4'	53:CA:576:C:O5'	1.85	0.76
3:CC:36:PHE:CE1	14:CN:91:GLU:HB3	2.20	0.76
57:DA:1270:C:H2'	57:DA:1648:U:H5''	1.68	0.76
57:DA:1345:C:O2'	57:DA:1346:G:H8	1.69	0.76
57:DA:1358:G:H2'	57:DA:1372:U:O4	1.85	0.76
57:DA:859:G:O2'	57:DA:860:U:OP2	2.02	0.76
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.67	0.76
35:DN:24:MET:HG2	35:DN:44:LEU:HD22	1.66	0.76
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.80	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:40:PRO:HB2	18:AR:42:ARG:HG2	1.67	0.76
22:BA:996:A:C2	22:BA:997:G:C8	2.73	0.76
28:BG:10:VAL:HG23	28:BG:10:VAL:O	1.84	0.76
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	2.00	0.76
53:CA:327:A:O2'	53:CA:329:A:H5''	1.84	0.76
5:CE:131:ASN:HD22	5:CE:132:PRO:HD2	1.49	0.76
1:AA:486:U:O2'	1:AA:487:A:H5'	1.85	0.76
22:BA:1347:A:O2'	22:BA:1348:C:H5'	1.86	0.76
22:BA:1434:A:H2'	22:BA:1435:G:H8	1.51	0.76
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.68	0.76
32:BK:18:ARG:CG	32:BK:18:ARG:HH11	1.97	0.76
38:BQ:20:ALA:HA	38:BQ:23:TYR:CE1	2.21	0.76
38:BQ:86:SER:HB2	39:BR:50:GLY:O	1.86	0.76
44:BW:47:GLY:O	44:BW:49:ASN:N	2.18	0.76
44:BW:51:GLY:HA3	44:BW:59:PHE:HE2	1.47	0.76
5:CE:55:VAL:O	5:CE:59:ILE:HG22	1.86	0.76
56:CP:74:LEU:O	56:CP:78:VAL:HG23	1.85	0.76
57:DA:1688:U:O2	57:DA:1700:A:H5'	1.86	0.76
57:DA:2631:G:H2'	57:DA:2632:A:H5''	1.66	0.76
57:DA:510:C:H2'	57:DA:511:U:C6	2.21	0.76
4:AD:47:LEU:HD21	4:AD:52:VAL:HG12	1.68	0.76
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.68	0.76
53:CA:624:C:O2'	56:CP:10:GLY:HA2	1.84	0.76
57:DA:1327:A:H2'	57:DA:1328:A:C8	2.21	0.76
57:DA:1430:G:H2'	57:DA:1431:A:C8	2.20	0.76
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.67	0.76
57:DA:2680:U:OP2	25:DD:114:LYS:HD3	1.86	0.76
59:DF:49:LEU:HA	59:DF:52:ALA:HB3	1.68	0.76
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.67	0.76
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.68	0.76
57:DA:794:A:H2'	57:DA:795:C:C6	2.21	0.76
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.86	0.76
35:DN:63:ARG:O	35:DN:67:PHE:HB2	1.86	0.76
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.19	0.75
53:CA:511:C:O2'	53:CA:512:U:H5''	1.84	0.75
4:CD:58:GLN:O	4:CD:62:ARG:HG2	1.86	0.75
15:CO:47:LYS:HD2	15:CO:47:LYS:H	1.49	0.75
57:DA:1051:G:H5'	57:DA:2752:C:H1'	1.66	0.75
57:DA:456:C:O2'	41:DT:73:ARG:HG3	1.85	0.75
57:DA:976:G:H2'	57:DA:977:G:H8	1.49	0.75
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.16	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:39:GLN:NE2	44:BW:43:LYS:H	1.84	0.75
46:BY:45:GLN:O	46:BY:46:VAL:HB	1.86	0.75
53:CA:1526:G:OP1	21:CU:38:GLU:HG3	1.86	0.75
57:DA:84:A:C4	57:DA:103:A:N6	2.54	0.75
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.13	0.75
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.68	0.75
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.86	0.75
22:BA:65:U:H2'	22:BA:66:C:H6	1.50	0.75
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.17	0.75
20:CT:22:SER:O	20:CT:26:MET:HB2	1.85	0.75
57:DA:1038:G:C2	57:DA:1039:A:C8	2.74	0.75
57:DA:1327:A:H2'	57:DA:1328:A:H8	1.50	0.75
57:DA:1812:U:H2'	57:DA:1813:G:H8	1.51	0.75
57:DA:995:C:O2	31:DJ:3:THR:HG23	1.86	0.75
5:AE:11:GLN:HA	5:AE:11:GLN:HE21	1.52	0.75
24:BC:117:SER:HB2	24:BC:128:THR:HB	1.68	0.75
38:BQ:26:ALA:HB1	38:BQ:30:VAL:HG23	1.68	0.75
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.15	0.75
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.21	0.75
53:CA:348:G:H2'	53:CA:349:A:C8	2.18	0.75
57:DA:1024:G:C3'	57:DA:1025:G:H5''	2.16	0.75
57:DA:1391:U:H4'	41:DT:19:LYS:NZ	2.02	0.75
57:DA:1490:A:H8	24:DC:73:ILE:HD12	1.51	0.75
57:DA:1827:U:H4'	57:DA:1970:A:O2'	1.85	0.75
57:DA:491:G:H2'	57:DA:492:A:C8	2.21	0.75
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.68	0.75
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.50	0.75
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.66	0.75
14:AN:22:LYS:HG3	14:AN:23:ARG:H	1.52	0.75
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.22	0.75
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.01	0.75
53:CA:532:A:C8	3:CC:192:TYR:CE2	2.75	0.75
57:DA:1534:U:H6	57:DA:1538:G:N1	1.84	0.75
57:DA:1929:G:H4'	57:DA:1930:G:OP1	1.87	0.75
57:DA:286:U:H2'	57:DA:287:G:C8	2.22	0.75
57:DA:739:A:O2'	57:DA:740:C:C5	2.40	0.75
24:DC:145:MET:HE2	24:DC:181:ARG:HH22	1.52	0.75
59:DF:41:GLU:HG2	59:DF:42:ALA:H	1.51	0.75
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.68	0.75
14:AN:40:ARG:NH1	14:AN:44:VAL:HG11	2.01	0.75
21:AU:16:ARG:HH11	21:AU:19:LYS:CG	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1079:C:N4	22:BA:1088:A:H2	1.84	0.75
22:BA:1707:G:H2'	22:BA:1708:C:C6	2.21	0.75
53:CA:1329:A:H5''	55:CM:25:GLY:N	2.00	0.75
53:CA:1493:A:H8	57:DA:1913:A:H61	1.33	0.75
53:CA:451:A:H4'	53:CA:452:A:O5'	1.85	0.75
53:CA:936:C:O2'	53:CA:937:A:H8	1.68	0.75
8:CH:1:SER:HB3	8:CH:3:GLN:HG3	1.69	0.75
57:DA:2210:U:H4'	57:DA:2211:A:O5'	1.84	0.75
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.87	0.75
42:DU:45:GLN:HE21	42:DU:45:GLN:HA	1.49	0.75
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	2.13	0.75
22:BA:2602:A:H4'	22:BA:2603:G:OP2	1.85	0.75
22:BA:479:A:O2'	22:BA:481:G:H5'	1.86	0.75
22:BA:636:G:C5	33:BL:111:ILE:HD11	2.22	0.75
29:BH:14:SER:OG	29:BH:17:ASP:HB2	1.87	0.75
53:CA:969:A:O2'	53:CA:970:C:H5'	1.87	0.75
4:CD:104:MET:O	4:CD:104:MET:HG2	1.86	0.75
5:CE:13:LYS:HA	5:CE:13:LYS:HE2	1.68	0.75
57:DA:1070:A:H5'	57:DA:1071:G:H5''	1.68	0.75
57:DA:160:A:N6	57:DA:167:A:H1'	2.01	0.75
57:DA:1809:A:O2'	57:DA:1810:A:C8	2.39	0.75
57:DA:2204:G:H5'	24:DC:149:LYS:HG3	1.69	0.75
57:DA:2324:U:H5'	57:DA:2325:G:C5'	2.16	0.75
57:DA:656:G:H2'	57:DA:657:U:C6	2.22	0.75
32:DK:7:MET:CE	32:DK:7:MET:HA	2.16	0.75
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.67	0.75
1:AA:1279:G:N3	1:AA:1279:G:H2'	2.02	0.75
1:AA:792:A:O2'	1:AA:794:A:N7	2.18	0.75
22:BA:1491:G:O2'	22:BA:1492:G:H5'	1.87	0.75
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.67	0.75
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.48	0.75
47:BZ:35:VAL:HG21	47:BZ:37:ARG:NH1	2.02	0.75
53:CA:252:U:H2'	53:CA:253:A:C8	2.22	0.75
53:CA:247:G:O6	53:CA:278:G:C6	2.40	0.75
5:CE:98:ALA:HB2	5:CE:123:LEU:HG	1.68	0.75
6:CF:25:TYR:O	6:CF:29:ILE:HD13	1.86	0.75
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.51	0.75
32:DK:25:LEU:H	32:DK:25:LEU:HD23	1.52	0.75
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.50	0.75
52:B4:1:MET:HB3	52:B4:34:LYS:HG2	1.68	0.75
22:BA:289:G:H2'	22:BA:290:U:O4'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:198:G:HO2'	53:CA:199:A:H8	1.34	0.75
53:CA:33:A:H2'	53:CA:34:C:C6	2.20	0.75
53:CA:920:U:H2'	53:CA:921:U:H6	1.52	0.75
4:CD:66:VAL:HG22	4:CD:96:ARG:HH11	1.52	0.75
5:CE:44:ARG:HG2	5:CE:72:ASN:HA	1.68	0.75
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	1.68	0.75
57:DA:1906:G:H8	57:DA:1929:G:H2'	1.50	0.75
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.86	0.75
53:CA:345:C:H4'	53:CA:346:G:H5''	1.69	0.74
2:CB:74:ALA:HB1	2:CB:206:ILE:HD11	1.67	0.74
57:DA:1709:U:H2'	57:DA:1710:G:H8	1.51	0.74
57:DA:480:A:H3'	57:DA:481:G:C5'	2.17	0.74
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.51	0.74
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.69	0.74
1:AA:60:A:H4'	1:AA:61:G:O5'	1.85	0.74
22:BA:2747:G:O2'	28:BG:66:THR:HG22	1.87	0.74
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.69	0.74
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.01	0.74
10:CJ:15:HIS:CE1	10:CJ:68:ARG:HD3	2.21	0.74
57:DA:1430:G:H2'	57:DA:1431:A:H8	1.53	0.74
57:DA:1912:A:N6	57:DA:1917:U:H3	1.85	0.74
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.51	0.74
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.69	0.74
57:DA:857:G:H1'	44:DW:19:ARG:NE	2.02	0.74
1:AA:61:G:H2'	1:AA:62:U:C6	2.22	0.74
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.67	0.74
22:BA:1499:C:O2'	22:BA:1500:G:H5'	1.87	0.74
22:BA:2834:G:H2'	22:BA:2879:A:N6	2.02	0.74
27:BF:133:GLU:H	27:BF:150:GLY:CA	1.99	0.74
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.67	0.74
53:CA:752:G:H1'	53:CA:754:C:N4	2.02	0.74
57:DA:2392:A:C8	57:DA:2429:G:C2	2.75	0.74
58:DB:44:G:H3'	59:DF:91:ARG:NE	2.01	0.74
58:DB:58:A:C2'	58:DB:59:A:H8	1.99	0.74
57:DA:2720:U:H5''	37:DP:52:ARG:NH2	2.02	0.74
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.68	0.74
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.17	0.74
1:AA:1239:A:H62	1:AA:1299:A:H62	1.35	0.74
8:AH:88:LYS:HA	8:AH:91:LEU:HD12	1.68	0.74
22:BA:1936:A:H2	22:BA:1943:U:C5	2.05	0.74
22:BA:2210:U:H4'	22:BA:2211:A:O5'	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:97:GLU:O	27:BF:101:ARG:HG2	1.85	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
53:CA:181:A:H1'	53:CA:182:A:C2	2.23	0.74
53:CA:491:G:O2'	53:CA:492:C:H5'	1.86	0.74
53:CA:501:C:H2'	53:CA:502:A:H8	1.50	0.74
53:CA:818:G:O2'	53:CA:819:A:H5''	1.87	0.74
57:DA:1429:G:HO2'	57:DA:1430:G:H8	0.78	0.74
57:DA:1847:A:O2'	57:DA:1848:A:C8	2.40	0.74
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.51	0.74
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.53	0.74
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.22	0.74
1:AA:545:C:H5'	4:AD:68:GLU:HG3	1.67	0.74
1:AA:601:G:H2'	1:AA:602:A:C8	2.22	0.74
5:AE:89:THR:HG22	5:AE:90:GLY:H	1.51	0.74
1:AA:1129:C:C5'	9:AI:17:ARG:HH22	1.95	0.74
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.36	0.74
53:CA:501:C:H2'	53:CA:502:A:C8	2.22	0.74
53:CA:563:A:N3	53:CA:563:A:H2'	2.02	0.74
3:CC:39:ARG:HG2	3:CC:54:ILE:HD13	1.69	0.74
6:CF:3:HIS:ND1	6:CF:92:THR:HG23	2.02	0.74
6:CF:92:THR:O	6:CF:93:LYS:HG2	1.87	0.74
54:CG:59:GLU:OE2	54:CG:63:VAL:HG23	1.86	0.74
53:CA:537:G:H5''	12:CL:109:ARG:NH1	2.02	0.74
57:DA:241:A:H4'	57:DA:242:G:OP1	1.88	0.74
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.88	0.74
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.05	0.74
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.23	0.74
22:BA:1343:G:H2'	22:BA:1344:U:C6	2.21	0.74
53:CA:1139:G:H4'	53:CA:1140:C:O5'	1.86	0.74
55:CM:78:ARG:HH21	55:CM:79:LEU:HD23	1.52	0.74
18:CR:21:ASP:HB3	18:CR:23:LYS:HG2	1.69	0.74
57:DA:686:U:O4	50:D2:12:ARG:HG3	1.87	0.74
57:DA:1439:A:N7	57:DA:1440:U:C1'	2.51	0.74
57:DA:286:U:H2'	57:DA:287:G:H8	1.51	0.74
57:DA:464:U:H1'	57:DA:686:U:C5	2.22	0.74
24:DC:33:LEU:O	24:DC:34:GLU:HB3	1.86	0.74
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.51	0.74
1:AA:47:C:H4'	1:AA:48:C:O5'	1.87	0.74
9:AI:83:THR:HG21	9:AI:102:PHE:HB3	1.70	0.74
24:BC:251:THR:HG22	24:BC:252:LYS:N	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.23	0.74
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	2.02	0.74
53:CA:413:G:N1	4:CD:32:LYS:HE3	2.03	0.74
53:CA:513:C:O2'	53:CA:514:C:O4'	2.05	0.74
4:CD:2:ARG:NH2	4:CD:114:ARG:HH11	1.86	0.74
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD12	1.69	0.74
56:CP:8:ARG:HB3	56:CP:28:ARG:NH1	2.03	0.74
57:DA:1494:A:H2'	57:DA:1495:A:C8	2.22	0.74
57:DA:2311:A:H5'	57:DA:2312:U:C6	2.23	0.74
57:DA:2321:U:O2	57:DA:2321:U:C3'	2.35	0.74
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	2.03	0.74
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.70	0.74
59:DF:12:VAL:HA	59:DF:15:LEU:HB2	1.69	0.74
1:AA:601:G:H2'	1:AA:602:A:H8	1.52	0.74
2:AB:148:GLY:O	2:AB:151:LYS:HG2	1.87	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.04	0.74
35:BN:1:MET:O	35:BN:2:ARG:HB2	1.86	0.74
40:BS:2:GLU:O	40:BS:107:VAL:O	2.05	0.74
53:CA:15:G:H2'	53:CA:16:A:H8	1.52	0.74
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.69	0.74
11:CK:27:ASN:ND2	11:CK:27:ASN:N	2.36	0.74
57:DA:1574:C:H6	57:DA:1574:C:O5'	1.70	0.74
57:DA:2771:C:H2'	57:DA:2772:C:H6	1.52	0.74
57:DA:774:G:O2'	57:DA:775:G:H8	1.70	0.74
57:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.69	0.74
59:DF:28:PRO:HB2	59:DF:168:LEU:HD21	1.70	0.74
1:AA:1130:A:H8	1:AA:1130:A:H5''	1.52	0.74
1:AA:299:G:H2'	1:AA:300:A:C8	2.22	0.74
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG23	1.69	0.74
22:BA:1139:G:O2'	22:BA:1140:C:H5'	1.87	0.74
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.86	0.74
53:CA:1322:C:O2'	53:CA:1323:G:H5'	1.87	0.74
53:CA:1408:A:C2	53:CA:1492:A:N6	2.55	0.74
53:CA:559:A:H4'	53:CA:560:A:O5'	1.86	0.74
21:CU:38:GLU:N	21:CU:40:PRO:HD2	2.03	0.74
57:DA:1654:A:HO2'	57:DA:1655:A:H8	0.80	0.74
57:DA:784:G:O2'	57:DA:785:G:H8	1.69	0.74
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	2.01	0.74
6:AF:91:ARG:HG3	6:AF:92:THR:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:42:LEU:HB3	10:AJ:43:PRO:HD2	1.70	0.74
22:BA:1019:U:H3	22:BA:1142:A:H62	1.33	0.74
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.70	0.74
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.67	0.74
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.88	0.74
53:CA:320:A:O2'	53:CA:1435:G:H1'	1.88	0.74
54:CG:117:LEU:HA	54:CG:121:ASN:HB2	1.68	0.74
53:CA:587:G:OP1	8:CH:80:PRO:HB3	1.88	0.74
11:CK:27:ASN:HD22	11:CK:27:ASN:H	1.32	0.74
55:CM:13:HIS:HB3	55:CM:16:ILE:HB	1.68	0.74
15:CO:25:GLU:HG2	15:CO:80:LEU:HG	1.69	0.74
58:DB:42:C:O2'	58:DB:43:C:H5'	1.87	0.74
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.23	0.74
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.28	0.74
1:AA:181:A:N6	1:AA:195:A:OP2	2.20	0.73
22:BA:1797:G:O3'	24:BC:255:LYS:HA	1.87	0.73
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.53	0.73
25:BD:99:GLU:HG3	25:BD:100:LEU:N	2.03	0.73
53:CA:820:U:H4'	53:CA:821:G:OP2	1.86	0.73
54:CG:68:VAL:HG22	54:CG:134:VAL:HG12	1.69	0.73
10:CJ:35:GLN:HG2	10:CJ:76:ILE:HG23	1.68	0.73
17:CQ:30:HIS:CE1	17:CQ:32:ILE:HG13	2.23	0.73
57:DA:320:A:H2'	26:DE:131:THR:OG1	1.87	0.73
57:DA:989:G:H4'	57:DA:990:A:OP1	1.86	0.73
1:AA:430:A:OP1	4:AD:8:LEU:HB2	1.88	0.73
11:AK:15:VAL:HG13	11:AK:78:ILE:HG23	1.68	0.73
24:BC:70:LYS:HE2	24:BC:73:ILE:HG13	1.69	0.73
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.22	0.73
53:CA:47:C:O2'	53:CA:48:C:H5'	1.87	0.73
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.29	0.73
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.70	0.73
57:DA:1399:C:O2'	57:DA:1400:U:H5'	1.89	0.73
57:DA:142:A:O2'	57:DA:143:C:H5'	1.88	0.73
57:DA:616:A:H2'	57:DA:617:G:C8	2.24	0.73
57:DA:92:U:H2'	57:DA:93:G:O4'	1.87	0.73
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.03	0.73
44:DW:18:LYS:HD3	44:DW:19:ARG:N	2.02	0.73
1:AA:49:U:O4	1:AA:365:U:H5	1.70	0.73
22:BA:1931:U:H5'	22:BA:1931:U:H6	1.53	0.73
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.69	0.73
41:BT:70:HIS:HB2	41:BT:73:ARG:O	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1169:A:H2'	53:CA:1170:A:C8	2.24	0.73
2:CB:49:PHE:HA	2:CB:52:ALA:HB3	1.70	0.73
6:CF:3:HIS:HD2	6:CF:65:GLU:HG2	1.52	0.73
57:DA:503:A:H4'	57:DA:504:A:O5'	1.88	0.73
34:DM:72:PRO:O	34:DM:73:ILE:HB	1.87	0.73
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.23	0.73
1:AA:1239:A:N6	1:AA:1299:A:N6	2.35	0.73
1:AA:974:A:H4'	1:AA:975:A:H5'	1.67	0.73
8:AH:103:VAL:HG12	8:AH:124:ILE:HG22	1.69	0.73
13:AM:106:ARG:HH12	13:AM:109:LYS:HD3	1.53	0.73
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.54	0.73
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.88	0.73
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.03	0.73
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.70	0.73
32:BK:33:ALA:HB1	32:BK:37:ASP:HB2	1.71	0.73
56:CP:73:ALA:HA	56:CP:76:LYS:HB2	1.70	0.73
57:DA:1352:U:C5	57:DA:1377:G:C6	2.76	0.73
57:DA:963:U:HO2'	57:DA:964:C:H6	1.36	0.73
32:DK:108:ARG:HA	32:DK:116:ILE:HD13	1.70	0.73
1:AA:1381:U:O2'	1:AA:1382:C:H5'	1.89	0.73
7:AG:61:PHE:CE1	7:AG:65:LEU:HD22	2.23	0.73
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.71	0.73
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.23	0.73
22:BA:2499:C:OP1	63:BA:3689:HOH:O	2.06	0.73
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.24	0.73
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.18	0.73
26:BE:24:ASN:O	26:BE:28:VAL:HG12	1.87	0.73
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.23	0.73
20:CT:26:MET:HE3	20:CT:56:ILE:HD13	1.69	0.73
57:DA:1447:C:H2'	57:DA:1448:G:C8	2.23	0.73
57:DA:1351:C:H4'	57:DA:1572:A:O4'	1.89	0.73
57:DA:1647:U:H5''	57:DA:1648:U:OP1	1.88	0.73
57:DA:2135:A:H2'	57:DA:2136:G:O4'	1.89	0.73
57:DA:2707:U:H2'	57:DA:2708:G:C8	2.22	0.73
6:AF:86:ARG:NH1	18:AR:63:TYR:HB3	2.02	0.73
26:BE:44:ARG:HH21	26:BE:44:ARG:CG	2.02	0.73
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.88	0.73
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.88	0.73
53:CA:538:G:H5''	12:CL:110:LYS:HB2	1.68	0.73
57:DA:1265:A:H4'	57:DA:1266:G:O5'	1.87	0.73
57:DA:1827:U:C4'	57:DA:1970:A:O2'	2.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1996:C:H4'	57:DA:1997:C:OP1	1.87	0.73
57:DA:2074:U:O2'	57:DA:2075:U:H5'	1.89	0.73
58:DB:57:A:C5	59:DF:25:MET:HB2	2.24	0.73
57:DA:873:C:H4'	34:DM:64:TRP:HE1	1.52	0.73
1:AA:109:A:H2'	1:AA:326:G:H21	1.54	0.73
38:BQ:86:SER:O	38:BQ:88:GLU:HB2	1.88	0.73
39:BR:90:ARG:O	39:BR:91:GLN:HB3	1.86	0.73
40:BS:72:THR:O	40:BS:73:LYS:HD2	1.89	0.73
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.70	0.73
53:CA:704:A:H2'	53:CA:705:G:H8	1.53	0.73
2:CB:103:TRP:HA	2:CB:106:VAL:HB	1.71	0.73
57:DA:2056:G:N2	48:D0:1:ALA:N	2.36	0.73
57:DA:1810:A:H3'	57:DA:1811:G:H8	1.54	0.73
57:DA:1998:A:H2'	57:DA:1999:C:C6	2.24	0.73
57:DA:395:U:HO2'	57:DA:396:G:H8	1.36	0.73
24:DC:147:PRO:HA	24:DC:187:CYS:HB3	1.68	0.73
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.68	0.73
1:AA:653:U:O2'	1:AA:654:G:H5'	1.89	0.73
1:AA:8:A:H62	4:AD:204:SER:HB2	1.53	0.73
2:AB:127:LYS:HG3	2:AB:128:LEU:H	1.52	0.73
8:AH:76:ARG:NE	8:AH:78:SER:O	2.22	0.73
22:BA:310:A:O2'	22:BA:311:A:H5''	1.89	0.73
22:BA:1791:A:O2'	24:BC:205:GLY:HA2	1.89	0.73
41:BT:13:ALA:O	41:BT:32:LEU:HB2	1.88	0.73
53:CA:337:G:H2'	53:CA:338:A:H8	1.52	0.73
53:CA:371:A:O2'	53:CA:372:C:H5'	1.88	0.73
12:CL:98:ARG:HB2	12:CL:116:TYR:HA	1.71	0.73
57:DA:1655:A:H2'	57:DA:1656:C:C6	2.23	0.73
57:DA:173:A:H2'	57:DA:174:U:H6	1.54	0.73
57:DA:2881:U:H2'	57:DA:2882:A:H8	1.53	0.73
57:DA:990:A:O2'	57:DA:991:C:H5''	1.87	0.73
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.71	0.73
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.54	0.73
1:AA:1299:A:N3	1:AA:1299:A:H2'	2.03	0.73
2:AB:89:PHE:CZ	2:AB:153:MET:HB2	2.24	0.73
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.18	0.73
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.24	0.73
53:CA:269:C:H2'	53:CA:270:A:C8	2.24	0.73
53:CA:597:G:H2'	53:CA:598:U:H5'	1.70	0.73
57:DA:1870:C:H5''	57:DA:1871:A:C2	2.24	0.73
57:DA:2023:C:O2'	57:DA:2024:G:H8	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2345:G:H4'	57:DA:2346:A:H5''	1.70	0.73
58:DB:75:G:H1	58:DB:102:G:N2	1.87	0.73
57:DA:397:U:OP2	45:DX:9:LYS:HE2	1.89	0.73
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.71	0.73
1:AA:129:A:O2'	1:AA:130:A:H5''	1.88	0.73
7:AG:76:SER:HA	7:AG:85:GLN:HB2	1.71	0.73
22:BA:2198:A:H2'	22:BA:2198:A:P	2.28	0.73
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.54	0.73
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.71	0.73
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.73
53:CA:260:G:OP1	20:CT:74:HIS:HE1	1.70	0.73
53:CA:456:A:H2'	53:CA:457:G:H8	1.54	0.73
57:DA:1027:A:O2'	57:DA:1028:A:H8	1.70	0.73
32:DK:101:GLY:O	32:DK:120:PRO:HB3	1.88	0.73
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.87	0.73
6:AF:29:ILE:HG12	6:AF:64:VAL:HG11	1.70	0.72
22:BA:310:A:HO2'	22:BA:311:A:H5''	1.53	0.72
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.92	0.72
38:BQ:8:ILE:C	38:BQ:8:ILE:HD12	2.08	0.72
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.18	0.72
53:CA:1387:G:H2'	53:CA:1388:C:C6	2.23	0.72
57:DA:2385:C:O2'	57:DA:2386:A:H8	1.70	0.72
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.69	0.72
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.89	0.72
1:AA:423:G:H2'	1:AA:423:G:N3	2.04	0.72
21:AU:35:GLU:O	21:AU:36:PHE:HB2	1.87	0.72
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.69	0.72
22:BA:397:U:OP2	45:BX:9:LYS:NZ	2.21	0.72
22:BA:919:U:C4	22:BA:920:A:N7	2.57	0.72
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.03	0.72
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.71	0.72
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.19	0.72
53:CA:79:G:H2'	53:CA:80:A:C8	2.24	0.72
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.69	0.72
57:DA:100:U:H1'	57:DA:101:A:C5	2.24	0.72
57:DA:2543:G:H2'	57:DA:2544:G:C8	2.25	0.72
57:DA:589:U:H2'	57:DA:590:A:H8	1.53	0.72
15:CO:63:ARG:HH22	57:DA:715:A:H5''	1.54	0.72
14:AN:22:LYS:HG3	14:AN:23:ARG:N	2.04	0.72
51:B3:54:LEU:O	51:B3:58:ILE:HG13	1.89	0.72
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:564:C:H6	53:CA:564:C:H5'	1.53	0.72
8:CH:77:VAL:HG12	8:CH:84:ILE:HG13	1.70	0.72
56:CP:44:SER:H	56:CP:46:LYS:NZ	1.87	0.72
57:DA:1731:G:H4'	57:DA:1732:C:OP1	1.88	0.72
57:DA:747:U:H2'	57:DA:2613:U:O4	1.89	0.72
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.54	0.72
1:AA:275:G:O2'	1:AA:276:G:H5'	1.89	0.72
1:AA:495:A:H4'	1:AA:496:A:O5'	1.89	0.72
1:AA:967:C:H1'	9:AI:129:ARG:HH22	1.55	0.72
9:AI:6:TYR:HE2	9:AI:17:ARG:HB2	1.55	0.72
18:AR:56:ARG:O	18:AR:60:ARG:HB2	1.88	0.72
44:BW:37:VAL:HG13	44:BW:55:ASP:O	1.89	0.72
53:CA:1279:G:H5''	10:CJ:9:ARG:HH22	1.54	0.72
53:CA:373:A:HO2'	53:CA:374:A:H5'	1.52	0.72
53:CA:547:A:H4'	53:CA:548:G:O5'	1.89	0.72
53:CA:66:A:H2'	53:CA:66:A:N3	2.04	0.72
54:CG:137:ARG:CZ	54:CG:138:GLU:HG2	2.18	0.72
57:DA:1965:C:H3'	57:DA:1966:A:C5'	2.20	0.72
57:DA:1998:A:H2'	57:DA:1999:C:H6	1.53	0.72
57:DA:2287:A:O2'	57:DA:2288:A:H3'	1.89	0.72
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.24	0.72
1:AA:1239:A:H4'	1:AA:1240:U:C5'	2.20	0.72
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.71	0.72
13:AM:106:ARG:HH21	13:AM:112:ARG:HB3	1.55	0.72
20:AT:8:LYS:HA	20:AT:11:ILE:HG23	1.72	0.72
21:AU:40:PRO:HA	21:AU:43:GLU:HB2	1.70	0.72
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.19	0.72
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.42	0.72
19:CS:35:ARG:HH21	19:CS:51:HIS:HD2	1.36	0.72
21:CU:35:GLU:HG3	21:CU:36:PHE:H	1.54	0.72
57:DA:1135:C:N4	57:DA:1139:G:C6	2.57	0.72
57:DA:73:A:H8	57:DA:73:A:O5'	1.72	0.72
57:DA:874:G:H5'	57:DA:875:G:OP2	1.89	0.72
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.70	0.72
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.54	0.72
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.25	0.72
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.18	0.72
44:BW:37:VAL:HG12	44:BW:38:ARG:N	2.03	0.72
57:DA:125:A:H4'	57:DA:126:A:OP2	1.90	0.72
57:DA:2215:C:O2'	57:DA:2216:G:H8	1.72	0.72
58:DB:40:U:O2	58:DB:43:C:H2'	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	1.89	0.72
57:DA:2619:C:H5'	25:DD:157:LYS:HA	1.69	0.72
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.70	0.72
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.71	0.72
6:AF:38:ARG:HG3	6:AF:39:LEU:N	2.03	0.72
13:AM:26:LYS:O	13:AM:30:LYS:HG3	1.88	0.72
22:BA:528:A:C2	22:BA:2043:C:H4'	2.24	0.72
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.24	0.72
27:BF:64:PRO:HA	27:BF:88:VAL:HG23	1.71	0.72
47:BZ:23:LEU:HD21	47:BZ:53:MET:CE	2.20	0.72
53:CA:1249:C:H2'	53:CA:1250:A:H5''	1.70	0.72
8:CH:54:THR:O	8:CH:56:PRO:HD3	1.88	0.72
55:CM:12:LYS:HE3	55:CM:12:LYS:HA	1.71	0.72
57:DA:1639:C:C2'	57:DA:1640:A:H5''	2.19	0.72
57:DA:1956:U:O2	57:DA:1985:C:H4'	1.89	0.72
57:DA:1127:A:N7	57:DA:2488:G:O2'	2.21	0.72
57:DA:249:C:H4'	57:DA:250:G:O5'	1.90	0.72
57:DA:247:G:H4'	57:DA:386:G:C5	2.25	0.72
57:DA:980:A:H5''	57:DA:981:A:OP2	1.90	0.72
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.37	0.72
1:AA:1468:A:C3'	1:AA:1469:C:H5''	2.18	0.72
22:BA:215:G:H4'	22:BA:216:A:OP1	1.88	0.72
22:BA:2615:U:O2'	22:BA:2616:C:H5'	1.90	0.72
22:BA:387:U:H4'	22:BA:388:G:O5'	1.88	0.72
22:BA:1070:A:C2	30:BI:9:LYS:HG2	2.24	0.72
33:BL:27:LEU:CD1	33:BL:27:LEU:H	1.91	0.72
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.72	0.72
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.25	0.72
53:CA:254:G:H5''	17:CQ:70:LYS:CD	2.20	0.72
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.71	0.72
57:DA:684:G:H5'	50:D2:16:HIS:CE1	2.24	0.72
57:DA:2267:A:H61	57:DA:2272:U:H3	1.35	0.72
57:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.38	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.90	0.72
22:BA:933:A:H2'	22:BA:933:A:N3	2.04	0.72
53:CA:794:A:H8	53:CA:794:A:H5''	1.55	0.72
57:DA:445:C:O2'	57:DA:446:G:O4'	2.08	0.72
57:DA:738:G:H2'	57:DA:739:A:C8	2.25	0.72
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.70	0.72
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.25	0.72
22:BA:2309:A:O2'	22:BA:2310:C:H5'	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:73:ILE:O	26:BE:73:ILE:HG12	1.90	0.72
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.72	0.72
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.54	0.72
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	2.04	0.72
57:DA:2199:A:H2'	57:DA:2200:C:H6	1.55	0.72
57:DA:921:C:H2'	57:DA:922:C:H5'	1.71	0.72
58:DB:42:C:H41	59:DF:87:LYS:HZ3	1.37	0.72
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.72	0.72
1:AA:684:U:H1'	11:AK:39:ASN:O	1.90	0.71
1:AA:686:U:O2'	1:AA:687:A:C8	2.41	0.71
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.09	0.71
22:BA:1045:C:C5'	22:BA:1046:A:H5'	2.20	0.71
22:BA:481:G:C4	22:BA:507:A:C2	2.78	0.71
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.72	0.71
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	2.05	0.71
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.71
38:BQ:60:TRP:O	38:BQ:63:ARG:HG3	1.90	0.71
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.69	0.71
53:CA:198:G:O6	53:CA:220:G:C4	2.43	0.71
5:CE:29:ILE:CG2	5:CE:30:PHE:N	2.51	0.71
17:CQ:18:LYS:HD3	17:CQ:48:GLU:OE2	1.89	0.71
57:DA:2502:G:H5'	57:DA:2503:A:H5''	1.72	0.71
57:DA:5:A:C2	57:DA:2899:A:C2	2.78	0.71
57:DA:876:C:H3'	57:DA:877:A:H8	1.54	0.71
34:DM:34:LYS:HD3	34:DM:131:VAL:HG21	1.72	0.71
4:AD:195:ASN:O	4:AD:196:GLU:HG3	1.89	0.71
5:AE:156:ARG:O	5:AE:158:LYS:N	2.22	0.71
9:AI:51:LEU:HB3	9:AI:56:MET:CG	2.20	0.71
22:BA:2199:A:H5''	22:BA:2199:A:C8	2.25	0.71
22:BA:855:G:H1'	44:BW:23:LYS:HD3	1.72	0.71
40:BS:73:LYS:CE	40:BS:73:LYS:HA	2.20	0.71
53:CA:1014:A:H4'	19:CS:13:HIS:CD2	2.25	0.71
53:CA:1228:C:O2'	53:CA:1229:A:H8	1.71	0.71
53:CA:1284:C:H5''	53:CA:1285:A:OP2	1.90	0.71
4:CD:34:GLU:O	4:CD:36:ALA:N	2.22	0.71
5:CE:14:LEU:HD22	5:CE:59:ILE:HD13	1.70	0.71
57:DA:1616:A:OP1	57:DA:1616:A:H2'	1.90	0.71
57:DA:2199:A:H2'	57:DA:2200:C:C6	2.24	0.71
57:DA:279:A:H61	57:DA:361:G:H1'	1.55	0.71
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.72	0.71
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:101:PHE:CE2	25:BD:203:VAL:HG22	2.24	0.71
27:BF:134:GLN:HE21	27:BF:134:GLN:N	1.88	0.71
28:BG:11:PRO:O	28:BG:14:VAL:HG22	1.90	0.71
53:CA:1304:G:H1'	53:CA:1333:A:H61	1.55	0.71
3:CC:166:TRP:O	3:CC:167:TYR:HB2	1.90	0.71
53:CA:876:C:C1'	8:CH:11:THR:HG21	2.20	0.71
57:DA:1346:G:O2'	57:DA:1347:A:C8	2.39	0.71
57:DA:1870:C:H5''	57:DA:1871:A:H2	1.53	0.71
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.55	0.71
32:DK:97:THR:O	32:DK:98:ARG:HB2	1.90	0.71
5:AE:14:LEU:O	5:AE:14:LEU:HD13	1.91	0.71
20:AT:68:LYS:HB2	20:AT:68:LYS:NZ	2.06	0.71
33:BL:29:LYS:HG2	33:BL:30:THR:CG2	2.20	0.71
42:BU:43:LYS:O	42:BU:57:ILE:HA	1.90	0.71
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.25	0.71
53:CA:239:U:H5'	53:CA:239:U:H6	1.55	0.71
3:CC:18:ASN:HD21	3:CC:53:ARG:NH1	1.88	0.71
12:CL:113:ARG:HB3	12:CL:118:VAL:HB	1.70	0.71
55:CM:13:HIS:HB2	55:CM:43:LYS:HE2	1.72	0.71
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HE3	1.72	0.71
19:CS:35:ARG:HA	19:CS:70:LEU:HB2	1.72	0.71
21:CU:16:ARG:CG	21:CU:19:LYS:HG2	2.16	0.71
57:DA:2689:U:H4'	57:DA:2690:U:OP2	1.88	0.71
25:DD:107:VAL:H	25:DD:206:ALA:H	1.36	0.71
57:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.55	0.71
39:DR:1:MET:HG3	39:DR:101:ILE:HD12	1.71	0.71
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.38	0.71
1:AA:701:U:O2	1:AA:701:U:H2'	1.88	0.71
22:BA:1310:G:H2'	22:BA:1311:G:H5'	1.71	0.71
44:BW:9:THR:HG22	44:BW:10:ARG:HH11	1.55	0.71
53:CA:1383:C:O2'	53:CA:1384:C:H5'	1.89	0.71
53:CA:665:A:H2'	53:CA:725:G:H22	1.53	0.71
53:CA:752:G:H1'	53:CA:754:C:H41	1.55	0.71
54:CG:64:ALA:HB2	54:CG:126:ALA:HB1	1.73	0.71
8:CH:54:THR:HG23	8:CH:55:LYS:H	1.54	0.71
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.56	0.71
57:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.90	0.71
57:DA:185:G:H2'	57:DA:186:G:C8	2.25	0.71
57:DA:678:C:H2'	57:DA:679:C:C6	2.26	0.71
59:DF:39:VAL:HA	59:DF:49:LEU:HG	1.71	0.71
59:DF:42:ALA:HB2	59:DF:49:LEU:HD21	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:13:ALA:O	41:DT:32:LEU:HB2	1.90	0.71
1:AA:205:A:H4'	1:AA:205:A:OP1	1.91	0.71
1:AA:68:G:C5	1:AA:69:G:H1'	2.25	0.71
22:BA:475:C:O2'	22:BA:476:G:H5'	1.90	0.71
53:CA:60:A:H4'	53:CA:61:G:O5'	1.89	0.71
53:CA:701:U:H4'	53:CA:702:A:H5''	1.71	0.71
57:DA:2893:A:H4'	57:DA:2894:G:O5'	1.89	0.71
57:DA:565:C:H2'	57:DA:566:U:O4'	1.89	0.71
57:DA:665:U:H2'	57:DA:666:A:C8	2.22	0.71
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.21	0.71
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.71	0.71
1:AA:559:A:H4'	1:AA:560:A:O5'	1.90	0.71
22:BA:2197:U:O3'	22:BA:2198:A:H2'	1.90	0.71
22:BA:62:U:H4'	22:BA:63:A:OP1	1.90	0.71
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.04	0.71
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.21	0.71
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.91	0.71
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.72	0.71
53:CA:1378:C:H3'	53:CA:1379:G:H5''	1.72	0.71
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.88	0.71
57:DA:1799:G:H4'	57:DA:1800:C:O5'	1.90	0.71
57:DA:1936:A:H2'	57:DA:1945:G:O6	1.90	0.71
57:DA:249:C:H2'	57:DA:249:C:O2	1.91	0.71
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.72	0.71
57:DA:1808:A:N7	45:DX:27:ARG:NH1	2.39	0.71
1:AA:563:A:H1'	1:AA:566:G:O2'	1.90	0.71
5:AE:83:PRO:HB3	5:AE:96:GLN:NE2	2.05	0.71
36:BO:111:ARG:O	36:BO:113:ALA:N	2.24	0.71
37:BP:4:ILE:CG2	37:BP:5:LYS:H	2.03	0.71
53:CA:1005:A:C5	53:CA:1006:G:H1'	2.25	0.71
53:CA:1293:C:H2'	53:CA:1294:G:C8	2.25	0.71
53:CA:6:G:N3	53:CA:6:G:C2'	2.54	0.71
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.05	0.71
57:DA:2379:G:H2'	57:DA:2380:C:H6	1.54	0.71
57:DA:739:A:H4'	57:DA:740:C:OP1	1.89	0.71
58:DB:67:G:HO2'	58:DB:68:C:H6	1.37	0.71
59:DF:64:PRO:HA	59:DF:88:VAL:HG22	1.72	0.71
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	1.72	0.71
1:AA:1447:A:H5''	1:AA:1448:C:H5	1.56	0.71
1:AA:642:A:H2'	1:AA:643:C:C6	2.26	0.71
4:AD:21:LYS:HD3	4:AD:21:LYS:O	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:105:ILE:HD11	5:AE:123:LEU:HD23	1.71	0.71
13:AM:88:LEU:HD23	13:AM:91:ARG:HH21	1.56	0.71
22:BA:1432:G:O2'	22:BA:1433:A:H5'	1.90	0.71
22:BA:2211:A:OP2	22:BA:2211:A:H4'	1.90	0.71
22:BA:704:G:O2'	22:BA:705:A:OP2	2.09	0.71
24:BC:212:TRP:O	24:BC:212:TRP:CD1	2.44	0.71
31:BJ:18:VAL:HG23	31:BJ:54:ILE:HD13	1.72	0.71
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.89	0.71
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.58	0.71
42:BU:97:SER:O	42:BU:98:ASN:HB3	1.91	0.71
45:BX:38:TRP:HB2	45:BX:45:PHE:CE2	2.26	0.71
2:CB:89:PHE:HE2	2:CB:152:ASP:HB2	1.56	0.71
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.56	0.71
57:DA:1036:G:C2	57:DA:1037:G:C8	2.79	0.71
57:DA:1645:G:OP1	57:DA:1646:C:H5'	1.90	0.71
57:DA:2815:C:H2'	57:DA:2816:G:C8	2.26	0.71
57:DA:455:C:H3'	57:DA:456:C:H5'	1.71	0.71
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.04	0.71
1:AA:688:G:H8	1:AA:688:G:H5''	1.54	0.71
8:AH:29:SER:HB3	8:AH:32:LYS:HG3	1.72	0.71
20:AT:82:ILE:O	20:AT:86:ALA:HB3	1.91	0.71
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.05	0.71
6:CF:18:VAL:O	6:CF:22:ILE:HG12	1.91	0.71
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.73	0.71
1:AA:110:C:H2'	1:AA:111:G:C8	2.26	0.70
2:AB:22:TRP:CG	2:AB:22:TRP:O	2.42	0.70
5:AE:120:HIS:O	5:AE:121:ASN:HB3	1.89	0.70
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.56	0.70
12:AL:86:VAL:O	12:AL:86:VAL:HG12	1.91	0.70
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	2.21	0.70
33:BL:9:ALA:O	33:BL:12:SER:HB3	1.90	0.70
44:BW:19:ARG:NH1	44:BW:22:VAL:HG11	2.06	0.70
3:CC:76:ILE:HD11	3:CC:102:ILE:HD11	1.72	0.70
57:DA:2311:A:H5'	57:DA:2312:U:C5	2.26	0.70
57:DA:781:A:H2'	57:DA:1777:U:H1'	1.73	0.70
57:DA:973:A:OP1	57:DA:973:A:H8	1.74	0.70
57:DA:782:A:N7	24:DC:219:VAL:HG21	2.05	0.70
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.71	0.70
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.73	0.70
57:DA:2296:U:H5	36:DO:9:ARG:NH2	1.89	0.70
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.31	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:209:U:H5'	1:AA:210:C:OP2	1.92	0.70
1:AA:89:U:O2'	1:AA:90:C:H5''	1.91	0.70
22:BA:506:G:H4'	22:BA:507:A:H5'	1.73	0.70
22:BA:752:A:N7	22:BA:1781:U:C1'	2.54	0.70
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.73	0.70
22:BA:2485:G:H5''	34:BM:45:GLN:HE21	1.55	0.70
53:CA:1530:G:O2'	53:CA:1531:A:C8	2.44	0.70
53:CA:765:G:C8	53:CA:812:G:C2	2.79	0.70
53:CA:960:U:H4'	53:CA:961:U:C5'	2.21	0.70
3:CC:126:ARG:HE	3:CC:126:ARG:HA	1.55	0.70
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	1.73	0.70
53:CA:1328:C:H5''	55:CM:27:THR:HG21	1.73	0.70
57:DA:1812:U:H2'	57:DA:1813:G:C8	2.26	0.70
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.73	0.70
4:AD:69:ARG:HE	4:AD:69:ARG:HA	1.56	0.70
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG3	1.73	0.70
22:BA:1870:C:H4'	22:BA:1871:A:OP1	1.91	0.70
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.56	0.70
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.88	0.70
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.22	0.70
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.21	0.70
41:BT:61:LEU:HA	63:BT:101:HOH:O	1.90	0.70
42:BU:80:ASP:OD1	42:BU:95:PHE:HB3	1.90	0.70
57:DA:727:A:H2'	57:DA:728:G:C8	2.25	0.70
58:DB:45:A:H2'	58:DB:46:A:C8	2.26	0.70
57:DA:1076:C:O2	30:DI:92:PRO:HG2	1.90	0.70
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.06	0.70
1:AA:1227:A:H2'	1:AA:1227:A:N3	2.03	0.70
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.27	0.70
2:AB:101:THR:HG22	2:AB:174:GLU:OE1	1.92	0.70
2:AB:209:VAL:HG23	2:AB:210:THR:H	1.56	0.70
5:AE:80:LEU:HD12	5:AE:146:MET:SD	2.31	0.70
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.71	0.70
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.55	0.70
53:CA:1129:C:O2'	53:CA:1130:A:C8	2.45	0.70
53:CA:1134:G:C6	53:CA:1135:U:H1'	2.26	0.70
53:CA:1226:C:N4	55:CM:102:LYS:HA	2.06	0.70
57:DA:1997:C:O2'	57:DA:1998:A:H5'	1.91	0.70
57:DA:2093:G:C2	57:DA:2094:A:N7	2.60	0.70
58:DB:12:C:H4'	58:DB:13:G:OP1	1.90	0.70
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.08	0.70
57:DA:923:G:H1'	44:DW:23:LYS:NZ	2.06	0.70
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.56	0.70
1:AA:887:G:C2'	1:AA:888:G:H5'	2.21	0.70
1:AA:92:U:H2'	1:AA:93:U:H6	1.56	0.70
17:AQ:11:VAL:HG12	17:AQ:12:VAL:N	2.07	0.70
22:BA:216:A:H2'	22:BA:217:A:H8	1.56	0.70
22:BA:915:C:H6	22:BA:915:C:H5''	1.56	0.70
23:BB:30:C:C2'	23:BB:31:C:H5'	2.21	0.70
24:BC:106:PRO:HG3	24:BC:141:HIS:CE1	2.26	0.70
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.73	0.70
36:BO:76:LYS:O	36:BO:80:GLU:HG2	1.92	0.70
53:CA:268:U:H2'	53:CA:269:C:C6	2.26	0.70
53:CA:520:A:H2'	53:CA:521:G:O4'	1.92	0.70
54:CG:107:ALA:O	54:CG:118:ARG:HB3	1.92	0.70
9:CI:75:ALA:HA	9:CI:78:ILE:HD12	1.73	0.70
10:CJ:84:VAL:HG23	10:CJ:85:ASP:N	2.02	0.70
57:DA:1723:G:H2'	57:DA:1724:G:H8	1.55	0.70
57:DA:1734:G:H2'	57:DA:1735:A:C8	2.26	0.70
57:DA:2269:G:H2'	57:DA:2270:A:H8	1.56	0.70
57:DA:2657:A:H2'	57:DA:2658:C:C6	2.26	0.70
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.57	0.70
33:DL:73:ILE:O	33:DL:105:ILE:HA	1.91	0.70
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.55	0.70
45:DX:11:PRO:HB2	45:DX:27:ARG:HH21	1.56	0.70
2:AB:218:ALA:HA	2:AB:221:ARG:HH21	1.56	0.70
22:BA:1603:A:H5''	22:BA:1604:C:OP2	1.91	0.70
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.05	0.70
42:BU:15:GLY:O	42:BU:17:ASP:N	2.24	0.70
44:BW:19:ARG:HH22	44:BW:22:VAL:HG21	1.55	0.70
53:CA:1151:A:O3'	10:CJ:70:HIS:CE1	2.44	0.70
57:DA:1204:A:H4'	57:DA:1205:A:O5'	1.91	0.70
57:DA:1324:G:O2'	57:DA:1616:A:C6	2.44	0.70
57:DA:1341:G:O2'	57:DA:1398:C:H5'	1.92	0.70
57:DA:1440:U:H2'	57:DA:1441:G:C8	2.23	0.70
57:DA:339:U:H2'	57:DA:340:A:C8	2.27	0.70
57:DA:687:C:H2'	57:DA:688:U:C6	2.26	0.70
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.21	0.70
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.26	0.70
59:DF:76:PHE:H	59:DF:76:PHE:HD2	1.38	0.70
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:992:C:H5'	39:DR:87:GLN:HE22	1.55	0.70
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	1.92	0.70
1:AA:496:A:H2'	1:AA:496:A:N3	2.04	0.70
12:AL:23:LEU:HB2	12:AL:58:ASN:HD22	1.56	0.70
21:AU:36:PHE:HD1	21:AU:39:LYS:HB3	1.56	0.70
22:BA:2830:C:O2'	22:BA:2831:G:H5'	1.91	0.70
33:BL:65:GLY:O	33:BL:66:PHE:HB3	1.90	0.70
53:CA:1239:A:H5''	54:CG:118:ARG:HH12	1.55	0.70
2:CB:209:VAL:O	2:CB:213:LEU:HB2	1.92	0.70
4:CD:8:LEU:CD2	4:CD:21:LYS:HD2	2.21	0.70
57:DA:1343:G:H2'	57:DA:1344:U:C5	2.26	0.70
57:DA:1511:G:O2'	57:DA:1512:C:H6	1.75	0.70
57:DA:2328:A:H2'	57:DA:2329:U:C6	2.27	0.70
26:DE:35:TYR:CE2	26:DE:177:PRO:HD2	2.27	0.70
31:DJ:75:TYR:HD1	31:DJ:84:ILE:HD11	1.54	0.70
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.27	0.70
6:AF:4:TYR:O	6:AF:63:ASN:HA	1.91	0.70
22:BA:1347:A:C2'	22:BA:1348:C:H5'	2.22	0.70
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.91	0.70
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.43	0.70
22:BA:2813:A:H2	22:BA:2887:A:H61	1.40	0.70
22:BA:321:U:O2'	22:BA:340:A:O2'	2.08	0.70
22:BA:372:G:H5''	45:BX:60:LYS:HE3	1.73	0.70
23:BB:12:C:H4'	23:BB:13:G:OP1	1.90	0.70
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.74	0.70
37:BP:96:LEU:HB3	37:BP:99:LEU:HD22	1.74	0.70
43:BV:80:HIS:CD2	43:BV:83:LYS:HB2	2.27	0.70
53:CA:72:A:O2'	53:CA:73:C:H5'	1.90	0.70
53:CA:93:U:H2'	53:CA:95:C:H5	1.56	0.70
20:CT:30:PHE:HE2	20:CT:52:GLU:HG2	1.57	0.70
57:DA:2210:U:H4'	57:DA:2211:A:C5'	2.21	0.70
57:DA:79:C:H2'	57:DA:80:G:O4'	1.91	0.70
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.05	0.70
1:AA:214:C:H2'	1:AA:215:C:H6	1.56	0.70
16:AP:51:ARG:NH2	16:AP:53:ASP:HB2	2.06	0.70
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.07	0.70
27:BF:142:TYR:O	27:BF:145:VAL:HG22	1.92	0.70
35:BN:71:ARG:HH21	35:BN:71:ARG:HG3	1.55	0.70
42:BU:25:LYS:O	42:BU:26:ASN:HB3	1.91	0.70
53:CA:518:C:H2'	53:CA:530:G:N7	2.07	0.70
53:CA:84:U:O2'	53:CA:85:U:H5'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:144:ILE:HD12	4:CD:177:MET:HB3	1.73	0.70
5:CE:79:THR:HA	5:CE:121:ASN:OD1	1.91	0.70
6:CF:42:TRP:HE1	6:CF:61:LEU:HD23	1.57	0.70
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	1.57	0.70
57:DA:1539:U:O2'	57:DA:1540:G:O4'	2.10	0.70
57:DA:2716:C:H2'	57:DA:2717:C:C6	2.27	0.70
57:DA:866:A:HO2'	57:DA:867:C:H6	1.39	0.70
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.57	0.70
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.07	0.70
1:AA:214:C:H2'	1:AA:215:C:C6	2.27	0.70
3:AC:139:ASN:HA	3:AC:142:ARG:HB2	1.74	0.70
5:AE:104:ILE:HG13	5:AE:114:LEU:HD23	1.73	0.70
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.74	0.70
20:AT:25:SER:O	20:AT:28:ARG:HG3	1.92	0.70
20:AT:47:GLN:HE21	20:AT:82:ILE:HD13	1.56	0.70
22:BA:197:A:H62	22:BA:2430:A:H2'	1.56	0.70
41:BT:39:THR:O	41:BT:39:THR:HG22	1.91	0.70
53:CA:177:G:O2'	53:CA:1448:C:H5''	1.92	0.70
53:CA:913:A:H4'	53:CA:914:A:O5'	1.92	0.70
10:CJ:38:GLY:O	10:CJ:40:ILE:HD12	1.92	0.70
12:CL:66:ILE:HD13	12:CL:73:LEU:HD12	1.74	0.70
17:CQ:61:ARG:HG2	17:CQ:75:VAL:HG11	1.73	0.70
57:DA:2056:G:H21	48:D0:1:ALA:N	1.90	0.70
57:DA:216:A:O2'	57:DA:217:A:C8	2.25	0.70
57:DA:2389:G:H5''	57:DA:2390:U:H5'	1.74	0.70
57:DA:2798:U:H5'	57:DA:2800:A:N7	2.07	0.70
57:DA:513:A:H2'	57:DA:514:A:C8	2.27	0.70
58:DB:67:G:O2'	58:DB:68:C:H6	1.75	0.70
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.59	0.70
1:AA:1160:G:O6	1:AA:1181:G:C6	2.44	0.69
1:AA:914:A:H2'	1:AA:915:A:H8	1.55	0.69
2:AB:108:GLN:HE21	2:AB:108:GLN:N	1.89	0.69
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.73	0.69
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	1.99	0.69
22:BA:163:C:OP1	22:BA:163:C:H6	1.75	0.69
22:BA:1734:G:O2'	22:BA:1735:A:H8	1.75	0.69
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	1.92	0.69
37:BP:3:ILE:HD13	37:BP:3:ILE:O	1.91	0.69
40:BS:73:LYS:CB	40:BS:106:VAL:HB	2.22	0.69
47:BZ:29:ARG:O	47:BZ:30:ARG:HG3	1.92	0.69
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:91:U:O2'	53:CA:92:U:H6	1.75	0.69
53:CA:1074:G:C4'	2:CB:102:ASN:HB2	2.22	0.69
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.91	0.69
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	2.06	0.69
57:DA:607:U:O4	57:DA:619:G:H2'	1.92	0.69
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	1.72	0.69
3:AC:21:TRP:HB3	3:AC:58:ARG:H	1.56	0.69
5:AE:97:PRO:HA	5:AE:122:VAL:HG12	1.75	0.69
7:AG:114:SER:HB3	7:AG:117:LEU:HG	1.74	0.69
9:AI:112:ARG:HH22	10:AJ:64:GLN:NE2	1.91	0.69
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.46	0.69
22:BA:1060:U:C4'	22:BA:1061:U:H5'	2.21	0.69
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.74	0.69
22:BA:789:A:OP1	22:BA:790:U:C5	2.45	0.69
22:BA:979:A:H2'	22:BA:982:C:H42	1.57	0.69
27:BF:126:ASN:OD1	27:BF:156:THR:HA	1.91	0.69
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.74	0.69
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.57	0.69
53:CA:1151:A:H2'	53:CA:1152:A:H8	1.57	0.69
53:CA:502:A:H1'	53:CA:550:G:H5'	1.74	0.69
4:CD:106:PHE:CD1	4:CD:158:LEU:HD21	2.27	0.69
5:CE:24:VAL:HG23	5:CE:26:GLY:H	1.57	0.69
54:CG:30:MET:O	54:CG:31:VAL:HB	1.91	0.69
9:CI:10:ARG:HG3	9:CI:14:SER:O	1.91	0.69
57:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.27	0.69
57:DA:2076:U:H5''	57:DA:2238:G:H22	1.58	0.69
57:DA:965:C:H5''	63:DA:3344:HOH:O	1.92	0.69
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.92	0.69
1:AA:788:U:H2'	1:AA:789:U:C6	2.27	0.69
1:AA:546:A:P	4:AD:68:GLU:HB2	2.31	0.69
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.91	0.69
22:BA:1671:U:O2	22:BA:1673:G:H8	1.75	0.69
22:BA:1673:G:H2'	22:BA:1674:G:H5'	1.74	0.69
22:BA:915:C:O2'	22:BA:916:G:H5'	1.92	0.69
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.72	0.69
27:BF:134:GLN:HG2	27:BF:135:ILE:N	2.07	0.69
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.74	0.69
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.22	0.69
2:CB:114:LYS:CA	2:CB:117:GLU:HG2	2.19	0.69
8:CH:102:VAL:HG23	8:CH:125:ILE:HD12	1.74	0.69
10:CJ:51:VAL:HB	14:CN:80:ARG:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2001:C:H4'	57:DA:2689:U:H2'	1.75	0.69
57:DA:70:G:O2'	57:DA:71:A:C5'	2.40	0.69
57:DA:84:A:C5	57:DA:103:A:N6	2.60	0.69
57:DA:851:C:H2'	57:DA:852:U:C6	2.27	0.69
57:DA:1826:G:OP2	24:DC:220:ARG:HB3	1.91	0.69
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.73	0.69
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.74	0.69
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.58	0.69
7:AG:69:ARG:HG3	7:AG:95:ARG:HG2	1.73	0.69
8:AH:6:ILE:HB	8:AH:76:ARG:HH12	1.56	0.69
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.55	0.69
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.57	0.69
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	1.73	0.69
53:CA:940:C:H5'	54:CG:101:ARG:NH2	2.06	0.69
19:CS:54:ARG:HG2	19:CS:55:GLN:H	1.56	0.69
57:DA:1722:A:N6	57:DA:1738:G:H1'	2.08	0.69
57:DA:1799:G:C8	24:DC:179:GLU:OE1	2.46	0.69
57:DA:2408:U:HO2'	57:DA:2409:G:H8	0.78	0.69
57:DA:2847:U:C2'	57:DA:2848:G:H5'	2.21	0.69
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.27	0.69
3:AC:146:LYS:HB2	3:AC:202:PHE:CD2	2.28	0.69
5:AE:106:ALA:CB	5:AE:124:ALA:HB3	2.21	0.69
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.74	0.69
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.72	0.69
22:BA:802:A:H2'	22:BA:803:U:H6	1.58	0.69
23:BB:66:A:H4'	23:BB:67:G:OP1	1.92	0.69
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.75	0.69
53:CA:1071:C:H2'	53:CA:1072:G:C8	2.27	0.69
2:CB:160:LEU:HB2	2:CB:182:VAL:HG12	1.73	0.69
20:CT:4:LYS:HB3	20:CT:6:ALA:H	1.57	0.69
57:DA:172:A:H2'	57:DA:173:A:C8	2.27	0.69
57:DA:2060:A:O2'	63:DA:3511:HOH:O	2.09	0.69
57:DA:765:C:H2'	57:DA:766:U:H6	1.57	0.69
57:DA:95:A:O2'	46:DY:41:HIS:HD2	1.75	0.69
57:DA:975:A:HO2'	57:DA:976:G:H8	1.41	0.69
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.73	0.69
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.07	0.69
2:AB:13:VAL:HG22	2:AB:207:ARG:HH22	1.58	0.69
22:BA:529:A:H4'	22:BA:530:G:OP1	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:52:HIS:NE2	24:BC:218:THR:HG23	2.06	0.69
33:BL:109:LYS:CG	33:BL:126:ARG:HB3	2.20	0.69
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.74	0.69
37:BP:28:LYS:HE3	37:BP:28:LYS:H	1.58	0.69
40:BS:19:LEU:O	48:B0:21:LEU:HD12	1.92	0.69
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.07	0.69
5:CE:38:VAL:HG12	5:CE:39:GLY:N	2.08	0.69
5:CE:154:ALA:HB1	8:CH:65:PHE:CE2	2.27	0.69
57:DA:1453:A:H4'	57:DA:1454:C:OP2	1.92	0.69
57:DA:1734:G:H2'	57:DA:1735:A:H8	1.58	0.69
26:DE:35:TYR:HE2	26:DE:177:PRO:HD2	1.55	0.69
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.57	0.69
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.58	0.69
57:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.72	0.69
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.05	0.69
1:AA:111:G:O6	1:AA:330:C:N4	2.26	0.69
1:AA:1468:A:H2'	1:AA:1469:C:H5''	1.75	0.69
1:AA:473:U:H2'	1:AA:474:G:H8	1.57	0.69
19:AS:50:VAL:HG21	19:AS:70:LEU:HB3	1.75	0.69
22:BA:2873:A:H5''	22:BA:2874:C:OP2	1.91	0.69
24:BC:129:LEU:HD23	24:BC:130:PRO:HD2	1.73	0.69
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	2.08	0.69
35:BN:38:LEU:O	35:BN:38:LEU:HD12	1.93	0.69
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.13	0.69
8:CH:76:ARG:HD3	8:CH:77:VAL:N	2.07	0.69
57:DA:2285:C:H5	49:D1:5:ARG:NH2	1.91	0.69
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.75	0.69
57:DA:1422:G:H4'	57:DA:1493:C:OP1	1.93	0.69
57:DA:78:U:O2'	57:DA:79:C:H5'	1.93	0.69
57:DA:975:A:O2'	57:DA:976:G:H8	1.76	0.69
58:DB:17:C:N4	58:DB:68:C:H42	1.91	0.69
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.75	0.69
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.23	0.69
37:DP:50:ARG:HB3	37:DP:57:ALA:N	2.07	0.69
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.74	0.69
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.74	0.69
1:AA:731:G:OP1	1:AA:766:A:H1'	1.93	0.69
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.92	0.69
49:B1:27:ARG:O	49:B1:30:PRO:HD3	1.92	0.69
22:BA:1315:C:OP2	63:BA:3762:HOH:O	2.11	0.69
22:BA:2383:G:H8	22:BA:2383:G:H5''	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:434:U:H4'	22:BA:435:C:OP1	1.92	0.69
25:BD:99:GLU:CG	25:BD:100:LEU:N	2.55	0.69
26:BE:79:ARG:HG2	26:BE:80:SER:N	2.07	0.69
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.74	0.69
32:BK:108:ARG:HH21	37:BP:34:GLY:HA3	1.58	0.69
39:BR:15:SER:H	39:BR:18:GLN:NE2	1.90	0.69
44:BW:45:HIS:HB2	44:BW:50:VAL:HG13	1.75	0.69
53:CA:794:A:H2'	53:CA:795:C:H6	1.57	0.69
56:CP:57:ILE:O	56:CP:61:VAL:HG23	1.91	0.69
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.91	0.69
57:DA:41:C:H2'	57:DA:42:A:C8	2.28	0.69
57:DA:746:U:H5''	57:DA:748:G:H5'	1.75	0.69
58:DB:8:C:H5''	36:DO:15:ARG:HH12	1.57	0.69
42:DU:92:VAL:HB	42:DU:101:THR:HG21	1.74	0.69
15:AO:2:LEU:HD22	15:AO:34:GLN:HG2	1.75	0.69
25:BD:182:ALA:C	25:BD:184:ARG:N	2.43	0.69
26:BE:79:ARG:CG	26:BE:80:SER:H	2.03	0.69
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	1.74	0.69
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.23	0.69
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.08	0.69
53:CA:822:U:H2'	53:CA:823:C:C6	2.26	0.69
4:CD:58:GLN:OE1	4:CD:58:GLN:HA	1.91	0.69
57:DA:1906:G:C8	57:DA:1929:G:H2'	2.27	0.69
57:DA:2860:A:H8	57:DA:2860:A:O5'	1.74	0.69
57:DA:2275:C:O2'	34:DM:84:LYS:HA	1.92	0.69
57:DA:508:A:N6	40:DS:9:HIS:CE1	2.60	0.69
1:AA:1095:U:O2'	1:AA:1096:C:O4'	2.10	0.69
1:AA:1409:C:O2'	1:AA:1410:A:H5'	1.93	0.69
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	1.92	0.69
31:BJ:6:ALA:HB2	31:BJ:45:THR:HG21	1.73	0.69
37:BP:51:ASN:O	37:BP:52:ARG:HG2	1.93	0.69
4:CD:24:VAL:HG23	4:CD:25:ARG:HB2	1.73	0.69
17:CQ:4:ILE:HG22	17:CQ:5:ARG:H	1.58	0.69
57:DA:1258:U:H2'	57:DA:1259:G:C8	2.28	0.69
57:DA:2666:C:H2'	57:DA:2667:C:H5'	1.75	0.69
57:DA:335:C:O2'	57:DA:336:C:H6	1.72	0.69
26:DE:75:SER:O	26:DE:78:TRP:HB2	1.91	0.69
28:DG:94:ARG:CZ	28:DG:105:SER:HB2	2.23	0.69
37:DP:87:ARG:NH1	37:DP:111:GLU:HG3	2.08	0.69
39:DR:23:GLU:O	39:DR:25:LEU:HD22	1.93	0.69
1:AA:891:U:O2'	1:AA:892:A:H5'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:137:VAL:HA	3:AC:148:ILE:HD13	1.74	0.69
50:B2:35:ARG:HG2	50:B2:42:LEU:HD11	1.73	0.69
22:BA:509:C:C5'	22:BA:509:C:H6	2.05	0.69
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.41	0.69
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE1	1.74	0.69
53:CA:373:A:H2'	53:CA:374:A:H8	1.58	0.69
4:CD:144:ILE:HG22	4:CD:145:ARG:O	1.93	0.69
54:CG:100:MET:H	54:CG:100:MET:CE	2.05	0.69
57:DA:1695:G:H8	24:DC:7:PRO:O	1.76	0.69
57:DA:2056:G:C2	57:DA:2057:G:C8	2.81	0.69
57:DA:2230:G:H1'	45:DX:31:ASN:HB3	1.74	0.69
57:DA:2581:G:H1	57:DA:2610:C:HO2'	1.40	0.69
57:DA:2614:A:H4'	57:DA:2615:U:OP1	1.93	0.69
57:DA:502:A:H5'	57:DA:503:A:OP2	1.92	0.69
57:DA:644:A:O2'	57:DA:645:C:H5'	1.91	0.69
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.08	0.69
1:AA:1050:G:O2'	1:AA:1051:C:H5'	1.93	0.68
1:AA:1063:C:H2'	1:AA:1064:G:H8	1.58	0.68
1:AA:536:C:H6	1:AA:536:C:H5'	1.58	0.68
22:BA:1011:G:H4'	22:BA:1012:U:OP1	1.93	0.68
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.93	0.68
32:BK:91:SER:O	32:BK:93:GLN:HB2	1.93	0.68
38:BQ:27:ARG:HH11	38:BQ:27:ARG:HG3	1.58	0.68
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.74	0.68
53:CA:495:A:C2	53:CA:496:A:C6	2.81	0.68
53:CA:499:A:C6	53:CA:547:A:C8	2.81	0.68
53:CA:961:U:O2'	53:CA:962:C:H6	1.69	0.68
54:CG:91:ARG:CG	54:CG:92:PRO:HD2	2.22	0.68
21:CU:28:LEU:O	21:CU:28:LEU:HD23	1.94	0.68
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.75	0.68
57:DA:1310:G:H2'	57:DA:1311:G:O4'	1.93	0.68
57:DA:1931:U:H2'	57:DA:1932:A:C8	2.27	0.68
57:DA:2771:C:H2'	57:DA:2772:C:C6	2.27	0.68
57:DA:2837:A:H2'	57:DA:2838:G:C8	2.28	0.68
57:DA:755:U:O2'	57:DA:756:A:H5'	1.93	0.68
57:DA:960:A:H2'	57:DA:962:G:H5'	1.74	0.68
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.74	0.68
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.75	0.68
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.57	0.68
1:AA:21:G:H2'	1:AA:22:G:C8	2.28	0.68
1:AA:642:A:H2'	1:AA:643:C:H6	1.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:82:G:N2	1:AA:84:U:H3	1.91	0.68
1:AA:958:A:C6	1:AA:959:A:N1	2.61	0.68
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.08	0.68
22:BA:1319:C:O2'	22:BA:1320:C:H5'	1.93	0.68
22:BA:532:A:HO2'	22:BA:2021:C:H5	1.40	0.68
22:BA:2352:A:N1	44:BW:30:VAL:HG21	2.08	0.68
22:BA:855:G:N3	44:BW:23:LYS:HD3	2.09	0.68
25:BD:104:VAL:HA	25:BD:106:LYS:NZ	2.08	0.68
28:BG:95:ALA:HB2	28:BG:104:LEU:HD23	1.75	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.74	0.68
31:BJ:65:THR:CG2	31:BJ:68:LYS:HE3	2.22	0.68
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.92	0.68
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.93	0.68
43:BV:61:LEU:O	43:BV:71:LYS:HA	1.92	0.68
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.00	0.68
53:CA:1348:U:HO2'	53:CA:1349:A:H8	1.42	0.68
53:CA:198:G:O2'	53:CA:199:A:H8	1.76	0.68
57:DA:1401:G:H2'	57:DA:1402:U:H6	1.56	0.68
57:DA:1299:G:H22	57:DA:1640:A:H5'	1.56	0.68
57:DA:1739:A:H2'	57:DA:1740:G:C8	2.27	0.68
57:DA:375:G:H5''	57:DA:375:G:C8	2.27	0.68
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.92	0.68
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.75	0.68
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.92	0.68
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.57	0.68
1:AA:1138:G:O2'	1:AA:1139:G:H4'	1.93	0.68
1:AA:1349:A:H2'	1:AA:1350:A:C8	2.28	0.68
1:AA:841:C:C2	1:AA:843:U:H5'	2.28	0.68
22:BA:215:G:H4'	22:BA:216:A:H4'	1.76	0.68
22:BA:620:G:H4'	22:BA:621:A:O5'	1.93	0.68
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.23	0.68
40:BS:84:ARG:CB	40:BS:96:ILE:HD11	2.16	0.68
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.28	0.68
53:CA:566:G:H4'	53:CA:567:G:OP1	1.94	0.68
53:CA:87:C:O2'	53:CA:88:U:H4'	1.93	0.68
53:CA:998:C:H2'	53:CA:999:C:H6	1.58	0.68
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.74	0.68
21:CU:19:LYS:N	21:CU:19:LYS:HZ3	1.91	0.68
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.93	0.68
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.58	0.68
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	1.91	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.73	0.68
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.57	0.68
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.58	0.68
1:AA:736:C:H2'	1:AA:737:C:C6	2.28	0.68
2:AB:95:TRP:HZ2	2:AB:100:LEU:HD23	1.57	0.68
9:AI:113:LYS:HG3	9:AI:119:LYS:HA	1.75	0.68
12:AL:27:PRO:HB2	12:AL:28:GLN:OE1	1.91	0.68
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.91	0.68
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.93	0.68
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.58	0.68
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.93	0.68
53:CA:818:G:C2'	53:CA:819:A:H5''	2.24	0.68
4:CD:56:GLU:HA	4:CD:56:GLU:OE1	1.92	0.68
55:CM:64:VAL:HG12	55:CM:65:GLU:HG3	1.76	0.68
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.08	0.68
57:DA:13:A:O2'	57:DA:15:G:N7	2.27	0.68
57:DA:2426:A:H3'	57:DA:2427:C:H5'	1.75	0.68
57:DA:2507:C:H1'	57:DA:2583:G:C2	2.29	0.68
32:DK:7:MET:HE2	32:DK:7:MET:HA	1.75	0.68
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.93	0.68
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.92	0.68
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.56	0.68
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.75	0.68
4:AD:160:LEU:H	4:AD:160:LEU:HD13	1.58	0.68
5:AE:14:LEU:HB2	5:AE:36:THR:HG22	1.74	0.68
9:AI:32:ARG:HG2	9:AI:36:GLN:CB	2.22	0.68
24:BC:141:HIS:HD2	24:BC:192:GLY:O	1.75	0.68
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.75	0.68
53:CA:753:A:H4'	53:CA:754:C:O5'	1.93	0.68
53:CA:1190:G:H3'	3:CC:2:GLN:O	1.94	0.68
9:CI:24:ASN:O	9:CI:61:ASP:HA	1.94	0.68
14:CN:66:THR:HG23	14:CN:82:LYS:HE3	1.75	0.68
56:CP:44:SER:H	56:CP:46:LYS:HZ3	1.42	0.68
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.19	0.68
57:DA:1062:G:O4'	57:DA:1088:A:N7	2.27	0.68
57:DA:2683:C:O2'	57:DA:2684:U:H5'	1.93	0.68
57:DA:2813:A:H2'	57:DA:2814:A:C8	2.27	0.68
59:DF:136:ILE:O	59:DF:137:PHE:O	2.12	0.68
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.76	0.68
1:AA:1278:G:O5'	1:AA:1279:G:H5'	1.94	0.68
1:AA:182:A:N3	1:AA:184:G:C8	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.75	0.68
1:AA:202:G:N2	1:AA:466:A:H61	1.91	0.68
6:AF:3:HIS:H	6:AF:92:THR:CG2	2.04	0.68
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.76	0.68
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.24	0.68
24:BC:143:VAL:HG12	24:BC:144:GLU:O	1.94	0.68
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.94	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.92	0.68
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.09	0.68
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.76	0.68
53:CA:1148:U:O2'	53:CA:1149:C:H5'	1.94	0.68
53:CA:1181:G:H2'	53:CA:1182:G:C8	2.29	0.68
54:CG:22:LEU:HA	54:CG:25:PHE:CB	2.19	0.68
57:DA:1398:C:HO2'	57:DA:1399:C:H6	1.42	0.68
57:DA:181:A:H2	57:DA:434:U:H1'	1.59	0.68
57:DA:36:G:C6	57:DA:445:C:N4	2.62	0.68
57:DA:945:A:H5'	57:DA:946:C:OP2	1.94	0.68
1:AA:1130:A:H5''	1:AA:1130:A:C8	2.29	0.68
1:AA:1167:A:C8	1:AA:1169:A:N6	2.62	0.68
1:AA:486:U:H5''	1:AA:486:U:C6	2.29	0.68
1:AA:577:G:O2'	1:AA:578:C:H5'	1.92	0.68
3:AC:119:ILE:HG21	3:AC:197:VAL:HG11	1.75	0.68
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.24	0.68
53:CA:608:A:H2'	53:CA:609:A:O4'	1.93	0.68
12:CL:50:LYS:N	12:CL:50:LYS:HD2	2.09	0.68
57:DA:1263:U:O2'	48:D0:7:PRO:HD2	1.93	0.68
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.57	0.68
57:DA:1290:C:HO2'	57:DA:1291:C:H6	0.75	0.68
57:DA:1751:U:H2'	57:DA:1752:C:C6	2.28	0.68
57:DA:298:G:H2'	57:DA:339:U:O4	1.93	0.68
57:DA:765:C:H2'	57:DA:766:U:C6	2.28	0.68
57:DA:784:G:HO2'	57:DA:785:G:H8	1.38	0.68
59:DF:43:ILE:HG12	59:DF:77:LYS:HD3	1.76	0.68
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.76	0.68
57:DA:2232:C:P	45:DX:26:ARG:NH1	2.67	0.68
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.71	0.68
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.29	0.68
2:AB:42:LEU:HG	2:AB:43:GLU:HG3	1.76	0.68
11:AK:42:GLY:HA3	11:AK:73:VAL:HG12	1.74	0.68
43:BV:10:LYS:NZ	43:BV:11:GLU:HG3	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.94	0.68
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.08	0.68
57:DA:512:G:OP2	57:DA:1235:G:H5'	1.93	0.68
57:DA:184:C:H2'	57:DA:185:G:C8	2.29	0.68
57:DA:1935:G:H1'	57:DA:1964:G:N2	2.08	0.68
57:DA:2149:U:O2'	57:DA:2150:C:C6	2.42	0.68
57:DA:391:A:H2'	57:DA:392:U:H6	1.59	0.68
1:AA:243:A:C4'	1:AA:244:U:H5''	2.20	0.68
16:AP:73:ALA:O	16:AP:77:GLU:HB2	1.93	0.68
22:BA:1050:A:C2	22:BA:2751:G:C4	2.82	0.68
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.08	0.68
22:BA:962:G:N2	22:BA:2250:G:H1	1.92	0.68
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.76	0.68
35:BN:23:ASN:H	35:BN:23:ASN:ND2	1.92	0.68
37:BP:105:LYS:HA	37:BP:108:ARG:NH2	2.09	0.68
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.93	0.68
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.18	0.68
53:CA:1090:U:H2'	53:CA:1091:U:H6	1.59	0.68
53:CA:1113:C:H2'	53:CA:1114:C:H6	1.59	0.68
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.58	0.68
57:DA:1024:G:H2'	57:DA:1025:G:C8	2.29	0.68
57:DA:1827:U:H2'	57:DA:1828:G:O4'	1.92	0.68
57:DA:2626:C:O2'	57:DA:2627:G:H5'	1.93	0.68
57:DA:2850:A:O2'	57:DA:2851:A:H5'	1.93	0.68
57:DA:397:U:O2'	57:DA:398:C:O4'	2.12	0.68
57:DA:672:C:O2'	26:DE:77:ILE:HD11	1.92	0.68
57:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.74	0.68
1:AA:206:C:H2'	1:AA:207:C:O4'	1.94	0.68
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.76	0.68
1:AA:1458:G:H5'	20:AT:26:MET:HB3	1.77	0.68
20:AT:77:ASN:HD22	20:AT:78:LEU:N	1.92	0.68
22:BA:1259:G:O2'	22:BA:1260:A:H5'	1.94	0.68
22:BA:2798:U:H2'	22:BA:2798:U:OP2	1.94	0.68
22:BA:947:A:HO2'	22:BA:984:A:H2	1.41	0.68
25:BD:182:ALA:O	25:BD:184:ARG:N	2.26	0.68
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.73	0.68
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.29	0.68
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.76	0.68
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.08	0.68
44:BW:26:GLY:O	44:BW:27:GLY:C	2.32	0.68
53:CA:1147:C:HO2'	53:CA:1148:U:H6	1.40	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:142:G:C2	53:CA:143:A:H1'	2.28	0.68
57:DA:1815:A:H4'	57:DA:1816:C:OP1	1.93	0.68
57:DA:2135:A:H3'	57:DA:2136:G:C5'	2.20	0.68
57:DA:2662:A:H2'	57:DA:2663:G:O4'	1.94	0.68
58:DB:94:A:OP1	43:DV:19:ARG:HD3	1.94	0.68
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.24	0.68
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.23	0.68
25:DD:9:VAL:O	37:DP:4:ILE:HD11	1.93	0.68
5:AE:80:LEU:HD23	5:AE:122:VAL:CG1	2.16	0.67
22:BA:1417:C:O2'	22:BA:1418:G:H5'	1.93	0.67
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.76	0.67
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.74	0.67
53:CA:1051:C:O2'	53:CA:1052:U:O5'	2.07	0.67
53:CA:738:C:H2'	53:CA:739:C:C6	2.23	0.67
53:CA:413:G:C6	4:CD:32:LYS:HE3	2.30	0.67
54:CG:24:LYS:O	54:CG:28:ILE:HG12	1.92	0.67
9:CI:49:GLN:N	9:CI:50:PRO:HD2	2.10	0.67
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.57	0.67
57:DA:1668:A:O4'	57:DA:1669:A:C2	2.47	0.67
57:DA:832:U:P	33:DL:38:GLN:H	2.17	0.67
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.76	0.67
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.47	0.67
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.75	0.67
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.74	0.67
1:AA:1239:A:N6	1:AA:1299:A:H62	1.92	0.67
9:AI:112:ARG:NH2	10:AJ:64:GLN:HE22	1.93	0.67
22:BA:1045:C:H5''	22:BA:1046:A:H5'	1.75	0.67
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.59	0.67
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.57	0.67
22:BA:284:U:H2'	22:BA:285:G:C8	2.29	0.67
22:BA:480:A:OP2	42:BU:43:LYS:HD2	1.94	0.67
25:BD:24:VAL:HA	25:BD:191:GLY:H	1.59	0.67
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.76	0.67
44:BW:50:VAL:O	44:BW:52:CYS:N	2.26	0.67
53:CA:1071:C:H2'	53:CA:1072:G:H8	1.60	0.67
53:CA:1152:A:H2'	53:CA:1153:G:H8	1.58	0.67
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.77	0.67
53:CA:1458:G:O2'	20:CT:22:SER:CB	2.41	0.67
20:CT:42:ASP:HB3	20:CT:45:ALA:HB3	1.76	0.67
57:DA:1056:G:H1'	57:DA:1103:A:N6	2.09	0.67
57:DA:2145:C:H3'	57:DA:2147:A:OP2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:712:G:N2	57:DA:720:U:H1'	2.09	0.67
58:DB:17:C:H42	58:DB:68:C:N4	1.91	0.67
33:DL:63:LYS:HB3	51:D3:12:ARG:HD2	1.76	0.67
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.24	0.67
1:AA:408:A:OP1	4:AD:109:THR:HG21	1.95	0.67
1:AA:548:G:H2'	1:AA:549:C:C6	2.29	0.67
53:CA:571:U:H5''	53:CA:572:A:OP2	1.94	0.67
53:CA:1348:U:H4'	9:CI:121:ARG:HG3	1.75	0.67
19:CS:49:ALA:HB1	19:CS:56:HIS:HB3	1.75	0.67
57:DA:1181:U:H2'	57:DA:1182:G:C8	2.30	0.67
57:DA:1635:A:H2'	57:DA:1636:U:H6	1.58	0.67
57:DA:45:G:H5'	57:DA:46:G:H5'	1.77	0.67
57:DA:531:C:H4'	57:DA:532:A:C8	2.30	0.67
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.74	0.67
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.58	0.67
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.15	0.67
1:AA:1094:G:HO2'	1:AA:1095:U:P	2.18	0.67
19:AS:51:HIS:CD2	19:AS:53:GLY:H	2.12	0.67
52:B4:10:LEU:HB2	52:B4:33:HIS:CD2	2.29	0.67
22:BA:1779:U:C5	22:BA:1784:A:N7	2.62	0.67
22:BA:714:U:H5'	22:BA:715:A:OP2	1.93	0.67
22:BA:800:A:H4'	22:BA:801:G:O5'	1.92	0.67
31:BJ:44:TYR:O	31:BJ:45:THR:HG22	1.94	0.67
3:CC:76:ILE:HA	3:CC:83:VAL:HG13	1.76	0.67
9:CI:114:LYS:HB2	9:CI:117:LEU:HD12	1.76	0.67
9:CI:118:ARG:NH2	9:CI:122:ARG:HE	1.90	0.67
14:CN:47:LEU:O	14:CN:50:LEU:HG	1.93	0.67
57:DA:1056:G:N2	57:DA:1102:C:H5	1.92	0.67
57:DA:2389:G:C5'	57:DA:2390:U:H5'	2.23	0.67
57:DA:2282:G:H1'	57:DA:2390:U:C5	2.28	0.67
57:DA:2756:U:O2'	57:DA:2757:A:H5'	1.95	0.67
57:DA:475:C:H2'	57:DA:476:G:C8	2.30	0.67
57:DA:876:C:H3'	57:DA:877:A:C8	2.28	0.67
57:DA:1695:G:H8	24:DC:7:PRO:HB2	1.59	0.67
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.94	0.67
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.29	0.67
1:AA:265:G:C2'	1:AA:266:G:H5'	2.25	0.67
1:AA:265:G:H2'	1:AA:266:G:H5'	1.76	0.67
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.58	0.67
1:AA:1373:G:H5''	7:AG:35:LYS:HB2	1.74	0.67
9:AI:46:VAL:HA	9:AI:49:GLN:HG3	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:14:ASP:HB3	10:AJ:17:LEU:HB3	1.76	0.67
22:BA:1343:G:H2'	22:BA:1344:U:H6	1.60	0.67
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.30	0.67
27:BF:161:SER:OG	27:BF:164:GLU:HG3	1.95	0.67
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.76	0.67
34:BM:8:LYS:HD2	34:BM:8:LYS:N	2.07	0.67
43:BV:48:MET:O	43:BV:51:GLN:HG3	1.94	0.67
10:CJ:15:HIS:HE1	10:CJ:68:ARG:HD3	1.57	0.67
14:CN:46:LYS:HE3	19:CS:10:ILE:HB	1.77	0.67
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.08	0.67
57:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.60	0.67
1:AA:345:C:O2'	32:BK:116:ILE:HD13	1.94	0.67
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.77	0.67
51:B3:40:LYS:HA	51:B3:43:LEU:HD12	1.75	0.67
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.90	0.67
53:CA:996:A:N1	53:CA:1046:A:H5'	2.09	0.67
4:CD:176:LYS:HE2	4:CD:178:GLU:CD	2.14	0.67
53:CA:1298:U:H5	54:CG:113:LYS:HA	1.58	0.67
19:CS:40:PHE:CB	19:CS:41:PRO:HD2	2.23	0.67
20:CT:23:ARG:HB3	20:CT:60:GLN:HE21	1.59	0.67
57:DA:1303:G:O2'	57:DA:1304:A:H8	1.76	0.67
57:DA:1590:A:H2'	57:DA:1591:A:C8	2.29	0.67
57:DA:1695:G:H2'	57:DA:1696:G:O4'	1.95	0.67
57:DA:1965:C:H5'	57:DA:1966:A:H5''	1.75	0.67
57:DA:324:A:C2	57:DA:325:G:H1'	2.29	0.67
57:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.59	0.67
59:DF:104:THR:HG22	59:DF:105:ILE:HG13	1.76	0.67
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.08	0.67
1:AA:246:A:H4'	1:AA:247:G:OP1	1.93	0.67
1:AA:363:A:OP1	12:AL:57:THR:HG21	1.95	0.67
22:BA:1157:G:N2	22:BA:1158:C:C2	2.63	0.67
22:BA:143:C:HO2'	22:BA:144:A:H8	1.42	0.67
22:BA:2032:G:N7	63:BA:3534:HOH:O	2.28	0.67
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.59	0.67
41:BT:32:LEU:N	41:BT:83:ALA:HB3	2.08	0.67
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.25	0.67
53:CA:1268:G:N2	53:CA:1327:C:H1'	2.09	0.67
53:CA:1513:A:H2'	53:CA:1514:G:H8	1.60	0.67
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.08	0.67
57:DA:1635:A:H5'	57:DA:1635:A:H8	1.58	0.67
57:DA:1915:U:O2'	57:DA:1916:A:H5'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2271:G:O2'	57:DA:2272:U:H5'	1.94	0.67
57:DA:2360:G:C1'	33:DL:60:ARG:HH21	2.06	0.67
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.76	0.67
1:AA:461:A:H3'	1:AA:461:A:N3	2.08	0.67
2:AB:40:ILE:HG21	2:AB:201:GLY:H	1.58	0.67
4:AD:33:ILE:O	4:AD:34:GLU:HB3	1.95	0.67
8:AH:93:LYS:HE3	8:AH:116:ARG:HH12	1.60	0.67
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.96	0.67
22:BA:1327:A:OP2	63:BA:3612:HOH:O	2.13	0.67
22:BA:1434:A:H2'	22:BA:1435:G:C8	2.28	0.67
22:BA:13:A:O2'	22:BA:15:G:N7	2.28	0.67
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.77	0.67
32:BK:63:VAL:HG11	32:BK:103:VAL:HG12	1.77	0.67
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.24	0.67
53:CA:1250:A:H2'	53:CA:1251:A:O4'	1.94	0.67
53:CA:1399:C:H4'	53:CA:1400:C:O5'	1.95	0.67
53:CA:523:A:H61	12:CL:49:ARG:HH12	1.41	0.67
53:CA:985:C:C4	53:CA:986:U:O4	2.48	0.67
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.59	0.67
53:CA:1239:A:H3'	54:CG:118:ARG:HH22	1.60	0.67
14:CN:40:ARG:NH1	19:CS:6:LYS:HB2	2.10	0.67
57:DA:1669:A:C2'	57:DA:1669:A:N3	2.58	0.67
57:DA:2429:G:H3'	57:DA:2429:G:OP2	1.95	0.67
24:DC:181:ARG:HG3	24:DC:265:PHE:O	1.95	0.67
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.30	0.67
1:AA:251:G:H4'	1:AA:252:U:O5'	1.94	0.67
1:AA:300:A:H1'	1:AA:565:U:O2	1.94	0.67
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.60	0.67
9:AI:40:ARG:CA	9:AI:44:ARG:HB3	2.23	0.67
1:AA:624:C:H4'	16:AP:10:GLY:O	1.95	0.67
22:BA:204:A:H4'	22:BA:205:G:OP1	1.94	0.67
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.60	0.67
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.52	0.67
53:CA:1200:C:O2'	53:CA:1201:A:OP2	2.12	0.67
53:CA:183:C:O2'	53:CA:184:G:H5'	1.94	0.67
53:CA:995:C:H42	53:CA:1046:A:H1'	1.58	0.67
2:CB:184:ALA:HB3	2:CB:195:VAL:HG21	1.76	0.67
21:AU:10:PRO:HG2	3:CC:71:ARG:NH2	2.10	0.67
57:DA:1328:A:H2'	57:DA:1330:C:C4	2.30	0.67
57:DA:1590:A:H2'	57:DA:1591:A:H8	1.60	0.67
57:DA:655:A:O2'	57:DA:656:G:C8	2.48	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:71:VAL:O	40:DS:71:VAL:HG13	1.95	0.67
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.10	0.67
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.95	0.67
1:AA:1533:C:H3'	1:AA:1534:A:H5''	1.77	0.67
1:AA:259:G:H2'	1:AA:260:G:C8	2.30	0.67
1:AA:953:G:C2	1:AA:954:G:H1'	2.28	0.67
4:AD:99:ASN:O	4:AD:103:ARG:HB2	1.95	0.67
8:AH:81:GLY:O	17:AQ:35:LYS:HE2	1.95	0.67
22:BA:1799:G:H4'	22:BA:1800:C:O5'	1.94	0.67
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.78	0.67
22:BA:811:U:O2'	22:BA:1250:G:H2'	1.95	0.67
22:BA:1082:U:H5'	30:BI:117:THR:O	1.95	0.67
32:BK:5:GLN:O	32:BK:6:THR:HB	1.93	0.67
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.58	0.67
53:CA:239:U:C6	53:CA:239:U:H5'	2.30	0.67
53:CA:92:U:H2'	53:CA:93:U:C5	2.30	0.67
57:DA:1345:C:OP2	57:DA:1345:C:H3'	1.94	0.67
57:DA:481:G:O2'	57:DA:507:A:N6	2.27	0.67
57:DA:704:G:H1'	57:DA:727:A:N6	2.09	0.67
57:DA:705:A:N6	57:DA:726:G:H1'	2.10	0.67
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.77	0.67
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.15	0.67
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	1.75	0.67
35:DN:22:ARG:O	35:DN:22:ARG:HG2	1.95	0.67
1:AA:1025:U:H5''	1:AA:1026:G:H5'	1.78	0.66
1:AA:1068:G:O2'	1:AA:1069:C:H5'	1.95	0.66
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.66
4:AD:167:PRO:HB2	4:AD:170:LEU:HD11	1.77	0.66
7:AG:52:ARG:HH12	7:AG:121:ASN:HD21	1.42	0.66
22:BA:1305:C:O2	22:BA:1305:C:H2'	1.95	0.66
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	1.96	0.66
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.66	0.66
53:CA:245:U:H5''	53:CA:245:U:H6	1.60	0.66
53:CA:313:A:H2'	53:CA:314:C:H6	1.60	0.66
4:CD:167:PRO:HB3	4:CD:169:TRP:CH2	2.30	0.66
54:CG:92:PRO:HA	54:CG:95:ARG:HB2	1.77	0.66
57:DA:1038:G:N1	57:DA:1039:A:C5	2.63	0.66
57:DA:1300:G:H5''	57:DA:1301:A:H5'	1.77	0.66
57:DA:492:A:H2'	57:DA:493:G:C8	2.29	0.66
57:DA:511:U:H4'	57:DA:1235:G:H4'	1.76	0.66
1:AA:1316:G:H5''	1:AA:1317:C:OP2	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1452:C:H4'	1:AA:1453:G:C4	2.31	0.66
4:AD:68:GLU:O	4:AD:72:ARG:HG2	1.95	0.66
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.76	0.66
22:BA:1695:G:C8	24:BC:7:PRO:HG2	2.30	0.66
22:BA:277:G:H4'	22:BA:278:A:N7	2.10	0.66
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.29	0.66
28:BG:137:LYS:HA	28:BG:140:ILE:HD11	1.76	0.66
54:CG:142:ARG:O	54:CG:146:ALA:HB3	1.94	0.66
57:DA:1565:C:O2'	57:DA:1566:A:O5'	2.13	0.66
57:DA:1324:G:H1'	57:DA:1616:A:H62	1.59	0.66
57:DA:571:U:C5	57:DA:575:A:C6	2.84	0.66
57:DA:602:A:H1'	57:DA:656:G:N2	2.09	0.66
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.25	0.66
1:AA:1281:C:O2'	1:AA:1282:C:H5'	1.95	0.66
22:BA:1378:A:O2'	22:BA:1379:U:O5'	2.13	0.66
22:BA:2207:C:H2'	22:BA:2208:C:H6	1.59	0.66
22:BA:2275:C:O2'	34:BM:84:LYS:HA	1.95	0.66
22:BA:65:U:H2'	22:BA:66:C:C6	2.30	0.66
22:BA:918:A:H4'	23:BB:97:C:O2	1.95	0.66
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.75	0.66
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.92	0.66
33:BL:77:ILE:HD11	33:BL:108:ALA:HB1	1.76	0.66
53:CA:1225:A:H4'	19:CS:77:ARG:NH1	2.10	0.66
53:CA:143:A:N3	53:CA:143:A:H2'	2.11	0.66
53:CA:245:U:H6	53:CA:245:U:C5'	2.09	0.66
53:CA:807:A:H2'	53:CA:808:C:C6	2.31	0.66
3:CC:190:THR:HG22	3:CC:191:THR:H	1.59	0.66
5:CE:35:LEU:HD11	5:CE:136:VAL:HG11	1.77	0.66
19:CS:35:ARG:HH21	19:CS:51:HIS:CD2	2.14	0.66
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.61	0.66
57:DA:1311:G:H1'	57:DA:1313:U:O4	1.95	0.66
57:DA:553:G:H2'	57:DA:554:U:O4'	1.95	0.66
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.77	0.66
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.76	0.66
43:DV:80:HIS:HD2	43:DV:82:TYR:H	1.41	0.66
57:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.76	0.66
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.60	0.66
22:BA:1110:G:HO2'	22:BA:1111:A:H8	1.44	0.66
22:BA:1414:C:C4	22:BA:1415:U:H5	2.14	0.66
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.30	0.66
22:BA:503:A:H5'	22:BA:505:A:OP1	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.77	0.66
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.25	0.66
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.31	0.66
53:CA:173:U:OP1	53:CA:198:G:H4'	1.96	0.66
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.77	0.66
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	1.95	0.66
57:DA:1676:A:H2'	57:DA:1677:A:O4'	1.96	0.66
57:DA:2707:U:H2'	57:DA:2708:G:H8	1.59	0.66
57:DA:568:U:H2'	57:DA:570:G:OP2	1.95	0.66
57:DA:642:U:H2'	57:DA:644:A:OP2	1.94	0.66
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.77	0.66
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.09	0.66
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.78	0.66
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.77	0.66
22:BA:1694:C:H4'	22:BA:1695:G:O5'	1.95	0.66
22:BA:1809:A:H2'	22:BA:1810:A:C8	2.30	0.66
22:BA:1859:U:H2'	22:BA:1860:G:C8	2.30	0.66
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.30	0.66
22:BA:346:A:C2	22:BA:347:A:H1'	2.29	0.66
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	1.95	0.66
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.95	0.66
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.95	0.66
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.59	0.66
38:BQ:26:ALA:HB1	38:BQ:30:VAL:CG2	2.26	0.66
42:BU:86:PHE:CE1	42:BU:101:THR:HG21	2.30	0.66
53:CA:878:A:OP1	8:CH:79:ARG:HB2	1.94	0.66
9:CI:71:ILE:CD1	9:CI:72:SER:H	2.09	0.66
11:CK:27:ASN:HA	11:CK:57:SER:HB3	1.77	0.66
12:CL:80:LEU:HD23	12:CL:97:VAL:HG21	1.78	0.66
57:DA:1808:A:O3'	57:DA:1809:A:H8	1.77	0.66
57:DA:2214:C:O2'	57:DA:2215:C:C5'	2.43	0.66
57:DA:2271:G:H2'	57:DA:2272:U:C6	2.31	0.66
57:DA:243:U:HO2'	57:DA:244:A:H8	1.41	0.66
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.11	0.66
25:DD:8:LYS:HB2	25:DD:201:LEU:CD1	2.24	0.66
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.78	0.66
2:AB:71:THR:O	2:AB:72:LYS:HG2	1.95	0.66
3:AC:134:LYS:HE3	3:AC:138:GLN:NE2	2.11	0.66
52:B4:10:LEU:CD1	52:B4:33:HIS:HD2	2.04	0.66
22:BA:1475:G:O2'	22:BA:1476:U:P	2.54	0.66
42:BU:82:VAL:O	42:BU:94:PHE:O	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.76	0.66
53:CA:344:A:H5''	53:CA:345:C:H5	1.60	0.66
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.96	0.66
57:DA:1274:A:O2'	57:DA:1275:A:H5''	1.95	0.66
57:DA:1440:U:O2'	57:DA:1441:G:H5'	1.95	0.66
57:DA:624:C:O2'	57:DA:657:U:H5''	1.95	0.66
57:DA:878:A:H4'	57:DA:898:C:H42	1.60	0.66
25:DD:48:ILE:HG22	25:DD:84:LEU:HD23	1.77	0.66
40:DS:51:LEU:O	40:DS:55:ILE:HD13	1.96	0.66
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.61	0.66
1:AA:475:C:H2'	1:AA:476:U:C6	2.31	0.66
1:AA:666:G:H5'	1:AA:726:C:H1'	1.78	0.66
4:AD:94:GLU:HG2	4:AD:185:PRO:HG3	1.78	0.66
5:AE:103:GLY:HA2	5:AE:121:ASN:HA	1.78	0.66
6:AF:6:ILE:CG1	6:AF:89:VAL:HG23	2.20	0.66
49:B1:10:LEU:O	49:B1:19:PHE:HB2	1.96	0.66
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.77	0.66
22:BA:142:A:H2'	22:BA:143:C:C6	2.31	0.66
22:BA:2352:A:H5''	22:BA:2353:G:OP2	1.96	0.66
22:BA:990:A:H5'	22:BA:990:A:H8	1.59	0.66
25:BD:149:ASN:CG	25:BD:150:GLN:H	1.98	0.66
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	1.96	0.66
35:BN:8:ARG:HB3	35:BN:10:LEU:HD22	1.75	0.66
43:BV:19:ARG:O	43:BV:22:ALA:HB3	1.95	0.66
44:BW:18:LYS:CA	44:BW:36:ILE:HG13	2.14	0.66
53:CA:373:A:C8	53:CA:373:A:H5'	2.30	0.66
53:CA:734:G:N2	18:CR:63:TYR:CE2	2.64	0.66
57:DA:1008:A:H4'	57:DA:1009:A:OP1	1.95	0.66
57:DA:2015:A:C6	48:D0:2:VAL:HG11	2.31	0.66
57:DA:2283:C:O2'	57:DA:2284:A:H5'	1.95	0.66
57:DA:492:A:O2'	57:DA:493:G:H5'	1.95	0.66
25:DD:106:LYS:O	25:DD:107:VAL:HB	1.95	0.66
57:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.47	0.66
30:DI:51:GLY:O	30:DI:52:LEU:HB2	1.94	0.66
35:DN:98:LEU:O	35:DN:112:TYR:HB2	1.95	0.66
40:DS:66:ILE:H	40:DS:66:ILE:HD13	1.61	0.66
1:AA:272:C:H2'	1:AA:273:U:H6	1.60	0.66
1:AA:922:G:H2'	1:AA:923:A:C8	2.30	0.66
22:BA:2249:U:O4	63:BA:3509:HOH:O	2.13	0.66
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.29	0.66
25:BD:4:LEU:HD22	25:BD:101:PHE:HE1	1.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.31	0.66
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.78	0.66
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.78	0.66
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.25	0.66
44:BW:31:LEU:HD23	44:BW:31:LEU:N	2.09	0.66
45:BX:76:LYS:HG3	45:BX:77:TYR:H	1.60	0.66
53:CA:858:G:O6	53:CA:869:G:H3'	1.95	0.66
12:CL:97:VAL:O	12:CL:97:VAL:HG23	1.94	0.66
57:DA:140:C:H5'	57:DA:141:G:N2	2.10	0.66
57:DA:2307:G:H1'	57:DA:2308:G:C5	2.30	0.66
57:DA:2750:A:O2'	57:DA:2752:C:N4	2.29	0.66
57:DA:391:A:C6	57:DA:411:G:C2	2.84	0.66
58:DB:90:C:H6	58:DB:90:C:H5''	1.60	0.66
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	1.93	0.66
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.78	0.66
2:AB:76:SER:HB2	2:AB:92:ASN:HB2	1.77	0.66
7:AG:24:LYS:O	7:AG:28:ILE:HG12	1.96	0.66
22:BA:1461:C:O2'	22:BA:1462:C:H5'	1.96	0.66
22:BA:2336:A:N6	44:BW:40:ARG:HD2	2.10	0.66
23:BB:15:A:O2'	23:BB:16:G:H5'	1.96	0.66
25:BD:107:VAL:H	25:BD:206:ALA:N	1.92	0.66
22:BA:2571:U:O2'	25:BD:151:THR:HG21	1.96	0.66
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.11	0.66
44:BW:39:GLN:HE21	44:BW:43:LYS:H	1.42	0.66
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.31	0.66
9:CI:78:ILE:O	9:CI:82:ILE:HG13	1.96	0.66
10:CJ:15:HIS:HA	10:CJ:18:ILE:CG2	2.23	0.66
15:CO:81:ILE:HG22	15:CO:86:LEU:HB2	1.76	0.66
53:CA:277:C:OP1	17:CQ:44:HIS:HE1	1.78	0.66
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.61	0.66
57:DA:1079:C:H41	57:DA:1088:A:C5'	2.06	0.66
57:DA:1393:A:N6	41:DT:19:LYS:HB2	2.11	0.66
57:DA:574:A:C2	57:DA:2032:G:O2'	2.49	0.66
57:DA:2800:A:C4	57:DA:2801:G:H1'	2.30	0.66
57:DA:2887:A:H1'	48:D0:39:ARG:HH22	1.60	0.66
58:DB:57:A:O2'	58:DB:58:A:C8	2.41	0.66
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.30	0.66
33:DL:93:ASN:CG	33:DL:94:THR:H	1.98	0.66
43:DV:70:ILE:HD13	43:DV:70:ILE:N	2.10	0.66
1:AA:536:C:H2'	1:AA:537:G:C8	2.31	0.66
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1984:G:C6	22:BA:1985:C:C5	2.83	0.66
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	1.96	0.66
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.78	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
40:BS:24:ILE:HD12	40:BS:32:ALA:HA	1.78	0.66
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.11	0.66
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.61	0.66
53:CA:960:U:O2'	53:CA:1223:C:H4'	1.96	0.66
53:CA:1533:C:H2'	53:CA:1534:A:H5''	1.77	0.66
55:CM:12:LYS:HB3	55:CM:17:ALA:HB2	1.78	0.66
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.09	0.66
57:DA:1313:U:O2'	57:DA:1314:C:H5'	1.95	0.66
57:DA:2038:G:H2'	57:DA:2039:U:O4'	1.96	0.66
57:DA:2217:G:H2'	57:DA:2218:G:H8	1.61	0.66
57:DA:573:U:H4'	57:DA:574:A:OP1	1.96	0.66
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.09	0.66
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.63	0.66
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.78	0.66
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.95	0.66
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.58	0.66
4:AD:117:VAL:HG12	4:AD:130:ASN:O	1.96	0.65
6:AF:97:THR:O	6:AF:98:GLU:HG2	1.96	0.65
13:AM:89:ARG:HH11	13:AM:94:LEU:HB3	1.61	0.65
20:AT:43:LYS:CB	20:AT:86:ALA:HB1	2.19	0.65
50:B2:27:GLY:O	50:B2:30:VAL:HB	1.96	0.65
22:BA:1438:U:O2'	22:BA:1439:A:H5'	1.95	0.65
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.78	0.65
22:BA:409:G:O2'	22:BA:410:G:H5'	1.96	0.65
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	1.78	0.65
53:CA:961:U:OP1	53:CA:961:U:H3'	1.97	0.65
2:CB:160:LEU:HD22	2:CB:175:ALA:HB2	1.79	0.65
3:CC:161:ILE:H	3:CC:161:ILE:HD13	1.62	0.65
57:DA:1038:G:C2	57:DA:1039:A:N7	2.64	0.65
57:DA:1060:U:H1'	57:DA:1062:G:OP2	1.95	0.65
57:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.78	0.65
57:DA:158:U:H1'	57:DA:169:G:N2	2.11	0.65
57:DA:1714:U:H3'	57:DA:1715:G:C5'	2.26	0.65
57:DA:1796:U:H2'	57:DA:1797:G:C8	2.30	0.65
57:DA:207:A:H2'	57:DA:208:C:H6	1.58	0.65
57:DA:2311:A:H4'	57:DA:2312:U:OP2	1.94	0.65
57:DA:2896:C:O2'	57:DA:2897:U:H5'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	1.78	0.65
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	1.97	0.65
1:AA:204:G:H1'	1:AA:465:A:C2	2.31	0.65
11:AK:52:ARG:HD2	11:AK:56:LYS:HD3	1.79	0.65
16:AP:59:HIS:CE1	16:AP:63:GLN:HE22	2.13	0.65
17:AQ:29:LYS:HB2	17:AQ:36:PHE:CZ	2.31	0.65
52:B4:3:VAL:O	52:B4:4:ARG:O	2.14	0.65
22:BA:1450:G:C6	22:BA:1451:C:N4	2.64	0.65
22:BA:1885:A:H2'	22:BA:1886:U:H6	1.61	0.65
22:BA:2134:A:HO2'	22:BA:2135:A:H8	1.44	0.65
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.61	0.65
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.60	0.65
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.78	0.65
41:BT:9:LYS:HG3	41:BT:9:LYS:O	1.96	0.65
44:BW:39:GLN:HE21	44:BW:43:LYS:N	1.94	0.65
44:BW:37:VAL:HG22	44:BW:55:ASP:O	1.97	0.65
53:CA:1031:C:H5'	53:CA:1032:G:H5''	1.77	0.65
3:CC:26:LYS:HA	3:CC:26:LYS:HE3	1.77	0.65
57:DA:1011:G:H4'	57:DA:1012:U:OP1	1.96	0.65
57:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.76	0.65
58:DB:52:A:N6	36:DO:33:ARG:HE	1.93	0.65
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.10	0.65
37:DP:88:ARG:NE	37:DP:112:ARG:HH21	1.92	0.65
1:AA:373:A:H2'	1:AA:374:A:H8	1.61	0.65
3:AC:6:PRO:HG2	3:AC:183:TYR:CD2	2.31	0.65
7:AG:4:ARG:NE	7:AG:4:ARG:HA	2.12	0.65
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.78	0.65
50:B2:19:ARG:O	50:B2:23:ALA:HB2	1.97	0.65
22:BA:1131:G:C4	31:BJ:77:HIS:ND1	2.65	0.65
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.11	0.65
27:BF:98:PHE:O	27:BF:102:LEU:HB2	1.96	0.65
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.76	0.65
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.32	0.65
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.78	0.65
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.79	0.65
53:CA:1102:A:H5''	53:CA:1102:A:H8	1.60	0.65
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.96	0.65
53:CA:174:A:O2'	53:CA:175:C:H5'	1.96	0.65
53:CA:631:C:H3'	53:CA:632:U:H5'	1.77	0.65
14:CN:52:ARG:HA	14:CN:52:ARG:NE	2.12	0.65
20:CT:67:HIS:HB3	20:CT:68:LYS:HD2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:35:GLU:CG	21:CU:36:PHE:H	2.08	0.65
57:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.11	0.65
57:DA:1275:A:C2'	57:DA:1275:A:N3	2.59	0.65
57:DA:1413:A:H2'	57:DA:1414:C:C6	2.31	0.65
57:DA:1739:A:H2'	57:DA:1740:G:H8	1.59	0.65
57:DA:309:A:H1'	57:DA:329:G:C4	2.32	0.65
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.26	0.65
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	1.95	0.65
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.62	0.65
1:AA:275:G:H2'	1:AA:276:G:H8	1.62	0.65
1:AA:761:G:H2'	1:AA:762:U:H6	1.62	0.65
1:AA:76:G:H2'	1:AA:76:G:N3	2.11	0.65
38:BQ:100:PHE:HD1	39:BR:13:ARG:HH22	1.44	0.65
53:CA:109:A:C8	53:CA:327:A:O4'	2.50	0.65
53:CA:122:G:O2'	53:CA:123:U:H5'	1.97	0.65
53:CA:1301:U:O2'	53:CA:1302:C:C5	2.49	0.65
53:CA:456:A:H2'	53:CA:457:G:C8	2.32	0.65
53:CA:745:G:H2'	53:CA:746:A:C8	2.32	0.65
20:CT:24:ARG:HD3	20:CT:28:ARG:HH21	1.62	0.65
57:DA:2616:C:H2'	57:DA:2617:U:H6	1.60	0.65
57:DA:2:G:C6	57:DA:3:U:C4	2.84	0.65
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.11	0.65
59:DF:91:ARG:NH2	59:DF:91:ARG:HB3	2.11	0.65
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.60	0.65
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.77	0.65
1:AA:269:C:H2'	1:AA:270:A:C8	2.32	0.65
1:AA:596:A:N6	1:AA:645:G:C6	2.65	0.65
4:AD:106:PHE:CG	4:AD:144:ILE:HD11	2.32	0.65
5:AE:110:MET:O	5:AE:114:LEU:HB2	1.96	0.65
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.29	0.65
22:BA:2207:C:H2'	22:BA:2208:C:C6	2.31	0.65
22:BA:2654:A:H4'	22:BA:2655:G:OP1	1.96	0.65
22:BA:1392:A:H61	41:BT:18:GLU:CD	1.99	0.65
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.95	0.65
3:CC:118:SER:O	3:CC:122:GLN:HG2	1.97	0.65
10:CJ:5:ARG:HG2	10:CJ:79:PRO:HG3	1.78	0.65
17:CQ:75:VAL:O	17:CQ:76:ARG:HB3	1.97	0.65
53:CA:1525:G:OP1	21:CU:37:TYR:HD1	1.80	0.65
21:CU:37:TYR:O	21:CU:38:GLU:HG2	1.96	0.65
57:DA:1268:A:H2'	57:DA:1269:A:C8	2.32	0.65
57:DA:2379:G:H2'	57:DA:2380:C:C6	2.31	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2408:U:O2'	57:DA:2409:G:C8	2.43	0.65
57:DA:2426:A:H3'	57:DA:2427:C:C5'	2.25	0.65
57:DA:275:C:H2'	57:DA:276:U:O4'	1.97	0.65
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.77	0.65
58:DB:57:A:C6	59:DF:25:MET:CG	2.79	0.65
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.31	0.65
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.11	0.65
38:DQ:40:LYS:CD	38:DQ:44:TYR:HE2	2.06	0.65
41:DT:19:LYS:HE2	41:DT:23:ALA:HB3	1.79	0.65
44:DW:43:LYS:HD2	44:DW:79:ILE:HD11	1.77	0.65
1:AA:408:A:P	4:AD:109:THR:HG21	2.37	0.65
1:AA:896:C:H2'	1:AA:897:C:H6	1.62	0.65
5:AE:133:ILE:H	5:AE:133:ILE:HD12	1.61	0.65
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.97	0.65
22:BA:1416:G:O2'	22:BA:1417:C:H6	1.78	0.65
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.60	0.65
24:BC:16:VAL:N	24:BC:203:VAL:HG12	2.09	0.65
37:BP:57:ALA:HB1	37:BP:73:PHE:O	1.97	0.65
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.10	0.65
44:BW:45:HIS:N	44:BW:45:HIS:ND1	2.43	0.65
46:BY:47:ARG:CG	46:BY:47:ARG:HH21	2.08	0.65
57:DA:1255:U:O2'	57:DA:1256:G:OP1	2.15	0.65
57:DA:1613:G:C6	57:DA:1619:G:O6	2.50	0.65
57:DA:2756:U:H4'	57:DA:2757:A:O5'	1.97	0.65
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.38	0.65
11:AK:22:ILE:HG22	11:AK:31:VAL:HG13	1.77	0.65
11:AK:60:PHE:O	11:AK:63:GLN:HB3	1.96	0.65
17:AQ:22:VAL:HG21	17:AQ:60:ILE:HD11	1.79	0.65
20:AT:6:ALA:HB1	20:AT:9:ARG:HB2	1.78	0.65
22:BA:1059:G:H5''	22:BA:1060:U:H3'	1.79	0.65
22:BA:2752:C:H2'	22:BA:2753:A:C8	2.32	0.65
22:BA:638:G:H2'	22:BA:639:U:C6	2.32	0.65
22:BA:932:U:C4'	22:BA:933:A:H5''	2.24	0.65
22:BA:1266:G:H5''	40:BS:15:GLN:HE22	1.62	0.65
53:CA:471:U:H2'	53:CA:472:U:C6	2.30	0.65
3:CC:119:ILE:O	3:CC:123:LEU:HB2	1.97	0.65
4:CD:187:ARG:C	4:CD:189:ASP:H	2.00	0.65
5:CE:131:ASN:HD22	5:CE:132:PRO:CD	2.09	0.65
57:DA:164:C:O2'	57:DA:165:A:H5'	1.97	0.65
57:DA:312:G:H5'	57:DA:331:C:O2'	1.96	0.65
57:DA:532:A:H4'	57:DA:533:G:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.32	0.65
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.27	0.65
1:AA:210:C:H4'	1:AA:211:G:N2	2.12	0.65
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.62	0.65
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.10	0.65
22:BA:1936:A:C2	22:BA:1943:U:C5	2.84	0.65
25:BD:97:SER:HB3	25:BD:99:GLU:OE1	1.96	0.65
22:BA:675:A:OP1	26:BE:58:LYS:HE2	1.97	0.65
27:BF:7:TYR:O	27:BF:12:VAL:HG12	1.96	0.65
31:BJ:44:TYR:HD1	31:BJ:44:TYR:O	1.79	0.65
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.08	0.65
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.97	0.65
53:CA:1024:G:H2'	53:CA:1025:U:O4'	1.96	0.65
53:CA:1064:G:O2'	53:CA:1190:G:N2	2.28	0.65
53:CA:519:C:O2'	53:CA:520:A:C5'	2.44	0.65
8:CH:76:ARG:HD3	8:CH:77:VAL:H	1.62	0.65
9:CI:19:PHE:O	9:CI:63:TYR:HB3	1.96	0.65
11:CK:27:ASN:ND2	11:CK:27:ASN:H	1.94	0.65
57:DA:1252:G:H5''	63:DA:3286:HOH:O	1.97	0.65
57:DA:2212:A:C8	57:DA:2214:C:N4	2.65	0.65
57:DA:2408:U:C2	57:DA:2409:G:N7	2.65	0.65
57:DA:246:C:H2'	57:DA:247:G:H5'	1.79	0.65
1:AA:511:C:HO2'	1:AA:512:U:H5''	1.60	0.65
1:AA:82:G:N2	1:AA:84:U:N3	2.44	0.65
22:BA:684:G:OP1	50:B2:16:HIS:CD2	2.48	0.65
22:BA:2507:C:O2	22:BA:2507:C:H2'	1.97	0.65
22:BA:2663:G:H2'	22:BA:2664:G:H8	1.61	0.65
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.62	0.65
22:BA:2726:A:O2'	22:BA:2727:A:H5'	1.95	0.65
22:BA:540:C:O2'	22:BA:541:A:H5'	1.97	0.65
32:BK:2:ILE:HG21	32:BK:39:ILE:HD12	1.79	0.65
40:BS:24:ILE:HG23	40:BS:71:VAL:HG11	1.78	0.65
6:CF:43:GLY:HA2	6:CF:58:HIS:CE1	2.32	0.65
57:DA:1439:A:H1'	57:DA:1553:A:N6	2.12	0.65
57:DA:7:G:H2'	57:DA:8:C:O4'	1.97	0.65
58:DB:81:G:C5	58:DB:82:U:C5	2.85	0.65
59:DF:33:ILE:HB	59:DF:90:LEU:HB2	1.79	0.65
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	1.97	0.65
57:DA:251:A:H4'	33:DL:47:ARG:NH2	2.11	0.65
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.31	0.65
1:AA:701:U:O2'	1:AA:702:A:OP2	2.15	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:31:CYS:O	4:AD:32:LYS:HB2	1.95	0.65
10:AJ:14:ASP:CB	10:AJ:17:LEU:HB3	2.27	0.65
18:AR:19:GLU:HG3	18:AR:54:LEU:HD22	1.79	0.65
22:BA:2485:G:H5''	34:BM:45:GLN:NE2	2.12	0.65
22:BA:733:G:C8	22:BA:761:A:N6	2.65	0.65
25:BD:99:GLU:CG	25:BD:100:LEU:H	2.09	0.65
40:BS:51:LEU:O	40:BS:55:ILE:HG13	1.97	0.65
53:CA:748:G:H2'	53:CA:749:A:C8	2.32	0.65
3:CC:117:ASP:HA	3:CC:120:THR:HB	1.79	0.65
56:CP:35:ARG:HH12	56:CP:38:PHE:HB3	1.61	0.65
57:DA:1521:G:C6	57:DA:1522:A:N6	2.65	0.65
57:DA:859:G:N2	57:DA:916:G:H2'	2.11	0.65
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.61	0.65
40:DS:52:GLU:O	40:DS:55:ILE:HB	1.97	0.65
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.77	0.65
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.12	0.65
46:DY:4:LYS:H	46:DY:4:LYS:HD3	1.62	0.65
5:AE:83:PRO:HB3	5:AE:96:GLN:HE21	1.62	0.64
11:AK:42:GLY:HA3	11:AK:73:VAL:CG1	2.27	0.64
18:AR:22:TYR:CZ	18:AR:23:LYS:HE3	2.32	0.64
22:BA:1026:G:O2'	22:BA:1027:A:H5'	1.97	0.64
22:BA:1186:G:OP1	63:BA:3581:HOH:O	2.15	0.64
22:BA:1641:A:H5''	22:BA:1642:G:OP2	1.96	0.64
22:BA:1671:U:O2	22:BA:1673:G:C8	2.49	0.64
22:BA:1945:G:H2'	22:BA:1946:U:H6	1.61	0.64
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.32	0.64
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.78	0.64
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.79	0.64
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.79	0.64
34:BM:43:ALA:O	34:BM:46:ILE:HG13	1.97	0.64
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.78	0.64
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.42	0.64
44:BW:44:PHE:O	44:BW:78:PHE:HA	1.97	0.64
46:BY:17:GLU:HB2	46:BY:53:VAL:HG11	1.78	0.64
53:CA:160:A:H2'	53:CA:161:A:O4'	1.97	0.64
53:CA:579:A:H2'	53:CA:580:C:C6	2.32	0.64
2:CB:66:ILE:H	2:CB:88:GLN:HB3	1.62	0.64
57:DA:1742:U:H2'	57:DA:1743:G:C8	2.33	0.64
57:DA:1754:A:OP1	37:DP:93:LYS:HE3	1.97	0.64
57:DA:1843:C:O2'	24:DC:253:GLY:HA3	1.97	0.64
57:DA:2264:C:C2	57:DA:2277:G:N2	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2298:A:H2'	57:DA:2299:U:C6	2.32	0.64
57:DA:401:A:H2'	57:DA:402:A:C8	2.32	0.64
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.17	0.64
32:DK:61:VAL:HG13	32:DK:87:LEU:HD21	1.79	0.64
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.79	0.64
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.79	0.64
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.60	0.64
1:AA:183:C:O2'	1:AA:184:G:H5'	1.97	0.64
2:AB:119:GLN:HA	2:AB:122:ASP:HB2	1.80	0.64
2:AB:13:VAL:CG2	2:AB:207:ARG:HH22	2.11	0.64
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.32	0.64
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.16	0.64
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.12	0.64
22:BA:1654:A:H1'	25:BD:118:PHE:CD1	2.31	0.64
22:BA:228:C:H4'	22:BA:229:C:H5''	1.78	0.64
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.32	0.64
22:BA:303:G:H2'	22:BA:304:U:H6	1.62	0.64
28:BG:112:VAL:HG23	28:BG:113:ASP:N	2.12	0.64
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.78	0.64
31:BJ:38:GLY:O	31:BJ:43:GLU:HB2	1.97	0.64
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.60	0.64
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.62	0.64
36:BO:31:THR:CG2	36:BO:34:HIS:H	2.09	0.64
44:BW:17:ALA:O	44:BW:18:LYS:HB3	1.97	0.64
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.79	0.64
47:BZ:9:THR:HG22	47:BZ:10:ARG:N	2.12	0.64
53:CA:1183:U:C3'	53:CA:1184:G:H5''	2.24	0.64
53:CA:369:G:OP2	53:CA:388:G:N2	2.29	0.64
2:CB:59:ILE:HA	2:CB:62:ARG:HD3	1.78	0.64
54:CG:2:ARG:HG2	54:CG:3:ARG:N	2.11	0.64
6:CF:90:MET:HE1	18:CR:60:ARG:HD3	1.79	0.64
57:DA:1616:A:H8	57:DA:1616:A:OP1	1.79	0.64
57:DA:184:C:H2'	57:DA:185:G:H8	1.60	0.64
57:DA:589:U:HO2'	57:DA:590:A:H5'	1.62	0.64
57:DA:607:U:H5	57:DA:619:G:C4	2.16	0.64
57:DA:75:G:H4'	46:DY:48:ARG:NH2	2.12	0.64
57:DA:822:G:H5''	63:DA:3357:HOH:O	1.96	0.64
58:DB:55:U:H1'	59:DF:25:MET:CE	2.27	0.64
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.78	0.64
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.16	0.64
1:AA:61:G:O2'	1:AA:62:U:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:64:G:H4'	1:AA:65:A:H5''	1.80	0.64
2:AB:119:GLN:C	2:AB:119:GLN:HE21	2.01	0.64
2:AB:71:THR:HG22	2:AB:72:LYS:H	1.61	0.64
13:AM:113:LYS:H	13:AM:114:PRO:CD	2.10	0.64
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.32	0.64
22:BA:646:U:H3'	22:BA:647:G:H5''	1.79	0.64
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.43	0.64
22:BA:988:A:P	47:BZ:11:SER:HB3	2.37	0.64
53:CA:663:A:O2'	53:CA:664:G:H5'	1.98	0.64
2:CB:56:LEU:HD22	2:CB:59:ILE:HD11	1.79	0.64
4:CD:195:ASN:HB3	4:CD:197:HIS:CD2	2.32	0.64
9:CI:6:TYR:HE2	9:CI:17:ARG:HA	1.62	0.64
18:CR:72:ARG:H	18:CR:72:ARG:NE	1.92	0.64
50:D2:22:MET:HG2	50:D2:22:MET:O	1.97	0.64
57:DA:1262:A:H2	48:D0:6:LYS:HD2	1.63	0.64
57:DA:1387:A:C5'	57:DA:1469:A:H1'	2.27	0.64
57:DA:1965:C:H3'	57:DA:1966:A:H5''	1.78	0.64
57:DA:2285:C:OP2	49:D1:5:ARG:HD3	1.97	0.64
57:DA:2653:U:C4	57:DA:2654:A:C6	2.84	0.64
57:DA:354:A:H2'	57:DA:355:U:O4'	1.96	0.64
57:DA:391:A:O2'	57:DA:392:U:H5'	1.98	0.64
58:DB:50:A:C2	58:DB:51:G:H1'	2.32	0.64
58:DB:81:G:H2'	58:DB:82:U:H6	1.63	0.64
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.62	0.64
26:DE:110:SER:O	26:DE:113:VAL:HG12	1.97	0.64
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.63	0.64
41:DT:29:THR:HB	41:DT:87:LEU:N	2.10	0.64
1:AA:920:U:H2'	1:AA:921:U:C6	2.32	0.64
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.07	0.64
22:BA:1071:G:H1'	22:BA:1089:A:N7	2.11	0.64
22:BA:1963:U:H6	22:BA:1963:U:O5'	1.80	0.64
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.97	0.64
22:BA:2485:G:C5'	34:BM:45:GLN:HE21	2.11	0.64
22:BA:39:G:H2'	22:BA:40:U:C6	2.32	0.64
25:BD:111:GLY:O	25:BD:169:ARG:O	2.16	0.64
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.50	0.64
29:BH:29:PHE:O	29:BH:33:GLN:HB3	1.98	0.64
53:CA:1218:C:H2'	53:CA:1219:A:H8	1.63	0.64
57:DA:1275:A:O2'	57:DA:1276:A:C1'	2.45	0.64
57:DA:1399:C:H2'	57:DA:1400:U:C5	2.33	0.64
57:DA:1905:C:O2'	57:DA:1929:G:H1'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:197:A:H62	57:DA:2430:A:C2'	2.01	0.64
57:DA:249:C:C5'	57:DA:2394:C:O2'	2.44	0.64
57:DA:27:G:N2	57:DA:512:G:H2'	2.12	0.64
57:DA:810:U:O4	33:DL:30:THR:HG22	1.96	0.64
24:DC:8:THR:O	24:DC:9:SER:HB3	1.97	0.64
26:DE:112:LEU:HD11	26:DE:186:VAL:HG11	1.79	0.64
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.27	0.64
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.63	0.64
1:AA:1094:G:O2'	1:AA:1095:U:OP2	2.15	0.64
1:AA:1127:G:O2'	1:AA:1128:C:H5'	1.97	0.64
1:AA:274:A:O2'	1:AA:275:G:H8	1.79	0.64
22:BA:1378:A:O2'	22:BA:1379:U:H3'	1.96	0.64
22:BA:819:A:OP2	22:BA:1187:G:N2	2.27	0.64
22:BA:2264:C:H41	44:BW:11:ASN:ND2	1.95	0.64
54:CG:128:GLU:HG3	54:CG:130:LYS:H	1.61	0.64
54:CG:16:LYS:HE2	9:CI:45:MET:SD	2.38	0.64
21:CU:15:LEU:HD12	21:CU:15:LEU:O	1.96	0.64
57:DA:2408:U:O2'	57:DA:2409:G:O5'	2.14	0.64
57:DA:720:U:H2'	57:DA:721:A:C8	2.33	0.64
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.62	0.64
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.62	0.64
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.98	0.64
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.33	0.64
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.27	0.64
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.98	0.64
1:AA:1433:A:OP2	63:AA:1837:HOH:O	2.15	0.64
16:AP:59:HIS:HE1	16:AP:63:GLN:HE22	1.45	0.64
22:BA:137:U:H5''	22:BA:140:C:C5	2.31	0.64
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.33	0.64
22:BA:1556:C:O2'	22:BA:1557:C:H5'	1.97	0.64
22:BA:2267:A:N3	22:BA:2267:A:H2'	2.13	0.64
23:BB:24:G:N7	23:BB:56:G:H2'	2.13	0.64
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.98	0.64
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.32	0.64
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.13	0.64
33:BL:93:ASN:O	33:BL:95:LEU:N	2.30	0.64
45:BX:30:PRO:O	45:BX:32:LEU:HD12	1.97	0.64
3:CC:80:GLY:O	3:CC:83:VAL:HG22	1.97	0.64
53:CA:1298:U:C5	54:CG:113:LYS:HA	2.32	0.64
57:DA:2615:U:C2	48:D0:3:GLN:HA	2.33	0.64
57:DA:1901:A:O2'	57:DA:1902:C:H5'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2825:G:H3'	57:DA:2826:A:H8	1.62	0.64
25:DD:94:GLN:O	25:DD:94:GLN:HG2	1.98	0.64
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.96	0.64
40:DS:24:ILE:HG22	40:DS:35:ILE:HD11	1.80	0.64
1:AA:946:A:H2'	1:AA:947:G:C8	2.31	0.64
5:AE:87:VAL:HG12	5:AE:92:ARG:HA	1.79	0.64
11:AK:19:VAL:HG22	11:AK:82:GLU:HG2	1.79	0.64
17:AQ:12:VAL:HG13	17:AQ:13:SER:H	1.62	0.64
22:BA:1510:G:H2'	22:BA:1511:G:H8	1.62	0.64
22:BA:1842:G:H2'	22:BA:1843:C:C6	2.32	0.64
22:BA:28:A:C2	22:BA:513:A:C8	2.85	0.64
28:BG:86:LEU:N	28:BG:86:LEU:HD12	2.12	0.64
44:BW:18:LYS:HG3	44:BW:19:ARG:N	2.13	0.64
53:CA:1160:G:C6	53:CA:1181:G:O6	2.50	0.64
53:CA:1170:A:H2'	53:CA:1171:A:O4'	1.97	0.64
53:CA:1326:U:H2'	53:CA:1327:C:C6	2.33	0.64
53:CA:413:G:N2	53:CA:428:G:O2'	2.31	0.64
57:DA:176:A:H3'	57:DA:177:G:N2	2.13	0.64
57:DA:2808:G:HO2'	57:DA:2809:A:H8	1.45	0.64
57:DA:2815:C:H2'	57:DA:2816:G:H8	1.62	0.64
58:DB:5:U:H2'	58:DB:6:G:H8	1.59	0.64
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.62	0.64
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.78	0.64
48:B0:33:SER:OG	48:B0:35:GLU:HG3	1.97	0.64
22:BA:568:U:OP1	33:BL:36:LYS:HE3	1.97	0.64
37:BP:104:GLY:O	37:BP:106:ALA:N	2.31	0.64
43:BV:42:LEU:HD13	43:BV:47:VAL:HG21	1.79	0.64
53:CA:429:U:H1'	53:CA:430:A:H5''	1.80	0.64
53:CA:888:G:O3'	53:CA:1488:G:H4'	1.97	0.64
53:CA:97:G:C6	53:CA:98:A:H1'	2.33	0.64
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.38	0.64
18:CR:19:GLU:CD	18:CR:20:ILE:H	2.01	0.64
57:DA:2683:C:H2'	57:DA:2684:U:H6	1.61	0.64
57:DA:481:G:O2'	57:DA:482:A:OP2	2.16	0.64
58:DB:17:C:O2'	58:DB:18:G:H8	1.81	0.64
57:DA:729:G:C6	24:DC:206:LYS:HB2	2.33	0.64
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.37	0.64
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.28	0.64
25:DD:149:ASN:O	25:DD:152:PRO:HD2	1.97	0.64
59:DF:103:ILE:HA	59:DF:107:VAL:HG21	1.78	0.64
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:832:U:OP1	33:DL:39:LYS:N	2.29	0.64
46:DY:1:MET:H3	46:DY:1:MET:HE2	1.63	0.64
1:AA:830:G:H2'	1:AA:831:A:H8	1.63	0.64
1:AA:922:G:H4'	5:AE:24:VAL:HA	1.80	0.64
6:AF:2:ARG:HH21	6:AF:68:GLN:NE2	1.95	0.64
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.63	0.64
22:BA:656:G:H2'	22:BA:657:U:C6	2.32	0.64
22:BA:78:U:H2'	22:BA:79:C:H6	1.62	0.64
22:BA:996:A:O2'	22:BA:997:G:H5'	1.98	0.64
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.63	0.64
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	1.97	0.64
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.18	0.64
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.61	0.64
53:CA:268:U:H2'	53:CA:269:C:H6	1.62	0.64
57:DA:118:A:OP2	57:DA:119:A:H3'	1.98	0.64
57:DA:128:C:H2'	57:DA:129:C:C6	2.33	0.64
57:DA:29:U:H5	63:DA:3207:HOH:O	1.78	0.64
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.96	0.64
1:AA:690:G:H2'	1:AA:691:G:C8	2.33	0.64
15:AO:80:LEU:HD12	15:AO:80:LEU:O	1.96	0.64
22:BA:357:C:H2'	22:BA:358:U:H6	1.60	0.64
23:BB:90:C:C6	23:BB:90:C:H5''	2.23	0.64
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.31	0.64
53:CA:1154:G:H2'	53:CA:1155:A:H8	1.62	0.64
4:CD:191:SER:O	4:CD:192:ALA:HB2	1.98	0.64
5:CE:155:LYS:HB3	8:CH:70:VAL:HG23	1.80	0.64
55:CM:13:HIS:HB3	55:CM:16:ILE:HD13	1.80	0.64
57:DA:1489:C:H4'	57:DA:1490:A:OP1	1.97	0.64
57:DA:1810:A:H2'	57:DA:1811:G:O4'	1.97	0.64
57:DA:590:A:H2'	57:DA:591:U:H6	1.64	0.64
25:DD:149:ASN:O	25:DD:151:THR:N	2.31	0.64
34:DM:42:THR:HG22	34:DM:44:ARG:N	2.12	0.64
42:DU:26:ASN:O	42:DU:34:ILE:HB	1.98	0.64
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.22	0.64
45:DX:11:PRO:CB	45:DX:27:ARG:HH21	2.11	0.64
1:AA:197:A:O2'	1:AA:198:G:C8	2.50	0.63
6:AF:52:ASN:O	6:AF:53:LYS:HB3	1.98	0.63
6:AF:36:ILE:HG22	6:AF:64:VAL:HG22	1.80	0.63
13:AM:18:LEU:O	13:AM:24:VAL:HG21	1.98	0.63
48:B0:39:ARG:HG2	48:B0:40:HIS:ND1	2.13	0.63
22:BA:1009:A:O5'	22:BA:1009:A:H8	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2198:A:OP2	22:BA:2198:A:C3'	2.46	0.63
22:BA:2198:A:HO2'	22:BA:2224:G:H22	1.44	0.63
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.32	0.63
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.60	0.63
22:BA:708:G:N2	22:BA:724:U:H1'	2.13	0.63
22:BA:876:C:H2'	22:BA:877:A:O4'	1.98	0.63
24:BC:181:ARG:NH2	24:BC:265:PHE:HB3	2.13	0.63
28:BG:23:ILE:HD12	28:BG:23:ILE:H	1.63	0.63
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.78	0.63
42:BU:38:ILE:HG22	42:BU:39:ASN:N	2.13	0.63
53:CA:484:G:H4'	53:CA:485:U:O5'	1.95	0.63
53:CA:652:U:O4	53:CA:752:G:H2'	1.99	0.63
5:CE:107:GLY:O	5:CE:111:ARG:HB2	1.98	0.63
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.63	0.63
57:DA:1081:U:H4'	30:DI:123:ALA:HA	1.80	0.63
57:DA:1071:G:N7	57:DA:1089:A:C5	2.66	0.63
57:DA:1783:A:H5'	57:DA:2608:G:H4'	1.79	0.63
57:DA:2508:G:C2	57:DA:2582:G:C6	2.86	0.63
6:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.32	0.63
57:DA:2597:G:OP1	24:DC:240:GLY:HA3	1.98	0.63
59:DF:147:ARG:HG2	59:DF:149:ARG:HH12	1.63	0.63
59:DF:47:LYS:HA	59:DF:50:ASP:HB3	1.78	0.63
33:DL:29:LYS:HG2	33:DL:30:THR:HG23	1.80	0.63
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.80	0.63
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.13	0.63
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.79	0.63
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.33	0.63
1:AA:413:G:N2	1:AA:428:G:O2'	2.31	0.63
1:AA:98:A:H2'	1:AA:99:C:H6	1.63	0.63
5:AE:153:ALA:HA	5:AE:156:ARG:CB	2.28	0.63
22:BA:532:A:N7	22:BA:2021:C:H2'	2.13	0.63
22:BA:665:U:O2'	22:BA:666:A:H5'	1.98	0.63
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.81	0.63
40:BS:4:ILE:HB	40:BS:106:VAL:HA	1.79	0.63
53:CA:219:U:H2'	53:CA:220:G:H8	1.64	0.63
3:CC:150:VAL:HG12	3:CC:199:VAL:HG12	1.79	0.63
57:DA:1178:C:H2'	57:DA:1179:G:O4'	1.99	0.63
57:DA:2458:G:O2'	57:DA:2460:U:C5	2.51	0.63
57:DA:2753:A:H2'	57:DA:2754:U:C6	2.33	0.63
57:DA:477:A:C2'	57:DA:478:A:H8	2.11	0.63
57:DA:686:U:C6	57:DA:788:A:N1	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:28:SER:O	32:DK:29:HIS:CB	2.45	0.63
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.80	0.63
58:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.98	0.63
1:AA:1143:G:H2'	1:AA:1144:G:H8	1.64	0.63
3:AC:10:ARG:O	3:AC:13:ILE:O	2.16	0.63
5:AE:113:VAL:HG21	5:AE:140:ILE:HD12	1.80	0.63
7:AG:146:ALA:C	7:AG:148:LYS:H	2.00	0.63
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.98	0.63
49:B1:3:GLY:O	49:B1:4:ILE:HG12	1.98	0.63
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.13	0.63
22:BA:1696:G:H5''	22:BA:1696:G:H8	1.64	0.63
22:BA:2449:U:H4'	22:BA:2450:A:OP1	1.97	0.63
22:BA:580:U:H2'	22:BA:581:C:H6	1.63	0.63
23:BB:112:G:H2'	23:BB:113:C:C6	2.33	0.63
25:BD:38:LYS:O	25:BD:46:ARG:HA	1.99	0.63
35:BN:58:ASP:O	35:BN:59:SER:HB3	1.96	0.63
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.33	0.63
40:BS:18:ARG:O	40:BS:19:LEU:HB2	1.96	0.63
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.63	0.63
53:CA:1067:A:H4'	53:CA:1068:G:O5'	1.96	0.63
53:CA:84:U:N3	53:CA:87:C:H1'	2.13	0.63
8:CH:78:SER:HB2	8:CH:124:ILE:O	1.99	0.63
8:CH:85:TYR:CD2	8:CH:123:GLU:HB2	2.33	0.63
53:CA:529:G:O6	12:CL:45:ASN:HA	1.99	0.63
57:DA:999:U:O2'	57:DA:1000:A:H5'	1.98	0.63
57:DA:1328:A:H2'	57:DA:1330:C:N4	2.13	0.63
57:DA:1349:C:H2'	57:DA:1350:C:C5	2.32	0.63
57:DA:1417:C:O2'	57:DA:1418:G:H5'	1.99	0.63
57:DA:477:A:H2'	57:DA:478:A:C8	2.33	0.63
57:DA:49:A:H4'	57:DA:50:U:O5'	1.97	0.63
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.80	0.63
59:DF:147:ARG:O	59:DF:148:VAL:HG22	1.99	0.63
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.13	0.63
4:AD:88:ASN:HA	4:AD:91:ALA:HB3	1.79	0.63
7:AG:61:PHE:HE1	7:AG:65:LEU:HD22	1.63	0.63
11:AK:87:GLY:H	11:AK:113:THR:HG22	1.63	0.63
13:AM:19:THR:HA	13:AM:24:VAL:HG23	1.79	0.63
20:AT:53:MET:O	20:AT:56:ILE:HG22	1.98	0.63
22:BA:1483:G:C2	22:BA:1484:U:C2	2.87	0.63
22:BA:1682:G:C8	22:BA:1757:A:C2	2.86	0.63
22:BA:1919:A:O2'	22:BA:1920:C:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.32	0.63
53:CA:243:A:H4'	53:CA:244:U:H5'	1.80	0.63
53:CA:82:G:C2'	53:CA:83:C:H4'	2.29	0.63
57:DA:1196:C:H1'	57:DA:1226:A:C4	2.33	0.63
57:DA:1555:G:O2'	57:DA:1556:C:H5'	1.98	0.63
57:DA:1574:C:H2'	57:DA:1575:C:O4'	1.97	0.63
57:DA:2006:C:H2'	57:DA:2007:U:C6	2.34	0.63
57:DA:185:G:C6	57:DA:212:G:C2	2.86	0.63
57:DA:2714:G:H2'	57:DA:2715:C:C6	2.32	0.63
57:DA:86:G:C2	57:DA:87:U:C4	2.86	0.63
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.79	0.63
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.80	0.63
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.99	0.63
1:AA:596:A:H2'	1:AA:597:G:C8	2.32	0.63
8:AH:74:ILE:HD13	8:AH:128:VAL:HG13	1.79	0.63
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	2.21	0.63
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	1.97	0.63
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.63	0.63
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	1.99	0.63
22:BA:1646:C:H5''	22:BA:1647:U:O5'	1.98	0.63
22:BA:1738:G:HO2'	22:BA:1739:A:H8	1.47	0.63
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.98	0.63
22:BA:2150:C:H2'	22:BA:2151:U:C6	2.33	0.63
22:BA:704:G:O2'	22:BA:726:G:N2	2.20	0.63
22:BA:947:A:O2'	22:BA:984:A:H2	1.81	0.63
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.47	0.63
37:BP:50:ARG:O	37:BP:51:ASN:HB2	1.99	0.63
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.61	0.63
41:BT:26:LYS:O	41:BT:27:SER:HB2	1.99	0.63
53:CA:1380:U:H4'	53:CA:1381:U:OP1	1.98	0.63
6:CF:88:MET:HG2	6:CF:90:MET:SD	2.38	0.63
9:CI:118:ARG:HH21	9:CI:122:ARG:HE	1.47	0.63
57:DA:1417:C:H4'	57:DA:1587:G:H21	1.64	0.63
57:DA:1779:U:H5	57:DA:1784:A:N7	1.96	0.63
57:DA:2069:G:N2	57:DA:2443:C:C2	2.66	0.63
57:DA:666:A:H5''	33:DL:48:ARG:HG2	1.79	0.63
57:DA:69:C:H2'	57:DA:70:G:C8	2.34	0.63
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.28	0.63
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.81	0.63
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.33	0.63
1:AA:923:A:H2'	1:AA:924:C:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.28	0.63
51:B3:29:ARG:O	51:B3:30:HIS:HB2	1.98	0.63
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.80	0.63
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.63	0.63
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.81	0.63
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.34	0.63
36:BO:68:LYS:O	36:BO:71:ALA:HB3	1.98	0.63
37:BP:59:THR:HG23	37:BP:72:VAL:HG13	1.81	0.63
22:BA:494:G:N2	40:BS:57:ASN:HD21	1.95	0.63
53:CA:1026:G:H1	53:CA:1036:A:N6	1.96	0.63
53:CA:1513:A:H2'	53:CA:1514:G:C8	2.34	0.63
53:CA:154:U:H2'	53:CA:155:A:H5'	1.79	0.63
53:CA:295:C:H2'	53:CA:296:U:H6	1.62	0.63
4:CD:106:PHE:HD1	4:CD:158:LEU:HD21	1.62	0.63
4:CD:195:ASN:HB3	4:CD:197:HIS:NE2	2.14	0.63
5:CE:157:GLY:HA3	8:CH:63:LYS:HZ2	1.62	0.63
54:CG:9:ARG:HD3	54:CG:24:LYS:HZ1	1.64	0.63
57:DA:156:A:H2'	57:DA:157:C:H6	1.63	0.63
57:DA:2093:G:C6	57:DA:2225:A:C2'	2.78	0.63
57:DA:225:C:H2'	57:DA:226:A:O4'	1.98	0.63
57:DA:2345:G:H4'	57:DA:2346:A:C5'	2.27	0.63
57:DA:491:G:O2'	57:DA:492:A:H5'	1.98	0.63
24:DC:31:PRO:O	24:DC:32:LEU:HD23	1.99	0.63
25:DD:184:ARG:NH2	37:DP:6:GLN:HE21	1.97	0.63
25:DD:28:GLU:HA	25:DD:185:ASN:O	1.99	0.63
29:DH:27:ARG:HH21	29:DH:27:ARG:HB2	1.63	0.63
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.27	0.63
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	1.98	0.63
37:DP:109:ILE:O	37:DP:110:LYS:HG3	1.99	0.63
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.13	0.63
1:AA:785:G:C2'	1:AA:786:G:H5'	2.29	0.63
22:BA:1813:G:N3	24:BC:49:THR:HG21	2.14	0.63
23:BB:13:G:O2'	23:BB:15:A:OP2	2.16	0.63
22:BA:1789:A:OP1	24:BC:220:ARG:HD3	1.97	0.63
25:BD:107:VAL:O	25:BD:174:SER:O	2.16	0.63
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.81	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
37:BP:19:PHE:O	37:BP:20:ARG:HB3	1.99	0.63
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.29	0.63
53:CA:754:C:H2'	53:CA:754:C:O2	1.98	0.63
3:CC:134:LYS:HD3	3:CC:138:GLN:OE1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:90:MET:CE	18:CR:60:ARG:HD3	2.28	0.63
8:CH:1:SER:C	8:CH:3:GLN:H	2.00	0.63
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.64	0.63
57:DA:1607:C:H4'	57:DA:1608:A:C8	2.34	0.63
57:DA:1814:G:N1	57:DA:1815:A:N6	2.46	0.63
57:DA:226:A:C2	57:DA:230:G:O6	2.51	0.63
57:DA:2902:C:H2'	57:DA:2903:U:O4'	1.98	0.63
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	1.99	0.63
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.62	0.63
57:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.99	0.63
43:DV:75:GLN:HB2	43:DV:90:ASP:O	1.97	0.63
1:AA:1007:U:C2'	1:AA:1008:U:H5''	2.29	0.63
3:AC:156:LEU:HD13	3:AC:163:ARG:HB2	1.81	0.63
7:AG:3:ARG:HG3	7:AG:4:ARG:H	1.64	0.63
15:AO:72:LYS:HA	15:AO:72:LYS:HE2	1.80	0.63
21:AU:8:ASN:N	21:AU:8:ASN:HD22	1.96	0.63
49:B1:47:ILE:H	49:B1:47:ILE:HD12	1.64	0.63
22:BA:1947:C:C2	22:BA:1960:A:C2	2.87	0.63
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.14	0.63
22:BA:914:G:C8	22:BA:914:G:H5''	2.32	0.63
27:BF:24:VAL:O	27:BF:27:VAL:HG12	1.98	0.63
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.64	0.63
31:BJ:88:THR:HG22	31:BJ:91:GLU:HB2	1.81	0.63
53:CA:1279:G:C5'	10:CJ:9:ARG:HH22	2.11	0.63
5:CE:39:GLY:HA2	5:CE:45:VAL:HA	1.80	0.63
14:CN:33:VAL:HG22	14:CN:40:ARG:HH21	1.62	0.63
57:DA:2886:A:H62	48:D0:39:ARG:HD3	1.63	0.63
57:DA:1635:A:H2'	57:DA:1636:U:C6	2.34	0.63
57:DA:172:A:H2'	57:DA:173:A:H8	1.64	0.63
57:DA:764:A:N3	57:DA:781:A:C6	2.67	0.63
57:DA:2619:C:OP1	25:DD:157:LYS:HE2	1.98	0.63
57:DA:64:A:O2'	41:DT:69:ARG:HG2	1.99	0.63
1:AA:502:A:H2'	1:AA:503:C:O4'	1.98	0.63
1:AA:697:U:O2	1:AA:798:U:H1'	1.98	0.63
4:AD:34:GLU:O	4:AD:37:PRO:HD3	1.99	0.63
20:AT:14:GLU:HA	20:AT:17:ARG:HB2	1.80	0.63
21:AU:18:PHE:O	21:AU:21:SER:HB3	1.99	0.63
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.34	0.63
34:BM:66:ARG:HG3	34:BM:101:VAL:HG13	1.81	0.63
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.79	0.63
53:CA:286:C:H2'	53:CA:287:U:O4'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:27:ALA:O	6:CF:31:GLY:HA3	1.99	0.63
9:CI:118:ARG:HG3	9:CI:124:PRO:HG3	1.80	0.63
57:DA:105:C:H2'	57:DA:106:C:C6	2.34	0.63
57:DA:1078:U:H4'	57:DA:1079:C:C5'	2.29	0.63
57:DA:1176:U:H2'	57:DA:1177:G:C8	2.34	0.63
57:DA:1207:C:O2'	57:DA:1208:C:H6	1.75	0.63
57:DA:1744:A:H3'	57:DA:1745:A:H8	1.63	0.63
57:DA:2339:C:O2'	57:DA:2340:A:O4'	2.17	0.63
57:DA:370:G:N1	57:DA:424:G:C5	2.67	0.63
57:DA:685:A:H5'	57:DA:686:U:OP1	1.99	0.63
57:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.62	0.63
34:DM:42:THR:CG2	34:DM:44:ARG:H	2.11	0.63
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.80	0.63
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.80	0.63
1:AA:872:A:C4	1:AA:874:G:N7	2.66	0.62
4:AD:169:TRP:CE3	4:AD:185:PRO:HB3	2.34	0.62
22:BA:1607:C:N4	22:BA:1622:G:N7	2.47	0.62
22:BA:1735:A:C2	22:BA:1736:U:C2	2.87	0.62
22:BA:2051:A:OP2	22:BA:2051:A:H8	1.82	0.62
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.14	0.62
22:BA:509:C:H5''	22:BA:509:C:C6	2.24	0.62
23:BB:104:A:H2'	23:BB:105:G:O4'	1.98	0.62
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.62	0.62
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.81	0.62
28:BG:61:TRP:O	28:BG:62:ALA:C	2.36	0.62
33:BL:99:ASN:OD1	63:BL:301:HOH:O	2.16	0.62
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.29	0.62
44:BW:9:THR:CG2	44:BW:10:ARG:HH11	2.11	0.62
53:CA:1014:A:H2	53:CA:1219:A:H1'	1.63	0.62
53:CA:1365:G:H2'	53:CA:1366:C:C6	2.34	0.62
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.25	0.62
50:D2:46:LYS:N	50:D2:46:LYS:HD2	2.14	0.62
57:DA:1264:A:H2'	57:DA:2014:A:N6	2.14	0.62
57:DA:2197:U:O2'	57:DA:2224:G:N1	2.30	0.62
43:DV:55:GLU:O	43:DV:57:TYR:N	2.32	0.62
1:AA:1247:U:O2'	1:AA:1248:A:H5'	1.99	0.62
1:AA:279:A:H5''	1:AA:281:G:O4'	1.99	0.62
1:AA:761:G:H2'	1:AA:762:U:C6	2.34	0.62
3:AC:46:LEU:HB3	3:AC:49:ALA:HB3	1.80	0.62
22:BA:2092:U:O2'	22:BA:2093:G:P	2.57	0.62
22:BA:2146:C:H4'	22:BA:2147:A:O5'	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.64	0.62
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.64	0.62
31:BJ:54:ILE:HD12	31:BJ:54:ILE:C	2.19	0.62
33:BL:81:ASP:O	33:BL:82:LEU:HB3	2.00	0.62
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	2.14	0.62
38:BQ:43:GLN:NE2	39:BR:77:PHE:HD1	1.96	0.62
41:BT:73:ARG:CZ	41:BT:73:ARG:HB3	2.28	0.62
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.34	0.62
53:CA:438:U:H2'	53:CA:494:G:O6	1.98	0.62
53:CA:515:G:N7	63:CA:1855:HOH:O	2.31	0.62
53:CA:718:A:C5	11:CK:117:HIS:CD2	2.88	0.62
17:CQ:13:SER:HB3	17:CQ:21:VAL:HB	1.81	0.62
57:DA:1495:A:H2'	57:DA:1496:A:C8	2.34	0.62
57:DA:2225:A:H5'	57:DA:2226:C:H5'	1.80	0.62
57:DA:2576:G:C8	57:DA:2580:U:O4	2.52	0.62
57:DA:2712:C:C2	57:DA:2715:C:OP1	2.52	0.62
57:DA:455:C:N3	57:DA:473:G:H5'	2.14	0.62
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.64	0.62
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.62	0.62
31:DJ:89:PHE:CE2	31:DJ:100:VAL:HG11	2.33	0.62
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	1.81	0.62
1:AA:1398:A:H5''	1:AA:1398:A:C8	2.27	0.62
1:AA:518:C:H2'	1:AA:530:G:C8	2.34	0.62
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.30	0.62
22:BA:1340:U:H3'	41:BT:61:LEU:HD22	1.82	0.62
22:BA:143:C:O2'	22:BA:144:A:H8	1.83	0.62
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.64	0.62
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.81	0.62
22:BA:2842:G:C2'	22:BA:2843:G:H5'	2.29	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.65	0.62
28:BG:72:ASN:O	28:BG:76:ILE:HG22	1.98	0.62
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.14	0.62
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.61	0.62
37:BP:77:SER:OG	37:BP:79:VAL:HG13	2.00	0.62
38:BQ:94:LEU:O	38:BQ:94:LEU:HD13	1.99	0.62
43:BV:26:PHE:HD1	43:BV:27:PRO:O	1.83	0.62
22:BA:2091:C:O2	45:BX:33:HIS:CE1	2.52	0.62
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.13	0.62
53:CA:533:A:C2	53:CA:536:C:C5	2.87	0.62
53:CA:93:U:H2'	53:CA:95:C:C5	2.34	0.62
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:63:LYS:O	8:CH:70:VAL:HG12	2.00	0.62
57:DA:126:A:O5'	50:D2:19:ARG:HG3	1.99	0.62
57:DA:1060:U:C4'	57:DA:1061:U:H2'	2.29	0.62
58:DB:44:G:H5''	59:DF:91:ARG:NE	2.15	0.62
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.00	0.62
1:AA:508:U:O2'	1:AA:509:A:C8	2.52	0.62
1:AA:817:C:H4'	1:AA:818:G:OP1	1.97	0.62
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.64	0.62
7:AG:4:ARG:HA	7:AG:4:ARG:HE	1.64	0.62
11:AK:96:ILE:HG13	11:AK:97:ARG:N	2.14	0.62
12:AL:23:LEU:CB	12:AL:58:ASN:HD22	2.13	0.62
52:B4:25:VAL:HG11	52:B4:35:GLN:HE21	1.65	0.62
22:BA:1079:C:C4	22:BA:1088:A:H2	2.17	0.62
22:BA:1376:C:O2'	22:BA:1377:G:H5'	1.98	0.62
22:BA:1818:U:O2'	22:BA:1819:A:OP2	2.16	0.62
22:BA:1936:A:C2	22:BA:1943:U:H5	2.17	0.62
22:BA:21:A:O2'	22:BA:22:C:H5'	2.00	0.62
22:BA:2321:U:H6	22:BA:2321:U:H5''	1.64	0.62
22:BA:2555:U:C5	22:BA:2556:C:C2	2.88	0.62
22:BA:763:G:O2'	22:BA:764:A:H3'	2.00	0.62
22:BA:854:C:O2	22:BA:924:G:C2	2.52	0.62
24:BC:109:LEU:HD23	24:BC:110:LYS:N	2.14	0.62
25:BD:98:VAL:O	25:BD:100:LEU:N	2.31	0.62
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.63	0.62
32:BK:112:PHE:O	32:BK:115:ILE:HG22	1.99	0.62
38:BQ:111:LYS:NZ	39:BR:48:LYS:HD3	2.14	0.62
40:BS:39:THR:HG22	40:BS:44:ALA:HB2	1.80	0.62
53:CA:1201:A:H1'	53:CA:1202:U:OP2	2.00	0.62
53:CA:1322:C:H2'	53:CA:1322:C:O2	1.99	0.62
53:CA:51:A:H4'	53:CA:52:C:H5'	1.81	0.62
9:CI:30:ASN:O	9:CI:32:ARG:HG2	1.99	0.62
20:CT:34:VAL:HG21	20:CT:53:MET:HG2	1.81	0.62
57:DA:1758:U:O4	57:DA:2695:U:H4'	2.00	0.62
57:DA:2303:G:H5'	59:DF:121:PHE:CE1	2.35	0.62
57:DA:477:A:H2'	57:DA:478:A:H8	1.64	0.62
57:DA:726:G:OP2	57:DA:726:G:H8	1.83	0.62
58:DB:17:C:HO2'	58:DB:18:G:H8	1.47	0.62
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.82	0.62
26:DE:73:ILE:O	26:DE:73:ILE:HG13	1.99	0.62
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.98	0.62
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.14	0.62
1:AA:1021:A:C2'	1:AA:1022:A:H5''	2.26	0.62
11:AK:13:LYS:O	11:AK:14:GLN:HB3	1.99	0.62
12:AL:23:LEU:O	12:AL:25:ALA:N	2.32	0.62
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.33	0.62
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.34	0.62
22:BA:2134:A:N6	22:BA:2157:G:C5	2.68	0.62
22:BA:269:C:H2'	22:BA:270:A:H5'	1.81	0.62
22:BA:491:G:H2'	22:BA:492:A:C8	2.34	0.62
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.26	0.62
28:BG:7:PRO:O	28:BG:8:VAL:HB	1.99	0.62
39:BR:48:LYS:HD2	39:BR:48:LYS:H	1.65	0.62
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.80	0.62
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.34	0.62
53:CA:330:C:O2'	53:CA:331:G:C8	2.45	0.62
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	1.82	0.62
17:CQ:27:PHE:CD1	17:CQ:36:PHE:HB3	2.34	0.62
57:DA:1347:A:O2'	57:DA:1348:C:H5'	1.99	0.62
57:DA:138:U:H2'	57:DA:140:C:H1'	1.82	0.62
57:DA:27:G:H22	57:DA:512:G:H2'	1.65	0.62
57:DA:627:A:O2'	57:DA:628:G:C8	2.50	0.62
57:DA:64:A:OP1	41:DT:77:ARG:HG2	1.98	0.62
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.29	0.62
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.13	0.62
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.32	0.62
1:AA:877:G:N2	8:AH:1:SER:HB2	2.12	0.62
12:AL:73:LEU:HD11	12:AL:79:ILE:HG21	1.81	0.62
16:AP:22:ALA:HB2	16:AP:32:PHE:HA	1.80	0.62
17:AQ:12:VAL:CG1	17:AQ:13:SER:N	2.63	0.62
22:BA:2663:G:H2'	22:BA:2664:G:C8	2.34	0.62
23:BB:116:G:H4'	36:BO:54:VAL:O	1.99	0.62
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	1.82	0.62
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	1.99	0.62
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.30	0.62
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.64	0.62
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.63	0.62
53:CA:166:U:H2'	53:CA:167:A:H5'	1.82	0.62
53:CA:277:C:H2'	53:CA:278:G:H8	1.64	0.62
3:CC:5:HIS:NE2	3:CC:183:TYR:HE2	1.98	0.62
3:CC:84:GLU:HA	3:CC:87:ARG:HB2	1.81	0.62
5:CE:59:ILE:HG13	5:CE:59:ILE:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:117:HIS:O	11:CK:118:ASN:HB2	1.99	0.62
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.14	0.62
57:DA:1071:G:N7	57:DA:1089:A:C6	2.67	0.62
57:DA:1416:G:O2'	57:DA:1417:C:O5'	2.16	0.62
57:DA:1565:C:H3'	24:DC:17:LYS:HE2	1.82	0.62
57:DA:1912:A:N6	57:DA:1917:U:N3	2.46	0.62
57:DA:2403:C:H2'	57:DA:2404:U:H6	1.63	0.62
57:DA:2461:A:H1'	57:DA:2492:U:H3	1.63	0.62
57:DA:2623:G:H4'	57:DA:2825:G:C8	2.34	0.62
57:DA:374:A:N6	57:DA:401:A:C8	2.67	0.62
57:DA:616:A:H2'	57:DA:617:G:H8	1.59	0.62
57:DA:677:A:O2'	57:DA:2071:A:H5'	2.00	0.62
57:DA:743:A:OP1	25:DD:135:GLY:HA2	1.99	0.62
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.81	0.62
59:DF:48:LEU:HG	59:DF:49:LEU:HD22	1.82	0.62
42:DU:34:ILE:HG12	42:DU:62:ALA:O	2.00	0.62
44:DW:77:LYS:N	44:DW:77:LYS:HZ2	1.97	0.62
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.14	0.62
1:AA:35:G:H2'	1:AA:36:C:H6	1.64	0.62
1:AA:372:C:H4'	1:AA:373:A:OP1	1.99	0.62
3:AC:154:GLY:O	3:AC:195:ILE:HG12	2.00	0.62
22:BA:161:A:OP2	22:BA:162:U:H3'	2.00	0.62
22:BA:1681:G:O2'	22:BA:1762:A:H1'	1.99	0.62
22:BA:2772:C:H2'	22:BA:2773:C:H6	1.65	0.62
22:BA:390:U:O2'	22:BA:391:A:OP2	2.18	0.62
32:BK:95:ILE:O	32:BK:95:ILE:HD12	1.99	0.62
41:BT:15:HIS:HB3	41:BT:31:VAL:HG22	1.80	0.62
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.20	0.62
53:CA:1176:A:H2'	53:CA:1177:G:O4'	1.99	0.62
53:CA:1206:G:H4'	3:CC:191:THR:O	1.99	0.62
53:CA:205:A:C6	53:CA:206:C:N4	2.67	0.62
53:CA:328:C:H2'	53:CA:328:C:O2	1.97	0.62
53:CA:664:G:N2	53:CA:741:G:H1	1.90	0.62
2:CB:114:LYS:CE	2:CB:151:LYS:HB2	2.22	0.62
4:CD:61:ARG:HH21	4:CD:67:LEU:CA	2.11	0.62
57:DA:1635:A:H5'	57:DA:1635:A:C8	2.34	0.62
57:DA:1941:C:H2'	57:DA:1942:C:C6	2.34	0.62
57:DA:2271:G:H2'	57:DA:2272:U:H6	1.63	0.62
57:DA:232:G:O2'	57:DA:233:A:H5''	1.98	0.62
57:DA:2574:G:O2'	25:DD:148:GLN:HB2	1.99	0.62
57:DA:729:G:H3'	57:DA:730:A:C5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:28:LEU:O	35:DN:32:GLU:N	2.31	0.62
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.82	0.62
38:DQ:57:ARG:O	38:DQ:61:ILE:HD13	2.00	0.62
1:AA:1202:U:O4'	14:AN:68:ARG:HD2	1.99	0.62
1:AA:86:G:C2	1:AA:87:C:N4	2.66	0.62
8:AH:10:LEU:HD11	8:AH:126:CYS:CB	2.30	0.62
11:AK:35:ASP:OD2	11:AK:39:ASN:HB2	1.99	0.62
11:AK:87:GLY:N	11:AK:113:THR:HG22	2.15	0.62
48:B0:47:TYR:CE2	48:B0:52:LYS:HB2	2.35	0.62
22:BA:1417:C:H2'	22:BA:1418:G:C8	2.35	0.62
22:BA:1931:U:C6	22:BA:1931:U:H5'	2.34	0.62
33:BL:92:LEU:HD23	33:BL:125:LEU:HD23	1.81	0.62
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.35	0.62
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.34	0.62
53:CA:279:A:C5'	53:CA:280:C:H3'	2.22	0.62
53:CA:802:A:H2'	53:CA:803:G:H5'	1.82	0.62
2:CB:93:HIS:ND1	2:CB:145:ASN:O	2.33	0.62
9:CI:59:LYS:HE3	9:CI:60:LEU:HG	1.82	0.62
19:CS:46:LEU:H	19:CS:46:LEU:HD23	1.63	0.62
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.81	0.62
57:DA:1071:G:O2'	57:DA:1072:C:H5'	1.99	0.62
57:DA:1268:A:C6	57:DA:2013:A:C8	2.87	0.62
57:DA:2798:U:H5'	57:DA:2800:A:C5	2.35	0.62
57:DA:2889:C:N4	57:DA:2890:G:C6	2.68	0.62
57:DA:754:U:H2'	57:DA:755:U:C6	2.35	0.62
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.80	0.62
2:AB:20:ARG:HA	2:AB:20:ARG:NH1	2.15	0.62
3:AC:156:LEU:N	3:AC:156:LEU:HD12	2.13	0.62
4:AD:145:ARG:NH1	4:AD:147:LYS:HE3	2.09	0.62
10:AJ:19:ASP:HA	10:AJ:22:THR:HB	1.81	0.62
11:AK:91:GLY:HA2	11:AK:94:SER:HB3	1.82	0.62
12:AL:72:ASN:OD1	12:AL:104:SER:HB3	1.99	0.62
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.28	0.62
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.35	0.62
22:BA:669:G:N3	22:BA:669:G:H2'	2.15	0.62
22:BA:790:U:H2'	63:BA:3756:HOH:O	1.98	0.62
22:BA:1819:A:OP1	24:BC:154:ALA:HA	1.99	0.62
27:BF:114:ARG:H	27:BF:114:ARG:HD2	1.64	0.62
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.81	0.62
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.52	0.62
39:BR:1:MET:HA	39:BR:42:ALA:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:29:THR:HA	41:BT:86:THR:HA	1.82	0.62
45:BX:4:CYS:HB2	45:BX:51:SER:HB3	1.81	0.62
53:CA:119:A:H4'	53:CA:120:A:C8	2.34	0.62
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.52	0.62
53:CA:796:C:OP1	11:CK:127:ARG:HB3	2.00	0.62
17:CQ:59:GLU:HG2	17:CQ:76:ARG:HG2	1.82	0.62
57:DA:1512:C:O2'	57:DA:1513:U:H5'	1.99	0.62
57:DA:1826:G:P	24:DC:220:ARG:HB3	2.39	0.62
57:DA:2665:A:H2'	57:DA:2666:C:O2	1.99	0.62
57:DA:781:A:N1	57:DA:1776:G:O2'	2.29	0.62
24:DC:1:ALA:O	24:DC:18:VAL:HG23	2.00	0.62
28:DG:86:LEU:HD12	28:DG:132:LEU:HD11	1.82	0.62
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.10	0.62
1:AA:1320:C:H41	19:AS:36:ARG:HG2	1.65	0.62
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.34	0.62
1:AA:819:A:H4'	1:AA:820:U:OP2	1.99	0.62
2:AB:86:CYS:HB2	2:AB:88:GLN:HG3	1.81	0.62
4:AD:117:VAL:CA	4:AD:122:ILE:HD11	2.30	0.62
16:AP:57:ILE:O	16:AP:61:VAL:HG23	2.00	0.62
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.38	0.62
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.00	0.62
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.64	0.62
22:BA:2134:A:O2'	22:BA:2135:A:H5''	2.00	0.62
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.35	0.62
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.00	0.62
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.35	0.62
22:BA:475:C:C4	22:BA:481:G:O6	2.52	0.62
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	2.00	0.62
33:BL:82:LEU:HD23	33:BL:82:LEU:C	2.20	0.62
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.15	0.62
53:CA:453:G:H2'	53:CA:454:G:C8	2.35	0.62
3:CC:176:THR:HG22	3:CC:178:ARG:HG3	1.82	0.62
53:CA:1219:A:OP1	14:CN:52:ARG:HG3	2.00	0.62
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.65	0.62
14:CN:9:GLU:HA	14:CN:12:ARG:HD2	1.81	0.62
57:DA:1300:G:H4'	57:DA:1301:A:O5'	2.00	0.62
57:DA:1525:A:H2'	57:DA:1526:C:O4'	2.00	0.62
57:DA:1746:A:H2'	57:DA:1747:U:H6	1.65	0.62
57:DA:2147:A:OP1	57:DA:2147:A:H4'	2.00	0.62
57:DA:704:G:C2'	57:DA:726:G:H22	2.11	0.62
24:DC:53:ILE:HA	24:DC:214:GLY:O	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.65	0.62
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.15	0.62
4:AD:151:GLN:H	4:AD:154:VAL:HG13	1.65	0.61
5:AE:100:GLU:HB3	5:AE:121:ASN:HA	1.80	0.61
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.35	0.61
14:AN:46:LYS:HD2	19:AS:12:LEU:HD21	1.83	0.61
21:AU:36:PHE:HA	21:AU:39:LYS:HE2	1.82	0.61
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.17	0.61
22:BA:2104:C:H2'	22:BA:2105:U:O4'	2.00	0.61
22:BA:2259:U:O4'	22:BA:2427:C:H2'	2.00	0.61
22:BA:875:G:C2'	22:BA:876:C:H5'	2.30	0.61
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.14	0.61
35:BN:73:ASN:O	35:BN:76:VAL:HG12	1.99	0.61
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.65	0.61
45:BX:40:GLU:O	45:BX:43:LYS:HD2	2.00	0.61
53:CA:1217:C:O2'	53:CA:1218:C:O4'	2.13	0.61
53:CA:372:C:O2'	53:CA:373:A:P	2.58	0.61
2:CB:162:VAL:HG13	2:CB:184:ALA:HB2	1.82	0.61
5:CE:157:GLY:HA3	8:CH:63:LYS:NZ	2.14	0.61
56:CP:75:ILE:HG22	56:CP:80:LYS:HD2	1.81	0.61
20:CT:23:ARG:HB3	20:CT:60:GLN:HE22	1.61	0.61
57:DA:1338:G:H4'	41:DT:18:GLU:CD	2.20	0.61
57:DA:1439:A:C2	57:DA:1553:A:N7	2.68	0.61
57:DA:2508:G:N2	57:DA:2582:G:C6	2.68	0.61
57:DA:2699:C:H2'	57:DA:2700:A:H8	1.62	0.61
57:DA:372:G:P	45:DX:61:LYS:HZ1	2.23	0.61
57:DA:476:G:O2'	57:DA:477:A:O5'	2.17	0.61
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.21	0.61
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.30	0.61
26:DE:166:LYS:HA	26:DE:166:LYS:HE2	1.82	0.61
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.00	0.61
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.82	0.61
57:DA:329:G:O6	42:DU:16:LYS:HB2	2.00	0.61
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.63	0.61
1:AA:1242:G:O2'	1:AA:1243:C:H5'	2.00	0.61
1:AA:935:A:H61	7:AG:2:ARG:HB2	1.65	0.61
1:AA:1370:G:O5'	9:AI:110:VAL:HG21	1.99	0.61
20:AT:68:LYS:HB2	20:AT:68:LYS:HZ2	1.65	0.61
22:BA:1090:A:O2'	22:BA:1091:G:H5'	2.00	0.61
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.35	0.61
22:BA:2438:U:O2'	22:BA:2439:A:H5''	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.48	0.61
22:BA:2752:C:H2'	22:BA:2753:A:H8	1.65	0.61
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.80	0.61
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.81	0.61
46:BY:9:LYS:NZ	46:BY:9:LYS:HA	2.15	0.61
53:CA:1147:C:O2'	53:CA:1148:U:H6	1.82	0.61
4:CD:33:ILE:O	4:CD:35:GLN:HG2	1.99	0.61
9:CI:58:GLU:HG3	9:CI:59:LYS:H	1.64	0.61
12:CL:42:LYS:HG2	12:CL:43:LYS:N	2.15	0.61
12:CL:5:GLN:HG3	12:CL:9:LYS:NZ	2.15	0.61
17:CQ:25:GLU:HA	17:CQ:39:ARG:O	1.99	0.61
19:CS:45:GLY:H	19:CS:61:VAL:HB	1.65	0.61
57:DA:1338:G:H5''	41:DT:17:SER:HB3	1.80	0.61
57:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.30	0.61
57:DA:2305:U:H4'	59:DF:132:ARG:HG2	1.81	0.61
57:DA:2310:C:H42	59:DF:76:PHE:HE1	1.48	0.61
57:DA:2520:C:H2'	57:DA:2521:C:H6	1.65	0.61
57:DA:2716:C:O2'	57:DA:2717:C:H5'	2.00	0.61
57:DA:2756:U:H1'	57:DA:2757:A:H5''	1.83	0.61
57:DA:816:C:H2'	57:DA:817:C:H6	1.65	0.61
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.82	0.61
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.00	0.61
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.34	0.61
20:AT:5:SER:OG	20:AT:6:ALA:N	2.33	0.61
21:AU:3:ILE:HA	21:AU:19:LYS:NZ	2.14	0.61
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.66	0.61
22:BA:1833:C:C4	22:BA:1834:U:C5	2.88	0.61
22:BA:2383:G:H2'	22:BA:2384:U:H6	1.65	0.61
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.00	0.61
22:BA:894:U:H2'	22:BA:895:U:C6	2.35	0.61
45:BX:5:GLN:HE21	45:BX:49:ARG:H	1.45	0.61
53:CA:198:G:C4	53:CA:199:A:C8	2.88	0.61
53:CA:587:G:H4'	8:CH:3:GLN:HA	1.83	0.61
53:CA:642:A:O2'	53:CA:643:C:C6	2.54	0.61
4:CD:176:LYS:CG	4:CD:178:GLU:HB2	2.29	0.61
54:CG:59:GLU:HG3	54:CG:60:ALA:N	2.15	0.61
57:DA:1033:U:H4'	57:DA:1034:G:OP1	2.00	0.61
57:DA:1417:C:H2'	57:DA:1418:G:C8	2.35	0.61
57:DA:1645:G:H4'	57:DA:1646:C:C5	2.35	0.61
57:DA:2036:C:O2'	57:DA:2037:A:C8	2.52	0.61
57:DA:2631:G:C6	57:DA:2632:A:N7	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.81	0.61
29:DH:116:ARG:O	29:DH:117:LEU:HG	2.00	0.61
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.13	0.61
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.64	0.61
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.30	0.61
1:AA:536:C:H2'	1:AA:537:G:H8	1.63	0.61
1:AA:688:G:H2'	1:AA:689:C:H6	1.65	0.61
6:AF:18:VAL:HG11	6:AF:58:HIS:CD2	2.35	0.61
12:AL:78:VAL:HG12	12:AL:101:LEU:HD23	1.82	0.61
13:AM:79:LEU:HD22	13:AM:86:ARG:HB2	1.83	0.61
14:AN:40:ARG:HH22	14:AN:44:VAL:HG21	1.65	0.61
17:AQ:45:VAL:HG13	17:AQ:72:TRP:O	2.01	0.61
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.82	0.61
22:BA:2033:A:H3'	63:BA:3476:HOH:O	2.00	0.61
22:BA:42:A:H3'	22:BA:43:G:H5''	1.82	0.61
22:BA:893:C:H2'	22:BA:894:U:O4'	2.00	0.61
38:BQ:38:VAL:O	38:BQ:41:ALA:HB3	2.00	0.61
39:BR:27:ILE:HG13	39:BR:33:VAL:CG1	2.30	0.61
39:BR:41:ILE:O	39:BR:46:GLU:HB2	1.99	0.61
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.65	0.61
44:BW:19:ARG:HH12	44:BW:22:VAL:HG11	1.65	0.61
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.28	0.61
45:BX:29:LEU:HD23	45:BX:29:LEU:N	2.15	0.61
53:CA:1447:A:O2'	53:CA:1448:C:OP1	2.18	0.61
2:CB:100:LEU:O	2:CB:103:TRP:HE3	1.83	0.61
57:DA:1127:A:O2'	57:DA:1128:G:H5'	2.01	0.61
57:DA:1594:U:H2'	57:DA:1595:C:C6	2.36	0.61
57:DA:152:A:C2	57:DA:175:G:C2	2.88	0.61
57:DA:1905:C:N4	57:DA:1930:G:N1	2.49	0.61
57:DA:222:A:N6	57:DA:232:G:H1'	2.15	0.61
57:DA:2261:C:C2	57:DA:2280:G:N2	2.68	0.61
57:DA:586:A:O5'	57:DA:586:A:H8	1.83	0.61
57:DA:852:U:H2'	57:DA:853:C:C6	2.34	0.61
58:DB:55:U:H1'	59:DF:25:MET:SD	2.39	0.61
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.82	0.61
33:DL:73:ILE:O	33:DL:105:ILE:HG23	2.00	0.61
45:DX:2:ARG:HH21	45:DX:32:LEU:HD23	1.64	0.61
1:AA:242:G:C2	1:AA:245:U:C4	2.88	0.61
22:BA:1735:A:H2'	22:BA:1736:U:C6	2.35	0.61
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.82	0.61
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.35	0.61
22:BA:455:C:N3	22:BA:472:A:H2'	2.16	0.61
22:BA:588:U:H2'	22:BA:589:U:C6	2.35	0.61
26:BE:147:LEU:HD23	26:BE:183:PHE:CD1	2.36	0.61
22:BA:871:U:OP1	34:BM:5:LYS:HG3	2.01	0.61
53:CA:157:U:O2'	53:CA:158:G:H5'	2.01	0.61
53:CA:238:A:H2'	53:CA:239:U:C5'	2.31	0.61
53:CA:451:A:H61	53:CA:481:G:H5'	1.66	0.61
53:CA:613:C:H2'	53:CA:614:C:C6	2.35	0.61
53:CA:695:A:H2'	53:CA:696:A:C8	2.36	0.61
53:CA:702:A:H5'	53:CA:703:G:N7	2.15	0.61
5:CE:151:MET:O	5:CE:154:ALA:HB3	2.01	0.61
54:CG:110:ARG:HG3	54:CG:111:GLY:N	2.13	0.61
9:CI:38:PHE:CE2	9:CI:71:ILE:HG22	2.35	0.61
11:CK:64:VAL:O	11:CK:68:ARG:HB2	2.00	0.61
57:DA:1438:U:C5	57:DA:1552:A:N1	2.68	0.61
57:DA:1447:C:H2'	57:DA:1448:G:H8	1.66	0.61
57:DA:182:A:H2'	57:DA:183:C:C6	2.35	0.61
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.33	0.61
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.00	0.61
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.83	0.61
33:DL:55:MET:SD	33:DL:59:ARG:NE	2.74	0.61
35:DN:35:LYS:HD3	35:DN:112:TYR:OH	2.01	0.61
10:AJ:65:TYR:HB3	14:AN:95:LEU:HD11	1.81	0.61
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.15	0.61
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.26	0.61
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.65	0.61
22:BA:319:G:C4	22:BA:333:G:N2	2.69	0.61
22:BA:435:C:O2'	22:BA:436:C:H5'	2.00	0.61
22:BA:623:C:H2'	22:BA:624:C:H6	1.65	0.61
24:BC:158:GLY:H	24:BC:194:VAL:HG13	1.66	0.61
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.65	0.61
44:BW:41:GLY:O	44:BW:42:THR:C	2.39	0.61
53:CA:1478:U:H2'	53:CA:1479:C:C6	2.36	0.61
53:CA:202:G:HO2'	53:CA:468:A:H8	1.41	0.61
53:CA:51:A:H4'	53:CA:52:C:C5'	2.31	0.61
53:CA:676:A:H2'	53:CA:677:U:H6	1.65	0.61
2:CB:127:LYS:HE2	2:CB:136:ARG:HH21	1.65	0.61
6:CF:75:GLU:OE2	6:CF:89:VAL:HG11	2.01	0.61
11:CK:106:ILE:O	11:CK:106:ILE:HG12	2.01	0.61
21:CU:36:PHE:CD1	21:CU:40:PRO:HB3	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1759:A:H2'	57:DA:1760:C:C6	2.36	0.61
57:DA:1965:C:H2'	57:DA:1966:A:C8	2.35	0.61
57:DA:2232:C:OP1	45:DX:26:ARG:NH1	2.34	0.61
57:DA:2358:A:H61	33:DL:54:GLN:HE22	1.46	0.61
57:DA:2448:A:HO2'	57:DA:2449:U:H5	1.45	0.61
57:DA:244:A:H2'	57:DA:245:G:O4'	2.00	0.61
57:DA:2619:C:H4'	25:DD:156:PHE:O	2.01	0.61
57:DA:674:G:H5''	26:DE:71:GLY:H	1.65	0.61
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.82	0.61
25:DD:110:THR:HA	25:DD:171:THR:HA	1.83	0.61
33:DL:18:ARG:HB3	33:DL:21:ARG:HD2	1.83	0.61
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.13	0.61
1:AA:1066:C:H6	1:AA:1066:C:H5''	1.65	0.61
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.01	0.61
1:AA:250:A:H4'	1:AA:251:G:O5'	2.00	0.61
1:AA:390:U:H2'	1:AA:391:G:C8	2.35	0.61
1:AA:820:U:H4'	1:AA:821:G:OP2	1.99	0.61
4:AD:63:ILE:HG23	4:AD:64:TYR:CD1	2.35	0.61
5:AE:105:ILE:HG13	5:AE:123:LEU:HA	1.83	0.61
5:AE:44:ARG:HA	5:AE:71:ILE:O	2.00	0.61
13:AM:86:ARG:HH21	13:AM:96:VAL:HG12	1.66	0.61
22:BA:1110:G:O2'	22:BA:1111:A:O5'	2.18	0.61
22:BA:2886:A:N3	22:BA:2887:A:H1'	2.16	0.61
25:BD:1:MET:SD	25:BD:100:LEU:HD11	2.41	0.61
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	2.12	0.61
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.30	0.61
44:BW:47:GLY:C	44:BW:49:ASN:H	2.04	0.61
53:CA:1069:C:H4'	53:CA:1192:C:O2	2.00	0.61
53:CA:961:U:H5	53:CA:1223:C:H1'	1.66	0.61
53:CA:818:G:C3'	53:CA:819:A:H5''	2.30	0.61
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.04	0.61
3:CC:9:ILE:HD12	14:CN:97:LYS:HD3	1.82	0.61
5:CE:68:ARG:O	5:CE:70:MET:HG2	2.01	0.61
10:CJ:37:ARG:HG2	10:CJ:75:ASP:HB3	1.82	0.61
15:CO:69:LEU:O	15:CO:69:LEU:HD22	2.01	0.61
53:CA:267:C:OP2	17:CQ:68:LYS:HD2	2.00	0.61
57:DA:1183:U:H2'	57:DA:1184:U:H6	1.65	0.61
57:DA:151:C:H2'	57:DA:152:A:C8	2.36	0.61
57:DA:1809:A:O2'	57:DA:1810:A:H8	1.81	0.61
57:DA:2348:U:O2'	57:DA:2349:G:O4'	2.18	0.61
57:DA:594:U:H2'	57:DA:595:C:C6	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:686:U:H6	57:DA:788:A:N1	1.98	0.61
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.16	0.61
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.82	0.61
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.17	0.61
1:AA:843:U:H2'	1:AA:844:G:H5'	1.83	0.61
3:AC:13:ILE:O	3:AC:15:LYS:N	2.34	0.61
13:AM:106:ARG:HH11	13:AM:106:ARG:HA	1.66	0.61
1:AA:1329:A:H5''	13:AM:25:GLY:H	1.66	0.61
16:AP:37:GLY:HA2	16:AP:51:ARG:NH1	2.16	0.61
11:AK:126:ARG:C	21:AU:33:ARG:HH12	2.04	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.01	0.61
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.01	0.61
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.03	0.61
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.48	0.61
44:BW:37:VAL:C	44:BW:38:ARG:HG2	2.21	0.61
44:BW:39:GLN:C	44:BW:41:GLY:N	2.50	0.61
53:CA:1288:A:H2'	53:CA:1289:A:H8	1.65	0.61
53:CA:72:A:N6	53:CA:99:C:H1'	2.16	0.61
3:CC:46:LEU:HD22	3:CC:75:VAL:HG22	1.81	0.61
9:CI:48:ARG:HH21	9:CI:57:VAL:HG21	1.65	0.61
11:CK:96:ILE:HD13	11:CK:109:ILE:HD13	1.82	0.61
12:CL:42:LYS:HG2	12:CL:43:LYS:H	1.66	0.61
20:CT:73:ARG:CG	20:CT:73:ARG:NH1	2.59	0.61
57:DA:1197:G:H5'	57:DA:1227:G:O2'	2.01	0.61
57:DA:1754:A:C6	57:DA:1755:A:C6	2.88	0.61
57:DA:2324:U:C5'	57:DA:2325:G:H5''	2.29	0.61
57:DA:36:G:O2'	57:DA:37:C:H5'	2.00	0.61
57:DA:379:G:C6	57:DA:396:G:C6	2.89	0.61
57:DA:870:U:H2'	57:DA:871:U:H5'	1.82	0.61
24:DC:62:ARG:HD3	24:DC:83:ASP:CG	2.20	0.61
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.14	0.61
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.69	0.61
29:DH:24:GLY:O	29:DH:28:ASN:HB2	2.01	0.61
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.83	0.61
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.10	0.61
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.82	0.61
1:AA:795:C:H5''	1:AA:796:C:OP2	2.01	0.61
1:AA:914:A:O2'	1:AA:915:A:H5'	2.00	0.61
11:AK:86:LYS:HA	11:AK:113:THR:HG22	1.81	0.61
12:AL:87:LYS:O	12:AL:88:ASP:HB2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:AP:67:ILE:CG2	16:AP:72:ALA:HB2	2.31	0.61
22:BA:1:G:H2'	22:BA:1:G:N3	2.15	0.61
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.84	0.61
22:BA:2500:U:H5''	22:BA:2501:C:OP2	2.01	0.61
23:BB:45:A:O2'	23:BB:46:A:H5'	2.01	0.61
25:BD:158:GLY:O	25:BD:159:LYS:C	2.38	0.61
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.82	0.61
41:BT:59:ASN:O	41:BT:83:ALA:O	2.18	0.61
53:CA:269:C:H2'	53:CA:270:A:H8	1.66	0.61
53:CA:32:A:C2'	53:CA:33:A:H8	2.12	0.61
53:CA:113:G:N2	53:CA:353:A:H8	1.97	0.61
53:CA:630:A:C2	63:CA:1858:HOH:O	2.52	0.61
53:CA:802:A:C2'	53:CA:803:G:H5'	2.31	0.61
53:CA:570:G:H1'	53:CA:820:U:C4	2.36	0.61
54:CG:78:ARG:HA	54:CG:84:TYR:HB2	1.82	0.61
10:CJ:80:THR:O	10:CJ:84:VAL:HG22	2.01	0.61
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.82	0.61
57:DA:1062:G:H22	57:DA:1077:A:H2	1.49	0.61
57:DA:1535:A:H2'	57:DA:1535:A:N3	2.16	0.61
57:DA:27:G:HO2'	57:DA:28:A:H8	1.49	0.61
28:DG:43:LYS:O	28:DG:49:LEU:HD12	2.01	0.61
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.16	0.61
36:DO:24:THR:HG22	36:DO:41:ALA:HA	1.83	0.61
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.81	0.61
41:DT:29:THR:CB	41:DT:86:THR:H	2.14	0.61
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.36	0.61
1:AA:539:A:H2'	1:AA:540:G:H8	1.60	0.61
1:AA:80:A:C2	1:AA:81:A:H1'	2.36	0.61
1:AA:96:U:O2'	1:AA:97:G:H8	1.82	0.61
2:AB:32:GLY:HA3	2:AB:39:ILE:HG12	1.82	0.61
8:AH:9:MET:HE1	8:AH:32:LYS:HA	1.82	0.61
14:AN:40:ARG:HH12	14:AN:44:VAL:CG1	2.11	0.61
22:BA:2391:G:O6	22:BA:2425:A:H8	1.84	0.61
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.49	0.61
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.82	0.61
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.35	0.61
22:BA:636:G:H3'	33:BL:128:THR:HG21	1.81	0.61
24:BC:156:SER:O	24:BC:194:VAL:HG11	2.01	0.61
25:BD:92:VAL:O	25:BD:93:GLY:C	2.37	0.61
32:BK:47:ILE:CG1	32:BK:48:PRO:HD2	2.23	0.61
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CZ	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.33	0.61
53:CA:108:G:H5'	53:CA:109:A:H5''	1.82	0.61
53:CA:1145:A:O2'	53:CA:1146:A:H5''	2.01	0.61
53:CA:1160:G:HO2'	53:CA:1161:C:C5'	2.14	0.61
53:CA:1285:A:O2'	53:CA:1286:U:H5'	2.01	0.61
53:CA:348:G:O2'	53:CA:349:A:H5'	2.01	0.61
53:CA:464:U:C4	53:CA:466:A:H4'	2.36	0.61
53:CA:642:A:N7	8:CH:106:SER:HA	2.16	0.61
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.31	0.61
57:DA:2230:G:H2'	57:DA:2231:U:C6	2.36	0.61
57:DA:2440:C:H2'	57:DA:2441:U:O4'	2.01	0.61
57:DA:370:G:C6	57:DA:424:G:N7	2.69	0.61
57:DA:620:G:O2'	57:DA:622:G:N7	2.33	0.61
57:DA:663:G:OP1	33:DL:17:LYS:HG2	2.00	0.61
57:DA:674:G:H4'	26:DE:69:ARG:HB3	1.83	0.61
25:DD:137:SER:HB3	25:DD:138:LEU:CD2	2.30	0.61
59:DF:65:LEU:HD23	59:DF:65:LEU:H	1.65	0.61
30:DI:50:LYS:HE2	30:DI:50:LYS:HA	1.83	0.61
57:DA:57:C:O2'	41:DT:36:LYS:HE2	2.01	0.61
1:AA:1058:G:C5	1:AA:1059:C:C5	2.89	0.60
1:AA:1530:G:O2'	1:AA:1531:A:C8	2.54	0.60
10:AJ:41:PRO:O	10:AJ:42:LEU:HB2	2.00	0.60
13:AM:45:SER:O	13:AM:46:GLU:HB2	2.00	0.60
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.64	0.60
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.36	0.60
22:BA:90:U:H2'	22:BA:91:A:C8	2.35	0.60
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.65	0.60
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.01	0.60
47:BZ:8:GLN:O	47:BZ:10:ARG:N	2.33	0.60
53:CA:1172:C:O2'	53:CA:1173:U:H5'	2.01	0.60
53:CA:1356:G:H2'	53:CA:1357:A:C8	2.36	0.60
12:CL:79:ILE:HD12	12:CL:96:THR:CG2	2.31	0.60
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CZ	2.36	0.60
19:CS:79:TYR:O	19:CS:80:ARG:HB2	2.00	0.60
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.66	0.60
57:DA:1510:G:N2	57:DA:1511:G:C4	2.69	0.60
57:DA:1597:A:O3'	57:DA:1598:A:H8	1.84	0.60
57:DA:1394:U:H4'	57:DA:1603:A:H4'	1.83	0.60
57:DA:1665:A:N7	63:DA:3436:HOH:O	2.31	0.60
57:DA:1737:G:C6	57:DA:1738:G:N1	2.69	0.60
57:DA:1738:G:O2'	57:DA:1739:A:H8	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2061:G:N7	57:DA:2501:C:H4'	2.15	0.60
57:DA:2259:U:O4'	57:DA:2427:C:H2'	2.01	0.60
57:DA:1998:A:O3'	57:DA:2724:U:H4'	2.01	0.60
57:DA:2839:G:N2	57:DA:2880:C:C4	2.69	0.60
57:DA:457:A:N1	57:DA:470:A:H5''	2.15	0.60
24:DC:52:HIS:HD2	24:DC:217:PRO:O	1.83	0.60
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.01	0.60
26:DE:98:LYS:O	26:DE:99:LYS:HB2	2.00	0.60
29:DH:84:ALA:HA	29:DH:89:LYS:O	2.01	0.60
57:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.01	0.60
38:DQ:111:LYS:HE3	39:DR:48:LYS:HD3	1.83	0.60
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.83	0.60
45:DX:19:HIS:C	45:DX:21:LEU:H	2.03	0.60
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.01	0.60
1:AA:215:C:H2'	1:AA:216:U:C6	2.36	0.60
1:AA:500:G:H2'	1:AA:501:C:C6	2.36	0.60
13:AM:86:ARG:NH2	13:AM:96:VAL:HG12	2.16	0.60
1:AA:186:C:O4'	20:AT:75:LYS:HD2	2.00	0.60
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.84	0.60
22:BA:459:U:H2'	22:BA:460:A:H8	1.65	0.60
26:BE:108:ILE:HB	33:BL:2:ARG:HH22	1.66	0.60
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.82	0.60
35:BN:58:ASP:OD2	35:BN:63:ARG:NH2	2.33	0.60
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.83	0.60
53:CA:936:C:O2'	53:CA:937:A:C8	2.49	0.60
53:CA:968:A:N3	53:CA:1062:U:H4'	2.15	0.60
3:CC:120:THR:O	3:CC:120:THR:HG22	2.00	0.60
8:CH:91:LEU:HD12	8:CH:116:ARG:HG3	1.83	0.60
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.01	0.60
12:CL:26:CYS:HB2	12:CL:29:LYS:HE2	1.81	0.60
56:CP:75:ILE:HA	56:CP:78:VAL:HG23	1.83	0.60
57:DA:1809:A:H2'	57:DA:1810:A:C8	2.36	0.60
57:DA:1819:A:H4'	57:DA:1820:U:H5'	1.83	0.60
57:DA:1962:C:H4'	57:DA:1963:U:OP1	2.01	0.60
57:DA:1974:C:H2'	57:DA:1975:G:H8	1.66	0.60
57:DA:2881:U:O2'	57:DA:2882:A:H5'	2.02	0.60
57:DA:585:G:H2'	57:DA:1254:A:H61	1.66	0.60
57:DA:604:G:C2	57:DA:605:G:C5	2.88	0.60
57:DA:609:A:H2'	57:DA:610:C:O4'	2.01	0.60
57:DA:616:A:C2'	57:DA:617:G:C8	2.80	0.60
58:DB:13:G:H5''	58:DB:13:G:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.81	0.60
57:DA:2529:G:H4'	28:DG:174:LYS:CD	2.31	0.60
57:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.31	0.60
37:DP:28:LYS:NZ	37:DP:82:SER:HB2	2.16	0.60
42:DU:14:THR:HB	42:DU:68:ASN:CB	2.30	0.60
43:DV:14:LYS:CG	43:DV:18:ARG:HD2	2.31	0.60
1:AA:107:G:H2'	1:AA:108:G:H5'	1.83	0.60
4:AD:10:LEU:CD2	4:AD:62:ARG:HG3	2.31	0.60
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.01	0.60
19:AS:17:LYS:HB3	19:AS:30:LEU:HD23	1.83	0.60
22:BA:1568:G:OP1	24:BC:62:ARG:NH1	2.34	0.60
22:BA:216:A:H2'	22:BA:217:A:C8	2.35	0.60
22:BA:1064:C:H5'	30:BI:88:GLY:HA3	1.84	0.60
34:BM:31:PHE:CE2	34:BM:110:GLU:HG2	2.37	0.60
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.00	0.60
41:BT:39:THR:HB	41:BT:42:GLU:H	1.66	0.60
43:BV:26:PHE:CZ	43:BV:42:LEU:HD12	2.37	0.60
53:CA:1147:C:H4'	9:CI:6:TYR:CE1	2.37	0.60
53:CA:1304:G:H1'	53:CA:1333:A:N6	2.16	0.60
53:CA:464:U:O4	53:CA:466:A:H4'	2.01	0.60
53:CA:486:U:O2	53:CA:486:U:H2'	1.98	0.60
53:CA:73:C:O2'	53:CA:74:A:H8	1.84	0.60
17:CQ:29:LYS:HE2	17:CQ:36:PHE:CE1	2.36	0.60
18:CR:39:VAL:HG12	18:CR:40:PRO:HD2	1.83	0.60
57:DA:226:A:H2'	57:DA:227:A:C8	2.36	0.60
57:DA:513:A:H2'	57:DA:514:A:H8	1.65	0.60
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.84	0.60
57:DA:1666:G:O3'	32:DK:6:THR:HG23	2.01	0.60
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.29	0.60
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.83	0.60
1:AA:174:A:O2'	1:AA:175:C:H5'	2.01	0.60
1:AA:548:G:O2'	1:AA:549:C:H5'	2.02	0.60
1:AA:686:U:O2'	1:AA:687:A:H8	1.79	0.60
2:AB:66:ILE:HB	2:AB:88:GLN:CB	2.30	0.60
4:AD:190:LEU:O	4:AD:191:SER:HB2	2.01	0.60
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.83	0.60
12:AL:7:VAL:HG13	17:AQ:30:HIS:CD2	2.35	0.60
22:BA:1310:G:C2'	22:BA:1311:G:H5'	2.31	0.60
22:BA:332:A:C2	22:BA:335:C:C5	2.89	0.60
22:BA:39:G:H2'	22:BA:40:U:H6	1.65	0.60
22:BA:571:U:C5	22:BA:575:A:C6	2.88	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:225:ASN:HB3	24:BC:226:PRO:HD2	1.83	0.60
25:BD:45:TYR:CD1	25:BD:45:TYR:N	2.68	0.60
29:BH:67:ALA:C	29:BH:69:ALA:H	2.04	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
31:BJ:75:TYR:CD1	31:BJ:86:GLN:HB3	2.36	0.60
39:BR:21:ARG:NH2	39:BR:93:PHE:CD1	2.70	0.60
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.84	0.60
46:BY:43:LEU:O	46:BY:47:ARG:HB2	2.02	0.60
53:CA:103:U:C2	53:CA:104:G:C8	2.90	0.60
53:CA:1079:G:H2'	53:CA:1080:A:C8	2.37	0.60
53:CA:397:A:N7	53:CA:547:A:O2'	2.34	0.60
53:CA:496:A:O2'	53:CA:497:G:C8	2.54	0.60
5:CE:55:VAL:N	5:CE:56:PRO:HD2	2.17	0.60
10:CJ:5:ARG:HH21	10:CJ:77:VAL:HG13	1.66	0.60
57:DA:389:G:C8	57:DA:2413:G:H4'	2.36	0.60
57:DA:447:A:C8	57:DA:473:G:C6	2.89	0.60
57:DA:91:A:O2'	57:DA:92:U:H6	1.84	0.60
29:DH:62:LEU:C	29:DH:64:ALA:H	2.04	0.60
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	2.01	0.60
1:AA:1303:C:O2'	1:AA:1304:G:H5'	2.00	0.60
2:AB:139:GLU:O	2:AB:143:LEU:HD23	2.00	0.60
12:AL:33:CYS:HA	12:AL:53:ARG:O	2.00	0.60
17:AQ:13:SER:O	17:AQ:16:MET:SD	2.59	0.60
17:AQ:67:SER:OG	17:AQ:70:LYS:HB3	2.02	0.60
19:AS:52:ASN:O	19:AS:76:THR:HG22	2.01	0.60
22:BA:1313:U:H4'	22:BA:1332:G:H4'	1.82	0.60
22:BA:1935:G:H1'	22:BA:1964:G:N2	2.16	0.60
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	2.00	0.60
28:BG:23:ILE:HG21	28:BG:71:LEU:HD11	1.83	0.60
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	1.84	0.60
37:BP:33:GLU:HB2	37:BP:38:ARG:HH11	1.67	0.60
41:BT:39:THR:O	41:BT:40:LYS:HB2	2.01	0.60
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.05	0.60
47:BZ:40:THR:HG23	47:BZ:43:ILE:HG23	1.84	0.60
53:CA:821:G:H2'	53:CA:822:U:C6	2.36	0.60
53:CA:86:G:H1'	53:CA:87:C:O5'	2.01	0.60
53:CA:960:U:C5'	53:CA:961:U:H5''	2.31	0.60
53:CA:410:G:OP1	4:CD:25:ARG:HD2	2.02	0.60
5:CE:129:SER:HA	63:CE:202:HOH:O	2.01	0.60
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.65	0.60
56:CP:36:VAL:O	56:CP:36:VAL:HG13	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.64	0.60
19:CS:50:VAL:HG11	19:CS:70:LEU:HB3	1.83	0.60
20:CT:3:ILE:O	20:CT:4:LYS:HG2	2.01	0.60
57:DA:1846:G:H5''	57:DA:1847:A:OP2	2.01	0.60
57:DA:2184:A:H2'	57:DA:2185:U:O4'	2.01	0.60
57:DA:2563:U:H1'	57:DA:2566:A:N6	2.17	0.60
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.04	0.60
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.16	0.60
39:DR:48:LYS:H	39:DR:48:LYS:HD2	1.65	0.60
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.83	0.60
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.17	0.60
1:AA:1241:G:C2	1:AA:1242:G:C5	2.90	0.60
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.66	0.60
1:AA:487:A:H2'	1:AA:488:C:O4'	2.01	0.60
5:AE:121:ASN:N	5:AE:121:ASN:HD22	2.00	0.60
10:AJ:8:ILE:HG12	10:AJ:100:ILE:HG22	1.83	0.60
11:AK:108:ASN:HB3	21:AU:6:ARG:HG2	1.83	0.60
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.00	0.60
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.37	0.60
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.02	0.60
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.62	0.60
26:BE:175:ILE:HG23	26:BE:175:ILE:O	2.00	0.60
29:BH:3:VAL:HA	29:BH:37:VAL:O	2.02	0.60
33:BL:96:LYS:HA	33:BL:101:ILE:HG22	1.84	0.60
37:BP:17:PRO:HG3	37:BP:83:ILE:O	2.00	0.60
39:BR:21:ARG:HG3	39:BR:95:ASP:OD1	2.01	0.60
40:BS:48:LYS:O	40:BS:52:GLU:HG3	2.01	0.60
42:BU:71:ILE:HD12	42:BU:95:PHE:CD2	2.36	0.60
53:CA:67:C:OP1	53:CA:199:A:H5''	2.01	0.60
3:CC:122:GLN:HB2	3:CC:127:VAL:HG21	1.83	0.60
3:CC:13:ILE:HG22	3:CC:14:VAL:HG23	1.84	0.60
54:CG:75:LYS:HG3	54:CG:76:SER:N	2.17	0.60
53:CA:958:A:H62	19:CS:54:ARG:NH1	2.00	0.60
57:DA:83:A:N6	57:DA:101:A:H5'	2.16	0.60
57:DA:1078:U:H4'	57:DA:1079:C:H5''	1.81	0.60
57:DA:1386:C:O2'	57:DA:1387:A:H8	1.85	0.60
57:DA:1663:G:C2	57:DA:1998:A:C5	2.90	0.60
57:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.32	0.60
24:DC:257:ARG:NH2	24:DC:266:ILE:HD11	2.16	0.60
59:DF:42:ALA:CB	59:DF:49:LEU:HD21	2.31	0.60
28:DG:72:ASN:O	28:DG:76:ILE:HG12	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:7:MET:HG3	32:DK:17:ARG:HH12	1.65	0.60
32:DK:39:ILE:HB	32:DK:41:ILE:HD13	1.82	0.60
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.02	0.60
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.66	0.60
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.37	0.60
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.31	0.60
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.82	0.60
1:AA:267:C:O2'	1:AA:268:U:H5'	2.01	0.60
14:AN:51:PRO:O	14:AN:52:ARG:HB2	2.01	0.60
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.84	0.60
51:B3:32:LEU:HA	51:B3:35:LYS:HD2	1.82	0.60
22:BA:1731:G:C4	22:BA:1733:G:N7	2.69	0.60
22:BA:2728:U:O2'	22:BA:2729:G:C5'	2.47	0.60
22:BA:28:A:O2'	22:BA:29:U:H5'	2.02	0.60
22:BA:794:A:H2'	22:BA:795:C:C6	2.36	0.60
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.02	0.60
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.84	0.60
28:BG:60:GLY:O	28:BG:61:TRP:HB2	2.02	0.60
33:BL:77:ILE:O	33:BL:110:VAL:O	2.20	0.60
40:BS:18:ARG:CG	40:BS:76:VAL:HG13	2.32	0.60
44:BW:18:LYS:HE3	44:BW:19:ARG:CG	2.30	0.60
53:CA:960:U:O2'	53:CA:1223:C:H5''	2.01	0.60
3:CC:120:THR:HG23	3:CC:187:GLU:O	2.01	0.60
57:DA:2361:G:OP1	51:D3:25:HIS:HA	2.02	0.60
57:DA:1038:G:N3	57:DA:1039:A:C8	2.69	0.60
57:DA:1341:G:H3'	57:DA:1397:U:O2	2.01	0.60
57:DA:1605:C:H4'	57:DA:1610:A:C6	2.36	0.60
57:DA:279:A:C2	57:DA:362:A:H4'	2.36	0.60
57:DA:516:C:H2'	57:DA:517:C:H6	1.67	0.60
57:DA:976:G:H2'	57:DA:977:G:C8	2.34	0.60
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.11	0.60
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.83	0.60
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.82	0.60
1:AA:374:A:OP1	1:AA:452:A:N1	2.35	0.60
8:AH:104:SER:O	8:AH:122:GLY:HA3	2.02	0.60
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.14	0.60
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.31	0.60
13:AM:40:GLU:HG3	13:AM:41:ASP:N	2.17	0.60
14:AN:15:LEU:HD23	14:AN:18:LYS:HD2	1.82	0.60
15:AO:15:GLY:C	15:AO:17:ASP:H	2.05	0.60
19:AS:3:SER:O	19:AS:5:LYS:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2021:C:P	48:B0:8:THR:HG21	2.42	0.60
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.31	0.60
22:BA:1941:C:C5'	22:BA:1941:C:H6	2.10	0.60
22:BA:2094:A:P	29:BH:22:LYS:HD2	2.42	0.60
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.01	0.60
22:BA:875:G:H2'	22:BA:876:C:H5'	1.83	0.60
22:BA:987:C:H2'	22:BA:988:A:H5'	1.84	0.60
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.02	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.17	0.60
31:BJ:44:TYR:HD2	38:BQ:63:ARG:HD3	1.67	0.60
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.32	0.60
40:BS:13:SER:O	40:BS:14:ALA:HB2	2.00	0.60
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.49	0.60
53:CA:1159:U:H5	53:CA:1182:G:O2'	1.81	0.60
53:CA:1514:G:H2'	53:CA:1515:G:H8	1.67	0.60
3:CC:41:TYR:HE1	3:CC:89:VAL:HG12	1.67	0.60
4:CD:138:PRO:O	4:CD:139:ASN:HB2	2.02	0.60
6:CF:9:MET:HE1	18:CR:64:LEU:O	2.02	0.60
17:CQ:27:PHE:HD1	17:CQ:36:PHE:HB3	1.66	0.60
57:DA:1275:A:N7	35:DN:16:HIS:HB2	2.17	0.60
57:DA:1387:A:O2'	57:DA:1388:G:H8	1.77	0.60
57:DA:1713:A:H4'	57:DA:1714:U:OP1	2.01	0.60
57:DA:2056:G:N2	48:D0:1:ALA:H1	1.99	0.60
57:DA:2834:G:H1'	57:DA:2879:A:H61	1.65	0.60
24:DC:211:ARG:HD2	24:DC:215:VAL:O	2.01	0.60
57:DA:1797:G:O3'	24:DC:255:LYS:O	2.20	0.60
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.66	0.60
26:DE:44:ARG:H	26:DE:89:PRO:HA	1.66	0.60
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.67	0.60
57:DA:2336:A:N7	44:DW:40:ARG:NH2	2.50	0.60
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.37	0.60
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.02	0.60
1:AA:582:C:C2	1:AA:583:A:C8	2.90	0.60
1:AA:826:C:H5'	8:AH:12:ARG:NH2	2.13	0.60
14:AN:30:ILE:HG23	14:AN:44:VAL:HG12	1.83	0.60
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.32	0.60
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.37	0.60
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.02	0.60
22:BA:572:A:C2	22:BA:2033:A:C2	2.89	0.60
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2491:U:H5''	22:BA:2570:G:H5''	1.84	0.60
24:BC:93:VAL:O	24:BC:94:LEU:HB3	1.99	0.60
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.65	0.60
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.16	0.60
37:BP:95:LYS:HG2	37:BP:97:TYR:CE1	2.36	0.60
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.32	0.60
46:BY:47:ARG:NH2	46:BY:47:ARG:HG3	2.07	0.60
53:CA:158:G:C5	53:CA:164:G:C6	2.90	0.60
53:CA:47:C:H4'	53:CA:48:C:O5'	2.00	0.60
53:CA:675:A:H1'	11:CK:117:HIS:ND1	2.17	0.60
2:CB:103:TRP:HB2	2:CB:106:VAL:HB	1.84	0.60
2:CB:80:LYS:O	2:CB:84:LEU:N	2.34	0.60
4:CD:94:GLU:OE1	4:CD:103:ARG:NE	2.33	0.60
8:CH:93:LYS:N	8:CH:93:LYS:HD3	2.17	0.60
56:CP:16:PHE:CE2	56:CP:40:ASN:HB2	2.36	0.60
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.54	0.60
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.02	0.60
57:DA:1439:A:H3'	57:DA:1439:A:H8	1.65	0.60
57:DA:1557:C:H2'	57:DA:1558:C:C6	2.37	0.60
24:DC:68:ARG:NH1	24:DC:115:ILE:HD12	2.14	0.60
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.67	0.60
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.84	0.60
53:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.83	0.60
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.49	0.60
1:AA:1046:A:O2'	1:AA:1047:G:H5'	2.01	0.60
1:AA:1381:U:O2'	1:AA:1382:C:C5'	2.49	0.60
1:AA:547:A:H4'	1:AA:548:G:O5'	2.02	0.60
2:AB:19:THR:HG23	2:AB:20:ARG:H	1.66	0.60
5:AE:55:VAL:N	5:AE:56:PRO:HD2	2.16	0.60
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.35	0.60
22:BA:749:A:C6	22:BA:1618:A:C2	2.89	0.60
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.02	0.60
22:BA:705:A:N6	22:BA:726:G:H1'	2.17	0.60
22:BA:950:G:C6	22:BA:951:C:C4	2.90	0.60
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.67	0.60
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.66	0.60
22:BA:1011:G:H5''	38:BQ:76:SER:OG	2.02	0.60
44:BW:39:GLN:NE2	44:BW:43:LYS:N	2.50	0.60
44:BW:67:LYS:O	44:BW:68:PHE:HB2	2.01	0.60
53:CA:1101:A:H1'	53:CA:1102:A:O4'	2.02	0.60
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:93:U:C2	53:CA:95:C:N4	2.70	0.60
2:CB:125:PHE:CD1	2:CB:137:THR:HG22	2.37	0.60
17:CQ:59:GLU:HB3	17:CQ:76:ARG:O	2.01	0.60
57:DA:1054:A:C4	57:DA:1055:G:H1'	2.36	0.60
57:DA:1063:G:O2'	57:DA:1064:C:C6	2.54	0.60
57:DA:1352:U:H5	57:DA:1377:G:C5	2.19	0.60
57:DA:1379:U:H2'	57:DA:1379:U:O2	2.01	0.60
57:DA:2094:A:O2'	57:DA:2095:A:O4'	2.20	0.60
57:DA:2582:G:H2'	57:DA:2582:G:N3	2.16	0.60
24:DC:93:VAL:HG11	24:DC:101:ARG:H	1.67	0.60
31:DJ:25:LEU:HD22	31:DJ:26:GLY:N	2.17	0.60
35:DN:37:THR:HG22	35:DN:39:PRO:CD	2.29	0.60
37:DP:67:GLU:CD	37:DP:68:GLY:H	2.05	0.60
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.00	0.60
1:AA:466:A:O2'	1:AA:467:U:H5	1.85	0.59
1:AA:788:U:H2'	1:AA:789:U:H6	1.65	0.59
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.01	0.59
22:BA:1465:G:C6	22:BA:1466:U:N3	2.70	0.59
22:BA:2571:U:O2'	25:BD:151:THR:CG2	2.50	0.59
22:BA:946:C:H2'	22:BA:947:A:H8	1.66	0.59
24:BC:185:ALA:C	24:BC:187:CYS:H	2.06	0.59
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.40	0.59
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.02	0.59
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.49	0.59
38:BQ:27:ARG:NH1	38:BQ:27:ARG:HG3	2.17	0.59
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.84	0.59
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.02	0.59
53:CA:338:A:N6	53:CA:351:G:H1	1.98	0.59
53:CA:608:A:OP2	63:CA:1859:HOH:O	2.16	0.59
53:CA:808:C:OP1	15:CO:47:LYS:HE2	2.02	0.59
55:CM:12:LYS:H	55:CM:44:ILE:HG13	1.66	0.59
17:CQ:25:GLU:HG2	17:CQ:40:THR:HG22	1.83	0.59
57:DA:2142:A:H2'	57:DA:2143:C:H4'	1.83	0.59
57:DA:226:A:H2'	57:DA:227:A:H8	1.66	0.59
57:DA:238:C:H4'	57:DA:608:A:O2'	2.02	0.59
57:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.32	0.59
57:DA:181:A:C2	57:DA:434:U:H1'	2.37	0.59
57:DA:833:A:H2'	57:DA:834:G:C8	2.36	0.59
58:DB:86:G:C2'	58:DB:87:U:H5''	2.30	0.59
25:DD:125:TRP:HB3	25:DD:160:LYS:HD3	1.84	0.59
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.84	0.59
1:AA:1084:G:C5	1:AA:1085:U:C4	2.91	0.59
1:AA:903:G:H2'	1:AA:904:U:H6	1.67	0.59
2:AB:133:ALA:O	2:AB:137:THR:HG23	2.01	0.59
9:AI:9:GLY:HA2	9:AI:80:HIS:HD2	1.66	0.59
15:AO:85:GLY:O	15:AO:86:LEU:HB3	2.01	0.59
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.32	0.59
22:BA:2250:G:O5'	22:BA:2250:G:H8	1.86	0.59
22:BA:945:A:H5'	22:BA:946:C:OP2	2.02	0.59
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.83	0.59
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.17	0.59
41:BT:40:LYS:O	41:BT:44:LYS:N	2.34	0.59
53:CA:1239:A:H62	53:CA:1299:A:N6	2.00	0.59
53:CA:564:C:H5'	53:CA:564:C:C6	2.36	0.59
53:CA:637:C:H2'	53:CA:638:U:C6	2.37	0.59
53:CA:404:G:O6	4:CD:1:ALA:HB2	2.01	0.59
54:CG:63:VAL:HG11	54:CG:127:ALA:HB2	1.84	0.59
53:CA:265:G:O3'	17:CQ:67:SER:HA	2.01	0.59
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.50	0.59
57:DA:1126:A:H8	57:DA:1126:A:OP1	1.84	0.59
57:DA:585:G:C2'	57:DA:1254:A:H61	2.14	0.59
57:DA:1438:U:H2'	57:DA:1439:A:O4'	2.02	0.59
57:DA:203:A:H8	57:DA:203:A:O5'	1.85	0.59
57:DA:784:G:C6	24:DC:227:VAL:HG11	2.38	0.59
57:DA:615:U:O4	26:DE:39:ALA:HB2	2.02	0.59
59:DF:91:ARG:HA	59:DF:95:MET:SD	2.42	0.59
36:DO:15:ARG:HG2	36:DO:93:ASP:OD1	2.02	0.59
32:DK:76:VAL:O	37:DP:71:ARG:HG3	2.02	0.59
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.67	0.59
2:AB:117:GLU:HA	2:AB:120:SER:HB2	1.83	0.59
11:AK:39:ASN:O	11:AK:40:ALA:HB3	2.02	0.59
22:BA:1669:A:H2'	22:BA:1669:A:N3	2.16	0.59
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.65	0.59
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.37	0.59
22:BA:646:U:H3'	22:BA:647:G:C5'	2.33	0.59
25:BD:122:VAL:HG12	25:BD:123:LYS:N	2.17	0.59
42:BU:28:LEU:HB2	42:BU:32:LYS:O	2.01	0.59
53:CA:1440:U:OP2	53:CA:1440:U:H6	1.84	0.59
53:CA:1493:A:H3'	57:DA:1913:A:N6	2.17	0.59
53:CA:951:G:H2'	53:CA:952:U:C6	2.36	0.59
53:CA:1226:C:C5	55:CM:102:LYS:HA	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1716:U:O2'	57:DA:1717:A:H5'	2.03	0.59
57:DA:2533:U:H4'	57:DA:2664:G:H4'	1.84	0.59
57:DA:395:U:O2'	57:DA:396:G:H8	1.84	0.59
58:DB:42:C:N4	59:DF:87:LYS:NZ	2.50	0.59
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.03	0.59
57:DA:2849:U:OP1	37:DP:92:ARG:NH1	2.36	0.59
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.37	0.59
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.36	0.59
2:AB:99:MET:HA	2:AB:106:VAL:HG21	1.84	0.59
14:AN:9:GLU:OE1	14:AN:60:ARG:HB3	2.01	0.59
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.86	0.59
22:BA:226:A:N6	22:BA:227:A:C6	2.70	0.59
22:BA:790:U:O2'	22:BA:791:C:O5'	2.20	0.59
1:AA:345:C:OP1	37:BP:36:LYS:HE2	2.01	0.59
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.17	0.59
43:BV:80:HIS:CD2	43:BV:83:LYS:CB	2.85	0.59
44:BW:14:ASP:O	44:BW:15:SER:HB2	2.02	0.59
53:CA:1142:G:H2'	53:CA:1143:G:C8	2.37	0.59
53:CA:1148:U:H2'	53:CA:1149:C:O4'	2.02	0.59
18:CR:33:THR:HG23	18:CR:39:VAL:HG22	1.84	0.59
57:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.02	0.59
57:DA:1534:U:C6	57:DA:1538:G:N1	2.70	0.59
57:DA:1609:A:N6	57:DA:1616:A:C2	2.71	0.59
57:DA:2386:A:H2	44:DW:38:ARG:HG2	1.68	0.59
57:DA:2756:U:C1'	57:DA:2757:A:H5''	2.32	0.59
57:DA:388:G:N7	57:DA:390:U:H2'	2.18	0.59
57:DA:45:G:H5'	57:DA:46:G:OP1	2.03	0.59
57:DA:574:A:H4'	57:DA:575:A:H5'	1.84	0.59
57:DA:782:A:H5'	57:DA:783:A:C2	2.37	0.59
58:DB:31:C:H5''	59:DF:29:ARG:HH12	1.67	0.59
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.83	0.59
44:DW:45:HIS:HB3	44:DW:58:LEU:HD11	1.84	0.59
1:AA:672:U:H2'	1:AA:673:A:C8	2.38	0.59
1:AA:714:G:H2'	1:AA:715:A:C8	2.37	0.59
1:AA:994:A:C5	1:AA:1216:A:H4'	2.37	0.59
11:AK:125:LYS:O	11:AK:126:ARG:HB2	2.01	0.59
13:AM:68:LEU:O	13:AM:72:ILE:HG13	2.02	0.59
22:BA:196:A:H2'	22:BA:805:G:O6	2.02	0.59
23:BB:112:G:H2'	23:BB:113:C:H6	1.67	0.59
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.02	0.59
27:BF:128:SER:HA	27:BF:154:THR:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:64:VAL:HG22	31:BJ:68:LYS:HD2	1.84	0.59
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.84	0.59
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.18	0.59
43:BV:10:LYS:HZ3	43:BV:10:LYS:HB2	1.67	0.59
53:CA:1084:G:C5	53:CA:1085:U:C4	2.91	0.59
53:CA:1336:C:H1'	53:CA:1337:G:C2	2.36	0.59
53:CA:388:G:O2'	53:CA:389:A:P	2.61	0.59
53:CA:460:A:O2'	53:CA:462:G:H5'	2.02	0.59
53:CA:596:A:C2	53:CA:597:G:C5	2.91	0.59
53:CA:885:G:HO2'	53:CA:914:A:H2	1.51	0.59
53:CA:951:G:H2'	53:CA:952:U:H6	1.67	0.59
4:CD:29:THR:C	4:CD:30:LYS:HD3	2.22	0.59
5:CE:14:LEU:HD13	5:CE:36:THR:HG22	1.85	0.59
11:CK:124:LYS:HG3	21:CU:34:ARG:HD2	1.85	0.59
11:CK:85:VAL:HG11	11:CK:92:ARG:NH1	2.17	0.59
55:CM:78:ARG:NH2	55:CM:79:LEU:HD23	2.16	0.59
55:CM:86:ARG:NH1	55:CM:90:HIS:HD2	2.00	0.59
21:CU:35:GLU:HA	21:CU:35:GLU:OE2	2.01	0.59
57:DA:2333:A:C2	57:DA:2335:A:N6	2.69	0.59
57:DA:2351:G:O6	51:D3:42:HIS:HE1	1.85	0.59
57:DA:2552:U:C2	57:DA:2554:U:H5'	2.38	0.59
57:DA:532:A:H5'	57:DA:533:G:O4'	2.03	0.59
57:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.02	0.59
57:DA:590:A:C6	57:DA:591:U:C4	2.90	0.59
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.84	0.59
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	1.85	0.59
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.16	0.59
1:AA:545:C:H5'	4:AD:68:GLU:CG	2.32	0.59
1:AA:569:C:H5''	1:AA:570:G:OP1	2.02	0.59
1:AA:865:A:O2'	1:AA:866:C:H5'	2.03	0.59
2:AB:116:LEU:HD12	2:AB:140:LEU:HD11	1.84	0.59
2:AB:65:LYS:HG2	2:AB:153:MET:HG3	1.84	0.59
3:AC:6:PRO:O	3:AC:10:ARG:HG2	2.03	0.59
7:AG:106:ALA:HB1	7:AG:132:THR:HB	1.82	0.59
7:AG:29:LEU:HD23	7:AG:29:LEU:O	2.02	0.59
22:BA:2503:A:H4'	22:BA:2504:U:OP1	2.02	0.59
22:BA:614:A:O2'	22:BA:615:U:OP2	2.19	0.59
22:BA:783:A:C8	22:BA:784:G:H4'	2.37	0.59
23:BB:109:A:H2'	23:BB:110:C:C6	2.38	0.59
26:BE:7:ASP:O	26:BE:9:GLN:N	2.36	0.59
39:BR:97:LYS:O	39:BR:98:ILE:HB	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.66	0.59
53:CA:1478:U:H2'	53:CA:1479:C:H6	1.65	0.59
53:CA:296:U:C2	53:CA:297:G:C8	2.90	0.59
2:CB:80:LYS:HD3	2:CB:90:PHE:CZ	2.37	0.59
11:CK:74:LYS:HG3	11:CK:78:ILE:HG12	1.85	0.59
57:DA:1013:C:O2'	57:DA:1014:A:H5'	2.03	0.59
57:DA:1439:A:N7	57:DA:1440:U:H1'	2.16	0.59
57:DA:2255:G:H2'	57:DA:2256:G:O4'	2.01	0.59
57:DA:2446:G:H5''	57:DA:2447:G:OP2	2.03	0.59
57:DA:2720:U:H5''	37:DP:52:ARG:HH21	1.68	0.59
57:DA:836:G:C6	57:DA:837:C:C4	2.91	0.59
33:DL:33:ARG:HD3	33:DL:40:SER:HA	1.82	0.59
39:DR:62:GLU:OE1	39:DR:97:LYS:HD2	2.02	0.59
2:AB:53:LEU:HA	2:AB:56:LEU:HB3	1.84	0.59
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.01	0.59
8:AH:45:ILE:HA	8:AH:63:LYS:HG3	1.84	0.59
8:AH:6:ILE:HB	8:AH:76:ARG:NH1	2.16	0.59
12:AL:29:LYS:O	12:AL:81:ILE:HG22	2.02	0.59
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.37	0.59
1:AA:674:G:H4'	18:AR:69:TYR:CD1	2.37	0.59
48:B0:43:THR:HG23	48:B0:47:TYR:O	2.02	0.59
51:B3:56:LEU:H	51:B3:56:LEU:HD22	1.67	0.59
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.67	0.59
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.21	0.59
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.37	0.59
22:BA:26:G:H1'	22:BA:514:A:H61	1.66	0.59
22:BA:632:A:O2'	22:BA:633:A:H5'	2.02	0.59
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.18	0.59
25:BD:110:THR:CG2	25:BD:171:THR:HG22	2.31	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
33:BL:28:GLY:O	33:BL:29:LYS:O	2.21	0.59
37:BP:50:ARG:CG	37:BP:57:ALA:H	2.16	0.59
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.03	0.59
53:CA:1452:C:H5'	53:CA:1453:G:C5	2.37	0.59
53:CA:497:G:O2'	53:CA:498:A:C8	2.53	0.59
4:CD:197:HIS:O	4:CD:201:GLU:HG3	2.03	0.59
12:CL:34:THR:HG22	12:CL:35:ARG:HE	1.67	0.59
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.34	0.59
57:DA:1183:U:H2'	57:DA:1184:U:C6	2.37	0.59
57:DA:128:C:H6	57:DA:128:C:H5''	1.67	0.59
57:DA:1274:A:C6	57:DA:1302:A:C2	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:188:G:H2'	57:DA:189:G:H5'	1.85	0.59
53:CA:1493:A:H3'	57:DA:1913:A:H62	1.67	0.59
57:DA:323:C:H6	26:DE:165:HIS:CE1	2.20	0.59
57:DA:589:U:C2'	57:DA:590:A:H8	2.15	0.59
57:DA:685:A:H1'	57:DA:688:U:O4	2.02	0.59
57:DA:726:G:OP2	57:DA:726:G:C8	2.55	0.59
57:DA:901:C:H2'	57:DA:902:C:H6	1.66	0.59
58:DB:111:U:O2'	58:DB:112:G:C8	2.53	0.59
24:DC:78:GLU:OE2	24:DC:94:LEU:HD22	2.03	0.59
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	2.02	0.59
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.35	0.59
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.31	0.59
58:DB:38:C:H4'	36:DO:100:HIS:NE2	2.17	0.59
57:DA:851:C:H4'	47:DZ:46:MET:HG2	1.84	0.59
1:AA:158:G:H2'	1:AA:159:G:H5''	1.84	0.59
12:AL:79:ILE:HD12	12:AL:96:THR:HG21	1.85	0.59
14:AN:48:GLN:NE2	14:AN:48:GLN:HA	2.18	0.59
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.18	0.59
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.17	0.59
22:BA:444:C:H4'	26:BE:44:ARG:HD3	1.85	0.59
22:BA:533:G:H2'	22:BA:534:U:C6	2.38	0.59
22:BA:540:C:C2'	22:BA:541:A:H5'	2.33	0.59
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.02	0.59
22:BA:558:U:H5''	31:BJ:111:LYS:HE3	1.84	0.59
33:BL:56:PRO:HD2	33:BL:59:ARG:HG3	1.83	0.59
34:BM:78:LEU:HD23	34:BM:79:ALA:N	2.17	0.59
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.13	0.59
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.37	0.59
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.66	0.59
44:BW:9:THR:HG22	44:BW:10:ARG:NH1	2.17	0.59
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.67	0.59
53:CA:1331:G:HO2'	53:CA:1332:A:H8	1.51	0.59
53:CA:113:G:H1'	53:CA:354:G:H5'	1.83	0.59
53:CA:960:U:H4'	53:CA:961:U:H5''	1.84	0.59
11:CK:104:PHE:H	11:CK:104:PHE:HD1	1.50	0.59
53:CA:795:C:H5''	11:CK:127:ARG:HH21	1.68	0.59
12:CL:27:PRO:HB2	12:CL:28:GLN:OE1	2.03	0.59
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.17	0.59
57:DA:1078:U:H4'	57:DA:1079:C:O5'	2.01	0.59
57:DA:1662:U:C2'	57:DA:1663:G:H5''	2.29	0.59
57:DA:1833:C:C4	57:DA:1834:U:C4	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2447:G:N7	57:DA:2500:U:H2'	2.17	0.59
57:DA:638:G:H2'	57:DA:639:U:C6	2.38	0.59
57:DA:960:A:C2'	57:DA:962:G:H5'	2.31	0.59
25:DD:117:GLY:O	25:DD:119:ALA:N	2.36	0.59
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	1.85	0.59
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.33	0.59
41:DT:67:VAL:O	41:DT:68:LYS:HG3	2.02	0.59
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.84	0.59
1:AA:1006:G:H2'	1:AA:1007:U:C6	2.38	0.59
1:AA:1111:A:O2'	1:AA:1112:C:H5'	2.02	0.59
1:AA:1222:G:OP1	1:AA:1321:U:O2'	2.18	0.59
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.03	0.59
1:AA:185:U:H2'	1:AA:186:C:H6	1.67	0.59
1:AA:409:U:OP1	4:AD:23:GLY:HA3	2.02	0.59
1:AA:429:U:H1'	1:AA:430:A:H5''	1.84	0.59
1:AA:762:U:C2	1:AA:763:G:C8	2.90	0.59
2:AB:163:ILE:HG23	2:AB:164:ASP:N	2.15	0.59
8:AH:85:TYR:CD2	8:AH:123:GLU:HB2	2.38	0.59
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.83	0.59
10:AJ:51:VAL:CB	14:AN:80:ARG:HB2	2.31	0.59
22:BA:142:A:H2'	22:BA:143:C:C5	2.37	0.59
22:BA:752:A:C8	22:BA:1781:U:O4'	2.56	0.59
22:BA:1799:G:N2	22:BA:1818:U:O2'	2.34	0.59
22:BA:2345:G:C5	22:BA:2381:A:C2	2.91	0.59
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.37	0.59
22:BA:547:A:C8	22:BA:548:G:N3	2.71	0.59
22:BA:2637:U:OP1	25:BD:83:ARG:NH2	2.36	0.59
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.84	0.59
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.63	0.59
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.23	0.59
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.03	0.59
45:BX:6:VAL:HG12	45:BX:50:VAL:HG22	1.85	0.59
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.85	0.59
53:CA:1144:G:H21	53:CA:1146:A:N6	2.00	0.59
53:CA:654:G:H2'	53:CA:655:A:C8	2.38	0.59
53:CA:734:G:H2'	53:CA:735:C:C6	2.38	0.59
3:CC:180:ASP:OD2	3:CC:203:LYS:HB2	2.03	0.59
6:CF:68:GLN:HG2	6:CF:69:GLU:H	1.67	0.59
57:DA:1461:C:H2'	57:DA:1462:C:C6	2.37	0.59
57:DA:2196:C:O2'	57:DA:2197:U:H5'	2.03	0.59
57:DA:2260:C:H2'	57:DA:2261:C:H6	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:507:A:OP2	57:DA:507:A:H2'	2.02	0.59
57:DA:70:G:O2'	57:DA:71:A:H5''	2.03	0.59
59:DF:92:GLY:O	59:DF:95:MET:HB3	2.03	0.59
31:DJ:2:LYS:NZ	31:DJ:2:LYS:HB2	2.17	0.59
33:DL:81:ASP:O	33:DL:83:ALA:N	2.35	0.59
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.85	0.59
1:AA:1469:C:H5'	1:AA:1469:C:H6	1.67	0.59
1:AA:1520:C:C2	1:AA:1521:C:C5	2.91	0.59
5:AE:136:VAL:O	5:AE:136:VAL:HG22	2.02	0.59
12:AL:3:VAL:O	12:AL:7:VAL:HG23	2.03	0.59
22:BA:1414:C:C4	22:BA:1415:U:C5	2.90	0.59
22:BA:1478:G:H1	22:BA:1513:U:H3	1.51	0.59
22:BA:187:G:C2	22:BA:210:C:O2	2.56	0.59
22:BA:686:U:H2'	22:BA:788:A:N1	2.18	0.59
22:BA:946:C:H5'	63:BA:3339:HOH:O	2.02	0.59
22:BA:987:C:C2'	22:BA:988:A:H5'	2.33	0.59
24:BC:141:HIS:O	24:BC:143:VAL:HG23	2.03	0.59
26:BE:121:VAL:O	26:BE:189:THR:HA	2.03	0.59
28:BG:88:LEU:HD11	28:BG:95:ALA:CB	2.32	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
33:BL:95:LEU:HB3	33:BL:100:ILE:HD11	1.84	0.59
34:BM:41:LEU:O	34:BM:93:VAL:HG23	2.02	0.59
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.68	0.59
53:CA:1072:G:C6	53:CA:1073:U:C4	2.91	0.59
53:CA:1240:U:H5''	54:CG:108:ARG:HH21	1.68	0.59
2:CB:10:LYS:HA	2:CB:10:LYS:HE3	1.84	0.59
3:CC:149:LYS:HG3	3:CC:168:ARG:HB2	1.84	0.59
53:CA:439:U:H4'	4:CD:120:LYS:HD2	1.85	0.59
5:CE:37:VAL:HG12	5:CE:38:VAL:N	2.18	0.59
8:CH:28:SER:HB2	8:CH:57:GLU:O	2.02	0.59
56:CP:20:VAL:HG21	56:CP:32:PHE:HB2	1.85	0.59
20:CT:60:GLN:HB3	20:CT:65:LEU:HD12	1.85	0.59
57:DA:2421:G:N7	51:D3:30:HIS:HD2	2.01	0.59
57:DA:1494:A:H2'	57:DA:1495:A:H8	1.67	0.59
57:DA:2023:C:O2'	57:DA:2024:G:H5'	2.02	0.59
57:DA:2214:C:H2'	57:DA:2215:C:H6	1.67	0.59
57:DA:273:G:H2'	57:DA:274:C:C6	2.38	0.59
57:DA:602:A:H1'	57:DA:656:G:H22	1.66	0.59
57:DA:67:U:H2'	57:DA:68:G:C8	2.36	0.59
57:DA:705:A:H2'	57:DA:706:A:C8	2.38	0.59
57:DA:794:A:H2'	57:DA:795:C:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:159:THR:O	24:DC:194:VAL:HG12	2.03	0.59
25:DD:32:ASN:HB3	25:DD:52:THR:OG1	2.02	0.59
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.18	0.59
57:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.68	0.59
1:AA:450:G:N7	1:AA:481:G:O6	2.36	0.58
1:AA:570:G:H2'	1:AA:571:U:C6	2.38	0.58
3:AC:52:SER:HB2	3:AC:111:ASP:OD2	2.03	0.58
3:AC:156:LEU:CD1	3:AC:156:LEU:H	2.13	0.58
5:AE:12:GLU:HB2	5:AE:38:VAL:HG12	1.84	0.58
21:AU:24:LYS:HG2	21:AU:25:ALA:H	1.67	0.58
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.39	0.58
22:BA:962:G:H21	22:BA:2250:G:H1	1.49	0.58
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.01	0.58
22:BA:269:C:C2'	22:BA:270:A:H5'	2.32	0.58
25:BD:101:PHE:HE2	25:BD:203:VAL:CG2	2.15	0.58
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.24	0.58
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.22	0.58
32:BK:91:SER:O	32:BK:92:GLU:C	2.41	0.58
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.85	0.58
38:BQ:100:PHE:HD1	39:BR:13:ARG:NH2	1.99	0.58
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.33	0.58
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.33	0.58
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.85	0.58
53:CA:1130:A:C5	53:CA:1146:A:C6	2.90	0.58
53:CA:256:U:H2'	53:CA:257:G:O4'	2.03	0.58
53:CA:412:A:H4'	53:CA:413:G:OP1	2.01	0.58
53:CA:66:A:N6	53:CA:67:C:N4	2.50	0.58
53:CA:696:A:H8	53:CA:696:A:O5'	1.86	0.58
53:CA:861:G:H2'	53:CA:862:C:H6	1.67	0.58
2:CB:95:TRP:CH2	2:CB:171:ALA:HA	2.38	0.58
6:CF:66:ALA:HB3	6:CF:71:ILE:HD13	1.85	0.58
8:CH:82:LEU:HD12	12:CL:3:VAL:HG11	1.84	0.58
12:CL:72:ASN:HD22	12:CL:72:ASN:H	1.50	0.58
53:CA:624:C:H4'	56:CP:10:GLY:C	2.23	0.58
56:CP:52:LEU:O	56:CP:53:ASP:HB2	2.03	0.58
20:CT:30:PHE:CE2	20:CT:52:GLU:HG2	2.37	0.58
57:DA:1204:A:H4'	57:DA:1205:A:C5'	2.33	0.58
57:DA:1411:U:H2'	57:DA:1412:U:C6	2.37	0.58
57:DA:574:A:H4'	57:DA:575:A:C5'	2.33	0.58
57:DA:740:C:H5''	57:DA:1784:A:H3'	1.83	0.58
57:DA:984:A:O2'	57:DA:985:C:OP1	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:74:VAL:HB	36:DO:106:LEU:HD11	1.84	0.58
1:AA:966:G:H2'	1:AA:967:C:C6	2.37	0.58
3:AC:143:LEU:N	3:AC:143:LEU:HD22	2.16	0.58
8:AH:45:ILE:HG22	8:AH:62:LEU:HD13	1.85	0.58
10:AJ:88:MET:HB3	10:AJ:89:ARG:HH12	1.68	0.58
22:BA:2210:U:H4'	22:BA:2211:A:C5'	2.32	0.58
22:BA:2813:A:C2	22:BA:2887:A:N6	2.63	0.58
22:BA:564:C:C2'	22:BA:565:C:H5'	2.32	0.58
22:BA:60:G:O2'	22:BA:61:C:P	2.62	0.58
22:BA:639:U:H2'	22:BA:640:C:C6	2.38	0.58
22:BA:726:G:O2'	22:BA:727:A:P	2.60	0.58
28:BG:9:VAL:O	28:BG:11:PRO:HD3	2.03	0.58
34:BM:76:LYS:O	34:BM:77:PRO:O	2.20	0.58
34:BM:76:LYS:HG3	34:BM:77:PRO:HD2	1.85	0.58
35:BN:66:ALA:O	35:BN:69:ARG:O	2.21	0.58
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.15	0.58
37:BP:52:ARG:HH11	37:BP:52:ARG:HG2	1.68	0.58
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.03	0.58
41:BT:32:LEU:O	41:BT:34:VAL:HG13	2.04	0.58
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	1.85	0.58
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.03	0.58
53:CA:1124:G:O2'	53:CA:1125:U:C5	2.56	0.58
53:CA:251:G:H4'	53:CA:252:U:H5'	1.85	0.58
53:CA:642:A:C8	8:CH:106:SER:HA	2.38	0.58
53:CA:855:U:H5	53:CA:871:U:O4	1.86	0.58
53:CA:892:A:O2'	53:CA:1415:G:H4'	2.03	0.58
4:CD:49:ASP:O	4:CD:53:GLN:HG3	2.02	0.58
5:CE:104:ILE:HA	5:CE:122:VAL:HB	1.85	0.58
5:CE:38:VAL:HG12	5:CE:39:GLY:H	1.67	0.58
5:CE:84:VAL:HG22	5:CE:85:LYS:N	2.18	0.58
54:CG:135:LYS:O	54:CG:139:ASP:HB2	2.03	0.58
57:DA:2015:A:C5	48:D0:2:VAL:HG11	2.37	0.58
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.38	0.58
57:DA:1286:A:C4	57:DA:1289:C:N4	2.71	0.58
57:DA:1325:U:H4'	57:DA:1326:U:OP1	2.03	0.58
57:DA:1809:A:C2'	57:DA:1810:A:C8	2.86	0.58
57:DA:404:A:H5'	57:DA:405:U:OP1	2.02	0.58
57:DA:634:C:H2'	57:DA:635:C:C6	2.38	0.58
57:DA:639:U:O2'	57:DA:640:C:O4'	2.22	0.58
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.84	0.58
28:DG:163:TYR:N	28:DG:163:TYR:HD2	2.00	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.02	0.58
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.33	0.58
1:AA:184:G:H2'	1:AA:185:U:C5	2.37	0.58
10:AJ:29:ALA:HB1	10:AJ:36:VAL:HG21	1.84	0.58
12:AL:64:SER:OG	12:AL:96:THR:HG23	2.02	0.58
12:AL:82:ARG:NH1	12:AL:83:GLY:O	2.36	0.58
13:AM:40:GLU:HG3	13:AM:41:ASP:H	1.68	0.58
16:AP:77:GLU:C	16:AP:79:ASN:H	2.06	0.58
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.68	0.58
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.67	0.58
22:BA:1931:U:O2'	22:BA:1932:A:H5'	2.03	0.58
22:BA:1945:G:C4	22:BA:1946:U:C5	2.90	0.58
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.35	0.58
22:BA:2821:A:H4'	25:BD:167:ASN:ND2	2.18	0.58
22:BA:511:U:O4	22:BA:512:G:C2	2.55	0.58
24:BC:170:TYR:CE2	24:BC:184:GLU:HA	2.38	0.58
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.34	0.58
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.03	0.58
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.04	0.58
38:BQ:86:SER:O	38:BQ:87:VAL:C	2.42	0.58
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.51	0.58
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.85	0.58
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.85	0.58
53:CA:170:U:O2'	53:CA:171:A:H5'	2.04	0.58
53:CA:252:U:H2'	53:CA:253:A:H8	1.67	0.58
53:CA:599:C:O3'	8:CH:121:GLY:HA3	2.03	0.58
53:CA:615:G:H2'	53:CA:616:G:H8	1.68	0.58
53:CA:722:G:O3'	53:CA:723:U:C5	2.56	0.58
4:CD:25:ARG:HG2	4:CD:25:ARG:NH1	2.18	0.58
54:CG:112:ASP:HB3	54:CG:117:LEU:HB3	1.85	0.58
12:CL:34:THR:HG22	12:CL:35:ARG:HG2	1.85	0.58
14:CN:8:ARG:HD2	14:CN:12:ARG:CZ	2.34	0.58
57:DA:1231:U:H2'	57:DA:1232:G:C8	2.38	0.58
57:DA:1283:G:H22	57:DA:1286:A:H5'	1.66	0.58
57:DA:1439:A:H3'	57:DA:1439:A:C8	2.39	0.58
57:DA:1441:G:H2'	57:DA:1442:U:C6	2.38	0.58
57:DA:1519:G:H5'	57:DA:1520:U:OP2	2.03	0.58
57:DA:2030:A:N3	57:DA:2499:C:H5''	2.18	0.58
57:DA:233:A:O2'	57:DA:234:U:O5'	2.21	0.58
57:DA:593:U:H2'	57:DA:594:U:H6	1.67	0.58
58:DB:11:C:H2'	58:DB:15:A:N6	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.56	0.58
32:DK:88:ASN:HB2	32:DK:91:SER:HB2	1.85	0.58
34:DM:108:VAL:HG11	34:DM:112:LEU:HD12	1.85	0.58
38:DQ:108:LEU:O	38:DQ:108:LEU:HD23	2.03	0.58
1:AA:996:A:C2	1:AA:1046:A:H5'	2.38	0.58
1:AA:1094:G:O2'	1:AA:1095:U:P	2.61	0.58
1:AA:1108:G:H5''	3:AC:175:HIS:ND1	2.17	0.58
1:AA:1223:C:OP1	1:AA:1224:U:H3'	2.03	0.58
1:AA:144:G:C4	1:AA:179:A:C2	2.92	0.58
1:AA:330:C:H5''	1:AA:330:C:H6	1.69	0.58
2:AB:40:ILE:HG21	2:AB:201:GLY:N	2.18	0.58
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.16	0.58
4:AD:61:ARG:HG2	4:AD:71:PHE:CD2	2.38	0.58
20:AT:27:MET:O	20:AT:31:ILE:HG13	2.03	0.58
22:BA:1130:U:O2'	22:BA:1131:G:H8	1.87	0.58
22:BA:119:A:H4'	22:BA:120:U:O5'	2.04	0.58
22:BA:1962:C:O2'	22:BA:1964:G:OP2	2.22	0.58
22:BA:2244:U:O2'	22:BA:2245:U:H5'	2.03	0.58
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.22	0.58
22:BA:2786:U:H2'	22:BA:2787:C:H6	1.68	0.58
22:BA:527:C:H4'	22:BA:528:A:O5'	2.03	0.58
22:BA:616:A:H4'	26:BE:101:TYR:CE2	2.38	0.58
28:BG:10:VAL:O	28:BG:10:VAL:CG2	2.51	0.58
28:BG:112:VAL:HG23	28:BG:113:ASP:H	1.68	0.58
41:BT:87:LEU:HB2	41:BT:91:GLN:HE21	1.67	0.58
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.04	0.58
53:CA:818:G:H3'	53:CA:819:A:C5'	2.33	0.58
3:CC:133:MET:HB2	3:CC:150:VAL:HG21	1.84	0.58
4:CD:137:SER:O	4:CD:140:ASP:HB2	2.02	0.58
18:CR:22:TYR:HA	18:CR:57:ALA:HB1	1.86	0.58
52:D4:3:VAL:O	52:D4:4:ARG:HB2	2.03	0.58
57:DA:1130:U:O2'	57:DA:1131:G:C8	2.57	0.58
57:DA:1918:A:H4'	57:DA:1919:A:OP1	2.02	0.58
57:DA:1420:A:C8	57:DA:2211:A:N6	2.68	0.58
57:DA:2360:G:H5''	57:DA:2361:G:OP2	2.04	0.58
57:DA:2507:C:H1'	57:DA:2583:G:N2	2.17	0.58
57:DA:2677:G:H2'	57:DA:2678:C:C6	2.38	0.58
57:DA:391:A:H2'	57:DA:392:U:C6	2.38	0.58
57:DA:422:A:H2'	57:DA:423:A:C8	2.39	0.58
57:DA:534:U:H1'	38:DQ:44:TYR:HB3	1.85	0.58
57:DA:754:U:H2'	57:DA:755:U:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:91:A:HO2'	57:DA:92:U:H6	1.51	0.58
24:DC:62:ARG:HH21	24:DC:62:ARG:CG	2.13	0.58
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.51	0.58
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.85	0.58
28:DG:93:TYR:CD2	28:DG:93:TYR:N	2.69	0.58
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.04	0.58
2:AB:103:TRP:CH2	2:AB:107:ARG:HD3	2.38	0.58
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.43	0.58
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.85	0.58
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.04	0.58
5:AE:59:ILE:O	5:AE:62:ALA:HB3	2.04	0.58
9:AI:6:TYR:CG	9:AI:7:GLY:N	2.69	0.58
12:AL:81:ILE:HD11	12:AL:94:TYR:CG	2.39	0.58
20:AT:34:VAL:HG11	20:AT:78:LEU:HD22	1.86	0.58
50:B2:43:THR:O	50:B2:44:VAL:CG2	2.51	0.58
22:BA:1180:U:O2'	22:BA:1181:U:H5'	2.04	0.58
22:BA:2020:A:O3'	48:B0:8:THR:HG21	2.03	0.58
22:BA:2214:C:C6	22:BA:2214:C:H5'	2.29	0.58
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.38	0.58
22:BA:7:G:H2'	22:BA:8:C:C6	2.39	0.58
40:BS:73:LYS:HA	40:BS:73:LYS:HE3	1.85	0.58
43:BV:10:LYS:HZ1	43:BV:11:GLU:HG3	1.68	0.58
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.52	0.58
53:CA:1533:C:C2'	53:CA:1534:A:H5''	2.32	0.58
53:CA:745:G:H2'	53:CA:746:A:H8	1.69	0.58
53:CA:93:U:O5'	53:CA:93:U:H6	1.86	0.58
2:CB:20:ARG:HH21	2:CB:38:HIS:CD2	2.22	0.58
4:CD:109:THR:HG22	4:CD:111:ALA:N	2.15	0.58
11:CK:14:GLN:HA	11:CK:76:TYR:O	2.03	0.58
12:CL:80:LEU:O	12:CL:97:VAL:HG22	2.04	0.58
55:CM:18:LEU:HD22	55:CM:32:ILE:HG21	1.86	0.58
14:CN:66:THR:CG2	14:CN:82:LYS:HE3	2.33	0.58
21:CU:33:ARG:NH1	21:CU:34:ARG:HD3	2.19	0.58
57:DA:1255:U:HO2'	57:DA:1256:G:P	2.26	0.58
57:DA:1286:A:C6	57:DA:1289:C:N3	2.72	0.58
57:DA:154:U:H2'	57:DA:155:A:O4'	2.03	0.58
57:DA:1964:G:H4'	57:DA:1965:C:OP2	2.03	0.58
57:DA:740:C:C5	57:DA:1981:A:C2	2.92	0.58
57:DA:2060:A:H62	26:DE:69:ARG:HH12	1.50	0.58
57:DA:2296:U:H5	36:DO:9:ARG:HH22	1.49	0.58
57:DA:633:A:H8	57:DA:633:A:O5'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:708:G:N2	57:DA:724:U:H1'	2.19	0.58
57:DA:740:C:O2'	57:DA:741:U:H5'	2.04	0.58
57:DA:802:A:H2'	57:DA:803:U:H6	1.63	0.58
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	2.03	0.58
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.33	0.58
1:AA:1162:C:H2'	1:AA:1163:A:H8	1.68	0.58
1:AA:1466:C:H2'	1:AA:1467:C:O4'	2.04	0.58
1:AA:243:A:C2	1:AA:245:U:H2'	2.39	0.58
1:AA:484:G:H4'	1:AA:485:U:O5'	2.02	0.58
1:AA:695:A:H2'	1:AA:696:A:C8	2.38	0.58
3:AC:5:HIS:HD2	3:AC:7:ASN:H	1.52	0.58
7:AG:12:LEU:H	7:AG:12:LEU:CD2	2.10	0.58
11:AK:22:ILE:HG13	11:AK:22:ILE:O	2.02	0.58
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.24	0.58
52:B4:9:LYS:N	52:B4:9:LYS:CD	2.66	0.58
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.20	0.58
22:BA:1286:A:O2'	22:BA:1288:G:OP2	2.19	0.58
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.39	0.58
22:BA:243:U:O2'	22:BA:244:A:H5'	2.04	0.58
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.04	0.58
22:BA:482:A:N6	22:BA:506:G:O2'	2.33	0.58
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.39	0.58
42:BU:51:LEU:O	42:BU:52:ASN:HB2	2.04	0.58
53:CA:1183:U:O2'	53:CA:1184:G:OP1	2.20	0.58
53:CA:1239:A:H62	53:CA:1299:A:H61	1.51	0.58
53:CA:1381:U:C4	54:CG:77:ARG:NH1	2.72	0.58
53:CA:559:A:H4'	53:CA:560:A:C5'	2.33	0.58
53:CA:719:C:H3'	53:CA:720:C:C6	2.38	0.58
53:CA:78:A:H2'	53:CA:79:G:H8	1.68	0.58
53:CA:992:U:O2'	53:CA:993:G:OP2	2.17	0.58
4:CD:112:GLU:O	4:CD:116:LEU:HD23	2.03	0.58
4:CD:115:GLN:HE21	4:CD:153:ARG:NH2	2.02	0.58
9:CI:59:LYS:HG2	9:CI:60:LEU:HG	1.85	0.58
12:CL:19:ASN:N	12:CL:19:ASN:HD22	1.98	0.58
12:CL:33:CYS:HB3	12:CL:77:SER:O	2.03	0.58
55:CM:78:ARG:HH21	55:CM:79:LEU:CD2	2.16	0.58
53:CA:375:U:OP1	56:CP:70:ARG:HD3	2.02	0.58
49:D1:10:LEU:HD23	49:D1:20:TYR:HB3	1.86	0.58
57:DA:1303:G:HO2'	57:DA:1304:A:H8	1.50	0.58
57:DA:1387:A:N3	57:DA:1388:G:C8	2.72	0.58
57:DA:1552:A:N3	57:DA:1552:A:H2'	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2313:C:O2'	57:DA:2314:A:H8	1.76	0.58
57:DA:2572:A:C8	25:DD:149:ASN:ND2	2.69	0.58
57:DA:2807:U:H3'	57:DA:2808:G:H5''	1.85	0.58
57:DA:815:C:P	39:DR:85:LYS:HE2	2.44	0.58
57:DA:82:U:H2'	57:DA:83:A:H5''	1.86	0.58
25:DD:21:SER:O	25:DD:23:PRO:HD3	2.02	0.58
59:DF:39:VAL:HG22	59:DF:49:LEU:HG	1.84	0.58
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.33	0.58
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.06	0.58
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.67	0.58
1:AA:1087:G:O2'	1:AA:1088:G:H5'	2.03	0.58
8:AH:88:LYS:HG3	8:AH:89:ASP:N	2.18	0.58
18:AR:59:LYS:HA	18:AR:62:ARG:HD2	1.85	0.58
20:AT:26:MET:CE	20:AT:56:ILE:HD11	2.34	0.58
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.19	0.58
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.26	0.58
22:BA:1791:A:N6	22:BA:1828:G:O2'	2.26	0.58
22:BA:1984:G:C5	22:BA:1985:C:C5	2.91	0.58
22:BA:553:G:H2'	22:BA:554:U:O4'	2.04	0.58
25:BD:126:ASN:HD22	25:BD:126:ASN:N	2.00	0.58
27:BF:175:PRO:O	27:BF:176:PHE:HB2	2.03	0.58
28:BG:59:ASP:O	28:BG:62:ALA:HB3	2.03	0.58
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.34	0.58
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.37	0.58
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.39	0.58
53:CA:16:A:C2'	53:CA:17:U:H5'	2.34	0.58
53:CA:344:A:H5''	53:CA:345:C:C5	2.38	0.58
53:CA:415:A:H3'	53:CA:416:G:H8	1.67	0.58
53:CA:985:C:O2'	53:CA:986:U:H5'	2.03	0.58
53:CA:995:C:N4	53:CA:1046:A:H1'	2.18	0.58
10:CJ:39:PRO:HA	10:CJ:74:VAL:H	1.68	0.58
14:CN:87:ALA:HB2	14:CN:92:ILE:HD12	1.86	0.58
53:CA:1217:C:OP1	14:CN:8:ARG:HB2	2.02	0.58
53:CA:1318:A:O2'	19:CS:36:ARG:HD3	2.03	0.58
57:DA:1821:A:OP1	24:DC:199:HIS:NE2	2.29	0.58
57:DA:1843:C:H6	57:DA:1843:C:O5'	1.87	0.58
57:DA:2141:G:H2'	57:DA:2142:A:C8	2.39	0.58
57:DA:2602:A:H3'	57:DA:2602:A:OP1	2.02	0.58
57:DA:2629:U:H5''	57:DA:2630:G:OP1	2.03	0.58
58:DB:116:G:H2'	58:DB:117:G:H8	1.68	0.58
58:DB:13:G:N2	58:DB:16:G:C4	2.72	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.23	0.58
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.18	0.58
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.66	0.58
1:AA:1167:A:C8	1:AA:1169:A:C6	2.92	0.58
1:AA:1506:U:H2'	63:AA:1800:HOH:O	2.02	0.58
1:AA:411:A:H62	1:AA:413:G:N2	2.02	0.58
1:AA:428:G:O4'	1:AA:430:A:C8	2.57	0.58
1:AA:918:A:H2'	1:AA:919:A:C8	2.39	0.58
1:AA:968:A:H4'	1:AA:969:A:OP2	2.02	0.58
5:AE:152:VAL:HG12	5:AE:155:LYS:HZ1	1.68	0.58
8:AH:33:VAL:HG12	8:AH:34:ALA:N	2.19	0.58
11:AK:110:THR:HG22	21:AU:4:LYS:CB	2.33	0.58
13:AM:81:ASP:OD2	27:BF:111:ARG:HD2	2.03	0.58
18:AR:54:LEU:HD12	18:AR:58:ILE:HD11	1.84	0.58
19:AS:46:LEU:H	19:AS:61:VAL:HG23	1.69	0.58
48:B0:27:LEU:HD23	48:B0:27:LEU:H	1.69	0.58
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.68	0.58
24:BC:33:LEU:HA	24:BC:61:TYR:O	2.04	0.58
25:BD:114:LYS:HE3	25:BD:114:LYS:O	2.03	0.58
28:BG:59:ASP:HB2	28:BG:63:GLN:CG	2.33	0.58
1:AA:345:C:H3'	37:BP:33:GLU:OE1	2.04	0.58
38:BQ:60:TRP:CZ2	38:BQ:93:ILE:HB	2.39	0.58
41:BT:57:VAL:O	41:BT:85:VAL:O	2.21	0.58
45:BX:39:VAL:HG21	45:BX:42:GLU:HB2	1.85	0.58
53:CA:198:G:O6	53:CA:220:G:C5	2.57	0.58
53:CA:252:U:H6	53:CA:252:U:H5'	1.69	0.58
53:CA:523:A:N6	12:CL:49:ARG:HH12	2.00	0.58
4:CD:137:SER:O	4:CD:181:PHE:HD2	1.86	0.58
12:CL:41:PRO:HD2	12:CL:47:ALA:O	2.04	0.58
12:CL:3:VAL:HG23	12:CL:4:ASN:N	2.16	0.58
57:DA:117:G:N1	57:DA:119:A:N6	2.51	0.58
57:DA:1275:A:HO2'	57:DA:1276:A:C1'	2.14	0.58
57:DA:271:G:O2'	57:DA:272:A:H5''	2.04	0.58
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.69	0.58
28:DG:19:ASN:HD22	28:DG:19:ASN:N	2.02	0.58
29:DH:54:LEU:HA	29:DH:57:LYS:HG2	1.86	0.58
31:DJ:41:LYS:C	31:DJ:43:GLU:H	2.07	0.58
32:DK:104:THR:C	32:DK:106:GLU:H	2.07	0.58
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.68	0.58
4:AD:129:VAL:HG13	4:AD:131:ILE:CD1	2.32	0.58
11:AK:107:THR:HG22	11:AK:108:ASN:ND2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:63:CYS:HG	14:AN:66:THR:HG1	1.47	0.58
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.04	0.58
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.04	0.58
22:BA:1150:C:H2'	22:BA:1151:A:O5'	2.04	0.58
22:BA:1330:C:O2'	22:BA:1331:G:H5'	2.04	0.58
22:BA:1865:U:O2'	22:BA:1866:A:H5''	2.03	0.58
22:BA:1943:U:H4'	22:BA:1944:U:O5'	2.04	0.58
22:BA:1964:G:H4'	22:BA:1965:C:OP2	2.02	0.58
22:BA:2060:A:O2'	22:BA:2061:G:OP2	2.17	0.58
22:BA:2862:G:H2'	22:BA:2863:C:H6	1.69	0.58
22:BA:623:C:H2'	22:BA:624:C:C6	2.39	0.58
31:BJ:75:TYR:HD1	31:BJ:86:GLN:HB3	1.69	0.58
32:BK:18:ARG:H	32:BK:45:GLU:CB	2.15	0.58
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.45	0.58
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.57	0.58
53:CA:249:U:C2	53:CA:276:G:N1	2.72	0.58
53:CA:280:C:H4'	53:CA:281:G:OP2	2.03	0.58
53:CA:404:G:N7	4:CD:1:ALA:HA	2.18	0.58
53:CA:631:C:H5''	53:CA:632:U:O4'	2.04	0.58
6:CF:42:TRP:HB2	6:CF:59:TYR:HB2	1.85	0.58
54:CG:42:VAL:O	54:CG:43:TYR:HB2	2.03	0.58
8:CH:94:VAL:HG21	8:CH:127:TYR:HB3	1.86	0.58
10:CJ:42:LEU:HD22	10:CJ:71:LEU:HD23	1.85	0.58
53:CA:1272:G:H5'	14:CN:33:VAL:HB	1.86	0.58
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.57	0.58
57:DA:1327:A:O2'	57:DA:1328:A:O4'	2.11	0.58
57:DA:2312:U:H2'	57:DA:2313:C:C6	2.39	0.58
57:DA:2461:A:N1	57:DA:2490:G:N2	2.52	0.58
57:DA:484:C:N4	57:DA:497:A:C2	2.72	0.58
57:DA:503:A:C6	57:DA:506:G:C6	2.91	0.58
57:DA:524:G:H2'	57:DA:525:U:H6	1.68	0.58
25:DD:107:VAL:HG13	25:DD:109:VAL:HG23	1.86	0.58
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.03	0.58
59:DF:48:LEU:HD23	59:DF:48:LEU:H	1.68	0.58
59:DF:66:ILE:HG13	59:DF:83:PRO:HB3	1.86	0.58
40:DS:27:LYS:O	40:DS:71:VAL:HG12	2.03	0.58
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.86	0.58
1:AA:1319:A:H2'	1:AA:1323:G:N7	2.19	0.58
1:AA:1365:G:H2'	1:AA:1366:C:C6	2.39	0.58
1:AA:51:A:H4'	1:AA:52:C:O5'	2.03	0.58
1:AA:619:U:H3	4:AD:130:ASN:CB	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:754:C:O2	1:AA:754:C:H5''	2.03	0.58
2:AB:157:PRO:O	2:AB:180:ILE:HD12	2.03	0.58
5:AE:143:LEU:O	5:AE:146:MET:HB3	2.04	0.58
14:AN:11:LYS:NZ	14:AN:11:LYS:HB2	2.19	0.58
22:BA:1106:G:C2	22:BA:1107:G:C8	2.92	0.58
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.04	0.58
22:BA:1735:A:H2'	22:BA:1736:U:H6	1.69	0.58
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.51	0.58
22:BA:2645:G:H3'	22:BA:2646:C:H5'	1.86	0.58
22:BA:2672:U:H2'	22:BA:2673:G:O5'	2.04	0.58
22:BA:278:A:C2	22:BA:362:A:C8	2.92	0.58
24:BC:173:LEU:HD22	24:BC:183:VAL:CG2	2.34	0.58
25:BD:101:PHE:CD1	25:BD:101:PHE:N	2.72	0.58
32:BK:34:GLY:O	32:BK:35:VAL:C	2.42	0.58
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.86	0.58
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.86	0.58
40:BS:84:ARG:O	40:BS:95:ARG:O	2.22	0.58
41:BT:25:GLU:HA	41:BT:28:ASN:O	2.04	0.58
53:CA:1014:A:C2	53:CA:1219:A:H1'	2.39	0.58
53:CA:1190:G:O2'	53:CA:1191:A:P	2.61	0.58
53:CA:321:A:O2'	53:CA:1436:U:H5'	2.03	0.58
53:CA:623:C:H6	53:CA:623:C:O5'	1.87	0.58
53:CA:934:C:H4'	53:CA:935:A:OP1	2.03	0.58
5:CE:52:ALA:HB2	5:CE:61:LYS:HE3	1.86	0.58
19:CS:52:ASN:HD21	19:CS:55:GLN:N	2.02	0.58
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.03	0.58
48:D0:38:LEU:HB2	48:D0:41:HIS:NE2	2.18	0.58
57:DA:1056:G:C1'	57:DA:1103:A:H61	2.16	0.58
57:DA:104:A:H2'	57:DA:105:C:C6	2.39	0.58
57:DA:1068:G:C8	57:DA:1069:A:N7	2.72	0.58
57:DA:1359:A:N1	57:DA:1360:G:H1'	2.17	0.58
57:DA:2093:G:O6	57:DA:2225:A:C2'	2.52	0.58
57:DA:858:G:C4	57:DA:2268:A:C2	2.91	0.58
58:DB:27:C:H2'	58:DB:28:C:H6	1.67	0.58
25:DD:178:VAL:HG12	25:DD:179:ARG:HG3	1.86	0.58
29:DH:102:ALA:C	29:DH:104:THR:H	2.07	0.58
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.19	0.58
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.52	0.58
1:AA:1261:A:N1	1:AA:1274:A:C2	2.72	0.57
1:AA:1322:C:HO2'	1:AA:1323:G:P	2.26	0.57
1:AA:415:A:H2'	1:AA:416:G:H8	1.67	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:426:U:O2'	1:AA:427:U:H5'	2.04	0.57
1:AA:480:U:H5''	1:AA:481:G:OP2	2.04	0.57
2:AB:74:ALA:O	2:AB:75:ALA:HB2	2.03	0.57
4:AD:151:GLN:H	4:AD:154:VAL:CG1	2.17	0.57
15:AO:63:ARG:HG2	15:AO:87:ARG:NH1	2.11	0.57
16:AP:59:HIS:CE1	16:AP:63:GLN:NE2	2.71	0.57
19:AS:43:MET:O	19:AS:61:VAL:HG21	2.04	0.57
22:BA:1063:G:H2'	22:BA:1064:C:O4'	2.04	0.57
22:BA:49:A:H61	22:BA:177:G:H2'	1.69	0.57
22:BA:2428:G:OP1	22:BA:2429:G:OP1	2.22	0.57
22:BA:568:U:O2	22:BA:570:G:C8	2.56	0.57
36:BO:59:ALA:HA	36:BO:62:LEU:HD12	1.86	0.57
44:BW:8:SER:O	44:BW:9:THR:CG2	2.52	0.57
53:CA:1417:G:C6	53:CA:1482:G:C6	2.92	0.57
53:CA:31:G:H5'	53:CA:306:A:N1	2.19	0.57
53:CA:109:A:H8	53:CA:327:A:O4'	1.86	0.57
53:CA:577:G:C4	53:CA:816:A:C2	2.93	0.57
54:CG:100:MET:HE3	54:CG:100:MET:H	1.69	0.57
54:CG:136:LYS:O	54:CG:140:VAL:HG23	2.04	0.57
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.85	0.57
10:CJ:7:ARG:NH1	10:CJ:102:LEU:HG	2.19	0.57
55:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.85	0.57
53:CA:264:C:O2'	17:CQ:64:ARG:HG3	2.03	0.57
18:CR:58:ILE:O	18:CR:62:ARG:HG3	2.04	0.57
57:DA:1153:C:H2'	57:DA:1154:G:C8	2.39	0.57
57:DA:1274:A:O2'	57:DA:1275:A:C5'	2.52	0.57
57:DA:1737:G:N7	57:DA:1738:G:C6	2.72	0.57
57:DA:2571:U:C4	57:DA:2574:G:C8	2.92	0.57
57:DA:2744:G:N2	57:DA:2745:C:C2	2.72	0.57
57:DA:28:A:C6	57:DA:513:A:C8	2.91	0.57
57:DA:749:A:C6	57:DA:1618:A:C2	2.92	0.57
59:DF:107:VAL:N	59:DF:108:PRO:CD	2.67	0.57
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.15	0.57
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.84	0.57
57:DA:636:G:H3'	33:DL:128:THR:HG21	1.86	0.57
57:DA:2718:G:O3'	37:DP:95:LYS:HG3	2.03	0.57
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.18	0.57
44:DW:28:GLU:HG3	44:DW:29:SER:H	1.68	0.57
1:AA:1160:G:C6	1:AA:1181:G:O6	2.57	0.57
1:AA:497:G:N2	1:AA:498:A:C6	2.72	0.57
1:AA:545:C:C5'	4:AD:68:GLU:HG3	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:633:G:O2'	1:AA:634:C:H5'	2.05	0.57
3:AC:33:ASP:O	3:AC:37:LYS:HB2	2.04	0.57
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.04	0.57
19:AS:4:LEU:HD12	19:AS:4:LEU:H	1.68	0.57
22:BA:1313:U:O2	22:BA:1313:U:H2'	2.04	0.57
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.05	0.57
22:BA:2007:U:H2'	22:BA:2008:C:H6	1.69	0.57
22:BA:2648:G:O2'	22:BA:2649:C:H5'	2.04	0.57
22:BA:364:C:H2'	22:BA:365:U:C6	2.38	0.57
27:BF:147:ARG:HG3	27:BF:148:VAL:H	1.68	0.57
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.57
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.67	0.57
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.25	0.57
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.68	0.57
39:BR:58:VAL:CG1	39:BR:102:SER:HB2	2.34	0.57
39:BR:46:GLU:O	39:BR:46:GLU:OE1	2.21	0.57
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.51	0.57
53:CA:1089:G:H2'	53:CA:1090:U:O4'	2.04	0.57
53:CA:1299:A:C8	53:CA:1301:U:H1'	2.38	0.57
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.56	0.57
53:CA:1504:G:H3'	53:CA:1505:G:H5'	1.86	0.57
53:CA:960:U:C5	53:CA:1225:A:H1'	2.40	0.57
2:CB:105:THR:O	2:CB:108:GLN:HG2	2.04	0.57
4:CD:31:CYS:O	4:CD:32:LYS:HB2	2.05	0.57
54:CG:4:ARG:HG3	54:CG:5:VAL:N	2.18	0.57
10:CJ:84:VAL:CG2	10:CJ:85:ASP:H	2.06	0.57
55:CM:28:ARG:HD2	55:CM:28:ARG:O	2.03	0.57
55:CM:36:ALA:HB2	55:CM:55:LEU:HD21	1.85	0.57
53:CA:1226:C:H5''	55:CM:94:LEU:HD21	1.85	0.57
14:CN:62:ARG:HE	14:CN:69:PRO:HA	1.68	0.57
17:CQ:61:ARG:HG2	17:CQ:75:VAL:CG1	2.34	0.57
57:DA:1006:C:C2	57:DA:1138:G:N2	2.72	0.57
57:DA:2874:C:H2'	57:DA:2875:C:C5	2.39	0.57
57:DA:287:G:O2'	57:DA:288:U:H5'	2.05	0.57
57:DA:308:G:C6	57:DA:309:A:C6	2.93	0.57
57:DA:36:G:N1	57:DA:445:C:C4	2.73	0.57
58:DB:6:G:H4'	58:DB:28:C:H4'	1.86	0.57
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.67	0.57
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.05	0.57
57:DA:632:A:H5''	33:DL:68:SER:OG	2.04	0.57
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:842:U:H2'	1:AA:844:G:P	2.43	0.57
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.08	0.57
9:AI:28:VAL:HB	9:AI:63:TYR:CD2	2.34	0.57
11:AK:100:ASN:HB2	11:AK:106:ILE:HG21	1.85	0.57
14:AN:60:ARG:O	14:AN:61:ASN:CB	2.50	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.19	0.57
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.34	0.57
22:BA:1269:A:O5'	22:BA:1269:A:H8	1.87	0.57
22:BA:1998:A:H2'	22:BA:1999:C:H6	1.68	0.57
22:BA:699:A:H1'	22:BA:1634:A:H2'	1.85	0.57
22:BA:988:A:OP2	47:BZ:11:SER:HB3	2.03	0.57
23:BB:90:C:C5'	23:BB:90:C:H6	2.11	0.57
25:BD:136:ASN:ND2	25:BD:139:SER:O	2.36	0.57
31:BJ:118:MET:HA	31:BJ:121:LYS:HE2	1.87	0.57
32:BK:43:ILE:HG12	32:BK:56:ASP:HB2	1.86	0.57
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.04	0.57
22:BA:381:G:OP1	45:BX:17:ARG:HD3	2.04	0.57
53:CA:1213:A:O2'	53:CA:1214:C:C5'	2.42	0.57
10:CJ:37:ARG:HB3	10:CJ:74:VAL:O	2.04	0.57
57:DA:118:A:O5'	57:DA:119:A:H5''	2.04	0.57
57:DA:12:U:O2	57:DA:12:U:H2'	2.03	0.57
57:DA:1693:U:H4'	57:DA:1694:C:OP2	2.04	0.57
57:DA:2267:A:N6	57:DA:2272:U:H3	2.03	0.57
57:DA:2313:C:O2'	57:DA:2314:A:H5'	2.03	0.57
57:DA:2298:A:H5'	57:DA:2322:A:O2'	2.04	0.57
57:DA:2623:G:H21	48:D0:18:HIS:CE1	2.22	0.57
57:DA:2668:G:O2'	57:DA:2669:G:H8	1.87	0.57
57:DA:2726:A:O2'	57:DA:2727:A:H5'	2.04	0.57
57:DA:482:A:N6	57:DA:506:G:C4	2.71	0.57
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.03	0.57
57:DA:2642:G:H5'	31:DJ:80:HIS:CE1	2.39	0.57
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.87	0.57
37:DP:7:LEU:O	37:DP:7:LEU:HD12	2.05	0.57
57:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.40	0.57
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.67	0.57
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.02	0.57
57:DA:851:C:C4'	47:DZ:46:MET:HG2	2.34	0.57
1:AA:1064:G:N2	1:AA:1190:G:O2'	2.36	0.57
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.39	0.57
1:AA:306:A:H2'	1:AA:307:C:C6	2.39	0.57
1:AA:35:G:H2'	1:AA:36:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:575:G:H2'	1:AA:821:G:OP2	2.04	0.57
1:AA:826:C:C5'	8:AH:12:ARG:HH21	2.12	0.57
8:AH:87:ARG:O	8:AH:121:GLY:HA3	2.04	0.57
11:AK:126:ARG:CB	21:AU:33:ARG:NH1	2.67	0.57
22:BA:1179:G:OP2	22:BA:1180:U:H5''	2.05	0.57
22:BA:1983:G:O2'	22:BA:1984:G:H5'	2.03	0.57
22:BA:2203:U:H5''	22:BA:2204:G:OP1	2.04	0.57
22:BA:42:A:C3'	22:BA:43:G:H5''	2.34	0.57
22:BA:619:G:H5''	22:BA:620:G:OP2	2.04	0.57
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.59	0.57
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.36	0.57
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.69	0.57
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.69	0.57
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.30	0.57
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.12	0.57
40:BS:72:THR:HG21	40:BS:108:SER:OG	2.05	0.57
53:CA:1048:G:H21	53:CA:1214:C:H5	1.53	0.57
53:CA:738:C:C6	53:CA:739:C:H5	2.21	0.57
53:CA:960:U:H5'	53:CA:961:U:H5''	1.86	0.57
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.85	0.57
57:DA:1738:G:HO2'	57:DA:1739:A:H8	1.49	0.57
57:DA:414:C:H5''	57:DA:1879:C:O2'	2.04	0.57
57:DA:206:U:O2'	57:DA:207:A:H5'	2.03	0.57
57:DA:2353:G:H2'	57:DA:2354:C:O4'	2.03	0.57
57:DA:2408:U:O2'	57:DA:2409:G:C5'	2.53	0.57
57:DA:2542:A:H4'	57:DA:2543:G:H5'	1.84	0.57
57:DA:579:G:C8	57:DA:2017:U:C4	2.93	0.57
57:DA:973:A:H5'	57:DA:974:G:OP2	2.03	0.57
24:DC:15:VAL:HG22	24:DC:204:LEU:O	2.03	0.57
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.85	0.57
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.04	0.57
35:DN:96:ARG:HH11	35:DN:116:VAL:HG22	1.69	0.57
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.04	0.57
1:AA:1517:G:N3	22:BA:1919:A:O2'	2.37	0.57
1:AA:181:A:H5''	1:AA:182:A:OP1	2.04	0.57
1:AA:397:A:N7	1:AA:547:A:O2'	2.36	0.57
1:AA:512:U:O2'	1:AA:513:C:O4'	2.22	0.57
1:AA:688:G:H5''	1:AA:688:G:C8	2.37	0.57
3:AC:34:SER:OG	3:AC:94:ALA:HA	2.03	0.57
4:AD:62:ARG:HA	4:AD:62:ARG:NE	2.19	0.57
4:AD:64:TYR:CE1	4:AD:93:LEU:HD13	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.45	0.57
52:B4:24:ARG:HG2	52:B4:24:ARG:HH21	1.70	0.57
52:B4:37:GLN:O	52:B4:37:GLN:HG2	2.04	0.57
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.86	0.57
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.87	0.57
22:BA:26:G:C6	22:BA:27:G:N1	2.72	0.57
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.34	0.57
25:BD:29:VAL:HB	25:BD:98:VAL:HG22	1.86	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57
34:BM:23:GLY:O	34:BM:101:VAL:HG12	2.04	0.57
39:BR:62:GLU:O	39:BR:64:VAL:HG23	2.03	0.57
23:BB:98:G:H1	43:BV:14:LYS:HB3	1.69	0.57
44:BW:28:GLU:O	44:BW:30:VAL:N	2.38	0.57
44:BW:9:THR:HG23	44:BW:10:ARG:CD	2.19	0.57
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.04	0.57
53:CA:1386:G:O2'	53:CA:1387:G:H5'	2.05	0.57
53:CA:373:A:C2'	53:CA:374:A:H5'	2.34	0.57
53:CA:461:A:N3	53:CA:461:A:H2'	2.19	0.57
2:CB:90:PHE:CE2	2:CB:149:GLY:HA3	2.39	0.57
6:CF:42:TRP:HB2	6:CF:59:TYR:CB	2.34	0.57
8:CH:24:VAL:HG12	8:CH:62:LEU:HD21	1.86	0.57
20:CT:2:ASN:N	20:CT:7:LYS:NZ	2.49	0.57
21:CU:33:ARG:CZ	21:CU:34:ARG:HD3	2.34	0.57
57:DA:1055:G:C3'	57:DA:1056:G:H5'	2.35	0.57
57:DA:1142:A:C8	57:DA:1144:A:N7	2.73	0.57
57:DA:1553:A:C8	57:DA:1555:G:C6	2.93	0.57
57:DA:1555:G:H2'	57:DA:1556:C:C6	2.39	0.57
57:DA:1476:U:H1'	57:DA:1732:C:C2	2.40	0.57
57:DA:251:A:H8	57:DA:251:A:O5'	1.87	0.57
57:DA:828:U:H2'	57:DA:828:U:O2	2.02	0.57
58:DB:45:A:H2'	58:DB:46:A:H8	1.67	0.57
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.33	0.57
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.32	0.57
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.68	0.57
32:DK:10:VAL:HG13	32:DK:12:ASP:OD1	2.04	0.57
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.34	0.57
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.04	0.57
1:AA:1016:A:C8	1:AA:1017:U:H1'	2.40	0.57
1:AA:1151:A:H5'	10:AJ:42:LEU:O	2.04	0.57
1:AA:122:G:H2'	1:AA:123:U:H6	1.70	0.57
1:AA:508:U:H4'	1:AA:509:A:OP1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:49:ALA:HB1	3:AC:75:VAL:HG22	1.86	0.57
17:AQ:20:ILE:N	17:AQ:47:ASP:OD1	2.37	0.57
17:AQ:80:LYS:HB2	17:AQ:80:LYS:NZ	2.19	0.57
20:AT:60:GLN:NE2	20:AT:65:LEU:HD21	2.20	0.57
22:BA:1247:A:C4	22:BA:1249:U:C5	2.91	0.57
22:BA:1539:U:C2	22:BA:1540:G:C8	2.93	0.57
22:BA:2134:A:N6	22:BA:2135:A:N6	2.53	0.57
22:BA:2391:G:O2'	22:BA:2424:C:N4	2.33	0.57
22:BA:94:A:H2'	22:BA:95:A:C8	2.40	0.57
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.43	0.57
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.86	0.57
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.88	0.57
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.70	0.57
38:BQ:39:ILE:O	38:BQ:43:GLN:HG3	2.04	0.57
41:BT:24:MET:O	41:BT:24:MET:HG3	2.04	0.57
41:BT:68:LYS:HE2	41:BT:77:ARG:NE	2.20	0.57
53:CA:1151:A:H2'	53:CA:1152:A:C8	2.40	0.57
53:CA:1206:G:C6	53:CA:1207:G:C5	2.93	0.57
53:CA:134:G:H2'	53:CA:135:C:O4'	2.05	0.57
53:CA:1409:C:H6	53:CA:1409:C:O5'	1.88	0.57
53:CA:246:A:C4	53:CA:282:A:N6	2.73	0.57
53:CA:106:C:O2	53:CA:379:C:H4'	2.04	0.57
53:CA:740:U:O2'	53:CA:741:G:H5'	2.04	0.57
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.03	0.57
57:DA:1126:A:H4'	57:DA:1127:A:C5'	2.34	0.57
57:DA:1461:C:H2'	57:DA:1462:C:H6	1.68	0.57
57:DA:1545:A:H2'	57:DA:1546:G:O4'	2.05	0.57
57:DA:1998:A:H4'	57:DA:2724:U:O2'	2.03	0.57
57:DA:2849:U:O4	57:DA:2867:G:C8	2.58	0.57
57:DA:303:G:C2	57:DA:304:U:C2	2.93	0.57
57:DA:60:G:HO2'	57:DA:61:C:P	2.27	0.57
57:DA:799:G:P	57:DA:800:A:H3'	2.43	0.57
25:DD:101:PHE:HE2	25:DD:205:PRO:HD3	1.69	0.57
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.85	0.57
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.86	0.57
44:DW:25:PHE:O	44:DW:27:GLY:N	2.37	0.57
46:DY:1:MET:N	46:DY:1:MET:HE2	2.19	0.57
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.40	0.57
1:AA:75:G:C5	1:AA:76:G:C8	2.91	0.57
8:AH:46:GLU:HB3	8:AH:61:THR:HB	1.86	0.57
17:AQ:51:GLU:O	17:AQ:52:CYS:O	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.03	0.57
22:BA:2134:A:C6	22:BA:2135:A:C6	2.93	0.57
22:BA:2531:A:H5'	28:BG:156:TYR:CE2	2.40	0.57
22:BA:544:C:N3	22:BA:548:G:OP1	2.37	0.57
22:BA:830:G:H4'	22:BA:831:G:OP2	2.04	0.57
22:BA:869:G:H2'	22:BA:870:U:O4'	2.03	0.57
22:BA:923:G:H21	44:BW:23:LYS:NZ	2.03	0.57
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	1.86	0.57
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.05	0.57
38:BQ:91:ARG:CB	38:BQ:94:LEU:HB2	2.34	0.57
41:BT:61:LEU:HD12	41:BT:61:LEU:O	2.04	0.57
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.53	0.57
53:CA:476:U:C6	53:CA:476:U:OP2	2.57	0.57
53:CA:679:C:O2	53:CA:712:A:C2	2.58	0.57
2:CB:48:MET:O	2:CB:199:ILE:HG22	2.05	0.57
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.05	0.57
14:CN:52:ARG:HA	14:CN:52:ARG:CZ	2.35	0.57
14:CN:76:PHE:CE2	14:CN:92:ILE:HG21	2.32	0.57
57:DA:1055:G:N3	57:DA:1055:G:H2'	2.20	0.57
57:DA:991:C:OP2	57:DA:1186:G:OP2	2.22	0.57
57:DA:840:C:H4'	57:DA:1192:G:O2'	2.05	0.57
57:DA:1476:U:H2'	57:DA:1477:A:H8	1.69	0.57
57:DA:2440:C:O2'	57:DA:2441:U:H4'	2.04	0.57
57:DA:2808:G:O2'	57:DA:2809:A:H8	1.88	0.57
57:DA:304:U:H2'	57:DA:305:C:C6	2.39	0.57
57:DA:263:G:H4'	57:DA:430:A:O4'	2.05	0.57
57:DA:532:A:N1	57:DA:2020:A:O2'	2.35	0.57
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.05	0.57
26:DE:61:ARG:O	26:DE:61:ARG:HD2	2.05	0.57
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.40	0.57
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.20	0.57
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.34	0.57
41:DT:58:VAL:HG23	41:DT:85:VAL:HA	1.87	0.57
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.18	0.57
1:AA:258:G:C4	1:AA:259:G:C8	2.92	0.57
2:AB:9:LEU:HD23	2:AB:11:ALA:H	1.69	0.57
2:AB:187:ASP:HB2	2:AB:203:ASP:HB3	1.86	0.57
4:AD:133:SER:O	4:AD:134:TYR:C	2.43	0.57
22:BA:1024:G:N2	22:BA:1142:A:H2	2.02	0.57
22:BA:1247:A:C2	22:BA:1249:U:C6	2.93	0.57
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2727:A:O2'	22:BA:2728:U:H5'	2.04	0.57
22:BA:469:G:O6	50:B2:37:LYS:HE3	2.04	0.57
22:BA:784:G:O2'	22:BA:785:G:H5''	2.04	0.57
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.20	0.57
28:BG:95:ALA:CB	28:BG:104:LEU:HD23	2.34	0.57
31:BJ:88:THR:HG22	31:BJ:91:GLU:CB	2.35	0.57
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.05	0.57
37:BP:19:PHE:O	37:BP:23:ASP:OD1	2.23	0.57
53:CA:1084:G:OP1	53:CA:1086:U:C5	2.57	0.57
53:CA:1342:C:H2'	53:CA:1343:G:C8	2.40	0.57
53:CA:369:G:O2'	53:CA:370:C:H5'	2.05	0.57
53:CA:613:C:H2'	53:CA:614:C:H6	1.68	0.57
53:CA:802:A:O2'	53:CA:803:G:H5'	2.05	0.57
53:CA:919:A:O2'	53:CA:920:U:H5'	2.04	0.57
53:CA:976:G:H5'	53:CA:977:A:OP2	2.05	0.57
5:CE:25:LYS:HB2	5:CE:25:LYS:NZ	2.20	0.57
54:CG:76:SER:HA	54:CG:85:GLN:HA	1.87	0.57
20:CT:9:ARG:HD3	20:CT:12:GLN:NE2	2.20	0.57
57:DA:528:A:C2	57:DA:2042:A:H2'	2.39	0.57
57:DA:2241:A:H2'	57:DA:2242:G:C8	2.40	0.57
57:DA:243:U:O2'	57:DA:244:A:H8	1.88	0.57
57:DA:310:A:O2'	57:DA:311:A:C8	2.46	0.57
57:DA:600:G:H5''	26:DE:27:LEU:HD22	1.87	0.57
57:DA:74:A:H4'	57:DA:75:G:O5'	2.04	0.57
57:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.40	0.57
42:DU:95:PHE:CD1	42:DU:95:PHE:N	2.71	0.57
43:DV:28:ALA:HA	43:DV:88:HIS:ND1	2.19	0.57
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.39	0.57
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.05	0.57
44:DW:8:SER:O	44:DW:9:THR:HB	2.05	0.57
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.69	0.57
1:AA:208:U:H3	1:AA:212:G:N2	2.03	0.57
1:AA:574:A:H5''	1:AA:575:G:OP2	2.04	0.57
2:AB:103:TRP:CZ3	2:AB:107:ARG:HD3	2.40	0.57
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.87	0.57
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.05	0.57
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.35	0.57
22:BA:141:G:H5'	22:BA:142:A:C8	2.39	0.57
22:BA:1450:G:N2	22:BA:1452:G:O6	2.35	0.57
22:BA:1901:A:O2'	22:BA:1902:C:H5'	2.05	0.57
22:BA:1998:A:H2'	22:BA:1999:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:752:A:N7	22:BA:1781:U:O4'	2.38	0.57
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.53	0.57
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.08	0.57
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.03	0.57
32:BK:99:ILE:HG23	32:BK:100:PHE:N	2.20	0.57
22:BA:2013:A:C2	40:BS:88:ARG:NH1	2.73	0.57
41:BT:14:PRO:HB2	41:BT:16:VAL:HG23	1.87	0.57
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.05	0.57
44:BW:22:VAL:O	44:BW:23:LYS:O	2.23	0.57
53:CA:1168:U:C2'	53:CA:1168:U:O2	2.46	0.57
53:CA:1458:G:H4'	20:CT:22:SER:HB2	1.85	0.57
53:CA:374:A:O2'	53:CA:375:U:H5'	2.03	0.57
53:CA:940:C:H5'	54:CG:101:ARG:HH22	1.67	0.57
53:CA:982:U:H1'	53:CA:983:A:C8	2.39	0.57
19:CS:62:THR:HG22	19:CS:63:ASP:H	1.69	0.57
57:DA:1071:G:O6	57:DA:1091:G:N7	2.38	0.57
24:DC:72:GLY:O	24:DC:73:ILE:HD13	2.05	0.57
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.38	0.57
59:DF:34:THR:O	59:DF:35:LEU:HB2	2.04	0.57
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.86	0.57
32:DK:103:VAL:HG23	32:DK:122:VAL:O	2.05	0.57
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	2.03	0.57
57:DA:2230:G:C1'	45:DX:31:ASN:HB3	2.34	0.57
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.40	0.57
1:AA:198:G:C4	1:AA:199:A:N7	2.72	0.57
1:AA:243:A:H4'	1:AA:244:U:H5'	1.86	0.57
1:AA:375:U:H4'	16:AP:17:TYR:CE2	2.40	0.57
2:AB:148:GLY:C	2:AB:150:ILE:H	2.07	0.57
9:AI:100:ALA:HB1	9:AI:102:PHE:CE2	2.40	0.57
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	2.35	0.57
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.05	0.57
22:BA:1071:G:C8	22:BA:1089:A:N6	2.73	0.57
22:BA:1142:A:C4	22:BA:1144:A:C8	2.93	0.57
22:BA:745:G:H2'	22:BA:746:U:H5'	1.87	0.57
28:BG:132:LEU:HD23	28:BG:132:LEU:N	2.20	0.57
32:BK:78:ARG:NH1	37:BP:70:GLU:OE2	2.38	0.57
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.87	0.57
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.05	0.57
37:BP:105:LYS:CA	37:BP:108:ARG:HH21	2.18	0.57
38:BQ:97:ILE:HD13	38:BQ:104:ALA:HB3	1.86	0.57
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.04	0.57
53:CA:98:A:C2	53:CA:99:C:C2	2.93	0.57
53:CA:707:U:H4'	11:CK:21:HIS:CD2	2.40	0.57
19:CS:52:ASN:C	19:CS:52:ASN:HD22	2.07	0.57
21:CU:35:GLU:OE1	21:CU:37:TYR:CD1	2.58	0.57
57:DA:117:G:C6	57:DA:119:A:C6	2.93	0.57
57:DA:1682:G:H2'	57:DA:1683:U:C5	2.40	0.57
57:DA:1734:G:C2'	57:DA:1735:A:H8	2.17	0.57
57:DA:1912:A:H62	57:DA:1917:U:H3	1.46	0.57
57:DA:2037:A:H2'	57:DA:2038:G:C8	2.40	0.57
57:DA:2286:G:H4'	57:DA:2287:A:C1'	2.35	0.57
57:DA:477:A:O2'	57:DA:478:A:H8	1.87	0.57
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.04	0.57
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.08	0.57
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.05	0.57
59:DF:110:ILE:HD13	59:DF:110:ILE:H	1.70	0.57
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.86	0.57
57:DA:7:G:O2'	31:DJ:15:TRP:HZ2	1.87	0.57
32:DK:57:VAL:O	32:DK:57:VAL:HG13	2.05	0.57
32:DK:63:VAL:HG12	32:DK:64:ARG:HD3	1.87	0.57
34:DM:136:MET:HE2	43:DV:57:TYR:HD2	1.70	0.57
34:DM:19:GLY:N	34:DM:38:ARG:NH2	2.41	0.57
57:DA:871:U:OP1	34:DM:4:PRO:HA	2.05	0.57
1:AA:1091:U:H1'	1:AA:1095:U:O2	2.05	0.56
1:AA:1314:C:OP2	19:AS:5:LYS:HD2	2.05	0.56
1:AA:1447:A:H5''	1:AA:1448:C:C5	2.38	0.56
1:AA:853:C:C2'	1:AA:854:U:H5'	2.34	0.56
4:AD:84:ASN:HD22	4:AD:87:GLU:HG2	1.70	0.56
9:AI:6:TYR:CE2	9:AI:17:ARG:HB2	2.37	0.56
15:AO:9:LYS:NZ	15:AO:9:LYS:HB3	2.19	0.56
22:BA:1085:A:H3'	22:BA:1086:A:H2	1.67	0.56
22:BA:1113:U:C2	22:BA:1114:C:C5	2.92	0.56
22:BA:1559:U:H4'	22:BA:1560:G:OP2	2.04	0.56
22:BA:335:C:H5''	42:BU:81:ARG:HD3	1.86	0.56
22:BA:544:C:H3'	22:BA:545:U:O2	2.03	0.56
22:BA:789:A:OP1	22:BA:790:U:H5	1.88	0.56
24:BC:64:VAL:O	24:BC:64:VAL:HG12	2.04	0.56
22:BA:1993:U:C4'	25:BD:133:THR:HG21	2.29	0.56
26:BE:127:GLU:H	26:BE:127:GLU:CD	2.07	0.56
26:BE:134:LEU:O	26:BE:134:LEU:HD12	2.05	0.56
28:BG:126:THR:HG22	28:BG:127:GLN:N	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.23	0.56
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.87	0.56
37:BP:91:VAL:HG11	37:BP:96:LEU:HD21	1.86	0.56
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.35	0.56
53:CA:1151:A:C6	53:CA:1152:A:N6	2.73	0.56
53:CA:1448:C:O2'	53:CA:1449:C:C6	2.58	0.56
53:CA:367:U:OP1	53:CA:395:C:H1'	2.05	0.56
53:CA:666:G:C4	53:CA:741:G:C2	2.93	0.56
53:CA:735:C:H5'	18:CR:59:LYS:HD3	1.87	0.56
53:CA:764:C:N4	53:CA:812:G:N1	2.52	0.56
5:CE:157:GLY:HA3	8:CH:63:LYS:HE3	1.86	0.56
9:CI:61:ASP:O	9:CI:62:LEU:HD22	2.05	0.56
57:DA:1249:U:H4'	38:DQ:3:VAL:HB	1.85	0.56
57:DA:2091:C:C4	57:DA:2092:U:O4	2.58	0.56
57:DA:2304:G:N2	57:DA:2312:U:H3	1.97	0.56
57:DA:2849:U:O4	57:DA:2867:G:H8	1.86	0.56
57:DA:224:U:H5	57:DA:420:C:H4'	1.70	0.56
57:DA:477:A:C2'	57:DA:478:A:C8	2.88	0.56
57:DA:571:U:O2'	57:DA:573:U:H5''	2.05	0.56
57:DA:739:A:HO2'	57:DA:740:C:H5	1.48	0.56
57:DA:777:G:N7	57:DA:793:A:C2	2.65	0.56
57:DA:919:U:H2'	57:DA:920:A:H8	1.64	0.56
57:DA:950:G:C6	57:DA:951:C:N3	2.73	0.56
24:DC:8:THR:O	24:DC:9:SER:CB	2.53	0.56
25:DD:12:THR:HG22	25:DD:13:ARG:O	2.05	0.56
30:DI:83:ALA:HB2	30:DI:99:LYS:O	2.05	0.56
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.35	0.56
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.05	0.56
42:DU:95:PHE:O	42:DU:97:SER:N	2.38	0.56
47:DZ:37:ARG:HA	47:DZ:37:ARG:NE	2.19	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.40	0.56
1:AA:872:A:C8	1:AA:874:G:C8	2.93	0.56
5:AE:134:ASN:O	5:AE:137:ARG:HB3	2.05	0.56
22:BA:2307:G:N2	22:BA:2311:A:C8	2.73	0.56
24:BC:39:SER:C	24:BC:41:GLY:H	2.07	0.56
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
31:BJ:55:ILE:HD12	31:BJ:56:VAL:O	2.04	0.56
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.34	0.56
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.51	0.56
44:BW:40:ARG:HB2	44:BW:56:HIS:CE1	2.40	0.56
53:CA:149:A:C2	53:CA:150:U:C2	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:197:A:C6	53:CA:221:C:H4'	2.40	0.56
53:CA:501:C:H1'	53:CA:549:C:O2'	2.04	0.56
53:CA:658:C:H1'	15:CO:21:THR:HG21	1.86	0.56
53:CA:764:C:N4	53:CA:812:G:C6	2.73	0.56
2:CB:103:TRP:HA	2:CB:106:VAL:H	1.70	0.56
4:CD:190:LEU:O	4:CD:191:SER:O	2.23	0.56
4:CD:25:ARG:HG2	4:CD:25:ARG:HH11	1.69	0.56
6:CF:43:GLY:O	6:CF:44:ARG:C	2.44	0.56
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.35	0.56
55:CM:32:ILE:O	55:CM:32:ILE:HD13	2.05	0.56
56:CP:54:LEU:H	56:CP:54:LEU:HD23	1.70	0.56
20:CT:57:VAL:HG12	20:CT:71:ALA:HB2	1.87	0.56
57:DA:770:G:H1'	57:DA:1379:U:C4	2.40	0.56
57:DA:1751:U:H2'	57:DA:1752:C:H6	1.69	0.56
57:DA:1826:G:C6	57:DA:1827:U:C4	2.93	0.56
57:DA:185:G:H2'	57:DA:186:G:H8	1.70	0.56
57:DA:1957:C:O2'	57:DA:1985:C:H1'	2.05	0.56
58:DB:26:C:H1'	58:DB:117:G:H1'	1.87	0.56
59:DF:134:GLN:HB2	59:DF:137:PHE:HE2	1.70	0.56
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.87	0.56
33:DL:117:THR:HG22	33:DL:118:THR:H	1.70	0.56
1:AA:303:A:H2'	1:AA:304:U:O4'	2.05	0.56
1:AA:525:C:H2'	1:AA:526:C:C6	2.40	0.56
1:AA:901:A:N7	1:AA:902:G:H1'	2.20	0.56
1:AA:98:A:H2'	1:AA:99:C:C6	2.41	0.56
4:AD:86:GLY:O	4:AD:89:LEU:HB3	2.06	0.56
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	2.18	0.56
52:B4:9:LYS:O	52:B4:10:LEU:HD23	2.05	0.56
22:BA:1071:G:H1'	22:BA:1089:A:C8	2.40	0.56
22:BA:1056:G:H21	22:BA:1103:A:H62	1.51	0.56
22:BA:1107:G:N2	22:BA:1108:U:C2	2.72	0.56
22:BA:2249:U:N3	22:BA:2253:G:OP2	2.38	0.56
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.41	0.56
24:BC:141:HIS:CD2	24:BC:192:GLY:O	2.58	0.56
24:BC:140:VAL:HG13	24:BC:189:ALA:HB1	1.87	0.56
22:BA:1670:C:O2	25:BD:134:HIS:NE2	2.37	0.56
25:BD:9:VAL:CG2	25:BD:26:VAL:HB	2.33	0.56
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.19	0.56
26:BE:48:THR:H	26:BE:51:GLU:HG3	1.69	0.56
26:BE:95:LYS:O	26:BE:96:VAL:HB	2.06	0.56
29:BH:75:LEU:HD22	29:BH:143:ILE:HG12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.87	0.56
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.40	0.56
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.86	0.56
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.05	0.56
45:BX:65:THR:O	45:BX:68:ALA:HB3	2.06	0.56
53:CA:542:G:H2'	53:CA:543:U:H6	1.71	0.56
53:CA:652:U:HO2'	53:CA:653:U:P	2.29	0.56
53:CA:676:A:H2'	53:CA:677:U:C6	2.40	0.56
53:CA:972:C:O2'	10:CJ:57:VAL:HG23	2.06	0.56
53:CA:984:C:O2'	53:CA:985:C:C6	2.51	0.56
55:CM:21:ILE:HB	55:CM:24:VAL:HG23	1.87	0.56
18:CR:71:ASP:OD1	21:CU:3:ILE:HD11	2.05	0.56
49:D1:7:LYS:O	49:D1:8:ILE:HD13	2.05	0.56
57:DA:1076:C:O2'	57:DA:1077:A:C8	2.58	0.56
57:DA:108:G:H2'	57:DA:109:C:C6	2.41	0.56
57:DA:1049:C:O2	57:DA:1113:U:H4'	2.05	0.56
57:DA:2244:U:H2'	57:DA:2245:U:O4'	2.04	0.56
57:DA:2282:G:H1'	57:DA:2390:U:H5	1.69	0.56
57:DA:2448:A:O2'	57:DA:2449:U:H5	1.88	0.56
57:DA:2497:A:O2'	57:DA:2498:C:OP2	2.24	0.56
57:DA:2669:G:H2'	57:DA:2670:A:C8	2.39	0.56
57:DA:2714:G:O5'	57:DA:2714:G:H8	1.88	0.56
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.71	0.56
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.05	0.56
57:DA:994:C:OP2	38:DQ:49:ARG:HG3	2.04	0.56
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.21	0.56
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.11	0.56
1:AA:135:C:H2'	1:AA:136:C:H5'	1.87	0.56
1:AA:466:A:O2'	1:AA:467:U:C5	2.58	0.56
1:AA:914:A:N3	1:AA:915:A:C8	2.73	0.56
4:AD:100:VAL:O	4:AD:100:VAL:HG12	2.05	0.56
1:AA:8:A:N6	4:AD:204:SER:HB2	2.20	0.56
4:AD:80:ARG:HH21	4:AD:81:LEU:HD21	1.71	0.56
7:AG:145:GLU:HA	7:AG:148:LYS:HB2	1.87	0.56
11:AK:14:GLN:HA	11:AK:76:TYR:O	2.05	0.56
12:AL:71:HIS:ND1	12:AL:73:LEU:HB2	2.20	0.56
20:AT:2:ASN:O	20:AT:3:ILE:C	2.43	0.56
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.05	0.56
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.05	0.56
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.40	0.56
22:BA:2773:C:OP1	25:BD:171:THR:HG23	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.58	0.56
32:BK:6:THR:O	32:BK:6:THR:HG22	2.05	0.56
37:BP:61:ARG:HG2	37:BP:70:GLU:CG	2.35	0.56
44:BW:28:GLU:CA	44:BW:28:GLU:OE2	2.54	0.56
53:CA:1455:G:H2'	53:CA:1456:A:C8	2.40	0.56
53:CA:238:A:C2'	53:CA:239:U:H5''	2.34	0.56
53:CA:748:G:H2'	53:CA:749:A:H8	1.67	0.56
53:CA:953:G:C6	53:CA:1229:A:N6	2.73	0.56
2:CB:130:LYS:HD3	2:CB:133:ALA:HB3	1.87	0.56
54:CG:30:MET:HE1	54:CG:33:GLY:HA2	1.87	0.56
11:CK:124:LYS:O	21:CU:34:ARG:HB2	2.06	0.56
57:DA:1006:C:O5'	57:DA:1006:C:H6	1.87	0.56
57:DA:176:A:H3'	57:DA:177:G:H21	1.69	0.56
57:DA:2025:C:H2'	57:DA:2026:U:C6	2.41	0.56
57:DA:2195:U:H2'	57:DA:2196:C:H6	1.69	0.56
57:DA:2651:C:O2'	57:DA:2652:C:H5'	2.06	0.56
57:DA:2714:G:O2'	57:DA:2715:C:H5'	2.06	0.56
57:DA:424:G:O2'	57:DA:425:G:H5'	2.06	0.56
57:DA:53:A:H2'	57:DA:54:G:C8	2.41	0.56
57:DA:589:U:H2'	57:DA:590:A:C8	2.38	0.56
24:DC:171:VAL:HG23	24:DC:185:ALA:HB1	1.87	0.56
25:DD:175:LEU:O	25:DD:176:ASP:HB2	2.05	0.56
26:DE:117:ARG:NH2	33:DL:2:ARG:HB3	2.21	0.56
35:DN:47:VAL:O	35:DN:50:PRO:HD2	2.06	0.56
42:DU:32:LYS:HE2	42:DU:65:GLN:CD	2.26	0.56
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.87	0.56
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.40	0.56
1:AA:234:C:O2'	1:AA:235:C:H5'	2.06	0.56
1:AA:827:U:C4	1:AA:870:U:C2	2.94	0.56
5:AE:121:ASN:HD21	5:AE:122:VAL:HG13	1.71	0.56
15:AO:42:PHE:CE1	15:AO:55:LEU:HD22	2.40	0.56
52:B4:9:LYS:C	52:B4:10:LEU:HD23	2.26	0.56
22:BA:1169:A:C2	22:BA:1181:U:O2	2.59	0.56
22:BA:1171:G:C6	22:BA:1172:C:C4	2.93	0.56
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.05	0.56
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.87	0.56
28:BG:117:PRO:O	28:BG:118:ALA:O	2.24	0.56
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.41	0.56
22:BA:1154:G:OP1	38:BQ:57:ARG:HD3	2.05	0.56
41:BT:50:LEU:HD12	41:BT:50:LEU:N	2.19	0.56
53:CA:204:G:H2'	53:CA:205:A:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:322:C:O2'	20:CT:17:ARG:HG3	2.05	0.56
53:CA:352:C:H5''	53:CA:352:C:H6	1.69	0.56
53:CA:536:C:H2'	53:CA:537:G:C8	2.40	0.56
53:CA:846:G:O2'	53:CA:847:G:H5'	2.05	0.56
5:CE:103:GLY:HA3	5:CE:121:ASN:CA	2.34	0.56
6:CF:45:ARG:HG2	6:CF:46:GLN:H	1.69	0.56
8:CH:17:GLN:NE2	8:CH:69:ALA:HB1	2.19	0.56
12:CL:43:LYS:CB	12:CL:44:PRO:CD	2.73	0.56
55:CM:57:ASP:O	55:CM:61:LYS:HG3	2.06	0.56
15:CO:73:ASP:OD2	15:CO:76:ARG:HD3	2.05	0.56
18:CR:21:ASP:HB3	18:CR:23:LYS:CG	2.36	0.56
57:DA:1062:G:H2'	57:DA:1070:A:OP1	2.05	0.56
57:DA:1722:A:C6	57:DA:1739:A:C8	2.93	0.56
57:DA:1823:G:H5''	63:DA:3766:HOH:O	2.05	0.56
57:DA:2366:A:H2'	57:DA:2367:G:O4'	2.05	0.56
57:DA:2394:C:H41	51:D3:30:HIS:CE1	2.23	0.56
57:DA:2461:A:H1'	57:DA:2492:U:N3	2.20	0.56
57:DA:2513:A:C5	57:DA:2514:U:C4	2.93	0.56
57:DA:2742:G:OP1	52:D4:36:ARG:HD3	2.04	0.56
57:DA:491:G:C4	57:DA:492:A:C8	2.94	0.56
57:DA:503:A:N3	57:DA:505:A:H2'	2.20	0.56
57:DA:700:G:C6	57:DA:701:G:C5	2.93	0.56
57:DA:992:C:H4'	39:DR:74:ILE:HD13	1.87	0.56
58:DB:18:G:C2	58:DB:67:G:O6	2.59	0.56
29:DH:9:VAL:CG1	29:DH:10:ALA:N	2.69	0.56
29:DH:38:PRO:O	29:DH:40:THR:HG23	2.06	0.56
32:DK:71:ARG:CB	32:DK:72:PRO:HD3	2.26	0.56
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.21	0.56
45:DX:4:CYS:HB3	45:DX:9:LYS:H	1.71	0.56
1:AA:322:C:O2'	20:AT:17:ARG:HG2	2.06	0.56
3:AC:110:LEU:HD21	3:AC:143:LEU:HD23	1.87	0.56
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.41	0.56
7:AG:49:LEU:CD1	7:AG:60:ALA:HB1	2.35	0.56
13:AM:15:VAL:HA	13:AM:33:LEU:CD1	2.36	0.56
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.58	0.56
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.06	0.56
22:BA:1427:A:H4'	22:BA:1428:C:O5'	2.06	0.56
24:BC:12:ARG:HG2	24:BC:12:ARG:NH1	2.11	0.56
24:BC:255:LYS:O	24:BC:257:ARG:N	2.31	0.56
25:BD:169:ARG:O	25:BD:170:VAL:CG1	2.51	0.56
27:BF:16:MET:O	27:BF:20:ASN:HA	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:77:ILE:N	32:BK:77:ILE:HD12	2.21	0.56
36:BO:102:ARG:O	36:BO:105:ALA:HB3	2.05	0.56
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.31	0.56
42:BU:35:VAL:HB	42:BU:38:ILE:HG13	1.86	0.56
42:BU:85:ARG:HA	42:BU:91:LYS:O	2.05	0.56
53:CA:1000:A:H1'	53:CA:1041:G:N2	2.21	0.56
53:CA:1057:G:H4'	3:CC:196:GLY:H	1.70	0.56
53:CA:962:C:N4	53:CA:974:A:H61	2.04	0.56
2:CB:99:MET:O	2:CB:103:TRP:HB3	2.05	0.56
8:CH:11:THR:HG23	8:CH:14:ARG:HH22	1.69	0.56
55:CM:69:ARG:HA	55:CM:72:ILE:HG22	1.88	0.56
57:DA:1373:A:H2'	57:DA:1374:G:O4'	2.05	0.56
57:DA:1943:U:O4'	57:DA:1943:U:O2	2.20	0.56
57:DA:2310:C:H2'	57:DA:2311:A:H5''	1.88	0.56
57:DA:2654:A:H4'	57:DA:2655:G:OP1	2.04	0.56
57:DA:764:A:C2	57:DA:781:A:C2	2.93	0.56
57:DA:960:A:C8	57:DA:962:G:C8	2.93	0.56
57:DA:1568:G:H21	24:DC:57:HIS:CE1	2.23	0.56
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	2.00	0.56
59:DF:147:ARG:H	59:DF:147:ARG:HD2	1.71	0.56
59:DF:7:TYR:O	59:DF:8:LYS:HG3	2.06	0.56
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.68	0.56
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.20	0.56
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.86	0.56
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.05	0.56
1:AA:143:A:H5'	1:AA:144:G:H5'	1.87	0.56
1:AA:175:C:O2'	1:AA:176:C:H5'	2.05	0.56
1:AA:499:A:H1'	1:AA:500:G:C8	2.41	0.56
1:AA:683:G:H21	11:AK:39:ASN:HA	1.71	0.56
1:AA:707:U:OP1	11:AK:86:LYS:HE3	2.05	0.56
1:AA:792:A:H4'	1:AA:793:U:O5'	2.06	0.56
5:AE:113:VAL:HG21	5:AE:140:ILE:CD1	2.36	0.56
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.88	0.56
17:AQ:31:PRO:HB2	17:AQ:32:ILE:HD12	1.87	0.56
20:AT:54:GLN:N	20:AT:55:PRO:HD2	2.21	0.56
20:AT:66:ILE:HG23	20:AT:66:ILE:O	2.05	0.56
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.87	0.56
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.35	0.56
22:BA:1707:G:H2'	22:BA:1708:C:H6	1.68	0.56
22:BA:2199:A:H5''	22:BA:2199:A:H8	1.67	0.56
22:BA:2473:U:O2	22:BA:2473:U:H2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.06	0.56
22:BA:813:U:H2'	22:BA:814:C:C6	2.40	0.56
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.53	0.56
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.87	0.56
37:BP:105:LYS:O	37:BP:108:ARG:HD3	2.06	0.56
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.06	0.56
53:CA:1062:U:H2'	53:CA:1063:C:C5	2.41	0.56
53:CA:1366:C:HO2'	53:CA:1367:C:H6	1.49	0.56
53:CA:205:A:C5	53:CA:206:C:N4	2.73	0.56
53:CA:346:G:H2'	53:CA:346:G:N3	2.19	0.56
53:CA:536:C:H2'	53:CA:537:G:H8	1.69	0.56
53:CA:694:A:C3'	53:CA:695:A:H5''	2.31	0.56
2:CB:133:ALA:HA	2:CB:137:THR:HG21	1.87	0.56
5:CE:84:VAL:HG22	5:CE:85:LYS:H	1.71	0.56
15:CO:38:LEU:HG	15:CO:42:PHE:CE1	2.40	0.56
15:CO:83:ARG:O	15:CO:83:ARG:HG2	2.06	0.56
57:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.04	0.56
57:DA:1439:A:N7	57:DA:1440:U:N1	2.54	0.56
57:DA:1997:C:OP2	25:DD:129:THR:OG1	2.22	0.56
57:DA:340:A:H2'	57:DA:341:C:O4'	2.05	0.56
57:DA:52:A:O2'	57:DA:53:A:H5'	2.05	0.56
57:DA:628:G:C6	57:DA:636:G:C2	2.93	0.56
57:DA:848:C:H2'	57:DA:849:A:H8	1.70	0.56
57:DA:962:G:OP1	57:DA:962:G:H3'	2.06	0.56
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.87	0.56
40:DS:24:ILE:HG22	40:DS:35:ILE:CD1	2.35	0.56
45:DX:52:ALA:O	45:DX:53:LYS:HB3	2.04	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.93	0.56
1:AA:1129:C:H2'	1:AA:1139:G:N7	2.20	0.56
1:AA:1253:G:H2'	1:AA:1254:A:C8	2.35	0.56
1:AA:367:U:C6	1:AA:394:G:N2	2.74	0.56
3:AC:119:ILE:HD11	3:AC:133:MET:HA	1.88	0.56
4:AD:166:LYS:NZ	4:AD:166:LYS:HB3	2.20	0.56
7:AG:39:GLU:HB2	7:AG:43:TYR:CE2	2.40	0.56
50:B2:18:PHE:O	50:B2:22:MET:HB2	2.06	0.56
22:BA:2062:A:O2'	22:BA:2063:C:C5'	2.48	0.56
22:BA:962:G:OP1	63:BA:3353:HOH:O	2.18	0.56
22:BA:976:G:C2	22:BA:977:G:C8	2.93	0.56
24:BC:24:HIS:CG	24:BC:25:LYS:H	2.24	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
38:BQ:20:ALA:HA	38:BQ:23:TYR:CD1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.87	0.56
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.71	0.56
53:CA:1348:U:O2'	53:CA:1349:A:H8	1.87	0.56
53:CA:263:A:P	20:CT:73:ARG:HH12	2.29	0.56
53:CA:487:A:H2'	53:CA:488:C:O4'	2.05	0.56
53:CA:537:G:H5''	12:CL:109:ARG:HH12	1.70	0.56
56:CP:29:ASN:N	56:CP:29:ASN:OD1	2.37	0.56
57:DA:1060:U:O4'	57:DA:1061:U:H2'	2.05	0.56
57:DA:1290:C:O2'	57:DA:1291:C:C6	2.43	0.56
57:DA:1343:G:C5	57:DA:1597:A:N6	2.74	0.56
57:DA:2093:G:N7	57:DA:2225:A:H2'	2.20	0.56
57:DA:30:G:C6	57:DA:31:C:N3	2.74	0.56
57:DA:724:U:H2'	57:DA:725:G:O4'	2.05	0.56
57:DA:855:G:N3	44:DW:23:LYS:HE3	2.21	0.56
58:DB:110:C:O2'	58:DB:111:U:C5'	2.46	0.56
58:DB:27:C:H2'	58:DB:28:C:C6	2.39	0.56
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	2.21	0.56
24:DC:145:MET:HE2	24:DC:181:ARG:NH2	2.21	0.56
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.05	0.56
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.06	0.56
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.41	0.56
36:DO:115:LEU:H	36:DO:115:LEU:CD1	2.17	0.56
58:DB:28:C:OP1	36:DO:31:THR:HG21	2.06	0.56
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.06	0.56
1:AA:86:G:N2	1:AA:87:C:N4	2.53	0.56
2:AB:20:ARG:HH12	2:AB:38:HIS:CE1	2.24	0.56
2:AB:221:ARG:CZ	2:AB:221:ARG:HB3	2.36	0.56
49:B1:29:LYS:HB3	49:B1:29:LYS:NZ	2.20	0.56
51:B3:31:ILE:HG13	51:B3:31:ILE:O	2.05	0.56
52:B4:9:LYS:N	52:B4:9:LYS:HD3	2.09	0.56
22:BA:1103:A:H2'	22:BA:1104:C:H5'	1.87	0.56
22:BA:1238:G:O2'	22:BA:1239:G:H5'	2.06	0.56
22:BA:1695:G:H2'	22:BA:1696:G:O4'	2.06	0.56
22:BA:1698:A:H4'	22:BA:1699:G:O5'	2.05	0.56
22:BA:1832:C:N4	22:BA:1833:C:C4	2.73	0.56
22:BA:1867:G:HO2'	22:BA:1868:C:H5'	1.69	0.56
22:BA:1947:C:N3	22:BA:1960:A:C2	2.74	0.56
22:BA:2561:U:O3'	32:BK:40:LYS:HE2	2.06	0.56
24:BC:77:VAL:HG13	24:BC:113:ASP:O	2.06	0.56
34:BM:33:LEU:CD2	34:BM:128:THR:HB	2.36	0.56
22:BA:2275:C:HO2'	34:BM:84:LYS:HA	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.18	0.56
45:BX:32:LEU:HA	45:BX:51:SER:HA	1.88	0.56
53:CA:174:A:H2'	53:CA:175:C:H6	1.71	0.56
53:CA:35:G:H21	12:CL:114:SER:HB3	1.70	0.56
53:CA:437:U:H2'	53:CA:438:U:O5'	2.06	0.56
53:CA:449:G:N1	53:CA:450:G:C6	2.74	0.56
53:CA:517:G:H5'	53:CA:519:C:C2	2.41	0.56
54:CG:12:LEU:HD22	54:CG:13:PRO:O	2.05	0.56
15:CO:38:LEU:HG	15:CO:42:PHE:HE1	1.70	0.56
19:CS:52:ASN:ND2	19:CS:54:ARG:HG2	2.21	0.56
21:CU:19:LYS:N	21:CU:19:LYS:NZ	2.53	0.56
21:CU:31:VAL:O	21:CU:33:ARG:N	2.39	0.56
57:DA:1008:A:OP1	57:DA:1008:A:H8	1.89	0.56
57:DA:1090:A:H3'	57:DA:1091:G:H5''	1.88	0.56
57:DA:1337:G:H8	57:DA:1337:G:OP2	1.88	0.56
57:DA:1735:A:H2'	57:DA:1736:U:C6	2.41	0.56
57:DA:1814:G:C2	57:DA:1815:A:N6	2.74	0.56
57:DA:2519:U:C6	57:DA:2542:A:N6	2.73	0.56
57:DA:2650:U:C2	57:DA:2671:G:N2	2.74	0.56
57:DA:2732:G:H5''	57:DA:2733:A:O4'	2.05	0.56
57:DA:374:A:C6	57:DA:401:A:C8	2.94	0.56
57:DA:455:C:H3'	57:DA:456:C:C5'	2.35	0.56
57:DA:77:G:O2'	57:DA:78:U:O4'	2.18	0.56
57:DA:962:G:O2'	57:DA:963:U:C6	2.59	0.56
58:DB:100:G:H2'	58:DB:101:A:O4'	2.06	0.56
31:DJ:64:VAL:HG11	31:DJ:69:ARG:HA	1.87	0.56
57:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.70	0.56
46:DY:31:GLN:C	46:DY:33:ALA:H	2.09	0.56
1:AA:1269:A:H2	1:AA:1312:G:N3	2.02	0.56
1:AA:1499:A:O2'	1:AA:1500:A:H5'	2.05	0.56
1:AA:922:G:H1'	5:AE:23:THR:HG22	1.87	0.56
2:AB:9:LEU:HD23	2:AB:11:ALA:N	2.21	0.56
2:AB:14:HIS:HB2	2:AB:208:ALA:HB2	1.87	0.56
14:AN:82:LYS:HE2	14:AN:85:GLU:HG3	1.87	0.56
16:AP:51:ARG:O	16:AP:52:LEU:HD12	2.06	0.56
20:AT:57:VAL:HG12	20:AT:58:ASP:N	2.20	0.56
22:BA:1510:G:H2'	22:BA:1511:G:C8	2.41	0.56
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.41	0.56
22:BA:581:C:H2'	22:BA:582:A:C8	2.41	0.56
22:BA:616:A:O2'	22:BA:617:G:H5'	2.06	0.56
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.32	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:151:THR:CG2	25:BD:152:PRO:CD	2.78	0.56
28:BG:85:LYS:HA	28:BG:130:ILE:O	2.06	0.56
28:BG:174:LYS:HE2	28:BG:176:LYS:OXT	2.05	0.56
45:BX:11:PRO:HB3	45:BX:29:LEU:HB3	1.86	0.56
45:BX:34:SER:HA	45:BX:48:LEU:O	2.06	0.56
53:CA:1253:G:N1	53:CA:1285:A:N6	2.54	0.56
53:CA:858:G:O6	53:CA:869:G:C8	2.59	0.56
4:CD:137:SER:CB	4:CD:138:PRO:HD2	2.36	0.56
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	2.19	0.56
9:CI:56:MET:HG3	9:CI:57:VAL:HG23	1.88	0.56
17:CQ:59:GLU:HG3	17:CQ:75:VAL:HG22	1.88	0.56
21:CU:36:PHE:CD2	21:CU:39:LYS:HE2	2.41	0.56
57:DA:1011:G:O2'	57:DA:1013:C:H5''	2.05	0.56
57:DA:1062:G:OP1	57:DA:1070:A:H4'	2.06	0.56
57:DA:1259:G:H2'	57:DA:1260:A:H8	1.71	0.56
57:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.87	0.56
57:DA:1273:U:H4'	57:DA:1275:A:OP2	2.06	0.56
57:DA:1326:U:O2'	57:DA:1327:A:O5'	2.24	0.56
57:DA:1491:G:C6	57:DA:1500:G:C2	2.93	0.56
57:DA:1655:A:H2'	57:DA:1656:C:H6	1.66	0.56
57:DA:2336:A:N7	44:DW:40:ARG:CZ	2.69	0.56
57:DA:247:G:C5	57:DA:249:C:H1'	2.41	0.56
57:DA:301:G:C6	57:DA:302:C:N4	2.74	0.56
57:DA:503:A:C4	57:DA:506:G:N7	2.74	0.56
59:DF:41:GLU:O	59:DF:43:ILE:N	2.39	0.56
29:DH:33:GLN:O	29:DH:35:LYS:HG2	2.06	0.56
58:DB:112:G:N2	36:DO:45:SER:HA	2.05	0.56
42:DU:44:HIS:CD2	42:DU:57:ILE:HG21	2.40	0.56
1:AA:258:G:N2	1:AA:259:G:H1'	2.21	0.56
1:AA:864:A:H3'	1:AA:865:A:C8	2.41	0.56
1:AA:92:U:H2'	1:AA:93:U:C5	2.41	0.56
2:AB:127:LYS:HG3	2:AB:128:LEU:N	2.21	0.56
2:AB:174:GLU:O	2:AB:178:LEU:HB2	2.06	0.56
4:AD:191:SER:O	4:AD:192:ALA:HB2	2.06	0.56
9:AI:38:PHE:HA	9:AI:41:GLU:OE1	2.06	0.56
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.68	0.56
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.05	0.56
22:BA:2389:G:C5'	22:BA:2390:U:H5'	2.32	0.56
22:BA:622:G:H2'	22:BA:623:C:H6	1.71	0.56
24:BC:247:TRP:C	24:BC:249:VAL:H	2.10	0.56
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:47:LYS:HD3	26:BE:51:GLU:O	2.05	0.56
27:BF:134:GLN:NE2	27:BF:148:VAL:O	2.39	0.56
27:BF:131:VAL:CG2	27:BF:151:LEU:HG	2.36	0.56
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	1.87	0.56
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.39	0.56
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.88	0.56
53:CA:120:A:H3'	53:CA:121:U:C5'	2.35	0.56
53:CA:548:G:H2'	53:CA:549:C:C6	2.41	0.56
53:CA:811:C:H4'	53:CA:900:A:N6	2.20	0.56
2:CB:95:TRP:CZ3	2:CB:171:ALA:HA	2.41	0.56
2:CB:74:ALA:CB	2:CB:206:ILE:HD11	2.35	0.56
2:CB:44:LYS:O	2:CB:48:MET:HG3	2.05	0.56
5:CE:148:SER:H	5:CE:151:MET:HE3	1.71	0.56
8:CH:12:ARG:HH12	8:CH:27:PRO:HD2	1.70	0.56
11:CK:121:ARG:NH2	21:CU:35:GLU:HB2	2.20	0.56
11:CK:94:SER:O	11:CK:97:ARG:HB2	2.06	0.56
57:DA:2020:A:H5'	48:D0:8:THR:HG22	1.88	0.56
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.21	0.56
57:DA:1343:G:H2'	57:DA:1344:U:H5	1.70	0.56
57:DA:140:C:H5'	57:DA:141:G:H21	1.70	0.56
57:DA:1272:A:C5	57:DA:1618:A:H1'	2.40	0.56
57:DA:1815:A:C2	57:DA:1817:G:O6	2.59	0.56
57:DA:1971:U:O2'	57:DA:1972:G:OP1	2.22	0.56
57:DA:279:A:N6	57:DA:361:G:O2'	2.39	0.56
57:DA:2800:A:C2'	57:DA:2801:G:H4'	2.36	0.56
57:DA:852:U:H2'	57:DA:853:C:H6	1.71	0.56
57:DA:947:A:O2'	57:DA:948:C:O4'	2.24	0.56
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.71	0.56
28:DG:84:LYS:O	28:DG:85:LYS:HB3	2.06	0.56
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.58	0.56
31:DJ:86:GLN:O	31:DJ:87:ALA:HB2	2.06	0.56
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.53	0.56
36:DO:108:ASP:C	36:DO:110:ALA:H	2.09	0.56
36:DO:70:ALA:O	36:DO:74:VAL:HG23	2.06	0.56
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.06	0.56
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.04	0.56
46:DY:25:GLN:HB2	46:DY:46:VAL:HG11	1.87	0.56
1:AA:596:A:N6	1:AA:645:G:N1	2.54	0.55
4:AD:196:GLU:C	4:AD:198:LEU:H	2.08	0.55
7:AG:92:PRO:O	7:AG:93:VAL:HG13	2.06	0.55
11:AK:109:ILE:HB	21:AU:5:VAL:CG2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:10:ASP:OD1	13:AM:44:ILE:HD13	2.06	0.55
15:AO:16:ARG:O	15:AO:17:ASP:HB3	2.05	0.55
22:BA:1684:G:H2'	22:BA:1685:C:C6	2.41	0.55
22:BA:194:G:C8	63:BA:3759:HOH:O	2.59	0.55
22:BA:396:G:H1'	45:BX:28:PHE:HB3	1.86	0.55
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.36	0.55
27:BF:56:LEU:HA	27:BF:59:ILE:HD12	1.87	0.55
27:BF:38:GLY:HA2	27:BF:85:GLY:HA3	1.87	0.55
37:BP:80:VAL:O	37:BP:81:ASP:HB3	2.06	0.55
38:BQ:63:ARG:NH2	38:BQ:95:ALA:C	2.60	0.55
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.06	0.55
53:CA:183:C:HO2'	53:CA:184:G:C5'	2.19	0.55
53:CA:330:C:O2'	53:CA:331:G:O5'	2.24	0.55
53:CA:861:G:C5	53:CA:862:C:C5	2.94	0.55
3:CC:84:GLU:C	3:CC:86:LEU:H	2.08	0.55
4:CD:81:LEU:O	4:CD:83:GLY:N	2.39	0.55
9:CI:51:LEU:C	9:CI:53:LEU:H	2.09	0.55
12:CL:33:CYS:HA	12:CL:54:VAL:HA	1.88	0.55
57:DA:1416:G:C6	57:DA:1417:C:N4	2.74	0.55
57:DA:1611:C:O2'	57:DA:1612:C:H6	1.88	0.55
57:DA:1716:U:C4	57:DA:1745:A:N6	2.74	0.55
57:DA:204:A:OP1	57:DA:206:U:H1'	2.06	0.55
57:DA:246:C:C2'	57:DA:247:G:H5'	2.35	0.55
57:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.05	0.55
57:DA:674:G:O3'	26:DE:60:TRP:CH2	2.59	0.55
57:DA:729:G:C2'	57:DA:729:G:N3	2.68	0.55
57:DA:826:U:O2'	33:DL:53:GLY:HA3	2.05	0.55
57:DA:92:U:O2'	57:DA:93:G:H5'	2.07	0.55
57:DA:2060:A:C2'	26:DE:63:LYS:HZ2	2.08	0.55
59:DF:31:GLU:C	59:DF:95:MET:HE1	2.27	0.55
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.88	0.55
32:DK:17:ARG:HG2	32:DK:18:ARG:H	1.70	0.55
34:DM:72:PRO:HA	34:DM:92:TRP:CE3	2.41	0.55
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.89	0.55
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.36	0.55
1:AA:1136:C:H5''	1:AA:1137:C:OP2	2.05	0.55
1:AA:1526:G:P	21:AU:38:GLU:HB2	2.47	0.55
1:AA:903:G:C5	1:AA:904:U:C5	2.94	0.55
1:AA:922:G:H2'	1:AA:923:A:H8	1.71	0.55
2:AB:95:TRP:HH2	2:AB:100:LEU:HB2	1.70	0.55
9:AI:128:LYS:HD2	9:AI:129:ARG:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.18	0.55
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.13	0.55
51:B3:21:PHE:HB2	51:B3:49:VAL:HG13	1.89	0.55
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.36	0.55
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.41	0.55
22:BA:2868:A:H2'	22:BA:2869:G:C8	2.42	0.55
22:BA:545:U:O4'	22:BA:545:U:O2	2.22	0.55
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.59	0.55
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.70	0.55
22:BA:1842:G:O4'	24:BC:242:HIS:CE1	2.59	0.55
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	2.06	0.55
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.05	0.55
53:CA:1167:A:N7	53:CA:1169:A:N6	2.54	0.55
53:CA:263:A:OP1	20:CT:73:ARG:NH1	2.39	0.55
2:CB:147:LEU:H	2:CB:147:LEU:HD12	1.71	0.55
54:CG:32:ASP:HB2	54:CG:34:LYS:HD3	1.88	0.55
8:CH:80:PRO:HA	8:CH:83:ARG:HE	1.71	0.55
9:CI:44:ARG:HH21	9:CI:48:ARG:NH1	2.04	0.55
56:CP:17:TYR:CD1	56:CP:39:PHE:HD2	2.24	0.55
56:CP:71:VAL:O	56:CP:74:LEU:HB2	2.07	0.55
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.87	0.55
57:DA:1053:C:N4	57:DA:1054:A:H62	2.04	0.55
57:DA:1237:A:O2'	57:DA:1238:G:H4'	2.07	0.55
57:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.06	0.55
57:DA:1534:U:H2'	57:DA:1536:C:O2	2.07	0.55
57:DA:187:G:C2	57:DA:210:C:C2	2.94	0.55
57:DA:2023:C:H4'	57:DA:2617:U:O3'	2.07	0.55
57:DA:2876:G:H4'	37:DP:2:ASN:HD21	1.72	0.55
57:DA:729:G:O2'	57:DA:1775:U:H1'	2.06	0.55
57:DA:866:A:O2'	57:DA:867:C:H6	1.88	0.55
58:DB:12:C:H5''	58:DB:15:A:H62	1.70	0.55
25:DD:112:THR:HG22	25:DD:113:SER:N	2.21	0.55
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.06	0.55
57:DA:452:G:OP1	26:DE:53:THR:HG23	2.06	0.55
59:DF:36:ASN:O	59:DF:37:MET:HB3	2.06	0.55
59:DF:57:ALA:HB2	59:DF:64:PRO:HG2	1.88	0.55
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.22	0.55
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.70	0.55
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.06	0.55
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.06	0.55
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.88	0.55
1:AA:868:C:N4	1:AA:869:G:C2	2.73	0.55
2:AB:165:ALA:HB2	2:AB:186:VAL:HG12	1.88	0.55
3:AC:115:VAL:HG11	3:AC:199:VAL:HG21	1.88	0.55
4:AD:71:PHE:CE1	4:AD:199:ILE:HD11	2.41	0.55
8:AH:83:ARG:O	8:AH:84:ILE:HD13	2.06	0.55
10:AJ:48:ARG:NH2	14:AN:100:TRP:CD2	2.74	0.55
14:AN:15:LEU:N	14:AN:18:LYS:HE2	2.22	0.55
22:BA:1653:G:H1	35:BN:11:ASN:ND2	2.04	0.55
22:BA:2347:C:OP1	22:BA:2347:C:H4'	2.06	0.55
22:BA:2503:A:O2'	22:BA:2505:G:OP2	2.24	0.55
22:BA:907:G:C2'	22:BA:908:C:H5'	2.36	0.55
24:BC:77:VAL:O	24:BC:77:VAL:HG22	2.07	0.55
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.88	0.55
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.07	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
22:BA:996:A:C4'	38:BQ:91:ARG:HG2	2.33	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:CA	2.37	0.55
45:BX:7:THR:OG1	45:BX:9:LYS:HD2	2.06	0.55
53:CA:1003:G:N2	53:CA:1005:A:H5''	2.21	0.55
53:CA:909:A:H2	53:CA:1413:A:N3	2.04	0.55
53:CA:570:G:H2'	53:CA:571:U:C6	2.41	0.55
53:CA:65:A:H4'	53:CA:66:A:O5'	2.05	0.55
53:CA:922:G:H2'	53:CA:923:A:C8	2.41	0.55
2:CB:147:LEU:N	2:CB:147:LEU:HD12	2.21	0.55
5:CE:132:PRO:O	5:CE:136:VAL:HG12	2.06	0.55
5:CE:44:ARG:NH2	5:CE:70:MET:HB2	2.20	0.55
10:CJ:6:ILE:HG23	10:CJ:100:ILE:HG23	1.87	0.55
12:CL:2:THR:CB	12:CL:5:GLN:HB2	2.35	0.55
56:CP:46:LYS:HE2	56:CP:47:GLU:N	2.21	0.55
56:CP:5:ARG:O	56:CP:19:VAL:HA	2.06	0.55
49:D1:18:HIS:HD1	49:D1:48:TYR:HH	1.55	0.55
57:DA:1117:C:O5'	57:DA:1117:C:H6	1.89	0.55
57:DA:1555:G:N2	57:DA:1556:C:C2	2.74	0.55
57:DA:2296:U:C4'	57:DA:2297:A:OP1	2.30	0.55
57:DA:303:G:O2'	57:DA:304:U:C6	2.55	0.55
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.41	0.55
35:DN:83:LEU:HD11	35:DN:86:ARG:HH21	1.72	0.55
37:DP:48:ALA:HB3	37:DP:59:THR:CB	2.35	0.55
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.71	0.55
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.07	0.55
1:AA:937:A:N6	1:AA:1345:U:O4	2.39	0.55
1:AA:721:G:H4'	1:AA:722:G:C5'	2.36	0.55
6:AF:47:LEU:HD13	6:AF:51:ILE:HG22	1.88	0.55
6:AF:6:ILE:HG12	6:AF:89:VAL:CG2	2.22	0.55
10:AJ:7:ARG:O	10:AJ:100:ILE:HA	2.05	0.55
21:AU:19:LYS:HE2	21:AU:19:LYS:N	2.21	0.55
49:B1:16:THR:HB	49:B1:41:VAL:HG21	1.88	0.55
22:BA:1059:G:C6	22:BA:1060:U:N3	2.74	0.55
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.06	0.55
22:BA:2805:C:C4	22:BA:2806:C:C4	2.94	0.55
25:BD:121:THR:O	25:BD:122:VAL:HB	2.05	0.55
27:BF:129:MET:SD	27:BF:153:ILE:HD11	2.47	0.55
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.21	0.55
31:BJ:65:THR:CG2	31:BJ:66:GLY:N	2.69	0.55
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.12	0.55
53:CA:1215:G:HO2'	53:CA:1216:A:H8	1.53	0.55
53:CA:162:A:H2'	53:CA:163:C:O4'	2.05	0.55
53:CA:254:G:H5''	17:CQ:70:LYS:HD3	1.86	0.55
53:CA:309:A:H1'	53:CA:608:A:C2	2.41	0.55
53:CA:643:C:O2'	53:CA:644:U:C5'	2.54	0.55
53:CA:678:U:H1'	53:CA:777:A:O3'	2.05	0.55
2:CB:137:THR:O	2:CB:140:LEU:HB3	2.06	0.55
9:CI:49:GLN:N	9:CI:50:PRO:CD	2.70	0.55
10:CJ:57:VAL:HG22	10:CJ:58:ASN:N	2.16	0.55
14:CN:20:PHE:HE1	14:CN:54:SER:HB2	1.71	0.55
57:DA:2285:C:C5	49:D1:5:ARG:NH2	2.72	0.55
57:DA:1125:G:C6	57:DA:1126:A:N6	2.74	0.55
57:DA:1527:G:H1'	57:DA:1546:G:N2	2.20	0.55
57:DA:1714:U:H3'	57:DA:1715:G:H5'	1.88	0.55
57:DA:2092:U:HO2'	57:DA:2093:G:H8	1.05	0.55
57:DA:2297:A:N3	57:DA:2298:A:C8	2.74	0.55
57:DA:2677:G:H2'	57:DA:2678:C:H6	1.71	0.55
57:DA:296:U:C2	57:DA:297:G:C8	2.94	0.55
57:DA:357:C:H2'	57:DA:358:U:H6	1.72	0.55
57:DA:467:G:H4'	57:DA:796:C:O2'	2.06	0.55
57:DA:70:G:OP2	57:DA:70:G:H8	1.89	0.55
57:DA:2591:C:P	24:DC:237:ARG:HD2	2.46	0.55
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.99	0.55
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.45	0.55
57:DA:64:A:P	41:DT:77:ARG:HG2	2.45	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1319:A:C8	1:AA:1323:G:C6	2.94	0.55
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.41	0.55
1:AA:270:A:H2'	1:AA:271:C:H6	1.66	0.55
1:AA:961:U:H6	1:AA:961:U:O5'	1.90	0.55
2:AB:71:THR:HG22	2:AB:72:LYS:N	2.21	0.55
3:AC:96:VAL:HB	3:AC:97:PRO:HD2	1.88	0.55
6:AF:77:THR:O	6:AF:81:ASN:HB2	2.06	0.55
10:AJ:21:ALA:HA	10:AJ:24:GLU:HG3	1.88	0.55
15:AO:80:LEU:HD12	15:AO:80:LEU:C	2.27	0.55
22:BA:1414:C:C5	22:BA:1415:U:H5	2.25	0.55
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.56	0.55
22:BA:181:A:H1'	22:BA:435:C:H5'	1.87	0.55
23:BB:73:A:C4	23:BB:104:A:C2	2.95	0.55
33:BL:65:GLY:O	33:BL:66:PHE:CB	2.53	0.55
33:BL:91:ASP:H	33:BL:94:THR:CG2	2.19	0.55
37:BP:4:ILE:O	37:BP:6:GLN:N	2.40	0.55
44:BW:14:ASP:OD2	44:BW:16:GLU:OE1	2.25	0.55
45:BX:63:ILE:O	45:BX:67:LEU:HG	2.06	0.55
53:CA:1181:G:H2'	53:CA:1182:G:N7	2.21	0.55
53:CA:1278:G:O2'	53:CA:1279:G:C2	2.57	0.55
53:CA:502:A:H2'	53:CA:503:C:O4'	2.07	0.55
53:CA:562:U:H1'	12:CL:11:ARG:HD2	1.87	0.55
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.32	0.55
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.87	0.55
57:DA:2286:G:O6	49:D1:22:THR:HG21	2.06	0.55
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.06	0.55
57:DA:1079:C:N3	57:DA:1088:A:H2	2.03	0.55
57:DA:1312:U:C2	57:DA:1603:A:C6	2.94	0.55
57:DA:1491:G:C2	57:DA:1492:G:N7	2.75	0.55
57:DA:1491:G:O6	57:DA:1500:G:C2	2.59	0.55
57:DA:1904:G:H1'	57:DA:1927:A:N1	2.21	0.55
57:DA:2093:G:O6	57:DA:2225:A:H2'	2.05	0.55
57:DA:2226:C:H2'	57:DA:2227:A:C8	2.42	0.55
57:DA:2315:G:C2	57:DA:2316:G:C4	2.95	0.55
57:DA:2800:A:H2'	57:DA:2801:G:O4'	2.06	0.55
57:DA:2889:C:C4	57:DA:2890:G:C6	2.94	0.55
57:DA:447:A:H5'	57:DA:449:A:C5	2.42	0.55
57:DA:239:C:HO2'	57:DA:621:A:H2	1.55	0.55
57:DA:587:C:H1'	57:DA:671:C:H5'	1.89	0.55
15:CO:63:ARG:HH12	57:DA:715:A:P	2.29	0.55
57:DA:867:C:O2'	57:DA:868:U:C5'	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.06	0.55
26:DE:119:ILE:HG13	26:DE:119:ILE:O	2.06	0.55
59:DF:52:ALA:HA	59:DF:55:ASP:HB2	1.88	0.55
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.05	0.55
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.26	0.55
35:DN:1:MET:O	35:DN:2:ARG:CB	2.55	0.55
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.07	0.55
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.21	0.55
1:AA:1533:C:O5'	1:AA:1533:C:H6	1.89	0.55
1:AA:328:C:O2	1:AA:328:C:H2'	2.06	0.55
1:AA:428:G:C1'	1:AA:430:A:C8	2.89	0.55
1:AA:924:C:O2'	1:AA:925:G:H5'	2.06	0.55
4:AD:196:GLU:HA	4:AD:199:ILE:CG2	2.37	0.55
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	2.05	0.55
12:AL:74:GLN:O	12:AL:75:GLU:C	2.45	0.55
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.89	0.55
22:BA:1872:A:H2'	22:BA:1873:G:O4'	2.07	0.55
22:BA:303:G:H2'	22:BA:304:U:C6	2.41	0.55
25:BD:143:PRO:HD2	25:BD:144:GLY:H	1.71	0.55
34:BM:80:VAL:HG22	34:BM:81:ARG:O	2.06	0.55
39:BR:45:GLU:HA	39:BR:45:GLU:OE2	2.05	0.55
43:BV:5:ASN:ND2	43:BV:5:ASN:H	2.04	0.55
45:BX:70:LEU:HB3	45:BX:75:GLU:HB2	1.89	0.55
53:CA:1091:U:O2	53:CA:1093:A:H8	1.89	0.55
53:CA:1298:U:H4'	53:CA:1299:A:O5'	2.07	0.55
53:CA:179:A:H2'	53:CA:180:U:C6	2.41	0.55
53:CA:604:G:C6	53:CA:605:U:N3	2.75	0.55
3:CC:113:LYS:HG3	3:CC:184:ASN:ND2	2.22	0.55
5:CE:79:THR:HG23	5:CE:81:GLN:H	1.70	0.55
54:CG:88:VAL:HG22	54:CG:89:GLU:N	2.18	0.55
17:CQ:45:VAL:HG11	17:CQ:60:ILE:CG2	2.36	0.55
21:CU:53:LYS:HB2	21:CU:53:LYS:NZ	2.21	0.55
57:DA:1114:C:O2'	57:DA:1115:G:O4'	2.24	0.55
57:DA:1746:A:H2'	57:DA:1747:U:C6	2.42	0.55
57:DA:1808:A:C3'	57:DA:1809:A:H8	2.20	0.55
57:DA:202:U:H3'	57:DA:203:A:C8	2.41	0.55
57:DA:606:U:O2'	57:DA:607:U:H4'	2.07	0.55
57:DA:927:A:C6	57:DA:928:A:C6	2.95	0.55
58:DB:45:A:OP1	59:DF:91:ARG:HD2	2.07	0.55
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.21	0.55
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:90:GLN:OE1	26:DE:90:GLN:HA	2.06	0.55
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.87	0.55
37:DP:95:LYS:HE3	37:DP:95:LYS:HA	1.88	0.55
57:DA:1155:A:H5''	38:DQ:54:ARG:NE	2.22	0.55
47:DZ:40:THR:N	47:DZ:43:ILE:HD11	2.20	0.55
1:AA:1123:U:O3'	10:AJ:38:GLY:HA3	2.06	0.55
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.06	0.55
1:AA:1361:G:C2'	1:AA:1362:A:H5'	2.34	0.55
1:AA:1442:G:H2'	1:AA:1443:C:C6	2.41	0.55
1:AA:68:G:H5'	1:AA:171:A:O2'	2.07	0.55
1:AA:74:A:C6	1:AA:97:G:O6	2.60	0.55
5:AE:120:HIS:O	5:AE:121:ASN:CB	2.53	0.55
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.21	0.55
7:AG:68:VAL:HG12	7:AG:102:TRP:HE3	1.72	0.55
14:AN:63:CYS:HB2	14:AN:79:SER:OG	2.06	0.55
49:B1:7:LYS:HG3	49:B1:23:THR:HG22	1.89	0.55
22:BA:2421:G:N7	51:B3:30:HIS:CD2	2.74	0.55
22:BA:1733:G:C2	22:BA:1734:G:C5	2.95	0.55
22:BA:1962:C:H4'	22:BA:1963:U:OP1	2.06	0.55
22:BA:2325:G:C6	22:BA:2326:C:N4	2.75	0.55
22:BA:2366:A:C2	22:BA:2367:G:H1'	2.41	0.55
22:BA:2492:U:HO2'	22:BA:2493:U:H5'	1.70	0.55
22:BA:572:A:OP1	22:BA:573:U:H5	1.89	0.55
22:BA:627:A:C6	22:BA:637:A:C8	2.95	0.55
22:BA:996:A:H4'	38:BQ:91:ARG:CG	2.32	0.55
25:BD:104:VAL:HA	25:BD:106:LYS:HZ3	1.70	0.55
27:BF:134:GLN:O	27:BF:136:ILE:N	2.34	0.55
27:BF:60:SER:O	27:BF:61:GLY:C	2.45	0.55
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.55	0.55
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.21	0.55
53:CA:1087:G:H2'	53:CA:1088:G:H8	1.70	0.55
53:CA:1098:C:H2'	53:CA:1099:G:O4'	2.06	0.55
53:CA:1239:A:O2'	53:CA:1241:G:C5	2.58	0.55
53:CA:1316:G:N2	53:CA:1318:A:H3'	2.21	0.55
53:CA:157:U:C2'	53:CA:158:G:H5'	2.37	0.55
53:CA:80:A:H3'	53:CA:81:A:H4'	1.88	0.55
9:CI:5:TYR:HD2	9:CI:5:TYR:N	2.04	0.55
57:DA:1053:C:N4	57:DA:1054:A:N6	2.55	0.55
57:DA:1062:G:H8	57:DA:1070:A:OP2	1.90	0.55
57:DA:55:G:N2	57:DA:116:C:C2	2.75	0.55
57:DA:1335:C:OP1	41:DT:68:LYS:HD2	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2136:G:C2'	57:DA:2137:U:C6	2.89	0.55
57:DA:2269:G:H2'	57:DA:2270:A:C8	2.38	0.55
57:DA:2285:C:H2'	57:DA:2286:G:H5''	1.89	0.55
57:DA:477:A:O2'	57:DA:478:A:O4'	2.24	0.55
57:DA:492:A:O2'	57:DA:493:G:C5'	2.54	0.55
24:DC:66:PHE:HB3	24:DC:150:GLY:O	2.06	0.55
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.87	0.55
29:DH:38:PRO:O	29:DH:40:THR:N	2.40	0.55
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	1.89	0.55
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.07	0.55
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.33	0.55
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.88	0.55
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	2.06	0.55
43:DV:30:ILE:HD12	43:DV:38:LEU:HD23	1.89	0.55
44:DW:33:GLY:O	44:DW:34:SER:CB	2.53	0.55
57:DA:75:G:H4'	46:DY:48:ARG:HH21	1.72	0.55
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.42	0.55
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.42	0.55
1:AA:141:G:N2	1:AA:142:G:H1'	2.21	0.55
1:AA:269:C:N4	1:AA:270:A:N6	2.55	0.55
1:AA:600:A:H2'	1:AA:601:G:H8	1.71	0.55
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.54	0.55
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.54	0.55
22:BA:1303:G:O2'	22:BA:1304:A:H5'	2.07	0.55
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.22	0.55
22:BA:1737:G:N1	22:BA:1738:G:N2	2.55	0.55
22:BA:1967:C:H2'	22:BA:1968:G:C8	2.42	0.55
22:BA:45:G:H5''	22:BA:46:G:H5'	1.88	0.55
24:BC:169:ALA:O	24:BC:185:ALA:HB3	2.06	0.55
27:BF:45:ASP:HB3	27:BF:48:LEU:HB2	1.89	0.55
29:BH:31:VAL:O	29:BH:32:PRO:C	2.45	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
32:BK:107:LEU:O	32:BK:109:SER:N	2.39	0.55
36:BO:34:HIS:HD2	36:BO:53:THR:OG1	1.90	0.55
44:BW:24:ARG:HD2	44:BW:24:ARG:C	2.25	0.55
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.07	0.55
53:CA:517:G:H2'	53:CA:531:U:C5	2.41	0.55
3:CC:24:ASN:O	3:CC:28:PHE:HB2	2.06	0.55
53:CA:1191:A:OP1	3:CC:2:GLN:NE2	2.40	0.55
5:CE:157:GLY:HA3	8:CH:63:LYS:CE	2.37	0.55
53:CA:600:A:OP1	8:CH:88:LYS:HG2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1024:G:H21	57:DA:1144:A:C4'	2.20	0.55
57:DA:1038:G:N1	57:DA:1039:A:N7	2.55	0.55
57:DA:1156:A:P	38:DQ:54:ARG:HE	2.29	0.55
57:DA:1205:A:N7	26:DE:165:HIS:CG	2.75	0.55
57:DA:1310:G:N2	57:DA:1605:C:C2	2.75	0.55
57:DA:123:G:O3'	57:DA:1376:C:H4'	2.06	0.55
57:DA:1565:C:HO2'	57:DA:1566:A:P	2.29	0.55
57:DA:170:U:H2'	57:DA:171:U:H6	1.72	0.55
57:DA:2066:C:H5''	63:DA:3530:HOH:O	2.06	0.55
57:DA:2822:G:H2'	57:DA:2823:A:H5''	1.88	0.55
57:DA:2834:G:H1'	57:DA:2879:A:N6	2.21	0.55
58:DB:69:G:H2'	58:DB:70:C:O4'	2.07	0.55
25:DD:122:VAL:HG22	25:DD:127:PHE:O	2.07	0.55
59:DF:147:ARG:HD3	59:DF:149:ARG:HH22	1.72	0.55
35:DN:37:THR:HB	35:DN:40:LYS:CB	2.37	0.55
40:DS:80:PRO:HG2	40:DS:100:THR:HG21	1.89	0.55
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.87	0.55
1:AA:1384:C:H2'	1:AA:1385:G:H8	1.72	0.55
1:AA:923:A:O4'	1:AA:1398:A:C2	2.60	0.55
1:AA:21:G:H2'	1:AA:22:G:H8	1.71	0.55
1:AA:439:U:C6	4:AD:119:HIS:HD2	2.25	0.55
1:AA:550:G:H2'	1:AA:551:U:H6	1.72	0.55
5:AE:17:VAL:HG22	5:AE:18:ASN:N	2.22	0.55
7:AG:52:ARG:HH12	7:AG:121:ASN:ND2	2.04	0.55
22:BA:1063:G:H2'	22:BA:1064:C:C6	2.41	0.55
22:BA:1104:C:H2'	22:BA:1105:U:H6	1.72	0.55
22:BA:1313:U:O3'	22:BA:1332:G:H5''	2.07	0.55
22:BA:1509:A:N3	22:BA:1510:G:C8	2.75	0.55
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.41	0.55
22:BA:2151:U:N3	22:BA:2152:G:C5	2.75	0.55
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	2.07	0.55
22:BA:2724:U:P	25:BD:116:LYS:HZ2	2.30	0.55
22:BA:990:A:C5'	22:BA:990:A:H8	2.20	0.55
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.88	0.55
28:BG:74:MET:O	28:BG:78:VAL:HG22	2.07	0.55
32:BK:63:VAL:HG12	32:BK:64:ARG:HG3	1.89	0.55
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.70	0.55
35:BN:9:GLN:O	35:BN:17:ARG:HD3	2.06	0.55
38:BQ:69:ARG:CG	38:BQ:69:ARG:HH21	2.19	0.55
44:BW:19:ARG:NH2	44:BW:22:VAL:CG2	2.67	0.55
53:CA:373:A:H5'	53:CA:373:A:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:429:U:O2	53:CA:430:A:H5''	2.07	0.55
53:CA:604:G:H2'	53:CA:605:U:O4'	2.07	0.55
53:CA:644:U:C2	53:CA:645:G:C8	2.95	0.55
53:CA:979:C:H2'	53:CA:980:C:O4'	2.07	0.55
4:CD:176:LYS:HE2	4:CD:178:GLU:OE1	2.07	0.55
54:CG:8:GLN:CD	54:CG:9:ARG:H	2.09	0.55
8:CH:75:GLN:O	8:CH:126:CYS:CB	2.55	0.55
53:CA:1343:G:H1'	9:CI:122:ARG:NH1	2.22	0.55
9:CI:90:ASP:HB3	9:CI:93:LEU:HD23	1.88	0.55
19:CS:54:ARG:CG	19:CS:55:GLN:H	2.19	0.55
20:CT:62:ALA:HA	20:CT:67:HIS:CE1	2.41	0.55
21:CU:35:GLU:HG3	21:CU:36:PHE:N	2.21	0.55
57:DA:1062:G:C4	57:DA:1063:G:C8	2.94	0.55
57:DA:1744:A:H3'	57:DA:1745:A:C8	2.41	0.55
57:DA:1954:G:O2'	57:DA:1955:U:P	2.64	0.55
57:DA:2092:U:H1'	57:DA:2093:G:N7	2.11	0.55
57:DA:230:G:O2'	57:DA:231:A:H8	1.90	0.55
57:DA:2577:A:H2	48:D0:1:ALA:N	2.05	0.55
57:DA:2543:G:C6	57:DA:2765:A:C5	2.95	0.55
57:DA:2834:G:C1'	57:DA:2879:A:H61	2.20	0.55
26:DE:153:LEU:HB2	26:DE:171:ASP:HB3	1.88	0.55
57:DA:674:G:O3'	26:DE:60:TRP:HH2	1.89	0.55
58:DB:54:G:H21	59:DF:25:MET:HE2	1.70	0.55
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.22	0.55
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.89	0.55
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.17	0.55
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.89	0.55
46:DY:60:LYS:HG2	46:DY:60:LYS:O	2.07	0.55
1:AA:1500:A:OP2	63:AA:1872:HOH:O	2.18	0.55
1:AA:172:A:C5	1:AA:174:A:N7	2.75	0.55
1:AA:263:A:H2'	1:AA:264:C:C5	2.41	0.55
1:AA:718:A:C8	11:AK:117:HIS:HB3	2.42	0.55
13:AM:13:HIS:HB3	13:AM:41:ASP:HA	1.88	0.55
20:AT:33:LYS:HE2	20:AT:33:LYS:N	2.22	0.55
51:B3:41:ARG:HG3	51:B3:44:ARG:NH2	2.22	0.55
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	2.07	0.55
22:BA:2298:A:H61	22:BA:2318:G:H1'	1.71	0.55
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.25	0.55
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.42	0.55
22:BA:77:G:N2	22:BA:110:G:H1'	2.22	0.55
25:BD:11:MET:HA	25:BD:24:VAL:O	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:40:HIS:CD2	31:BJ:41:LYS:HG2	2.42	0.55
39:BR:2:TYR:CE1	39:BR:42:ALA:HB3	2.42	0.55
41:BT:40:LYS:HG2	41:BT:58:VAL:HG22	1.88	0.55
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.22	0.55
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.60	0.55
53:CA:202:G:O2'	53:CA:468:A:H8	1.89	0.55
53:CA:327:A:C2	53:CA:329:A:N3	2.75	0.55
2:CB:89:PHE:CE2	2:CB:152:ASP:HB2	2.41	0.55
2:CB:221:ARG:HA	2:CB:224:ARG:CZ	2.37	0.55
4:CD:106:PHE:CD1	4:CD:106:PHE:N	2.66	0.55
53:CA:560:A:C6	5:CE:127:TYR:CE2	2.94	0.55
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.88	0.55
12:CL:109:ARG:CB	12:CL:118:VAL:HG21	2.36	0.55
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.88	0.55
57:DA:1342:A:C5	57:DA:1345:C:N4	2.75	0.55
57:DA:1432:G:O2'	57:DA:1433:A:H5'	2.06	0.55
57:DA:204:A:C4	57:DA:206:U:O4	2.60	0.55
57:DA:2296:U:C5	36:DO:9:ARG:NH2	2.74	0.55
57:DA:2396:G:C2	57:DA:2421:G:C2	2.95	0.55
57:DA:242:G:H8	51:D3:3:ILE:O	1.90	0.55
57:DA:2557:G:H2'	57:DA:2558:C:C6	2.42	0.55
57:DA:273:G:O2'	57:DA:274:C:O4'	2.25	0.55
57:DA:2876:G:C2	57:DA:2877:G:H1'	2.42	0.55
57:DA:422:A:H2'	57:DA:423:A:H8	1.71	0.55
57:DA:60:G:O2'	57:DA:61:C:OP1	2.24	0.55
57:DA:648:G:H2'	57:DA:649:G:H8	1.73	0.55
57:DA:742:A:H2'	57:DA:743:A:C8	2.41	0.55
57:DA:901:C:H2'	57:DA:902:C:C6	2.41	0.55
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.07	0.55
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	2.23	0.55
37:DP:9:GLN:HB3	37:DP:12:MET:CE	2.36	0.55
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.41	0.54
3:AC:153:SER:HB2	3:AC:164:THR:HG22	1.87	0.54
4:AD:117:VAL:HA	4:AD:122:ILE:HD11	1.88	0.54
4:AD:60:VAL:O	4:AD:63:ILE:HG22	2.06	0.54
5:AE:81:GLN:HG2	5:AE:149:PRO:CG	2.36	0.54
11:AK:124:LYS:NZ	21:AU:33:ARG:HH21	2.05	0.54
22:BA:1005:C:O2'	31:BJ:30:THR:HG21	2.07	0.54
22:BA:1184:U:H2'	22:BA:1185:G:O5'	2.06	0.54
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.36	0.54
22:BA:1912:A:C2	22:BA:1919:A:C6	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:225:C:H2'	22:BA:226:A:O4'	2.07	0.54
22:BA:2879:A:H4'	22:BA:2880:C:OP1	2.07	0.54
22:BA:324:A:C2	22:BA:325:G:H1'	2.42	0.54
22:BA:545:U:H2'	22:BA:546:U:C4'	2.33	0.54
22:BA:580:U:H2'	22:BA:581:C:C6	2.42	0.54
23:BB:28:C:C2'	23:BB:29:A:H5'	2.37	0.54
24:BC:56:GLY:O	24:BC:57:HIS:O	2.25	0.54
26:BE:151:GLY:N	26:BE:192:ALA:HB2	2.22	0.54
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.54
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.39	0.54
32:BK:76:VAL:HB	37:BP:72:VAL:HG21	1.87	0.54
53:CA:220:G:C2	53:CA:221:C:C6	2.95	0.54
2:CB:9:LEU:HG	2:CB:10:LYS:H	1.72	0.54
3:CC:126:ARG:HE	3:CC:126:ARG:CA	2.20	0.54
3:CC:148:ILE:HD13	3:CC:201:ILE:HG12	1.87	0.54
4:CD:106:PHE:HB3	4:CD:154:VAL:CG2	2.37	0.54
54:CG:59:GLU:HB2	54:CG:62:GLU:HB2	1.88	0.54
9:CI:125:GLN:HE21	9:CI:125:GLN:H	1.54	0.54
53:CA:1126:U:O4	10:CJ:73:LEU:HD11	2.06	0.54
17:CQ:13:SER:O	17:CQ:20:ILE:HB	2.07	0.54
57:DA:1263:U:HO2'	48:D0:7:PRO:HD2	1.72	0.54
57:DA:1079:C:N4	57:DA:1088:A:N3	2.55	0.54
57:DA:1381:G:H2'	57:DA:1382:G:H5''	1.89	0.54
57:DA:1993:U:O2'	57:DA:1994:C:H5'	2.07	0.54
57:DA:2308:G:O6	57:DA:2311:A:N7	2.40	0.54
57:DA:2636:C:H2'	57:DA:2637:U:H6	1.71	0.54
57:DA:2823:A:C5	57:DA:2824:C:C5	2.94	0.54
57:DA:637:A:N6	57:DA:652:U:H4'	2.22	0.54
57:DA:865:C:H5''	57:DA:866:A:OP1	2.07	0.54
58:DB:12:C:H5''	58:DB:15:A:N6	2.22	0.54
57:DA:784:G:C2	24:DC:227:VAL:HG21	2.42	0.54
59:DF:16:MET:HA	59:DF:21:TYR:HB2	1.88	0.54
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.46	0.54
35:DN:103:ARG:HG3	35:DN:104:ALA:N	2.22	0.54
38:DQ:50:ARG:N	38:DQ:50:ARG:HD2	2.22	0.54
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.07	0.54
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.89	0.54
1:AA:1250:A:N3	1:AA:1370:G:O2'	2.37	0.54
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.42	0.54
1:AA:702:A:C4	22:BA:1847:A:H2	2.25	0.54
3:AC:118:SER:O	3:AC:122:GLN:HG2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:166:TRP:N	3:AC:166:TRP:HE3	1.94	0.54
5:AE:132:PRO:HA	5:AE:135:VAL:HG13	1.88	0.54
9:AI:83:THR:HG21	9:AI:102:PHE:CB	2.35	0.54
20:AT:66:ILE:CD1	20:AT:70:LYS:HE3	2.35	0.54
22:BA:1063:G:H2'	22:BA:1064:C:H6	1.72	0.54
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.78	0.54
22:BA:1199:U:H2'	22:BA:1200:C:H6	1.71	0.54
22:BA:1322:A:H2'	22:BA:1323:C:H5'	1.89	0.54
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.42	0.54
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.56	0.54
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.91	0.54
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.88	0.54
25:BD:57:ALA:O	25:BD:60:VAL:HG12	2.08	0.54
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.06	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
34:BM:64:TRP:HZ3	34:BM:106:ASP:HB2	1.72	0.54
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.37	0.54
44:BW:40:ARG:HG2	44:BW:52:CYS:SG	2.48	0.54
46:BY:9:LYS:HB3	46:BY:12:GLU:HB2	1.88	0.54
53:CA:1050:G:O2'	53:CA:1051:C:C6	2.59	0.54
53:CA:1068:G:O2'	53:CA:1069:C:H5'	2.07	0.54
53:CA:1250:A:N3	53:CA:1287:A:N6	2.55	0.54
53:CA:1520:C:H2'	53:CA:1521:C:C6	2.42	0.54
53:CA:632:U:H3'	53:CA:633:G:H5'	1.88	0.54
53:CA:642:A:O2'	53:CA:643:C:H6	1.89	0.54
53:CA:818:G:C3'	53:CA:819:A:C5'	2.85	0.54
2:CB:128:LEU:HD22	2:CB:132:GLU:HG2	1.89	0.54
4:CD:19:PHE:O	4:CD:22:SER:HB2	2.07	0.54
54:CG:91:ARG:HG2	54:CG:92:PRO:CD	2.30	0.54
56:CP:5:ARG:HA	56:CP:71:VAL:HG11	1.89	0.54
57:DA:1038:G:C2	57:DA:1039:A:C5	2.95	0.54
57:DA:1079:C:H2'	57:DA:1080:A:C8	2.42	0.54
57:DA:1773:A:H2'	57:DA:1774:C:O4'	2.08	0.54
15:CO:63:ARG:NH2	57:DA:715:A:H5'	2.20	0.54
57:DA:834:G:H2'	57:DA:835:C:O4'	2.07	0.54
57:DA:860:U:HO2'	57:DA:861:A:C5'	2.20	0.54
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.90	0.54
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.07	0.54
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.07	0.54
32:DK:19:VAL:HG12	32:DK:41:ILE:HG12	1.88	0.54
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	1.93	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.42	0.54
57:DA:1248:G:H2'	38:DQ:1:ALA:O	2.08	0.54
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.21	0.54
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.07	0.54
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.41	0.54
1:AA:340:U:H2'	1:AA:341:C:H6	1.73	0.54
1:AA:465:A:H2'	1:AA:466:A:O4'	2.07	0.54
1:AA:577:G:O4'	1:AA:816:A:H2'	2.06	0.54
2:AB:67:LEU:HB3	2:AB:160:LEU:CD1	2.37	0.54
2:AB:168:GLU:HB3	2:AB:171:ALA:HB3	1.90	0.54
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.07	0.54
5:AE:67:ARG:HB2	5:AE:68:ARG:HE	1.72	0.54
6:AF:49:TYR:HE2	6:AF:51:ILE:HB	1.72	0.54
14:AN:12:ARG:HG2	14:AN:53:ASP:HB3	1.88	0.54
15:AO:78:THR:O	15:AO:82:GLU:OE1	2.24	0.54
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.21	0.54
22:BA:1403:A:C2	22:BA:1404:C:C2	2.95	0.54
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.06	0.54
22:BA:445:C:H5''	38:BQ:2:ARG:HB2	1.89	0.54
22:BA:531:C:C5	22:BA:2035:G:C2	2.96	0.54
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.20	0.54
30:BI:24:GLY:O	30:BI:27:LEU:HG	2.07	0.54
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.89	0.54
35:BN:23:ASN:HD22	35:BN:23:ASN:N	1.95	0.54
38:BQ:91:ARG:NE	39:BR:11:GLN:HB2	2.22	0.54
42:BU:44:HIS:O	42:BU:45:GLN:C	2.46	0.54
53:CA:350:G:C6	53:CA:351:G:C6	2.95	0.54
53:CA:502:A:H4'	53:CA:550:G:H4'	1.89	0.54
53:CA:920:U:C2	53:CA:921:U:C5	2.95	0.54
53:CA:9:G:O2'	53:CA:10:A:H5'	2.08	0.54
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.42	0.54
4:CD:39:GLN:C	4:CD:41:GLY:H	2.10	0.54
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.06	0.54
12:CL:19:ASN:N	12:CL:19:ASN:ND2	2.56	0.54
17:CQ:12:VAL:HG22	17:CQ:12:VAL:O	2.08	0.54
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.75	0.54
57:DA:118:A:OP1	50:D2:22:MET:SD	2.66	0.54
57:DA:1399:C:H2'	57:DA:1400:U:C6	2.42	0.54
57:DA:1437:C:N4	57:DA:1552:A:H2	2.04	0.54
57:DA:1787:A:H2'	57:DA:1788:C:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1825:U:C4	57:DA:1826:G:N7	2.75	0.54
57:DA:2006:C:H2'	57:DA:2007:U:H6	1.71	0.54
57:DA:2151:U:H2'	57:DA:2152:G:H8	1.71	0.54
57:DA:2849:U:OP2	37:DP:92:ARG:HG3	2.07	0.54
57:DA:612:G:C2	57:DA:617:G:O6	2.60	0.54
57:DA:98:G:O2'	57:DA:103:A:C8	2.61	0.54
58:DB:42:C:H4'	59:DF:63:LYS:HB3	1.88	0.54
34:DM:1:MET:O	34:DM:2:LEU:O	2.25	0.54
35:DN:16:HIS:C	35:DN:18:GLN:H	2.11	0.54
35:DN:96:ARG:NH1	35:DN:116:VAL:HG22	2.21	0.54
37:DP:61:ARG:NH1	37:DP:63:ILE:HD11	2.21	0.54
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.69	0.54
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.72	0.54
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.89	0.54
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.07	0.54
1:AA:1332:A:N3	1:AA:1332:A:H5''	2.23	0.54
1:AA:1348:U:HO2'	1:AA:1349:A:H8	1.53	0.54
1:AA:736:C:H2'	1:AA:737:C:H6	1.69	0.54
1:AA:77:A:H2'	1:AA:78:A:N7	2.22	0.54
7:AG:69:ARG:HG3	7:AG:95:ARG:CG	2.38	0.54
11:AK:24:ALA:HA	11:AK:29:THR:HG23	1.90	0.54
11:AK:15:VAL:HG13	11:AK:78:ILE:CG2	2.37	0.54
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.10	0.54
22:BA:1159:U:H2'	22:BA:1160:G:H5'	1.90	0.54
22:BA:1411:U:C4	22:BA:1412:U:C4	2.95	0.54
22:BA:1512:C:OP2	22:BA:1512:C:H6	1.91	0.54
22:BA:163:C:O2'	22:BA:164:C:O5'	2.22	0.54
22:BA:1754:A:C6	22:BA:1755:A:C6	2.95	0.54
22:BA:1857:G:O2'	22:BA:1858:A:P	2.66	0.54
22:BA:747:U:O2	22:BA:2014:A:H1'	2.08	0.54
22:BA:2225:A:H4'	22:BA:2226:C:H6	1.72	0.54
22:BA:2282:G:H4'	22:BA:2389:G:O2'	2.07	0.54
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.88	0.54
22:BA:358:U:H2'	22:BA:359:G:O4'	2.07	0.54
22:BA:404:A:C8	22:BA:406:G:C6	2.96	0.54
22:BA:50:U:H4'	22:BA:51:G:OP2	2.08	0.54
22:BA:622:G:H2'	22:BA:623:C:C6	2.43	0.54
22:BA:979:A:H2'	22:BA:982:C:N4	2.22	0.54
22:BA:988:A:C2'	22:BA:989:G:O5'	2.56	0.54
23:BB:93:C:H2'	23:BB:94:A:H8	1.73	0.54
24:BC:252:LYS:HZ3	24:BC:252:LYS:HB2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.35	0.54
34:BM:42:THR:OG1	34:BM:45:GLN:HG3	2.07	0.54
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	1.89	0.54
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.22	0.54
38:BQ:43:GLN:HE22	39:BR:77:PHE:HD1	1.55	0.54
43:BV:10:LYS:N	43:BV:10:LYS:HD3	2.16	0.54
46:BY:5:GLU:O	46:BY:8:GLU:HB2	2.06	0.54
53:CA:1052:U:H3'	53:CA:1053:G:H5''	1.89	0.54
53:CA:1081:A:H2'	53:CA:1082:A:O4'	2.06	0.54
53:CA:1504:G:C3'	53:CA:1505:G:H5'	2.37	0.54
2:CB:60:ALA:C	2:CB:62:ARG:H	2.11	0.54
3:CC:34:SER:O	3:CC:38:VAL:HG13	2.08	0.54
4:CD:115:GLN:NE2	4:CD:153:ARG:HH22	2.06	0.54
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.22	0.54
57:DA:1429:G:C2	57:DA:1430:G:C5	2.96	0.54
57:DA:1698:A:H4'	57:DA:1699:G:OP1	2.04	0.54
57:DA:1901:A:OP2	24:DC:252:LYS:HE3	2.07	0.54
57:DA:2188:U:H2'	57:DA:2189:U:C6	2.43	0.54
57:DA:2714:G:O5'	57:DA:2714:G:C8	2.60	0.54
57:DA:2785:C:O3'	25:DD:70:LYS:HD3	2.07	0.54
57:DA:2800:A:H2'	57:DA:2801:G:C4'	2.37	0.54
57:DA:776:G:H1'	57:DA:793:A:N1	2.23	0.54
57:DA:846:U:O2'	57:DA:847:U:H5''	2.08	0.54
59:DF:177:ARG:NH1	59:DF:178:LYS:HB3	2.21	0.54
59:DF:5:ASP:C	59:DF:7:TYR:H	2.11	0.54
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.88	0.54
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.33	0.54
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.73	0.54
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.07	0.54
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.07	0.54
2:AB:49:PHE:HB2	2:AB:53:LEU:HD23	1.90	0.54
6:AF:11:HIS:HD2	6:AF:12:PRO:CD	2.21	0.54
6:AF:38:ARG:HH11	6:AF:38:ARG:HG2	1.72	0.54
7:AG:20:GLU:O	7:AG:24:LYS:HG3	2.08	0.54
9:AI:24:ASN:H	9:AI:61:ASP:HB2	1.73	0.54
14:AN:87:ALA:HB2	14:AN:92:ILE:HD12	1.88	0.54
1:AA:230:G:H5''	16:AP:31:ARG:HH21	1.72	0.54
20:AT:19:HIS:O	20:AT:23:ARG:HG2	2.07	0.54
20:AT:27:MET:HG3	20:AT:28:ARG:N	2.21	0.54
22:BA:1159:U:O2'	22:BA:1160:G:H5'	2.08	0.54
22:BA:1486:U:H2'	22:BA:1487:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2722:G:H4'	35:BN:3:HIS:O	2.07	0.54
22:BA:595:C:H2'	22:BA:596:U:C6	2.42	0.54
22:BA:752:A:N7	22:BA:1781:U:H1'	2.22	0.54
25:BD:106:LYS:N	25:BD:106:LYS:HD2	2.22	0.54
30:BI:60:VAL:HG22	30:BI:66:PHE:HB2	1.90	0.54
31:BJ:88:THR:HG23	31:BJ:91:GLU:H	1.73	0.54
32:BK:3:GLN:O	32:BK:6:THR:HB	2.07	0.54
41:BT:7:LEU:O	41:BT:10:VAL:HG13	2.08	0.54
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.89	0.54
53:CA:1243:C:H2'	53:CA:1244:G:C8	2.43	0.54
53:CA:1480:A:H2'	53:CA:1481:U:O4'	2.07	0.54
53:CA:429:U:C1'	53:CA:430:A:H5''	2.37	0.54
53:CA:914:A:O2'	53:CA:915:A:O4'	2.26	0.54
2:CB:127:LYS:HE2	2:CB:136:ARG:NH2	2.22	0.54
6:CF:67:PRO:O	6:CF:69:GLU:N	2.41	0.54
55:CM:68:LEU:HD22	55:CM:69:ARG:HH11	1.72	0.54
14:CN:96:LYS:HD2	14:CN:96:LYS:H	1.72	0.54
20:CT:54:GLN:N	20:CT:55:PRO:HD2	2.23	0.54
48:D0:28:SER:HB3	48:D0:39:ARG:HE	1.71	0.54
49:D1:24:LYS:HE2	49:D1:52:LYS:NZ	2.22	0.54
57:DA:1010:A:O2'	57:DA:1011:G:C5'	2.55	0.54
57:DA:1157:G:O2'	57:DA:1158:C:H5'	2.07	0.54
57:DA:1205:A:H5''	57:DA:1206:G:N7	2.22	0.54
57:DA:1417:C:O2'	57:DA:1418:G:C5'	2.55	0.54
57:DA:1628:G:H2'	57:DA:1629:U:H6	1.72	0.54
57:DA:1827:U:O4'	57:DA:1970:A:O2'	2.26	0.54
57:DA:1997:C:O2'	57:DA:1998:A:C5'	2.55	0.54
57:DA:2004:G:C5	57:DA:2005:A:C8	2.95	0.54
57:DA:2403:C:H2'	57:DA:2404:U:C6	2.42	0.54
57:DA:2526:G:C5	57:DA:2527:C:C5	2.96	0.54
57:DA:2881:U:H2'	57:DA:2882:A:C8	2.38	0.54
57:DA:826:U:C5	57:DA:828:U:H6	2.26	0.54
57:DA:878:A:H4'	57:DA:898:C:N4	2.20	0.54
24:DC:257:ARG:CZ	24:DC:266:ILE:HD11	2.38	0.54
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.72	0.54
59:DF:113:PHE:O	59:DF:114:ARG:CB	2.55	0.54
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.23	0.54
31:DJ:25:LEU:HB2	31:DJ:62:VAL:CG2	2.38	0.54
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.89	0.54
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.72	0.54
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1158:C:H2'	1:AA:1158:C:O2	2.06	0.54
1:AA:247:G:C6	1:AA:278:G:C2	2.96	0.54
1:AA:32:A:H2'	1:AA:33:A:H8	1.68	0.54
1:AA:613:C:H2'	1:AA:614:C:H6	1.71	0.54
1:AA:914:A:C4	1:AA:915:A:C8	2.96	0.54
4:AD:130:ASN:O	4:AD:131:ILE:C	2.45	0.54
4:AD:151:GLN:O	4:AD:152:SER:C	2.46	0.54
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.21	0.54
5:AE:64:GLU:HG2	5:AE:68:ARG:NH2	2.23	0.54
1:AA:1343:G:O3'	9:AI:123:ARG:HB3	2.08	0.54
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.73	0.54
1:AA:706:A:O2'	11:AK:30:ILE:HD11	2.07	0.54
14:AN:83:VAL:HG12	14:AN:84:ARG:N	2.22	0.54
16:AP:67:ILE:HG21	16:AP:72:ALA:HB2	1.89	0.54
22:BA:2225:A:H4'	22:BA:2226:C:O5'	2.08	0.54
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.30	0.54
22:BA:309:A:N3	22:BA:329:G:O2'	2.40	0.54
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.89	0.54
22:BA:868:U:C4	22:BA:869:G:N7	2.76	0.54
24:BC:106:PRO:CA	24:BC:141:HIS:HE1	2.20	0.54
26:BE:187:VAL:O	26:BE:188:MET:HB3	2.08	0.54
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.22	0.54
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.88	0.54
29:BH:43:ASN:HD22	29:BH:43:ASN:N	2.05	0.54
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.71	0.54
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.30	0.54
53:CA:1139:G:H4'	53:CA:1140:C:C5'	2.38	0.54
53:CA:1144:G:N2	53:CA:1146:A:H62	2.04	0.54
53:CA:264:C:H2'	53:CA:265:G:O4'	2.06	0.54
53:CA:304:U:H2'	53:CA:305:G:C8	2.41	0.54
53:CA:891:U:C5	53:CA:906:A:C2	2.96	0.54
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.89	0.54
4:CD:68:GLU:O	4:CD:69:ARG:C	2.46	0.54
54:CG:129:ASN:OD1	54:CG:134:VAL:HG11	2.08	0.54
8:CH:5:PRO:O	8:CH:8:ASP:HB3	2.07	0.54
12:CL:24:GLU:O	12:CL:25:ALA:HB3	2.08	0.54
14:CN:55:SER:C	14:CN:57:SER:H	2.10	0.54
15:CO:27:GLN:O	15:CO:30:LEU:HB2	2.07	0.54
17:CQ:14:ASP:OD2	17:CQ:52:CYS:HB2	2.07	0.54
19:CS:35:ARG:NH1	19:CS:76:THR:HG22	2.23	0.54
57:DA:1304:A:O2'	57:DA:1305:C:O5'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1312:U:H4'	57:DA:1313:U:O5'	2.07	0.54
57:DA:1342:A:C4	57:DA:1345:C:N4	2.76	0.54
57:DA:1572:A:O5'	57:DA:1572:A:H8	1.90	0.54
57:DA:1915:U:C2'	57:DA:1916:A:H8	2.11	0.54
57:DA:2408:U:H5	63:DA:3596:HOH:O	1.89	0.54
57:DA:284:U:H2'	57:DA:285:G:H8	1.72	0.54
57:DA:364:C:H2'	57:DA:365:U:C6	2.42	0.54
57:DA:224:U:O4	57:DA:420:C:H5'	2.08	0.54
57:DA:95:A:H2'	57:DA:96:C:C5'	2.37	0.54
24:DC:260:LYS:HA	24:DC:263:ASP:OD1	2.08	0.54
57:DA:2620:C:O4'	25:DD:161:MET:HG3	2.07	0.54
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.21	0.54
28:DG:1:SER:C	28:DG:3:VAL:H	2.10	0.54
29:DH:66:ASN:HD22	29:DH:137:GLU:HB3	1.73	0.54
31:DJ:92:MET:HE2	31:DJ:95:ARG:HD2	1.90	0.54
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.08	0.54
34:DM:81:ARG:NH2	34:DM:84:LYS:HE2	2.22	0.54
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.08	0.54
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.07	0.54
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.90	0.54
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.07	0.54
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.68	0.54
1:AA:279:A:H5''	1:AA:281:G:H5'	1.88	0.54
1:AA:430:A:H2'	1:AA:431:A:H8	1.73	0.54
1:AA:204:G:C1'	1:AA:465:A:C2	2.90	0.54
1:AA:516:U:O2'	1:AA:517:G:H5'	2.08	0.54
1:AA:874:G:O2'	1:AA:875:U:H5'	2.07	0.54
3:AC:136:ALA:O	3:AC:140:ALA:HB2	2.07	0.54
1:AA:1343:G:H1'	9:AI:122:ARG:NH1	2.23	0.54
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.37	0.54
22:BA:1269:A:OP2	63:BA:3379:HOH:O	2.19	0.54
22:BA:1385:A:O2'	22:BA:1396:U:O2	2.23	0.54
22:BA:528:A:C2	22:BA:2042:A:H2'	2.42	0.54
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	2.07	0.54
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.06	0.54
22:BA:459:U:H2'	22:BA:460:A:C8	2.42	0.54
22:BA:74:A:H5'	22:BA:75:G:O4'	2.06	0.54
23:BB:89:U:H3'	23:BB:90:C:C5'	2.37	0.54
22:BA:1842:G:O4'	24:BC:242:HIS:HE1	1.90	0.54
24:BC:80:LEU:HA	24:BC:90:ILE:O	2.07	0.54
26:BE:170:ARG:HH21	26:BE:170:ARG:HG2	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:41:GLN:OE1	26:BE:43:THR:HG21	2.08	0.54
23:BB:27:C:OP1	36:BO:34:HIS:HE1	1.91	0.54
39:BR:1:MET:HG3	39:BR:1:MET:O	2.08	0.54
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.88	0.54
53:CA:106:C:O2'	53:CA:107:G:H5'	2.08	0.54
53:CA:1261:A:N7	53:CA:1274:A:H2	2.06	0.54
53:CA:483:C:H2'	53:CA:484:G:C8	2.43	0.54
53:CA:441:A:C2	53:CA:497:G:C6	2.95	0.54
53:CA:644:U:H2'	53:CA:645:G:H8	1.72	0.54
53:CA:577:G:N9	53:CA:816:A:C2	2.76	0.54
5:CE:14:LEU:HD12	5:CE:15:ILE:N	2.23	0.54
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.28	0.54
53:CA:520:A:OP1	12:CL:48:LEU:HG	2.07	0.54
55:CM:81:ASP:HB3	55:CM:82:LEU:HD12	1.90	0.54
20:CT:50:PHE:O	20:CT:53:MET:HG3	2.07	0.54
57:DA:1062:G:C8	57:DA:1088:A:C8	2.96	0.54
57:DA:1064:C:OP1	30:DI:88:GLY:HA3	2.07	0.54
57:DA:1327:A:C2	57:DA:1328:A:H1'	2.42	0.54
57:DA:1327:A:N3	57:DA:1328:A:H1'	2.23	0.54
57:DA:156:A:H3'	57:DA:156:A:OP2	2.07	0.54
57:DA:1721:G:H1'	57:DA:1739:A:N6	2.22	0.54
57:DA:1982:U:H6	57:DA:1982:U:O5'	1.90	0.54
57:DA:2142:A:C3'	57:DA:2143:C:H4'	2.37	0.54
57:DA:2337:G:N3	57:DA:2337:G:H2'	2.23	0.54
57:DA:2682:A:H61	57:DA:2728:U:H1'	1.72	0.54
57:DA:2714:G:H2'	57:DA:2715:C:H6	1.71	0.54
57:DA:381:G:H5''	45:DX:15:ASN:HD22	1.73	0.54
57:DA:492:A:H2'	57:DA:493:G:H8	1.68	0.54
57:DA:590:A:H2'	57:DA:591:U:C6	2.42	0.54
57:DA:637:A:OP2	33:DL:112:LEU:HD22	2.07	0.54
58:DB:85:G:N2	58:DB:92:C:C2	2.76	0.54
24:DC:180:MET:CE	24:DC:268:ARG:HE	2.21	0.54
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.89	0.54
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.22	0.54
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.73	0.54
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	2.08	0.54
40:DS:29:VAL:O	40:DS:33:LEU:HB2	2.07	0.54
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.73	0.54
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.37	0.54
57:DA:2269:G:O3'	44:DW:18:LYS:HE2	2.08	0.54
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:57:G:C6	1:AA:356:A:N1	2.76	0.54
2:AB:49:PHE:CG	2:AB:212:TYR:OH	2.60	0.54
2:AB:212:TYR:O	2:AB:216:VAL:HG23	2.08	0.54
4:AD:16:THR:CG2	4:AD:17:ASP:H	2.17	0.54
8:AH:88:LYS:HA	8:AH:91:LEU:CD1	2.36	0.54
14:AN:42:ASN:C	14:AN:44:VAL:H	2.10	0.54
52:B4:4:ARG:HG3	52:B4:6:SER:O	2.08	0.54
22:BA:1289:C:H2'	22:BA:1290:C:C6	2.42	0.54
22:BA:1829:A:N3	24:BC:14:HIS:HE1	2.06	0.54
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.41	0.54
22:BA:2352:A:O5'	22:BA:2352:A:H8	1.91	0.54
22:BA:247:G:H4'	22:BA:386:G:C5	2.42	0.54
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.90	0.54
24:BC:24:HIS:CG	24:BC:25:LYS:N	2.76	0.54
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.56	0.54
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.08	0.54
35:BN:71:ARG:NH2	35:BN:71:ARG:HG3	2.21	0.54
36:BO:31:THR:HG22	36:BO:34:HIS:O	2.08	0.54
22:BA:1252:G:N1	38:BQ:36:GLN:OE1	2.38	0.54
41:BT:32:LEU:N	41:BT:32:LEU:HD23	2.23	0.54
43:BV:40:ILE:CG2	43:BV:41:GLU:N	2.71	0.54
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.89	0.54
44:BW:37:VAL:CG1	44:BW:38:ARG:N	2.70	0.54
53:CA:1391:U:H2'	53:CA:1392:G:H8	1.70	0.54
53:CA:769:G:H4'	53:CA:1513:A:H4'	1.89	0.54
53:CA:15:G:H8	53:CA:15:G:H5'	1.73	0.54
53:CA:643:C:O2'	53:CA:644:U:H5'	2.07	0.54
53:CA:714:G:H2'	53:CA:715:A:C8	2.43	0.54
53:CA:405:U:O4	4:CD:1:ALA:HB1	2.07	0.54
53:CA:737:C:OP1	6:CF:91:ARG:HD2	2.08	0.54
10:CJ:25:ILE:O	10:CJ:25:ILE:HG22	2.08	0.54
56:CP:77:GLU:C	56:CP:79:ASN:H	2.10	0.54
57:DA:100:U:C6	57:DA:100:U:OP1	2.61	0.54
57:DA:740:C:C5'	57:DA:1784:A:H3'	2.38	0.54
57:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.42	0.54
57:DA:1914:C:O2'	57:DA:1915:U:O4'	2.26	0.54
57:DA:2140:G:C6	57:DA:2152:G:C6	2.96	0.54
57:DA:2185:U:H2'	57:DA:2186:G:C8	2.42	0.54
57:DA:2813:A:H2'	57:DA:2814:A:H8	1.72	0.54
57:DA:740:C:O2'	57:DA:741:U:C5'	2.56	0.54
57:DA:974:G:H1'	57:DA:975:A:C8	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.08	0.54
25:DD:79:LEU:HD22	25:DD:79:LEU:N	2.22	0.54
28:DG:132:LEU:N	28:DG:132:LEU:HD12	2.22	0.54
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.08	0.54
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.88	0.54
34:DM:42:THR:HG22	34:DM:45:GLN:H	1.72	0.54
1:AA:1101:A:N7	2:AB:170:ILE:HG22	2.23	0.54
1:AA:1468:A:H2'	1:AA:1469:C:C5'	2.37	0.54
1:AA:176:C:H2'	1:AA:177:G:N3	2.22	0.54
1:AA:182:A:C2	1:AA:184:G:C8	2.96	0.54
1:AA:49:U:C4	1:AA:364:A:C6	2.96	0.54
1:AA:652:U:O2'	1:AA:653:U:O5'	2.26	0.54
1:AA:70:U:O2'	1:AA:71:A:C8	2.61	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	0.54
6:AF:9:MET:HE3	18:AR:64:LEU:HD22	1.89	0.54
7:AG:37:THR:O	7:AG:41:ILE:HG13	2.07	0.54
8:AH:105:THR:HG21	8:AH:120:LEU:CD1	2.31	0.54
12:AL:88:ASP:HB3	12:AL:89:LEU:HD22	1.90	0.54
22:BA:1062:G:C8	22:BA:1088:A:C8	2.96	0.54
22:BA:1657:U:O3'	25:BD:138:LEU:HD23	2.08	0.54
22:BA:2505:G:O4'	61:BA:3136:CLM:CL2	2.63	0.54
22:BA:478:A:C6	22:BA:480:A:C6	2.96	0.54
22:BA:511:U:H5	22:BA:512:G:C5	2.26	0.54
22:BA:780:G:N2	22:BA:783:A:H62	1.99	0.54
23:BB:78:A:C2	23:BB:99:A:C4	2.96	0.54
23:BB:78:A:H2'	23:BB:79:G:O4'	2.08	0.54
28:BG:155:PRO:O	28:BG:170:THR:HA	2.08	0.54
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.89	0.54
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.39	0.54
37:BP:85:VAL:O	37:BP:86:LYS:HB2	2.08	0.54
41:BT:39:THR:O	41:BT:41:ALA:N	2.40	0.54
41:BT:86:THR:O	41:BT:87:LEU:HD23	2.07	0.54
53:CA:110:C:H2'	53:CA:111:G:C8	2.43	0.54
53:CA:1461:G:C5	53:CA:1462:C:C4	2.96	0.54
53:CA:1493:A:H8	57:DA:1913:A:N6	2.04	0.54
53:CA:962:C:O2'	53:CA:963:G:H8	1.89	0.54
53:CA:985:C:O2'	53:CA:986:U:C5'	2.56	0.54
3:CC:12:GLY:O	3:CC:13:ILE:HD13	2.08	0.54
12:CL:36:VAL:O	12:CL:36:VAL:HG23	2.08	0.54
15:CO:16:ARG:HB2	15:CO:23:SER:HB2	1.88	0.54
19:CS:28:LYS:O	19:CS:30:LEU:HD12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.43	0.54
57:DA:1038:G:C6	57:DA:1039:A:N7	2.76	0.54
57:DA:1048:A:C5	57:DA:1049:C:N4	2.76	0.54
57:DA:1231:U:H2'	57:DA:1232:G:H8	1.72	0.54
57:DA:1238:G:O2'	57:DA:1239:G:H5'	2.07	0.54
57:DA:2143:C:H5''	57:DA:2144:G:N7	2.22	0.54
57:DA:2516:A:C4	57:DA:2569:G:N2	2.76	0.54
57:DA:2766:A:N3	57:DA:2766:A:H2'	2.22	0.54
57:DA:524:G:H2'	57:DA:525:U:C6	2.43	0.54
57:DA:604:G:C6	57:DA:625:G:C6	2.96	0.54
58:DB:81:G:C4	58:DB:82:U:C5	2.96	0.54
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.56	0.54
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.08	0.54
41:DT:63:VAL:HG21	41:DT:80:TRP:CE2	2.43	0.54
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.71	0.54
47:DZ:37:ARG:HA	47:DZ:37:ARG:HE	1.73	0.54
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.89	0.54
1:AA:11:G:C5	1:AA:12:U:C5	2.96	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.73	0.54
1:AA:237:G:H5''	17:AQ:26:ARG:NH2	2.23	0.54
1:AA:340:U:H2'	1:AA:341:C:C6	2.43	0.54
1:AA:428:G:H1'	1:AA:430:A:N7	2.22	0.54
1:AA:507:C:H3'	1:AA:508:U:H5''	1.89	0.54
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.61	0.54
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.73	0.54
5:AE:37:VAL:HG11	5:AE:113:VAL:HA	1.90	0.54
5:AE:17:VAL:HG22	5:AE:18:ASN:H	1.73	0.54
22:BA:1006:C:C2'	22:BA:1007:C:H5'	2.38	0.54
22:BA:1179:G:C2	22:BA:1180:U:O2'	2.61	0.54
22:BA:1537:G:H2'	22:BA:1538:G:O4'	2.09	0.54
22:BA:1835:G:C4	22:BA:1931:U:C4	2.96	0.54
22:BA:2001:C:H4'	22:BA:2689:U:H2'	1.89	0.54
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.08	0.54
22:BA:2405:G:O2'	22:BA:2411:A:N6	2.41	0.54
22:BA:2555:U:H5	22:BA:2556:C:C2	2.26	0.54
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.41	0.54
22:BA:85:G:OP1	42:BU:27:VAL:HG11	2.08	0.54
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.71	0.54
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.90	0.54
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.07	0.54
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.89	0.54
33:BL:85:VAL:CG2	33:BL:94:THR:HG23	2.38	0.54
22:BA:958:U:H5'	34:BM:14:LYS:NZ	2.22	0.54
38:BQ:86:SER:O	38:BQ:88:GLU:N	2.41	0.54
44:BW:40:ARG:HG3	44:BW:56:HIS:ND1	2.23	0.54
44:BW:29:SER:HA	44:BW:63:ASP:HB3	1.90	0.54
53:CA:1382:C:O2'	53:CA:1383:C:C5'	2.55	0.54
53:CA:1406:U:H2'	53:CA:1407:C:H5'	1.90	0.54
53:CA:8:A:C5	4:CD:205:LYS:HG3	2.43	0.54
53:CA:90:C:O2'	53:CA:91:U:C6	2.53	0.54
53:CA:989:U:C2'	53:CA:990:C:H5'	2.38	0.54
4:CD:29:THR:HG22	4:CD:30:LYS:HD3	1.89	0.54
55:CM:111:PRO:HG2	55:CM:113:LYS:HG3	1.89	0.54
14:CN:68:ARG:NH1	14:CN:80:ARG:HH12	2.06	0.54
19:CS:10:ILE:HG22	19:CS:14:LEU:HD21	1.90	0.54
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.90	0.54
51:D3:44:ARG:H	51:D3:45:PRO:HD2	1.73	0.54
57:DA:1232:G:H2'	57:DA:1233:C:C6	2.43	0.54
57:DA:1612:C:C2'	57:DA:1613:G:O5'	2.56	0.54
57:DA:1706:C:O2'	57:DA:1707:G:OP1	2.26	0.54
57:DA:1967:C:O2'	57:DA:1968:G:H5'	2.08	0.54
57:DA:2384:U:OP2	57:DA:2384:U:H6	1.90	0.54
57:DA:238:C:H2'	57:DA:239:C:O4'	2.07	0.54
57:DA:2666:C:H2'	57:DA:2667:C:C5'	2.38	0.54
57:DA:2748:A:H1'	28:DG:66:THR:CG2	2.34	0.54
57:DA:2758:A:H2'	57:DA:2759:G:H5'	1.89	0.54
57:DA:2869:G:H2'	57:DA:2870:C:O4'	2.08	0.54
57:DA:373:U:HO2'	57:DA:374:A:H8	1.51	0.54
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.08	0.54
25:DD:33:ARG:H	25:DD:33:ARG:HD2	1.72	0.54
26:DE:196:VAL:HG13	26:DE:200:LEU:HD23	1.89	0.54
59:DF:103:ILE:O	59:DF:103:ILE:HG22	2.08	0.54
33:DL:48:ARG:HG3	33:DL:48:ARG:NH1	2.18	0.54
34:DM:26:VAL:HG21	34:DM:132:THR:O	2.08	0.54
58:DB:50:A:OP1	36:DO:68:LYS:HB2	2.07	0.54
38:DQ:15:LYS:O	38:DQ:19:GLN:HG3	2.09	0.54
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.90	0.54
3:AC:21:TRP:CD1	3:AC:58:ARG:HG2	2.44	0.53
4:AD:61:ARG:NH1	4:AD:68:GLU:HG2	2.22	0.53
8:AH:17:GLN:HE21	8:AH:71:VAL:CG2	2.15	0.53
13:AM:106:ARG:HH21	13:AM:112:ARG:CB	2.19	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:5:MET:HA	14:AN:8:ARG:HD2	1.90	0.53
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.08	0.53
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.40	0.53
22:BA:1494:A:H2'	22:BA:1495:A:H8	1.69	0.53
22:BA:1956:U:O2'	22:BA:1957:C:H5'	2.07	0.53
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.42	0.53
22:BA:2385:C:O2'	22:BA:2386:A:O4'	2.25	0.53
22:BA:2449:U:O5'	22:BA:2449:U:H6	1.91	0.53
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.08	0.53
24:BC:257:ARG:HE	24:BC:269:ARG:NH2	2.06	0.53
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.53
39:BR:25:LEU:H	39:BR:94:THR:HG21	1.73	0.53
40:BS:68:ASP:O	40:BS:109:ASP:HB3	2.09	0.53
53:CA:1202:U:H2'	53:CA:1203:C:H6	1.73	0.53
53:CA:1450:U:H4'	53:CA:1451:U:H5	1.73	0.53
53:CA:1494:G:N2	53:CA:1495:U:C2	2.76	0.53
53:CA:338:A:N1	53:CA:351:G:N2	2.55	0.53
53:CA:373:A:N3	53:CA:374:A:C8	2.77	0.53
53:CA:457:G:N3	53:CA:457:G:H2'	2.24	0.53
53:CA:496:A:C2'	53:CA:496:A:N3	2.70	0.53
53:CA:598:U:H2'	53:CA:599:C:O4'	2.08	0.53
53:CA:725:G:C5	53:CA:726:C:C5	2.97	0.53
53:CA:844:G:O2'	53:CA:845:A:H5''	2.08	0.53
4:CD:84:ASN:HD22	4:CD:84:ASN:C	2.10	0.53
9:CI:114:LYS:HD2	9:CI:120:ALA:O	2.08	0.53
55:CM:2:ARG:HA	55:CM:7:ASN:O	2.07	0.53
14:CN:20:PHE:CA	14:CN:24:ALA:HB2	2.38	0.53
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.43	0.53
57:DA:1117:C:H2'	57:DA:1118:C:C6	2.43	0.53
57:DA:973:A:H1'	57:DA:1188:U:C6	2.42	0.53
57:DA:1666:G:H4'	32:DK:6:THR:HG23	1.88	0.53
57:DA:1740:G:H2'	57:DA:1741:C:H6	1.73	0.53
57:DA:1790:C:H2'	57:DA:1791:A:C8	2.43	0.53
57:DA:1865:U:C4	57:DA:1875:G:C2	2.96	0.53
57:DA:2046:G:C2	57:DA:2047:C:C2	2.96	0.53
57:DA:2345:G:C6	57:DA:2347:C:N4	2.75	0.53
57:DA:2616:C:H2'	57:DA:2617:U:C6	2.40	0.53
57:DA:585:G:H1'	57:DA:1256:G:N2	2.23	0.53
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.55	0.53
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.73	0.53
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DF:35:LEU:HA	59:DF:152:ASP:O	2.08	0.53
36:DO:7:ARG:NH2	36:DO:29:HIS:HD2	2.05	0.53
38:DQ:10:ARG:HB2	38:DQ:10:ARG:CZ	2.37	0.53
57:DA:751:A:O5'	40:DS:90:LYS:HA	2.08	0.53
1:AA:1161:C:O2'	1:AA:1162:C:H5'	2.09	0.53
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.09	0.53
1:AA:337:G:H2'	1:AA:338:A:C8	2.42	0.53
1:AA:49:U:O4	1:AA:365:U:C5	2.57	0.53
1:AA:802:A:H5''	1:AA:803:G:OP2	2.08	0.53
2:AB:113:LEU:O	2:AB:117:GLU:HG3	2.07	0.53
2:AB:130:LYS:NZ	2:AB:133:ALA:HB2	2.23	0.53
7:AG:113:LYS:HB2	7:AG:117:LEU:HD12	1.90	0.53
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.53	0.53
22:BA:1430:G:H2'	22:BA:1431:A:H8	1.72	0.53
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.08	0.53
22:BA:1936:A:H2	22:BA:1943:U:C4	2.25	0.53
22:BA:2585:U:HO2'	22:BA:2586:U:C5'	2.21	0.53
22:BA:672:C:OP2	33:BL:42:SER:OG	2.20	0.53
22:BA:783:A:H8	22:BA:784:G:H4'	1.71	0.53
23:BB:116:G:H4'	36:BO:54:VAL:HG22	1.90	0.53
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.00	0.53
24:BC:71:ASP:HA	24:BC:117:SER:O	2.08	0.53
25:BD:119:ALA:HB2	25:BD:165:MET:CB	2.38	0.53
25:BD:191:GLY:O	25:BD:192:ALA:HB3	2.08	0.53
35:BN:74:GLU:O	35:BN:77:ALA:HB3	2.08	0.53
37:BP:83:ILE:HD13	37:BP:83:ILE:C	2.29	0.53
42:BU:100:GLU:O	42:BU:101:THR:HB	2.08	0.53
53:CA:1337:G:H5''	53:CA:1338:G:OP1	2.08	0.53
53:CA:321:A:N7	53:CA:328:C:C2	2.76	0.53
53:CA:424:G:H2'	53:CA:425:G:H8	1.73	0.53
53:CA:429:U:H3'	4:CD:8:LEU:HD23	1.90	0.53
53:CA:560:A:C4	5:CE:127:TYR:CD2	2.97	0.53
53:CA:629:A:H2'	53:CA:630:A:O4'	2.08	0.53
53:CA:802:A:H2'	53:CA:803:G:C5'	2.38	0.53
15:CO:70:LYS:HA	15:CO:77:TYR:HB2	1.90	0.53
51:D3:9:ALA:HB1	51:D3:13:PHE:HD2	1.73	0.53
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.55	0.53
57:DA:1507:C:H5'	57:DA:1508:A:OP2	2.08	0.53
57:DA:195:A:C6	57:DA:198:C:C5	2.96	0.53
57:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.41	0.53
57:DA:2478:A:N7	57:DA:2529:G:C6	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2022:U:O2'	57:DA:2616:C:O2'	2.24	0.53
57:DA:471:A:O5'	57:DA:471:A:H8	1.91	0.53
24:DC:166:ARG:HA	24:DC:171:VAL:HA	1.89	0.53
25:DD:98:VAL:HG23	25:DD:180:VAL:HG12	1.90	0.53
59:DF:60:SER:C	59:DF:62:GLN:H	2.11	0.53
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.08	0.53
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.27	0.53
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.72	0.53
57:DA:857:G:O2'	44:DW:19:ARG:CZ	2.57	0.53
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.43	0.53
1:AA:414:A:O2'	1:AA:415:A:O4'	2.24	0.53
1:AA:92:U:O2'	1:AA:93:U:O4'	2.21	0.53
1:AA:958:A:C5	1:AA:959:A:C6	2.96	0.53
5:AE:94:PHE:HZ	5:AE:96:GLN:CD	2.11	0.53
22:BA:1440:U:H2'	22:BA:1441:G:O4'	2.09	0.53
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.43	0.53
22:BA:285:G:H2'	22:BA:285:G:N3	2.21	0.53
22:BA:2862:G:H2'	22:BA:2863:C:C6	2.43	0.53
23:BB:20:G:H2'	23:BB:21:G:O4'	2.09	0.53
24:BC:173:LEU:O	24:BC:180:MET:HA	2.07	0.53
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.07	0.53
24:BC:255:LYS:C	24:BC:257:ARG:H	2.11	0.53
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	2.92	0.53
25:BD:121:THR:O	25:BD:122:VAL:CB	2.57	0.53
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.08	0.53
26:BE:143:LEU:HD13	26:BE:146:VAL:HG11	1.89	0.53
27:BF:21:TYR:HE2	27:BF:28:PRO:HD3	1.73	0.53
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.82	0.53
37:BP:64:SER:O	37:BP:65:ASN:C	2.46	0.53
38:BQ:6:GLY:HA2	38:BQ:9:ALA:HB3	1.91	0.53
43:BV:51:GLN:HB2	43:BV:57:TYR:OH	2.08	0.53
53:CA:1175:G:H2'	53:CA:1176:A:C8	2.42	0.53
53:CA:1477:U:H2'	53:CA:1478:U:C6	2.43	0.53
2:CB:89:PHE:HB3	2:CB:149:GLY:O	2.08	0.53
4:CD:34:GLU:O	4:CD:37:PRO:HD3	2.08	0.53
9:CI:27:ILE:HD13	9:CI:62:LEU:HB3	1.90	0.53
12:CL:78:VAL:HG23	12:CL:101:LEU:HD12	1.90	0.53
19:CS:52:ASN:HD21	19:CS:54:ARG:HG2	1.73	0.53
51:D3:9:ALA:HB1	51:D3:13:PHE:CD2	2.43	0.53
52:D4:27:CYS:SG	52:D4:33:HIS:HB2	2.48	0.53
57:DA:1210:G:H5''	57:DA:1211:C:H3'	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2352:A:O5'	57:DA:2352:A:H8	1.91	0.53
57:DA:2461:A:H1'	57:DA:2492:U:C2	2.42	0.53
57:DA:347:A:H2'	57:DA:348:A:H8	1.72	0.53
57:DA:454:A:H4'	57:DA:455:C:OP2	2.08	0.53
57:DA:486:C:H2'	57:DA:487:C:C6	2.43	0.53
57:DA:963:U:O2'	57:DA:964:C:H6	1.90	0.53
58:DB:15:A:OP1	58:DB:108:A:H5'	2.08	0.53
57:DA:2590:A:H5''	24:DC:237:ARG:NE	2.22	0.53
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.39	0.53
26:DE:108:ILE:HD13	26:DE:108:ILE:O	2.08	0.53
59:DF:28:PRO:CB	59:DF:168:LEU:HD21	2.37	0.53
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.07	0.53
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.23	0.53
30:DI:57:VAL:O	30:DI:58:ILE:HG13	2.08	0.53
31:DJ:48:VAL:HG12	31:DJ:49:ASP:H	1.73	0.53
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.38	0.53
57:DA:2674:G:O3'	32:DK:30:ARG:HG2	2.07	0.53
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.09	0.53
37:DP:65:ASN:N	37:DP:65:ASN:HD22	2.05	0.53
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.91	0.53
47:DZ:15:ARG:N	47:DZ:15:ARG:HD2	2.24	0.53
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.24	0.53
1:AA:1081:A:H5'	5:AE:22:LYS:HG3	1.89	0.53
1:AA:628:G:H2'	1:AA:629:A:C8	2.43	0.53
1:AA:830:G:H2'	1:AA:831:A:C8	2.42	0.53
1:AA:853:C:O2'	1:AA:854:U:H5'	2.09	0.53
1:AA:923:A:H2'	1:AA:924:C:C6	2.42	0.53
4:AD:71:PHE:HE1	4:AD:199:ILE:HD11	1.73	0.53
7:AG:145:GLU:CA	7:AG:148:LYS:HB2	2.39	0.53
9:AI:9:GLY:HA2	9:AI:80:HIS:CD2	2.44	0.53
22:BA:1422:G:C4	22:BA:1423:G:C8	2.96	0.53
22:BA:1871:A:C8	22:BA:1872:A:C6	2.96	0.53
22:BA:2520:C:O2'	22:BA:2521:C:H5'	2.09	0.53
22:BA:544:C:C4	22:BA:550:C:N4	2.77	0.53
32:BK:121:GLU:O	32:BK:122:VAL:C	2.46	0.53
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.42	0.53
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.09	0.53
53:CA:140:U:O2	53:CA:183:C:N4	2.42	0.53
4:CD:148:ALA:O	4:CD:151:GLN:HB2	2.07	0.53
9:CI:5:TYR:CD2	9:CI:5:TYR:N	2.75	0.53
11:CK:17:ASP:OD2	11:CK:80:ASN:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:57:ARG:O	15:CO:61:GLN:HG2	2.09	0.53
57:DA:1188:U:O2'	57:DA:1189:A:H5'	2.08	0.53
57:DA:1282:U:O4	57:DA:1283:G:C6	2.61	0.53
57:DA:1737:G:H5'	57:DA:1738:G:OP2	2.08	0.53
57:DA:2064:C:H2'	57:DA:2065:C:C6	2.43	0.53
57:DA:2088:A:H2'	57:DA:2089:C:C6	2.43	0.53
57:DA:415:A:C2	57:DA:2409:G:C6	2.96	0.53
57:DA:260:G:C6	57:DA:261:G:C5	2.95	0.53
57:DA:55:G:C2	57:DA:116:C:C2	2.96	0.53
57:DA:922:C:H2'	57:DA:923:G:H8	1.72	0.53
57:DA:975:A:C2'	57:DA:976:G:H8	2.22	0.53
57:DA:994:C:O2	39:DR:10:LYS:HE2	2.08	0.53
58:DB:57:A:C5	59:DF:25:MET:CB	2.91	0.53
25:DD:107:VAL:HG13	25:DD:203:VAL:HG23	1.90	0.53
25:DD:113:SER:OG	25:DD:114:LYS:N	2.41	0.53
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.08	0.53
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.90	0.53
57:DA:600:G:H5'	26:DE:27:LEU:HD13	1.90	0.53
59:DF:32:LYS:HB3	59:DF:156:THR:HB	1.89	0.53
44:DW:20:LEU:HD11	44:DW:35:ILE:CG1	2.38	0.53
1:AA:206:C:C2	1:AA:207:C:H1'	2.44	0.53
1:AA:439:U:C2'	1:AA:440:C:H5'	2.39	0.53
1:AA:684:U:H3	1:AA:706:A:H61	1.56	0.53
1:AA:792:A:C4	1:AA:794:A:N6	2.77	0.53
9:AI:107:ALA:O	9:AI:109:GLN:HG2	2.08	0.53
11:AK:91:GLY:O	11:AK:95:THR:HB	2.07	0.53
17:AQ:18:LYS:CA	17:AQ:47:ASP:HB2	2.26	0.53
22:BA:27:G:N2	22:BA:512:G:O2'	2.40	0.53
22:BA:514:A:H1'	22:BA:581:C:O2'	2.08	0.53
24:BC:106:PRO:CG	24:BC:141:HIS:CE1	2.92	0.53
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.08	0.53
26:BE:21:ARG:HG3	26:BE:22:ASP:N	2.22	0.53
27:BF:114:ARG:HD2	27:BF:114:ARG:N	2.23	0.53
27:BF:120:SER:HB2	27:BF:127:TYR:CE1	2.44	0.53
36:BO:64:TYR:O	36:BO:67:ASN:OD1	2.27	0.53
42:BU:97:SER:O	42:BU:98:ASN:CB	2.56	0.53
44:BW:43:LYS:HE2	44:BW:68:PHE:HE1	1.73	0.53
53:CA:1013:G:N2	53:CA:1015:G:H3'	2.24	0.53
53:CA:1320:C:O2'	19:CS:72:GLU:HA	2.09	0.53
53:CA:1350:A:H2	54:CG:33:GLY:HA3	1.74	0.53
53:CA:277:C:H2'	53:CA:278:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:367:U:C6	53:CA:394:G:N2	2.77	0.53
53:CA:449:G:C2	53:CA:450:G:C5	2.96	0.53
53:CA:781:A:H2'	53:CA:782:A:H5'	1.89	0.53
53:CA:640:A:O2'	8:CH:106:SER:HB2	2.09	0.53
15:CO:38:LEU:HD12	15:CO:41:HIS:HB3	1.90	0.53
17:CQ:29:LYS:HB2	17:CQ:36:PHE:CE1	2.44	0.53
57:DA:1071:G:O4'	57:DA:1088:A:O2'	2.26	0.53
57:DA:1078:U:H5''	57:DA:1079:C:OP1	2.08	0.53
57:DA:1281:G:O2'	57:DA:1282:U:H5'	2.08	0.53
57:DA:1717:A:H2'	57:DA:1718:G:O4'	2.09	0.53
57:DA:196:A:H61	57:DA:831:G:H21	1.55	0.53
57:DA:2638:G:H1'	57:DA:2778:A:N6	2.23	0.53
57:DA:311:A:O2'	57:DA:332:A:H5'	2.08	0.53
57:DA:320:A:H5''	57:DA:321:U:OP1	2.09	0.53
57:DA:510:C:H2'	57:DA:511:U:C5	2.43	0.53
57:DA:656:G:O2'	57:DA:657:U:O4'	2.18	0.53
24:DC:132:ARG:HG3	24:DC:132:ARG:O	2.08	0.53
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.09	0.53
57:DA:443:A:H2'	26:DE:40:ARG:NE	2.23	0.53
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	1.90	0.53
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.37	0.53
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	2.09	0.53
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.23	0.53
38:DQ:63:ARG:O	38:DQ:66:ALA:N	2.41	0.53
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.89	0.53
57:DA:381:G:C5'	45:DX:15:ASN:HD22	2.21	0.53
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.08	0.53
1:AA:66:A:N6	1:AA:104:G:C2	2.77	0.53
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.56	0.53
1:AA:212:G:H2'	1:AA:213:G:H8	1.73	0.53
1:AA:269:C:H2'	1:AA:270:A:H8	1.74	0.53
1:AA:275:G:HO2'	1:AA:276:G:H5'	1.72	0.53
1:AA:536:C:O2'	1:AA:537:G:H5'	2.08	0.53
1:AA:673:A:H2'	1:AA:674:G:C8	2.44	0.53
4:AD:16:THR:CG2	4:AD:17:ASP:N	2.69	0.53
4:AD:64:TYR:CD1	4:AD:93:LEU:HD13	2.44	0.53
5:AE:132:PRO:O	5:AE:136:VAL:HG13	2.09	0.53
13:AM:23:GLY:HA3	13:AM:64:VAL:HG12	1.91	0.53
13:AM:7:ASN:O	13:AM:9:PRO:HD3	2.09	0.53
22:BA:1288:G:C4	22:BA:1327:A:C2	2.96	0.53
22:BA:1505:A:C6	22:BA:1506:U:N3	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1839:G:H2'	22:BA:1840:G:H8	1.72	0.53
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.49	0.53
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.43	0.53
22:BA:346:A:H2'	22:BA:347:A:H8	1.73	0.53
26:BE:58:LYS:HZ1	26:BE:62:GLN:HA	1.74	0.53
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.21	0.53
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	1.90	0.53
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.12	0.53
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.48	0.53
33:BL:57:LEU:HG	33:BL:61:LEU:HD22	1.90	0.53
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.20	0.53
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.43	0.53
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.08	0.53
53:CA:119:A:H4'	53:CA:120:A:O5'	2.08	0.53
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.08	0.53
53:CA:1190:G:O3'	3:CC:2:GLN:HB3	2.08	0.53
4:CD:106:PHE:HB3	4:CD:154:VAL:HG23	1.91	0.53
5:CE:68:ARG:O	5:CE:69:ASN:C	2.47	0.53
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.39	0.53
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.46	0.53
19:CS:13:HIS:O	19:CS:17:LYS:HG2	2.08	0.53
19:CS:38:THR:HA	19:CS:69:LYS:HA	1.90	0.53
11:CK:92:ARG:HH22	21:CU:19:LYS:HD2	1.73	0.53
11:CK:111:ASP:N	21:CU:3:ILE:N	2.55	0.53
57:DA:1073:A:OP2	57:DA:1073:A:H4'	2.08	0.53
57:DA:1187:G:H5''	39:DR:83:TYR:CE1	2.44	0.53
57:DA:1544:A:C6	57:DA:1545:A:C6	2.97	0.53
57:DA:1808:A:H3'	57:DA:1809:A:C8	2.42	0.53
57:DA:227:A:O2'	57:DA:228:C:O5'	2.25	0.53
57:DA:2577:A:C2	48:D0:1:ALA:N	2.77	0.53
57:DA:36:G:N1	57:DA:445:C:N4	2.55	0.53
57:DA:574:A:C8	57:DA:2055:C:H5''	2.44	0.53
57:DA:575:A:H2'	57:DA:576:U:C5	2.44	0.53
57:DA:586:A:O2'	57:DA:671:C:O2	2.25	0.53
57:DA:674:G:H2'	57:DA:804:A:H61	1.72	0.53
57:DA:747:U:C2'	57:DA:2613:U:O4	2.55	0.53
58:DB:8:C:H5''	36:DO:15:ARG:NH1	2.24	0.53
24:DC:131:MET:HA	24:DC:134:ILE:CG1	2.37	0.53
24:DC:144:GLU:HG3	24:DC:151:GLY:HA2	1.89	0.53
31:DJ:8:PRO:HG2	31:DJ:9:GLU:H	1.73	0.53
33:DL:103:ILE:H	33:DL:103:ILE:HD12	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DR:33:VAL:HG23	39:DR:61:ALA:HB3	1.90	0.53
40:DS:6:LYS:HZ2	40:DS:104:THR:HG23	1.73	0.53
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.90	0.53
1:AA:1152:A:H2'	1:AA:1153:G:H8	1.73	0.53
1:AA:1387:G:C6	1:AA:1388:C:N4	2.77	0.53
1:AA:430:A:C4	1:AA:431:A:C8	2.96	0.53
1:AA:563:A:N6	63:AA:1818:HOH:O	2.41	0.53
8:AH:12:ARG:HH11	8:AH:26:MET:HB2	1.74	0.53
11:AK:57:SER:O	11:AK:90:PRO:HG3	2.08	0.53
13:AM:4:ALA:H	13:AM:56:ARG:HG3	1.74	0.53
22:BA:2198:A:H4'	22:BA:2199:A:OP1	2.07	0.53
22:BA:2383:G:H5''	22:BA:2383:G:C8	2.39	0.53
22:BA:2562:U:H2'	22:BA:2563:U:H5'	1.90	0.53
22:BA:636:G:O5'	33:BL:128:THR:HG22	2.09	0.53
22:BA:960:A:H2'	22:BA:962:G:H5'	1.88	0.53
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.29	0.53
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.09	0.53
23:BB:57:A:C4	27:BF:25:MET:HB3	2.43	0.53
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.74	0.53
27:BF:34:THR:CG2	27:BF:89:THR:HG23	2.35	0.53
28:BG:139:VAL:C	28:BG:141:GLY:N	2.61	0.53
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.61	0.53
42:BU:73:ASN:HD21	42:BU:76:THR:HG23	1.73	0.53
53:CA:1138:G:N2	53:CA:1140:C:C4	2.76	0.53
53:CA:1279:G:H2'	10:CJ:45:ARG:NH2	2.23	0.53
53:CA:567:G:H1'	63:CA:1820:HOH:O	2.07	0.53
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.91	0.53
2:CB:19:THR:OG1	2:CB:20:ARG:N	2.41	0.53
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.38	0.53
19:CS:52:ASN:HD22	19:CS:54:ARG:H	1.57	0.53
57:DA:1032:A:H1'	52:D4:23:ILE:CD1	2.27	0.53
57:DA:1258:U:H2'	57:DA:1259:G:H8	1.72	0.53
57:DA:1259:G:H2'	57:DA:1260:A:O4'	2.09	0.53
57:DA:1281:G:H2'	57:DA:1282:U:O4'	2.09	0.53
57:DA:1469:A:H2'	57:DA:1470:A:H8	1.67	0.53
57:DA:183:C:H2'	57:DA:184:C:H5'	1.89	0.53
57:DA:1982:U:H6	57:DA:1982:U:C5'	2.22	0.53
57:DA:2144:G:O2'	57:DA:2147:A:OP2	2.16	0.53
57:DA:271:G:O2'	57:DA:272:A:C5'	2.56	0.53
57:DA:2734:A:C8	57:DA:2735:G:C8	2.96	0.53
57:DA:2721:A:C2	57:DA:2873:A:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:739:A:O2'	57:DA:740:C:H5	1.85	0.53
57:DA:90:U:H3'	57:DA:91:A:H5''	1.91	0.53
57:DA:927:A:H2'	57:DA:928:A:C8	2.44	0.53
58:DB:57:A:C5	59:DF:25:MET:SD	3.02	0.53
59:DF:56:LEU:O	59:DF:60:SER:HB3	2.08	0.53
31:DJ:82:GLY:O	31:DJ:84:ILE:N	2.42	0.53
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.35	0.53
41:DT:34:VAL:O	41:DT:34:VAL:HG12	2.09	0.53
42:DU:54:PRO:HG2	42:DU:55:GLY:N	2.20	0.53
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.07	0.53
1:AA:139:A:C2'	1:AA:140:U:H5'	2.39	0.53
1:AA:620:C:H2'	1:AA:621:A:O4'	2.08	0.53
1:AA:991:U:H4'	1:AA:992:U:OP1	2.09	0.53
4:AD:147:LYS:O	4:AD:149:LYS:N	2.42	0.53
5:AE:136:VAL:O	5:AE:137:ARG:HB2	2.09	0.53
15:AO:60:SER:O	15:AO:64:LYS:HG3	2.08	0.53
17:AQ:46:HIS:HA	17:AQ:70:LYS:HE3	1.91	0.53
22:BA:1115:G:HO2'	22:BA:1116:G:P	2.30	0.53
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.90	0.53
22:BA:1385:A:C4	22:BA:1386:C:C5	2.97	0.53
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.43	0.53
22:BA:1869:G:N2	22:BA:1873:G:C6	2.77	0.53
22:BA:2800:A:H5''	22:BA:2800:A:H8	1.73	0.53
22:BA:483:A:C8	22:BA:484:C:C5	2.97	0.53
22:BA:634:C:H2'	22:BA:635:C:C6	2.43	0.53
23:BB:56:G:H5''	23:BB:57:A:OP1	2.09	0.53
24:BC:210:ALA:O	24:BC:215:VAL:HG23	2.09	0.53
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.44	0.53
22:BA:1817:G:OP1	24:BC:86:ARG:NH2	2.42	0.53
36:BO:88:LYS:O	36:BO:89:ASP:HB2	2.09	0.53
37:BP:22:GLY:O	37:BP:109:ILE:HD11	2.09	0.53
39:BR:64:VAL:O	39:BR:65:ALA:HB3	2.09	0.53
41:BT:48:GLN:HE21	41:BT:48:GLN:HA	1.72	0.53
41:BT:69:ARG:CZ	41:BT:70:HIS:HA	2.39	0.53
44:BW:58:LEU:HD23	44:BW:79:ILE:HD12	1.91	0.53
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.37	0.53
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.24	0.53
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.38	0.53
53:CA:424:G:H2'	53:CA:425:G:C8	2.43	0.53
53:CA:458:U:H2'	53:CA:459:A:C8	2.43	0.53
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:114:ALA:O	8:CH:117:GLN:HB3	2.09	0.53
53:CA:391:G:H5''	56:CP:8:ARG:CD	2.38	0.53
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.24	0.53
57:DA:1210:G:C6	57:DA:1237:A:N7	2.77	0.53
57:DA:1320:C:HO2'	57:DA:1321:A:H8	1.56	0.53
57:DA:109:C:H4'	57:DA:348:A:H4'	1.91	0.53
57:DA:622:G:O2'	57:DA:623:C:H5'	2.09	0.53
57:DA:799:G:C6	57:DA:800:A:C5	2.97	0.53
57:DA:972:A:N1	57:DA:973:A:N6	2.57	0.53
58:DB:19:C:H2'	58:DB:20:G:H8	1.72	0.53
58:DB:68:C:O2'	58:DB:69:G:O5'	2.26	0.53
25:DD:56:LYS:HB3	25:DD:56:LYS:NZ	2.24	0.53
59:DF:101:ARG:HH11	59:DF:138:PRO:HB3	1.74	0.53
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.21	0.53
33:DL:3:LEU:O	33:DL:4:ASN:C	2.47	0.53
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.74	0.53
45:DX:36:ARG:HA	45:DX:47:THR:HA	1.90	0.53
1:AA:108:G:H2'	1:AA:109:A:OP1	2.08	0.53
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.09	0.53
1:AA:427:U:C4	1:AA:428:G:C6	2.96	0.53
1:AA:662:U:H2'	1:AA:663:A:C8	2.44	0.53
3:AC:24:ASN:HD22	3:AC:25:THR:H	1.55	0.53
14:AN:14:ALA:HB1	14:AN:18:LYS:NZ	2.24	0.53
15:AO:23:SER:HB3	15:AO:26:VAL:HG23	1.89	0.53
19:AS:28:LYS:HB3	19:AS:29:PRO:CD	2.38	0.53
20:AT:79:THR:O	20:AT:82:ILE:HG13	2.08	0.53
21:AU:4:LYS:O	21:AU:4:LYS:HD2	2.08	0.53
50:B2:12:ARG:HB2	50:B2:12:ARG:CZ	2.38	0.53
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.43	0.53
25:BD:119:ALA:HB2	25:BD:165:MET:HB3	1.90	0.53
26:BE:119:ILE:O	26:BE:187:VAL:O	2.25	0.53
29:BH:80:ILE:HG23	29:BH:147:VAL:HG21	1.90	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.24	0.53
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.24	0.53
47:BZ:29:ARG:C	47:BZ:30:ARG:HG3	2.29	0.53
47:BZ:2:LYS:HE2	47:BZ:2:LYS:O	2.09	0.53
53:CA:1242:G:C2	53:CA:1243:C:H1'	2.44	0.53
53:CA:1346:A:C8	53:CA:1348:U:N3	2.77	0.53
53:CA:177:G:O2'	53:CA:1448:C:H4'	2.09	0.53
53:CA:1493:A:C8	53:CA:1493:A:OP1	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:166:U:OP2	53:CA:166:U:H6	1.92	0.53
53:CA:384:G:H2'	53:CA:385:C:C6	2.44	0.53
53:CA:537:G:H2'	53:CA:538:G:C8	2.44	0.53
2:CB:115:ASP:O	2:CB:119:GLN:HB2	2.08	0.53
4:CD:159:GLU:OE2	4:CD:160:LEU:HD22	2.08	0.53
53:CA:1523:G:P	11:CK:124:LYS:HZ3	2.32	0.53
21:CU:16:ARG:HD2	21:CU:19:LYS:NZ	2.24	0.53
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.71	0.53
57:DA:1189:A:H2'	57:DA:1190:G:O4'	2.09	0.53
57:DA:1255:U:H2'	26:DE:68:ALA:HB2	1.91	0.53
57:DA:1607:C:H4'	57:DA:1608:A:O5'	2.09	0.53
57:DA:1638:C:H4'	57:DA:2710:C:O2	2.09	0.53
57:DA:370:G:C6	57:DA:424:G:C5	2.97	0.53
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.74	0.53
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.38	0.53
57:DA:1008:A:H5''	31:DJ:37:ARG:HH22	1.74	0.53
32:DK:70:ARG:HH11	32:DK:76:VAL:CG2	2.21	0.53
34:DM:38:ARG:O	34:DM:126:ILE:HG21	2.08	0.53
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.09	0.53
35:DN:96:ARG:HG2	35:DN:98:LEU:HD13	1.91	0.53
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.08	0.53
38:DQ:91:ARG:NE	39:DR:11:GLN:HB2	2.24	0.53
39:DR:14:VAL:HG22	39:DR:15:SER:O	2.09	0.53
57:DA:1614:A:N6	40:DS:91:GLY:HA2	2.24	0.53
42:DU:39:ASN:HB3	42:DU:62:ALA:HB3	1.91	0.53
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.91	0.53
57:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.38	0.53
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.43	0.53
1:AA:107:G:C2'	1:AA:108:G:H5'	2.39	0.53
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.44	0.53
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.09	0.53
1:AA:374:A:H5''	1:AA:452:A:N1	2.24	0.53
1:AA:600:A:H2'	1:AA:601:G:C8	2.44	0.53
1:AA:66:A:O4'	1:AA:173:U:C4	2.62	0.53
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.09	0.53
12:AL:87:LYS:HB2	12:AL:87:LYS:NZ	2.24	0.53
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.90	0.53
22:BA:1298:C:C2	22:BA:1643:G:N2	2.77	0.53
22:BA:2068:U:H5''	22:BA:2068:U:H6	1.74	0.53
22:BA:2193:G:H2'	22:BA:2194:U:C6	2.44	0.53
22:BA:2319:G:HO2'	22:BA:2320:U:H5	1.57	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2681:C:C2	22:BA:2724:U:O4	2.61	0.53
22:BA:2729:G:H8	22:BA:2729:G:H5''	1.74	0.53
22:BA:933:A:C2'	22:BA:933:A:N3	2.72	0.53
23:BB:46:A:C5	23:BB:47:C:C5	2.97	0.53
24:BC:134:ILE:O	24:BC:166:ARG:NH1	2.41	0.53
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.09	0.53
27:BF:105:ILE:O	27:BF:109:ARG:HD3	2.08	0.53
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.44	0.53
38:BQ:86:SER:HB2	39:BR:50:GLY:C	2.29	0.53
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.90	0.53
44:BW:9:THR:O	44:BW:10:ARG:O	2.27	0.53
53:CA:198:G:N3	53:CA:199:A:C8	2.77	0.53
53:CA:295:C:C5	53:CA:296:U:C5	2.97	0.53
53:CA:552:U:C2	53:CA:553:A:C8	2.97	0.53
53:CA:85:U:O2	53:CA:85:U:O4'	2.27	0.53
53:CA:967:C:N3	53:CA:968:A:N6	2.56	0.53
53:CA:994:A:O2'	53:CA:995:C:H6	1.92	0.53
2:CB:114:LYS:HA	2:CB:117:GLU:CG	2.30	0.53
2:CB:128:LEU:HB3	2:CB:131:LYS:HB3	1.89	0.53
3:CC:15:LYS:HG3	3:CC:16:PRO:HD2	1.91	0.53
4:CD:8:LEU:HD22	4:CD:21:LYS:HD2	1.91	0.53
6:CF:6:ILE:HD12	6:CF:6:ILE:H	1.72	0.53
57:DA:1049:C:H2'	57:DA:1050:A:H8	1.74	0.53
57:DA:1329:U:HO2'	57:DA:1330:C:P	2.32	0.53
57:DA:1388:G:H2'	57:DA:1389:G:H8	1.73	0.53
57:DA:1735:A:H2'	57:DA:1736:U:H6	1.74	0.53
57:DA:2287:A:HO2'	57:DA:2288:A:H3'	1.73	0.53
57:DA:234:U:O2'	57:DA:235:U:C5'	2.52	0.53
57:DA:298:G:HO2'	57:DA:322:A:H2	1.57	0.53
57:DA:716:A:C3'	57:DA:717:C:H5''	2.39	0.53
57:DA:718:A:C3'	57:DA:719:C:H5'	2.39	0.53
57:DA:804:A:H2'	57:DA:806:C:C4	2.44	0.53
24:DC:28:PRO:HG3	24:DC:62:ARG:NH1	2.23	0.53
25:DD:24:VAL:HG23	25:DD:190:LYS:HA	1.90	0.53
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.21	0.53
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.44	0.53
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.09	0.53
34:DM:97:GLN:HB2	34:DM:98:PRO:HD2	1.91	0.53
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.74	0.53
57:DA:1341:G:C2	41:DT:84:TYR:CE2	2.97	0.53
46:DY:28:LEU:HD22	46:DY:28:LEU:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1102:A:O2'	1:AA:1103:C:H5'	2.09	0.52
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.08	0.52
1:AA:197:A:H4'	1:AA:198:G:O5'	2.07	0.52
1:AA:299:G:C6	1:AA:300:A:C6	2.96	0.52
1:AA:508:U:O2'	1:AA:509:A:H8	1.91	0.52
1:AA:978:A:OP2	1:AA:1362:A:N6	2.42	0.52
3:AC:119:ILE:CG2	3:AC:197:VAL:HG11	2.38	0.52
4:AD:113:ALA:O	4:AD:116:LEU:HB2	2.08	0.52
12:AL:82:ARG:HB2	12:AL:97:VAL:HG23	1.91	0.52
22:BA:1538:G:H2'	22:BA:1539:U:C6	2.44	0.52
22:BA:1639:C:C2'	22:BA:1640:A:H5'	2.40	0.52
22:BA:1955:U:H5	22:BA:2557:G:N2	2.08	0.52
22:BA:2334:U:H4'	22:BA:2335:A:OP2	2.09	0.52
22:BA:2525:G:C2	22:BA:2539:C:C2	2.97	0.52
22:BA:2728:U:HO2'	22:BA:2729:G:H8	1.53	0.52
22:BA:403:U:O2'	22:BA:404:A:OP2	2.18	0.52
22:BA:88:G:C2	22:BA:89:A:C8	2.97	0.52
22:BA:936:A:H2'	22:BA:937:C:C6	2.44	0.52
22:BA:946:C:O2'	22:BA:947:A:C5'	2.57	0.52
24:BC:69:ASN:O	24:BC:70:LYS:C	2.46	0.52
26:BE:131:THR:HG23	26:BE:160:ALA:HA	1.89	0.52
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.08	0.52
27:BF:123:GLY:HA2	27:BF:162:ASP:OD2	2.09	0.52
32:BK:99:ILE:CG2	32:BK:100:PHE:N	2.72	0.52
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.10	0.52
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.09	0.52
53:CA:1134:G:C5	53:CA:1135:U:H1'	2.44	0.52
53:CA:1190:G:H5'	3:CC:175:HIS:NE2	2.24	0.52
53:CA:1301:U:O2'	53:CA:1302:C:C6	2.60	0.52
53:CA:17:U:H2'	53:CA:18:C:C6	2.43	0.52
53:CA:192:A:H8	53:CA:192:A:O5'	1.92	0.52
53:CA:284:C:H2'	53:CA:285:C:H6	1.73	0.52
53:CA:560:A:C8	53:CA:566:G:C4	2.98	0.52
53:CA:614:C:N3	53:CA:615:G:C8	2.77	0.52
53:CA:738:C:C5	53:CA:739:C:H5	2.27	0.52
4:CD:100:VAL:HG21	4:CD:136:VAL:HG21	1.91	0.52
4:CD:93:LEU:O	4:CD:96:ARG:HG3	2.09	0.52
5:CE:104:ILE:N	5:CE:122:VAL:H	2.00	0.52
55:CM:64:VAL:HG12	55:CM:65:GLU:N	2.20	0.52
14:CN:100:TRP:CD1	14:CN:100:TRP:C	2.83	0.52
14:CN:33:VAL:HG22	14:CN:40:ARG:NH2	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:7:THR:O	15:CO:11:VAL:HG23	2.09	0.52
21:CU:34:ARG:O	21:CU:35:GLU:O	2.26	0.52
57:DA:2886:A:N7	48:D0:39:ARG:NE	2.57	0.52
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.30	0.52
57:DA:1010:A:O2'	57:DA:1011:G:H5''	2.09	0.52
57:DA:1213:A:H2'	57:DA:1214:A:C8	2.43	0.52
57:DA:1364:G:N2	57:DA:1367:A:OP2	2.42	0.52
57:DA:1441:G:C2	57:DA:1442:U:C2	2.97	0.52
57:DA:2266:A:O2'	57:DA:2267:A:OP2	2.25	0.52
57:DA:2700:A:C2	57:DA:2708:G:C2	2.97	0.52
57:DA:322:A:H3'	26:DE:163:ASN:HD21	1.74	0.52
57:DA:727:A:C2'	57:DA:728:G:C8	2.92	0.52
58:DB:57:A:C2'	58:DB:58:A:H8	2.22	0.52
24:DC:32:LEU:O	24:DC:33:LEU:HD23	2.09	0.52
57:DA:1567:G:H5''	24:DC:84:PRO:HG3	1.90	0.52
59:DF:45:ASP:C	59:DF:47:LYS:H	2.12	0.52
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.90	0.52
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.29	0.52
57:DA:1277:G:O2'	35:DN:24:MET:HB2	2.09	0.52
35:DN:2:ARG:HD2	35:DN:2:ARG:O	2.09	0.52
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.09	0.52
57:DA:508:A:N6	40:DS:9:HIS:NE2	2.56	0.52
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.90	0.52
1:AA:1399:C:H4'	1:AA:1400:C:O5'	2.08	0.52
1:AA:809:G:C6	1:AA:810:C:C5	2.97	0.52
3:AC:6:PRO:HG2	3:AC:183:TYR:CG	2.44	0.52
5:AE:149:PRO:HG2	5:AE:150:GLU:HG2	1.92	0.52
13:AM:113:LYS:H	13:AM:114:PRO:HD2	1.75	0.52
14:AN:60:ARG:HA	63:AN:302:HOH:O	2.09	0.52
15:AO:16:ARG:HD3	15:AO:20:ASP:OD2	2.08	0.52
17:AQ:40:THR:HG22	17:AQ:41:THR:N	2.25	0.52
48:B0:27:LEU:H	48:B0:27:LEU:CD2	2.22	0.52
50:B2:12:ARG:NH2	50:B2:12:ARG:HB2	2.25	0.52
22:BA:1833:C:C5	22:BA:1834:U:C5	2.98	0.52
22:BA:2333:A:H4'	22:BA:2334:U:O5'	2.09	0.52
22:BA:2403:C:C4	22:BA:2415:G:C2	2.98	0.52
22:BA:2673:G:C2	22:BA:2674:G:C8	2.97	0.52
22:BA:2725:A:O2'	22:BA:2726:A:H2'	2.10	0.52
22:BA:2856:A:N6	22:BA:2857:G:C6	2.78	0.52
22:BA:323:C:N4	22:BA:333:G:C5	2.77	0.52
22:BA:364:C:O2'	22:BA:365:U:H5'	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:745:G:C2'	22:BA:746:U:H5'	2.40	0.52
22:BA:963:U:H2'	22:BA:964:C:C6	2.45	0.52
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.23	0.52
26:BE:75:SER:HB3	26:BE:78:TRP:HB2	1.91	0.52
27:BF:105:ILE:C	27:BF:108:PRO:HD2	2.30	0.52
41:BT:15:HIS:O	41:BT:17:SER:N	2.43	0.52
53:CA:1202:U:H2'	53:CA:1203:C:C6	2.45	0.52
53:CA:1279:G:H5'	10:CJ:9:ARG:HH12	1.74	0.52
53:CA:320:A:C2	53:CA:334:C:N3	2.78	0.52
53:CA:345:C:H4'	53:CA:346:G:C5'	2.38	0.52
53:CA:765:G:O6	53:CA:811:C:C5	2.63	0.52
53:CA:577:G:H4'	53:CA:816:A:H2'	1.92	0.52
3:CC:116:ALA:HB2	3:CC:199:VAL:HG21	1.91	0.52
55:CM:68:LEU:O	55:CM:72:ILE:HG22	2.09	0.52
6:CF:5:GLU:OE2	18:CR:23:LYS:HE2	2.09	0.52
48:D0:29:VAL:HG21	48:D0:34:GLY:HA2	1.89	0.52
48:D0:37:HIS:HB2	48:D0:41:HIS:HE1	1.74	0.52
57:DA:1264:A:C6	57:DA:1265:A:N6	2.77	0.52
57:DA:1649:G:C6	57:DA:2009:A:C6	2.97	0.52
57:DA:1794:A:H1'	57:DA:1900:A:C2	2.44	0.52
57:DA:53:A:C2	57:DA:179:C:H4'	2.44	0.52
57:DA:1838:C:C2	57:DA:1899:A:C2	2.98	0.52
57:DA:1945:G:H2'	57:DA:1946:U:C6	2.44	0.52
57:DA:2400:G:H2'	57:DA:2401:U:O4'	2.09	0.52
57:DA:2623:G:H4'	57:DA:2825:G:H8	1.74	0.52
57:DA:632:A:H4'	33:DL:68:SER:HA	1.91	0.52
57:DA:806:C:H2'	57:DA:807:U:H6	1.74	0.52
57:DA:836:G:C5	57:DA:837:C:C4	2.96	0.52
57:DA:929:U:O2'	57:DA:930:G:H5'	2.09	0.52
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.91	0.52
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.73	0.52
34:DM:119:LEU:HD23	34:DM:119:LEU:O	2.09	0.52
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.09	0.52
34:DM:27:SER:N	34:DM:66:ARG:HH22	2.07	0.52
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.91	0.52
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.09	0.52
57:DA:748:G:O5'	40:DS:89:ALA:HB2	2.08	0.52
41:DT:20:ALA:HB1	41:DT:31:VAL:HG11	1.90	0.52
44:DW:24:ARG:HA	44:DW:66:VAL:H	1.74	0.52
46:DY:57:LEU:O	46:DY:57:LEU:HD13	2.09	0.52
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1118:U:H2'	1:AA:1119:C:H6	1.74	0.52
1:AA:1384:C:H2'	1:AA:1385:G:C8	2.44	0.52
1:AA:76:G:C2	1:AA:95:C:N3	2.77	0.52
2:AB:100:LEU:HB3	2:AB:174:GLU:HG2	1.90	0.52
3:AC:55:VAL:O	3:AC:65:VAL:HA	2.09	0.52
4:AD:57:LYS:HG2	4:AD:202:LEU:CD2	2.38	0.52
5:AE:121:ASN:ND2	5:AE:122:VAL:HG13	2.24	0.52
9:AI:12:LYS:H	9:AI:105:ARG:HH12	1.55	0.52
12:AL:86:VAL:CG1	12:AL:89:LEU:HD23	2.39	0.52
22:BA:1060:U:H5''	22:BA:1061:U:OP1	2.09	0.52
22:BA:1639:C:O2'	22:BA:1640:A:H5'	2.09	0.52
22:BA:2019:A:H4'	38:BQ:33:VAL:HG21	1.91	0.52
22:BA:2109:U:O4	22:BA:2110:G:C5	2.62	0.52
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.91	0.52
22:BA:2748:A:O3'	28:BG:3:VAL:HG11	2.09	0.52
22:BA:2841:C:H2'	22:BA:2842:G:C8	2.44	0.52
22:BA:324:A:N6	22:BA:339:U:O4'	2.42	0.52
22:BA:674:G:H5''	26:BE:71:GLY:HA3	1.91	0.52
22:BA:907:G:H2'	22:BA:908:C:H5'	1.91	0.52
24:BC:20:ASN:CG	24:BC:23:LEU:HD23	2.30	0.52
24:BC:80:LEU:HD13	24:BC:109:LEU:HG	1.91	0.52
29:BH:27:ARG:HH12	29:BH:38:PRO:HG3	1.74	0.52
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.54	0.52
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.74	0.52
32:BK:111:LYS:H	32:BK:111:LYS:HE2	1.72	0.52
37:BP:92:ARG:O	37:BP:92:ARG:HG3	2.10	0.52
38:BQ:85:ALA:O	38:BQ:86:SER:O	2.27	0.52
53:CA:1239:A:H3'	54:CG:118:ARG:NH2	2.24	0.52
53:CA:587:G:H4'	8:CH:3:GLN:CA	2.37	0.52
54:CG:99:ALA:O	54:CG:103:ILE:HG13	2.08	0.52
10:CJ:40:ILE:HG22	10:CJ:42:LEU:CD1	2.39	0.52
12:CL:97:VAL:HG23	12:CL:100:ALA:HB3	1.91	0.52
55:CM:18:LEU:H	55:CM:18:LEU:HD12	1.74	0.52
57:DA:1161:C:H2'	57:DA:1162:G:H8	1.74	0.52
57:DA:1204:A:O4'	57:DA:1206:G:C5	2.63	0.52
57:DA:1337:G:C8	57:DA:1337:G:OP2	2.62	0.52
57:DA:1388:G:O2'	57:DA:1389:G:C5'	2.54	0.52
57:DA:1491:G:C2	57:DA:1492:G:C8	2.98	0.52
57:DA:2011:U:H2'	57:DA:2012:G:O4'	2.09	0.52
57:DA:2021:C:H2'	57:DA:2021:C:O2	2.09	0.52
57:DA:2185:U:H2'	57:DA:2186:G:H8	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:231:A:O2'	57:DA:232:G:H5'	2.10	0.52
57:DA:247:G:H4'	57:DA:386:G:C4	2.44	0.52
57:DA:2812:G:C6	57:DA:2813:A:C6	2.97	0.52
57:DA:379:G:C5	57:DA:396:G:C6	2.97	0.52
57:DA:58:G:N2	57:DA:59:U:H1'	2.24	0.52
24:DC:9:SER:OG	24:DC:12:ARG:HB2	2.08	0.52
25:DD:51:THR:HG21	25:DD:75:ALA:O	2.09	0.52
26:DE:65:THR:HG23	26:DE:67:ARG:HG3	1.92	0.52
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.24	0.52
59:DF:177:ARG:CZ	59:DF:178:LYS:H	2.22	0.52
37:DP:13:LYS:H	37:DP:13:LYS:HD2	1.74	0.52
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.75	0.52
43:DV:77:VAL:HG23	43:DV:89:ILE:CG2	2.40	0.52
1:AA:1098:C:C2	1:AA:1099:G:C8	2.97	0.52
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.39	0.52
1:AA:373:A:C2	1:AA:374:A:C8	2.97	0.52
1:AA:374:A:H2'	1:AA:375:U:C6	2.44	0.52
1:AA:511:C:H2'	1:AA:534:U:O2	2.09	0.52
1:AA:994:A:C2	14:AN:4:SER:HB2	2.44	0.52
2:AB:105:THR:O	2:AB:105:THR:HG22	2.10	0.52
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CB	2.37	0.52
21:AU:7:GLU:HB2	21:AU:11:PHE:CE1	2.45	0.52
22:BA:26:G:H1'	22:BA:514:A:N6	2.24	0.52
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.09	0.52
22:BA:581:C:O2'	22:BA:582:A:H5'	2.10	0.52
22:BA:915:C:H5''	22:BA:915:C:C6	2.42	0.52
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.19	0.52
27:BF:12:VAL:HG13	27:BF:13:LYS:H	1.74	0.52
27:BF:33:ILE:HG12	27:BF:155:ILE:HG12	1.91	0.52
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.35	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	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
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.09	0.52
36:BO:106:LEU:HD12	36:BO:106:LEU:C	2.29	0.52
36:BO:67:ASN:O	36:BO:69:ASP:N	2.42	0.52
46:BY:53:VAL:O	46:BY:57:LEU:HD23	2.09	0.52
53:CA:1093:A:C5	53:CA:1095:U:O4'	2.62	0.52
53:CA:1129:C:O2'	53:CA:1130:A:H8	1.88	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1249:C:H4'	9:CI:74:GLN:HE22	1.74	0.52
53:CA:1458:G:O3'	20:CT:22:SER:CA	2.53	0.52
53:CA:183:C:H2'	53:CA:183:C:O2	2.08	0.52
53:CA:733:G:O2'	53:CA:734:G:H5''	2.09	0.52
2:CB:170:ILE:O	2:CB:174:GLU:HG3	2.09	0.52
2:CB:47:PRO:HA	2:CB:50:ASN:HB2	1.91	0.52
3:CC:33:ASP:O	3:CC:37:LYS:HG2	2.10	0.52
10:CJ:33:GLY:O	10:CJ:35:GLN:N	2.42	0.52
12:CL:70:GLY:C	12:CL:98:ARG:HH22	2.13	0.52
14:CN:6:LYS:O	14:CN:10:VAL:HG23	2.08	0.52
20:CT:4:LYS:HE3	20:CT:5:SER:N	2.15	0.52
51:D3:50:SER:O	51:D3:52:GLY:N	2.42	0.52
57:DA:1087:G:C5	57:DA:1089:A:C2	2.97	0.52
57:DA:749:A:H1'	57:DA:1618:A:OP1	2.08	0.52
57:DA:1866:A:H2'	57:DA:1867:G:O4'	2.10	0.52
57:DA:1944:U:O4'	57:DA:1955:U:H1'	2.09	0.52
57:DA:2077:A:OP1	57:DA:2238:G:N1	2.41	0.52
57:DA:2248:C:H3'	57:DA:2249:U:C6	2.45	0.52
57:DA:858:G:H2'	57:DA:2268:A:N3	2.25	0.52
57:DA:2290:G:C5	57:DA:2291:U:C4	2.98	0.52
57:DA:2738:A:H2	57:DA:2766:A:H61	1.57	0.52
57:DA:2748:A:C4	57:DA:2757:A:N6	2.77	0.52
57:DA:2812:G:H2'	57:DA:2813:A:C8	2.45	0.52
57:DA:40:U:C4	57:DA:41:C:C4	2.97	0.52
57:DA:416:U:C4	57:DA:417:C:C4	2.97	0.52
57:DA:430:A:OP2	57:DA:431:U:H5	1.92	0.52
57:DA:64:A:H8	57:DA:64:A:O5'	1.93	0.52
57:DA:736:C:O5'	57:DA:736:C:H6	1.92	0.52
57:DA:845:A:N1	57:DA:932:U:O2	2.42	0.52
25:DD:111:GLY:HA3	25:DD:194:PRO:HG2	1.89	0.52
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.08	0.52
37:DP:77:SER:OG	37:DP:79:VAL:HG22	2.09	0.52
40:DS:66:ILE:HD13	40:DS:66:ILE:N	2.23	0.52
41:DT:29:THR:H	41:DT:87:LEU:CB	2.19	0.52
1:AA:1253:G:O2'	1:AA:1254:A:H5'	2.10	0.52
1:AA:1320:C:N4	19:AS:35:ARG:HB2	2.25	0.52
1:AA:975:A:H8	1:AA:1357:A:HO2'	1.56	0.52
1:AA:188:C:O2	1:AA:188:C:H2'	2.08	0.52
2:AB:75:ALA:O	2:AB:79:VAL:HG23	2.09	0.52
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.10	0.52
5:AE:86:GLY:O	5:AE:93:VAL:HB	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:93:LYS:CE	8:AH:116:ARG:HH12	2.23	0.52
8:AH:105:THR:CG2	8:AH:120:LEU:HD13	2.32	0.52
13:AM:3:ILE:HA	13:AM:56:ARG:NH1	2.24	0.52
48:B0:45:ASP:O	48:B0:52:LYS:HE3	2.09	0.52
22:BA:1524:G:O2'	22:BA:1525:A:H5'	2.10	0.52
22:BA:49:A:N6	22:BA:177:G:C4	2.78	0.52
22:BA:2345:G:C4	22:BA:2381:A:C2	2.97	0.52
22:BA:301:G:H1'	22:BA:302:C:C6	2.44	0.52
22:BA:484:C:H2'	22:BA:485:C:H6	1.74	0.52
22:BA:777:G:O2'	22:BA:778:G:H5'	2.08	0.52
24:BC:141:HIS:CB	24:BC:190:THR:HB	2.36	0.52
25:BD:100:LEU:HB3	25:BD:101:PHE:CD1	2.45	0.52
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.39	0.52
28:BG:84:LYS:O	28:BG:85:LYS:HB2	2.08	0.52
29:BH:96:THR:HG23	29:BH:96:THR:O	2.10	0.52
33:BL:7:SER:HB2	33:BL:8:PRO:CD	2.40	0.52
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.83	0.52
53:CA:1029:U:H4'	53:CA:1032:G:H1	1.73	0.52
53:CA:1073:U:C2	53:CA:1074:G:C8	2.97	0.52
53:CA:1102:A:H5''	53:CA:1102:A:C8	2.41	0.52
53:CA:115:G:C2	53:CA:289:G:N7	2.77	0.52
5:CE:137:ARG:HA	5:CE:140:ILE:HG13	1.91	0.52
6:CF:91:ARG:O	6:CF:93:LYS:HE3	2.10	0.52
8:CH:1:SER:C	8:CH:3:GLN:N	2.63	0.52
10:CJ:80:THR:HB	10:CJ:82:LYS:NZ	2.24	0.52
57:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.45	0.52
57:DA:1079:C:O2'	57:DA:1080:A:O4'	2.28	0.52
57:DA:1130:U:O2'	57:DA:1131:G:H8	1.93	0.52
57:DA:1157:G:H2'	57:DA:1158:C:C6	2.44	0.52
57:DA:1649:G:H2'	57:DA:1650:A:H8	1.75	0.52
57:DA:1775:U:H2'	57:DA:1776:G:O5'	2.08	0.52
57:DA:2191:A:H3'	57:DA:2192:U:H6	1.73	0.52
57:DA:223:A:C5	57:DA:422:A:N7	2.77	0.52
57:DA:2049:G:N2	57:DA:2620:C:C2	2.77	0.52
57:DA:2748:A:C2	57:DA:2757:A:C5	2.97	0.52
57:DA:480:A:H3'	57:DA:481:G:H5'	1.89	0.52
57:DA:648:G:H2'	57:DA:649:G:C8	2.44	0.52
57:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.45	0.52
57:DA:929:U:H1'	47:DZ:25:GLY:O	2.09	0.52
58:DB:94:A:OP1	43:DV:19:ARG:CD	2.56	0.52
24:DC:170:TYR:HD2	24:DC:183:VAL:O	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.09	0.52
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.09	0.52
44:DW:70:VAL:O	44:DW:70:VAL:HG22	2.10	0.52
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.24	0.52
1:AA:1053:G:C6	1:AA:1199:U:C2	2.98	0.52
1:AA:1073:U:O2'	2:AB:102:ASN:ND2	2.43	0.52
1:AA:1084:G:C6	1:AA:1085:U:O4	2.62	0.52
1:AA:122:G:H2'	1:AA:123:U:C6	2.44	0.52
1:AA:194:C:O2'	1:AA:195:A:H5'	2.09	0.52
2:AB:141:GLU:HA	2:AB:144:GLU:HB2	1.91	0.52
2:AB:165:ALA:HA	2:AB:172:ILE:HD11	1.92	0.52
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.30	0.52
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.74	0.52
3:AC:22:PHE:CD1	10:AJ:12:ALA:HA	2.45	0.52
12:AL:29:LYS:O	12:AL:80:LEU:HD12	2.10	0.52
16:AP:20:VAL:HG21	16:AP:32:PHE:HB2	1.90	0.52
48:B0:53:VAL:O	48:B0:54:ILE:O	2.26	0.52
49:B1:9:LYS:O	49:B1:50:GLU:HG3	2.09	0.52
51:B3:21:PHE:HB2	51:B3:49:VAL:HG11	1.90	0.52
22:BA:215:G:C4'	22:BA:216:A:H4'	2.40	0.52
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.74	0.52
22:BA:2319:G:O2'	22:BA:2320:U:H5	1.92	0.52
22:BA:2320:U:H4'	22:BA:2321:U:H5''	1.91	0.52
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.84	0.52
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.57	0.52
22:BA:341:C:H2'	22:BA:342:A:O4'	2.10	0.52
22:BA:843:G:O2'	22:BA:844:A:H5'	2.10	0.52
22:BA:959:A:H62	34:BM:82:MET:HE3	1.75	0.52
22:BA:976:G:C2	22:BA:977:G:N7	2.77	0.52
24:BC:139:THR:O	24:BC:161:VAL:O	2.27	0.52
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.42	0.52
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.28	0.52
32:BK:20:MET:O	32:BK:41:ILE:HG13	2.09	0.52
38:BQ:75:TYR:CZ	38:BQ:79:ILE:HG13	2.43	0.52
43:BV:80:HIS:HD2	43:BV:83:LYS:CB	2.22	0.52
53:CA:82:G:C5	53:CA:89:U:C5	2.98	0.52
53:CA:91:U:C4	53:CA:92:U:C4	2.98	0.52
2:CB:25:LYS:HD2	2:CB:25:LYS:H	1.75	0.52
3:CC:61:LYS:O	3:CC:96:VAL:HB	2.09	0.52
10:CJ:52:LEU:HB2	14:CN:80:ARG:HE	1.75	0.52
15:CO:54:GLY:O	15:CO:58:MET:HG3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:24:LYS:CG	21:CU:25:ALA:N	2.55	0.52
57:DA:1993:U:O2'	57:DA:1994:C:C5'	2.57	0.52
57:DA:2218:G:H2'	57:DA:2219:U:H6	1.75	0.52
57:DA:2668:G:O2'	57:DA:2669:G:O5'	2.27	0.52
57:DA:2851:A:C2'	57:DA:2852:G:C8	2.92	0.52
57:DA:30:G:C5	57:DA:31:C:C4	2.98	0.52
57:DA:68:G:C6	57:DA:69:C:C4	2.97	0.52
57:DA:720:U:H2'	57:DA:721:A:H8	1.74	0.52
24:DC:19:VAL:O	24:DC:19:VAL:HG12	2.09	0.52
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.10	0.52
57:DA:659:G:H4'	26:DE:95:LYS:HD3	1.91	0.52
59:DF:103:ILE:HG21	59:DF:173:ASP:O	2.09	0.52
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.09	0.52
31:DJ:106:LYS:HE2	31:DJ:109:LEU:HB2	1.91	0.52
1:AA:1279:G:C2'	1:AA:1279:G:N3	2.71	0.52
1:AA:215:C:O2'	1:AA:216:U:H5'	2.09	0.52
1:AA:373:A:HO2'	1:AA:374:A:H5'	1.73	0.52
1:AA:563:A:C2'	1:AA:563:A:N3	2.67	0.52
7:AG:110:ARG:HH11	7:AG:110:ARG:HB2	1.75	0.52
8:AH:1:SER:C	8:AH:3:GLN:N	2.62	0.52
9:AI:128:LYS:CD	9:AI:129:ARG:H	2.23	0.52
17:AQ:45:VAL:HG21	17:AQ:60:ILE:CD1	2.27	0.52
48:B0:33:SER:O	48:B0:34:GLY:O	2.28	0.52
22:BA:1062:G:O2'	22:BA:1063:G:C8	2.63	0.52
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.09	0.52
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.75	0.52
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.33	0.52
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.45	0.52
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.45	0.52
22:BA:747:U:C4	22:BA:2613:U:C4	2.98	0.52
22:BA:581:C:H2'	22:BA:582:A:H8	1.75	0.52
22:BA:983:A:C6	22:BA:984:A:C2	2.98	0.52
22:BA:947:A:O2'	22:BA:984:A:C2	2.58	0.52
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.88	0.52
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.91	0.52
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.91	0.52
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	2.10	0.52
43:BV:10:LYS:HZ2	43:BV:11:GLU:N	2.07	0.52
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.21	0.52
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.10	0.52
53:CA:1301:U:O2'	53:CA:1302:C:H5	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:725:G:H2'	53:CA:726:C:H6	1.75	0.52
2:CB:9:LEU:HD23	2:CB:9:LEU:H	1.74	0.52
4:CD:72:ARG:HA	4:CD:203:TYR:HE1	1.74	0.52
5:CE:80:LEU:O	5:CE:81:GLN:CB	2.57	0.52
54:CG:4:ARG:HD2	54:CG:5:VAL:H	1.74	0.52
53:CA:36:C:H4'	12:CL:118:VAL:O	2.10	0.52
55:CM:36:ALA:HB3	55:CM:55:LEU:HD11	1.92	0.52
55:CM:91:ARG:HD3	55:CM:91:ARG:O	2.09	0.52
56:CP:48:GLU:CD	56:CP:51:ARG:HB2	2.30	0.52
57:DA:1206:G:H2'	57:DA:1207:C:C6	2.45	0.52
57:DA:1291:C:O2'	57:DA:1292:G:O4'	2.27	0.52
57:DA:1681:G:O2'	57:DA:1762:A:O2'	2.27	0.52
57:DA:1734:G:HO2'	57:DA:1735:A:H8	1.55	0.52
57:DA:2314:A:C2	57:DA:2315:G:C5	2.97	0.52
57:DA:1255:U:H5'	57:DA:2502:G:H22	1.74	0.52
57:DA:54:G:H2'	57:DA:55:G:O4'	2.08	0.52
26:DE:105:LEU:O	26:DE:109:LEU:HB2	2.09	0.52
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.10	0.52
57:DA:797:G:OP1	26:DE:57:LYS:HG2	2.10	0.52
59:DF:122:ASP:HB2	59:DF:126:ASN:HB2	1.92	0.52
28:DG:149:ALA:O	28:DG:151:ARG:N	2.43	0.52
29:DH:89:LYS:HD2	29:DH:124:THR:HA	1.92	0.52
32:DK:17:ARG:O	32:DK:45:GLU:HB3	2.10	0.52
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.92	0.52
33:DL:93:ASN:CG	33:DL:94:THR:N	2.62	0.52
36:DO:29:HIS:HB3	36:DO:36:TYR:HB2	1.92	0.52
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.73	0.52
43:DV:15:GLY:O	43:DV:19:ARG:HG3	2.10	0.52
57:DA:857:G:H1'	44:DW:19:ARG:HE	1.71	0.52
1:AA:1158:C:C2'	1:AA:1158:C:O2	2.58	0.52
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.74	0.52
1:AA:901:A:C5	1:AA:902:G:H1'	2.45	0.52
1:AA:89:U:O2'	1:AA:90:C:C5'	2.57	0.52
1:AA:945:G:C6	1:AA:1337:G:C5	2.98	0.52
8:AH:48:PHE:O	8:AH:49:LYS:HB2	2.09	0.52
10:AJ:21:ALA:HA	10:AJ:24:GLU:OE2	2.10	0.52
12:AL:106:VAL:CG2	12:AL:116:TYR:HB3	2.40	0.52
49:B1:34:GLU:O	49:B1:35:LEU:HB3	2.09	0.52
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.09	0.52
22:BA:1079:C:C4	22:BA:1080:A:N7	2.78	0.52
22:BA:136:G:H2'	22:BA:137:U:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:163:C:HO2'	22:BA:164:C:C5'	2.22	0.52
22:BA:309:A:O3'	42:BU:15:GLY:HA2	2.10	0.52
22:BA:386:G:H4'	22:BA:387:U:OP2	2.09	0.52
22:BA:408:G:O2'	22:BA:409:G:H5'	2.10	0.52
22:BA:574:A:H4'	22:BA:575:A:O5'	2.10	0.52
24:BC:159:THR:HG1	24:BC:194:VAL:HG11	1.74	0.52
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.30	0.52
32:BK:76:VAL:HB	37:BP:72:VAL:HG23	1.91	0.52
34:BM:42:THR:O	34:BM:44:ARG:N	2.42	0.52
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.25	0.52
45:BX:29:LEU:HD23	45:BX:29:LEU:H	1.74	0.52
53:CA:1017:U:OP2	53:CA:1017:U:H6	1.92	0.52
53:CA:1262:C:H2'	53:CA:1263:C:H5'	1.91	0.52
53:CA:1269:A:H2	53:CA:1312:G:H21	1.58	0.52
53:CA:569:C:H5''	53:CA:570:G:OP1	2.09	0.52
4:CD:61:ARG:HG3	4:CD:71:PHE:CD2	2.44	0.52
10:CJ:44:THR:OG1	10:CJ:70:HIS:CE1	2.63	0.52
55:CM:106:ARG:HA	55:CM:110:GLY:O	2.10	0.52
17:CQ:37:ILE:HG13	17:CQ:38:LYS:O	2.10	0.52
21:CU:14:ALA:O	21:CU:15:LEU:O	2.28	0.52
50:D2:38:GLY:O	50:D2:42:LEU:HD13	2.10	0.52
57:DA:125:A:H5''	50:D2:19:ARG:HB2	1.92	0.52
57:DA:1512:C:H2'	57:DA:1513:U:C6	2.45	0.52
57:DA:1625:C:H5''	57:DA:1626:A:OP2	2.09	0.52
57:DA:1910:G:C2	57:DA:1921:G:C2	2.98	0.52
57:DA:2239:G:H2'	57:DA:2240:U:H6	1.74	0.52
57:DA:308:G:N1	57:DA:309:A:C2	2.78	0.52
57:DA:329:G:OP1	57:DA:329:G:H3'	2.10	0.52
57:DA:412:A:N7	57:DA:2412:A:H1'	2.24	0.52
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.75	0.52
26:DE:70:SER:HG	26:DE:78:TRP:HH2	1.57	0.52
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.92	0.52
37:DP:52:ARG:NH1	37:DP:52:ARG:HG2	2.24	0.52
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	1.91	0.52
57:DA:855:G:H21	44:DW:23:LYS:HZ2	1.57	0.52
57:DA:372:G:C8	45:DX:56:ARG:HG2	2.45	0.52
1:AA:439:U:HO2'	1:AA:440:C:H5'	1.75	0.52
1:AA:66:A:H2'	1:AA:66:A:N3	2.25	0.52
1:AA:811:C:H4'	1:AA:900:A:N6	2.24	0.52
2:AB:100:LEU:HD12	2:AB:178:LEU:CD2	2.37	0.52
4:AD:84:ASN:HD22	4:AD:87:GLU:H	1.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:B2:3:ARG:CG	50:B2:3:ARG:NH2	2.64	0.52
22:BA:1179:G:N1	22:BA:1180:U:O2'	2.43	0.52
22:BA:1653:G:H4'	22:BA:1654:A:O5'	2.09	0.52
22:BA:1871:A:H8	22:BA:1872:A:C6	2.28	0.52
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.25	0.52
22:BA:2689:U:H5''	22:BA:2690:U:OP2	2.09	0.52
22:BA:725:G:C6	22:BA:726:G:N1	2.78	0.52
22:BA:898:C:H2'	22:BA:899:A:H5'	1.92	0.52
25:BD:101:PHE:HD1	25:BD:101:PHE:N	2.08	0.52
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.25	0.52
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.91	0.52
38:BQ:4:LYS:NZ	38:BQ:7:VAL:HG13	2.25	0.52
44:BW:29:SER:N	44:BW:63:ASP:HB3	2.24	0.52
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.40	0.52
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.08	0.52
53:CA:119:A:H5'	53:CA:120:A:C5'	2.40	0.52
53:CA:197:A:N6	53:CA:221:C:H4'	2.25	0.52
53:CA:204:G:H2'	53:CA:205:A:C8	2.45	0.52
53:CA:389:A:H2'	53:CA:390:U:O4'	2.10	0.52
53:CA:495:A:C6	53:CA:496:A:N6	2.78	0.52
53:CA:555:U:H2'	53:CA:556:C:C6	2.45	0.52
53:CA:677:U:H3	53:CA:713:G:H22	1.58	0.52
53:CA:722:G:O3'	53:CA:723:U:C6	2.63	0.52
5:CE:104:ILE:H	5:CE:122:VAL:N	1.98	0.52
19:CS:28:LYS:HB3	19:CS:29:PRO:HD2	1.92	0.52
57:DA:126:A:H2'	50:D2:46:LYS:CE	2.40	0.52
57:DA:1645:G:H4'	57:DA:1646:C:H5	1.75	0.52
57:DA:1681:G:O2'	57:DA:1762:A:C2'	2.58	0.52
57:DA:1760:C:OP1	57:DA:2712:C:H5	1.93	0.52
57:DA:1809:A:C2	57:DA:1810:A:C4	2.98	0.52
57:DA:1906:G:C8	57:DA:1929:G:C4	2.98	0.52
57:DA:2136:G:O6	57:DA:2156:G:C2	2.63	0.52
57:DA:511:U:H5''	57:DA:512:G:OP2	2.09	0.52
57:DA:82:U:H2'	57:DA:83:A:O4'	2.10	0.52
57:DA:1820:U:OP1	24:DC:176:ARG:NE	2.43	0.52
24:DC:76:VAL:O	24:DC:93:VAL:O	2.28	0.52
59:DF:58:ALA:HB1	59:DF:139:GLU:HG2	1.91	0.52
59:DF:74:ALA:HB1	59:DF:76:PHE:CD2	2.45	0.52
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.31	0.52
32:DK:99:ILE:HD12	32:DK:118:LEU:HB2	1.91	0.52
38:DQ:4:LYS:O	38:DQ:5:ARG:HB2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DX:6:VAL:HG12	45:DX:50:VAL:HG12	1.92	0.52
45:DX:6:VAL:CG1	45:DX:50:VAL:HG12	2.40	0.52
1:AA:1111:A:C2	3:AC:176:THR:HG23	2.46	0.52
1:AA:1151:A:O2'	1:AA:1152:A:C5'	2.53	0.52
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.10	0.52
1:AA:329:A:H2'	1:AA:332:G:N7	2.24	0.52
1:AA:524:G:C6	1:AA:525:C:N4	2.78	0.52
1:AA:740:U:O2'	1:AA:741:G:H5'	2.09	0.52
1:AA:1112:C:H1'	3:AC:178:ARG:HD3	1.91	0.52
3:AC:38:VAL:O	3:AC:42:LEU:HB2	2.10	0.52
4:AD:194:ILE:O	4:AD:194:ILE:HG13	2.09	0.52
5:AE:158:LYS:HE2	8:AH:63:LYS:NZ	2.25	0.52
17:AQ:60:ILE:HG22	17:AQ:61:ARG:N	2.25	0.52
22:BA:1031:G:H4'	52:B4:6:SER:HB2	1.92	0.52
22:BA:1416:G:O2'	22:BA:1417:C:C6	2.56	0.52
22:BA:1538:G:H2'	22:BA:1539:U:C5	2.45	0.52
22:BA:1753:G:OP1	37:BP:92:ARG:HD3	2.10	0.52
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.39	0.52
22:BA:1815:A:H1'	22:BA:1817:G:C8	2.45	0.52
22:BA:1853:A:H2'	22:BA:1854:A:C8	2.44	0.52
22:BA:2318:G:C6	22:BA:2319:G:N1	2.77	0.52
22:BA:460:A:OP1	50:B2:41:ARG:NH1	2.38	0.52
27:BF:39:VAL:HG13	27:BF:84:ILE:HD12	1.90	0.52
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.25	0.52
31:BJ:123:LYS:CD	31:BJ:123:LYS:N	2.73	0.52
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.62	0.52
34:BM:66:ARG:NH1	34:BM:104:GLU:OE1	2.41	0.52
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.10	0.52
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CD2	2.98	0.52
41:BT:39:THR:CG2	41:BT:39:THR:O	2.57	0.52
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.25	0.52
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.44	0.52
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.44	0.52
53:CA:1077:G:C2	53:CA:1081:A:C2	2.98	0.52
53:CA:926:G:C6	53:CA:1505:G:C6	2.98	0.52
53:CA:672:U:H2'	53:CA:673:A:H8	1.75	0.52
53:CA:728:A:H2'	53:CA:729:A:C8	2.45	0.52
53:CA:94:G:O2'	53:CA:95:C:H5'	2.09	0.52
53:CA:989:U:H2'	53:CA:990:C:H5'	1.92	0.52
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.93	0.52
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:35:LYS:O	9:CI:42:THR:HG21	2.10	0.52
51:D3:23:HIS:O	51:D3:46:LYS:HB2	2.09	0.52
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.74	0.52
57:DA:1059:G:N3	30:DI:131:THR:HG22	2.25	0.52
57:DA:1363:C:C2	57:DA:1364:G:C8	2.98	0.52
57:DA:1374:G:H2'	57:DA:1375:U:O4'	2.10	0.52
57:DA:1688:U:C4	57:DA:1698:A:C2	2.98	0.52
57:DA:2039:U:H2'	57:DA:2040:G:C8	2.45	0.52
57:DA:2210:U:H4'	57:DA:2211:A:H5'	1.89	0.52
57:DA:2504:U:H5'	57:DA:2504:U:H6	1.74	0.52
57:DA:2514:U:H2'	57:DA:2515:C:C6	2.45	0.52
57:DA:2834:G:C1'	57:DA:2879:A:N6	2.73	0.52
57:DA:547:A:H8	57:DA:548:G:H5'	1.74	0.52
57:DA:786:C:H4'	57:DA:1780:A:N7	2.25	0.52
58:DB:11:C:C5	58:DB:12:C:H5	2.28	0.52
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.24	0.52
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.25	0.52
26:DE:65:THR:CG2	26:DE:67:ARG:HG3	2.40	0.52
28:DG:154:GLU:O	28:DG:156:TYR:N	2.43	0.52
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.25	0.52
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.25	0.52
36:DO:111:ARG:HA	36:DO:115:LEU:O	2.10	0.52
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.92	0.52
1:AA:1530:G:O2'	1:AA:1531:A:H8	1.92	0.51
1:AA:17:U:H2'	1:AA:18:C:C6	2.45	0.51
1:AA:672:U:H2'	1:AA:673:A:H8	1.74	0.51
2:AB:40:ILE:HD13	2:AB:201:GLY:CA	2.27	0.51
3:AC:179:ALA:HB1	3:AC:202:PHE:HE1	1.74	0.51
4:AD:169:TRP:CD1	4:AD:170:LEU:HG	2.46	0.51
5:AE:135:VAL:O	5:AE:139:THR:HG23	2.09	0.51
5:AE:45:VAL:HG22	5:AE:117:ALA:HA	1.92	0.51
14:AN:63:CYS:SG	14:AN:66:THR:OG1	2.61	0.51
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.91	0.51
21:AU:45:LYS:HA	21:AU:45:LYS:HE3	1.92	0.51
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.22	0.51
22:BA:1061:U:H3'	22:BA:1062:G:H5''	1.92	0.51
22:BA:1338:G:O2'	22:BA:1339:G:H5'	2.10	0.51
22:BA:1371:G:O2'	22:BA:1372:U:H5'	2.11	0.51
22:BA:137:U:O2'	22:BA:138:U:P	2.68	0.51
22:BA:1476:U:HO2'	22:BA:1477:A:C5'	2.23	0.51
22:BA:1833:C:C5	22:BA:1834:U:H5	2.28	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2136:G:C2	22:BA:2137:U:C4	2.98	0.51
22:BA:2403:C:C4	22:BA:2415:G:N1	2.78	0.51
22:BA:2429:G:P	63:BA:3702:HOH:O	2.67	0.51
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.10	0.51
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.40	0.51
22:BA:271:G:O2'	22:BA:272:A:H5''	2.09	0.51
22:BA:247:G:H4'	22:BA:386:G:C6	2.44	0.51
22:BA:580:U:C2	22:BA:581:C:C5	2.98	0.51
24:BC:254:LYS:O	24:BC:256:THR:N	2.41	0.51
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.91	0.51
26:BE:124:PHE:C	26:BE:124:PHE:CD1	2.82	0.51
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.73	0.51
22:BA:2838:G:H1'	35:BN:45:ARG:NH1	2.24	0.51
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.93	0.51
40:BS:73:LYS:HB3	40:BS:106:VAL:HB	1.91	0.51
40:BS:95:ARG:O	40:BS:96:ILE:CG1	2.58	0.51
47:BZ:38:GLU:O	47:BZ:43:ILE:HG12	2.10	0.51
53:CA:1195:C:H2'	53:CA:1197:A:O4'	2.10	0.51
53:CA:82:G:N7	53:CA:89:U:C4	2.78	0.51
2:CB:9:LEU:HD12	2:CB:11:ALA:C	2.31	0.51
3:CC:142:ARG:HG2	3:CC:143:LEU:HD12	1.91	0.51
4:CD:117:VAL:HG11	4:CD:132:ALA:HA	1.91	0.51
4:CD:196:GLU:O	4:CD:200:VAL:HG23	2.09	0.51
55:CM:106:ARG:HH21	55:CM:112:ARG:CZ	2.23	0.51
17:CQ:61:ARG:CG	17:CQ:75:VAL:HG11	2.40	0.51
51:D3:41:ARG:HD2	51:D3:41:ARG:O	2.10	0.51
57:DA:1055:G:H3'	57:DA:1056:G:H5'	1.91	0.51
57:DA:1355:G:O2'	57:DA:1356:G:H5'	2.11	0.51
57:DA:183:C:H6	57:DA:183:C:O5'	1.91	0.51
57:DA:1904:G:C2'	57:DA:1905:C:H5'	2.38	0.51
57:DA:2016:U:C4	57:DA:2017:U:C4	2.97	0.51
57:DA:2346:A:H3'	57:DA:2347:C:C5'	2.35	0.51
57:DA:2550:G:C2	57:DA:2559:C:O2	2.62	0.51
57:DA:322:A:H3'	26:DE:163:ASN:ND2	2.25	0.51
57:DA:571:U:C4	57:DA:575:A:C5	2.98	0.51
57:DA:617:G:O2'	57:DA:618:G:O4'	2.27	0.51
57:DA:74:A:H5'	46:DY:48:ARG:HH22	1.74	0.51
24:DC:115:ILE:HB	24:DC:126:GLY:O	2.10	0.51
25:DD:110:THR:OG1	25:DD:171:THR:HG22	2.10	0.51
59:DF:28:PRO:HB2	59:DF:168:LEU:CD2	2.40	0.51
29:DH:109:GLU:OE2	29:DH:109:GLU:HA	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.91	0.51
33:DL:63:LYS:C	33:DL:65:GLY:H	2.14	0.51
35:DN:15:SER:HA	35:DN:18:GLN:HB3	1.93	0.51
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.39	0.51
40:DS:68:ASP:N	40:DS:68:ASP:OD1	2.43	0.51
1:AA:138:G:O2'	1:AA:139:A:H5'	2.10	0.51
1:AA:263:A:H2'	1:AA:264:C:C6	2.46	0.51
1:AA:414:A:H2'	1:AA:415:A:H8	1.75	0.51
10:AJ:67:ILE:CG1	14:AN:95:LEU:HD13	2.40	0.51
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.10	0.51
16:AP:2:VAL:HG23	16:AP:65:ALA:HA	1.91	0.51
1:AA:1458:G:OP1	20:AT:26:MET:HA	2.09	0.51
22:BA:1073:A:H8	22:BA:1073:A:P	2.34	0.51
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.45	0.51
22:BA:2094:A:OP1	29:BH:22:LYS:HD2	2.10	0.51
22:BA:2238:G:N7	63:BA:3501:HOH:O	2.34	0.51
22:BA:2418:A:C5	22:BA:2419:U:C5	2.98	0.51
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.46	0.51
22:BA:511:U:C5	22:BA:512:G:C5	2.98	0.51
22:BA:919:U:C3'	22:BA:919:U:C6	2.94	0.51
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.41	0.51
25:BD:140:HIS:CE1	63:BD:301:HOH:O	2.62	0.51
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.40	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51
22:BA:580:U:O2'	38:BQ:30:VAL:HG13	2.10	0.51
22:BA:996:A:O3'	38:BQ:91:ARG:HG2	2.10	0.51
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.23	0.51
39:BR:1:MET:HB2	39:BR:43:ASN:ND2	2.24	0.51
43:BV:44:HIS:CE1	43:BV:86:LEU:H	2.13	0.51
46:BY:23:ARG:O	46:BY:24:GLU:C	2.48	0.51
53:CA:1140:C:H2'	53:CA:1141:C:C5	2.45	0.51
53:CA:1215:G:O2'	53:CA:1216:A:H8	1.93	0.51
53:CA:142:G:C5	53:CA:143:A:C8	2.98	0.51
53:CA:418:C:H1'	53:CA:540:G:O2'	2.10	0.51
2:CB:95:TRP:HZ2	2:CB:100:LEU:HD13	1.74	0.51
2:CB:128:LEU:O	2:CB:129:THR:C	2.49	0.51
3:CC:53:ARG:HB2	3:CC:53:ARG:HH11	1.75	0.51
15:CO:16:ARG:HB2	15:CO:23:SER:CB	2.40	0.51
56:CP:66:THR:HG22	56:CP:67:ILE:N	2.25	0.51
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.58	0.51
49:D1:32:LYS:HE3	49:D1:52:LYS:OXT	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:466:A:P	50:D2:34:ARG:HH21	2.33	0.51
52:D4:19:ARG:HH12	52:D4:26:ILE:HG13	1.76	0.51
57:DA:1229:C:H2'	57:DA:1230:A:C8	2.45	0.51
57:DA:1262:A:C2	48:D0:6:LYS:HD2	2.43	0.51
57:DA:1608:A:C8	57:DA:1611:C:N4	2.78	0.51
57:DA:2324:U:HO2'	57:DA:2385:C:H5	1.57	0.51
57:DA:2894:G:HO2'	57:DA:2895:G:P	2.33	0.51
57:DA:417:C:H2'	57:DA:418:C:H6	1.76	0.51
57:DA:612:G:C2	57:DA:614:A:H1'	2.44	0.51
57:DA:638:G:O2'	57:DA:639:U:O4'	2.25	0.51
57:DA:828:U:C5	57:DA:829:A:N6	2.78	0.51
57:DA:867:C:O2'	57:DA:868:U:H5'	2.11	0.51
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.74	0.51
57:DA:674:G:H5''	26:DE:71:GLY:N	2.24	0.51
59:DF:59:ILE:HG23	59:DF:137:PHE:HE1	1.75	0.51
29:DH:80:ILE:HB	29:DH:101:ASP:OD2	2.10	0.51
32:DK:64:ARG:HD2	32:DK:102:PRO:O	2.10	0.51
32:DK:87:LEU:HD12	32:DK:92:GLU:CA	2.40	0.51
37:DP:9:GLN:HB3	37:DP:12:MET:HE2	1.93	0.51
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.40	0.51
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.24	0.51
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.46	0.51
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.93	0.51
1:AA:198:G:C2'	1:AA:199:A:H8	2.24	0.51
1:AA:414:A:N3	1:AA:415:A:C8	2.78	0.51
1:AA:560:A:H5'	1:AA:566:G:H21	1.73	0.51
1:AA:57:G:H2'	1:AA:58:C:H6	1.73	0.51
1:AA:626:G:C4	1:AA:627:G:C8	2.99	0.51
1:AA:914:A:O2'	1:AA:915:A:C5'	2.58	0.51
7:AG:136:LYS:O	7:AG:140:VAL:HG23	2.10	0.51
9:AI:93:LEU:HD12	9:AI:94:ARG:N	2.25	0.51
10:AJ:29:ALA:CB	10:AJ:36:VAL:HG21	2.40	0.51
14:AN:40:ARG:HH12	14:AN:44:VAL:HG21	1.73	0.51
12:AL:7:VAL:HG13	17:AQ:30:HIS:HD2	1.75	0.51
22:BA:1057:A:C2	22:BA:1082:U:C2	2.98	0.51
22:BA:1360:G:P	63:BA:3618:HOH:O	2.69	0.51
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.46	0.51
22:BA:1626:A:O2'	22:BA:1627:G:OP2	2.28	0.51
22:BA:1744:A:H3'	22:BA:1745:A:H8	1.74	0.51
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.70	0.51
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:511:U:C5	22:BA:512:G:C4	2.97	0.51
22:BA:69:C:H2'	22:BA:70:G:C8	2.46	0.51
22:BA:947:A:H2'	22:BA:948:C:C6	2.45	0.51
23:BB:89:U:H4'	23:BB:89:U:OP2	2.11	0.51
27:BF:122:ASP:OD1	27:BF:126:ASN:HB2	2.10	0.51
27:BF:118:ALA:HB2	27:BF:176:PHE:CD2	2.45	0.51
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.51
45:BX:30:PRO:HD2	45:BX:32:LEU:HD11	1.92	0.51
53:CA:554:A:H2'	53:CA:555:U:C6	2.46	0.51
53:CA:968:A:C4	53:CA:1062:U:H4'	2.45	0.51
53:CA:998:C:H2'	53:CA:999:C:C6	2.40	0.51
2:CB:112:ARG:O	2:CB:112:ARG:HG3	2.09	0.51
21:AU:10:PRO:HG2	3:CC:71:ARG:CZ	2.40	0.51
4:CD:2:ARG:NH2	4:CD:114:ARG:NH1	2.58	0.51
4:CD:61:ARG:NH2	4:CD:67:LEU:HA	2.21	0.51
6:CF:41:ASP:OD2	6:CF:58:HIS:CE1	2.63	0.51
54:CG:124:SER:O	54:CG:128:GLU:HG2	2.10	0.51
8:CH:34:ALA:O	8:CH:38:VAL:HG23	2.09	0.51
9:CI:125:GLN:H	9:CI:125:GLN:NE2	2.09	0.51
10:CJ:15:HIS:CA	10:CJ:18:ILE:HG22	2.30	0.51
10:CJ:8:ILE:HG22	10:CJ:100:ILE:HG12	1.92	0.51
19:CS:36:ARG:O	19:CS:69:LYS:HD2	2.10	0.51
57:DA:1431:A:H2'	57:DA:1432:G:O4'	2.10	0.51
57:DA:1673:G:O2'	57:DA:1674:G:H5'	2.10	0.51
57:DA:1916:A:H2'	57:DA:1917:U:C6	2.46	0.51
57:DA:2151:U:H2'	57:DA:2152:G:C8	2.45	0.51
57:DA:2348:U:HO2'	57:DA:2349:G:H8	1.57	0.51
57:DA:2413:G:H2'	57:DA:2414:G:H8	1.75	0.51
57:DA:28:A:O2'	57:DA:29:U:H5'	2.09	0.51
57:DA:415:A:N1	57:DA:2409:G:C6	2.78	0.51
57:DA:502:A:C5	57:DA:505:A:N7	2.79	0.51
57:DA:53:A:O2'	57:DA:54:G:H5'	2.10	0.51
57:DA:811:U:H5''	57:DA:812:C:OP2	2.10	0.51
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.11	0.51
25:DD:107:VAL:H	25:DD:206:ALA:N	2.05	0.51
25:DD:16:THR:HG23	25:DD:18:ASP:H	1.75	0.51
25:DD:106:LYS:CB	25:DD:206:ALA:H	2.23	0.51
26:DE:72:SER:O	26:DE:74:LYS:N	2.43	0.51
26:DE:79:ARG:O	26:DE:80:SER:C	2.49	0.51
28:DG:120:ILE:CG1	28:DG:140:ILE:HG22	2.37	0.51
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.91	0.51
31:DJ:106:LYS:HD2	31:DJ:119:PHE:CD2	2.45	0.51
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.92	0.51
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.30	0.51
38:DQ:74:SER:O	38:DQ:78:PHE:HB2	2.09	0.51
57:DA:2331:G:H4'	44:DW:41:GLY:N	2.25	0.51
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.10	0.51
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.49	0.51
1:AA:1303:C:O2'	1:AA:1304:G:C5'	2.58	0.51
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.58	0.51
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.40	0.51
1:AA:264:C:H2'	1:AA:265:G:O4'	2.10	0.51
1:AA:275:G:H5''	1:AA:275:G:H8	1.75	0.51
1:AA:687:A:C8	1:AA:701:U:H5	2.29	0.51
1:AA:721:G:H1'	1:AA:722:G:C2	2.45	0.51
1:AA:751:U:H4'	15:AO:23:SER:HA	1.91	0.51
1:AA:791:G:C6	1:AA:792:A:N7	2.78	0.51
1:AA:15:G:C4'	5:AE:28:ARG:NH1	2.73	0.51
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.25	0.51
6:AF:85:ILE:O	6:AF:86:ARG:C	2.48	0.51
9:AI:11:ARG:HA	9:AI:105:ARG:NH1	2.26	0.51
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.40	0.51
22:BA:1444:G:H2'	22:BA:1445:G:H8	1.75	0.51
22:BA:1733:G:N3	22:BA:1734:G:C8	2.79	0.51
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.44	0.51
22:BA:244:A:H2'	22:BA:245:G:O4'	2.11	0.51
22:BA:2730:C:O3'	25:BD:174:SER:HB3	2.11	0.51
22:BA:31:C:H4'	22:BA:1238:G:H4'	1.92	0.51
22:BA:747:U:H2'	22:BA:2613:U:O4	2.10	0.51
22:BA:869:G:C5	22:BA:870:U:C5	2.98	0.51
23:BB:28:C:O2'	23:BB:29:A:H5'	2.10	0.51
25:BD:9:VAL:HG22	25:BD:10:GLY:H	1.76	0.51
28:BG:16:VAL:HG11	28:BG:49:LEU:HD21	1.92	0.51
29:BH:12:LEU:HB2	29:BH:19:VAL:HG11	1.93	0.51
29:BH:4:ILE:HG12	29:BH:18:GLN:NE2	2.24	0.51
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.10	0.51
36:BO:51:ALA:HB3	36:BO:78:VAL:CG1	2.41	0.51
37:BP:33:GLU:CB	37:BP:38:ARG:HH11	2.24	0.51
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.45	0.51
47:BZ:7:THR:HG22	47:BZ:32:GLY:HA2	1.92	0.51
53:CA:1248:A:O2'	9:CI:37:TYR:HD1	1.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:129:A:O2'	53:CA:130:A:C8	2.63	0.51
53:CA:198:G:O2'	53:CA:199:A:C8	2.55	0.51
53:CA:301:G:H2'	53:CA:302:G:C8	2.45	0.51
53:CA:382:A:N7	53:CA:383:A:C6	2.78	0.51
53:CA:636:U:H2'	53:CA:637:C:C6	2.45	0.51
53:CA:740:U:H4'	15:CO:38:LEU:HD11	1.92	0.51
53:CA:865:A:C2	53:CA:918:A:H4'	2.46	0.51
53:CA:892:A:C5	53:CA:893:C:C5	2.98	0.51
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.91	0.51
3:CC:185:THR:HG22	3:CC:186:SER:H	1.73	0.51
54:CG:4:ARG:NH2	54:CG:6:ILE:HB	2.26	0.51
11:CK:70:ALA:HA	11:CK:73:VAL:HG22	1.93	0.51
14:CN:53:ASP:HA	14:CN:58:ARG:HD3	1.93	0.51
57:DA:2234:G:C6	57:DA:2235:G:N7	2.79	0.51
57:DA:2287:A:N7	57:DA:2289:G:C8	2.78	0.51
57:DA:2323:G:N2	57:DA:2335:A:H2	2.08	0.51
57:DA:2852:G:H2'	57:DA:2853:C:O4'	2.09	0.51
57:DA:2812:G:N2	57:DA:2889:C:C2	2.78	0.51
57:DA:442:G:C6	57:DA:444:C:N4	2.78	0.51
57:DA:483:A:H2'	57:DA:484:C:H6	1.74	0.51
57:DA:526:A:N6	57:DA:2626:C:H4'	2.26	0.51
57:DA:571:U:HO2'	57:DA:573:U:H6	1.54	0.51
57:DA:63:A:N6	57:DA:91:A:N6	2.57	0.51
57:DA:778:G:C6	57:DA:779:U:N3	2.78	0.51
57:DA:834:G:H1'	57:DA:2358:A:C2	2.45	0.51
57:DA:862:G:H2'	57:DA:863:A:O4'	2.11	0.51
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.90	0.51
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.10	0.51
59:DF:111:ARG:HG3	59:DF:135:ILE:HG12	1.93	0.51
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.93	0.51
37:DP:57:ALA:HB1	37:DP:73:PHE:O	2.11	0.51
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.91	0.51
1:AA:1151:A:C4	1:AA:1152:A:N7	2.79	0.51
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.46	0.51
1:AA:782:A:H2'	1:AA:783:C:O4'	2.10	0.51
2:AB:202:ASN:ND2	2:AB:205:ALA:HB2	2.26	0.51
3:AC:89:VAL:O	3:AC:93:ILE:HG13	2.10	0.51
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.10	0.51
10:AJ:88:MET:HB3	10:AJ:89:ARG:NH1	2.25	0.51
16:AP:28:ARG:HE	16:AP:29:ASN:ND2	2.01	0.51
20:AT:77:ASN:HD22	20:AT:78:LEU:H	1.56	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1131:G:O2'	22:BA:2026:U:H5'	2.11	0.51
22:BA:1734:G:N3	22:BA:1735:A:C8	2.78	0.51
22:BA:1838:C:C4	22:BA:1899:A:C4	2.99	0.51
22:BA:2082:A:O5'	22:BA:2082:A:H8	1.93	0.51
22:BA:2276:G:P	34:BM:83:GLY:O	2.69	0.51
22:BA:2563:U:O2	22:BA:2565:A:H8	1.93	0.51
22:BA:277:G:H4'	22:BA:278:A:C8	2.46	0.51
22:BA:645:C:O2'	22:BA:646:U:H5''	2.09	0.51
22:BA:693:A:H2'	22:BA:694:U:O4'	2.11	0.51
22:BA:765:C:H2'	22:BA:766:U:C6	2.46	0.51
22:BA:792:A:H5''	22:BA:793:A:H5'	1.92	0.51
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.10	0.51
24:BC:257:ARG:HE	24:BC:269:ARG:HH22	1.58	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.10	0.51
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.13	0.51
33:BL:101:ILE:HG23	33:BL:102:GLY:N	2.25	0.51
33:BL:27:LEU:CD1	33:BL:27:LEU:N	2.60	0.51
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.10	0.51
33:BL:87:GLY:O	33:BL:89:VAL:N	2.44	0.51
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.78	0.51
39:BR:54:VAL:HG22	39:BR:57:GLY:HA3	1.93	0.51
39:BR:9:GLY:C	39:BR:10:LYS:HD2	2.30	0.51
45:BX:36:ARG:HG3	45:BX:47:THR:HB	1.92	0.51
47:BZ:40:THR:OG1	47:BZ:41:PRO:HD2	2.11	0.51
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.23	0.51
53:CA:562:U:H4'	53:CA:563:A:O5'	2.10	0.51
53:CA:560:A:N7	53:CA:566:G:C4	2.78	0.51
53:CA:597:G:N7	53:CA:598:U:C5	2.79	0.51
53:CA:654:G:H2'	53:CA:655:A:H8	1.74	0.51
53:CA:568:G:N2	53:CA:883:C:C2	2.79	0.51
12:CL:6:LEU:HA	12:CL:9:LYS:O	2.11	0.51
53:CA:952:U:H5	55:CM:102:LYS:HZ1	1.58	0.51
14:CN:76:PHE:CE2	14:CN:95:LEU:HD22	2.45	0.51
17:CQ:47:ASP:HB3	17:CQ:74:LEU:CB	2.40	0.51
21:CU:39:LYS:H	21:CU:40:PRO:CD	2.19	0.51
49:D1:16:THR:CG2	49:D1:41:VAL:HB	2.41	0.51
57:DA:1087:G:N2	57:DA:1103:A:H1'	2.25	0.51
57:DA:118:A:C8	57:DA:119:A:C8	2.99	0.51
57:DA:1956:U:O2'	57:DA:1957:C:H5'	2.10	0.51
57:DA:2157:G:OP2	57:DA:2157:G:N2	2.44	0.51
57:DA:223:A:C5	57:DA:422:A:C8	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2283:C:H5''	57:DA:2283:C:H6	1.76	0.51
57:DA:2425:A:H4'	57:DA:2426:A:O5'	2.11	0.51
57:DA:2440:C:N3	57:DA:2441:U:H1'	2.25	0.51
57:DA:301:G:C6	57:DA:317:G:C6	2.99	0.51
57:DA:655:A:H4'	57:DA:656:G:O5'	2.09	0.51
57:DA:799:G:C6	57:DA:800:A:C6	2.99	0.51
57:DA:86:G:C2	57:DA:87:U:C5	2.99	0.51
58:DB:54:G:N2	59:DF:25:MET:HE1	2.26	0.51
58:DB:58:A:C2'	58:DB:59:A:C8	2.77	0.51
59:DF:131:VAL:C	59:DF:133:GLU:H	2.13	0.51
59:DF:129:MET:HG3	59:DF:153:ILE:HD12	1.91	0.51
37:DP:48:ALA:HB3	37:DP:59:THR:HB	1.93	0.51
38:DQ:35:PHE:O	38:DQ:39:ILE:HG12	2.11	0.51
1:AA:1320:C:N3	19:AS:35:ARG:NH1	2.58	0.51
1:AA:197:A:H1'	1:AA:198:G:O4'	2.11	0.51
1:AA:366:A:H4'	1:AA:367:U:OP1	2.09	0.51
1:AA:468:A:O2'	1:AA:469:C:H5'	2.10	0.51
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.92	0.51
1:AA:771:G:H2'	1:AA:772:U:C6	2.45	0.51
1:AA:792:A:N3	1:AA:794:A:C5	2.79	0.51
1:AA:957:U:O2	1:AA:959:A:H8	1.94	0.51
10:AJ:11:LYS:CG	10:AJ:97:ASP:HB3	2.38	0.51
14:AN:20:PHE:HA	14:AN:24:ALA:HB3	1.92	0.51
17:AQ:20:ILE:HB	17:AQ:47:ASP:OD1	2.11	0.51
48:B0:54:ILE:HG22	48:B0:54:ILE:O	2.11	0.51
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.46	0.51
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.11	0.51
22:BA:2847:U:H2'	22:BA:2848:G:O4'	2.10	0.51
22:BA:28:A:C5	22:BA:513:A:N7	2.79	0.51
22:BA:534:U:H2'	22:BA:535:G:H8	1.76	0.51
22:BA:562:U:H2'	22:BA:572:A:O4'	2.11	0.51
22:BA:845:A:C6	22:BA:847:U:C6	2.99	0.51
22:BA:971:G:H2'	22:BA:972:A:H5'	1.93	0.51
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.10	0.51
32:BK:2:ILE:O	32:BK:6:THR:HG21	2.09	0.51
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.21	0.51
32:BK:92:GLU:O	32:BK:93:GLN:O	2.28	0.51
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.44	0.51
35:BN:38:LEU:C	35:BN:38:LEU:HD12	2.31	0.51
39:BR:48:LYS:CD	39:BR:48:LYS:H	2.23	0.51
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1066:C:H2'	53:CA:1067:A:C8	2.45	0.51
53:CA:1202:U:O2'	53:CA:1203:C:H5'	2.10	0.51
53:CA:247:G:C6	53:CA:278:G:N1	2.79	0.51
53:CA:66:A:H5'	53:CA:67:C:OP2	2.11	0.51
53:CA:704:A:C2'	53:CA:705:G:H8	2.23	0.51
53:CA:814:A:H2'	53:CA:816:A:O5'	2.11	0.51
2:CB:103:TRP:HD1	2:CB:107:ARG:HB3	1.75	0.51
2:CB:103:TRP:O	2:CB:107:ARG:HG2	2.10	0.51
2:CB:150:ILE:HD11	2:CB:153:MET:HE2	1.91	0.51
2:CB:76:SER:O	2:CB:79:VAL:HG12	2.11	0.51
6:CF:2:ARG:HD2	6:CF:92:THR:OG1	2.10	0.51
54:CG:59:GLU:HG3	54:CG:60:ALA:H	1.75	0.51
9:CI:40:ARG:H	9:CI:44:ARG:HD3	1.76	0.51
56:CP:67:ILE:HG12	56:CP:72:ALA:HB2	1.92	0.51
52:D4:22:VAL:O	52:D4:24:ARG:HG3	2.11	0.51
57:DA:1062:G:O2'	57:DA:1063:G:H8	1.93	0.51
57:DA:1187:G:H8	57:DA:1187:G:OP2	1.93	0.51
57:DA:1439:A:C3'	57:DA:1439:A:C8	2.93	0.51
57:DA:1475:G:N3	57:DA:1475:G:H2'	2.25	0.51
57:DA:1799:G:C5	24:DC:175:LEU:HD13	2.45	0.51
57:DA:230:G:C2	57:DA:231:A:N7	2.78	0.51
57:DA:2513:A:C2	25:DD:148:GLN:NE2	2.77	0.51
57:DA:2713:U:H3'	57:DA:2714:G:H5"	1.93	0.51
57:DA:301:G:O2'	57:DA:302:C:O5'	2.29	0.51
57:DA:397:U:OP1	45:DX:30:PRO:CA	2.55	0.51
26:DE:55:SER:OG	26:DE:56:GLY:N	2.44	0.51
35:DN:34:ILE:HD12	35:DN:44:LEU:HD21	1.91	0.51
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.26	0.51
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.92	0.51
1:AA:1161:C:O2'	1:AA:1162:C:C5'	2.58	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.51
3:AC:164:THR:O	3:AC:165:GLU:C	2.49	0.51
4:AD:147:LYS:O	4:AD:149:LYS:HB2	2.10	0.51
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.74	0.51
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.91	0.51
8:AH:88:LYS:HG3	8:AH:89:ASP:H	1.76	0.51
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.78	0.51
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.10	0.51
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.40	0.51
48:B0:53:VAL:O	48:B0:54:ILE:C	2.49	0.51
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1324:G:C4	22:BA:1328:A:N6	2.78	0.51
22:BA:1452:G:H3'	63:BA:3413:HOH:O	2.09	0.51
22:BA:1614:A:H61	40:BS:88:ARG:H	1.59	0.51
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.40	0.51
22:BA:2311:A:O3'	22:BA:2312:U:C6	2.64	0.51
22:BA:2820:A:H3'	22:BA:2820:A:H8	1.76	0.51
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.28	0.51
22:BA:313:G:C2'	22:BA:314:C:H5'	2.40	0.51
22:BA:532:A:O2'	22:BA:2021:C:H5	1.93	0.51
23:BB:93:C:H2'	23:BB:94:A:C8	2.46	0.51
25:BD:68:PHE:HB3	25:BD:73:VAL:HA	1.93	0.51
25:BD:92:VAL:HG12	25:BD:92:VAL:O	2.10	0.51
28:BG:9:VAL:HA	28:BG:48:THR:HA	1.92	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
35:BN:73:ASN:HD22	35:BN:76:VAL:CG1	2.23	0.51
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.25	0.51
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.51
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.79	0.51
42:BU:42:LYS:HD3	42:BU:42:LYS:N	2.25	0.51
44:BW:35:ILE:HG12	44:BW:35:ILE:O	2.10	0.51
45:BX:32:LEU:H	45:BX:32:LEU:HD12	1.75	0.51
53:CA:1499:A:O2'	53:CA:1500:A:H5'	2.11	0.51
53:CA:926:G:H3'	53:CA:1505:G:H21	1.76	0.51
53:CA:50:A:H1'	53:CA:52:C:C6	2.46	0.51
53:CA:577:G:C6	53:CA:812:G:N2	2.79	0.51
53:CA:702:A:H5'	53:CA:703:G:C8	2.46	0.51
53:CA:705:G:H2'	53:CA:706:A:C8	2.46	0.51
53:CA:996:A:H2'	53:CA:997:U:C6	2.46	0.51
6:CF:3:HIS:HB2	6:CF:92:THR:HG23	1.93	0.51
9:CI:38:PHE:HE2	9:CI:71:ILE:HG22	1.76	0.51
20:CT:74:HIS:O	20:CT:78:LEU:HB2	2.11	0.51
57:DA:1263:U:O2'	48:D0:6:LYS:HG3	2.11	0.51
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	1.91	0.51
57:DA:1220:G:C2	57:DA:1230:A:C2	2.99	0.51
57:DA:1285:A:N6	57:DA:1329:U:C5	2.79	0.51
57:DA:1286:A:C4	57:DA:1289:C:C4	2.99	0.51
57:DA:132:G:N2	57:DA:148:U:C2	2.79	0.51
57:DA:1342:A:C6	57:DA:1397:U:C6	2.98	0.51
57:DA:1608:A:O3'	57:DA:1609:A:H3'	2.11	0.51
57:DA:1923:U:H2'	57:DA:1924:C:H6	1.76	0.51
57:DA:1999:C:H5''	57:DA:2723:C:O2'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:223:A:N6	57:DA:422:A:C6	2.78	0.51
57:DA:2683:C:H2'	57:DA:2684:U:C6	2.42	0.51
57:DA:672:C:H5'	57:DA:672:C:H6	1.74	0.51
57:DA:716:A:H3'	57:DA:717:C:H5''	1.92	0.51
58:DB:40:U:O2'	58:DB:45:A:N6	2.43	0.51
24:DC:127:ASN:O	24:DC:191:LEU:HD22	2.10	0.51
24:DC:2:VAL:O	24:DC:3:VAL:HB	2.11	0.51
26:DE:85:PHE:O	26:DE:86:ALA:C	2.49	0.51
28:DG:70:LEU:O	28:DG:74:MET:HB2	2.10	0.51
35:DN:83:LEU:CD1	35:DN:86:ARG:HH21	2.24	0.51
36:DO:25:ARG:HB3	36:DO:93:ASP:HB2	1.91	0.51
36:DO:49:VAL:HG11	36:DO:81:ARG:HB3	1.92	0.51
57:DA:2264:C:H41	44:DW:11:ASN:ND2	2.08	0.51
1:AA:1152:A:O2'	1:AA:1153:G:H5'	2.11	0.51
1:AA:1157:A:C5	1:AA:1180:A:C6	2.98	0.51
1:AA:1239:A:H4'	1:AA:1240:U:H5'	1.93	0.51
1:AA:1288:A:H2'	1:AA:1289:A:H8	1.76	0.51
1:AA:1348:U:H2'	1:AA:1349:A:H8	1.74	0.51
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.76	0.51
1:AA:570:G:C4	1:AA:571:U:C5	2.99	0.51
1:AA:958:A:C6	1:AA:959:A:C6	2.99	0.51
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.75	0.51
52:B4:24:ARG:HG2	52:B4:24:ARG:NH2	2.26	0.51
22:BA:1155:A:C4	22:BA:1157:G:N7	2.79	0.51
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.44	0.51
22:BA:1843:C:O2'	22:BA:1844:C:H5'	2.10	0.51
22:BA:2109:U:C4	22:BA:2181:U:O4	2.63	0.51
22:BA:2495:G:O2'	22:BA:2496:C:H5'	2.10	0.51
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.44	0.51
22:BA:976:G:N3	22:BA:976:G:H2'	2.25	0.51
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.09	0.51
25:BD:53:GLY:HA3	25:BD:77:ARG:CB	2.41	0.51
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.92	0.51
34:BM:54:THR:O	34:BM:56:ALA:N	2.44	0.51
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.49	0.51
38:BQ:106:THR:O	38:BQ:107:ALA:C	2.48	0.51
42:BU:87:GLU:O	42:BU:88:ASP:O	2.28	0.51
45:BX:29:LEU:HB2	45:BX:30:PRO:HD3	1.91	0.51
53:CA:1416:G:C2'	53:CA:1417:G:H5'	2.40	0.51
53:CA:1507:A:H2'	53:CA:1508:A:C8	2.46	0.51
53:CA:68:G:N2	53:CA:152:A:HI'	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:750:C:H4'	15:CO:20:ASP:HB2	1.92	0.51
53:CA:889:A:HO2'	53:CA:890:G:P	2.34	0.51
2:CB:23:ASN:HB2	2:CB:189:ASN:O	2.11	0.51
4:CD:186:GLU:O	4:CD:187:ARG:HB2	2.10	0.51
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.11	0.51
8:CH:38:VAL:HA	8:CH:41:GLU:CG	2.41	0.51
10:CJ:10:LEU:O	10:CJ:18:ILE:HD11	2.11	0.51
11:CK:74:LYS:HD2	11:CK:104:PHE:HE1	1.76	0.51
55:CM:103:THR:HG22	55:CM:104:ASN:N	2.26	0.51
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.10	0.51
57:DA:111:A:C2	57:DA:112:U:C2	2.98	0.51
57:DA:1237:A:H2	57:DA:1238:G:H1'	1.70	0.51
57:DA:1525:A:C6	57:DA:1526:C:C2	2.99	0.51
57:DA:156:A:H2'	57:DA:157:C:C6	2.43	0.51
57:DA:1827:U:C4'	57:DA:1970:A:HO2'	2.19	0.51
57:DA:1973:G:C6	57:DA:1974:C:N4	2.79	0.51
57:DA:2143:C:H3'	57:DA:2144:G:C8	2.46	0.51
57:DA:2267:A:N6	57:DA:2272:U:N3	2.52	0.51
57:DA:2603:G:H4'	57:DA:2603:G:OP2	2.11	0.51
57:DA:2636:C:H2'	57:DA:2637:U:C6	2.45	0.51
57:DA:329:G:H4'	57:DA:330:A:OP1	2.07	0.51
57:DA:476:G:O2'	57:DA:477:A:H3'	2.10	0.51
57:DA:570:G:C5	57:DA:2030:A:N7	2.79	0.51
57:DA:576:U:H2'	57:DA:577:G:C8	2.45	0.51
57:DA:628:G:H2'	57:DA:629:G:C8	2.46	0.51
57:DA:704:G:H2'	57:DA:726:G:N2	2.19	0.51
57:DA:708:G:H2'	57:DA:709:U:H6	1.76	0.51
57:DA:696:G:C2	57:DA:767:U:O2	2.63	0.51
57:DA:78:U:C2'	57:DA:79:C:H5'	2.41	0.51
58:DB:24:G:H1'	58:DB:27:C:H41	1.73	0.51
57:DA:1789:A:OP1	24:DC:220:ARG:HD3	2.11	0.51
24:DC:231:HIS:O	24:DC:232:GLY:C	2.48	0.51
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.78	0.51
25:DD:12:THR:HG22	25:DD:13:ARG:N	2.25	0.51
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.11	0.51
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.24	0.51
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.76	0.51
37:DP:56:SER:O	37:DP:75:THR:HG22	2.10	0.51
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.32	0.51
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.41	0.51
43:DV:73:LYS:O	43:DV:92:VAL:HG22	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1380:U:H5'	1:AA:1381:U:OP1	2.11	0.51
1:AA:16:A:C2'	1:AA:17:U:H5'	2.41	0.51
1:AA:342:C:C2'	1:AA:343:U:H5'	2.41	0.51
1:AA:550:G:O2'	1:AA:551:U:H5'	2.11	0.51
1:AA:61:G:H2'	1:AA:62:U:H6	1.74	0.51
1:AA:669:G:O2'	1:AA:670:G:H5'	2.11	0.51
2:AB:110:ILE:HD12	2:AB:147:LEU:CD1	2.37	0.51
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.78	0.51
7:AG:78:ARG:HH22	7:AG:81:GLY:HA2	1.75	0.51
1:AA:641:U:H4'	8:AH:106:SER:O	2.10	0.51
8:AH:45:ILE:C	8:AH:63:LYS:HD2	2.31	0.51
11:AK:22:ILE:HD13	11:AK:95:THR:CG2	2.32	0.51
13:AM:24:VAL:O	13:AM:24:VAL:HG23	2.10	0.51
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.40	0.51
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.93	0.51
22:BA:1157:G:H2'	22:BA:1158:C:C6	2.45	0.51
22:BA:1421:G:C2	22:BA:1422:G:C8	2.99	0.51
22:BA:2581:G:H4'	22:BA:2582:G:N7	2.26	0.51
22:BA:2773:C:H2'	22:BA:2774:C:H6	1.76	0.51
22:BA:395:U:O2'	22:BA:396:G:N7	2.41	0.51
22:BA:657:U:O2'	22:BA:658:U:H5'	2.11	0.51
22:BA:799:G:C6	22:BA:800:A:C6	2.99	0.51
22:BA:946:C:H2'	22:BA:947:A:C8	2.45	0.51
22:BA:38:A:O2'	26:BE:43:THR:HA	2.10	0.51
26:BE:58:LYS:HE3	26:BE:62:GLN:HE21	1.74	0.51
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.46	0.51
29:BH:14:SER:O	29:BH:16:GLY:N	2.44	0.51
32:BK:99:ILE:HG22	32:BK:119:ALA:HA	1.92	0.51
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.41	0.51
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.57	0.51
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.11	0.51
53:CA:1134:G:N1	53:CA:1141:C:C4	2.78	0.51
53:CA:243:A:C2	53:CA:246:A:C8	2.99	0.51
53:CA:465:A:H8	53:CA:467:U:OP1	1.94	0.51
53:CA:765:G:H1'	53:CA:812:G:N2	2.26	0.51
2:CB:164:ASP:HB3	2:CB:167:HIS:HB3	1.93	0.51
6:CF:3:HIS:HB2	6:CF:92:THR:HA	1.93	0.51
12:CL:88:ASP:HB3	12:CL:89:LEU:HD22	1.92	0.51
53:CA:673:A:H1'	18:CR:63:TYR:CE2	2.46	0.51
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.93	0.51
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1395:A:H4'	57:DA:1397:U:C5	2.45	0.51
57:DA:1420:A:N3	57:DA:2211:A:N7	2.59	0.51
57:DA:120:U:O4	57:DA:177:G:C8	2.64	0.51
57:DA:185:G:C5	57:DA:212:G:N2	2.78	0.51
57:DA:1936:A:H2	57:DA:1943:U:O4	1.94	0.51
57:DA:193:U:H4'	57:DA:802:A:HO2'	1.76	0.51
57:DA:1651:G:N2	57:DA:2007:U:C2	2.79	0.51
57:DA:2069:G:C2	57:DA:2443:C:C2	2.98	0.51
57:DA:2135:A:C2'	57:DA:2136:G:O4'	2.56	0.51
57:DA:2138:G:OP2	57:DA:2138:G:H8	1.94	0.51
57:DA:2216:G:O2'	57:DA:2217:G:C8	2.23	0.51
57:DA:2550:G:O6	57:DA:2551:C:N4	2.44	0.51
57:DA:2663:G:H2'	57:DA:2664:G:H8	1.76	0.51
57:DA:2672:U:H6	57:DA:2672:U:O5'	1.94	0.51
57:DA:2757:A:OP1	52:D4:20:ASP:N	2.44	0.51
57:DA:379:G:C6	57:DA:380:G:C5	2.99	0.51
57:DA:70:G:H5'	57:DA:112:U:O2	2.11	0.51
57:DA:94:A:C6	57:DA:95:A:C6	2.99	0.51
58:DB:19:C:H2'	58:DB:20:G:C8	2.46	0.51
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.93	0.51
57:DA:616:A:H4'	26:DE:101:TYR:CZ	2.45	0.51
26:DE:139:LYS:NZ	26:DE:139:LYS:HB2	2.25	0.51
59:DF:67:THR:O	59:DF:84:ILE:HG22	2.11	0.51
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.11	0.51
37:DP:37:LYS:O	37:DP:38:ARG:HB3	2.11	0.51
38:DQ:40:LYS:O	38:DQ:44:TYR:HD2	1.93	0.51
1:AA:257:G:H2'	1:AA:258:G:H8	1.76	0.51
2:AB:9:LEU:HB2	2:AB:42:LEU:HD13	1.92	0.51
6:AF:4:TYR:HA	6:AF:91:ARG:O	2.11	0.51
9:AI:119:LYS:HG3	9:AI:122:ARG:HB3	1.93	0.51
16:AP:20:VAL:HG21	16:AP:32:PHE:CB	2.41	0.51
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.32	0.51
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.93	0.51
22:BA:1107:G:C2	22:BA:1108:U:C2	2.99	0.51
22:BA:811:U:HO2'	22:BA:1250:G:H2'	1.76	0.51
22:BA:1607:C:N4	22:BA:1622:G:C5	2.78	0.51
22:BA:2232:C:H2'	22:BA:2233:U:H6	1.75	0.51
22:BA:2272:U:H5''	22:BA:2273:A:OP1	2.11	0.51
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.46	0.51
22:BA:2714:G:P	63:BA:3549:HOH:O	2.68	0.51
22:BA:2865:U:C4	22:BA:2866:U:C4	3.00	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:923:G:N3	44:BW:23:LYS:CE	2.69	0.51
22:BA:999:U:OP2	63:BA:3356:HOH:O	2.20	0.51
23:BB:2:G:C6	23:BB:119:A:C2	2.98	0.51
27:BF:128:SER:OG	27:BF:154:THR:HB	2.10	0.51
27:BF:68:LYS:N	27:BF:68:LYS:HD2	2.23	0.51
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.10	0.51
29:BH:53:GLU:HG2	29:BH:53:GLU:O	2.11	0.51
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.51
36:BO:31:THR:HG23	36:BO:33:ARG:N	2.26	0.51
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CG	2.99	0.51
42:BU:94:PHE:O	42:BU:94:PHE:CD1	2.64	0.51
53:CA:39:G:H2'	53:CA:40:C:H6	1.76	0.51
53:CA:449:G:C2	53:CA:450:G:C4	2.99	0.51
53:CA:595:A:H4'	53:CA:596:A:OP1	2.11	0.51
53:CA:985:C:O2'	53:CA:986:U:O5'	2.29	0.51
53:CA:64:G:C8	53:CA:99:C:N4	2.78	0.51
55:CM:3:ILE:O	55:CM:4:ALA:HB2	2.11	0.51
56:CP:52:LEU:HD21	56:CP:75:ILE:HG12	1.92	0.51
57:DA:511:U:C5'	57:DA:1235:G:H4'	2.40	0.51
57:DA:1281:G:C6	57:DA:1290:C:N4	2.79	0.51
57:DA:1582:C:H2'	57:DA:1585:C:H42	1.75	0.51
57:DA:1655:A:C8	57:DA:1656:C:C5	2.99	0.51
57:DA:1968:G:H5'	63:DA:3480:HOH:O	2.11	0.51
57:DA:2039:U:H2'	57:DA:2040:G:H8	1.75	0.51
57:DA:2049:G:C5	57:DA:2050:C:C5	2.99	0.51
57:DA:2100:G:C6	57:DA:2101:A:C6	2.99	0.51
57:DA:2226:C:H2'	57:DA:2227:A:H8	1.74	0.51
57:DA:2425:A:H1'	57:DA:2427:C:C5	2.45	0.51
57:DA:298:G:O5'	57:DA:298:G:H8	1.94	0.51
57:DA:333:G:O2'	57:DA:334:C:H5'	2.11	0.51
57:DA:338:G:H2'	57:DA:339:U:H5'	1.93	0.51
57:DA:223:A:C6	57:DA:422:A:N7	2.79	0.51
57:DA:528:A:C2	57:DA:2043:C:H4'	2.46	0.51
57:DA:527:C:O2'	57:DA:528:A:P	2.69	0.51
57:DA:627:A:O2'	57:DA:628:G:O4'	2.29	0.51
57:DA:942:G:H2'	57:DA:943:A:H5'	1.92	0.51
24:DC:93:VAL:CG1	24:DC:94:LEU:N	2.74	0.51
59:DF:43:ILE:HD13	59:DF:82:TYR:HE2	1.75	0.51
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.11	0.51
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.93	0.51
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:8:ILE:HD12	36:DO:8:ILE:H	1.75	0.51
40:DS:49:LYS:HZ3	40:DS:49:LYS:HB3	1.76	0.51
43:DV:56:PHE:C	43:DV:58:SER:H	2.14	0.51
43:DV:72:VAL:HA	43:DV:92:VAL:O	2.10	0.51
44:DW:31:LEU:C	44:DW:33:GLY:H	2.13	0.51
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.91	0.51
1:AA:1196:A:O2'	1:AA:1197:A:OP2	2.29	0.50
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.10	0.50
1:AA:374:A:H2'	1:AA:375:U:H6	1.75	0.50
1:AA:587:G:H4'	8:AH:3:GLN:CA	2.39	0.50
1:AA:633:G:H2'	1:AA:634:C:H6	1.75	0.50
1:AA:687:A:N7	1:AA:701:U:H5	2.10	0.50
1:AA:878:A:H5''	8:AH:80:PRO:HG2	1.94	0.50
5:AE:114:LEU:HD21	5:AE:122:VAL:HG23	1.92	0.50
1:AA:932:C:OP1	7:AG:3:ARG:HB3	2.12	0.50
9:AI:117:LEU:HD23	9:AI:123:ARG:HD3	1.93	0.50
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.12	0.50
13:AM:4:ALA:HB2	13:AM:59:VAL:HG13	1.92	0.50
13:AM:86:ARG:HH22	13:AM:97:ARG:HA	1.76	0.50
14:AN:47:LEU:HD23	14:AN:47:LEU:O	2.11	0.50
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.59	0.50
22:BA:1374:G:O2'	22:BA:1375:U:H5'	2.11	0.50
22:BA:1434:A:OP1	22:BA:1434:A:H4'	2.11	0.50
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.27	0.50
22:BA:2405:G:H1'	22:BA:2412:A:N6	2.26	0.50
22:BA:2820:A:O2'	22:BA:2821:A:P	2.70	0.50
22:BA:747:U:OP2	40:BS:90:LYS:NZ	2.42	0.50
25:BD:114:LYS:HZ3	25:BD:116:LYS:HE2	1.76	0.50
25:BD:151:THR:C	25:BD:153:GLY:N	2.62	0.50
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.74	0.50
29:BH:66:ASN:C	29:BH:68:ARG:H	2.13	0.50
29:BH:76:GLU:HG2	29:BH:106:ALA:HB2	1.92	0.50
32:BK:2:ILE:HG21	32:BK:39:ILE:CD1	2.40	0.50
32:BK:39:ILE:HG22	32:BK:60:ALA:O	2.11	0.50
32:BK:65:THR:HG1	32:BK:68:GLY:H	1.58	0.50
34:BM:13:HIS:O	34:BM:14:LYS:HB2	2.12	0.50
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.75	0.50
53:CA:1157:A:C2	53:CA:1181:G:C8	2.99	0.50
53:CA:140:U:H2'	53:CA:141:G:O4'	2.11	0.50
53:CA:1452:C:H5'	53:CA:1453:G:C4	2.46	0.50
53:CA:148:G:N1	53:CA:149:A:C5	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:295:C:C4	53:CA:296:U:C4	2.99	0.50
3:CC:76:ILE:HG12	3:CC:83:VAL:HG11	1.93	0.50
54:CG:49:LEU:HG	54:CG:123:LEU:HB3	1.93	0.50
53:CA:643:C:H5''	8:CH:31:LEU:HD13	1.93	0.50
10:CJ:79:PRO:HA	10:CJ:84:VAL:HG11	1.92	0.50
56:CP:4:ILE:HD12	56:CP:4:ILE:N	2.26	0.50
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.24	0.50
57:DA:1213:A:O2'	57:DA:1214:A:H5'	2.11	0.50
57:DA:1328:A:H2'	57:DA:1330:C:C5	2.45	0.50
57:DA:1380:G:H1'	57:DA:1569:A:N6	2.26	0.50
57:DA:1476:U:O2'	57:DA:1477:A:H5'	2.11	0.50
57:DA:1520:U:O4	57:DA:1521:G:C6	2.64	0.50
57:DA:1991:U:H6	57:DA:1991:U:H5''	1.74	0.50
57:DA:2060:A:H62	26:DE:69:ARG:NH1	2.07	0.50
57:DA:2422:C:H2'	57:DA:2423:U:H5''	1.93	0.50
57:DA:2581:G:H5''	57:DA:2582:G:OP1	2.11	0.50
57:DA:2788:C:H2'	57:DA:2789:C:C6	2.45	0.50
57:DA:595:C:O2	57:DA:663:G:C2	2.65	0.50
57:DA:705:A:H62	57:DA:726:G:H1'	1.76	0.50
57:DA:746:U:H5'	57:DA:748:G:O4'	2.11	0.50
57:DA:750:A:H5''	57:DA:751:A:OP2	2.10	0.50
24:DC:62:ARG:N	24:DC:62:ARG:HD2	2.26	0.50
29:DH:75:LEU:O	29:DH:76:GLU:HB2	2.10	0.50
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.40	0.50
37:DP:107:ALA:O	37:DP:108:ARG:C	2.50	0.50
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	2.11	0.50
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.46	0.50
45:DX:62:GLY:O	45:DX:66:VAL:HG23	2.10	0.50
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.27	0.50
45:DX:4:CYS:HB3	45:DX:9:LYS:N	2.26	0.50
46:DY:50:VAL:HA	46:DY:53:VAL:HG23	1.92	0.50
1:AA:1066:C:H5''	1:AA:1066:C:C6	2.45	0.50
2:AB:49:PHE:HB2	2:AB:53:LEU:CD2	2.42	0.50
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.76	0.50
7:AG:96:ASN:N	7:AG:96:ASN:OD1	2.44	0.50
13:AM:28:ARG:NH2	13:AM:62:PHE:HB2	2.26	0.50
17:AQ:11:VAL:HG12	17:AQ:12:VAL:H	1.76	0.50
17:AQ:33:TYR:O	17:AQ:35:LYS:N	2.44	0.50
22:BA:1079:C:N4	22:BA:1088:A:C2	2.72	0.50
22:BA:1509:A:H1'	22:BA:1510:G:C5'	2.31	0.50
22:BA:758:C:O2	22:BA:1981:A:H2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2264:C:N4	44:BW:11:ASN:ND2	2.59	0.50
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.94	0.50
22:BA:415:A:C5	22:BA:416:U:C5	2.98	0.50
22:BA:919:U:H3'	22:BA:919:U:C6	2.46	0.50
63:BA:3241:HOH:O	26:BE:81:GLY:HA2	2.12	0.50
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.11	0.50
33:BL:40:SER:O	33:BL:41:ARG:HB2	2.12	0.50
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.31	0.50
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HD3	2.46	0.50
40:BS:13:SER:O	40:BS:14:ALA:CB	2.59	0.50
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.26	0.50
43:BV:65:VAL:O	43:BV:65:VAL:CG2	2.59	0.50
22:BA:856:G:C1'	44:BW:23:LYS:HB3	2.36	0.50
53:CA:1072:G:H2'	53:CA:1073:U:C6	2.46	0.50
53:CA:1434:A:N6	53:CA:1435:G:N1	2.59	0.50
53:CA:688:G:H5''	53:CA:688:G:H8	1.76	0.50
53:CA:961:U:O4	53:CA:983:A:N6	2.44	0.50
5:CE:105:ILE:O	5:CE:105:ILE:HG22	2.10	0.50
54:CG:37:THR:HA	54:CG:40:SER:OG	2.11	0.50
11:CK:19:VAL:HG22	11:CK:82:GLU:HG2	1.92	0.50
14:CN:27:LYS:C	14:CN:27:LYS:HD2	2.31	0.50
56:CP:32:PHE:CD1	56:CP:32:PHE:C	2.85	0.50
57:DA:1021:A:C2'	57:DA:1022:G:H4'	2.40	0.50
57:DA:1014:A:C2	57:DA:1149:G:C2	2.99	0.50
57:DA:1179:G:N2	57:DA:1180:U:C2	2.80	0.50
57:DA:1311:G:H21	57:DA:1603:A:H62	1.58	0.50
57:DA:1611:C:HO2'	57:DA:1612:C:H6	1.51	0.50
57:DA:163:C:O2'	57:DA:164:C:O4'	2.23	0.50
57:DA:1722:A:N6	57:DA:1739:A:C8	2.79	0.50
57:DA:21:A:H2'	57:DA:22:C:C6	2.46	0.50
57:DA:2428:G:N2	33:DL:60:ARG:CZ	2.75	0.50
57:DA:2447:G:C8	57:DA:2500:U:H2'	2.47	0.50
57:DA:247:G:C8	57:DA:249:C:C6	2.99	0.50
57:DA:2537:U:H2'	57:DA:2538:C:C6	2.46	0.50
57:DA:2626:C:C2'	57:DA:2627:G:H5'	2.42	0.50
57:DA:527:C:N3	57:DA:2779:U:H2'	2.26	0.50
57:DA:333:G:O2'	57:DA:334:C:H6	1.93	0.50
57:DA:416:U:H2'	57:DA:417:C:O4'	2.11	0.50
57:DA:463:G:N2	57:DA:466:A:OP2	2.37	0.50
57:DA:656:G:O2'	57:DA:657:U:H5'	2.10	0.50
58:DB:84:G:N2	58:DB:93:C:C2	2.78	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	1.93	0.50
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.27	0.50
1:AA:1074:G:C6	1:AA:1075:U:C4	2.99	0.50
1:AA:179:A:C2'	1:AA:180:U:H5'	2.42	0.50
1:AA:189:A:O2'	1:AA:190:A:H5'	2.11	0.50
1:AA:351:G:H4'	1:AA:352:C:OP1	2.10	0.50
1:AA:443:C:O2'	1:AA:444:G:H5'	2.12	0.50
1:AA:785:G:H2'	1:AA:786:G:H5'	1.94	0.50
1:AA:858:G:C2'	1:AA:859:G:H5'	2.41	0.50
2:AB:20:ARG:O	2:AB:22:TRP:N	2.44	0.50
2:AB:42:LEU:HG	2:AB:43:GLU:N	2.25	0.50
14:AN:50:LEU:HB3	14:AN:51:PRO:HD2	1.92	0.50
48:B0:9:ARG:HH21	48:B0:9:ARG:HG3	1.76	0.50
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	2.11	0.50
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.47	0.50
22:BA:1537:G:H5''	22:BA:1537:G:N3	2.27	0.50
22:BA:412:A:O2'	22:BA:413:C:H5'	2.11	0.50
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.26	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
31:BJ:37:ARG:HG2	31:BJ:37:ARG:O	2.12	0.50
33:BL:132:ARG:HA	33:BL:142:ILE:CD1	2.42	0.50
43:BV:65:VAL:O	43:BV:66:ASP:OD1	2.29	0.50
53:CA:1446:A:H2'	53:CA:1447:A:H5'	1.93	0.50
53:CA:926:G:H3'	53:CA:1505:G:N2	2.26	0.50
53:CA:599:C:H4'	8:CH:121:GLY:C	2.31	0.50
53:CA:900:A:O5'	53:CA:900:A:H8	1.94	0.50
3:CC:6:PRO:HG2	3:CC:183:TYR:CD2	2.47	0.50
5:CE:118:GLY:O	5:CE:119:VAL:HG13	2.12	0.50
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.27	0.50
12:CL:65:TYR:HE1	12:CL:67:GLY:HA2	1.77	0.50
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.27	0.50
57:DA:1178:C:C2	57:DA:1179:G:C8	3.00	0.50
57:DA:1249:U:H4'	38:DQ:3:VAL:CB	2.40	0.50
57:DA:1416:G:HO2'	57:DA:1417:C:P	2.33	0.50
57:DA:191:A:C2	57:DA:192:C:C2	2.99	0.50
57:DA:2059:A:O3'	26:DE:64:GLY:HA2	2.11	0.50
57:DA:2075:U:N3	57:DA:2435:A:C2	2.80	0.50
57:DA:2477:U:O4	52:D4:10:LEU:HD22	2.10	0.50
57:DA:2648:G:H2'	57:DA:2649:C:O4'	2.10	0.50
57:DA:2631:G:N2	57:DA:2788:C:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:432:A:O5'	57:DA:432:A:H8	1.93	0.50
57:DA:45:G:C5'	57:DA:46:G:H5'	2.42	0.50
57:DA:661:A:H2'	57:DA:662:G:O4'	2.10	0.50
57:DA:800:A:H4'	57:DA:801:G:O5'	2.10	0.50
57:DA:972:A:C2	57:DA:973:A:N6	2.79	0.50
57:DA:989:G:C4'	57:DA:990:A:OP1	2.57	0.50
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.12	0.50
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.12	0.50
57:DA:443:A:N6	26:DE:36:ALA:HB1	2.20	0.50
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.99	0.50
37:DP:87:ARG:HG2	37:DP:88:ARG:N	2.26	0.50
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.24	0.50
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.92	0.50
1:AA:1053:G:O2'	1:AA:1054:C:OP2	2.21	0.50
1:AA:1159:U:N3	1:AA:1182:G:C5	2.80	0.50
1:AA:119:A:C2	1:AA:240:G:C8	3.00	0.50
1:AA:1239:A:H62	1:AA:1299:A:H61	1.53	0.50
1:AA:128:G:O2'	1:AA:129:A:H5'	2.10	0.50
1:AA:593:U:H2'	1:AA:594:U:H6	1.75	0.50
1:AA:844:G:H2'	1:AA:844:G:N3	2.26	0.50
6:AF:29:ILE:HG22	6:AF:30:THR:N	2.26	0.50
11:AK:100:ASN:HB2	11:AK:106:ILE:CG2	2.42	0.50
13:AM:2:ARG:HG3	13:AM:56:ARG:HH12	1.77	0.50
15:AO:24:THR:HG22	15:AO:69:LEU:HD12	1.94	0.50
20:AT:55:PRO:HG2	20:AT:56:ILE:H	1.77	0.50
21:AU:3:ILE:HA	21:AU:19:LYS:HZ1	1.75	0.50
50:B2:43:THR:O	50:B2:44:VAL:CB	2.59	0.50
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.93	0.50
22:BA:1561:C:H2'	22:BA:1562:U:H6	1.75	0.50
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.11	0.50
23:BB:94:A:C2'	23:BB:95:U:H5'	2.40	0.50
25:BD:140:HIS:HE1	63:BD:302:HOH:O	1.93	0.50
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.72	0.50
32:BK:77:ILE:CD1	32:BK:105:ARG:HH12	2.25	0.50
33:BL:95:LEU:HB3	33:BL:100:ILE:CG1	2.42	0.50
36:BO:47:VAL:O	36:BO:47:VAL:HG23	2.12	0.50
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.92	0.50
38:BQ:85:ALA:O	38:BQ:87:VAL:O	2.29	0.50
53:CA:1004:A:H2'	53:CA:1005:A:C8	2.46	0.50
53:CA:1272:G:H2'	53:CA:1273:C:H5'	1.93	0.50
53:CA:130:A:O2'	53:CA:131:A:O5'	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1386:G:C2	53:CA:1387:G:C8	2.99	0.50
53:CA:1447:A:P	53:CA:1448:C:H5	2.35	0.50
53:CA:151:A:H2'	53:CA:152:A:O4'	2.10	0.50
53:CA:643:C:H5''	8:CH:31:LEU:HD22	1.92	0.50
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.77	0.50
3:CC:110:LEU:O	3:CC:110:LEU:HD23	2.11	0.50
4:CD:29:THR:C	4:CD:31:CYS:H	2.15	0.50
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.11	0.50
54:CG:32:ASP:CB	54:CG:34:LYS:HD3	2.42	0.50
15:CO:28:VAL:HG13	15:CO:62:ARG:HG3	1.92	0.50
56:CP:54:LEU:HG	56:CP:55:ASP:H	1.76	0.50
17:CQ:46:HIS:HB2	17:CQ:70:LYS:CE	2.41	0.50
20:CT:14:GLU:HA	20:CT:17:ARG:HB2	1.93	0.50
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.26	0.50
57:DA:1259:G:H2'	57:DA:1260:A:C8	2.47	0.50
57:DA:1474:U:C2'	57:DA:1475:G:H5'	2.37	0.50
57:DA:14:A:C6	57:DA:526:A:C2	3.00	0.50
57:DA:1905:C:N4	57:DA:1930:G:C2	2.80	0.50
57:DA:2211:A:OP2	57:DA:2211:A:H4'	2.11	0.50
57:DA:639:U:HO2'	57:DA:640:C:H6	1.58	0.50
57:DA:664:G:H4'	57:DA:941:A:OP1	2.11	0.50
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.65	0.50
59:DF:90:LEU:HB3	59:DF:95:MET:HG3	1.92	0.50
30:DI:61:TYR:HE2	30:DI:67:THR:H	1.58	0.50
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.15	0.50
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.84	0.50
38:DQ:71:ASN:ND2	38:DQ:106:THR:HA	2.25	0.50
44:DW:65:LYS:HE2	44:DW:84:GLU:HA	1.92	0.50
1:AA:1421:G:C6	1:AA:1422:G:N7	2.79	0.50
1:AA:1417:G:C6	1:AA:1482:G:C6	3.00	0.50
1:AA:184:G:H4'	1:AA:224:U:O3'	2.11	0.50
1:AA:373:A:N3	1:AA:374:A:C8	2.79	0.50
1:AA:628:G:C2	1:AA:629:A:C4	3.00	0.50
1:AA:794:A:H2'	1:AA:795:C:C6	2.47	0.50
2:AB:153:MET:HE2	2:AB:157:PRO:HG3	1.93	0.50
2:AB:66:ILE:HG13	2:AB:220:VAL:HG11	1.93	0.50
7:AG:38:ALA:O	7:AG:42:VAL:HG23	2.11	0.50
7:AG:90:VAL:HG23	7:AG:94:ARG:HD3	1.93	0.50
15:AO:9:LYS:O	15:AO:13:GLU:HG3	2.11	0.50
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.47	0.50
17:AQ:29:LYS:HB2	17:AQ:36:PHE:CE1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:675:A:OP1	18:AR:70:THR:HG21	2.10	0.50
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.11	0.50
22:BA:1485:U:C2	22:BA:1505:A:C2	3.00	0.50
22:BA:603:A:C8	22:BA:655:A:C6	2.99	0.50
26:BE:12:LEU:HD13	26:BE:12:LEU:O	2.12	0.50
31:BJ:123:LYS:HD2	31:BJ:123:LYS:N	2.25	0.50
34:BM:31:PHE:CZ	34:BM:110:GLU:HA	2.47	0.50
34:BM:62:LYS:HB3	34:BM:106:ASP:HB3	1.93	0.50
44:BW:30:VAL:O	44:BW:30:VAL:CG2	2.56	0.50
53:CA:284:C:H2'	53:CA:285:C:C6	2.47	0.50
53:CA:425:G:H2'	53:CA:426:U:O4'	2.11	0.50
53:CA:501:C:H1'	53:CA:549:C:H1'	1.93	0.50
53:CA:733:G:O2'	53:CA:734:G:C5'	2.59	0.50
53:CA:840:C:N3	53:CA:842:U:H4'	2.26	0.50
2:CB:26:MET:HE2	2:CB:29:PHE:HD2	1.77	0.50
4:CD:187:ARG:HG3	4:CD:191:SER:OG	2.12	0.50
54:CG:74:VAL:CG1	54:CG:143:MET:HB2	2.42	0.50
54:CG:9:ARG:HD3	54:CG:24:LYS:NZ	2.26	0.50
53:CA:1186:G:H4'	9:CI:111:GLU:CD	2.31	0.50
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	1.92	0.50
48:D0:27:LEU:HB3	48:D0:37:HIS:O	2.11	0.50
48:D0:38:LEU:O	48:D0:41:HIS:ND1	2.45	0.50
57:DA:117:G:C2	57:DA:119:A:N6	2.79	0.50
57:DA:1342:A:N6	57:DA:1397:U:C5	2.80	0.50
57:DA:1361:G:C2'	57:DA:1362:C:H5'	2.41	0.50
57:DA:236:C:H2'	57:DA:237:C:H6	1.76	0.50
57:DA:2520:C:H2'	57:DA:2521:C:C6	2.46	0.50
57:DA:2842:G:H2'	57:DA:2843:G:O4'	2.11	0.50
57:DA:345:A:O2'	57:DA:346:A:C2	2.61	0.50
57:DA:382:A:H2'	57:DA:383:C:H5''	1.94	0.50
57:DA:222:A:H3'	57:DA:421:C:H5'	1.94	0.50
57:DA:433:C:O2'	57:DA:434:U:H5'	2.11	0.50
57:DA:449:A:O2'	57:DA:450:G:C5'	2.58	0.50
57:DA:533:G:OP1	38:DQ:27:ARG:HD3	2.11	0.50
57:DA:811:U:H1'	57:DA:1251:C:C2	2.46	0.50
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.31	0.50
24:DC:91:ALA:HB3	24:DC:103:ILE:HG23	1.92	0.50
28:DG:53:PRO:HB3	28:DG:61:TRP:N	2.26	0.50
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.26	0.50
30:DI:20:SER:OG	30:DI:25:PRO:HG2	2.11	0.50
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.26	0.50
40:DS:27:LYS:O	40:DS:28:LYS:O	2.30	0.50
42:DU:52:ASN:CG	42:DU:54:PRO:HD3	2.31	0.50
43:DV:80:HIS:CD2	43:DV:83:LYS:N	2.79	0.50
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.10	0.50
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.73	0.50
1:AA:1160:G:O6	1:AA:1181:G:C5	2.64	0.50
1:AA:66:A:O2'	1:AA:67:C:H5'	2.12	0.50
1:AA:765:G:N1	1:AA:812:G:O2'	2.40	0.50
1:AA:903:G:C4	1:AA:904:U:C5	3.00	0.50
1:AA:92:U:O2'	1:AA:93:U:H5'	2.12	0.50
3:AC:35:ASP:OD1	3:AC:56:ILE:HG21	2.11	0.50
11:AK:76:TYR:N	11:AK:76:TYR:CD1	2.80	0.50
21:AU:24:LYS:HG2	21:AU:25:ALA:N	2.27	0.50
21:AU:8:ASN:O	21:AU:11:PHE:HE2	1.95	0.50
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.26	0.50
22:BA:1110:G:O2'	22:BA:1111:A:P	2.70	0.50
22:BA:1381:G:H2'	22:BA:1382:G:H5'	1.94	0.50
22:BA:1392:A:C6	22:BA:1393:A:C6	2.99	0.50
22:BA:1459:G:C5	22:BA:1461:C:C4	3.00	0.50
22:BA:1853:A:C5	22:BA:1889:A:C6	3.00	0.50
22:BA:2407:A:H2'	22:BA:2408:U:C6	2.46	0.50
22:BA:2061:G:H5''	22:BA:2503:A:C2	2.46	0.50
24:BC:211:ARG:NE	24:BC:211:ARG:HA	2.27	0.50
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.46	0.50
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	2.11	0.50
31:BJ:76:HIS:O	31:BJ:84:ILE:HD12	2.10	0.50
34:BM:6:ARG:CZ	34:BM:6:ARG:HB2	2.42	0.50
40:BS:3:THR:HB	40:BS:62:ASP:OD2	2.12	0.50
42:BU:71:ILE:HD12	42:BU:95:PHE:CE2	2.47	0.50
44:BW:71:LYS:HD2	44:BW:71:LYS:N	2.25	0.50
53:CA:1013:G:H22	53:CA:1015:G:H3'	1.76	0.50
53:CA:113:G:C1'	53:CA:354:G:H5'	2.40	0.50
53:CA:1501:C:N4	53:CA:1504:G:C2	2.79	0.50
53:CA:268:U:C2	53:CA:269:C:C5	3.00	0.50
53:CA:672:U:O2'	53:CA:673:A:H5'	2.11	0.50
53:CA:5:U:H4'	53:CA:6:G:H5''	1.93	0.50
4:CD:115:GLN:NE2	4:CD:153:ARG:NH2	2.59	0.50
4:CD:60:VAL:HG22	4:CD:194:ILE:HG21	1.93	0.50
8:CH:24:VAL:HG22	8:CH:25:THR:N	2.27	0.50
10:CJ:30:LYS:HG2	10:CJ:36:VAL:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.42	0.50
11:CK:15:VAL:O	11:CK:16:SER:HB2	2.11	0.50
56:CP:67:ILE:HG23	56:CP:67:ILE:O	2.12	0.50
11:CK:124:LYS:O	21:CU:33:ARG:NE	2.44	0.50
51:D3:22:LYS:H	51:D3:48:MET:CB	2.23	0.50
57:DA:1301:A:C8	57:DA:1303:G:C8	2.99	0.50
57:DA:1722:A:H61	57:DA:1738:G:H1'	1.77	0.50
57:DA:2299:U:O2'	57:DA:2300:C:O4'	2.27	0.50
57:DA:486:C:H2'	57:DA:487:C:H6	1.76	0.50
57:DA:533:G:H21	38:DQ:44:TYR:HD1	1.58	0.50
57:DA:867:C:O2'	57:DA:868:U:O5'	2.30	0.50
57:DA:942:G:C2'	57:DA:943:A:H5'	2.42	0.50
57:DA:991:C:O5'	57:DA:991:C:H6	1.93	0.50
58:DB:57:A:C4	59:DF:25:MET:CB	2.93	0.50
25:DD:12:THR:CG2	25:DD:13:ARG:N	2.74	0.50
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.94	0.50
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.25	0.50
35:DN:54:LEU:HB2	35:DN:62:ASN:ND2	2.27	0.50
36:DO:49:VAL:CG1	36:DO:81:ARG:HB3	2.41	0.50
39:DR:6:GLN:HA	39:DR:6:GLN:HE21	1.76	0.50
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.26	0.50
46:DY:31:GLN:OE1	46:DY:37:LEU:HB2	2.11	0.50
1:AA:1091:U:C2	1:AA:1095:U:N3	2.80	0.50
1:AA:1358:U:H6	1:AA:1359:C:C5	2.30	0.50
1:AA:1373:G:H5''	7:AG:35:LYS:HD2	1.94	0.50
1:AA:15:G:H2'	1:AA:16:A:H8	1.76	0.50
1:AA:259:G:C4	1:AA:260:G:C8	3.00	0.50
1:AA:43:C:H2'	1:AA:44:A:O4'	2.11	0.50
1:AA:570:G:H2'	1:AA:571:U:H6	1.76	0.50
1:AA:626:G:H2'	1:AA:627:G:C8	2.47	0.50
1:AA:652:U:O4	1:AA:752:G:H2'	2.12	0.50
5:AE:80:LEU:HD12	5:AE:146:MET:CE	2.42	0.50
5:AE:152:VAL:HB	5:AE:155:LYS:NZ	2.26	0.50
5:AE:63:MET:O	5:AE:67:ARG:HG2	2.12	0.50
8:AH:48:PHE:O	8:AH:49:LYS:CB	2.59	0.50
8:AH:4:ASP:HB2	8:AH:80:PRO:HG3	1.92	0.50
9:AI:57:VAL:HG12	9:AI:58:GLU:HG2	1.93	0.50
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.39	0.50
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.57	0.50
22:BA:1416:G:O2'	22:BA:1417:C:O5'	2.30	0.50
22:BA:142:A:O2'	22:BA:143:C:O4'	2.30	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1548:A:H2'	22:BA:1549:A:C8	2.47	0.50
22:BA:1716:U:O2'	22:BA:1717:A:H5'	2.12	0.50
22:BA:1912:A:C2	22:BA:1919:A:C5	2.99	0.50
22:BA:2107:G:O6	22:BA:2183:A:C6	2.65	0.50
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.77	0.50
22:BA:242:G:H5''	51:B3:63:TYR:CE2	2.47	0.50
22:BA:2545:G:O2'	22:BA:2546:U:H5'	2.12	0.50
22:BA:88:G:C6	22:BA:89:A:N7	2.80	0.50
22:BA:7:G:H2'	22:BA:8:C:H6	1.75	0.50
22:BA:95:A:O2'	46:BY:41:HIS:HD2	1.95	0.50
22:BA:994:C:O3'	22:BA:995:C:H3'	2.11	0.50
29:BH:58:LEU:HA	29:BH:61:VAL:HB	1.93	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.26	0.50
39:BR:101:ILE:HG22	39:BR:101:ILE:O	2.12	0.50
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.27	0.50
44:BW:40:ARG:NH1	44:BW:45:HIS:NE2	2.58	0.50
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.41	0.50
47:BZ:3:THR:C	47:BZ:4:ILE:HG22	2.32	0.50
53:CA:123:U:OP1	53:CA:311:C:O2'	2.28	0.50
53:CA:1287:A:O2'	53:CA:1288:A:C8	2.60	0.50
53:CA:377:G:H2'	53:CA:378:G:H8	1.76	0.50
53:CA:437:U:C2'	53:CA:438:U:O5'	2.59	0.50
53:CA:309:A:O2'	53:CA:607:A:N1	2.33	0.50
53:CA:642:A:O2'	53:CA:643:C:O5'	2.30	0.50
53:CA:71:A:C2	53:CA:72:A:C8	3.00	0.50
53:CA:861:G:H2'	53:CA:862:C:C6	2.45	0.50
53:CA:936:C:O2'	53:CA:937:A:O5'	2.30	0.50
3:CC:172:VAL:O	3:CC:174:LEU:HD23	2.11	0.50
3:CC:185:THR:O	3:CC:186:SER:HB2	2.11	0.50
5:CE:132:PRO:O	5:CE:134:ASN:N	2.45	0.50
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.32	0.50
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.11	0.50
57:DA:1179:G:C2	57:DA:1180:U:C2	2.99	0.50
57:DA:1322:A:C5	57:DA:1323:C:C5	2.99	0.50
57:DA:146:A:C2	57:DA:147:C:C2	2.99	0.50
57:DA:188:G:C2'	57:DA:189:G:H5'	2.41	0.50
57:DA:1991:U:H2'	57:DA:1992:G:H5'	1.93	0.50
57:DA:2321:U:OP2	57:DA:2322:A:OP2	2.30	0.50
57:DA:2667:C:H2'	57:DA:2668:G:C8	2.46	0.50
57:DA:311:A:C2	57:DA:328:U:O4	2.64	0.50
57:DA:596:U:C2	57:DA:662:G:N2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:726:G:O2'	57:DA:727:A:OP2	2.27	0.50
24:DC:62:ARG:NH2	24:DC:62:ARG:HG2	2.21	0.50
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.39	0.50
25:DD:159:LYS:HA	25:DD:159:LYS:HE2	1.93	0.50
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.92	0.50
26:DE:72:SER:C	26:DE:74:LYS:H	2.14	0.50
59:DF:113:PHE:CE2	59:DF:116:LEU:HD22	2.47	0.50
31:DJ:60:ASP:N	31:DJ:60:ASP:OD1	2.45	0.50
32:DK:104:THR:OG1	32:DK:106:GLU:HB2	2.11	0.50
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.26	0.50
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.46	0.50
40:DS:82:MET:HB2	40:DS:98:LYS:HB2	1.93	0.50
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.59	0.50
1:AA:716:A:C6	1:AA:717:U:N3	2.79	0.50
1:AA:91:U:H2'	1:AA:92:U:C1'	2.42	0.50
4:AD:147:LYS:HD3	4:AD:147:LYS:N	2.25	0.50
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.60	0.50
7:AG:53:SER:C	7:AG:55:LYS:H	2.15	0.50
7:AG:49:LEU:HD12	7:AG:60:ALA:HB1	1.94	0.50
7:AG:99:ALA:O	7:AG:103:ILE:HG13	2.12	0.50
15:AO:77:TYR:OH	15:AO:87:ARG:HG2	2.11	0.50
20:AT:3:ILE:O	20:AT:4:LYS:HB2	2.10	0.50
22:BA:1184:U:C2'	22:BA:1185:G:O5'	2.59	0.50
22:BA:1210:G:P	22:BA:1212:G:H5'	2.52	0.50
22:BA:1498:C:HO2'	22:BA:1499:C:H6	1.53	0.50
22:BA:1799:G:H22	22:BA:1818:U:HO2'	1.57	0.50
22:BA:1857:G:O2'	22:BA:1858:A:OP2	2.27	0.50
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.44	0.50
22:BA:2516:A:C2	22:BA:2569:G:C4	3.00	0.50
22:BA:522:A:C6	22:BA:523:C:C4	2.99	0.50
22:BA:729:G:C2'	22:BA:729:G:N3	2.72	0.50
22:BA:764:A:H3'	22:BA:765:C:H5'	1.94	0.50
23:BB:54:G:H2'	23:BB:55:U:H6	1.77	0.50
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.11	0.50
25:BD:151:THR:O	25:BD:152:PRO:C	2.48	0.50
27:BF:21:TYR:CE2	27:BF:28:PRO:HD3	2.47	0.50
30:BI:58:ILE:HG22	30:BI:60:VAL:HG23	1.92	0.50
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.14	0.50
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.26	0.50
44:BW:41:GLY:O	44:BW:43:LYS:N	2.44	0.50
47:BZ:6:ILE:HD11	47:BZ:47:ILE:HD11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1092:A:C6	53:CA:1183:U:O2	2.64	0.50
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.27	0.50
53:CA:512:U:O2'	53:CA:513:C:H5'	2.12	0.50
53:CA:747:A:H2'	53:CA:748:G:O4'	2.12	0.50
6:CF:81:ASN:O	6:CF:83:ALA:N	2.45	0.50
11:CK:96:ILE:HG21	11:CK:109:ILE:HD11	1.93	0.50
11:CK:90:PRO:O	11:CK:91:GLY:C	2.50	0.50
55:CM:13:HIS:NE2	55:CM:41:ASP:HA	2.25	0.50
53:CA:1114:C:O2'	14:CN:99:SER:HB2	2.12	0.50
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.12	0.50
57:DA:108:G:H2'	57:DA:109:C:H6	1.77	0.50
57:DA:1286:A:C6	57:DA:1329:U:C2	3.00	0.50
57:DA:120:U:C2	57:DA:149:A:C6	2.99	0.50
57:DA:1441:G:C4	57:DA:1551:A:C2	3.00	0.50
57:DA:1737:G:C5	57:DA:1738:G:C6	2.99	0.50
57:DA:1739:A:C2	57:DA:1740:G:C4	3.00	0.50
57:DA:1817:G:H4'	24:DC:85:ASN:O	2.12	0.50
57:DA:2135:A:H2'	57:DA:2136:G:H8	1.76	0.50
57:DA:2314:A:H2'	57:DA:2315:G:H8	1.76	0.50
57:DA:2552:U:C2	57:DA:2554:U:C5'	2.95	0.50
57:DA:2585:U:O2'	57:DA:2586:U:H5'	2.11	0.50
57:DA:2829:A:H2'	57:DA:2830:C:H5'	1.94	0.50
57:DA:49:A:C8	57:DA:51:G:C2	2.99	0.50
57:DA:612:G:N2	57:DA:614:A:HO2'	2.09	0.50
57:DA:614:A:H4'	57:DA:616:A:H62	1.77	0.50
57:DA:663:G:H5''	57:DA:664:G:OP2	2.12	0.50
57:DA:721:A:C2	57:DA:722:A:C4	2.99	0.50
57:DA:818:G:N7	57:DA:1187:G:C6	2.80	0.50
57:DA:975:A:H2'	57:DA:976:G:C8	2.47	0.50
58:DB:108:A:HO2'	58:DB:109:A:P	2.35	0.50
58:DB:57:A:N6	59:DF:25:MET:SD	2.85	0.50
24:DC:127:ASN:O	24:DC:190:THR:HA	2.12	0.50
59:DF:41:GLU:CG	59:DF:42:ALA:H	2.24	0.50
31:DJ:23:LYS:CB	31:DJ:28:LEU:HD13	2.42	0.50
35:DN:75:ILE:O	35:DN:75:ILE:HD12	2.11	0.50
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.38	0.50
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.12	0.50
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.77	0.50
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.77	0.50
1:AA:244:U:O4	1:AA:906:A:H1'	2.12	0.50
1:AA:40:C:O2	1:AA:40:C:H2'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:562:U:H1'	12:AL:11:ARG:HB3	1.93	0.50
1:AA:922:G:C6	1:AA:923:A:C6	2.99	0.50
3:AC:54:ILE:HD12	3:AC:54:ILE:C	2.31	0.50
4:AD:47:LEU:CD2	4:AD:52:VAL:HG12	2.40	0.50
7:AG:23:ALA:O	7:AG:26:VAL:HG22	2.12	0.50
8:AH:17:GLN:NE2	8:AH:69:ALA:HB1	2.26	0.50
14:AN:90:GLY:O	14:AN:92:ILE:N	2.44	0.50
16:AP:12:LYS:HG2	16:AP:13:LYS:HG2	1.94	0.50
21:AU:32:ARG:O	21:AU:32:ARG:HG2	2.12	0.50
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.36	0.50
22:BA:117:G:C6	22:BA:119:A:N6	2.80	0.50
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.76	0.50
22:BA:1499:C:H2'	22:BA:1500:G:C8	2.30	0.50
22:BA:1579:A:O2'	22:BA:1580:A:H5'	2.12	0.50
22:BA:2017:U:H5''	22:BA:2018:G:OP1	2.12	0.50
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.12	0.50
22:BA:2517:C:C6	22:BA:2542:A:N7	2.79	0.50
22:BA:2581:G:H4'	22:BA:2582:G:C8	2.46	0.50
22:BA:300:A:H2'	22:BA:334:C:H1'	1.93	0.50
22:BA:304:U:H2'	22:BA:305:C:C6	2.47	0.50
22:BA:49:A:C6	22:BA:177:G:C4	3.00	0.50
23:BB:35:C:H2'	23:BB:36:C:O4'	2.10	0.50
22:BA:1257:C:H5'	26:BE:78:TRP:CH2	2.46	0.50
27:BF:110:ILE:O	27:BF:111:ARG:C	2.49	0.50
28:BG:30:GLY:O	28:BG:32:LEU:N	2.45	0.50
29:BH:9:VAL:O	29:BH:13:GLY:N	2.45	0.50
37:BP:43:GLU:H	37:BP:62:LYS:NZ	2.09	0.50
40:BS:18:ARG:HG3	40:BS:76:VAL:HG13	1.94	0.50
41:BT:29:THR:CA	41:BT:86:THR:HA	2.42	0.50
43:BV:4:ILE:O	43:BV:63:ILE:HA	2.11	0.50
44:BW:24:ARG:HD3	44:BW:65:LYS:HE2	1.93	0.50
53:CA:1363:A:C5	53:CA:1365:G:C6	2.99	0.50
53:CA:1378:C:H3'	53:CA:1379:G:C5'	2.42	0.50
53:CA:1387:G:C4	53:CA:1388:C:C5	3.00	0.50
53:CA:1517:G:C8	57:DA:1920:C:OP1	2.64	0.50
4:CD:2:ARG:HE	4:CD:114:ARG:HD2	1.77	0.50
8:CH:89:ASP:N	8:CH:89:ASP:OD1	2.45	0.50
10:CJ:50:THR:HB	10:CJ:64:GLN:OE1	2.12	0.50
12:CL:120:ARG:HG2	12:CL:121:PRO:N	2.25	0.50
57:DA:1429:G:N3	57:DA:1430:G:N7	2.59	0.50
57:DA:1815:A:H1'	57:DA:1817:G:N7	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1844:C:O3'	24:DC:255:LYS:NZ	2.43	0.50
57:DA:1910:G:C6	57:DA:1911:U:C4	3.00	0.50
57:DA:2200:C:N4	57:DA:2224:G:N2	2.60	0.50
57:DA:2296:U:O2'	57:DA:2297:A:O5'	2.30	0.50
57:DA:2691:C:O2'	57:DA:2692:G:H5'	2.10	0.50
57:DA:2847:U:H2'	57:DA:2848:G:C5'	2.33	0.50
57:DA:389:G:O2'	57:DA:390:U:H5'	2.12	0.50
57:DA:404:A:C2	57:DA:406:G:N1	2.80	0.50
57:DA:612:G:N2	57:DA:614:A:O2'	2.45	0.50
57:DA:740:C:C5	57:DA:1981:A:N1	2.80	0.50
58:DB:41:G:H3'	58:DB:42:C:C5'	2.40	0.50
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.77	0.50
26:DE:54:GLY:O	26:DE:55:SER:HB3	2.12	0.50
59:DF:11:VAL:HG12	59:DF:12:VAL:N	2.26	0.50
58:DB:54:G:H21	59:DF:25:MET:CE	2.25	0.50
29:DH:8:LYS:HD2	29:DH:8:LYS:C	2.32	0.50
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.12	0.50
37:DP:5:LYS:HE2	37:DP:9:GLN:NE2	2.27	0.50
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.26	0.50
57:DA:380:G:O3'	45:DX:15:ASN:HB2	2.12	0.50
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.93	0.50
1:AA:1195:C:H2'	1:AA:1197:A:H5'	1.94	0.49
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.60	0.49
1:AA:36:C:OP1	12:AL:119:LYS:HE3	2.12	0.49
1:AA:550:G:H2'	1:AA:551:U:C6	2.47	0.49
1:AA:739:C:C4	1:AA:740:U:C5	3.00	0.49
4:AD:56:GLU:O	4:AD:59:LYS:HB3	2.12	0.49
5:AE:149:PRO:O	5:AE:152:VAL:HG22	2.12	0.49
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	2.25	0.49
6:AF:46:GLN:NE2	6:AF:55:HIS:HB2	2.27	0.49
11:AK:30:ILE:HB	11:AK:45:THR:HG22	1.94	0.49
16:AP:61:VAL:HA	16:AP:65:ALA:H	1.76	0.49
17:AQ:29:LYS:HG2	17:AQ:34:GLY:HA2	1.92	0.49
19:AS:80:ARG:HG3	19:AS:80:ARG:O	2.12	0.49
52:B4:15:LYS:O	52:B4:16:ILE:O	2.30	0.49
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.11	0.49
22:BA:1909:C:C2	22:BA:1922:G:N2	2.80	0.49
22:BA:2006:C:H6	22:BA:2006:C:O5'	1.95	0.49
22:BA:2084:C:O5'	22:BA:2084:C:H6	1.94	0.49
22:BA:272:A:O2'	22:BA:273:G:O5'	2.29	0.49
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.47	0.49
25:BD:40:LEU:HD12	25:BD:40:LEU:H	1.77	0.49
26:BE:115:GLN:O	26:BE:116:ASP:C	2.51	0.49
27:BF:72:SER:HB2	27:BF:80:GLN:H	1.77	0.49
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.44	0.49
29:BH:2:GLN:C	29:BH:3:VAL:HG13	2.32	0.49
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.49
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	1.94	0.49
34:BM:46:ILE:C	34:BM:46:ILE:HD12	2.32	0.49
34:BM:50:ARG:O	34:BM:53:MET:HB3	2.12	0.49
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.27	0.49
38:BQ:8:ILE:HD12	38:BQ:9:ALA:N	2.27	0.49
53:CA:1004:A:H2'	53:CA:1005:A:O4'	2.12	0.49
53:CA:1124:G:O2'	53:CA:1125:U:C6	2.64	0.49
53:CA:121:U:H3'	53:CA:121:U:OP1	2.11	0.49
53:CA:1293:C:H2'	53:CA:1294:G:H8	1.73	0.49
53:CA:14:U:O2	53:CA:16:A:C8	2.65	0.49
53:CA:160:A:O2'	53:CA:344:A:N6	2.44	0.49
53:CA:380:G:N2	53:CA:383:A:OP2	2.43	0.49
53:CA:398:U:H2'	53:CA:399:G:H8	1.77	0.49
53:CA:986:U:C2'	53:CA:987:G:O5'	2.60	0.49
4:CD:191:SER:O	4:CD:192:ALA:CB	2.60	0.49
54:CG:4:ARG:HG2	54:CG:4:ARG:HH11	1.76	0.49
8:CH:65:PHE:CD2	8:CH:66:GLN:HG2	2.47	0.49
56:CP:20:VAL:CG2	56:CP:32:PHE:HB2	2.41	0.49
18:CR:44:THR:OG1	18:CR:46:THR:HG22	2.12	0.49
18:CR:59:LYS:O	18:CR:63:TYR:CD1	2.65	0.49
21:CU:25:ALA:O	21:CU:29:ALA:N	2.40	0.49
57:DA:100:U:H1'	57:DA:101:A:N7	2.27	0.49
57:DA:1206:G:H2'	57:DA:1207:C:C5	2.47	0.49
57:DA:1343:G:O2'	57:DA:1344:U:C6	2.59	0.49
57:DA:1519:G:C6	57:DA:1520:U:N3	2.80	0.49
57:DA:1989:G:H2'	57:DA:1990:C:H5'	1.92	0.49
57:DA:2353:G:H21	44:DW:30:VAL:HG21	1.77	0.49
57:DA:2708:G:O2'	57:DA:2709:G:H5'	2.12	0.49
57:DA:2718:G:OP1	37:DP:97:TYR:HD1	1.95	0.49
57:DA:391:A:O2'	57:DA:392:U:C5'	2.60	0.49
57:DA:432:A:O2'	57:DA:433:C:H5'	2.12	0.49
57:DA:453:A:N3	57:DA:457:A:O2'	2.45	0.49
57:DA:477:A:O2'	57:DA:478:A:O5'	2.30	0.49
57:DA:709:U:H2'	57:DA:710:U:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:730:A:O2'	57:DA:731:C:H5'	2.12	0.49
57:DA:845:A:N6	57:DA:932:U:N3	2.59	0.49
58:DB:17:C:O2'	58:DB:18:G:C5'	2.60	0.49
26:DE:130:LYS:O	26:DE:134:LEU:HB3	2.12	0.49
59:DF:137:PHE:CB	59:DF:138:PRO:HD2	2.34	0.49
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.12	0.49
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.41	0.49
57:DA:855:G:O2'	44:DW:23:LYS:HD3	2.12	0.49
57:DA:95:A:HO2'	46:DY:39:GLN:HA	1.77	0.49
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.12	0.49
1:AA:389:A:C6	1:AA:390:U:H1'	2.48	0.49
1:AA:464:U:N3	1:AA:466:A:H5'	2.27	0.49
1:AA:481:G:H3'	1:AA:481:G:H8	1.76	0.49
1:AA:715:A:H2'	1:AA:716:A:C8	2.47	0.49
1:AA:832:G:C6	1:AA:833:G:N7	2.80	0.49
2:AB:40:ILE:HG21	2:AB:201:GLY:CA	2.42	0.49
4:AD:11:SER:HA	4:AD:18:LEU:HD12	1.94	0.49
7:AG:13:PRO:HB2	7:AG:18:GLY:HA2	1.94	0.49
8:AH:17:GLN:CD	8:AH:69:ALA:HB1	2.32	0.49
12:AL:107:LYS:O	12:AL:108:ASP:HB2	2.12	0.49
13:AM:89:ARG:NH1	13:AM:94:LEU:HB3	2.25	0.49
17:AQ:21:VAL:HA	17:AQ:43:LEU:O	2.12	0.49
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.48	0.49
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.92	0.49
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.11	0.49
22:BA:1911:U:C2	22:BA:1918:A:C2	3.00	0.49
22:BA:2423:U:O2'	22:BA:2424:C:P	2.70	0.49
22:BA:2603:G:H2'	22:BA:2604:U:C6	2.46	0.49
22:BA:2691:C:O3'	22:BA:2871:U:H4'	2.11	0.49
22:BA:2721:A:H1'	22:BA:2873:A:H2'	1.93	0.49
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.12	0.49
22:BA:286:U:H2'	22:BA:287:G:O4'	2.12	0.49
23:BB:37:C:C5	23:BB:38:C:C4	3.00	0.49
24:BC:210:ALA:HB1	24:BC:215:VAL:HG23	1.94	0.49
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.93	0.49
27:BF:37:MET:CE	27:BF:151:LEU:HB3	2.43	0.49
22:BA:2313:C:H5''	27:BF:87:LYS:HD3	1.93	0.49
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.12	0.49
31:BJ:21:THR:O	31:BJ:23:LYS:N	2.44	0.49
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG23	1.94	0.49
36:BO:110:ALA:O	36:BO:113:ALA:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.75	0.49
44:BW:28:GLU:CD	44:BW:29:SER:H	2.15	0.49
53:CA:1004:A:C4	53:CA:1026:G:N7	2.80	0.49
53:CA:1319:A:N6	53:CA:1323:G:C2	2.80	0.49
53:CA:1441:A:C2	53:CA:1442:G:H1'	2.47	0.49
53:CA:371:A:C2'	53:CA:372:C:H5'	2.41	0.49
53:CA:461:A:P	53:CA:462:G:OP2	2.70	0.49
53:CA:598:U:H4'	8:CH:85:TYR:CD1	2.47	0.49
53:CA:734:G:H2'	53:CA:735:C:H6	1.77	0.49
53:CA:828:U:H2'	53:CA:829:G:O5'	2.12	0.49
53:CA:996:A:O2'	53:CA:997:U:O4'	2.29	0.49
2:CB:131:LYS:O	2:CB:131:LYS:HE3	2.11	0.49
4:CD:25:ARG:O	4:CD:26:ALA:C	2.50	0.49
54:CG:148:LYS:NZ	54:CG:148:LYS:HB2	2.27	0.49
9:CI:15:ALA:O	9:CI:66:VAL:HG23	2.12	0.49
57:DA:1328:A:H3'	57:DA:1330:C:H41	1.77	0.49
57:DA:1353:A:O4'	57:DA:1569:A:H2	1.95	0.49
57:DA:1412:U:H2'	57:DA:1413:A:O4'	2.11	0.49
57:DA:1931:U:O2'	57:DA:1932:A:H5'	2.12	0.49
57:DA:2142:A:C2'	57:DA:2143:C:H4'	2.41	0.49
57:DA:2232:C:O5'	57:DA:2232:C:H6	1.94	0.49
57:DA:228:C:H5'	57:DA:229:C:H5	1.77	0.49
57:DA:2316:G:H2'	57:DA:2317:A:H8	1.77	0.49
57:DA:2773:C:H2'	57:DA:2774:C:H6	1.76	0.49
57:DA:478:A:C6	57:DA:480:A:C6	3.00	0.49
57:DA:81:G:H2'	57:DA:82:U:O4'	2.12	0.49
57:DA:1774:C:O2	24:DC:10:PRO:HB2	2.12	0.49
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.42	0.49
29:DH:47:PHE:O	29:DH:51:ARG:HG3	2.12	0.49
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.26	0.49
29:DH:62:LEU:C	29:DH:64:ALA:N	2.65	0.49
32:DK:87:LEU:HD23	32:DK:87:LEU:H	1.77	0.49
35:DN:103:ARG:HG3	35:DN:104:ALA:H	1.77	0.49
38:DQ:29:ARG:HD2	48:D0:9:ARG:NH1	2.27	0.49
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.14	0.49
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.12	0.49
44:DW:37:VAL:C	44:DW:39:GLN:H	2.15	0.49
1:AA:1270:G:OP2	1:AA:1270:G:H8	1.94	0.49
1:AA:186:C:H4'	20:AT:75:LYS:HG3	1.94	0.49
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.49
8:AH:63:LYS:O	8:AH:70:VAL:HG23	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:23:LEU:HG	12:AL:24:GLU:H	1.76	0.49
13:AM:88:LEU:O	13:AM:92:ARG:HG3	2.12	0.49
16:AP:78:VAL:O	16:AP:78:VAL:HG22	2.11	0.49
18:AR:66:LEU:O	18:AR:67:LEU:HD23	2.12	0.49
21:AU:34:ARG:HD3	21:AU:39:LYS:NZ	2.27	0.49
22:BA:1430:G:H2'	22:BA:1431:A:C8	2.47	0.49
22:BA:1486:U:H2'	22:BA:1487:U:H6	1.77	0.49
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.76	0.49
22:BA:49:A:H61	22:BA:177:G:C2'	2.24	0.49
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	2.12	0.49
22:BA:1847:A:H2'	22:BA:1847:A:N3	2.26	0.49
22:BA:2322:A:N6	22:BA:2333:A:H62	2.10	0.49
22:BA:2365:G:O2'	22:BA:2366:A:C8	2.58	0.49
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.27	0.49
22:BA:417:C:H2'	22:BA:418:C:H6	1.77	0.49
22:BA:503:A:H4'	22:BA:504:A:O5'	2.12	0.49
22:BA:573:U:O3'	22:BA:574:A:H3'	2.11	0.49
22:BA:655:A:O2'	22:BA:656:G:H8	1.92	0.49
22:BA:751:A:H8	22:BA:751:A:O5'	1.95	0.49
24:BC:237:ARG:O	24:BC:238:ASN:HB2	2.12	0.49
25:BD:114:LYS:HE3	25:BD:114:LYS:CA	2.43	0.49
22:BA:2512:C:O2'	25:BD:159:LYS:HE3	2.12	0.49
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.94	0.49
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.12	0.49
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.76	0.49
30:BI:27:LEU:HD12	30:BI:27:LEU:C	2.33	0.49
31:BJ:130:HIS:HD2	31:BJ:132:HIS:N	2.01	0.49
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.28	0.49
32:BK:12:ASP:HB3	32:BK:85:VAL:HG13	1.93	0.49
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.12	0.49
22:BA:1244:A:O5'	33:BL:7:SER:HB3	2.12	0.49
22:BA:1223:G:P	39:BR:68:ARG:HH12	2.34	0.49
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.12	0.49
53:CA:1244:G:O2'	53:CA:1245:C:O4'	2.24	0.49
53:CA:131:A:C2	53:CA:132:C:N3	2.81	0.49
53:CA:937:A:C2	53:CA:1379:G:C6	3.00	0.49
53:CA:147:G:H2'	53:CA:148:G:C8	2.47	0.49
53:CA:373:A:C2	53:CA:374:A:C8	3.00	0.49
53:CA:429:U:H1'	53:CA:430:A:C5'	2.42	0.49
53:CA:495:A:N1	53:CA:496:A:N6	2.61	0.49
53:CA:54:C:H2'	53:CA:352:C:N4	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:82:G:C6	53:CA:89:U:C5	3.00	0.49
2:CB:75:ALA:HB2	2:CB:209:VAL:HG21	1.94	0.49
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.74	0.49
5:CE:18:ASN:OD1	5:CE:18:ASN:N	2.46	0.49
53:CA:1240:U:O2'	54:CG:37:THR:HB	2.12	0.49
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.27	0.49
57:DA:1049:C:O2'	57:DA:1050:A:C5'	2.59	0.49
57:DA:1203:U:N3	57:DA:1204:A:N6	2.60	0.49
57:DA:1281:G:C2'	57:DA:1282:U:H5'	2.42	0.49
57:DA:1745:A:H2'	57:DA:1746:A:H8	1.78	0.49
57:DA:1808:A:H5''	57:DA:1809:A:N7	2.27	0.49
57:DA:1965:C:H5''	57:DA:1965:C:H6	1.76	0.49
57:DA:2013:A:N6	57:DA:2014:A:C2	2.80	0.49
57:DA:2234:G:C5	57:DA:2235:G:C8	3.00	0.49
57:DA:228:C:H5'	57:DA:229:C:C5	2.47	0.49
57:DA:2401:U:H3'	57:DA:2402:U:C5'	2.35	0.49
57:DA:2566:A:O2'	57:DA:2567:G:OP2	2.28	0.49
57:DA:2622:U:O2'	57:DA:2825:G:N7	2.43	0.49
57:DA:2880:C:H1'	35:DN:93:GLY:N	2.09	0.49
57:DA:2:G:C5	57:DA:3:U:C4	3.00	0.49
57:DA:590:A:C5	57:DA:591:U:C5	3.00	0.49
25:DD:106:LYS:HB3	25:DD:206:ALA:N	2.23	0.49
59:DF:64:PRO:HA	59:DF:88:VAL:CG2	2.41	0.49
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.77	0.49
31:DJ:45:THR:HG23	31:DJ:45:THR:O	2.12	0.49
32:DK:107:LEU:C	32:DK:109:SER:H	2.16	0.49
35:DN:56:LYS:HE2	35:DN:87:PHE:O	2.12	0.49
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.33	0.49
37:DP:56:SER:O	37:DP:57:ALA:HB2	2.11	0.49
1:AA:1183:U:H3'	1:AA:1184:G:H5''	1.95	0.49
1:AA:1326:U:H2'	1:AA:1327:C:H6	1.77	0.49
1:AA:1504:G:H3'	63:AA:1801:HOH:O	2.11	0.49
1:AA:274:A:H4'	1:AA:275:G:O5'	2.11	0.49
1:AA:484:G:HO2'	1:AA:485:U:P	2.34	0.49
1:AA:626:G:H2'	1:AA:627:G:H8	1.76	0.49
1:AA:897:C:H2'	1:AA:897:C:O2	2.13	0.49
2:AB:184:ALA:HB3	2:AB:195:VAL:HG21	1.94	0.49
7:AG:146:ALA:C	7:AG:148:LYS:N	2.65	0.49
13:AM:39:ALA:HB3	13:AM:42:VAL:HG13	1.95	0.49
22:BA:1313:U:C2'	22:BA:1313:U:O2	2.60	0.49
22:BA:2832:U:HO2'	22:BA:2833:U:P	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:O	26:BE:188:MET:HA	2.13	0.49
32:BK:11:ALA:O	32:BK:99:ILE:HG13	2.13	0.49
35:BN:71:ARG:HG2	35:BN:71:ARG:HH21	1.74	0.49
37:BP:92:ARG:HB2	37:BP:92:ARG:HH11	1.78	0.49
39:BR:10:LYS:HD2	39:BR:10:LYS:N	2.27	0.49
41:BT:31:VAL:HA	41:BT:84:TYR:H	1.77	0.49
53:CA:1097:C:H2'	53:CA:1098:C:H6	1.78	0.49
53:CA:1159:U:O4'	53:CA:1182:G:N2	2.44	0.49
53:CA:173:U:H5''	53:CA:174:A:OP2	2.13	0.49
53:CA:212:G:O2'	53:CA:213:G:O5'	2.30	0.49
53:CA:238:A:H2'	53:CA:239:U:C4'	2.43	0.49
53:CA:491:G:C2'	53:CA:492:C:H5'	2.43	0.49
53:CA:762:U:O5'	53:CA:762:U:H6	1.95	0.49
53:CA:821:G:O2'	53:CA:822:U:H5'	2.12	0.49
53:CA:770:C:O2'	53:CA:899:C:N3	2.42	0.49
4:CD:28:ASP:O	4:CD:29:THR:O	2.29	0.49
10:CJ:5:ARG:C	10:CJ:6:ILE:HD12	2.33	0.49
11:CK:33:ILE:O	11:CK:41:LEU:HB2	2.12	0.49
14:CN:13:VAL:HA	14:CN:59:GLN:NE2	2.28	0.49
17:CQ:25:GLU:CG	17:CQ:40:THR:HG22	2.42	0.49
19:CS:54:ARG:HG2	19:CS:55:GLN:N	2.27	0.49
53:CA:261:U:OP1	20:CT:70:LYS:HE2	2.13	0.49
57:DA:1084:A:H2'	57:DA:1085:A:H5'	1.95	0.49
57:DA:1364:G:H1'	57:DA:1368:G:N2	2.28	0.49
57:DA:1373:A:H4'	57:DA:2212:A:H1'	1.94	0.49
57:DA:1716:U:HO2'	57:DA:1717:A:H8	0.65	0.49
57:DA:785:G:O2'	57:DA:1779:U:C5'	2.60	0.49
57:DA:2056:G:H2'	57:DA:2056:G:N3	2.28	0.49
57:DA:2223:G:H2'	57:DA:2224:G:H5'	1.93	0.49
57:DA:2669:G:H2'	57:DA:2670:A:H8	1.76	0.49
57:DA:2882:A:H5''	35:DN:96:ARG:HD3	1.94	0.49
57:DA:37:C:H2'	57:DA:38:A:O4'	2.13	0.49
57:DA:420:C:H2'	57:DA:421:C:H6	1.77	0.49
57:DA:604:G:C6	57:DA:625:G:N1	2.81	0.49
57:DA:651:G:C6	57:DA:652:U:C4	3.01	0.49
58:DB:11:C:H5'	44:DW:71:LYS:HD3	1.95	0.49
58:DB:42:C:H2'	58:DB:43:C:C5	2.46	0.49
58:DB:44:G:OP1	59:DF:91:ARG:NH1	2.45	0.49
26:DE:149:ILE:O	26:DE:149:ILE:HG12	2.10	0.49
28:DG:60:GLY:O	28:DG:62:ALA:N	2.42	0.49
57:DA:1070:A:H61	30:DI:8:VAL:HB	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:2:ILE:O	32:DK:3:GLN:HG2	2.12	0.49
33:DL:7:SER:HB2	33:DL:8:PRO:HD2	1.93	0.49
35:DN:9:GLN:C	35:DN:10:LEU:O	2.50	0.49
25:DD:179:ARG:NH1	37:DP:7:LEU:HD11	2.27	0.49
38:DQ:39:ILE:O	38:DQ:42:GLY:N	2.45	0.49
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.93	0.49
39:DR:2:TYR:CE1	39:DR:13:ARG:HD2	2.47	0.49
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.48	0.49
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.27	0.49
1:AA:198:G:N2	1:AA:220:G:H1'	2.27	0.49
1:AA:464:U:H2'	1:AA:466:A:OP2	2.13	0.49
1:AA:520:A:C2	1:AA:536:C:O2	2.65	0.49
1:AA:57:G:N1	1:AA:356:A:C2	2.81	0.49
1:AA:588:G:C2	1:AA:589:U:C2	3.00	0.49
1:AA:596:A:C6	1:AA:645:G:C2	3.00	0.49
1:AA:729:A:H2'	1:AA:730:G:O4'	2.13	0.49
3:AC:22:PHE:C	3:AC:22:PHE:CD2	2.85	0.49
1:AA:1190:G:OP2	3:AC:4:VAL:HB	2.13	0.49
10:AJ:80:THR:HB	10:AJ:83:THR:HG22	1.93	0.49
11:AK:22:ILE:HG21	11:AK:95:THR:HG21	1.94	0.49
15:AO:20:ASP:OD1	15:AO:23:SER:HB2	2.13	0.49
22:BA:1019:U:H2'	22:BA:1020:A:C8	2.48	0.49
22:BA:1409:U:O2'	22:BA:1410:G:H5'	2.13	0.49
22:BA:221:A:C8	22:BA:266:G:O6	2.66	0.49
22:BA:2611:C:H6	22:BA:2611:C:O5'	1.95	0.49
22:BA:2853:C:H2'	22:BA:2854:G:H8	1.77	0.49
22:BA:300:A:N1	22:BA:333:G:O2'	2.42	0.49
22:BA:320:A:H4'	22:BA:322:A:N7	2.28	0.49
22:BA:571:U:C4	22:BA:575:A:C5	3.01	0.49
22:BA:735:A:H3'	22:BA:736:C:C6	2.48	0.49
22:BA:936:A:H2'	22:BA:937:C:H6	1.78	0.49
22:BA:93:G:O2'	22:BA:94:A:H5'	2.12	0.49
22:BA:966:G:C6	22:BA:967:U:C4	3.00	0.49
22:BA:988:A:H2'	22:BA:989:G:O5'	2.12	0.49
23:BB:45:A:C4	23:BB:46:A:C8	3.01	0.49
26:BE:145:ASP:OD1	26:BE:183:PHE:HD2	1.96	0.49
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.12	0.49
31:BJ:40:HIS:NE2	31:BJ:41:LYS:HE3	2.27	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:HE2	2.13	0.49
35:BN:23:ASN:ND2	35:BN:23:ASN:N	2.57	0.49
35:BN:73:ASN:ND2	35:BN:76:VAL:HG11	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:111:GLU:H	37:BP:111:GLU:CD	2.16	0.49
38:BQ:65:ASN:O	38:BQ:69:ARG:HB3	2.12	0.49
39:BR:27:ILE:HG13	39:BR:33:VAL:HG12	1.94	0.49
53:CA:1067:A:O3'	53:CA:1094:G:H5'	2.11	0.49
53:CA:119:A:H5'	53:CA:120:A:H5'	1.93	0.49
53:CA:1365:G:C2	53:CA:1366:C:C2	3.01	0.49
53:CA:142:G:C6	53:CA:143:A:C8	3.00	0.49
53:CA:204:G:H2'	53:CA:205:A:H8	1.77	0.49
53:CA:209:U:H2'	53:CA:209:U:O2	2.11	0.49
53:CA:210:C:O2	53:CA:210:C:H2'	2.13	0.49
53:CA:59:A:H2'	53:CA:59:A:N3	2.27	0.49
3:CC:59:PRO:O	3:CC:61:LYS:N	2.45	0.49
55:CM:87:GLY:O	55:CM:91:ARG:HD2	2.12	0.49
20:CT:79:THR:O	20:CT:82:ILE:HG13	2.13	0.49
57:DA:1015:U:H2'	57:DA:1016:G:O4'	2.13	0.49
57:DA:1320:C:O2'	57:DA:1321:A:H5''	2.13	0.49
57:DA:1430:G:O2'	57:DA:1431:A:H5'	2.12	0.49
57:DA:1439:A:C8	57:DA:1440:U:O4'	2.65	0.49
57:DA:1611:C:O2'	57:DA:1612:C:C6	2.60	0.49
57:DA:1819:A:O4'	57:DA:1821:A:C5	2.66	0.49
57:DA:1936:A:H2	57:DA:1943:U:C4	2.30	0.49
57:DA:2058:A:N6	57:DA:2059:A:N6	2.60	0.49
57:DA:2152:G:N3	57:DA:2152:G:H2'	2.27	0.49
57:DA:2571:U:O4	57:DA:2574:G:C8	2.65	0.49
57:DA:2734:A:N7	57:DA:2735:G:C8	2.81	0.49
57:DA:300:A:OP2	42:DU:96:LYS:HD3	2.12	0.49
57:DA:571:U:O3'	57:DA:573:U:C5	2.65	0.49
57:DA:605:G:H1'	57:DA:657:U:O2'	2.13	0.49
57:DA:71:A:OP2	57:DA:71:A:H3'	2.12	0.49
58:DB:88:C:O2'	58:DB:89:U:OP2	2.23	0.49
24:DC:166:ARG:HG3	24:DC:166:ARG:O	2.11	0.49
24:DC:29:PHE:C	24:DC:31:PRO:HD2	2.32	0.49
25:DD:181:ASP:C	25:DD:183:GLU:H	2.16	0.49
59:DF:43:ILE:HD13	59:DF:82:TYR:CE2	2.46	0.49
29:DH:48:GLU:HG2	29:DH:51:ARG:NH2	2.13	0.49
32:DK:113:MET:O	32:DK:116:ILE:HG12	2.12	0.49
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.26	0.49
36:DO:7:ARG:HH22	36:DO:29:HIS:HD2	1.61	0.49
39:DR:2:TYR:HE1	39:DR:13:ARG:HD2	1.77	0.49
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	1.93	0.49
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1322:C:O2'	1:AA:1323:G:P	2.70	0.49
1:AA:1453:G:H2'	1:AA:1453:G:N3	2.27	0.49
1:AA:518:C:H4'	1:AA:519:C:H5''	1.94	0.49
4:AD:2:ARG:NH2	4:AD:114:ARG:HD3	2.28	0.49
4:AD:28:ASP:C	4:AD:29:THR:O	2.49	0.49
4:AD:3:TYR:O	4:AD:4:LEU:HB2	2.11	0.49
5:AE:152:VAL:O	5:AE:156:ARG:HB2	2.13	0.49
7:AG:108:ARG:NH2	7:AG:118:ARG:HH22	2.11	0.49
7:AG:30:MET:HG2	7:AG:31:VAL:N	2.28	0.49
7:AG:72:VAL:HG12	7:AG:89:GLU:HA	1.94	0.49
1:AA:642:A:C5	8:AH:106:SER:HA	2.47	0.49
8:AH:91:LEU:HD23	8:AH:92:PRO:HD2	1.93	0.49
1:AA:1370:G:C5'	9:AI:110:VAL:HG21	2.43	0.49
11:AK:13:LYS:O	11:AK:14:GLN:CB	2.61	0.49
12:AL:33:CYS:HB3	12:AL:54:VAL:HG22	1.94	0.49
14:AN:22:LYS:CG	14:AN:23:ARG:N	2.74	0.49
18:AR:22:TYR:HA	18:AR:57:ALA:HB1	1.95	0.49
49:B1:50:GLU:O	49:B1:51:ALA:HB2	2.13	0.49
22:BA:1000:A:C2	22:BA:1155:A:C4	3.01	0.49
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.12	0.49
22:BA:1534:U:H5'	22:BA:1535:A:P	2.52	0.49
22:BA:1560:G:H2'	22:BA:1561:C:C6	2.48	0.49
22:BA:1734:G:C2'	22:BA:1735:A:H8	2.25	0.49
22:BA:1744:A:H2'	22:BA:1744:A:N3	2.27	0.49
22:BA:2188:U:O2'	22:BA:2189:U:H5'	2.11	0.49
22:BA:2562:U:C2'	22:BA:2563:U:H5'	2.42	0.49
22:BA:276:U:O2'	22:BA:277:G:O5'	2.30	0.49
22:BA:301:G:O2'	22:BA:302:C:O5'	2.31	0.49
25:BD:176:ASP:OD2	25:BD:176:ASP:N	2.42	0.49
25:BD:94:GLN:O	25:BD:95:SER:HB2	2.12	0.49
28:BG:85:LYS:HG2	28:BG:131:VAL:HB	1.95	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
32:BK:77:ILE:HD13	32:BK:105:ARG:HH12	1.76	0.49
34:BM:49:ALA:O	34:BM:50:ARG:C	2.50	0.49
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.75	0.49
53:CA:1513:A:O2'	53:CA:1514:G:H5'	2.12	0.49
53:CA:38:G:C2	53:CA:397:A:C2	3.00	0.49
53:CA:487:A:H3'	53:CA:488:C:C6	2.47	0.49
53:CA:559:A:H1'	53:CA:561:U:H2'	1.94	0.49
53:CA:680:C:C2	53:CA:711:G:N2	2.80	0.49
53:CA:765:G:O6	53:CA:811:C:C4	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:900:A:H2'	53:CA:901:A:C8	2.48	0.49
2:CB:164:ASP:CG	2:CB:203:ASP:HB2	2.32	0.49
2:CB:90:PHE:HE1	2:CB:92:ASN:HD22	1.60	0.49
6:AF:16:GLU:CB	4:CD:191:SER:HB2	2.40	0.49
4:CD:54:LEU:O	4:CD:58:GLN:HB2	2.12	0.49
17:CQ:29:LYS:HD2	17:CQ:34:GLY:HA2	1.95	0.49
57:DA:1277:G:N3	35:DN:23:ASN:HB3	2.28	0.49
57:DA:1436:G:H2'	57:DA:1437:C:O4'	2.12	0.49
57:DA:1649:G:H2'	57:DA:1650:A:C8	2.47	0.49
57:DA:1738:G:O2'	57:DA:1739:A:C8	2.59	0.49
57:DA:2011:U:C2'	57:DA:2012:G:H5'	2.43	0.49
57:DA:2052:A:N7	25:DD:146:ILE:HD11	2.26	0.49
57:DA:2092:U:O4'	57:DA:2092:U:O2	2.30	0.49
57:DA:2148:G:N2	57:DA:2149:U:O4	2.41	0.49
57:DA:2250:G:O5'	57:DA:2250:G:C8	2.65	0.49
57:DA:2461:A:H1'	57:DA:2492:U:O2	2.12	0.49
57:DA:2899:A:O2'	57:DA:2900:A:H5'	2.11	0.49
57:DA:304:U:H2'	57:DA:305:C:C5	2.48	0.49
57:DA:395:U:O2'	57:DA:396:G:O5'	2.30	0.49
57:DA:412:A:N6	57:DA:2412:A:O4'	2.46	0.49
57:DA:538:A:N6	57:DA:555:G:O2'	2.45	0.49
57:DA:771:G:O2'	57:DA:772:C:H5'	2.12	0.49
57:DA:799:G:O6	57:DA:800:A:C6	2.66	0.49
29:DH:96:THR:HA	29:DH:113:SER:OG	2.12	0.49
32:DK:108:ARG:HA	32:DK:116:ILE:HG21	1.95	0.49
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.75	0.49
38:DQ:25:GLY:C	38:DQ:27:ARG:H	2.15	0.49
45:DX:1:SER:O	45:DX:3:VAL:N	2.45	0.49
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.12	0.49
1:AA:1006:G:H2'	1:AA:1007:U:H6	1.76	0.49
1:AA:1131:G:H2'	1:AA:1132:C:O5'	2.12	0.49
1:AA:1277:C:H2'	1:AA:1278:G:H5''	1.95	0.49
1:AA:150:U:H2'	1:AA:151:A:H8	1.78	0.49
1:AA:198:G:C6	1:AA:220:G:C2	3.01	0.49
1:AA:594:U:H2'	1:AA:595:A:O4'	2.12	0.49
1:AA:657:U:H2'	1:AA:658:C:H6	1.78	0.49
1:AA:577:G:C4'	1:AA:816:A:H2'	2.42	0.49
1:AA:999:C:H2'	1:AA:1000:A:H8	1.77	0.49
4:AD:7:LYS:O	4:AD:10:LEU:HB2	2.12	0.49
4:AD:25:ARG:O	4:AD:26:ALA:HB2	2.13	0.49
9:AI:62:LEU:HD23	9:AI:62:LEU:N	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:68:LEU:HG	13:AM:72:ILE:HD11	1.95	0.49
17:AQ:66:LEU:O	17:AQ:67:SER:HB3	2.13	0.49
20:AT:43:LYS:NZ	20:AT:86:ALA:HA	2.27	0.49
22:BA:1901:A:H2'	22:BA:1902:C:C6	2.48	0.49
22:BA:2649:C:O2'	22:BA:2650:U:H5'	2.12	0.49
22:BA:350:G:H2'	22:BA:351:C:C6	2.47	0.49
22:BA:727:A:OP1	22:BA:1431:A:O2'	2.28	0.49
22:BA:842:U:O4	63:BA:3587:HOH:O	2.19	0.49
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.12	0.49
27:BF:99:PHE:O	27:BF:102:LEU:HB3	2.11	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
31:BJ:49:ASP:OD2	31:BJ:49:ASP:C	2.50	0.49
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	1.92	0.49
38:BQ:43:GLN:NE2	39:BR:77:PHE:CD1	2.80	0.49
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.94	0.49
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.30	0.49
53:CA:382:A:C8	53:CA:383:A:C5	3.00	0.49
53:CA:754:C:C2'	53:CA:754:C:O2	2.61	0.49
2:CB:95:TRP:CZ2	2:CB:100:LEU:HD13	2.47	0.49
2:CB:19:THR:HG22	2:CB:37:VAL:CG2	2.40	0.49
4:CD:2:ARG:HE	4:CD:114:ARG:CD	2.25	0.49
9:CI:14:SER:HA	9:CI:68:GLY:O	2.13	0.49
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.45	0.49
57:DA:116:C:H5''	57:DA:128:C:H41	1.78	0.49
57:DA:1387:A:C4	57:DA:1388:G:C8	3.01	0.49
57:DA:1521:G:C6	57:DA:1522:A:C6	3.00	0.49
57:DA:1552:A:C2'	57:DA:1553:A:H5'	2.41	0.49
57:DA:1587:G:N2	57:DA:1588:G:H1'	2.28	0.49
57:DA:1802:A:O2'	57:DA:1803:A:H5'	2.12	0.49
57:DA:1845:G:C6	57:DA:1846:G:C5	3.01	0.49
57:DA:2147:A:N3	57:DA:2147:A:H5''	2.27	0.49
57:DA:2209:G:C6	57:DA:2216:G:C6	3.01	0.49
57:DA:2332:C:H4'	44:DW:40:ARG:NH1	2.28	0.49
57:DA:2407:A:C2	57:DA:2408:U:N3	2.81	0.49
57:DA:2599:G:OP2	24:DC:234:GLY:HA2	2.13	0.49
57:DA:2625:G:H5'	57:DA:2626:C:OP2	2.13	0.49
57:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.45	0.49
57:DA:605:G:H2'	57:DA:606:U:C6	2.48	0.49
57:DA:676:A:H2	57:DA:2069:G:N3	2.11	0.49
58:DB:55:U:H4'	59:DF:24:VAL:HG23	1.94	0.49
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.43	0.49
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.25	0.49
34:DM:26:VAL:HA	34:DM:66:ARG:HH22	1.77	0.49
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.43	0.49
35:DN:93:GLY:O	35:DN:116:VAL:HG21	2.13	0.49
35:DN:31:HIS:O	35:DN:33:ILE:N	2.39	0.49
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	1.92	0.49
37:DP:88:ARG:HH11	37:DP:112:ARG:CZ	2.25	0.49
37:DP:28:LYS:HZ2	37:DP:82:SER:HB2	1.76	0.49
32:DK:76:VAL:HB	37:DP:72:VAL:CG2	2.42	0.49
42:DU:94:PHE:O	42:DU:95:PHE:C	2.50	0.49
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.13	0.49
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.13	0.49
1:AA:143:A:N3	1:AA:143:A:H2'	2.26	0.49
1:AA:148:G:N3	1:AA:1446:A:H2	2.11	0.49
1:AA:433:G:C2'	1:AA:434:U:H5'	2.43	0.49
2:AB:138:ARG:HB2	2:AB:138:ARG:NH1	2.27	0.49
2:AB:222:GLU:OE1	2:AB:225:SER:HA	2.12	0.49
3:AC:151:GLU:HG2	3:AC:151:GLU:O	2.13	0.49
7:AG:29:LEU:C	7:AG:29:LEU:HD23	2.33	0.49
8:AH:104:SER:HB2	8:AH:125:ILE:HD11	1.95	0.49
8:AH:8:ASP:O	8:AH:11:THR:HG22	2.11	0.49
8:AH:75:GLN:O	8:AH:126:CYS:HB2	2.12	0.49
8:AH:44:PHE:HE2	8:AH:100:ILE:HG12	1.77	0.49
11:AK:34:THR:HG1	11:AK:39:ASN:H	1.61	0.49
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	2.11	0.49
22:BA:1494:A:C2	22:BA:1495:A:C4	3.01	0.49
22:BA:1541:C:C2'	22:BA:1542:U:H5'	2.43	0.49
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.13	0.49
22:BA:161:A:H3'	22:BA:162:U:H5''	1.94	0.49
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.57	0.49
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.47	0.49
22:BA:244:A:C2	22:BA:255:A:C4	3.01	0.49
22:BA:2825:G:H5''	22:BA:2826:A:OP2	2.12	0.49
22:BA:646:U:H5'	22:BA:647:G:H5''	1.95	0.49
22:BA:747:U:C5	22:BA:2613:U:C5	3.00	0.49
28:BG:118:ALA:O	28:BG:120:ILE:N	2.45	0.49
35:BN:36:THR:HG23	35:BN:37:THR:O	2.12	0.49
35:BN:37:THR:HG22	35:BN:110:MET:HE1	1.94	0.49
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.78	0.49
41:BT:27:SER:O	41:BT:28:ASN:OD1	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.94	0.49
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.76	0.49
53:CA:1073:U:C4	53:CA:1074:G:N7	2.81	0.49
53:CA:1108:G:H5''	3:CC:175:HIS:CE1	2.47	0.49
53:CA:1117:A:C6	53:CA:1184:G:O6	2.65	0.49
53:CA:1239:A:N6	53:CA:1299:A:N6	2.60	0.49
53:CA:163:C:H2'	53:CA:164:G:O5'	2.13	0.49
53:CA:247:G:C6	53:CA:278:G:C2	3.01	0.49
53:CA:423:G:H2'	53:CA:424:G:O4'	2.13	0.49
53:CA:926:G:C6	53:CA:1505:G:C5	3.01	0.49
53:CA:975:A:O2'	53:CA:976:G:OP2	2.30	0.49
2:CB:80:LYS:O	2:CB:81:ASP:C	2.51	0.49
53:CA:1190:G:OP1	3:CC:3:LYS:HA	2.13	0.49
4:CD:60:VAL:CG2	4:CD:194:ILE:HG21	2.42	0.49
4:CD:97:LEU:HB2	4:CD:134:TYR:HB3	1.95	0.49
5:CE:113:VAL:CG2	5:CE:136:VAL:HG23	2.43	0.49
10:CJ:37:ARG:CG	10:CJ:75:ASP:HB3	2.42	0.49
12:CL:42:LYS:HD3	12:CL:43:LYS:NZ	2.27	0.49
57:DA:1241:A:H5'	57:DA:1241:A:N3	2.27	0.49
57:DA:1273:U:H4'	57:DA:1275:A:P	2.53	0.49
57:DA:1467:U:H2'	57:DA:1468:U:H5'	1.95	0.49
57:DA:1507:C:H3'	57:DA:1508:A:O4'	2.11	0.49
57:DA:1628:G:O2'	57:DA:1629:U:H5'	2.13	0.49
57:DA:1885:A:C6	57:DA:1886:U:C2	3.00	0.49
57:DA:2024:G:N2	57:DA:2040:G:H1'	2.27	0.49
57:DA:2096:C:O2'	57:DA:2097:A:H5'	2.12	0.49
57:DA:2197:U:C6	57:DA:2224:G:C6	3.01	0.49
57:DA:274:C:H2'	57:DA:275:C:O4'	2.13	0.49
57:DA:301:G:O3'	42:DU:81:ARG:NH1	2.45	0.49
57:DA:478:A:C6	57:DA:480:A:C5	3.01	0.49
57:DA:545:U:C2	57:DA:547:A:H5''	2.47	0.49
57:DA:589:U:C2	57:DA:590:A:N7	2.81	0.49
57:DA:598:U:H6	57:DA:598:U:O5'	1.96	0.49
57:DA:627:A:C2	57:DA:637:A:C4	3.00	0.49
57:DA:672:C:O2'	57:DA:673:C:H5'	2.13	0.49
57:DA:740:C:C6	57:DA:1981:A:C2	3.01	0.49
57:DA:800:A:N1	57:DA:802:A:C8	2.80	0.49
57:DA:830:G:OP2	57:DA:830:G:H8	1.96	0.49
57:DA:91:A:O2'	57:DA:92:U:C6	2.63	0.49
58:DB:62:C:H2'	58:DB:63:C:O4'	2.13	0.49
57:DA:1820:U:OP1	24:DC:176:ARG:HB3	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:146:ILE:HG13	25:DD:155:VAL:HG22	1.94	0.49
32:DK:108:ARG:CA	32:DK:116:ILE:HD13	2.43	0.49
53:CA:1422:G:C5'	32:DK:48:PRO:HB3	2.42	0.49
33:DL:105:ILE:HG22	33:DL:106:GLU:N	2.27	0.49
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.94	0.49
38:DQ:79:ILE:C	38:DQ:79:ILE:HD13	2.32	0.49
1:AA:1006:G:H2'	1:AA:1007:U:O4'	2.13	0.49
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.12	0.49
1:AA:663:A:N1	1:AA:743:A:C2	2.81	0.49
1:AA:934:C:H4'	1:AA:935:A:OP1	2.11	0.49
1:AA:977:A:H3'	1:AA:1362:A:H62	1.77	0.49
1:AA:1108:G:H5''	3:AC:175:HIS:CE1	2.48	0.49
1:AA:532:A:N7	3:AC:192:TYR:HB3	2.28	0.49
1:AA:1348:U:H4'	9:AI:121:ARG:CG	2.42	0.49
10:AJ:11:LYS:HB3	10:AJ:71:LEU:CD1	2.42	0.49
12:AL:49:ARG:CG	12:AL:49:ARG:HH11	1.95	0.49
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.13	0.49
22:BA:534:U:H2'	22:BA:535:G:C8	2.48	0.49
22:BA:697:G:H2'	22:BA:698:C:C6	2.48	0.49
22:BA:739:A:H1'	22:BA:740:C:H5	1.78	0.49
31:BJ:73:VAL:CG2	31:BJ:74:TYR:N	2.75	0.49
40:BS:2:GLU:O	40:BS:3:THR:O	2.30	0.49
40:BS:43:ALA:O	40:BS:46:LEU:HB2	2.13	0.49
41:BT:73:ARG:NH2	41:BT:74:ILE:H	2.10	0.49
44:BW:14:ASP:O	44:BW:15:SER:CB	2.61	0.49
44:BW:35:ILE:O	44:BW:37:VAL:N	2.41	0.49
53:CA:1058:G:OP1	3:CC:198:LYS:HE2	2.13	0.49
53:CA:1160:G:O6	53:CA:1181:G:O6	2.30	0.49
53:CA:922:G:O2'	53:CA:1398:A:N1	2.44	0.49
53:CA:1417:G:N2	53:CA:1484:C:C4	2.81	0.49
53:CA:330:C:H6	53:CA:330:C:H5'	1.78	0.49
53:CA:833:G:O2'	53:CA:834:U:H5'	2.12	0.49
53:CA:979:C:OP2	53:CA:981:U:O4	2.31	0.49
53:CA:988:G:H2'	53:CA:989:U:O4'	2.13	0.49
2:CB:103:TRP:HZ2	2:CB:155:GLY:HA2	1.77	0.49
2:CB:9:LEU:HB2	2:CB:11:ALA:H	1.77	0.49
2:CB:31:PHE:HB2	2:CB:41:ASN:HB2	1.95	0.49
3:CC:10:ARG:HH21	3:CC:181:ILE:HB	1.78	0.49
4:CD:21:LYS:O	4:CD:21:LYS:HG2	2.13	0.49
5:CE:33:THR:OG1	5:CE:49:TYR:CZ	2.66	0.49
54:CG:14:ASP:HB3	54:CG:18:GLY:N	2.23	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1125:U:C6	10:CJ:40:ILE:HG12	2.47	0.49
12:CL:5:GLN:HG3	12:CL:9:LYS:HZ3	1.78	0.49
12:CL:89:LEU:HB3	12:CL:92:VAL:HG21	1.95	0.49
14:CN:89:ARG:HG3	14:CN:91:GLU:HG3	1.95	0.49
21:CU:19:LYS:HB3	21:CU:24:LYS:HB2	1.94	0.49
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.75	0.49
57:DA:465:G:H4'	50:D2:16:HIS:HD2	1.77	0.49
57:DA:1080:A:H2'	57:DA:1081:U:C6	2.48	0.49
57:DA:1103:A:H8	57:DA:1103:A:O5'	1.96	0.49
57:DA:1204:A:N1	57:DA:1241:A:N1	2.60	0.49
57:DA:1807:G:N2	57:DA:1809:A:H3'	2.28	0.49
57:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.13	0.49
57:DA:262:A:C2	57:DA:430:A:H1'	2.48	0.49
57:DA:377:G:C6	57:DA:378:C:C4	3.01	0.49
57:DA:417:C:H2'	57:DA:418:C:C6	2.48	0.49
57:DA:426:C:O2'	57:DA:427:U:H5'	2.12	0.49
57:DA:3:U:C4	57:DA:4:U:C5	3.01	0.49
57:DA:858:G:C6	57:DA:2268:A:C6	3.01	0.49
30:DI:57:VAL:HG12	30:DI:58:ILE:N	2.24	0.49
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.13	0.49
32:DK:27:GLY:HA3	32:DK:30:ARG:HG3	1.95	0.49
33:DL:85:VAL:O	33:DL:85:VAL:HG22	2.13	0.49
38:DQ:111:LYS:CE	39:DR:48:LYS:HD3	2.43	0.49
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.95	0.49
43:DV:29:ILE:HG13	43:DV:88:HIS:CE1	2.48	0.49
57:DA:2352:A:C6	44:DW:30:VAL:HG11	2.47	0.49
1:AA:1004:A:C2	1:AA:1005:A:H1'	2.47	0.49
1:AA:113:G:H2'	1:AA:114:U:H6	1.78	0.49
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.77	0.49
1:AA:1320:C:H42	19:AS:35:ARG:HB2	1.78	0.49
1:AA:1451:U:O5'	1:AA:1452:C:H5	1.96	0.49
1:AA:191:G:C4	1:AA:192:A:C8	3.00	0.49
1:AA:201:G:H2'	1:AA:202:G:O4'	2.13	0.49
1:AA:520:A:H2	1:AA:536:C:O2	1.96	0.49
1:AA:71:A:HO2'	1:AA:72:A:P	2.36	0.49
1:AA:74:A:C2	1:AA:75:G:C4	3.01	0.49
1:AA:819:A:N7	1:AA:1529:G:C2	2.80	0.49
1:AA:860:A:H2'	1:AA:861:G:O4'	2.13	0.49
3:AC:137:VAL:HG11	3:AC:169:GLU:HB3	1.95	0.49
4:AD:196:GLU:HA	4:AD:199:ILE:HG22	1.95	0.49
4:AD:9:LYS:O	4:AD:12:ARG:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:76:ASN:CB	5:AE:81:GLN:HG3	2.43	0.49
6:AF:9:MET:HG2	6:AF:86:ARG:O	2.12	0.49
12:AL:82:ARG:CG	12:AL:82:ARG:NH1	2.70	0.49
13:AM:89:ARG:HB3	13:AM:96:VAL:HG22	1.95	0.49
14:AN:91:GLU:O	14:AN:93:PRO:HD3	2.13	0.49
1:AA:667:G:H4'	15:AO:50:HIS:ND1	2.28	0.49
15:AO:54:GLY:O	15:AO:58:MET:HG3	2.13	0.49
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.94	0.49
17:AQ:45:VAL:O	17:AQ:47:ASP:OD1	2.31	0.49
22:BA:1249:U:H5'	22:BA:1249:U:C6	2.48	0.49
22:BA:1470:A:H2'	22:BA:1471:G:O4'	2.13	0.49
22:BA:1509:A:C2	22:BA:1510:G:C8	3.00	0.49
22:BA:1760:C:C2'	22:BA:1761:C:H5'	2.43	0.49
22:BA:186:G:O2'	22:BA:187:G:H5'	2.13	0.49
22:BA:2210:U:C2	22:BA:2212:A:N7	2.81	0.49
22:BA:2524:G:H2'	22:BA:2525:G:O5'	2.13	0.49
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.48	0.49
22:BA:273:G:O2'	22:BA:274:C:O4'	2.31	0.49
22:BA:2842:G:H2'	22:BA:2843:G:H5'	1.95	0.49
22:BA:480:A:H2	22:BA:499:U:O2	1.96	0.49
22:BA:619:G:O6	63:BA:3288:HOH:O	2.20	0.49
24:BC:229:HIS:HD2	24:BC:246:PRO:HB3	1.77	0.49
26:BE:134:LEU:O	26:BE:138:LEU:HG	2.13	0.49
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.66	0.49
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.46	0.49
32:BK:88:ASN:HD22	32:BK:91:SER:H	1.60	0.49
35:BN:70:THR:HG21	35:BN:75:ILE:HD11	1.95	0.49
45:BX:15:ASN:HA	45:BX:24:THR:O	2.13	0.49
53:CA:116:A:H2'	53:CA:117:G:H8	1.78	0.49
53:CA:239:U:C6	53:CA:239:U:C5'	2.85	0.49
53:CA:577:G:C4'	53:CA:816:A:H2'	2.43	0.49
53:CA:611:C:H2'	53:CA:612:C:H6	1.76	0.49
53:CA:994:A:N3	53:CA:995:C:C6	2.81	0.49
3:CC:41:TYR:CE1	3:CC:89:VAL:HG12	2.47	0.49
8:CH:104:SER:OG	8:CH:109:VAL:HG22	2.13	0.49
14:CN:16:ALA:HA	14:CN:20:PHE:HD1	1.78	0.49
15:CO:69:LEU:CD1	15:CO:77:TYR:HA	2.43	0.49
56:CP:16:PHE:CZ	56:CP:38:PHE:HD1	2.31	0.49
56:CP:52:LEU:O	56:CP:53:ASP:CB	2.61	0.49
19:CS:57:VAL:HG21	19:CS:75:PRO:HD2	1.95	0.49
57:DA:1139:G:O2'	57:DA:1140:C:H5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1204:A:H4'	57:DA:1205:A:H5''	1.95	0.49
57:DA:143:C:C2'	57:DA:144:A:C8	2.91	0.49
57:DA:1613:G:C6	57:DA:1619:G:C6	3.00	0.49
57:DA:1656:C:OP1	25:DD:141:ARG:NH1	2.46	0.49
57:DA:1901:A:H4'	57:DA:1901:A:OP2	2.13	0.49
57:DA:740:C:C4	57:DA:1981:A:C2	3.01	0.49
57:DA:2150:C:H2'	57:DA:2151:U:C6	2.48	0.49
57:DA:227:A:HO2'	57:DA:228:C:P	2.35	0.49
57:DA:2346:A:C3'	57:DA:2347:C:H5''	2.35	0.49
57:DA:2638:G:O2'	57:DA:2639:A:C8	2.66	0.49
57:DA:2721:A:H2'	57:DA:2722:G:O4'	2.12	0.49
57:DA:279:A:C6	57:DA:280:U:N3	2.81	0.49
57:DA:295:G:H2'	57:DA:295:G:N3	2.27	0.49
57:DA:303:G:C6	57:DA:315:G:C6	3.01	0.49
57:DA:14:A:N6	57:DA:526:A:C4	2.80	0.49
58:DB:28:C:C2	58:DB:29:A:C8	3.01	0.49
25:DD:131:ASP:N	25:DD:131:ASP:OD2	2.46	0.49
32:DK:87:LEU:N	32:DK:87:LEU:HD23	2.27	0.49
57:DA:2415:G:H4'	33:DL:65:GLY:O	2.13	0.49
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.13	0.49
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.94	0.49
57:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.12	0.49
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.81	0.49
57:DA:2013:A:OP1	40:DS:96:ILE:HA	2.13	0.49
57:DA:1342:A:OP1	41:DT:59:ASN:HB3	2.12	0.49
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.13	0.49
44:DW:17:ALA:HB1	44:DW:36:ILE:HA	1.94	0.49
1:AA:1184:G:O2'	1:AA:1185:G:H5'	2.12	0.48
1:AA:1233:G:H2'	1:AA:1234:C:C6	2.48	0.48
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.41	0.48
1:AA:1306:A:C2'	1:AA:1307:U:H5'	2.43	0.48
1:AA:1441:A:N7	1:AA:1442:G:N7	2.61	0.48
1:AA:1481:U:O2'	1:AA:1482:G:H5'	2.13	0.48
1:AA:198:G:O2'	1:AA:199:A:C5'	2.61	0.48
1:AA:282:A:H5''	1:AA:283:U:OP2	2.12	0.48
1:AA:486:U:H2'	1:AA:487:A:C8	2.48	0.48
1:AA:302:G:N3	1:AA:556:C:H4'	2.28	0.48
1:AA:999:C:H2'	1:AA:1000:A:C8	2.48	0.48
2:AB:22:TRP:CZ3	2:AB:24:PRO:HA	2.48	0.48
7:AG:94:ARG:O	7:AG:95:ARG:C	2.52	0.48
9:AI:119:LYS:O	9:AI:120:ALA:HB3	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1151:A:H5''	10:AJ:44:THR:OG1	2.13	0.48
14:AN:20:PHE:C	14:AN:22:LYS:H	2.16	0.48
15:AO:2:LEU:O	15:AO:3:SER:C	2.51	0.48
19:AS:30:LEU:O	19:AS:49:ALA:HB3	2.13	0.48
49:B1:49:LYS:O	49:B1:50:GLU:HB3	2.13	0.48
50:B2:26:ASN:N	50:B2:26:ASN:HD22	2.11	0.48
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.36	0.48
22:BA:1941:C:C5'	22:BA:1941:C:C6	2.90	0.48
22:BA:2548:U:C2'	22:BA:2549:G:O5'	2.61	0.48
22:BA:2580:U:C5	22:BA:2581:G:C6	3.00	0.48
22:BA:823:C:C4	22:BA:824:U:C4	3.00	0.48
24:BC:129:LEU:O	24:BC:134:ILE:HD11	2.13	0.48
24:BC:93:VAL:CG1	24:BC:94:LEU:N	2.75	0.48
26:BE:146:VAL:HA	26:BE:185:LYS:O	2.13	0.48
27:BF:120:SER:O	27:BF:127:TYR:CD1	2.66	0.48
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.48	0.48
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	2.13	0.48
41:BT:29:THR:CG2	41:BT:86:THR:HG22	2.42	0.48
44:BW:49:ASN:HA	44:BW:61:LYS:H	1.78	0.48
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.55	0.48
53:CA:1004:A:H2'	53:CA:1005:A:H8	1.78	0.48
53:CA:1049:U:H4'	53:CA:1050:G:OP2	2.12	0.48
53:CA:1138:G:H2'	53:CA:1139:G:OP1	2.13	0.48
53:CA:1406:U:C2'	53:CA:1407:C:H5'	2.43	0.48
53:CA:223:A:C6	53:CA:224:U:C4	3.01	0.48
53:CA:542:G:N3	53:CA:543:U:C6	2.81	0.48
53:CA:653:U:P	8:CH:55:LYS:HZ2	2.36	0.48
53:CA:92:U:HO2'	53:CA:93:U:H6	1.60	0.48
4:CD:190:LEU:O	4:CD:190:LEU:HD23	2.12	0.48
5:CE:112:ALA:O	5:CE:113:VAL:C	2.52	0.48
54:CG:134:VAL:HB	54:CG:137:ARG:NH2	2.18	0.48
55:CM:68:LEU:HD22	55:CM:69:ARG:NH1	2.27	0.48
53:CA:1525:G:H5''	21:CU:37:TYR:CD1	2.48	0.48
21:CU:9:GLU:HB3	21:CU:10:PRO:CD	2.42	0.48
57:DA:1188:U:C2'	57:DA:1189:A:H5'	2.43	0.48
57:DA:1390:U:O2'	57:DA:1391:U:H5'	2.12	0.48
57:DA:1552:A:N3	57:DA:1552:A:C2'	2.76	0.48
57:DA:155:A:C2	57:DA:172:A:C6	3.01	0.48
57:DA:1635:A:C2'	57:DA:1636:U:H5'	2.43	0.48
57:DA:230:G:HO2'	57:DA:231:A:H8	1.59	0.48
57:DA:2321:U:O2	57:DA:2321:U:O5'	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2681:C:H4'	57:DA:2682:A:O5'	2.13	0.48
57:DA:2818:U:H2'	57:DA:2819:G:C8	2.47	0.48
57:DA:315:G:H2'	57:DA:316:C:O4'	2.13	0.48
57:DA:647:G:C5	57:DA:648:G:N7	2.81	0.48
57:DA:956:G:H1'	34:DM:82:MET:HE1	1.95	0.48
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.48	0.48
24:DC:28:PRO:HB3	24:DC:62:ARG:HH22	1.77	0.48
24:DC:95:TYR:C	24:DC:97:ASP:H	2.14	0.48
25:DD:112:THR:O	25:DD:113:SER:HB2	2.13	0.48
58:DB:57:A:N7	59:DF:25:MET:SD	2.86	0.48
59:DF:65:LEU:HD11	59:DF:87:LYS:HZ1	1.78	0.48
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	0.48
57:DA:1223:G:O6	39:DR:71:LYS:NZ	2.46	0.48
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.94	0.48
44:DW:42:THR:O	44:DW:43:LYS:HG2	2.13	0.48
1:AA:1016:A:H3'	1:AA:1017:U:O4'	2.13	0.48
1:AA:1202:U:O2'	1:AA:1203:C:H5'	2.13	0.48
1:AA:1421:G:C2	1:AA:1422:G:C8	3.01	0.48
1:AA:255:G:H2'	1:AA:256:U:C6	2.48	0.48
1:AA:734:G:H2'	1:AA:735:C:H6	1.78	0.48
22:BA:1006:C:H2'	22:BA:1007:C:H5'	1.94	0.48
22:BA:1179:G:C6	22:BA:1180:U:O2'	2.65	0.48
22:BA:1340:U:C5	22:BA:1603:A:C8	3.01	0.48
22:BA:151:C:H5'	22:BA:1360:G:OP1	2.13	0.48
22:BA:1945:G:C6	22:BA:1946:U:C4	3.01	0.48
22:BA:2092:U:C4'	22:BA:2093:G:O5'	2.61	0.48
22:BA:2209:G:C2	22:BA:2216:G:C2	3.01	0.48
22:BA:2446:G:H3'	22:BA:2447:G:H5''	1.95	0.48
22:BA:2823:A:OP2	25:BD:118:PHE:CD1	2.66	0.48
22:BA:2898:U:O2	31:BJ:134:ALA:HB1	2.12	0.48
22:BA:416:U:C4	22:BA:417:C:C4	3.02	0.48
22:BA:263:G:H1'	22:BA:430:A:N3	2.27	0.48
22:BA:475:C:C5	22:BA:481:G:O6	2.66	0.48
22:BA:962:G:H21	22:BA:2250:G:H22	1.60	0.48
22:BA:992:C:H2'	22:BA:993:G:H8	1.78	0.48
25:BD:34:VAL:CG2	25:BD:91:THR:HA	2.43	0.48
26:BE:44:ARG:HH21	26:BE:44:ARG:CB	2.26	0.48
22:BA:1255:U:C5	26:BE:68:ALA:HA	2.48	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
33:BL:109:LYS:HA	33:BL:126:ARG:O	2.13	0.48
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BU:12:VAL:O	42:BU:18:LYS:O	2.30	0.48
53:CA:147:G:H2'	53:CA:148:G:H8	1.77	0.48
53:CA:224:U:H2'	53:CA:225:C:C6	2.48	0.48
53:CA:946:A:H2'	53:CA:947:G:C8	2.48	0.48
2:CB:156:LEU:HD23	2:CB:156:LEU:H	1.77	0.48
2:CB:164:ASP:OD2	2:CB:203:ASP:HB2	2.13	0.48
2:CB:53:LEU:O	2:CB:57:ASN:HB2	2.13	0.48
5:CE:148:SER:O	5:CE:151:MET:N	2.42	0.48
8:CH:17:GLN:HE21	8:CH:71:VAL:HG23	1.78	0.48
14:CN:16:ALA:HA	14:CN:20:PHE:CD1	2.48	0.48
57:DA:2351:G:N7	51:D3:42:HIS:CE1	2.81	0.48
57:DA:1083:U:H1'	57:DA:1086:A:C2	2.49	0.48
57:DA:117:G:OP1	57:DA:124:G:O6	2.31	0.48
57:DA:1286:A:C5	57:DA:1289:C:N3	2.81	0.48
57:DA:1427:A:H4'	57:DA:1428:C:O5'	2.12	0.48
57:DA:1435:G:C2	57:DA:1558:C:N4	2.80	0.48
57:DA:1573:G:H2'	57:DA:1574:C:H5'	1.95	0.48
57:DA:167:A:C2	57:DA:168:G:H1'	2.48	0.48
57:DA:1906:G:N2	57:DA:1907:G:C4	2.81	0.48
57:DA:2033:A:OP2	57:DA:2033:A:H8	1.96	0.48
57:DA:2095:A:H5'	57:DA:2096:C:OP2	2.13	0.48
57:DA:187:G:N2	57:DA:210:C:H1'	2.28	0.48
57:DA:2216:G:O2'	57:DA:2217:G:O5'	2.32	0.48
57:DA:2386:A:C2	44:DW:38:ARG:HG2	2.47	0.48
57:DA:2612:C:O2	48:D0:1:ALA:HB2	2.12	0.48
57:DA:2657:A:O2'	57:DA:2658:C:C5'	2.60	0.48
57:DA:273:G:H2'	57:DA:274:C:H6	1.78	0.48
57:DA:2755:C:HO2'	57:DA:2756:U:H6	1.59	0.48
57:DA:2810:A:H2'	57:DA:2811:G:O4'	2.13	0.48
57:DA:335:C:O2'	57:DA:336:C:C5'	2.61	0.48
57:DA:447:A:C8	57:DA:473:G:C5	3.01	0.48
57:DA:49:A:C8	57:DA:51:G:N2	2.81	0.48
57:DA:607:U:H5	57:DA:619:G:C5	2.31	0.48
57:DA:822:G:O6	57:DA:943:A:C2	2.54	0.48
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.71	0.48
24:DC:51:ARG:O	24:DC:53:ILE:HG22	2.13	0.48
31:DJ:105:VAL:O	31:DJ:105:VAL:HG22	2.13	0.48
57:DA:480:A:H5'	42:DU:43:LYS:NZ	2.28	0.48
57:DA:1808:A:N6	45:DX:27:ARG:HD2	2.28	0.48
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.78	0.48
1:AA:1093:A:C2	1:AA:1095:U:H5'	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1160:G:O6	1:AA:1181:G:O6	2.31	0.48
1:AA:725:G:O2'	1:AA:726:C:H5'	2.13	0.48
1:AA:80:A:C2	1:AA:90:C:N3	2.80	0.48
1:AA:953:G:H2'	1:AA:954:G:O4'	2.14	0.48
2:AB:89:PHE:CE2	2:AB:153:MET:HB2	2.49	0.48
3:AC:39:ARG:CD	3:AC:54:ILE:HD11	2.43	0.48
3:AC:18:ASN:HB3	3:AC:39:ARG:HH12	1.78	0.48
5:AE:59:ILE:HG13	5:AE:60:GLN:N	2.29	0.48
6:AF:38:ARG:HG2	6:AF:38:ARG:NH1	2.27	0.48
6:AF:91:ARG:CG	6:AF:92:THR:H	2.23	0.48
1:AA:972:C:H4'	10:AJ:59:LYS:CG	2.43	0.48
12:AL:58:ASN:C	12:AL:58:ASN:OD1	2.51	0.48
19:AS:50:VAL:CG2	19:AS:70:LEU:HB3	2.43	0.48
51:B3:7:ARG:O	51:B3:11:LYS:HG3	2.13	0.48
51:B3:61:LEU:HB3	51:B3:64:ALA:HB2	1.95	0.48
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.13	0.48
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.77	0.48
22:BA:1356:G:C6	22:BA:1357:C:C4	3.02	0.48
22:BA:1731:G:C4	22:BA:1733:G:C8	3.01	0.48
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.42	0.48
22:BA:2136:G:C2'	22:BA:2137:U:C5	2.97	0.48
22:BA:2444:G:OP2	26:BE:63:LYS:HD2	2.13	0.48
22:BA:2553:G:C2	22:BA:2554:U:O2	2.67	0.48
22:BA:2711:A:P	63:BA:3548:HOH:O	2.71	0.48
22:BA:2886:A:H2'	22:BA:2887:A:O4'	2.13	0.48
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.66	0.48
25:BD:9:VAL:CG2	25:BD:10:GLY:N	2.76	0.48
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.46	0.48
32:BK:107:LEU:C	32:BK:109:SER:H	2.17	0.48
34:BM:1:MET:O	34:BM:2:LEU:CB	2.61	0.48
34:BM:66:ARG:HD3	34:BM:104:GLU:OE1	2.13	0.48
22:BA:2880:C:H1'	35:BN:92:GLY:H	1.78	0.48
47:BZ:22:THR:O	47:BZ:23:LEU:C	2.52	0.48
53:CA:1394:A:H2'	53:CA:1501:C:O2'	2.13	0.48
53:CA:1504:G:OP1	53:CA:1507:A:H4'	2.13	0.48
53:CA:443:C:H6	53:CA:443:C:O5'	1.96	0.48
53:CA:66:A:C6	53:CA:67:C:C4	3.01	0.48
53:CA:91:U:O2'	53:CA:92:U:H5''	2.13	0.48
53:CA:998:C:C6	53:CA:999:C:H5	2.31	0.48
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.67	0.48
54:CG:4:ARG:NH1	54:CG:4:ARG:HG2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:115:VAL:HG21	10:CJ:61:ALA:O	2.12	0.48
11:CK:84:MET:HG2	11:CK:110:THR:OG1	2.13	0.48
11:CK:74:LYS:HE3	11:CK:78:ILE:O	2.13	0.48
3:CC:29:ALA:CB	14:CN:64:ARG:HH12	2.26	0.48
17:CQ:17:GLU:O	17:CQ:18:LYS:HB2	2.13	0.48
18:CR:39:VAL:CG1	18:CR:40:PRO:HD2	2.43	0.48
57:DA:1190:G:H5''	33:DL:32:GLY:HA2	1.95	0.48
57:DA:1388:G:N1	57:DA:1400:U:N3	2.62	0.48
57:DA:1829:A:C8	57:DA:1830:C:C6	3.02	0.48
57:DA:563:A:C4	57:DA:2018:G:C2	3.01	0.48
57:DA:2093:G:O4'	57:DA:2093:G:OP1	2.30	0.48
57:DA:2269:G:C4	57:DA:2270:A:C8	3.01	0.48
57:DA:2292:U:H2'	57:DA:2293:G:C8	2.48	0.48
57:DA:481:G:HO2'	57:DA:507:A:H61	1.58	0.48
57:DA:538:A:O2'	31:DJ:8:PRO:CG	2.61	0.48
57:DA:623:C:O2'	57:DA:624:C:O4'	2.21	0.48
57:DA:945:A:C8	57:DA:2448:A:C2	3.01	0.48
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.96	0.48
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.95	0.48
57:DA:2305:U:O2'	59:DF:132:ARG:HA	2.14	0.48
34:DM:41:LEU:HD13	34:DM:96:ILE:HG12	1.94	0.48
35:DN:16:HIS:O	35:DN:20:MET:N	2.34	0.48
57:DA:1152:C:H5''	38:DQ:79:ILE:HD12	1.94	0.48
57:DA:815:C:OP1	39:DR:85:LYS:HE2	2.14	0.48
57:DA:492:A:N1	40:DS:49:LYS:CE	2.76	0.48
41:DT:12:ARG:HG3	46:DY:29:ARG:NH1	2.29	0.48
45:DX:4:CYS:HA	45:DX:32:LEU:HD11	1.95	0.48
45:DX:52:ALA:C	45:DX:54:GLY:H	2.16	0.48
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.48	0.48
1:AA:1055:A:N6	1:AA:1206:G:C6	2.81	0.48
1:AA:1248:A:H2	9:AI:71:ILE:HD11	1.79	0.48
1:AA:1483:A:H2'	1:AA:1484:C:O4'	2.14	0.48
1:AA:254:G:O2'	1:AA:255:G:H5'	2.14	0.48
1:AA:352:C:H6	1:AA:352:C:H5''	1.77	0.48
1:AA:558:G:C4	1:AA:559:A:C2	3.02	0.48
1:AA:692:U:H1'	1:AA:695:A:N7	2.28	0.48
3:AC:116:ALA:HB1	3:AC:186:SER:HB2	1.94	0.48
1:AA:1118:U:P	9:AI:105:ARG:HE	2.37	0.48
52:B4:13:ASN:ND2	52:B4:13:ASN:N	2.62	0.48
22:BA:1204:A:C2	22:BA:1240:U:N3	2.81	0.48
22:BA:18:U:HO2'	22:BA:19:A:H5'	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2594:C:N4	63:BA:3787:HOH:O	2.45	0.48
22:BA:2673:G:H2'	22:BA:2674:G:H8	1.78	0.48
22:BA:632:A:H2'	22:BA:633:A:C8	2.48	0.48
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.62	0.48
25:BD:61:THR:CB	25:BD:63:PRO:HD2	2.44	0.48
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.34	0.48
34:BM:43:ALA:CA	34:BM:46:ILE:HG13	2.38	0.48
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.96	0.48
36:BO:67:ASN:O	36:BO:68:LYS:C	2.51	0.48
38:BQ:63:ARG:HH22	38:BQ:95:ALA:C	2.17	0.48
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.64	0.48
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.13	0.48
44:BW:18:LYS:HE3	44:BW:19:ARG:HG2	1.95	0.48
44:BW:8:SER:O	44:BW:9:THR:CB	2.61	0.48
46:BY:40:SER:O	46:BY:42:LEU:N	2.46	0.48
53:CA:1097:C:H2'	53:CA:1098:C:C6	2.48	0.48
53:CA:1160:G:O2'	53:CA:1161:C:C5'	2.62	0.48
53:CA:1181:G:C2'	53:CA:1182:G:C8	2.95	0.48
53:CA:366:A:H1'	53:CA:395:C:O2	2.13	0.48
53:CA:486:U:O2	53:CA:486:U:C2'	2.62	0.48
53:CA:784:A:H2'	53:CA:785:G:C8	2.48	0.48
3:CC:120:THR:CG2	3:CC:120:THR:O	2.60	0.48
4:CD:187:ARG:HH21	4:CD:191:SER:HA	1.78	0.48
8:CH:17:GLN:NE2	8:CH:71:VAL:HG23	2.29	0.48
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	2.13	0.48
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.45	0.48
15:CO:66:LEU:HB3	15:CO:77:TYR:HE1	1.78	0.48
17:CQ:59:GLU:HG3	17:CQ:59:GLU:O	2.12	0.48
20:CT:34:VAL:HG12	20:CT:78:LEU:HD21	1.93	0.48
50:D2:10:LEU:O	50:D2:14:ARG:HB2	2.12	0.48
57:DA:1773:A:N7	57:DA:1829:A:H1'	2.29	0.48
57:DA:200:U:O4	57:DA:248:G:C2	2.66	0.48
57:DA:2429:G:C8	33:DL:55:MET:HE3	2.48	0.48
57:DA:2597:G:H2'	57:DA:2598:A:C8	2.48	0.48
57:DA:2898:U:H2'	57:DA:2899:A:C8	2.48	0.48
57:DA:300:A:H2'	57:DA:301:G:H5'	1.95	0.48
57:DA:303:G:C6	57:DA:315:G:O6	2.66	0.48
57:DA:347:A:H2'	57:DA:348:A:C8	2.47	0.48
57:DA:616:A:O2'	57:DA:617:G:O5'	2.32	0.48
57:DA:700:G:C5	57:DA:701:G:C8	3.01	0.48
57:DA:704:G:C2'	57:DA:726:G:N2	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:709:U:O2'	57:DA:710:U:H5'	2.13	0.48
58:DB:30:C:H2'	58:DB:31:C:H5'	1.94	0.48
24:DC:141:HIS:HB3	24:DC:190:THR:HB	1.95	0.48
24:DC:221:GLY:O	24:DC:224:MET:HG2	2.13	0.48
24:DC:35:LYS:HB3	24:DC:35:LYS:NZ	2.28	0.48
24:DC:62:ARG:NH2	24:DC:62:ARG:CG	2.76	0.48
26:DE:115:GLN:O	26:DE:117:ARG:N	2.46	0.48
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.14	0.48
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.93	0.48
32:DK:23:LYS:O	32:DK:25:LEU:HD23	2.12	0.48
34:DM:71:LYS:HB3	34:DM:93:VAL:O	2.14	0.48
35:DN:12:ARG:HB3	35:DN:16:HIS:ND1	2.27	0.48
57:DA:1278:C:O2'	35:DN:27:SER:HB3	2.13	0.48
39:DR:2:TYR:H	39:DR:42:ALA:CB	2.26	0.48
57:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.12	0.48
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	1.95	0.48
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.48	0.48
1:AA:251:G:N1	1:AA:266:G:O6	2.46	0.48
1:AA:429:U:H3'	4:AD:8:LEU:HD23	1.95	0.48
1:AA:511:C:O2'	1:AA:512:U:C5'	2.55	0.48
1:AA:57:G:C5	1:AA:58:C:C4	3.02	0.48
1:AA:71:A:O2'	1:AA:72:A:O5'	2.28	0.48
1:AA:896:C:H2'	1:AA:897:C:C6	2.47	0.48
1:AA:919:A:H8	1:AA:919:A:O5'	1.96	0.48
2:AB:115:ASP:O	2:AB:119:GLN:HB3	2.12	0.48
5:AE:29:ILE:HD12	5:AE:30:PHE:N	2.28	0.48
7:AG:25:PHE:CE1	7:AG:104:VAL:HG23	2.48	0.48
8:AH:17:GLN:NE2	8:AH:71:VAL:H	2.12	0.48
10:AJ:91:ASP:O	10:AJ:92:LEU:O	2.31	0.48
10:AJ:66:GLU:HG2	14:AN:98:ALA:HB2	1.95	0.48
17:AQ:80:LYS:HB2	17:AQ:80:LYS:HZ3	1.78	0.48
48:B0:3:GLN:NE2	48:B0:7:PRO:HD3	2.29	0.48
22:BA:1062:G:C8	22:BA:1088:A:H8	2.30	0.48
22:BA:1152:C:O2'	22:BA:1153:C:H5'	2.14	0.48
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.27	0.48
22:BA:1291:C:O2'	22:BA:1292:G:H5'	2.14	0.48
22:BA:1429:G:O2'	22:BA:1430:G:C5'	2.58	0.48
22:BA:2077:A:H2'	22:BA:2078:C:H6	1.79	0.48
22:BA:2134:A:C6	22:BA:2135:A:N6	2.82	0.48
22:BA:2403:C:N3	22:BA:2415:G:C2	2.81	0.48
22:BA:571:U:C5	22:BA:575:A:C5	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:250:GLN:NE2	24:BC:250:GLN:N	2.61	0.48
27:BF:129:MET:CE	27:BF:153:ILE:HD11	2.43	0.48
28:BG:61:TRP:O	28:BG:64:ALA:N	2.46	0.48
29:BH:49:ALA:HB3	29:BH:50:ARG:HH22	1.75	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.95	0.48
30:BI:61:TYR:CD2	30:BI:61:TYR:N	2.81	0.48
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	1.94	0.48
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.96	0.48
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.13	0.48
35:BN:95:THR:HG21	35:BN:113:ILE:HD11	1.94	0.48
36:BO:35:ILE:HD11	36:BO:106:LEU:HD23	1.94	0.48
44:BW:25:PHE:O	44:BW:27:GLY:N	2.46	0.48
44:BW:30:VAL:HA	44:BW:60:ALA:O	2.12	0.48
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.77	0.48
53:CA:185:U:H2'	53:CA:186:C:H6	1.79	0.48
53:CA:223:A:H2'	53:CA:224:U:C6	2.48	0.48
53:CA:381:C:H2'	53:CA:381:C:O2	2.13	0.48
53:CA:961:U:C4	53:CA:983:A:C6	3.02	0.48
3:CC:155:ARG:NE	3:CC:159:ALA:O	2.45	0.48
53:CA:1370:G:H5''	9:CI:110:VAL:HG21	1.94	0.48
9:CI:74:GLN:O	9:CI:78:ILE:HG13	2.14	0.48
12:CL:46:SER:O	12:CL:47:ALA:HB2	2.13	0.48
55:CM:69:ARG:HA	55:CM:72:ILE:CG2	2.44	0.48
56:CP:1:MET:O	56:CP:1:MET:HG3	2.14	0.48
18:CR:32:ILE:HD12	18:CR:32:ILE:O	2.13	0.48
49:D1:16:THR:HG21	49:D1:42:VAL:HG23	1.95	0.48
57:DA:1153:C:H2'	57:DA:1154:G:H8	1.76	0.48
57:DA:1430:G:O2'	57:DA:1431:A:O4'	2.25	0.48
57:DA:1555:G:C2	57:DA:1556:C:C2	3.01	0.48
57:DA:2094:A:O2'	57:DA:2095:A:C5'	2.61	0.48
57:DA:2264:C:H2'	57:DA:2265:U:O4'	2.14	0.48
57:DA:2310:C:H2'	57:DA:2311:A:C5'	2.43	0.48
57:DA:2345:G:N2	57:DA:2382:G:C8	2.81	0.48
57:DA:2746:U:H2'	57:DA:2747:G:H5'	1.94	0.48
57:DA:82:U:H5''	57:DA:296:U:H5''	1.96	0.48
57:DA:303:G:H2'	57:DA:304:U:C5	2.48	0.48
57:DA:479:A:H1'	57:DA:480:A:H5''	1.96	0.48
57:DA:602:A:H4'	57:DA:604:G:O3'	2.14	0.48
57:DA:1354:A:OP1	24:DC:35:LYS:HE3	2.13	0.48
25:DD:99:GLU:HG3	25:DD:100:LEU:H	1.79	0.48
25:DD:35:THR:HG21	25:DD:67:HIS:CD2	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.13	0.48
31:DJ:5:THR:HA	31:DJ:44:TYR:CE2	2.48	0.48
41:DT:15:HIS:CE1	41:DT:80:TRP:CH2	3.01	0.48
45:DX:70:LEU:HB2	45:DX:77:TYR:HE2	1.78	0.48
46:DY:49:ASP:O	46:DY:52:ARG:HB2	2.13	0.48
1:AA:1057:G:H4'	3:AC:196:GLY:H	1.79	0.48
1:AA:246:A:C4	1:AA:282:A:N6	2.82	0.48
2:AB:134:LEU:HA	2:AB:137:THR:OG1	2.13	0.48
2:AB:138:ARG:HA	2:AB:141:GLU:OE2	2.13	0.48
3:AC:153:SER:CB	3:AC:164:THR:HA	2.44	0.48
5:AE:155:LYS:H	5:AE:155:LYS:CD	2.27	0.48
8:AH:13:ILE:HG22	8:AH:14:ARG:N	2.28	0.48
8:AH:63:LYS:C	8:AH:64:TYR:HD1	2.17	0.48
8:AH:98:LEU:N	8:AH:98:LEU:HD23	2.29	0.48
10:AJ:11:LYS:HB3	10:AJ:71:LEU:HD13	1.95	0.48
11:AK:22:ILE:HD11	11:AK:85:VAL:HG22	1.95	0.48
12:AL:49:ARG:CG	12:AL:49:ARG:NH1	2.61	0.48
18:AR:25:ILE:HG21	18:AR:66:LEU:HB3	1.95	0.48
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.20	0.48
22:BA:1224:U:C4	22:BA:1225:G:C6	3.02	0.48
22:BA:1378:A:H2'	22:BA:1380:G:N7	2.29	0.48
22:BA:194:G:N7	63:BA:3759:HOH:O	2.35	0.48
22:BA:2674:G:H2'	22:BA:2675:A:C8	2.48	0.48
22:BA:686:U:H4'	22:BA:687:C:OP2	2.13	0.48
22:BA:990:A:H5'	22:BA:990:A:C8	2.45	0.48
24:BC:106:PRO:CG	24:BC:141:HIS:HE1	2.26	0.48
25:BD:104:VAL:HA	25:BD:106:LYS:HZ2	1.77	0.48
26:BE:170:ARG:HG2	26:BE:170:ARG:NH2	2.28	0.48
28:BG:68:ARG:HD2	28:BG:68:ARG:C	2.34	0.48
37:BP:67:GLU:HA	37:BP:67:GLU:OE1	2.13	0.48
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CD1	2.31	0.48
40:BS:14:ALA:O	40:BS:15:GLN:C	2.51	0.48
53:CA:1431:A:C6	53:CA:1432:G:N1	2.82	0.48
53:CA:522:C:H41	12:CL:49:ARG:NH2	1.93	0.48
53:CA:914:A:O2'	53:CA:915:A:O5'	2.31	0.48
53:CA:994:A:HO2'	53:CA:995:C:H6	1.55	0.48
2:CB:163:ILE:HA	2:CB:185:ILE:HG12	1.96	0.48
2:CB:35:ASN:O	2:CB:37:VAL:HG12	2.14	0.48
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.62	0.48
3:CC:153:SER:HB3	3:CC:164:THR:HB	1.94	0.48
5:CE:95:MET:HB3	5:CE:124:ALA:CB	2.39	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.95	0.48
11:CK:21:HIS:O	11:CK:22:ILE:HD12	2.13	0.48
12:CL:33:CYS:HA	12:CL:54:VAL:HG13	1.96	0.48
12:CL:83:GLY:HA2	12:CL:94:TYR:HA	1.95	0.48
14:CN:80:ARG:HG2	14:CN:81:ILE:N	2.29	0.48
17:CQ:22:VAL:HG21	17:CQ:58:VAL:HG21	1.96	0.48
18:CR:72:ARG:HA	21:CU:4:LYS:HE3	1.96	0.48
57:DA:1153:C:H2'	57:DA:1154:G:O4'	2.14	0.48
57:DA:1421:G:H8	57:DA:1421:G:OP2	1.95	0.48
57:DA:1803:A:O2'	57:DA:1804:C:C5'	2.62	0.48
57:DA:2043:C:C2	57:DA:2044:C:C5	3.01	0.48
57:DA:2217:G:C4	57:DA:2218:G:C8	3.01	0.48
57:DA:251:A:H4'	33:DL:47:ARG:HH22	1.77	0.48
57:DA:1669:A:O3'	57:DA:2549:G:H5'	2.13	0.48
57:DA:260:G:C6	57:DA:261:G:N7	2.81	0.48
57:DA:2873:A:H5''	57:DA:2874:C:OP2	2.14	0.48
57:DA:297:G:C2	57:DA:342:A:C2	3.01	0.48
57:DA:323:C:C4	57:DA:333:G:N7	2.82	0.48
57:DA:457:A:C2	57:DA:459:U:O4	2.67	0.48
57:DA:453:A:H4'	57:DA:472:A:H62	1.78	0.48
57:DA:726:G:O2'	57:DA:727:A:P	2.71	0.48
57:DA:870:U:C2'	57:DA:871:U:H5'	2.43	0.48
57:DA:980:A:C4	57:DA:1136:G:O4'	2.67	0.48
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.13	0.48
28:DG:88:LEU:HG	28:DG:128:THR:O	2.13	0.48
34:DM:28:PHE:HB2	34:DM:104:GLU:OE1	2.13	0.48
34:DM:31:PHE:CE2	34:DM:110:GLU:HB3	2.48	0.48
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.49	0.48
35:DN:103:ARG:HB2	35:DN:110:MET:HG3	1.94	0.48
37:DP:74:GLN:O	37:DP:77:SER:HB3	2.14	0.48
40:DS:35:ILE:HA	48:D0:24:VAL:HG21	1.95	0.48
42:DU:94:PHE:HD2	42:DU:94:PHE:O	1.95	0.48
1:AA:1371:G:C6	1:AA:1372:U:C4	3.02	0.48
1:AA:466:A:H4'	1:AA:467:U:OP2	2.13	0.48
1:AA:585:G:C6	1:AA:586:C:C4	3.01	0.48
2:AB:186:VAL:N	2:AB:199:ILE:O	2.46	0.48
2:AB:56:LEU:HB2	2:AB:183:PHE:CE1	2.48	0.48
2:AB:61:SER:C	2:AB:63:LYS:H	2.16	0.48
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.94	0.48
4:AD:145:ARG:HD2	4:AD:147:LYS:CE	2.41	0.48
4:AD:29:THR:HG22	4:AD:30:LYS:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:47:LEU:CD1	6:AF:51:ILE:HG22	2.43	0.48
11:AK:87:GLY:H	11:AK:113:THR:CG2	2.25	0.48
12:AL:98:ARG:NH1	12:AL:106:VAL:HG22	2.29	0.48
12:AL:24:GLU:O	12:AL:25:ALA:C	2.51	0.48
16:AP:11:ALA:O	16:AP:12:LYS:C	2.52	0.48
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CZ3	2.48	0.48
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.43	0.48
20:AT:47:GLN:HE21	20:AT:82:ILE:CD1	2.25	0.48
22:BA:1184:U:OP1	47:BZ:29:ARG:HD3	2.14	0.48
22:BA:1826:G:H2'	22:BA:1827:U:O5'	2.14	0.48
22:BA:2148:G:C2'	22:BA:2149:U:O4'	2.59	0.48
22:BA:2215:C:H2'	22:BA:2216:G:C8	2.49	0.48
22:BA:2555:U:C5	22:BA:2556:C:N1	2.81	0.48
22:BA:2569:G:C2	22:BA:2570:G:C8	3.01	0.48
22:BA:792:A:C5'	22:BA:793:A:H5'	2.43	0.48
25:BD:106:LYS:HB2	25:BD:206:ALA:H	1.77	0.48
25:BD:34:VAL:CG2	25:BD:94:GLN:H	2.25	0.48
26:BE:131:THR:HG22	26:BE:161:ALA:H	1.78	0.48
26:BE:5:LEU:HD23	26:BE:120:VAL:O	2.14	0.48
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.13	0.48
32:BK:99:ILE:HG21	32:BK:119:ALA:HB2	1.96	0.48
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.48	0.48
22:BA:2354:C:O5'	44:BW:31:LEU:HD22	2.14	0.48
53:CA:1146:A:O2'	53:CA:1147:C:C5'	2.61	0.48
53:CA:1160:G:O2'	53:CA:1161:C:H5'	2.13	0.48
53:CA:1296:C:C4	53:CA:1297:G:N2	2.82	0.48
53:CA:702:A:C8	53:CA:702:A:OP1	2.54	0.48
53:CA:818:G:H3'	53:CA:819:A:H5'	1.95	0.48
53:CA:868:C:H2'	53:CA:869:G:O4'	2.13	0.48
53:CA:922:G:C2	53:CA:923:A:C4	3.02	0.48
2:CB:9:LEU:C	2:CB:11:ALA:H	2.16	0.48
3:CC:172:VAL:O	3:CC:174:LEU:N	2.47	0.48
5:CE:132:PRO:HA	5:CE:135:VAL:HB	1.96	0.48
5:CE:37:VAL:HG12	5:CE:38:VAL:H	1.78	0.48
12:CL:56:LEU:CB	12:CL:58:ASN:OD1	2.62	0.48
12:CL:82:ARG:HB2	12:CL:97:VAL:CG1	2.44	0.48
20:CT:72:ALA:C	20:CT:74:HIS:H	2.17	0.48
57:DA:1036:G:C6	57:DA:1120:G:C6	3.02	0.48
57:DA:1112:G:O2'	57:DA:1113:U:C5'	2.62	0.48
57:DA:1425:G:H2'	57:DA:1426:G:C8	2.49	0.48
57:DA:1426:G:H5''	57:DA:1427:A:H3'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1428:C:HO2'	57:DA:1568:G:HO2'	1.61	0.48
57:DA:1527:G:H1'	57:DA:1546:G:H22	1.79	0.48
57:DA:1380:G:H1'	57:DA:1569:A:H61	1.79	0.48
57:DA:1586:A:C4	57:DA:1587:G:C8	3.02	0.48
57:DA:1706:C:C2	57:DA:1757:A:H5'	2.48	0.48
57:DA:1829:A:C8	57:DA:1830:C:C5	3.02	0.48
57:DA:2235:G:H2'	57:DA:2236:U:H6	1.78	0.48
57:DA:2461:A:C5	57:DA:2462:C:C4	3.02	0.48
57:DA:2769:U:H2'	57:DA:2770:G:H5'	1.96	0.48
57:DA:2774:C:N4	57:DA:2775:G:C6	2.82	0.48
57:DA:502:A:N6	57:DA:505:A:C6	2.82	0.48
57:DA:595:C:O5'	57:DA:595:C:H6	1.96	0.48
57:DA:828:U:H4'	57:DA:831:G:N1	2.29	0.48
57:DA:90:U:H3'	57:DA:91:A:C5'	2.43	0.48
57:DA:95:A:H2'	57:DA:96:C:H5''	1.96	0.48
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.62	0.48
25:DD:32:ASN:HA	25:DD:51:THR:O	2.13	0.48
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.13	0.48
59:DF:76:PHE:CD2	59:DF:76:PHE:N	2.75	0.48
59:DF:1:ALA:HB2	59:DF:93:GLU:O	2.14	0.48
59:DF:94:ARG:HA	59:DF:97:GLU:OE2	2.13	0.48
32:DK:1:MET:HB2	32:DK:32:TYR:HB3	1.95	0.48
32:DK:47:ILE:CG2	32:DK:49:ARG:HG3	2.43	0.48
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.13	0.48
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.95	0.48
36:DO:74:VAL:HB	36:DO:106:LEU:CD1	2.44	0.48
40:DS:96:ILE:HG12	40:DS:96:ILE:O	2.14	0.48
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.27	0.48
57:DA:481:G:P	42:DU:43:LYS:HG3	2.54	0.48
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.13	0.48
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.29	0.48
1:AA:944:G:N1	1:AA:1338:G:OP2	2.47	0.48
1:AA:181:A:H1'	1:AA:182:A:N7	2.29	0.48
1:AA:390:U:H2'	1:AA:391:G:H8	1.77	0.48
1:AA:595:A:C5	1:AA:641:U:C5	3.01	0.48
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	1.94	0.48
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.95	0.48
3:AC:134:LYS:HE3	3:AC:138:GLN:HE22	1.77	0.48
5:AE:121:ASN:ND2	5:AE:122:VAL:N	2.62	0.48
1:AA:972:C:H4'	10:AJ:59:LYS:HG2	1.96	0.48
11:AK:80:ASN:HB3	11:AK:105:ARG:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:30:HIS:N	17:AQ:35:LYS:O	2.42	0.48
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.29	0.48
22:BA:1106:G:C4	22:BA:1107:G:C8	3.02	0.48
22:BA:1714:U:C2'	22:BA:1714:U:O2	2.62	0.48
22:BA:1833:C:H2'	22:BA:1834:U:H6	1.77	0.48
22:BA:2400:G:C2'	22:BA:2401:U:H5'	2.44	0.48
22:BA:2532:G:C6	22:BA:2533:U:C4	3.01	0.48
22:BA:2553:G:N1	22:BA:2554:U:O2	2.47	0.48
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.49	0.48
22:BA:2801:G:H2'	22:BA:2802:G:H8	1.79	0.48
25:BD:133:THR:HG23	25:BD:134:HIS:HD2	1.78	0.48
26:BE:175:ILE:HD11	26:BE:180:LEU:HD11	1.95	0.48
29:BH:54:LEU:N	29:BH:57:LYS:HB3	2.28	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
33:BL:95:LEU:CD1	33:BL:100:ILE:HD11	2.38	0.48
22:BA:1248:G:O2'	38:BQ:2:ARG:HA	2.14	0.48
38:BQ:86:SER:HB3	39:BR:51:VAL:HG13	1.95	0.48
41:BT:32:LEU:H	41:BT:83:ALA:CB	2.18	0.48
42:BU:93:ARG:O	42:BU:94:PHE:HB3	2.14	0.48
22:BA:2264:C:N4	44:BW:11:ASN:HD21	2.07	0.48
53:CA:1003:G:N2	53:CA:1038:C:C2	2.81	0.48
53:CA:1265:C:C4	53:CA:1266:G:N7	2.82	0.48
53:CA:190:A:O5'	53:CA:190:A:H8	1.97	0.48
53:CA:327:A:N1	53:CA:329:A:C2	2.82	0.48
53:CA:364:A:C2	53:CA:365:U:O4	2.67	0.48
53:CA:542:G:C4	53:CA:543:U:C5	3.02	0.48
53:CA:583:A:H3'	53:CA:584:G:H8	1.79	0.48
53:CA:770:C:H1'	53:CA:899:C:H42	1.78	0.48
53:CA:70:U:H2'	53:CA:94:G:N7	2.29	0.48
53:CA:977:A:HO2'	53:CA:978:A:H5''	1.79	0.48
2:CB:163:ILE:CG2	2:CB:203:ASP:HA	2.44	0.48
8:CH:59:GLU:C	8:CH:60:LEU:HD12	2.34	0.48
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.13	0.48
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.33	0.48
49:D1:7:LYS:HD3	51:D3:33:THR:CG2	2.38	0.48
50:D2:31:LEU:CA	50:D2:34:ARG:HB2	2.42	0.48
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.25	0.48
52:D4:2:LYS:HZ3	52:D4:2:LYS:HA	1.79	0.48
57:DA:1280:G:H2'	57:DA:1281:G:H5'	1.96	0.48
57:DA:1299:G:N2	57:DA:1640:A:H5'	2.27	0.48
57:DA:1810:A:H3'	57:DA:1811:G:C8	2.41	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:532:A:N1	57:DA:2020:A:H1'	2.29	0.48
57:DA:2533:U:C4	57:DA:2534:A:C4	3.02	0.48
57:DA:2582:G:O2'	57:DA:2583:G:H5'	2.12	0.48
57:DA:2862:G:C2	57:DA:2863:C:C2	3.01	0.48
57:DA:435:C:C5	57:DA:436:C:C5	3.01	0.48
57:DA:514:A:N3	57:DA:581:C:O2'	2.41	0.48
57:DA:575:A:H2'	57:DA:576:U:H5	1.79	0.48
57:DA:703:U:H2'	57:DA:704:G:O4'	2.13	0.48
57:DA:849:A:H2'	57:DA:850:U:C6	2.49	0.48
24:DC:63:ILE:O	24:DC:64:VAL:HB	2.14	0.48
25:DD:61:THR:HB	25:DD:63:PRO:HD2	1.96	0.48
57:DA:321:U:O4'	26:DE:159:LEU:HG	2.14	0.48
58:DB:42:C:C5	59:DF:65:LEU:HD13	2.48	0.48
28:DG:120:ILE:O	28:DG:120:ILE:HD13	2.14	0.48
32:DK:21:CYS:HB2	32:DK:39:ILE:HG21	1.94	0.48
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.96	0.48
35:DN:9:GLN:O	35:DN:10:LEU:O	2.31	0.48
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.49	0.48
43:DV:28:ALA:HA	43:DV:88:HIS:CE1	2.49	0.48
1:AA:109:A:H4'	1:AA:110:C:OP2	2.13	0.48
1:AA:1241:G:O2'	1:AA:1242:G:C8	2.56	0.48
1:AA:683:G:N2	11:AK:39:ASN:HA	2.29	0.48
1:AA:972:C:HO2'	1:AA:973:G:C5'	2.27	0.48
2:AB:112:ARG:O	2:AB:116:LEU:HD23	2.13	0.48
3:AC:6:PRO:CG	3:AC:183:TYR:CG	2.97	0.48
5:AE:56:PRO:HG2	5:AE:57:ALA:H	1.79	0.48
11:AK:106:ILE:O	11:AK:106:ILE:HD13	2.13	0.48
22:BA:1249:U:H5'	22:BA:1249:U:H6	1.78	0.48
22:BA:1336:A:H2'	22:BA:1337:G:O4'	2.14	0.48
22:BA:1419:A:C3'	22:BA:1420:A:H5''	2.44	0.48
22:BA:178:G:O2'	22:BA:179:C:H5'	2.13	0.48
22:BA:2007:U:H2'	22:BA:2008:C:C6	2.48	0.48
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.96	0.48
22:BA:2520:C:H2'	22:BA:2521:C:H6	1.79	0.48
22:BA:2545:G:C2'	22:BA:2546:U:H5'	2.44	0.48
22:BA:264:C:O2'	22:BA:265:A:H3'	2.14	0.48
22:BA:311:A:C6	22:BA:328:U:C4	3.02	0.48
22:BA:866:A:C8	22:BA:914:G:C6	3.02	0.48
23:BB:40:U:O2'	23:BB:43:C:C5	2.66	0.48
25:BD:190:LYS:O	25:BD:191:GLY:O	2.32	0.48
26:BE:187:VAL:O	26:BE:188:MET:CB	2.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	1.95	0.48
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.43	0.48
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.44	0.48
40:BS:45:VAL:CG2	40:BS:46:LEU:N	2.76	0.48
47:BZ:9:THR:CG2	47:BZ:10:ARG:N	2.69	0.48
53:CA:148:G:C2	53:CA:149:A:C4	3.01	0.48
53:CA:183:C:O2'	53:CA:184:G:C5'	2.59	0.48
53:CA:211:G:N3	53:CA:211:G:H2'	2.29	0.48
53:CA:270:A:H2'	53:CA:271:C:C6	2.49	0.48
53:CA:355:C:C4	53:CA:356:A:N7	2.82	0.48
53:CA:502:A:C1'	53:CA:550:G:H5'	2.43	0.48
53:CA:687:A:C2	53:CA:704:A:C5	3.02	0.48
53:CA:722:G:N3	53:CA:722:G:H2'	2.28	0.48
53:CA:865:A:H2	53:CA:918:A:H4'	1.78	0.48
53:CA:935:A:O2'	53:CA:936:C:C6	2.66	0.48
2:CB:146:SER:HB2	2:CB:147:LEU:HD12	1.96	0.48
8:CH:12:ARG:NH1	8:CH:27:PRO:HD2	2.29	0.48
8:CH:39:LEU:HD23	8:CH:44:PHE:HD2	1.78	0.48
10:CJ:11:LYS:HB3	10:CJ:71:LEU:CD1	2.41	0.48
12:CL:75:GLU:C	12:CL:77:SER:H	2.18	0.48
57:DA:1203:U:C4	57:DA:1204:A:N7	2.81	0.48
57:DA:2195:U:O2'	57:DA:2196:C:H5'	2.14	0.48
57:DA:2290:G:H2'	57:DA:2291:U:C6	2.49	0.48
57:DA:2448:A:O2'	57:DA:2449:U:C5	2.65	0.48
57:DA:377:G:C6	57:DA:378:C:N3	2.82	0.48
57:DA:489:G:H4'	57:DA:490:C:OP1	2.14	0.48
57:DA:641:U:C5	57:DA:642:U:C4	3.01	0.48
57:DA:845:A:C2	57:DA:847:U:C6	3.01	0.48
57:DA:85:G:HO2'	57:DA:86:G:H8	1.62	0.48
57:DA:957:C:OP2	34:DM:75:GLU:HA	2.14	0.48
57:DA:982:C:H5''	57:DA:983:A:OP1	2.14	0.48
58:DB:26:C:H1'	58:DB:117:G:C1'	2.43	0.48
25:DD:107:VAL:HG11	25:DD:189:VAL:HG11	1.96	0.48
25:DD:61:THR:CB	25:DD:63:PRO:HD2	2.44	0.48
59:DF:11:VAL:O	59:DF:12:VAL:HB	2.14	0.48
59:DF:8:LYS:HB2	59:DF:8:LYS:NZ	2.29	0.48
30:DI:36:GLU:HB2	30:DI:40:ALA:HB3	1.94	0.48
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.34	0.48
41:DT:7:LEU:O	41:DT:10:VAL:HG13	2.13	0.48
58:DB:75:G:H1'	43:DV:29:ILE:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.96	0.48
1:AA:1087:G:N2	1:AA:1088:G:C4	2.82	0.48
1:AA:1202:U:H2'	1:AA:1203:C:C6	2.49	0.48
1:AA:1319:A:C8	1:AA:1323:G:C5	3.02	0.48
1:AA:161:A:N1	1:AA:347:G:O2'	2.46	0.48
1:AA:829:G:C6	1:AA:858:G:C2	3.01	0.48
3:AC:153:SER:CB	3:AC:164:THR:HG22	2.44	0.48
3:AC:59:PRO:O	3:AC:62:SER:HB3	2.14	0.48
4:AD:103:ARG:NH1	4:AD:110:ARG:HH22	2.12	0.48
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.77	0.48
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.28	0.48
17:AQ:50:ASN:OD1	17:AQ:50:ASN:N	2.47	0.48
22:BA:1026:G:C8	22:BA:1134:A:C4	3.02	0.48
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.27	0.48
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.44	0.48
22:BA:2052:A:C2	22:BA:2053:G:C8	3.02	0.48
22:BA:2714:G:H2'	22:BA:2715:C:H6	1.78	0.48
22:BA:2722:G:H2'	22:BA:2723:C:H6	1.78	0.48
22:BA:303:G:C6	22:BA:315:G:C6	3.02	0.48
22:BA:508:A:H4'	22:BA:509:C:OP2	2.13	0.48
22:BA:960:A:H5''	22:BA:961:C:OP2	2.13	0.48
22:BA:995:C:O2'	22:BA:996:A:P	2.72	0.48
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	2.43	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.44	0.48
33:BL:74:THR:HA	33:BL:107:PHE:O	2.14	0.48
37:BP:33:GLU:HG3	37:BP:34:GLY:H	1.78	0.48
41:BT:26:LYS:O	41:BT:27:SER:CB	2.60	0.48
45:BX:40:GLU:HG3	45:BX:43:LYS:NZ	2.28	0.48
53:CA:1008:U:C4	53:CA:1022:A:C2	3.02	0.48
53:CA:1130:A:N7	53:CA:1146:A:C6	2.82	0.48
53:CA:1278:G:OP2	53:CA:1278:G:H8	1.97	0.48
53:CA:1409:C:H2'	53:CA:1410:A:C8	2.48	0.48
53:CA:888:G:H4'	53:CA:1488:G:O2'	2.14	0.48
53:CA:160:A:H4'	53:CA:344:A:N1	2.29	0.48
53:CA:223:A:C5	53:CA:224:U:C5	3.02	0.48
53:CA:279:A:H4'	53:CA:280:C:O5'	2.14	0.48
53:CA:320:A:C2	53:CA:334:C:C2	3.01	0.48
53:CA:672:U:H2'	53:CA:673:A:C8	2.48	0.48
53:CA:739:C:H2'	53:CA:739:C:O2	2.14	0.48
53:CA:767:A:H2'	53:CA:768:A:C8	2.48	0.48
2:CB:176:ASN:C	2:CB:178:LEU:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:136:ALA:HA	3:CC:139:ASN:HD21	1.78	0.48
5:CE:130:THR:HA	5:CE:135:VAL:CG2	2.44	0.48
5:CE:157:GLY:CA	8:CH:63:LYS:HZ2	2.26	0.48
53:CA:1071:C:C5'	5:CE:53:ARG:HH11	2.27	0.48
54:CG:74:VAL:HG11	54:CG:143:MET:HB2	1.95	0.48
9:CI:58:GLU:HG3	9:CI:59:LYS:N	2.29	0.48
20:CT:60:GLN:HA	20:CT:60:GLN:OE1	2.13	0.48
57:DA:2351:G:N7	51:D3:42:HIS:NE2	2.62	0.48
57:DA:1069:A:O2'	57:DA:1071:G:H5''	2.14	0.48
57:DA:1071:G:O2'	57:DA:1072:C:C5'	2.62	0.48
57:DA:135:U:H2'	57:DA:136:G:C8	2.49	0.48
57:DA:1527:G:C2	57:DA:1546:G:N1	2.82	0.48
57:DA:1553:A:N7	57:DA:1555:G:C6	2.82	0.48
57:DA:1663:G:C6	57:DA:1998:A:N6	2.82	0.48
57:DA:1807:G:H21	57:DA:1809:A:H2'	1.78	0.48
57:DA:2525:G:C2	57:DA:2539:C:C2	3.02	0.48
57:DA:2876:G:N2	57:DA:2877:G:H1'	2.29	0.48
57:DA:28:A:C2	57:DA:29:U:H1'	2.49	0.48
57:DA:642:U:H4'	57:DA:2349:G:O2'	2.13	0.48
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.14	0.48
25:DD:169:ARG:O	25:DD:170:VAL:O	2.32	0.48
59:DF:103:ILE:H	59:DF:107:VAL:CG1	2.27	0.48
58:DB:54:G:N2	59:DF:25:MET:CE	2.77	0.48
29:DH:66:ASN:HA	29:DH:137:GLU:CD	2.34	0.48
29:DH:42:LYS:NZ	29:DH:42:LYS:HB3	2.29	0.48
30:DI:16:MET:SD	30:DI:19:PRO:HG2	2.53	0.48
33:DL:79:LEU:HD12	33:DL:112:LEU:HB2	1.96	0.48
35:DN:35:LYS:HD3	35:DN:112:TYR:CZ	2.49	0.48
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.44	0.48
44:DW:18:LYS:HZ3	44:DW:18:LYS:HB2	1.79	0.48
57:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.14	0.48
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.31	0.47
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.49	0.47
1:AA:506:G:C6	1:AA:507:C:C4	3.02	0.47
1:AA:501:C:H1'	1:AA:549:C:H1'	1.96	0.47
1:AA:595:A:C6	1:AA:641:U:C6	3.01	0.47
1:AA:738:C:H2'	1:AA:739:C:H6	1.78	0.47
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.44	0.47
8:AH:82:LEU:HD22	8:AH:84:ILE:HD11	1.95	0.47
17:AQ:6:THR:O	17:AQ:7:LEU:HD12	2.13	0.47
22:BA:1006:C:O2'	22:BA:1007:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1206:G:C6	22:BA:1207:C:C4	3.02	0.47
22:BA:1561:C:H2'	22:BA:1562:U:C6	2.49	0.47
22:BA:2322:A:N6	22:BA:2333:A:N6	2.62	0.47
22:BA:251:A:O5'	22:BA:251:A:H8	1.97	0.47
22:BA:2531:A:H5'	28:BG:156:TYR:CZ	2.49	0.47
22:BA:563:A:C2	22:BA:564:C:C2	3.02	0.47
24:BC:259:ASN:C	24:BC:261:ARG:H	2.17	0.47
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.79	0.47
26:BE:127:GLU:N	26:BE:127:GLU:CD	2.68	0.47
27:BF:39:VAL:H	27:BF:85:GLY:HA2	1.79	0.47
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.42	0.47
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.13	0.47
35:BN:13:ASN:O	35:BN:14:SER:C	2.53	0.47
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.95	0.47
38:BQ:82:LEU:CD2	38:BQ:112:ALA:HB2	2.44	0.47
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.32	0.47
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.43	0.47
53:CA:1449:C:O2'	53:CA:1450:U:C5'	2.62	0.47
53:CA:15:G:H5'	53:CA:15:G:C8	2.48	0.47
53:CA:729:A:H2'	53:CA:730:G:O4'	2.14	0.47
8:CH:85:TYR:CE2	8:CH:123:GLU:HB2	2.49	0.47
10:CJ:102:LEU:HD13	10:CJ:102:LEU:OXT	2.14	0.47
12:CL:2:THR:HG22	12:CL:4:ASN:H	1.77	0.47
17:CQ:4:ILE:HG22	17:CQ:5:ARG:N	2.27	0.47
19:CS:38:THR:HG1	19:CS:40:PHE:HD1	1.61	0.47
51:D3:46:LYS:HD3	51:D3:46:LYS:O	2.14	0.47
57:DA:1416:G:C4	57:DA:1417:C:C5	3.02	0.47
57:DA:1553:A:N7	57:DA:1555:G:C5	2.82	0.47
57:DA:1497:U:C5	57:DA:1578:U:O5'	2.66	0.47
57:DA:1648:U:O2'	57:DA:1649:G:O4'	2.26	0.47
57:DA:181:A:H2	57:DA:434:U:C1'	2.25	0.47
57:DA:2473:U:P	57:DA:2473:U:H6	2.37	0.47
57:DA:255:A:H2'	57:DA:256:A:O4'	2.14	0.47
57:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.27	0.47
57:DA:468:G:H4'	26:DE:57:LYS:CG	2.44	0.47
57:DA:565:C:H4'	57:DA:1253:A:N6	2.29	0.47
57:DA:629:G:O2'	57:DA:630:G:H5'	2.14	0.47
57:DA:861:A:O2'	57:DA:862:G:O4'	2.23	0.47
58:DB:55:U:H1'	59:DF:25:MET:HE1	1.95	0.47
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	1.96	0.47
57:DA:2025:C:OP1	25:DD:154:LYS:HE2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:57:A:C6	59:DF:25:MET:SD	3.07	0.47
29:DH:80:ILE:HB	29:DH:101:ASP:HB3	1.95	0.47
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.96	0.47
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.95	0.47
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.13	0.47
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.14	0.47
43:DV:21:ARG:HE	43:DV:87:GLN:CB	2.27	0.47
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.13	0.47
1:AA:1003:G:C6	1:AA:1036:A:N6	2.82	0.47
1:AA:1506:U:H3'	63:AA:1802:HOH:O	2.14	0.47
1:AA:502:A:H2'	1:AA:503:C:C6	2.49	0.47
3:AC:154:GLY:H	3:AC:156:LEU:HD11	1.78	0.47
3:AC:185:THR:HG22	3:AC:186:SER:N	2.29	0.47
4:AD:75:TYR:C	4:AD:75:TYR:CD1	2.87	0.47
5:AE:71:ILE:HG12	5:AE:72:ASN:H	1.79	0.47
16:AP:42:ILE:HG22	16:AP:43:ALA:N	2.28	0.47
20:AT:4:LYS:O	20:AT:5:SER:C	2.52	0.47
22:BA:1135:C:N4	22:BA:1139:G:C6	2.82	0.47
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.14	0.47
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.44	0.47
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.13	0.47
22:BA:2023:C:H5'	22:BA:2034:U:H1'	1.95	0.47
22:BA:269:C:H2'	22:BA:270:A:C5'	2.43	0.47
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.15	0.47
22:BA:45:G:H5''	22:BA:46:G:OP1	2.14	0.47
22:BA:806:C:O5'	22:BA:806:C:H6	1.97	0.47
22:BA:814:C:H2'	22:BA:815:C:C6	2.49	0.47
24:BC:170:TYR:HD2	24:BC:184:GLU:HA	1.75	0.47
24:BC:252:LYS:NZ	24:BC:252:LYS:HB2	2.27	0.47
22:BA:1806:C:O2	24:BC:43:ASN:OD1	2.32	0.47
25:BD:114:LYS:HD3	25:BD:116:LYS:HZ1	1.78	0.47
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.19	0.47
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.47
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.14	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
36:BO:105:ALA:O	36:BO:106:LEU:HB3	2.14	0.47
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.47	0.47
37:BP:56:SER:O	37:BP:75:THR:HG23	2.14	0.47
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.15	0.47
53:CA:295:C:C6	53:CA:296:U:C5	3.02	0.47
2:CB:101:THR:O	2:CB:102:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:102:ASN:CG	2:CB:102:ASN:O	2.52	0.47
54:CG:21:LEU:O	54:CG:25:PHE:N	2.47	0.47
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.13	0.47
9:CI:59:LYS:HE3	9:CI:60:LEU:CG	2.44	0.47
55:CM:92:ARG:HD2	19:CS:79:TYR:OH	2.14	0.47
57:DA:1108:U:H2'	57:DA:1109:C:O4'	2.14	0.47
57:DA:1139:G:N3	57:DA:1143:A:H2	2.11	0.47
57:DA:1145:C:O2'	57:DA:1146:C:H5'	2.14	0.47
57:DA:1213:A:H2'	57:DA:1214:A:H8	1.78	0.47
57:DA:1418:G:H1'	57:DA:1580:A:H61	1.78	0.47
57:DA:1483:G:H2'	57:DA:1484:U:C6	2.48	0.47
57:DA:1721:G:H1'	57:DA:1739:A:H61	1.79	0.47
57:DA:1878:G:H2'	57:DA:1879:C:O4'	2.15	0.47
57:DA:2431:U:N3	57:DA:2434:A:OP2	2.41	0.47
57:DA:2760:C:H2'	57:DA:2760:C:O2	2.14	0.47
57:DA:486:C:O5'	57:DA:486:C:H6	1.96	0.47
57:DA:672:C:H5'	57:DA:672:C:C6	2.49	0.47
57:DA:699:A:H2'	57:DA:700:G:O4'	2.15	0.47
57:DA:833:A:H2'	57:DA:834:G:H8	1.79	0.47
57:DA:85:G:O2'	57:DA:86:G:H8	1.97	0.47
57:DA:915:C:HO2'	57:DA:916:G:H5'	1.80	0.47
57:DA:948:C:H2'	57:DA:949:G:O4'	2.14	0.47
57:DA:99:U:H5'	57:DA:100:U:OP1	2.14	0.47
25:DD:161:MET:O	25:DD:162:ALA:O	2.32	0.47
59:DF:19:PHE:HB3	59:DF:21:TYR:CE2	2.49	0.47
59:DF:27:VAL:O	59:DF:27:VAL:HG23	2.15	0.47
28:DG:152:ARG:HD2	28:DG:153:PRO:HD2	1.96	0.47
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.96	0.47
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.29	0.47
37:DP:83:ILE:O	37:DP:83:ILE:HD13	2.13	0.47
43:DV:64:VAL:HG13	43:DV:68:LYS:O	2.14	0.47
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.28	0.47
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.14	0.47
1:AA:1202:U:O2'	1:AA:1203:C:C5'	2.62	0.47
1:AA:1260:G:H4'	1:AA:1284:C:H5'	1.96	0.47
2:AB:95:TRP:CH2	2:AB:100:LEU:HB2	2.48	0.47
12:AL:115:LYS:O	12:AL:116:TYR:HB2	2.15	0.47
13:AM:36:ALA:HB3	13:AM:38:ILE:HG12	1.95	0.47
13:AM:22:TYR:CE2	13:AM:69:ARG:HG2	2.49	0.47
13:AM:92:ARG:HB3	13:AM:92:ARG:CZ	2.44	0.47
14:AN:42:ASN:O	14:AN:44:VAL:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:69:LEU:HD22	15:AO:77:TYR:HB2	1.96	0.47
19:AS:62:THR:HB	19:AS:65:MET:HG3	1.96	0.47
22:BA:1021:A:H2'	22:BA:1021:A:N3	2.29	0.47
22:BA:1835:G:N3	22:BA:1931:U:C5	2.82	0.47
22:BA:2140:G:C2	22:BA:2141:G:C4	3.02	0.47
22:BA:2403:C:H2'	22:BA:2404:U:H6	1.78	0.47
22:BA:2469:A:C6	22:BA:2482:A:C8	3.03	0.47
22:BA:2592:G:C6	22:BA:2593:U:C4	3.02	0.47
22:BA:273:G:O2'	22:BA:274:C:O5'	2.32	0.47
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.14	0.47
22:BA:81:G:C6	22:BA:82:U:C2	3.02	0.47
22:BA:820:A:H2'	22:BA:821:A:O4'	2.15	0.47
22:BA:919:U:H2'	22:BA:920:A:O4'	2.14	0.47
22:BA:962:G:O2'	22:BA:963:U:H5'	2.13	0.47
22:BA:96:C:O2'	22:BA:97:C:H5'	2.13	0.47
24:BC:73:ILE:HG12	24:BC:73:ILE:H	1.47	0.47
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.96	0.47
26:BE:124:PHE:CZ	26:BE:148:ILE:HD12	2.50	0.47
27:BF:67:THR:N	27:BF:85:GLY:O	2.38	0.47
28:BG:159:LYS:HE2	28:BG:159:LYS:HB3	1.70	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.14	0.47
42:BU:27:VAL:HG22	42:BU:28:LEU:N	2.29	0.47
45:BX:19:HIS:C	45:BX:21:LEU:H	2.17	0.47
53:CA:106:C:C2'	53:CA:107:G:H5'	2.44	0.47
53:CA:1254:A:H2'	53:CA:1255:G:H8	1.72	0.47
53:CA:1271:A:H5'	53:CA:1314:C:H5''	1.96	0.47
53:CA:255:G:O3'	17:CQ:18:LYS:HD2	2.14	0.47
53:CA:974:A:O2'	53:CA:975:A:P	2.72	0.47
3:CC:8:GLY:HA3	14:CN:88:MET:SD	2.54	0.47
4:CD:24:VAL:HG23	4:CD:25:ARG:N	2.29	0.47
54:CG:4:ARG:CZ	54:CG:6:ILE:HG22	2.45	0.47
55:CM:106:ARG:CZ	55:CM:112:ARG:HB3	2.44	0.47
55:CM:11:HIS:N	55:CM:44:ILE:HD12	2.29	0.47
14:CN:12:ARG:HB3	14:CN:59:GLN:HG2	1.95	0.47
33:DL:62:PRO:O	51:D3:12:ARG:HB3	2.15	0.47
57:DA:1072:C:O2'	57:DA:1093:G:O6	2.25	0.47
57:DA:1199:U:H2'	57:DA:1200:C:C6	2.48	0.47
57:DA:1221:C:C4	57:DA:1222:U:C5	3.02	0.47
57:DA:1282:U:C4	57:DA:1283:G:C5	3.02	0.47
57:DA:2045:C:O2	48:D0:18:HIS:NE2	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2214:C:HO2'	57:DA:2215:C:H5'	1.73	0.47
57:DA:2487:G:H2'	57:DA:2488:G:C8	2.49	0.47
57:DA:784:G:OP1	57:DA:2588:G:H5''	2.14	0.47
57:DA:2667:C:H2'	57:DA:2668:G:H8	1.78	0.47
57:DA:2860:A:C8	57:DA:2860:A:O5'	2.63	0.47
57:DA:265:A:C6	57:DA:428:A:O4'	2.68	0.47
57:DA:438:G:C6	57:DA:439:A:C6	3.02	0.47
57:DA:527:C:H2'	57:DA:527:C:O2	2.13	0.47
57:DA:599:A:N3	57:DA:659:G:C2	2.83	0.47
57:DA:603:A:H4'	57:DA:604:G:C4'	2.44	0.47
57:DA:732:C:N4	57:DA:733:G:C6	2.83	0.47
58:DB:42:C:C4	58:DB:43:C:N4	2.83	0.47
58:DB:43:C:O3'	59:DF:91:ARG:NH2	2.47	0.47
25:DD:49:GLN:NE2	25:DD:79:LEU:HB3	2.29	0.47
26:DE:145:ASP:OD1	26:DE:166:LYS:HG3	2.14	0.47
59:DF:58:ALA:HB1	59:DF:139:GLU:CG	2.44	0.47
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.95	0.47
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.63	0.47
31:DJ:8:PRO:HG2	31:DJ:9:GLU:N	2.29	0.47
32:DK:121:GLU:O	32:DK:122:VAL:C	2.53	0.47
32:DK:7:MET:CG	32:DK:17:ARG:HH12	2.27	0.47
57:DA:1245:G:OP1	33:DL:8:PRO:HG3	2.14	0.47
35:DN:120:GLU:OE1	35:DN:120:GLU:HA	2.14	0.47
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.15	0.47
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.79	0.47
39:DR:48:LYS:H	39:DR:48:LYS:CD	2.24	0.47
57:DA:481:G:OP2	42:DU:43:LYS:HG3	2.14	0.47
1:AA:1049:U:H1'	1:AA:1201:A:N7	2.29	0.47
1:AA:1055:A:C6	1:AA:1206:G:C5	3.02	0.47
1:AA:307:C:H5''	1:AA:308:C:OP2	2.14	0.47
1:AA:510:A:N3	1:AA:543:U:H1'	2.28	0.47
1:AA:538:G:OP1	12:AL:109:ARG:HD3	2.14	0.47
1:AA:701:U:H5''	1:AA:703:G:O4'	2.14	0.47
1:AA:979:C:OP2	1:AA:980:C:H5	1.96	0.47
2:AB:49:PHE:CD1	2:AB:49:PHE:C	2.88	0.47
2:AB:59:ILE:C	2:AB:59:ILE:HD12	2.35	0.47
3:AC:81:GLU:O	3:AC:84:GLU:HB3	2.14	0.47
11:AK:100:ASN:HD22	11:AK:106:ILE:HG22	1.79	0.47
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.49	0.47
22:BA:1296:G:O2'	22:BA:1297:C:H5'	2.14	0.47
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1445:G:C6	22:BA:1446:C:C4	3.02	0.47
22:BA:1509:A:O2'	22:BA:1510:G:P	2.72	0.47
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.45	0.47
22:BA:1626:A:HO2'	22:BA:1627:G:P	2.37	0.47
22:BA:1912:A:N1	22:BA:1919:A:C5	2.82	0.47
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.49	0.47
22:BA:250:G:C6	22:BA:251:A:C6	3.03	0.47
22:BA:271:G:O2'	22:BA:272:A:C5'	2.62	0.47
22:BA:455:C:N3	22:BA:473:G:H5'	2.30	0.47
22:BA:754:U:H2'	22:BA:755:U:C6	2.50	0.47
23:BB:51:G:N2	23:BB:53:A:N6	2.63	0.47
23:BB:94:A:O2'	23:BB:95:U:H5'	2.15	0.47
25:BD:126:ASN:ND2	25:BD:126:ASN:N	2.63	0.47
25:BD:107:VAL:N	25:BD:206:ALA:H	1.98	0.47
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.76	0.47
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.15	0.47
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.96	0.47
28:BG:148:ARG:HA	28:BG:161:VAL:CG1	2.45	0.47
28:BG:162:ARG:NH1	28:BG:168:VAL:HG21	2.29	0.47
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.96	0.47
29:BH:78:VAL:CG1	29:BH:145:ASN:HB3	2.42	0.47
22:BA:558:U:P	31:BJ:113:PRO:HB2	2.54	0.47
32:BK:72:PRO:O	32:BK:74:GLY:N	2.43	0.47
33:BL:19:LEU:HA	33:BL:27:LEU:O	2.13	0.47
35:BN:47:VAL:O	35:BN:50:PRO:HD2	2.13	0.47
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.44	0.47
45:BX:34:SER:CA	45:BX:49:ARG:HA	2.44	0.47
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.29	0.47
53:CA:1350:A:C2	54:CG:33:GLY:HA3	2.49	0.47
53:CA:1508:A:H2'	53:CA:1509:C:O4'	2.15	0.47
53:CA:166:U:C2'	53:CA:167:A:H5'	2.44	0.47
53:CA:375:U:C4	53:CA:376:G:N7	2.83	0.47
53:CA:690:G:H2'	53:CA:691:G:O4'	2.15	0.47
53:CA:815:A:C2	53:CA:1529:G:C4	3.03	0.47
53:CA:89:U:O2'	53:CA:90:C:O4'	2.23	0.47
2:CB:80:LYS:HB3	2:CB:90:PHE:CE2	2.49	0.47
5:CE:54:GLU:HG3	5:CE:56:PRO:HG2	1.95	0.47
54:CG:4:ARG:CG	54:CG:5:VAL:N	2.77	0.47
8:CH:111:THR:HG22	8:CH:113:ARG:H	1.79	0.47
12:CL:26:CYS:CB	12:CL:29:LYS:HE2	2.45	0.47
15:CO:65:LEU:O	15:CO:68:TYR:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:9:GLY:O	17:CQ:57:VAL:HG13	2.14	0.47
51:D3:41:ARG:NH2	51:D3:41:ARG:CG	2.72	0.47
57:DA:1031:G:O2'	52:D4:7:VAL:HG12	2.14	0.47
57:DA:118:A:H1'	57:DA:178:G:O4'	2.13	0.47
57:DA:1213:A:N6	57:DA:1236:G:H1'	2.30	0.47
57:DA:1232:G:H2'	57:DA:1233:C:H6	1.80	0.47
57:DA:1275:A:O2'	57:DA:1276:A:H1'	2.14	0.47
57:DA:1345:C:H5''	57:DA:1396:U:O4	2.13	0.47
57:DA:1413:A:C6	57:DA:1414:C:N4	2.82	0.47
57:DA:1536:C:H4'	57:DA:1537:G:C5'	2.44	0.47
57:DA:165:A:H2'	57:DA:166:U:H6	1.80	0.47
57:DA:1973:G:C6	57:DA:1974:C:C4	3.03	0.47
57:DA:2214:C:H2'	57:DA:2215:C:C5	2.48	0.47
57:DA:2628:C:H1'	57:DA:2781:A:C4	2.50	0.47
57:DA:2668:G:C2	57:DA:2669:G:C4	3.03	0.47
57:DA:478:A:N6	57:DA:480:A:C6	2.83	0.47
57:DA:671:C:O2'	57:DA:672:C:H5'	2.14	0.47
57:DA:819:A:OP2	57:DA:1187:G:N2	2.48	0.47
58:DB:27:C:O2'	58:DB:28:C:H5'	2.15	0.47
58:DB:42:C:H5	59:DF:65:LEU:HD13	1.79	0.47
24:DC:183:VAL:HG13	24:DC:185:ALA:N	2.22	0.47
24:DC:225:ASN:HB3	24:DC:226:PRO:HD2	1.96	0.47
57:DA:1567:G:H5''	24:DC:84:PRO:HB3	1.96	0.47
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.96	0.47
59:DF:1:ALA:HA	59:DF:97:GLU:HB3	1.96	0.47
58:DB:42:C:N4	59:DF:87:LYS:HZ2	2.11	0.47
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.95	0.47
57:DA:558:U:OP1	31:DJ:113:PRO:HD2	2.13	0.47
32:DK:35:VAL:HA	32:DK:62:VAL:HG12	1.96	0.47
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.95	0.47
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.97	0.47
1:AA:1103:C:H2'	1:AA:1104:G:O4'	2.15	0.47
1:AA:1108:G:C5	1:AA:1109:C:C5	3.02	0.47
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.49	0.47
1:AA:491:G:C6	1:AA:492:C:C4	3.03	0.47
1:AA:828:U:H2'	1:AA:829:G:O5'	2.14	0.47
3:AC:39:ARG:CZ	3:AC:54:ILE:HD11	2.44	0.47
4:AD:60:VAL:HA	4:AD:63:ILE:HG22	1.95	0.47
5:AE:114:LEU:HD21	5:AE:122:VAL:CG2	2.45	0.47
10:AJ:42:LEU:HB3	10:AJ:43:PRO:CD	2.43	0.47
14:AN:40:ARG:NH2	14:AN:44:VAL:HG21	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:27:GLN:O	15:AO:30:LEU:HB2	2.14	0.47
18:AR:33:THR:HG22	18:AR:37:LYS:O	2.15	0.47
49:B1:22:THR:OG1	49:B1:23:THR:N	2.47	0.47
22:BA:1508:A:O2'	22:BA:1509:A:O5'	2.32	0.47
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.68	0.47
22:BA:1734:G:O2'	22:BA:1735:A:O4'	2.32	0.47
22:BA:2425:A:H4'	22:BA:2426:A:O5'	2.15	0.47
22:BA:2728:U:O2'	22:BA:2729:G:H8	1.97	0.47
22:BA:570:G:OP1	22:BA:972:A:O2'	2.30	0.47
23:BB:77:U:C2'	23:BB:78:A:H5'	2.45	0.47
24:BC:185:ALA:C	24:BC:187:CYS:N	2.67	0.47
24:BC:259:ASN:O	24:BC:260:LYS:HB2	2.13	0.47
25:BD:151:THR:C	25:BD:153:GLY:H	2.17	0.47
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.74	0.47
39:BR:67:GLY:HA3	39:BR:93:PHE:CZ	2.50	0.47
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.76	0.47
44:BW:39:GLN:O	44:BW:41:GLY:N	2.47	0.47
44:BW:50:VAL:HB	44:BW:51:GLY:H	1.46	0.47
46:BY:39:GLN:HB2	46:BY:41:HIS:NE2	2.29	0.47
53:CA:1036:A:C2'	53:CA:1037:C:H5'	2.45	0.47
53:CA:1151:A:N6	53:CA:1152:A:N6	2.63	0.47
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.46	0.47
53:CA:1221:G:C2	53:CA:1222:G:H1'	2.49	0.47
53:CA:1258:G:H2'	53:CA:1259:C:C6	2.50	0.47
53:CA:37:U:O2	53:CA:548:G:C2	2.67	0.47
53:CA:564:C:H2'	53:CA:565:U:C6	2.50	0.47
53:CA:579:A:C2	53:CA:763:G:C4	3.03	0.47
53:CA:60:A:N3	53:CA:61:G:H1'	2.29	0.47
53:CA:69:G:H2'	53:CA:70:U:C6	2.50	0.47
53:CA:947:G:P	55:CM:106:ARG:HG3	2.54	0.47
4:CD:187:ARG:NH1	4:CD:196:GLU:OE2	2.47	0.47
4:CD:71:PHE:O	4:CD:74:TYR:HB2	2.14	0.47
6:CF:2:ARG:NH2	6:CF:91:ARG:HB2	2.29	0.47
9:CI:53:LEU:O	9:CI:54:VAL:HG13	2.14	0.47
53:CA:1328:C:OP1	55:CM:27:THR:HG21	2.15	0.47
55:CM:82:LEU:HB2	19:CS:73:PHE:CE2	2.50	0.47
21:CU:39:LYS:O	21:CU:43:GLU:HB2	2.15	0.47
57:DA:103:A:H2'	57:DA:104:A:C8	2.49	0.47
57:DA:1062:G:HO2'	57:DA:1063:G:H8	1.58	0.47
57:DA:1206:G:C6	57:DA:1207:C:N4	2.83	0.47
57:DA:1469:A:C2	57:DA:1470:A:C5	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1670:C:C5	57:DA:1671:U:C4	3.02	0.47
57:DA:1671:U:O2	57:DA:1673:G:C8	2.67	0.47
57:DA:187:G:H2'	57:DA:1365:A:C2	2.49	0.47
57:DA:1969:A:H2'	57:DA:1972:G:H21	1.80	0.47
57:DA:2150:C:O2'	57:DA:2151:U:O4'	2.18	0.47
57:DA:2418:A:C6	57:DA:2419:U:C4	3.03	0.47
57:DA:9:G:H1	57:DA:2629:U:H2'	1.80	0.47
57:DA:2819:G:H5''	63:DA:3799:HOH:O	2.13	0.47
57:DA:307:G:N2	57:DA:310:A:C8	2.83	0.47
57:DA:524:G:C5	57:DA:525:U:C5	3.02	0.47
57:DA:14:A:C5	57:DA:526:A:C2	3.02	0.47
57:DA:534:U:C1'	38:DQ:44:TYR:HB3	2.45	0.47
57:DA:620:G:H4'	57:DA:621:A:O5'	2.14	0.47
57:DA:708:G:H2'	57:DA:709:U:C6	2.50	0.47
24:DC:93:VAL:HG13	24:DC:94:LEU:H	1.80	0.47
25:DD:174:SER:O	25:DD:175:LEU:O	2.32	0.47
59:DF:139:GLU:HB3	59:DF:142:TYR:HB3	1.97	0.47
30:DI:20:SER:N	30:DI:21:PRO:CD	2.77	0.47
57:DA:1008:A:C5'	31:DJ:37:ARG:HH22	2.27	0.47
32:DK:118:LEU:O	32:DK:120:PRO:HD2	2.13	0.47
34:DM:71:LYS:HG3	34:DM:72:PRO:HD2	1.95	0.47
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.45	0.47
57:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.95	0.47
41:DT:64:LYS:N	41:DT:64:LYS:HD2	2.30	0.47
43:DV:4:ILE:HD11	43:DV:50:MET:CE	2.45	0.47
45:DX:19:HIS:C	45:DX:21:LEU:N	2.66	0.47
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.96	0.47
1:AA:1060:U:H4'	10:AJ:54:SER:HB2	1.96	0.47
1:AA:486:U:H2'	1:AA:487:A:H8	1.80	0.47
1:AA:642:A:N7	8:AH:106:SER:HA	2.30	0.47
2:AB:20:ARG:O	2:AB:22:TRP:HB3	2.15	0.47
2:AB:58:LYS:HZ1	2:AB:62:ARG:HG3	1.78	0.47
5:AE:121:ASN:ND2	5:AE:122:VAL:H	2.12	0.47
9:AI:9:GLY:CA	9:AI:80:HIS:HD2	2.26	0.47
13:AM:90:HIS:HA	13:AM:108:ARG:NH2	2.30	0.47
13:AM:68:LEU:HG	13:AM:72:ILE:CD1	2.45	0.47
19:AS:47:THR:O	19:AS:48:ILE:C	2.53	0.47
22:BA:1287:A:H3'	22:BA:1288:G:N2	2.29	0.47
22:BA:1588:G:H2'	22:BA:1589:U:H6	1.80	0.47
22:BA:1664:A:C2	22:BA:2726:A:C8	3.02	0.47
22:BA:1716:U:H2'	22:BA:1717:A:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2364:C:C2'	22:BA:2365:G:H5'	2.45	0.47
22:BA:2842:G:C2	22:BA:2876:G:C2	3.03	0.47
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.79	0.47
22:BA:519:U:O2'	40:BS:73:LYS:HE2	2.15	0.47
23:BB:66:A:H61	23:BB:107:G:H2'	1.80	0.47
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.14	0.47
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.80	0.47
29:BH:8:LYS:O	29:BH:13:GLY:HA3	2.14	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
35:BN:83:LEU:O	35:BN:84:GLY:C	2.52	0.47
43:BV:29:ILE:O	43:BV:91:PHE:HB2	2.14	0.47
44:BW:28:GLU:HB3	44:BW:31:LEU:HD11	1.97	0.47
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.35	0.47
53:CA:1151:A:C4	53:CA:1152:A:N7	2.82	0.47
53:CA:17:U:C2	53:CA:18:C:C5	3.03	0.47
53:CA:25:C:H2'	53:CA:26:A:C8	2.49	0.47
53:CA:277:C:O2'	53:CA:278:G:H5'	2.15	0.47
53:CA:436:C:O2	53:CA:436:C:H2'	2.14	0.47
53:CA:513:C:HO2'	53:CA:514:C:H6	1.59	0.47
53:CA:647:C:H2'	53:CA:648:A:H8	1.80	0.47
2:CB:209:VAL:HG23	2:CB:210:THR:N	2.30	0.47
4:CD:144:ILE:HD12	4:CD:177:MET:SD	2.55	0.47
6:CF:81:ASN:O	6:CF:82:ASP:C	2.53	0.47
11:CK:51:PHE:O	11:CK:52:ARG:HD2	2.14	0.47
56:CP:78:VAL:C	56:CP:80:LYS:H	2.18	0.47
48:D0:54:ILE:O	48:D0:55:ALA:HB2	2.14	0.47
49:D1:10:LEU:HD22	49:D1:10:LEU:H	1.79	0.47
51:D3:31:ILE:HG21	51:D3:34:LYS:HZ3	1.77	0.47
57:DA:1062:G:N2	57:DA:1077:A:H2	2.12	0.47
57:DA:1353:A:O2'	57:DA:1354:A:H5'	2.15	0.47
57:DA:1623:G:C5	57:DA:1624:U:C5	3.02	0.47
57:DA:2025:C:N4	57:DA:2037:A:H61	2.13	0.47
57:DA:2210:U:C4'	57:DA:2211:A:H5'	2.45	0.47
57:DA:2283:C:N4	57:DA:2389:G:C5	2.82	0.47
57:DA:2839:G:C2	57:DA:2880:C:C4	3.02	0.47
57:DA:223:A:H2	57:DA:407:G:N3	2.13	0.47
57:DA:467:G:N1	57:DA:468:G:C5	2.83	0.47
57:DA:511:U:H5''	57:DA:1235:G:H4'	1.97	0.47
57:DA:618:G:O2'	57:DA:619:G:H5'	2.14	0.47
57:DA:935:C:H2'	57:DA:936:A:H8	1.78	0.47
58:DB:110:C:H2'	58:DB:111:U:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:58:A:O2'	58:DB:59:A:C5'	2.62	0.47
57:DA:784:G:C2	24:DC:227:VAL:CG2	2.97	0.47
24:DC:79:ARG:HG3	24:DC:92:LEU:HB2	1.97	0.47
59:DF:36:ASN:HA	59:DF:86:CYS:O	2.15	0.47
28:DG:139:VAL:HA	28:DG:142:GLN:CB	2.44	0.47
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.30	0.47
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	1.97	0.47
33:DL:83:ALA:CB	33:DL:117:THR:HB	2.43	0.47
36:DO:17:LYS:O	36:DO:21:LEU:HG	2.15	0.47
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.44	0.47
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.95	0.47
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	1.97	0.47
39:DR:39:LEU:HB2	39:DR:49:ILE:CD1	2.44	0.47
57:DA:992:C:C5'	39:DR:87:GLN:HE22	2.24	0.47
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.82	0.47
57:DA:2356:U:C4'	44:DW:16:GLU:HG3	2.39	0.47
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.97	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.49	0.47
1:AA:515:G:N1	1:AA:537:G:C6	2.83	0.47
1:AA:605:U:O2'	1:AA:606:G:H5'	2.15	0.47
1:AA:666:G:C2	1:AA:741:G:C4	3.02	0.47
1:AA:68:G:C6	1:AA:69:G:H1'	2.49	0.47
1:AA:829:G:O2'	1:AA:830:G:H5'	2.15	0.47
1:AA:972:C:O2'	1:AA:973:G:H5'	2.15	0.47
4:AD:114:ARG:O	4:AD:115:GLN:C	2.53	0.47
4:AD:34:GLU:O	4:AD:36:ALA:N	2.46	0.47
5:AE:56:PRO:O	5:AE:59:ILE:HG13	2.15	0.47
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.15	0.47
7:AG:119:LEU:CD2	7:AG:123:LEU:HD23	2.45	0.47
8:AH:21:LYS:HE2	8:AH:21:LYS:HA	1.96	0.47
14:AN:42:ASN:HD21	14:AN:46:LYS:NZ	2.11	0.47
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.15	0.47
1:AA:1014:A:H4'	19:AS:13:HIS:CD2	2.49	0.47
19:AS:62:THR:HG22	19:AS:63:ASP:N	2.30	0.47
19:AS:79:TYR:CG	19:AS:80:ARG:N	2.81	0.47
20:AT:4:LYS:O	20:AT:6:ALA:N	2.48	0.47
51:B3:51:LYS:N	51:B3:51:LYS:HD2	2.30	0.47
22:BA:1040:A:H2	22:BA:1115:G:H22	1.63	0.47
22:BA:1063:G:C2'	22:BA:1064:C:O4'	2.62	0.47
22:BA:118:A:C8	22:BA:119:A:C8	3.02	0.47
22:BA:1268:A:C2	22:BA:2013:A:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1322:A:C2'	22:BA:1323:C:H5'	2.45	0.47
22:BA:1734:G:C4	22:BA:1735:A:C8	3.03	0.47
22:BA:1954:G:O2'	22:BA:1956:U:O4	2.28	0.47
22:BA:2092:U:N3	22:BA:2225:A:O2'	2.48	0.47
22:BA:2231:U:OP1	45:BX:29:LEU:HD23	2.14	0.47
22:BA:2469:A:H2'	22:BA:2470:G:H5'	1.95	0.47
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.15	0.47
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.15	0.47
25:BD:91:THR:C	25:BD:93:GLY:N	2.67	0.47
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.52	0.47
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.29	0.47
27:BF:131:VAL:C	27:BF:132:ARG:HG3	2.34	0.47
28:BG:33:THR:CA	28:BG:34:ARG:HH11	2.27	0.47
35:BN:65:LEU:O	35:BN:65:LEU:HD12	2.14	0.47
37:BP:79:VAL:HG23	37:BP:79:VAL:O	2.14	0.47
38:BQ:86:SER:HB3	39:BR:51:VAL:CG1	2.45	0.47
40:BS:56:ALA:O	40:BS:57:ASN:C	2.51	0.47
53:CA:1090:U:C2	53:CA:1091:U:C5	3.03	0.47
53:CA:1480:A:C5	53:CA:1481:U:C5	3.03	0.47
53:CA:34:C:H2'	53:CA:35:G:C8	2.50	0.47
53:CA:386:C:C4	53:CA:387:U:C5	3.03	0.47
53:CA:89:U:O2'	53:CA:90:C:O5'	2.32	0.47
53:CA:90:C:O2'	53:CA:91:U:H5'	2.15	0.47
53:CA:981:U:O4	53:CA:1222:G:O6	2.33	0.47
53:CA:995:C:N3	53:CA:1046:A:O2'	2.43	0.47
2:CB:214:GLY:HA2	2:CB:217:ALA:HB3	1.95	0.47
3:CC:7:ASN:HD22	14:CN:89:ARG:HA	1.80	0.47
3:CC:84:GLU:C	3:CC:86:LEU:N	2.68	0.47
4:CD:196:GLU:O	4:CD:199:ILE:HG12	2.14	0.47
4:CD:25:ARG:O	4:CD:26:ALA:O	2.33	0.47
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.44	0.47
55:CM:16:ILE:HD12	55:CM:16:ILE:N	2.30	0.47
56:CP:78:VAL:O	56:CP:78:VAL:HG12	2.15	0.47
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.28	0.47
18:CR:27:THR:O	18:CR:30:ASN:HB3	2.15	0.47
57:DA:1021:A:HO2'	57:DA:1022:G:P	2.36	0.47
57:DA:1342:A:C6	57:DA:1397:U:C5	3.02	0.47
57:DA:1380:G:N2	57:DA:1381:G:H1'	2.30	0.47
57:DA:1775:U:C2'	57:DA:1776:G:O5'	2.63	0.47
57:DA:1890:A:H2	57:DA:2235:G:O4'	1.98	0.47
57:DA:192:C:C4	57:DA:193:U:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2151:U:C2	57:DA:2152:G:C8	3.02	0.47
57:DA:2313:C:O2'	57:DA:2314:A:C5'	2.62	0.47
57:DA:240:C:H3'	57:DA:241:A:H5''	1.96	0.47
57:DA:2623:G:C4'	57:DA:2825:G:H8	2.28	0.47
57:DA:2854:G:C2	57:DA:2864:G:C2	3.03	0.47
57:DA:17:G:C6	57:DA:524:G:C6	3.03	0.47
57:DA:812:C:O2'	57:DA:813:U:H5'	2.15	0.47
24:DC:17:LYS:HD3	24:DC:18:VAL:N	2.29	0.47
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.30	0.47
59:DF:3:LEU:HG	59:DF:100:GLU:CD	2.35	0.47
28:DG:116:LEU:HA	28:DG:117:PRO:HD3	1.70	0.47
28:DG:138:GLN:HG2	28:DG:138:GLN:O	2.14	0.47
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.15	0.47
32:DK:77:ILE:HG23	37:DP:71:ARG:HD2	1.96	0.47
37:DP:91:VAL:HG22	37:DP:109:ILE:HD13	1.96	0.47
40:DS:2:GLU:OE2	40:DS:2:GLU:HA	2.15	0.47
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.23	0.47
43:DV:26:PHE:HA	43:DV:27:PRO:HD2	1.75	0.47
57:DA:72:U:O2	46:DY:51:ALA:HB1	2.15	0.47
47:DZ:29:ARG:O	47:DZ:30:ARG:O	2.33	0.47
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.18	0.47
1:AA:1158:C:O2'	1:AA:1160:G:OP1	2.33	0.47
1:AA:374:A:O2'	1:AA:375:U:H5'	2.13	0.47
2:AB:95:TRP:HZ3	2:AB:98:GLY:H	1.61	0.47
4:AD:123:MET:HA	4:AD:128:VAL:HA	1.96	0.47
1:AA:7:A:N6	5:AE:96:GLN:OE1	2.48	0.47
6:AF:46:GLN:HE22	6:AF:55:HIS:HB2	1.80	0.47
9:AI:3:ASN:ND2	9:AI:4:GLN:H	2.12	0.47
9:AI:56:MET:CE	9:AI:57:VAL:H	2.28	0.47
11:AK:116:PRO:C	11:AK:118:ASN:H	2.17	0.47
12:AL:52:CYS:O	12:AL:54:VAL:HG23	2.15	0.47
17:AQ:16:MET:HG3	17:AQ:19:SER:C	2.35	0.47
1:AA:1314:C:C6	19:AS:5:LYS:HD3	2.50	0.47
11:AK:124:LYS:O	21:AU:33:ARG:HG2	2.14	0.47
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.46	0.47
22:BA:163:C:OP1	22:BA:163:C:C6	2.61	0.47
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.14	0.47
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.49	0.47
22:BA:2316:G:C4	22:BA:2317:A:C8	3.03	0.47
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.63	0.47
22:BA:2418:A:C6	22:BA:2419:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.45	0.47
25:BD:101:PHE:O	25:BD:102:ALA:C	2.53	0.47
25:BD:34:VAL:HG21	25:BD:91:THR:HA	1.97	0.47
27:BF:173:ASP:O	27:BF:174:PHE:C	2.53	0.47
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.73	0.47
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.29	0.47
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.96	0.47
33:BL:95:LEU:HB3	33:BL:100:ILE:CD1	2.44	0.47
25:BD:186:LEU:CD1	37:BP:3:ILE:HD11	2.37	0.47
37:BP:50:ARG:HD3	37:BP:51:ASN:H	1.76	0.47
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.80	0.47
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.29	0.47
22:BA:2013:A:H2	40:BS:88:ARG:HH12	1.61	0.47
42:BU:80:ASP:O	42:BU:81:ARG:HB2	2.14	0.47
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.96	0.47
44:BW:30:VAL:CA	44:BW:60:ALA:HB3	2.39	0.47
53:CA:1050:G:O2'	53:CA:1051:C:H6	1.97	0.47
53:CA:1052:U:O2'	53:CA:1055:A:OP2	2.30	0.47
53:CA:1146:A:H2'	53:CA:1147:C:C6	2.49	0.47
53:CA:184:G:N2	53:CA:185:U:C2	2.83	0.47
53:CA:32:A:C2	53:CA:33:A:C5	3.03	0.47
53:CA:55:A:OP2	53:CA:352:C:N4	2.47	0.47
53:CA:567:G:N2	63:CA:1819:HOH:O	2.43	0.47
53:CA:775:G:C2'	53:CA:776:G:H5'	2.45	0.47
2:CB:116:LEU:HD13	2:CB:140:LEU:HB2	1.96	0.47
8:CH:91:LEU:HB3	8:CH:112:ASP:OD2	2.15	0.47
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.15	0.47
14:CN:30:ILE:O	14:CN:40:ARG:HA	2.14	0.47
56:CP:20:VAL:HG22	56:CP:21:VAL:N	2.30	0.47
56:CP:69:ASP:O	56:CP:70:ARG:C	2.53	0.47
56:CP:71:VAL:HA	56:CP:74:LEU:HB2	1.96	0.47
18:CR:25:ILE:O	18:CR:25:ILE:HG13	2.14	0.47
18:CR:28:LEU:C	18:CR:30:ASN:H	2.17	0.47
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.78	0.47
57:DA:2392:A:OP1	51:D3:30:HIS:ND1	2.46	0.47
57:DA:1090:A:C3'	57:DA:1091:G:H5''	2.45	0.47
57:DA:1171:G:N2	57:DA:1179:G:H1'	2.30	0.47
57:DA:1203:U:C2	57:DA:1204:A:C6	3.03	0.47
57:DA:1238:G:H2'	57:DA:1239:G:H8	1.78	0.47
57:DA:1754:A:N6	57:DA:1755:A:C6	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1663:G:N2	57:DA:1998:A:C8	2.83	0.47
57:DA:2262:U:H1'	57:DA:2328:A:H1'	1.96	0.47
57:DA:858:G:C5	57:DA:2268:A:N1	2.83	0.47
57:DA:2508:G:H2'	57:DA:2509:G:O4'	2.15	0.47
57:DA:2757:A:O2'	57:DA:2758:A:H5'	2.14	0.47
57:DA:2816:G:C2	57:DA:2831:G:C2	3.03	0.47
57:DA:298:G:OP1	42:DU:83:GLY:HA2	2.15	0.47
57:DA:33:C:H2'	57:DA:446:G:N2	2.30	0.47
57:DA:467:G:O2'	57:DA:796:C:O3'	2.33	0.47
57:DA:475:C:H4'	57:DA:509:C:O2'	2.14	0.47
57:DA:64:A:H2'	57:DA:65:U:O4'	2.14	0.47
57:DA:874:G:C2	57:DA:904:G:C2	3.03	0.47
58:DB:16:G:O6	58:DB:69:G:C5	2.68	0.47
24:DC:171:VAL:H	24:DC:185:ALA:HB2	1.80	0.47
24:DC:62:ARG:HB2	24:DC:83:ASP:OD2	2.15	0.47
25:DD:109:VAL:O	25:DD:109:VAL:HG12	2.13	0.47
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.14	0.47
29:DH:6:LEU:HD13	29:DH:36:ALA:CA	2.44	0.47
31:DJ:51:GLY:CA	31:DJ:121:LYS:HE3	2.45	0.47
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.30	0.47
33:DL:66:PHE:CG	33:DL:67:THR:N	2.83	0.47
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.30	0.47
42:DU:85:ARG:HE	42:DU:85:ARG:HA	1.79	0.47
1:AA:1095:U:O2'	1:AA:1096:C:C5'	2.63	0.47
2:AB:138:ARG:HG3	2:AB:139:GLU:N	2.29	0.47
2:AB:179:GLY:O	2:AB:180:ILE:HD13	2.15	0.47
3:AC:35:ASP:O	3:AC:38:VAL:HG22	2.15	0.47
8:AH:63:LYS:CB	8:AH:70:VAL:HG21	2.45	0.47
1:AA:1348:U:H4'	9:AI:121:ARG:HG2	1.96	0.47
1:AA:967:C:C1'	9:AI:129:ARG:HH22	2.26	0.47
15:AO:3:SER:OG	15:AO:5:GLU:HG2	2.14	0.47
15:AO:68:TYR:O	15:AO:71:ARG:HG2	2.15	0.47
16:AP:48:GLU:CD	16:AP:49:GLY:H	2.17	0.47
21:AU:18:PHE:C	21:AU:19:LYS:HE2	2.34	0.47
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.15	0.47
22:BA:1164:C:H2'	22:BA:1165:A:C8	2.50	0.47
22:BA:1275:A:H4'	22:BA:1276:A:OP1	2.09	0.47
22:BA:1385:A:C2	22:BA:1386:C:C4	3.03	0.47
22:BA:1385:A:N3	22:BA:1386:C:C5	2.83	0.47
22:BA:1725:U:H2'	22:BA:1726:C:H6	1.80	0.47
22:BA:2019:A:H2'	22:BA:2020:A:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.50	0.47
22:BA:2630:G:H2'	22:BA:2631:G:H8	1.79	0.47
22:BA:399:U:C2'	22:BA:400:G:H5'	2.45	0.47
22:BA:780:G:H2'	22:BA:782:A:N7	2.30	0.47
23:BB:77:U:H2'	23:BB:78:A:H5'	1.96	0.47
29:BH:100:ALA:O	29:BH:102:ALA:N	2.48	0.47
31:BJ:73:VAL:CG2	31:BJ:74:TYR:H	2.22	0.47
32:BK:24:VAL:HG21	32:BK:31:ARG:O	2.15	0.47
34:BM:41:LEU:O	34:BM:93:VAL:CG2	2.63	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.95	0.47
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.95	0.47
53:CA:1150:A:N6	53:CA:1151:A:N6	2.62	0.47
53:CA:1303:C:N4	53:CA:1304:G:C2	2.83	0.47
53:CA:1342:C:H2'	53:CA:1343:G:H8	1.78	0.47
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.27	0.47
53:CA:14:U:H2'	53:CA:16:A:OP2	2.15	0.47
53:CA:1513:A:C6	53:CA:1514:G:C6	3.03	0.47
53:CA:171:A:C6	53:CA:172:A:N1	2.83	0.47
53:CA:575:G:C6	53:CA:821:G:C5	3.02	0.47
2:CB:206:ILE:C	2:CB:208:ALA:H	2.18	0.47
3:CC:14:VAL:HG12	3:CC:14:VAL:O	2.15	0.47
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.29	0.47
53:CA:598:U:H4'	8:CH:85:TYR:CG	2.49	0.47
9:CI:106:ASP:N	9:CI:106:ASP:OD1	2.48	0.47
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.45	0.47
49:D1:29:LYS:HE2	49:D1:31:GLU:OE2	2.15	0.47
57:DA:1075:C:O2'	57:DA:1076:C:H6	1.98	0.47
57:DA:1690:A:H2'	57:DA:1691:C:O4'	2.14	0.47
57:DA:2201:G:C5	57:DA:2223:G:C2	3.03	0.47
57:DA:2563:U:H1'	57:DA:2566:A:C6	2.49	0.47
57:DA:2728:U:O2'	57:DA:2729:G:C8	2.48	0.47
57:DA:2748:A:C2	57:DA:2749:A:C4	3.03	0.47
57:DA:752:A:C6	57:DA:1781:U:H1'	2.50	0.47
57:DA:959:A:H4'	57:DA:959:A:OP2	2.14	0.47
57:DA:975:A:H2'	57:DA:976:G:H8	1.80	0.47
24:DC:143:VAL:HB	24:DC:153:LEU:HB3	1.95	0.47
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.80	0.47
26:DE:153:LEU:HD22	26:DE:158:PHE:HD2	1.79	0.47
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.45	0.47
32:DK:76:VAL:HG12	32:DK:77:ILE:N	2.29	0.47
33:DL:79:LEU:CA	33:DL:82:LEU:HD11	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:112:ARG:HD2	37:DP:114:ASN:HD21	1.80	0.47
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.87	0.47
38:DQ:59:LEU:O	38:DQ:63:ARG:HD3	2.15	0.47
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.50	0.47
42:DU:33:VAL:O	42:DU:34:ILE:CG1	2.59	0.47
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.50	0.47
1:AA:1428:A:H2'	1:AA:1429:A:O4'	2.15	0.47
1:AA:252:U:H5''	1:AA:252:U:H6	1.79	0.47
1:AA:557:G:C6	1:AA:558:G:N1	2.82	0.47
3:AC:147:GLY:HA3	3:AC:171:ARG:O	2.14	0.47
8:AH:78:SER:HB2	8:AH:84:ILE:HB	1.97	0.47
9:AI:25:GLY:N	9:AI:58:GLU:HA	2.30	0.47
9:AI:3:ASN:O	9:AI:4:GLN:HG2	2.15	0.47
9:AI:49:GLN:C	9:AI:51:LEU:H	2.17	0.47
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	2.18	0.47
17:AQ:11:VAL:HB	17:AQ:55:GLY:H	1.80	0.47
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	2.28	0.47
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.14	0.47
22:BA:1321:A:H8	22:BA:1321:A:H5''	1.80	0.47
22:BA:1381:G:C2'	22:BA:1382:G:H5'	2.44	0.47
22:BA:1507:C:C4	22:BA:1508:A:C2	3.03	0.47
22:BA:2311:A:H5'	22:BA:2312:U:OP2	2.15	0.47
22:BA:2639:A:H2'	22:BA:2640:G:O4'	2.14	0.47
22:BA:2696:U:C2	22:BA:2697:G:C8	3.03	0.47
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.15	0.47
22:BA:579:G:H2'	22:BA:580:U:C6	2.50	0.47
23:BB:66:A:N6	23:BB:107:G:H2'	2.29	0.47
24:BC:20:ASN:HA	24:BC:21:PRO:HD2	1.71	0.47
25:BD:67:HIS:HD1	25:BD:67:HIS:C	2.18	0.47
26:BE:48:THR:H	26:BE:51:GLU:CG	2.28	0.47
27:BF:84:ILE:O	27:BF:84:ILE:HG23	2.15	0.47
28:BG:136:ASP:O	28:BG:140:ILE:HG13	2.15	0.47
28:BG:86:LEU:H	28:BG:86:LEU:HD12	1.79	0.47
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.30	0.47
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.44	0.47
36:BO:55:GLU:O	36:BO:56:LYS:C	2.52	0.47
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.14	0.47
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.30	0.47
37:BP:19:PHE:CD2	37:BP:19:PHE:N	2.82	0.47
38:BQ:82:LEU:O	38:BQ:85:ALA:HB3	2.14	0.47
47:BZ:35:VAL:HG21	47:BZ:37:ARG:CZ	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1190:G:H5'	3:CC:175:HIS:CE1	2.50	0.47
53:CA:248:C:O2'	53:CA:249:U:O5'	2.32	0.47
53:CA:249:U:H5'	53:CA:250:A:OP2	2.15	0.47
53:CA:254:G:O2'	53:CA:255:G:H5'	2.14	0.47
53:CA:295:C:C4	53:CA:296:U:C5	3.03	0.47
53:CA:375:U:C2	53:CA:376:G:C8	3.03	0.47
53:CA:382:A:N7	53:CA:383:A:N6	2.63	0.47
53:CA:580:C:H2'	53:CA:581:G:O4'	2.15	0.47
53:CA:309:A:O2'	53:CA:607:A:C2	2.68	0.47
53:CA:701:U:H4'	53:CA:702:A:C5'	2.42	0.47
53:CA:973:G:O2'	14:CN:68:ARG:NH2	2.46	0.47
53:CA:977:A:H8	53:CA:1223:C:N3	2.13	0.47
3:CC:148:ILE:HD12	3:CC:149:LYS:H	1.80	0.47
4:CD:7:LYS:O	4:CD:10:LEU:HB2	2.15	0.47
6:CF:67:PRO:O	6:CF:68:GLN:C	2.52	0.47
15:CO:10:ILE:HA	15:CO:13:GLU:HB2	1.97	0.47
56:CP:32:PHE:HD1	56:CP:32:PHE:C	2.17	0.47
18:CR:59:LYS:O	18:CR:63:TYR:HD1	1.98	0.47
20:CT:58:ASP:O	20:CT:61:ALA:HB3	2.15	0.47
49:D1:24:LYS:HE2	49:D1:52:LYS:HZ2	1.80	0.47
57:DA:1064:C:O2'	57:DA:1065:U:H5'	2.15	0.47
57:DA:1075:C:HO2'	57:DA:1076:C:H6	1.57	0.47
57:DA:1075:C:O2'	57:DA:1076:C:C6	2.67	0.47
57:DA:1186:G:H2'	57:DA:1187:G:O4'	2.15	0.47
57:DA:1323:C:C4	57:DA:1324:G:N7	2.83	0.47
57:DA:1529:G:H2'	57:DA:1530:G:O4'	2.15	0.47
57:DA:1312:U:O2	57:DA:1603:A:C2	2.67	0.47
57:DA:1700:A:H2'	57:DA:1701:A:O4'	2.14	0.47
57:DA:2072:C:H6	57:DA:2072:C:OP2	1.97	0.47
57:DA:2091:C:N4	57:DA:2092:U:C5	2.83	0.47
57:DA:2107:G:H2'	57:DA:2108:A:C8	2.50	0.47
57:DA:2666:C:O2	57:DA:2666:C:O4'	2.33	0.47
57:DA:2857:G:N2	57:DA:2860:A:OP2	2.48	0.47
57:DA:2837:A:N6	57:DA:2882:A:N6	2.63	0.47
57:DA:475:C:C2'	57:DA:476:G:C8	2.97	0.47
57:DA:515:A:H2'	57:DA:516:C:H5'	1.95	0.47
57:DA:623:C:H2'	57:DA:624:C:C6	2.50	0.47
57:DA:635:C:OP2	33:DL:126:ARG:NH1	2.48	0.47
57:DA:830:G:P	57:DA:830:G:H8	2.38	0.47
58:DB:59:A:H2'	58:DB:60:C:O4'	2.15	0.47
24:DC:147:PRO:CD	24:DC:184:GLU:HG3	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1566:A:C2	24:DC:212:TRP:HB2	2.49	0.47
32:DK:99:ILE:HG13	32:DK:118:LEU:HD12	1.97	0.47
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.95	0.47
41:DT:18:GLU:HB2	41:DT:19:LYS:H	1.50	0.47
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.15	0.47
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.14	0.47
1:AA:469:C:H2'	1:AA:470:C:C6	2.50	0.47
1:AA:488:C:O2'	1:AA:489:C:H5'	2.15	0.47
2:AB:130:LYS:NZ	2:AB:130:LYS:HA	2.29	0.47
5:AE:100:GLU:HB2	5:AE:103:GLY:CA	2.45	0.47
5:AE:76:ASN:HB3	5:AE:81:GLN:HG3	1.97	0.47
8:AH:63:LYS:C	8:AH:64:TYR:CD1	2.88	0.47
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.62	0.47
50:B2:25:LYS:HA	50:B2:28:ARG:NH2	2.30	0.47
22:BA:1334:G:C6	22:BA:1335:C:C4	3.04	0.47
22:BA:1419:A:H2'	22:BA:1421:G:C8	2.50	0.47
22:BA:1858:A:H8	22:BA:1858:A:OP2	1.97	0.47
22:BA:2023:C:O2	22:BA:2023:C:H2'	2.09	0.47
22:BA:2109:U:N3	22:BA:2181:U:C4	2.83	0.47
22:BA:226:A:C6	22:BA:227:A:C6	3.03	0.47
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.79	0.47
22:BA:2615:U:H2'	22:BA:2616:C:H6	1.80	0.47
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.50	0.47
22:BA:558:U:OP1	31:BJ:113:PRO:HB2	2.15	0.47
22:BA:646:U:C3'	22:BA:647:G:H5''	2.44	0.47
22:BA:962:G:H2'	22:BA:963:U:C6	2.50	0.47
24:BC:20:ASN:O	24:BC:23:LEU:HB2	2.15	0.47
27:BF:53:ALA:O	27:BF:55:ASP:N	2.48	0.47
32:BK:29:HIS:O	32:BK:30:ARG:C	2.53	0.47
33:BL:101:ILE:HG22	33:BL:102:GLY:H	1.80	0.47
33:BL:19:LEU:HB2	33:BL:27:LEU:HB2	1.97	0.47
63:BA:3796:HOH:O	33:BL:37:GLY:HA3	2.14	0.47
33:BL:94:THR:CG2	33:BL:95:LEU:H	2.28	0.47
34:BM:52:ALA:O	34:BM:53:MET:C	2.52	0.47
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.96	0.47
37:BP:32:VAL:O	37:BP:33:GLU:O	2.32	0.47
41:BT:29:THR:HA	41:BT:86:THR:H	1.80	0.47
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.15	0.47
45:BX:70:LEU:O	45:BX:71:ARG:C	2.53	0.47
53:CA:1397:C:P	53:CA:1397:C:H6	2.38	0.47
53:CA:652:U:O2'	53:CA:653:U:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:666:G:C5	53:CA:741:G:N1	2.83	0.47
53:CA:671:G:N1	53:CA:672:U:C2	2.83	0.47
53:CA:836:G:C6	53:CA:851:G:C5	3.03	0.47
5:CE:14:LEU:HD22	5:CE:59:ILE:CD1	2.43	0.47
9:CI:119:LYS:O	9:CI:119:LYS:HG3	2.14	0.47
9:CI:83:THR:HG21	9:CI:102:PHE:HB3	1.96	0.47
11:CK:78:ILE:HD13	11:CK:78:ILE:H	1.79	0.47
12:CL:120:ARG:HG2	12:CL:121:PRO:O	2.15	0.47
15:CO:23:SER:HB3	15:CO:26:VAL:CG2	2.45	0.47
57:DA:1006:C:C2	57:DA:1138:G:C2	3.03	0.47
57:DA:1282:U:H2'	57:DA:1283:G:O4'	2.15	0.47
57:DA:1378:A:H2'	57:DA:1380:G:N7	2.30	0.47
57:DA:1427:A:C2	57:DA:1570:A:OP2	2.68	0.47
57:DA:1518:C:H2'	57:DA:1519:G:O4'	2.15	0.47
57:DA:173:A:H2'	57:DA:174:U:C6	2.42	0.47
57:DA:1832:C:H2'	57:DA:1833:C:O4'	2.15	0.47
57:DA:574:A:H2	57:DA:2032:G:O2'	1.96	0.47
57:DA:2135:A:H2'	57:DA:2136:G:C8	2.49	0.47
57:DA:2263:C:H4'	57:DA:2329:U:H4'	1.97	0.47
57:DA:365:U:H2'	57:DA:366:C:O4'	2.14	0.47
57:DA:425:G:H2'	57:DA:426:C:H6	1.80	0.47
57:DA:528:A:H8	57:DA:528:A:H2'	1.55	0.47
57:DA:756:A:H2'	57:DA:757:G:O4'	2.15	0.47
57:DA:763:G:H8	57:DA:763:G:H2'	1.48	0.47
57:DA:973:A:H1'	57:DA:1188:U:C5	2.50	0.47
58:DB:18:G:C2	58:DB:67:G:C6	3.03	0.47
25:DD:146:ILE:O	25:DD:155:VAL:HG13	2.15	0.47
59:DF:39:VAL:HG13	59:DF:49:LEU:CD2	2.45	0.47
28:DG:87:GLN:HA	28:DG:129:GLU:HA	1.96	0.47
29:DH:24:GLY:O	29:DH:26:ALA:O	2.33	0.47
32:DK:92:GLU:O	32:DK:93:GLN:O	2.33	0.47
57:DA:587:C:N3	33:DL:33:ARG:NH2	2.62	0.47
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.17	0.47
38:DQ:8:ILE:O	38:DQ:8:ILE:HG12	2.13	0.47
45:DX:24:THR:O	45:DX:25:LYS:C	2.53	0.47
1:AA:1226:C:N4	13:AM:102:LYS:HG3	2.29	0.46
1:AA:11:G:H2'	1:AA:12:U:H6	1.80	0.46
1:AA:1468:A:C3'	1:AA:1469:C:C5'	2.90	0.46
1:AA:238:A:C2'	1:AA:239:U:H5'	2.45	0.46
1:AA:242:G:C2	1:AA:245:U:C5	3.04	0.46
1:AA:437:U:H4'	4:AD:153:ARG:NH2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:994:A:N7	1:AA:1216:A:H4'	2.30	0.46
2:AB:138:ARG:HA	2:AB:141:GLU:CD	2.35	0.46
3:AC:107:LYS:HB2	3:AC:107:LYS:NZ	2.30	0.46
1:AA:1373:G:C5'	7:AG:35:LYS:HB2	2.44	0.46
9:AI:90:ASP:OD2	9:AI:93:LEU:HG	2.15	0.46
10:AJ:26:VAL:O	10:AJ:30:LYS:HG2	2.16	0.46
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.41	0.46
13:AM:45:SER:O	13:AM:46:GLU:CB	2.62	0.46
19:AS:4:LEU:N	19:AS:4:LEU:HD12	2.28	0.46
22:BA:458:G:O2'	50:B2:39:ARG:HD2	2.15	0.46
51:B3:14:LYS:O	51:B3:21:PHE:O	2.32	0.46
22:BA:1688:U:H5''	22:BA:1689:A:OP1	2.15	0.46
22:BA:1824:G:C6	22:BA:1825:U:C4	3.03	0.46
22:BA:1952:A:C6	22:BA:1953:A:N1	2.83	0.46
22:BA:2282:G:H5''	22:BA:2283:C:O4'	2.15	0.46
22:BA:2680:U:OP2	25:BD:114:LYS:CE	2.50	0.46
22:BA:287:G:C2	22:BA:354:A:C2	3.03	0.46
22:BA:323:C:C4	22:BA:333:G:C8	3.04	0.46
22:BA:575:A:OP2	22:BA:2055:C:H5	1.98	0.46
22:BA:709:U:H2'	22:BA:710:U:C6	2.51	0.46
22:BA:569:U:H1'	22:BA:947:A:O4'	2.15	0.46
22:BA:974:G:C8	22:BA:989:G:C2	3.03	0.46
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.56	0.46
26:BE:188:MET:HG2	26:BE:193:VAL:HG22	1.97	0.46
27:BF:37:MET:SD	27:BF:56:LEU:HG	2.55	0.46
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.97	0.46
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.35	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
31:BJ:122:LEU:C	31:BJ:123:LYS:HD2	2.36	0.46
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.98	0.46
39:BR:28:ALA:O	39:BR:63:VAL:CG2	2.56	0.46
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.97	0.46
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.15	0.46
44:BW:39:GLN:O	44:BW:40:ARG:C	2.53	0.46
53:CA:1057:G:H2'	53:CA:1058:G:O4'	2.15	0.46
53:CA:1146:A:C6	53:CA:1147:C:C4	3.03	0.46
53:CA:177:G:O2'	53:CA:1448:C:C5'	2.62	0.46
53:CA:764:C:N4	53:CA:812:G:H1	2.12	0.46
53:CA:909:A:H2'	53:CA:910:C:O4'	2.15	0.46
2:CB:52:ALA:O	2:CB:56:LEU:HB2	2.14	0.46
3:CC:137:VAL:O	3:CC:138:GLN:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:75:LYS:CE	54:CG:76:SER:H	2.29	0.46
53:CA:1279:G:H2'	10:CJ:45:ARG:HH21	1.79	0.46
55:CM:75:SER:C	55:CM:77:LYS:H	2.18	0.46
19:CS:35:ARG:NH2	19:CS:53:GLY:H	2.12	0.46
21:CU:13:VAL:HG22	21:CU:15:LEU:HD23	1.97	0.46
48:D0:37:HIS:CB	48:D0:43:THR:HG22	2.45	0.46
57:DA:1161:C:H2'	57:DA:1162:G:C8	2.51	0.46
57:DA:1205:A:H5''	57:DA:1206:G:C8	2.50	0.46
57:DA:121:G:N3	57:DA:131:A:C2	2.83	0.46
57:DA:126:A:OP2	50:D2:19:ARG:HB2	2.15	0.46
57:DA:1349:C:H2'	57:DA:1350:C:C6	2.50	0.46
57:DA:1441:G:C6	57:DA:1442:U:C4	3.03	0.46
57:DA:1519:G:N1	57:DA:1520:U:C2	2.83	0.46
57:DA:1742:U:H2'	57:DA:1743:G:H8	1.77	0.46
57:DA:1796:U:H2'	57:DA:1797:G:H8	1.78	0.46
57:DA:189:G:P	45:DX:13:THR:HG21	2.56	0.46
57:DA:2074:U:N3	57:DA:2075:U:C4	2.83	0.46
57:DA:2267:A:H8	57:DA:2267:A:H2'	1.37	0.46
57:DA:2324:U:O2	57:DA:2385:C:C5	2.68	0.46
57:DA:2356:U:C5'	44:DW:16:GLU:HG3	2.46	0.46
57:DA:2415:G:C6	57:DA:2416:C:C4	3.03	0.46
57:DA:2437:G:O4'	57:DA:2598:A:C2	2.68	0.46
57:DA:2566:A:O2'	57:DA:2567:G:P	2.73	0.46
57:DA:2626:C:H2'	57:DA:2627:G:O4'	2.15	0.46
57:DA:2846:G:C6	57:DA:2847:U:N3	2.83	0.46
57:DA:513:A:C2	57:DA:514:A:C5	3.03	0.46
57:DA:849:A:H2'	57:DA:850:U:H6	1.81	0.46
24:DC:173:LEU:HD11	24:DC:183:VAL:HB	1.97	0.46
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	1.95	0.46
57:DA:2311:A:H1'	59:DF:78:ILE:HD11	1.96	0.46
28:DG:92:GLY:O	28:DG:93:TYR:C	2.52	0.46
29:DH:104:THR:O	29:DH:104:THR:HG23	2.15	0.46
29:DH:90:LEU:CD2	29:DH:91:PHE:H	2.28	0.46
30:DI:118:GLY:O	30:DI:123:ALA:HB3	2.15	0.46
31:DJ:105:VAL:O	31:DJ:109:LEU:HG	2.15	0.46
32:DK:22:ILE:HD11	32:DK:40:LYS:HG3	1.96	0.46
35:DN:31:HIS:C	35:DN:33:ILE:H	2.17	0.46
40:DS:5:ALA:HB3	40:DS:54:ALA:HB2	1.97	0.46
43:DV:61:LEU:N	43:DV:61:LEU:HD23	2.28	0.46
44:DW:25:PHE:O	44:DW:65:LYS:HA	2.15	0.46
57:DA:95:A:O2'	46:DY:40:SER:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.79	0.46
1:AA:119:A:C4	1:AA:240:G:N7	2.83	0.46
1:AA:212:G:H2'	1:AA:213:G:C8	2.50	0.46
1:AA:428:G:C1'	1:AA:430:A:N7	2.79	0.46
1:AA:967:C:H6	1:AA:967:C:O5'	1.98	0.46
3:AC:21:TRP:CB	3:AC:58:ARG:HG2	2.44	0.46
3:AC:61:LYS:HA	3:AC:61:LYS:HD2	1.73	0.46
3:AC:71:ARG:O	3:AC:74:ILE:HG22	2.15	0.46
5:AE:100:GLU:HB2	5:AE:103:GLY:HA2	1.98	0.46
6:AF:49:TYR:HA	18:AR:73:HIS:HB3	1.98	0.46
7:AG:144:ALA:C	7:AG:146:ALA:H	2.17	0.46
8:AH:62:LEU:HD13	8:AH:62:LEU:HA	1.77	0.46
9:AI:53:LEU:HD12	9:AI:53:LEU:N	2.30	0.46
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.15	0.46
18:AR:33:THR:CG2	18:AR:37:LYS:HB2	2.46	0.46
18:AR:44:THR:OG1	18:AR:46:THR:HG22	2.16	0.46
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.40	0.46
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.50	0.46
22:BA:1416:G:O2'	22:BA:1417:C:P	2.74	0.46
22:BA:1450:G:O6	22:BA:1451:C:N4	2.48	0.46
22:BA:1725:U:H2'	22:BA:1726:C:C6	2.50	0.46
22:BA:1737:G:C2	22:BA:1738:G:N2	2.83	0.46
22:BA:2532:G:C5	22:BA:2533:U:C5	3.04	0.46
22:BA:2581:G:C2	22:BA:2610:C:C6	3.03	0.46
22:BA:817:C:H2'	22:BA:818:G:O4'	2.15	0.46
22:BA:859:G:N2	22:BA:916:G:C4	2.82	0.46
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.11	0.46
24:BC:257:ARG:HG3	24:BC:269:ARG:HH22	1.79	0.46
27:BF:107:VAL:HG13	27:BF:113:PHE:CZ	2.50	0.46
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.78	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.96	0.46
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.83	0.46
32:BK:58:LEU:N	32:BK:58:LEU:HD23	2.31	0.46
37:BP:29:VAL:HG12	37:BP:30:TRP:O	2.15	0.46
43:BV:10:LYS:H	43:BV:10:LYS:CD	2.09	0.46
43:BV:78:GLN:HB2	43:BV:88:HIS:HB3	1.96	0.46
53:CA:1090:U:H2'	53:CA:1091:U:C6	2.45	0.46
53:CA:1215:G:C4	53:CA:1216:A:N7	2.83	0.46
53:CA:471:U:H2'	53:CA:472:U:H6	1.77	0.46
53:CA:974:A:OP1	14:CN:68:ARG:NH2	2.48	0.46
9:CI:76:GLY:O	9:CI:79:ARG:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CP:48:GLU:CD	56:CP:51:ARG:HE	2.18	0.46
57:DA:116:C:O2'	57:DA:117:G:H5'	2.15	0.46
57:DA:1387:A:C4	57:DA:1388:G:N7	2.83	0.46
57:DA:1553:A:C8	57:DA:1555:G:C5	3.02	0.46
57:DA:1683:U:H2'	57:DA:1684:G:H8	1.80	0.46
57:DA:2082:A:H2'	57:DA:2083:G:O4'	2.15	0.46
57:DA:2489:U:C4	57:DA:2490:G:C6	3.03	0.46
57:DA:2652:C:C4	57:DA:2653:U:C4	3.02	0.46
57:DA:2887:A:H1'	48:D0:39:ARG:NH2	2.30	0.46
57:DA:312:G:C2	57:DA:313:G:C8	3.04	0.46
57:DA:373:U:O2'	57:DA:374:A:H8	1.97	0.46
57:DA:460:A:H2'	57:DA:461:C:O4'	2.14	0.46
57:DA:702:U:C2	57:DA:703:U:C6	3.03	0.46
57:DA:729:G:N3	57:DA:729:G:H2'	2.30	0.46
57:DA:764:A:C2	57:DA:781:A:C4	3.02	0.46
57:DA:92:U:C6	57:DA:93:G:C8	3.03	0.46
24:DC:175:LEU:HD12	24:DC:179:GLU:HB3	1.97	0.46
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.15	0.46
57:DA:2729:G:H5''	25:DD:190:LYS:NZ	2.29	0.46
59:DF:35:LEU:HD11	59:DF:153:ILE:HG23	1.97	0.46
59:DF:45:ASP:HB3	59:DF:48:LEU:CD2	2.46	0.46
57:DA:2428:G:C2	33:DL:54:GLN:NE2	2.84	0.46
41:DT:19:LYS:HA	41:DT:19:LYS:HD3	1.67	0.46
57:DA:83:A:P	42:DU:91:LYS:HZ2	2.39	0.46
44:DW:11:ASN:OD1	44:DW:11:ASN:O	2.33	0.46
1:AA:585:G:N3	1:AA:879:C:H4'	2.30	0.46
2:AB:132:GLU:HG3	2:AB:132:GLU:O	2.14	0.46
2:AB:153:MET:CE	2:AB:157:PRO:HG3	2.46	0.46
2:AB:185:ILE:CG1	2:AB:185:ILE:O	2.63	0.46
2:AB:20:ARG:HH11	2:AB:20:ARG:HA	1.80	0.46
2:AB:32:GLY:HA3	2:AB:39:ILE:CG1	2.45	0.46
4:AD:19:PHE:CD1	4:AD:19:PHE:N	2.84	0.46
9:AI:52:GLU:HB3	9:AI:53:LEU:HD12	1.97	0.46
16:AP:75:ILE:C	16:AP:77:GLU:H	2.18	0.46
18:AR:35:SER:HB3	21:AU:3:ILE:HG13	1.97	0.46
18:AR:70:THR:OG1	18:AR:72:ARG:HG2	2.15	0.46
19:AS:69:LYS:HB2	19:AS:72:GLU:HG3	1.97	0.46
19:AS:79:TYR:CZ	19:AS:80:ARG:HB2	2.50	0.46
1:AA:258:G:H4'	20:AT:81:GLN:HE22	1.80	0.46
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.63	0.46
22:BA:1398:C:H2'	22:BA:1399:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1537:G:HO2'	22:BA:1538:G:P	2.38	0.46
22:BA:1548:A:H2'	22:BA:1549:A:H8	1.81	0.46
22:BA:2617:U:C4	22:BA:2618:G:N7	2.83	0.46
24:BC:49:THR:HG22	24:BC:50:THR:N	2.31	0.46
25:BD:152:PRO:O	25:BD:154:LYS:HG2	2.15	0.46
25:BD:33:ARG:NH2	25:BD:74:GLU:HB3	2.31	0.46
26:BE:48:THR:N	26:BE:51:GLU:HG3	2.31	0.46
27:BF:134:GLN:HE22	27:BF:149:ARG:HB3	1.80	0.46
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.34	0.46
33:BL:14:LYS:O	33:BL:15:ALA:O	2.33	0.46
40:BS:36:LEU:HA	40:BS:36:LEU:HD12	1.66	0.46
53:CA:1018:G:H2'	53:CA:1019:A:O4'	2.14	0.46
53:CA:1161:C:O2	53:CA:1176:A:C2	2.68	0.46
53:CA:1213:A:HO2'	53:CA:1214:C:H5'	1.76	0.46
53:CA:1270:G:H2'	53:CA:1271:A:C8	2.50	0.46
53:CA:347:G:H2'	53:CA:348:G:H8	1.80	0.46
53:CA:688:G:C8	53:CA:688:G:H5''	2.50	0.46
53:CA:986:U:C2'	53:CA:987:G:C8	2.78	0.46
4:CD:187:ARG:C	4:CD:189:ASP:N	2.67	0.46
8:CH:29:SER:OG	8:CH:32:LYS:HB3	2.15	0.46
14:CN:63:CYS:HB3	14:CN:67:GLY:H	1.81	0.46
18:CR:63:TYR:CE2	18:CR:69:TYR:OH	2.69	0.46
19:CS:39:ILE:HG12	19:CS:68:HIS:O	2.15	0.46
20:CT:3:ILE:H	20:CT:3:ILE:HD12	1.79	0.46
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.40	0.46
52:D4:2:LYS:NZ	52:D4:2:LYS:HA	2.30	0.46
57:DA:1003:G:N3	57:DA:1010:A:H2	2.14	0.46
57:DA:1037:G:C6	57:DA:1119:U:O2	2.68	0.46
57:DA:1087:G:H1'	57:DA:1089:A:H1'	1.98	0.46
57:DA:1308:A:H2'	57:DA:1309:G:O4'	2.15	0.46
57:DA:1346:G:O2'	57:DA:1347:A:O5'	2.34	0.46
57:DA:1383:A:C2	57:DA:1384:A:C4	3.03	0.46
57:DA:1388:G:HO2'	57:DA:1389:G:H5'	1.78	0.46
57:DA:1416:G:O2'	57:DA:1417:C:P	2.74	0.46
57:DA:1532:A:H2'	57:DA:1533:C:C6	2.51	0.46
57:DA:1740:G:H2'	57:DA:1741:C:C6	2.51	0.46
57:DA:1799:G:N1	57:DA:1819:A:OP2	2.42	0.46
57:DA:2516:A:C2	57:DA:2569:G:C2	3.03	0.46
57:DA:2581:G:H2'	57:DA:2610:C:N4	2.30	0.46
57:DA:2624:G:C2	57:DA:2625:G:H1'	2.51	0.46
57:DA:2729:G:H2'	57:DA:2730:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2889:C:C4	57:DA:2890:G:C5	3.03	0.46
57:DA:911:A:H8	57:DA:911:A:O5'	1.98	0.46
57:DA:975:A:O2'	57:DA:976:G:C5'	2.63	0.46
58:DB:60:C:H2'	58:DB:61:G:C8	2.51	0.46
24:DC:42:ARG:CZ	24:DC:48:ILE:HD11	2.46	0.46
25:DD:17:GLU:H	25:DD:17:GLU:CD	2.19	0.46
25:DD:208:LYS:O	25:DD:209:ALA:HB3	2.15	0.46
25:DD:98:VAL:HG23	25:DD:180:VAL:CG1	2.45	0.46
59:DF:36:ASN:O	59:DF:37:MET:CB	2.64	0.46
59:DF:73:VAL:O	59:DF:73:VAL:HG12	2.15	0.46
29:DH:57:LYS:HD2	29:DH:57:LYS:O	2.15	0.46
57:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.16	0.46
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.97	0.46
38:DQ:96:ASP:C	38:DQ:96:ASP:OD1	2.54	0.46
39:DR:79:ARG:O	39:DR:80:ARG:CB	2.63	0.46
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.95	0.46
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.97	0.46
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.15	0.46
1:AA:1152:A:O2'	1:AA:1153:G:C5'	2.64	0.46
1:AA:1261:A:C2	1:AA:1274:A:C2	3.02	0.46
1:AA:173:U:H1'	1:AA:197:A:C5	2.50	0.46
1:AA:209:U:C5'	1:AA:210:C:OP2	2.63	0.46
1:AA:439:U:H4'	4:AD:120:LYS:HG3	1.97	0.46
1:AA:449:G:O2'	1:AA:450:G:H5'	2.16	0.46
1:AA:597:G:C2	1:AA:644:U:C2	3.04	0.46
1:AA:668:G:O2'	1:AA:669:G:H5'	2.15	0.46
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.15	0.46
2:AB:187:ASP:HB2	2:AB:203:ASP:CG	2.36	0.46
1:AA:933:G:OP2	7:AG:2:ARG:HB3	2.14	0.46
12:AL:43:LYS:HB2	12:AL:43:LYS:NZ	2.30	0.46
13:AM:78:ARG:O	13:AM:82:LEU:HG	2.16	0.46
18:AR:37:LYS:HE2	18:AR:37:LYS:HB3	1.78	0.46
19:AS:50:VAL:HG22	19:AS:70:LEU:HD13	1.97	0.46
48:B0:3:GLN:HG3	48:B0:3:GLN:O	2.15	0.46
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.80	0.46
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.15	0.46
22:BA:1871:A:H8	22:BA:1872:A:C5	2.33	0.46
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.50	0.46
22:BA:2746:U:H2'	22:BA:2747:G:H5'	1.97	0.46
22:BA:2870:C:N4	22:BA:2871:U:C4	2.84	0.46
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:603:A:H4'	22:BA:604:G:O5'	2.16	0.46
22:BA:729:G:C6	24:BC:206:LYS:HB2	2.51	0.46
22:BA:754:U:H2'	22:BA:755:U:H6	1.80	0.46
23:BB:109:A:O2'	23:BB:110:C:H5'	2.15	0.46
23:BB:53:A:C2	23:BB:54:G:C8	3.03	0.46
28:BG:23:ILE:HG21	28:BG:71:LEU:CD1	2.44	0.46
28:BG:33:THR:H	28:BG:34:ARG:HD3	1.80	0.46
28:BG:51:PHE:N	28:BG:51:PHE:CD2	2.83	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
32:BK:118:LEU:N	32:BK:118:LEU:CD1	2.78	0.46
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.15	0.46
34:BM:66:ARG:NH1	34:BM:101:VAL:CG1	2.76	0.46
34:BM:71:LYS:HA	34:BM:72:PRO:HD3	1.71	0.46
23:BB:48:U:O2'	36:BO:100:HIS:HE1	1.97	0.46
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.35	0.46
22:BA:64:A:O2'	41:BT:70:HIS:HE1	1.97	0.46
43:BV:30:ILE:HA	43:BV:91:PHE:O	2.14	0.46
43:BV:30:ILE:HG12	43:BV:91:PHE:HB2	1.98	0.46
43:BV:80:HIS:HD2	43:BV:83:LYS:CA	2.26	0.46
22:BA:2332:C:OP1	44:BW:44:PHE:HZ	1.98	0.46
53:CA:1178:G:OP2	9:CI:98:ARG:NH2	2.49	0.46
53:CA:1409:C:H2'	53:CA:1410:A:H8	1.79	0.46
53:CA:250:A:H1'	53:CA:252:U:C4	2.50	0.46
53:CA:511:C:HO2'	53:CA:512:U:H6	1.61	0.46
53:CA:632:U:O2	53:CA:632:U:H2'	2.13	0.46
53:CA:649:A:H2'	53:CA:650:G:O4'	2.16	0.46
53:CA:701:U:O2'	53:CA:702:A:P	2.73	0.46
53:CA:880:C:C2'	53:CA:881:G:H5'	2.46	0.46
3:CC:10:ARG:O	3:CC:13:ILE:O	2.32	0.46
3:CC:39:ARG:CG	3:CC:54:ILE:HD13	2.41	0.46
4:CD:144:ILE:HD12	4:CD:177:MET:CB	2.44	0.46
4:CD:170:LEU:HA	4:CD:182:LYS:HB2	1.96	0.46
53:CA:6:G:H1	5:CE:102:THR:HG21	1.80	0.46
54:CG:68:VAL:O	54:CG:70:PRO:HD3	2.15	0.46
8:CH:11:THR:CG2	8:CH:14:ARG:HH12	2.06	0.46
55:CM:86:ARG:HH11	55:CM:90:HIS:HD2	1.64	0.46
55:CM:85:TYR:HE2	55:CM:96:VAL:HG13	1.80	0.46
18:CR:41:SER:HA	18:CR:46:THR:HG22	1.97	0.46
20:CT:81:GLN:O	20:CT:82:ILE:HG23	2.16	0.46
11:CK:111:ASP:HB3	21:CU:3:ILE:N	2.31	0.46
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:D3:23:HIS:ND1	51:D3:24:LYS:O	2.44	0.46
52:D4:7:VAL:HG22	52:D4:25:VAL:CG2	2.45	0.46
57:DA:1062:G:C4	57:DA:1063:G:N7	2.83	0.46
57:DA:1429:G:O2'	57:DA:1430:G:O5'	2.33	0.46
57:DA:1605:C:O2'	57:DA:1610:A:H2'	2.14	0.46
57:DA:2200:C:O2	57:DA:2226:C:N4	2.48	0.46
57:DA:1420:A:C4	57:DA:2211:A:N7	2.84	0.46
57:DA:2233:U:H2'	57:DA:2234:G:C8	2.51	0.46
57:DA:2250:G:OP1	57:DA:2275:C:H2'	2.15	0.46
57:DA:2331:G:N1	57:DA:2385:C:C4	2.84	0.46
57:DA:2459:A:H2'	57:DA:2459:A:N3	2.30	0.46
57:DA:2657:A:O2'	57:DA:2658:C:H5'	2.14	0.46
57:DA:2693:G:H2'	57:DA:2694:G:H8	1.79	0.46
57:DA:2774:C:N4	57:DA:2775:G:C5	2.83	0.46
57:DA:2813:A:C2	57:DA:2888:C:O2	2.68	0.46
57:DA:303:G:O2'	57:DA:304:U:O5'	2.33	0.46
57:DA:333:G:O2'	57:DA:334:C:C5'	2.64	0.46
57:DA:375:G:H5''	57:DA:375:G:H8	1.74	0.46
57:DA:410:G:C6	57:DA:2407:A:N6	2.83	0.46
57:DA:39:G:N2	57:DA:441:U:C2	2.84	0.46
57:DA:53:A:C2	50:D2:35:ARG:NH1	2.83	0.46
57:DA:575:A:N3	57:DA:576:U:C5	2.84	0.46
57:DA:859:G:N2	57:DA:916:G:C2'	2.78	0.46
57:DA:973:A:OP1	57:DA:973:A:C8	2.62	0.46
24:DC:244:VAL:HG12	24:DC:250:GLN:HA	1.97	0.46
28:DG:120:ILE:HG12	28:DG:134:GLY:HA3	1.98	0.46
34:DM:136:MET:HE1	43:DV:75:GLN:O	2.15	0.46
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.35	0.46
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.13	0.46
58:DB:7:G:N2	36:DO:47:VAL:HG21	2.30	0.46
37:DP:102:ARG:O	37:DP:103:THR:CB	2.64	0.46
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.41	0.46
41:DT:53:VAL:HG21	41:DT:92:ASN:HD22	1.79	0.46
1:AA:1181:G:C2	1:AA:1182:G:N2	2.83	0.46
1:AA:1312:G:N7	19:AS:2:ARG:HA	2.31	0.46
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.51	0.46
1:AA:157:U:O2'	1:AA:158:G:H5'	2.16	0.46
1:AA:275:G:H5''	1:AA:275:G:C8	2.51	0.46
1:AA:704:A:O2'	1:AA:705:G:H5'	2.16	0.46
1:AA:815:A:H4'	1:AA:817:C:C4	2.50	0.46
2:AB:59:ILE:HD12	2:AB:60:ALA:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:77:ASN:CG	5:AE:78:GLY:N	2.67	0.46
7:AG:96:ASN:O	7:AG:100:MET:HG3	2.15	0.46
11:AK:109:ILE:HG22	11:AK:110:THR:N	2.30	0.46
11:AK:126:ARG:CB	21:AU:33:ARG:HH12	2.28	0.46
15:AO:67:ASP:OD1	15:AO:87:ARG:NH2	2.48	0.46
15:AO:69:LEU:HD21	15:AO:76:ARG:HB2	1.96	0.46
19:AS:10:ILE:HD11	19:AS:15:LEU:HD22	1.97	0.46
22:BA:2294:G:H5''	36:BO:10:ARG:HD3	1.97	0.46
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.81	0.46
22:BA:2457:U:O2	22:BA:2495:G:C2	2.68	0.46
22:BA:2458:G:O2'	22:BA:2460:U:O4	2.26	0.46
22:BA:2607:G:C6	22:BA:2608:G:C6	3.03	0.46
22:BA:2796:U:H3	22:BA:2799:A:H61	1.62	0.46
22:BA:2860:A:H8	22:BA:2860:A:O5'	1.98	0.46
22:BA:589:U:H2'	22:BA:590:A:C8	2.50	0.46
22:BA:634:C:O5'	22:BA:634:C:H6	1.99	0.46
22:BA:638:G:C5	22:BA:651:G:C2	3.04	0.46
22:BA:656:G:H2'	22:BA:657:U:H6	1.77	0.46
22:BA:763:G:O2'	22:BA:765:C:H5'	2.15	0.46
22:BA:777:G:H2'	22:BA:778:G:H8	1.80	0.46
22:BA:913:U:H4'	22:BA:914:G:OP1	2.16	0.46
22:BA:998:C:OP2	38:BQ:57:ARG:NH2	2.48	0.46
24:BC:61:TYR:HD2	24:BC:85:ASN:ND2	2.14	0.46
25:BD:12:THR:HG22	25:BD:13:ARG:O	2.16	0.46
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.83	0.46
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.63	0.46
28:BG:1:SER:HB3	28:BG:5:LYS:NZ	2.30	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.79	0.46
34:BM:62:LYS:O	34:BM:105:MET:HA	2.16	0.46
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.30	0.46
38:BQ:111:LYS:HZ3	39:BR:48:LYS:HD3	1.81	0.46
41:BT:50:LEU:H	41:BT:50:LEU:CD1	2.23	0.46
41:BT:4:GLU:HG3	41:BT:6:ARG:HE	1.80	0.46
53:CA:254:G:OP1	17:CQ:69:THR:OG1	2.33	0.46
53:CA:38:G:N1	53:CA:397:A:OP1	2.42	0.46
53:CA:216:U:H4'	53:CA:464:U:H4'	1.97	0.46
53:CA:535:A:H4'	53:CA:536:C:OP1	2.12	0.46
53:CA:575:G:HO2'	53:CA:576:C:P	2.39	0.46
53:CA:669:G:C2	53:CA:670:G:C4	3.03	0.46
53:CA:761:G:C2	53:CA:762:U:C2	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:67:ILE:H	3:CC:102:ILE:HA	1.81	0.46
5:CE:114:LEU:O	5:CE:119:VAL:HG23	2.16	0.46
5:CE:80:LEU:HB3	5:CE:97:PRO:HB3	1.98	0.46
54:CG:49:LEU:HD13	54:CG:49:LEU:O	2.16	0.46
54:CG:59:GLU:C	54:CG:61:PHE:H	2.17	0.46
9:CI:39:GLY:O	9:CI:40:ARG:HB2	2.15	0.46
10:CJ:30:LYS:HG3	10:CJ:36:VAL:HG22	1.97	0.46
10:CJ:48:ARG:HB3	14:CN:100:TRP:HZ2	1.79	0.46
56:CP:38:PHE:CE2	56:CP:51:ARG:HB3	2.50	0.46
17:CQ:68:LYS:HG2	17:CQ:69:THR:HG23	1.96	0.46
21:CU:28:LEU:C	21:CU:28:LEU:HD23	2.35	0.46
57:DA:1441:G:H2'	57:DA:1442:U:H6	1.78	0.46
57:DA:1455:G:HO2'	57:DA:1456:G:H8	1.59	0.46
57:DA:1533:C:C2'	57:DA:1534:U:H5'	2.45	0.46
57:DA:1441:G:C4	57:DA:1551:A:H2	2.34	0.46
57:DA:1655:A:N7	57:DA:1656:C:C4	2.83	0.46
57:DA:1738:G:O2'	57:DA:1739:A:P	2.74	0.46
57:DA:1755:A:C2	57:DA:1758:U:H5	2.33	0.46
57:DA:2344:U:H4'	57:DA:2345:G:OP1	2.15	0.46
57:DA:2503:A:H5'	57:DA:2503:A:N3	2.30	0.46
57:DA:2603:G:C6	57:DA:2604:U:C4	3.04	0.46
57:DA:301:G:O2'	57:DA:302:C:P	2.73	0.46
57:DA:622:G:O2'	57:DA:623:C:C5'	2.64	0.46
57:DA:633:A:C5	57:DA:634:C:H1'	2.50	0.46
57:DA:732:C:C4	57:DA:733:G:C5	3.04	0.46
57:DA:745:G:H5''	57:DA:746:U:OP2	2.16	0.46
57:DA:800:A:C2	57:DA:802:A:C8	3.03	0.46
57:DA:784:G:O6	24:DC:227:VAL:HG11	2.16	0.46
59:DF:103:ILE:HG12	59:DF:175:PRO:HD3	1.97	0.46
59:DF:118:ALA:HB2	59:DF:176:PHE:HB3	1.98	0.46
57:DA:2658:C:H5''	28:DG:157:LYS:CD	2.46	0.46
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.16	0.46
34:DM:95:LEU:H	34:DM:95:LEU:HD13	1.80	0.46
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.15	0.46
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.36	0.46
37:DP:44:GLY:HA3	37:DP:60:VAL:HG12	1.98	0.46
41:DT:45:ALA:HA	41:DT:48:GLN:HG2	1.95	0.46
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.45	0.46
42:DU:12:VAL:HG21	42:DU:38:ILE:HG12	1.97	0.46
1:AA:1049:U:O2'	1:AA:1050:G:P	2.74	0.46
1:AA:1052:U:H5''	1:AA:1053:G:OP2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1055:A:H8	1:AA:1055:A:O5'	1.99	0.46
1:AA:1154:G:C2	1:AA:1155:A:C8	3.04	0.46
1:AA:1159:U:H4'	1:AA:1160:G:OP1	2.15	0.46
1:AA:1521:C:C2	1:AA:1522:U:C6	3.04	0.46
1:AA:33:A:H2'	1:AA:34:C:C6	2.51	0.46
1:AA:407:U:H2'	1:AA:408:A:O4'	2.16	0.46
1:AA:977:A:O2'	1:AA:978:A:H5''	2.15	0.46
3:AC:181:ILE:HD13	3:AC:202:PHE:HA	1.98	0.46
5:AE:60:GLN:C	5:AE:62:ALA:N	2.68	0.46
10:AJ:52:LEU:H	14:AN:80:ARG:HD2	1.80	0.46
11:AK:51:PHE:HE1	11:AK:60:PHE:HE2	1.63	0.46
12:AL:120:ARG:C	12:AL:122:LYS:H	2.19	0.46
3:AC:25:THR:HG23	14:AN:75:LYS:HD3	1.96	0.46
51:B3:41:ARG:HG3	51:B3:44:ARG:HH22	1.79	0.46
22:BA:1746:A:C2	22:BA:1747:U:C4	3.04	0.46
22:BA:1760:C:H2'	22:BA:1761:C:H5'	1.96	0.46
22:BA:2420:C:O2'	22:BA:2421:G:H5'	2.15	0.46
22:BA:2638:G:C2'	22:BA:2775:G:H22	2.29	0.46
22:BA:2832:U:O2'	22:BA:2833:U:P	2.74	0.46
22:BA:286:U:H2'	22:BA:287:G:H8	1.80	0.46
22:BA:573:U:H4'	22:BA:574:A:OP1	2.16	0.46
22:BA:704:G:HO2'	22:BA:705:A:P	2.38	0.46
22:BA:848:C:H1'	22:BA:934:U:O4'	2.15	0.46
22:BA:897:C:H5''	22:BA:898:C:OP2	2.16	0.46
22:BA:969:G:C6	22:BA:970:U:C4	3.04	0.46
23:BB:34:A:N6	23:BB:44:G:O2'	2.49	0.46
25:BD:100:LEU:HB3	25:BD:101:PHE:HD1	1.78	0.46
25:BD:42:ASN:O	25:BD:42:ASN:ND2	2.49	0.46
25:BD:99:GLU:HG2	25:BD:100:LEU:H	1.78	0.46
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.98	0.46
26:BE:97:ASN:HD22	26:BE:97:ASN:N	2.13	0.46
29:BH:66:ASN:C	29:BH:68:ARG:N	2.69	0.46
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.96	0.46
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.69	0.46
31:BJ:64:VAL:O	31:BJ:65:THR:CB	2.54	0.46
31:BJ:64:VAL:CG1	31:BJ:65:THR:N	2.78	0.46
32:BK:108:ARG:HH21	37:BP:34:GLY:CA	2.28	0.46
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.31	0.46
41:BT:34:VAL:O	41:BT:34:VAL:HG23	2.15	0.46
43:BV:55:GLU:HG3	43:BV:55:GLU:H	1.47	0.46
46:BY:40:SER:C	46:BY:42:LEU:N	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1086:U:H6	53:CA:1086:U:C5'	2.29	0.46
53:CA:1184:G:C2	53:CA:1185:G:C8	3.04	0.46
53:CA:198:G:O2'	53:CA:199:A:P	2.74	0.46
53:CA:80:A:C6	53:CA:81:A:O2'	2.65	0.46
53:CA:879:C:H2'	53:CA:880:C:O5'	2.15	0.46
3:CC:137:VAL:O	3:CC:140:ALA:HB3	2.15	0.46
11:CK:127:ARG:HG2	11:CK:127:ARG:O	2.15	0.46
12:CL:22:ALA:O	12:CL:58:ASN:ND2	2.48	0.46
55:CM:11:HIS:CE1	55:CM:43:LYS:HD2	2.49	0.46
14:CN:50:LEU:HB2	14:CN:51:PRO:HD3	1.96	0.46
14:CN:79:SER:O	14:CN:83:VAL:HG23	2.16	0.46
19:CS:38:THR:OG1	19:CS:67:GLY:HA2	2.16	0.46
20:CT:57:VAL:HG12	20:CT:71:ALA:CB	2.46	0.46
51:D3:35:LYS:HB2	51:D3:40:LYS:CD	2.44	0.46
52:D4:7:VAL:HG22	52:D4:25:VAL:HG23	1.98	0.46
57:DA:1204:A:O4'	57:DA:1206:G:N7	2.49	0.46
57:DA:1385:A:H4'	57:DA:1386:C:OP1	2.16	0.46
57:DA:137:U:C4	57:DA:138:U:C2	3.03	0.46
57:DA:1830:C:H5'	24:DC:14:HIS:HE1	1.80	0.46
57:DA:2061:G:C2	57:DA:2063:C:C4	3.03	0.46
57:DA:2305:U:H4'	59:DF:132:ARG:CG	2.45	0.46
57:DA:2348:U:O2'	57:DA:2349:G:H8	1.97	0.46
57:DA:2544:G:H5'	57:DA:2645:G:N7	2.30	0.46
57:DA:1129:A:C4	57:DA:2570:G:H1'	2.51	0.46
57:DA:2798:U:H5''	57:DA:2799:A:OP1	2.16	0.46
57:DA:455:C:N3	57:DA:473:G:C4'	2.79	0.46
57:DA:665:U:O2'	57:DA:666:A:H5'	2.16	0.46
57:DA:749:A:C4	57:DA:750:A:C8	3.04	0.46
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.35	0.46
59:DF:131:VAL:O	59:DF:132:ARG:HB2	2.16	0.46
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.63	0.46
29:DH:68:ARG:CG	29:DH:71:LYS:HD3	2.45	0.46
30:DI:49:GLU:OE2	30:DI:54:ILE:HG13	2.16	0.46
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.16	0.46
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.45	0.46
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.51	0.46
40:DS:66:ILE:CD1	40:DS:66:ILE:H	2.27	0.46
44:DW:14:ASP:O	44:DW:15:SER:HB2	2.16	0.46
46:DY:58:ASN:C	46:DY:60:LYS:N	2.69	0.46
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.15	0.46
1:AA:1380:U:C5	7:AG:2:ARG:HA	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:211:G:C2	1:AA:212:G:H1'	2.51	0.46
1:AA:258:G:H5''	63:AA:1701:HOH:O	2.16	0.46
1:AA:369:G:C4	1:AA:393:A:C2	3.03	0.46
1:AA:570:G:C6	1:AA:873:A:C2	3.04	0.46
5:AE:149:PRO:HA	5:AE:152:VAL:HG13	1.98	0.46
5:AE:81:GLN:H	5:AE:81:GLN:NE2	2.14	0.46
12:AL:3:VAL:HG23	12:AL:4:ASN:H	1.81	0.46
20:AT:53:MET:CE	20:AT:57:VAL:HG21	2.46	0.46
20:AT:78:LEU:O	20:AT:82:ILE:HG23	2.16	0.46
21:AU:18:PHE:HB3	21:AU:19:LYS:HE2	1.96	0.46
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.15	0.46
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.97	0.46
22:BA:14:A:H8	22:BA:14:A:O5'	1.99	0.46
22:BA:1999:C:O2	22:BA:2687:U:O2'	2.30	0.46
22:BA:2836:U:C4	22:BA:2883:A:N6	2.84	0.46
22:BA:286:U:H2'	22:BA:287:G:C8	2.51	0.46
22:BA:350:G:H2'	22:BA:351:C:H6	1.80	0.46
22:BA:726:G:O2'	22:BA:727:A:OP2	2.33	0.46
26:BE:43:THR:O	26:BE:43:THR:OG1	2.33	0.46
26:BE:97:ASN:ND2	26:BE:97:ASN:N	2.62	0.46
27:BF:87:LYS:O	27:BF:88:VAL:HG23	2.15	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
31:BJ:15:TRP:HA	31:BJ:53:TYR:O	2.16	0.46
32:BK:69:VAL:O	32:BK:76:VAL:HA	2.16	0.46
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.39	0.46
33:BL:78:ARG:CZ	33:BL:113:ALA:HB1	2.45	0.46
34:BM:109:PRO:O	34:BM:110:GLU:C	2.53	0.46
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.80	0.46
40:BS:69:LEU:HD12	40:BS:108:SER:O	2.14	0.46
41:BT:68:LYS:O	41:BT:69:ARG:O	2.34	0.46
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.50	0.46
47:BZ:6:ILE:CD1	47:BZ:47:ILE:HD11	2.46	0.46
53:CA:1001:C:H2'	53:CA:1002:G:O4'	2.16	0.46
53:CA:1095:U:H2'	53:CA:1096:C:C6	2.50	0.46
53:CA:212:G:HO2'	53:CA:213:G:P	2.39	0.46
53:CA:252:U:O4	53:CA:253:A:N6	2.49	0.46
53:CA:35:G:H21	12:CL:114:SER:CB	2.28	0.46
53:CA:821:G:H4'	63:CA:1740:HOH:O	2.16	0.46
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.46
2:CB:78:ALA:O	2:CB:213:LEU:HD23	2.16	0.46
2:CB:92:ASN:OD1	2:CB:93:HIS:ND1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:11:SER:O	4:CD:12:ARG:C	2.53	0.46
11:CK:22:ILE:HG22	11:CK:22:ILE:O	2.15	0.46
14:CN:63:CYS:SG	14:CN:82:LYS:HG3	2.56	0.46
21:CU:35:GLU:OE2	21:CU:35:GLU:CA	2.64	0.46
49:D1:34:GLU:HG3	49:D1:49:LYS:CB	2.46	0.46
57:DA:1036:G:N1	57:DA:1037:G:N7	2.64	0.46
57:DA:1300:G:OP2	57:DA:1300:G:H8	1.99	0.46
57:DA:1713:A:O2'	57:DA:1715:G:H5'	2.16	0.46
57:DA:1807:G:H1'	57:DA:1810:A:H62	1.79	0.46
57:DA:1848:A:C2	57:DA:1849:G:C4	3.04	0.46
57:DA:2074:U:H2'	57:DA:2075:U:C6	2.50	0.46
57:DA:2187:U:N3	57:DA:2188:U:C5	2.84	0.46
57:DA:2237:G:H5''	57:DA:2238:G:OP1	2.16	0.46
57:DA:2386:A:O2'	57:DA:2387:U:C6	2.66	0.46
57:DA:2392:A:C2	33:DL:55:MET:HG2	2.51	0.46
57:DA:2461:A:C2	57:DA:2490:G:N2	2.83	0.46
57:DA:2550:G:C6	57:DA:2551:C:C4	3.03	0.46
57:DA:533:G:C2	57:DA:534:U:C2	3.04	0.46
57:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.49	0.46
25:DD:51:THR:HG21	25:DD:76:GLY:HA3	1.95	0.46
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.16	0.46
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.42	0.46
29:DH:1:MET:HE3	29:DH:23:ALA:HB2	1.97	0.46
31:DJ:54:ILE:O	31:DJ:122:LEU:HD12	2.15	0.46
32:DK:119:ALA:O	32:DK:120:PRO:C	2.54	0.46
32:DK:35:VAL:HG23	32:DK:36:GLY:N	2.23	0.46
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.31	0.46
35:DN:96:ARG:CG	35:DN:98:LEU:HD13	2.45	0.46
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.15	0.46
37:DP:20:ARG:HG2	37:DP:112:ARG:NH1	2.03	0.46
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.18	0.46
57:DA:990:A:H61	39:DR:78:ARG:NH1	2.14	0.46
57:DA:139:U:H3	41:DT:1:MET:HA	1.81	0.46
41:DT:74:ILE:HG23	41:DT:75:GLY:N	2.30	0.46
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.97	0.46
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.15	0.46
1:AA:920:U:O4'	1:AA:1080:A:C2	2.69	0.46
1:AA:131:A:O2'	1:AA:132:C:O4'	2.33	0.46
1:AA:67:C:H4'	1:AA:172:A:O4'	2.16	0.46
1:AA:563:A:C1'	1:AA:566:G:O2'	2.61	0.46
1:AA:785:G:O2'	1:AA:786:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:829:G:C2	1:AA:830:G:C8	3.03	0.46
1:AA:986:U:H2'	1:AA:987:G:O4'	2.16	0.46
2:AB:53:LEU:HD21	2:AB:212:TYR:OH	2.15	0.46
2:AB:30:ILE:HD11	2:AB:38:HIS:CG	2.51	0.46
3:AC:76:ILE:C	3:AC:82:ASP:HB2	2.36	0.46
4:AD:88:ASN:HA	4:AD:91:ALA:CB	2.46	0.46
12:AL:86:VAL:O	12:AL:86:VAL:CG1	2.62	0.46
16:AP:67:ILE:HG13	16:AP:71:VAL:HG12	1.97	0.46
20:AT:60:GLN:HE21	20:AT:65:LEU:HD21	1.79	0.46
22:BA:1001:A:P	63:BA:3737:HOH:O	2.72	0.46
22:BA:1744:A:H5''	22:BA:1745:A:OP2	2.15	0.46
22:BA:1911:U:C4	22:BA:1918:A:C5	3.04	0.46
22:BA:2417:C:C2	22:BA:2418:A:C8	3.03	0.46
22:BA:2548:U:H2'	22:BA:2549:G:O5'	2.16	0.46
22:BA:25:U:C5	22:BA:26:G:C5	3.03	0.46
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.15	0.46
22:BA:892:A:H2'	22:BA:893:C:C6	2.51	0.46
23:BB:74:U:O2	43:BV:29:ILE:CD1	2.64	0.46
25:BD:104:VAL:HG12	25:BD:104:VAL:O	2.16	0.46
25:BD:39:ASP:OD1	25:BD:40:LEU:HD12	2.16	0.46
26:BE:5:LEU:CD1	26:BE:10:SER:HB3	2.45	0.46
26:BE:158:PHE:O	26:BE:160:ALA:O	2.33	0.46
63:BA:3286:HOH:O	26:BE:98:LYS:HE2	2.15	0.46
28:BG:162:ARG:CZ	28:BG:168:VAL:HG21	2.46	0.46
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.51	0.46
33:BL:93:ASN:ND2	33:BL:94:THR:H	2.14	0.46
37:BP:33:GLU:N	37:BP:36:LYS:O	2.49	0.46
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.80	0.46
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	2.14	0.46
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.31	0.46
53:CA:1072:G:C2	53:CA:1073:U:C2	3.04	0.46
53:CA:1105:A:H2'	53:CA:1106:G:H8	1.80	0.46
53:CA:1202:U:O2'	53:CA:1203:C:C5'	2.64	0.46
53:CA:1343:G:H4'	9:CI:123:ARG:HB3	1.98	0.46
53:CA:1406:U:H1'	53:CA:1518:A:H4'	1.97	0.46
53:CA:259:G:H2'	53:CA:260:G:H8	1.81	0.46
53:CA:557:G:C6	53:CA:558:G:N1	2.84	0.46
53:CA:577:G:O2'	53:CA:578:C:C5'	2.64	0.46
53:CA:666:G:C6	53:CA:741:G:C6	3.04	0.46
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.16	0.46
57:DA:1034:G:H2'	57:DA:1035:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1128:G:O6	57:DA:2491:U:C5	2.69	0.46
57:DA:1270:C:C2'	57:DA:1648:U:H5''	2.43	0.46
57:DA:1654:A:N3	57:DA:1655:A:C8	2.84	0.46
57:DA:172:A:O2'	57:DA:173:A:H5'	2.16	0.46
57:DA:1905:C:O4'	57:DA:1928:A:H2	1.95	0.46
57:DA:191:A:O2'	57:DA:192:C:H5'	2.15	0.46
57:DA:2006:C:H6	57:DA:2006:C:O5'	1.98	0.46
57:DA:2054:A:C2	57:DA:2616:C:N3	2.84	0.46
57:DA:229:C:HO2'	57:DA:230:G:C4'	2.28	0.46
57:DA:2487:G:H2'	57:DA:2488:G:H8	1.81	0.46
57:DA:265:A:N7	57:DA:427:U:O2'	2.48	0.46
57:DA:2808:G:O2'	57:DA:2809:A:C8	2.64	0.46
57:DA:2815:C:C2	57:DA:2816:G:C8	3.04	0.46
57:DA:2896:C:O2'	57:DA:2897:U:C5'	2.62	0.46
57:DA:40:U:C4	57:DA:41:C:N4	2.84	0.46
57:DA:35:G:O4'	57:DA:454:A:H1'	2.16	0.46
57:DA:740:C:H6	57:DA:740:C:O5'	1.98	0.46
57:DA:788:A:H5''	57:DA:789:A:OP1	2.16	0.46
57:DA:91:A:O2'	57:DA:92:U:C5'	2.57	0.46
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.64	0.46
59:DF:107:VAL:N	59:DF:108:PRO:HD2	2.31	0.46
59:DF:65:LEU:HG	59:DF:67:THR:HG23	1.98	0.46
28:DG:51:PHE:HE2	28:DG:68:ARG:HA	1.80	0.46
30:DI:28:GLY:O	30:DI:29:GLN:C	2.54	0.46
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.51	0.46
57:DA:2882:A:H5'	35:DN:96:ARG:HD3	1.97	0.46
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.51	0.46
57:DA:65:U:H5'	41:DT:75:GLY:HA3	1.96	0.46
57:DA:1341:G:C2	41:DT:84:TYR:HE2	2.34	0.46
43:DV:3:THR:HA	43:DV:62:THR:O	2.16	0.46
43:DV:80:HIS:HD2	43:DV:82:TYR:N	2.13	0.46
44:DW:65:LYS:HD2	44:DW:65:LYS:N	2.31	0.46
1:AA:1452:C:H5'	1:AA:1453:G:C5	2.51	0.46
1:AA:185:U:H2'	1:AA:186:C:C6	2.48	0.46
1:AA:198:G:O2'	1:AA:199:A:O5'	2.33	0.46
1:AA:27:G:H2'	1:AA:28:A:C8	2.50	0.46
1:AA:565:U:C4	1:AA:566:G:C5	3.04	0.46
1:AA:656:G:N2	15:AO:22:GLY:HA3	2.31	0.46
1:AA:865:A:H2'	1:AA:866:C:C6	2.51	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.04	0.46
3:AC:35:ASP:C	3:AC:37:LYS:H	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:67:LEU:HD23	4:AD:67:LEU:HA	1.81	0.46
6:AF:6:ILE:HD13	6:AF:74:LEU:CD2	2.46	0.46
10:AJ:14:ASP:HB2	10:AJ:17:LEU:HB3	1.98	0.46
19:AS:10:ILE:HG13	19:AS:10:ILE:O	2.15	0.46
48:B0:10:SER:O	48:B0:14:MET:HG3	2.15	0.46
22:BA:993:G:C6	22:BA:1162:G:C6	3.04	0.46
22:BA:1215:G:C4	22:BA:1216:G:C8	3.04	0.46
22:BA:1279:G:O2'	22:BA:1280:G:H5'	2.15	0.46
22:BA:1462:C:H2'	22:BA:1463:C:H6	1.81	0.46
22:BA:1482:G:H1'	22:BA:1509:A:H61	1.80	0.46
1:AA:1407:C:O2'	22:BA:1912:A:N1	2.40	0.46
22:BA:2053:G:H5''	25:BD:150:GLN:HA	1.98	0.46
22:BA:2284:A:O2'	22:BA:2285:C:H5'	2.16	0.46
22:BA:2394:C:P	51:B3:29:ARG:HH21	2.39	0.46
22:BA:2243:U:O2	22:BA:2434:A:C2	2.69	0.46
22:BA:2880:C:O2'	22:BA:2881:U:H5'	2.16	0.46
22:BA:548:G:H3'	22:BA:548:G:C8	2.51	0.46
22:BA:637:A:N1	22:BA:651:G:O2'	2.43	0.46
23:BB:75:G:O2'	43:BV:88:HIS:HE1	1.99	0.46
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.30	0.46
25:BD:74:GLU:O	25:BD:75:ALA:C	2.53	0.46
26:BE:113:VAL:CG1	26:BE:114:ARG:N	2.78	0.46
26:BE:113:VAL:HG12	26:BE:114:ARG:N	2.30	0.46
26:BE:153:LEU:HD12	26:BE:153:LEU:C	2.37	0.46
26:BE:23:PHE:CZ	26:BE:28:VAL:HG11	2.50	0.46
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	1.98	0.46
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.31	0.46
32:BK:74:GLY:HA3	37:BP:74:GLN:HE21	1.79	0.46
37:BP:28:LYS:N	37:BP:28:LYS:HE3	2.29	0.46
37:BP:95:LYS:HG2	37:BP:97:TYR:OH	2.15	0.46
40:BS:55:ILE:O	40:BS:58:ALA:HB3	2.16	0.46
22:BA:988:A:P	47:BZ:11:SER:CB	3.04	0.46
53:CA:1123:U:O3'	10:CJ:38:GLY:HA3	2.16	0.46
53:CA:1236:A:H2'	53:CA:1237:C:C6	2.51	0.46
53:CA:1297:G:H5'	53:CA:1299:A:N7	2.31	0.46
53:CA:266:G:O2'	53:CA:267:C:H3'	2.15	0.46
53:CA:505:G:C6	53:CA:535:A:C2	3.04	0.46
53:CA:560:A:N7	53:CA:566:G:C5	2.84	0.46
53:CA:754:C:H3'	53:CA:755:G:H8	1.80	0.46
53:CA:885:G:H1'	53:CA:914:A:N1	2.31	0.46
5:CE:22:LYS:H	5:CE:29:ILE:HG22	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:111:THR:HG22	8:CH:112:ASP:N	2.31	0.46
8:CH:30:LYS:O	8:CH:33:VAL:N	2.49	0.46
55:CM:106:ARG:HH21	55:CM:112:ARG:NE	2.13	0.46
57:DA:1142:A:C8	57:DA:1144:A:C5	3.04	0.46
57:DA:1265:A:H4'	57:DA:1266:G:H4'	1.98	0.46
57:DA:1754:A:C2	57:DA:1755:A:C4	3.03	0.46
57:DA:1838:C:N4	57:DA:1899:A:O4'	2.49	0.46
57:DA:1850:G:C2	57:DA:1893:C:O2	2.69	0.46
57:DA:1914:C:H2'	57:DA:1915:U:C6	2.51	0.46
57:DA:2028:U:H2'	57:DA:2029:G:C8	2.50	0.46
57:DA:247:G:C4	57:DA:249:C:H1'	2.50	0.46
57:DA:2480:C:N4	57:DA:2481:G:C6	2.84	0.46
57:DA:2638:G:H2'	57:DA:2775:G:H22	1.80	0.46
57:DA:2722:G:C2	57:DA:2723:C:C2	3.04	0.46
57:DA:272:A:C2	57:DA:273:G:C5	3.03	0.46
57:DA:299:A:C2	57:DA:319:G:N3	2.84	0.46
57:DA:319:G:C6	57:DA:333:G:N1	2.84	0.46
57:DA:270:A:N1	57:DA:369:U:H1'	2.30	0.46
57:DA:510:C:H6	57:DA:510:C:O5'	1.99	0.46
57:DA:672:C:H6	57:DA:672:C:C5'	2.29	0.46
57:DA:734:A:C2	57:DA:735:A:H1'	2.51	0.46
57:DA:763:G:C4	57:DA:765:C:C6	3.03	0.46
57:DA:944:C:H2'	63:DA:3352:HOH:O	2.16	0.46
58:DB:15:A:C8	58:DB:109:A:N6	2.83	0.46
24:DC:209:ALA:HA	24:DC:212:TRP:CE2	2.50	0.46
25:DD:10:GLY:HA3	25:DD:26:VAL:HB	1.98	0.46
28:DG:91:VAL:O	28:DG:93:TYR:N	2.48	0.46
29:DH:127:GLU:HA	29:DH:144:VAL:HG23	1.98	0.46
29:DH:28:ASN:HA	29:DH:28:ASN:HD22	1.58	0.46
32:DK:2:ILE:CG2	32:DK:3:GLN:N	2.76	0.46
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.15	0.46
39:DR:5:PHE:HA	39:DR:39:LEU:HD23	1.98	0.46
1:AA:1131:G:C2'	1:AA:1132:C:O5'	2.63	0.46
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.52	0.46
1:AA:184:G:O4'	1:AA:224:U:H4'	2.16	0.46
1:AA:257:G:C2	1:AA:258:G:C5	3.04	0.46
1:AA:66:A:C2'	1:AA:67:C:H5'	2.47	0.46
1:AA:753:A:H4'	1:AA:754:C:H5''	1.97	0.46
1:AA:821:G:H2'	1:AA:822:U:C6	2.51	0.46
1:AA:91:U:C2'	1:AA:92:U:O4'	2.64	0.46
3:AC:150:VAL:HG12	3:AC:199:VAL:HB	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	2.16	0.46
5:AE:123:LEU:H	5:AE:123:LEU:HD12	1.81	0.46
5:AE:152:VAL:HG11	8:AH:98:LEU:HB3	1.98	0.46
10:AJ:22:THR:HG22	10:AJ:23:ALA:N	2.30	0.46
15:AO:23:SER:O	15:AO:24:THR:C	2.54	0.46
22:BA:2815:C:H1'	48:B0:39:ARG:HD3	1.98	0.46
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.81	0.46
22:BA:221:A:H4'	22:BA:222:A:O5'	2.15	0.46
22:BA:2231:U:OP1	45:BX:29:LEU:CD2	2.64	0.46
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.49	0.46
22:BA:2813:A:H2	22:BA:2887:A:H62	1.59	0.46
22:BA:28:A:C4	22:BA:513:A:N7	2.84	0.46
22:BA:548:G:H3'	22:BA:548:G:H8	1.81	0.46
28:BG:29:ASN:CG	28:BG:30:GLY:H	2.19	0.46
29:BH:119:ASN:C	29:BH:121:VAL:H	2.18	0.46
29:BH:40:THR:O	29:BH:42:LYS:N	2.45	0.46
29:BH:48:GLU:HA	29:BH:51:ARG:HG3	1.98	0.46
29:BH:89:LYS:O	29:BH:90:LEU:HD12	2.16	0.46
29:BH:95:GLY:C	29:BH:97:ARG:H	2.19	0.46
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.17	0.46
31:BJ:120:ARG:O	31:BJ:123:LYS:HE2	2.16	0.46
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.15	0.46
31:BJ:140:LEU:HD13	31:BJ:140:LEU:C	2.36	0.46
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.03	0.46
31:BJ:84:ILE:O	31:BJ:84:ILE:HG13	2.16	0.46
34:BM:70:ASP:C	34:BM:70:ASP:OD1	2.54	0.46
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.63	0.46
40:BS:39:THR:O	40:BS:39:THR:HG22	2.16	0.46
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.29	0.46
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.16	0.46
44:BW:22:VAL:O	44:BW:25:PHE:CD2	2.69	0.46
44:BW:70:VAL:HG13	44:BW:70:VAL:O	2.16	0.46
45:BX:48:LEU:HD11	45:BX:67:LEU:CD2	2.45	0.46
53:CA:1064:G:N2	53:CA:1190:G:O2'	2.49	0.46
53:CA:1097:C:O2'	53:CA:1098:C:H5'	2.16	0.46
53:CA:1167:A:O2'	53:CA:1168:U:OP1	2.25	0.46
53:CA:1243:C:C2	53:CA:1244:G:N7	2.84	0.46
53:CA:1375:A:O2'	54:CG:101:ARG:NH2	2.48	0.46
53:CA:1463:U:H2'	53:CA:1464:U:C6	2.50	0.46
53:CA:1480:A:C4	53:CA:1481:U:C6	3.04	0.46
53:CA:655:A:N6	53:CA:752:G:N2	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:704:A:C2'	53:CA:705:G:C8	2.97	0.46
53:CA:765:G:C8	53:CA:812:G:N3	2.84	0.46
54:CG:17:PHE:HB2	54:CG:43:TYR:OH	2.16	0.46
53:CA:1346:A:N6	54:CG:9:ARG:HH22	2.14	0.46
8:CH:41:GLU:C	8:CH:43:GLY:H	2.20	0.46
15:CO:2:LEU:HD13	15:CO:34:GLN:HE21	1.81	0.46
20:CT:11:ILE:C	20:CT:13:SER:H	2.18	0.46
20:CT:2:ASN:O	20:CT:3:ILE:C	2.54	0.46
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.96	0.46
57:DA:103:A:O2'	57:DA:104:A:H5'	2.16	0.46
57:DA:1114:C:HO2'	57:DA:1115:G:C1'	2.29	0.46
57:DA:1179:G:H2'	57:DA:1180:U:C6	2.50	0.46
57:DA:1317:G:H2'	57:DA:1318:U:O4'	2.16	0.46
57:DA:1593:A:C5	57:DA:1594:U:C4	3.04	0.46
57:DA:1799:G:C4'	57:DA:1800:C:O5'	2.61	0.46
57:DA:1845:G:C4	57:DA:1846:G:C8	3.04	0.46
57:DA:1964:G:O2'	57:DA:1967:C:OP1	2.34	0.46
57:DA:201:C:C5	57:DA:202:U:C5	3.03	0.46
57:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.41	0.46
57:DA:2461:A:C6	57:DA:2462:C:C4	3.04	0.46
57:DA:2506:U:H3'	57:DA:2506:U:H6	1.81	0.46
57:DA:2654:A:N6	57:DA:2667:C:N4	2.63	0.46
57:DA:372:G:P	45:DX:61:LYS:NZ	2.88	0.46
57:DA:37:C:O2'	26:DE:45:ALA:CB	2.64	0.46
57:DA:329:G:H5'	57:DA:477:A:H4'	1.97	0.46
57:DA:975:A:N3	57:DA:976:G:C8	2.84	0.46
24:DC:239:PHE:HD1	24:DC:241:LYS:H	1.64	0.46
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.31	0.46
30:DI:105:LEU:O	30:DI:105:LEU:HD23	2.16	0.46
32:DK:40:LYS:HZ2	32:DK:89:ASN:HD21	1.64	0.46
38:DQ:82:LEU:HB3	38:DQ:88:GLU:OE2	2.15	0.46
57:DA:1198:U:O4'	38:DQ:8:ILE:HD12	2.16	0.46
57:DA:492:A:N1	40:DS:49:LYS:HE2	2.31	0.46
57:DA:1808:A:C5	45:DX:27:ARG:NH1	2.82	0.46
47:DZ:51:SER:C	47:DZ:53:MET:H	2.19	0.46
1:AA:1053:G:N2	1:AA:1056:U:C4	2.84	0.45
1:AA:1216:A:OP1	14:AN:2:LYS:HE2	2.15	0.45
1:AA:1253:G:N3	1:AA:1254:A:C8	2.85	0.45
1:AA:1258:G:C4	1:AA:1259:C:C5	3.04	0.45
1:AA:1310:G:H2'	1:AA:1311:A:O4'	2.15	0.45
1:AA:1323:G:H4'	1:AA:1362:A:C2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:821:G:H4'	63:AA:1740:HOH:O	2.16	0.45
1:AA:842:U:HO2'	1:AA:846:G:H1	1.61	0.45
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.98	0.45
2:AB:22:TRP:HA	2:AB:188:THR:O	2.16	0.45
3:AC:13:ILE:H	3:AC:13:ILE:HD13	1.81	0.45
8:AH:10:LEU:HD22	8:AH:74:ILE:CG1	2.46	0.45
9:AI:27:ILE:N	9:AI:27:ILE:HD12	2.31	0.45
11:AK:51:PHE:HB2	11:AK:55:ARG:HB3	1.97	0.45
11:AK:52:ARG:HA	11:AK:56:LYS:HB3	1.97	0.45
12:AL:21:PRO:O	12:AL:23:LEU:N	2.50	0.45
12:AL:42:LYS:O	12:AL:43:LYS:C	2.55	0.45
12:AL:73:LEU:HD11	12:AL:79:ILE:CG2	2.44	0.45
13:AM:10:ASP:CG	13:AM:44:ILE:HB	2.37	0.45
14:AN:53:ASP:HA	14:AN:58:ARG:HH11	1.81	0.45
15:AO:25:GLU:HG3	15:AO:69:LEU:HD11	1.98	0.45
16:AP:42:ILE:O	16:AP:43:ALA:HB3	2.16	0.45
17:AQ:45:VAL:CG2	17:AQ:60:ILE:HD13	2.31	0.45
51:B3:30:HIS:ND1	51:B3:31:ILE:HG22	2.32	0.45
22:BA:1459:G:H8	22:BA:1459:G:H2'	1.58	0.45
22:BA:749:A:N7	22:BA:1618:A:C6	2.85	0.45
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.34	0.45
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.78	0.45
22:BA:2298:A:H2'	22:BA:2299:U:O4'	2.16	0.45
22:BA:2757:A:N1	28:BG:66:THR:CG2	2.76	0.45
22:BA:608:A:N1	22:BA:609:A:C2	2.84	0.45
22:BA:81:G:C2	22:BA:106:C:C2	3.05	0.45
22:BA:923:G:H4'	44:BW:25:PHE:CZ	2.51	0.45
22:BA:960:A:C5'	22:BA:961:C:OP2	2.64	0.45
23:BB:17:C:H2'	23:BB:18:G:O4'	2.17	0.45
23:BB:54:G:H2'	23:BB:55:U:C6	2.51	0.45
24:BC:251:THR:CG2	24:BC:252:LYS:N	2.70	0.45
25:BD:119:ALA:HB1	25:BD:124:ARG:HB2	1.97	0.45
26:BE:119:ILE:HD11	26:BE:187:VAL:CG2	2.42	0.45
26:BE:159:LEU:HA	26:BE:159:LEU:HD12	1.56	0.45
29:BH:32:PRO:HB3	45:BX:38:TRP:CD1	2.51	0.45
33:BL:57:LEU:C	33:BL:59:ARG:H	2.19	0.45
33:BL:87:GLY:O	33:BL:88:GLY:C	2.55	0.45
33:BL:93:ASN:C	33:BL:93:ASN:HD22	2.17	0.45
40:BS:85:ILE:HG22	40:BS:86:MET:N	2.31	0.45
41:BT:65:GLY:N	41:BT:79:ASP:OD1	2.41	0.45
42:BU:13:LEU:HD11	42:BU:70:ALA:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:53:GLY:O	44:BW:56:HIS:N	2.49	0.45
45:BX:5:GLN:HE21	45:BX:49:ARG:CB	2.30	0.45
53:CA:1278:G:H1'	53:CA:1279:G:C5	2.52	0.45
53:CA:191:G:H2'	53:CA:192:A:C8	2.50	0.45
53:CA:328:C:C2'	53:CA:328:C:O2	2.63	0.45
53:CA:580:C:H2'	53:CA:581:G:C8	2.51	0.45
53:CA:769:G:O2'	53:CA:770:C:H5'	2.16	0.45
53:CA:879:C:C2'	53:CA:880:C:O5'	2.64	0.45
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.31	0.45
5:CE:13:LYS:CE	5:CE:13:LYS:HA	2.43	0.45
6:CF:25:TYR:HA	6:CF:28:ALA:HB3	1.98	0.45
9:CI:44:ARG:O	9:CI:48:ARG:HG2	2.17	0.45
3:CC:22:PHE:CD2	10:CJ:97:ASP:HB2	2.51	0.45
11:CK:121:ARG:HH21	21:CU:35:GLU:HB2	1.81	0.45
14:CN:92:ILE:HA	14:CN:93:PRO:HD3	1.83	0.45
57:DA:1014:A:O2'	57:DA:1015:U:H5'	2.17	0.45
57:DA:1168:G:C6	57:DA:1182:G:C6	3.04	0.45
57:DA:1441:G:N2	57:DA:1442:U:C2	2.84	0.45
57:DA:1485:U:C2	57:DA:1505:A:C2	3.04	0.45
57:DA:1510:G:C2	57:DA:1511:G:C5	3.04	0.45
57:DA:1511:G:O2'	57:DA:1512:C:C6	2.49	0.45
57:DA:155:A:H2'	57:DA:156:A:C8	2.52	0.45
57:DA:1750:G:C6	57:DA:1751:U:C4	3.04	0.45
57:DA:1783:A:C2	57:DA:2588:G:O4'	2.69	0.45
57:DA:1776:G:C2	57:DA:1789:A:N3	2.84	0.45
57:DA:1838:C:C4	57:DA:1899:A:C4	3.04	0.45
57:DA:221:A:H5''	57:DA:222:A:OP1	2.16	0.45
57:DA:2635:A:H2'	57:DA:2636:C:O4'	2.15	0.45
57:DA:2851:A:O2'	57:DA:2852:G:O4'	2.33	0.45
57:DA:465:G:C4'	50:D2:16:HIS:HD2	2.30	0.45
57:DA:505:A:O2'	57:DA:506:G:H5'	2.16	0.45
57:DA:687:C:H2'	57:DA:688:U:H6	1.80	0.45
57:DA:709:U:H2'	57:DA:710:U:C6	2.51	0.45
57:DA:804:A:H5''	57:DA:805:G:OP1	2.16	0.45
57:DA:848:C:H2'	57:DA:849:A:C8	2.51	0.45
57:DA:86:G:N2	57:DA:87:U:C4	2.84	0.45
57:DA:910:A:C2	34:DM:13:HIS:CE1	3.04	0.45
57:DA:949:G:C2	57:DA:969:G:C2	3.04	0.45
58:DB:109:A:O2'	58:DB:110:C:O5'	2.34	0.45
58:DB:110:C:H2'	58:DB:111:U:C6	2.51	0.45
24:DC:180:MET:HE1	24:DC:268:ARG:HE	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:196:ALA:O	25:DD:197:THR:C	2.55	0.45
57:DA:673:C:H4'	26:DE:77:ILE:HG13	1.98	0.45
59:DF:101:ARG:HH11	59:DF:138:PRO:CB	2.29	0.45
28:DG:116:LEU:HD13	28:DG:121:THR:HA	1.98	0.45
32:DK:121:GLU:HB3	32:DK:122:VAL:H	1.44	0.45
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.54	0.45
57:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.16	0.45
45:DX:42:GLU:HG2	45:DX:44:ARG:HE	1.80	0.45
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.46	0.45
1:AA:518:C:H4'	1:AA:519:C:C5'	2.46	0.45
1:AA:613:C:H2'	1:AA:614:C:C6	2.50	0.45
1:AA:724:G:O2'	1:AA:725:G:H5'	2.16	0.45
1:AA:885:G:H1'	1:AA:914:A:N1	2.32	0.45
2:AB:66:ILE:CG1	2:AB:220:VAL:HG11	2.47	0.45
2:AB:74:ALA:O	2:AB:75:ALA:CB	2.64	0.45
5:AE:104:ILE:HD11	5:AE:114:LEU:HB3	1.99	0.45
5:AE:117:ALA:HB3	5:AE:119:VAL:HG13	1.98	0.45
5:AE:55:VAL:O	5:AE:59:ILE:HG23	2.16	0.45
7:AG:112:ASP:HB2	7:AG:118:ARG:HG3	1.99	0.45
9:AI:88:GLU:HG3	9:AI:89:TYR:N	2.31	0.45
15:AO:24:THR:CG2	15:AO:69:LEU:HD12	2.45	0.45
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.16	0.45
22:BA:1046:A:H3'	22:BA:1047:G:H5'	1.96	0.45
22:BA:1063:G:O2'	22:BA:1064:C:O4'	2.33	0.45
22:BA:1079:C:C4	22:BA:1088:A:C2	3.01	0.45
22:BA:117:G:C6	22:BA:119:A:C6	3.04	0.45
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.52	0.45
22:BA:1260:A:H2'	22:BA:1261:C:H6	1.81	0.45
22:BA:1945:G:C5	22:BA:1946:U:C5	3.04	0.45
22:BA:1984:G:O2'	22:BA:1985:C:H5'	2.16	0.45
22:BA:2714:G:H2'	22:BA:2715:C:C6	2.51	0.45
22:BA:2808:G:N2	22:BA:2891:U:C6	2.83	0.45
22:BA:348:A:H2'	22:BA:349:U:O4'	2.16	0.45
22:BA:569:U:H4'	22:BA:946:C:O2	2.16	0.45
22:BA:597:G:C2	22:BA:661:A:C2	3.04	0.45
22:BA:769:U:C2	22:BA:770:G:C8	3.04	0.45
22:BA:994:C:H1'	39:BR:10:LYS:HZ3	1.81	0.45
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.47	0.45
24:BC:43:ASN:C	24:BC:45:ASN:N	2.70	0.45
24:BC:63:ILE:O	24:BC:64:VAL:HB	2.15	0.45
25:BD:186:LEU:HD21	37:BP:3:ILE:HD11	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.45
34:BM:45:GLN:O	34:BM:46:ILE:C	2.54	0.45
22:BA:580:U:H4'	38:BQ:30:VAL:HG11	1.97	0.45
38:BQ:90:ASP:O	38:BQ:91:ARG:O	2.33	0.45
43:BV:68:LYS:O	43:BV:69:GLU:C	2.54	0.45
43:BV:80:HIS:CE1	43:BV:81:PRO:HD2	2.51	0.45
44:BW:23:LYS:HZ1	44:BW:24:ARG:HG3	1.81	0.45
45:BX:32:LEU:O	45:BX:33:HIS:CD2	2.69	0.45
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.15	0.45
46:BY:39:GLN:HG3	46:BY:42:LEU:HD22	1.98	0.45
53:CA:120:A:C3'	53:CA:121:U:C5'	2.88	0.45
53:CA:181:A:N6	53:CA:195:A:OP2	2.50	0.45
53:CA:21:G:H2'	53:CA:22:G:C8	2.52	0.45
53:CA:822:U:C2	53:CA:823:C:C5	3.05	0.45
53:CA:90:C:H2'	53:CA:91:U:C5	2.51	0.45
53:CA:969:A:O2'	53:CA:970:C:C5'	2.62	0.45
2:CB:27:LYS:HD3	2:CB:27:LYS:O	2.16	0.45
2:CB:9:LEU:HD12	2:CB:12:GLY:N	2.31	0.45
11:CK:70:ALA:HB1	11:CK:104:PHE:CZ	2.51	0.45
12:CL:98:ARG:CZ	12:CL:106:VAL:HG22	2.46	0.45
15:CO:81:ILE:O	15:CO:85:GLY:N	2.49	0.45
19:CS:4:LEU:HB3	19:CS:5:LYS:H	1.53	0.45
21:CU:9:GLU:HB3	21:CU:10:PRO:HD2	1.98	0.45
48:D0:39:ARG:O	48:D0:40:HIS:HB2	2.16	0.45
49:D1:16:THR:CG2	49:D1:42:VAL:HG23	2.46	0.45
57:DA:1139:G:N2	57:DA:1140:C:C2	2.84	0.45
57:DA:1276:A:C2	57:DA:1277:G:C5	3.04	0.45
57:DA:1398:C:O2'	57:DA:1399:C:C6	2.70	0.45
57:DA:1723:G:C4	57:DA:1724:G:C8	3.04	0.45
57:DA:174:U:H2'	57:DA:174:U:O2	2.16	0.45
57:DA:2259:U:C6	57:DA:2427:C:C4	3.04	0.45
57:DA:2581:G:C6	57:DA:2610:C:C2	3.04	0.45
57:DA:2667:C:O2'	57:DA:2668:G:O4'	2.34	0.45
57:DA:2689:U:H5''	57:DA:2690:U:O5'	2.15	0.45
57:DA:2798:U:O4'	57:DA:2800:A:N6	2.48	0.45
57:DA:468:G:H4'	26:DE:57:LYS:HG2	1.98	0.45
57:DA:529:A:OP2	31:DJ:113:PRO:HG3	2.15	0.45
57:DA:682:G:N2	57:DA:796:C:C2	2.85	0.45
57:DA:849:A:C6	57:DA:850:U:C4	3.04	0.45
57:DA:1797:G:H4'	24:DC:254:LYS:O	2.16	0.45
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.22	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.16	0.45
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.15	0.45
25:DD:46:ARG:HB3	25:DD:84:LEU:HD12	1.99	0.45
59:DF:105:ILE:C	59:DF:108:PRO:HD2	2.37	0.45
59:DF:35:LEU:O	59:DF:87:LYS:HA	2.15	0.45
28:DG:154:GLU:C	28:DG:156:TYR:H	2.19	0.45
28:DG:154:GLU:HA	28:DG:155:PRO:HD2	1.82	0.45
30:DI:28:GLY:O	30:DI:30:GLN:HG3	2.16	0.45
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.64	0.45
34:DM:126:ILE:O	34:DM:128:THR:HG23	2.17	0.45
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	2.14	0.45
37:DP:52:ARG:HA	37:DP:52:ARG:HD3	1.77	0.45
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.16	0.45
57:DA:85:G:OP1	42:DU:5:ARG:HA	2.16	0.45
57:DA:85:G:OP2	42:DU:6:ARG:HB2	2.16	0.45
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.16	0.45
1:AA:112:G:C6	1:AA:330:C:N4	2.85	0.45
1:AA:1160:G:N2	1:AA:1161:C:C2	2.85	0.45
1:AA:1306:A:H2'	1:AA:1307:U:H5'	1.97	0.45
1:AA:1329:A:H5''	13:AM:25:GLY:N	2.30	0.45
1:AA:1416:G:H2'	1:AA:1417:G:H5'	1.98	0.45
1:AA:275:G:C4	1:AA:276:G:C8	3.04	0.45
1:AA:502:A:C2	1:AA:544:G:C2	3.05	0.45
1:AA:579:A:H2'	1:AA:580:C:H6	1.81	0.45
1:AA:957:U:O2	1:AA:959:A:C8	2.68	0.45
3:AC:63:ILE:O	3:AC:98:ALA:HA	2.16	0.45
4:AD:22:SER:O	4:AD:23:GLY:C	2.55	0.45
6:AF:6:ILE:HB	6:AF:62:MET:HB3	1.98	0.45
9:AI:56:MET:SD	9:AI:57:VAL:N	2.90	0.45
11:AK:64:VAL:O	11:AK:67:GLU:HB2	2.16	0.45
12:AL:87:LYS:O	12:AL:88:ASP:CB	2.65	0.45
16:AP:10:GLY:O	16:AP:11:ALA:CB	2.64	0.45
17:AQ:12:VAL:HG12	17:AQ:21:VAL:O	2.16	0.45
18:AR:63:TYR:CD1	18:AR:69:TYR:OH	2.70	0.45
20:AT:16:ALA:O	20:AT:17:ARG:C	2.55	0.45
49:B1:35:LEU:O	49:B1:35:LEU:HD23	2.17	0.45
22:BA:12:U:H2'	22:BA:12:U:O2	2.16	0.45
22:BA:142:A:C5	22:BA:143:C:C4	3.04	0.45
22:BA:1487:U:C2	22:BA:1503:A:C2	3.04	0.45
22:BA:1498:C:O2'	22:BA:1499:C:C6	2.67	0.45
22:BA:1612:C:H4'	50:B2:5:PHE:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:752:A:C5	22:BA:1781:U:O4'	2.69	0.45
22:BA:1816:C:C5	24:BC:61:TYR:CE1	3.05	0.45
22:BA:1989:G:O5'	22:BA:1989:G:H8	2.00	0.45
22:BA:2136:G:O2'	22:BA:2137:U:C6	2.67	0.45
22:BA:2727:A:H2'	22:BA:2728:U:C6	2.52	0.45
22:BA:592:A:O2'	51:B3:2:LYS:HA	2.16	0.45
22:BA:651:G:C6	22:BA:652:U:C4	3.03	0.45
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.49	0.45
24:BC:39:SER:C	24:BC:41:GLY:N	2.69	0.45
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.84	0.45
25:BD:105:LYS:HA	25:BD:177:VAL:CG2	2.46	0.45
26:BE:112:LEU:HD13	26:BE:186:VAL:CG1	2.40	0.45
26:BE:83:VAL:HG12	26:BE:83:VAL:O	2.16	0.45
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.37	0.45
36:BO:105:ALA:O	36:BO:107:ALA:N	2.49	0.45
38:BQ:8:ILE:C	38:BQ:8:ILE:CD1	2.79	0.45
53:CA:1004:A:N3	53:CA:1026:G:C5	2.84	0.45
53:CA:1046:A:H2'	53:CA:1047:G:O4'	2.17	0.45
53:CA:1102:A:O2'	53:CA:1103:C:H5'	2.16	0.45
53:CA:1104:G:H2'	53:CA:1105:A:O4'	2.16	0.45
53:CA:1113:C:H4'	3:CC:13:ILE:HD12	1.99	0.45
53:CA:954:G:H1	53:CA:1228:C:N4	2.13	0.45
53:CA:1231:G:C5	53:CA:1232:U:C5	3.05	0.45
53:CA:1336:C:H1'	53:CA:1337:G:N1	2.31	0.45
53:CA:1461:G:C6	53:CA:1462:C:C4	3.04	0.45
53:CA:149:A:H2'	53:CA:150:U:C6	2.52	0.45
53:CA:168:G:C2'	53:CA:169:C:H5'	2.45	0.45
53:CA:604:G:C2	53:CA:635:A:C2	3.05	0.45
53:CA:577:G:C8	53:CA:816:A:N1	2.85	0.45
53:CA:86:G:HO2'	53:CA:87:C:P	2.38	0.45
53:CA:91:U:O2'	53:CA:92:U:C6	2.52	0.45
54:CG:105:GLU:O	54:CG:109:LYS:HD3	2.17	0.45
54:CG:10:LYS:N	54:CG:10:LYS:HE3	2.31	0.45
8:CH:82:LEU:CD1	12:CL:3:VAL:HG11	2.46	0.45
55:CM:53:ASP:HA	55:CM:56:ARG:CZ	2.47	0.45
56:CP:75:ILE:HA	56:CP:78:VAL:CG2	2.45	0.45
57:DA:1206:G:C6	57:DA:1207:C:C4	3.05	0.45
57:DA:1355:G:C2	57:DA:1356:G:C8	3.04	0.45
57:DA:1398:C:C2	57:DA:1399:C:C5	3.04	0.45
57:DA:1522:A:H1'	57:DA:1524:G:C4	2.51	0.45
57:DA:1555:G:HO2'	57:DA:1556:C:H5'	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2020:A:H5'	48:D0:8:THR:CG2	2.46	0.45
57:DA:2214:C:HO2'	57:DA:2215:C:C5'	2.28	0.45
57:DA:223:A:C4	57:DA:408:G:H1'	2.51	0.45
57:DA:830:G:C2	57:DA:2448:A:N7	2.84	0.45
57:DA:24:G:C5	57:DA:25:U:C5	3.05	0.45
57:DA:2858:C:H2'	57:DA:2859:G:O4'	2.15	0.45
57:DA:28:A:H2'	57:DA:29:U:C6	2.51	0.45
57:DA:467:G:O3'	57:DA:797:G:H5'	2.16	0.45
57:DA:728:G:C2	57:DA:730:A:C4	3.05	0.45
57:DA:810:U:O2'	57:DA:811:U:H5	1.99	0.45
57:DA:974:G:H8	57:DA:975:A:N7	2.14	0.45
59:DF:160:LYS:HD3	59:DF:161:SER:N	2.31	0.45
58:DB:55:U:H5'	59:DF:24:VAL:HG21	1.98	0.45
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.81	0.45
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.80	0.45
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.39	0.45
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.32	0.45
34:DM:95:LEU:H	34:DM:95:LEU:CD1	2.28	0.45
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.32	0.45
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.30	0.45
41:DT:69:ARG:HG3	41:DT:70:HIS:N	2.30	0.45
1:AA:1157:A:H1'	1:AA:1181:G:N1	2.32	0.45
1:AA:126:G:H2'	1:AA:127:G:O5'	2.17	0.45
1:AA:1343:G:H4'	9:AI:123:ARG:HB3	1.98	0.45
1:AA:557:G:C6	1:AA:558:G:C2	3.05	0.45
1:AA:707:U:H2'	1:AA:708:C:C6	2.51	0.45
1:AA:748:G:C6	1:AA:749:A:C6	3.04	0.45
1:AA:903:G:H2'	1:AA:904:U:C6	2.48	0.45
1:AA:982:U:H4'	1:AA:983:A:C5'	2.47	0.45
4:AD:2:ARG:HB2	4:AD:4:LEU:CD1	2.47	0.45
14:AN:25:GLU:HG2	14:AN:26:LEU:HD12	1.98	0.45
14:AN:25:GLU:CG	14:AN:26:LEU:HD12	2.47	0.45
18:AR:35:SER:HA	18:AR:71:ASP:HB3	1.98	0.45
20:AT:26:MET:HE1	20:AT:56:ILE:HD11	1.98	0.45
20:AT:60:GLN:HE21	20:AT:65:LEU:CD2	2.30	0.45
49:B1:8:ILE:N	49:B1:22:THR:O	2.49	0.45
22:BA:1499:C:O2'	22:BA:1500:G:C5'	2.59	0.45
22:BA:1627:G:C2	22:BA:1628:G:C8	3.05	0.45
22:BA:1872:A:C2'	22:BA:1873:G:O4'	2.64	0.45
22:BA:2020:A:H5'	48:B0:8:THR:HG22	1.98	0.45
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:271:G:C4	22:BA:272:A:N7	2.85	0.45
22:BA:669:G:C5	22:BA:801:G:C6	3.04	0.45
22:BA:812:C:H4'	38:BQ:12:ARG:HH22	1.82	0.45
24:BC:151:GLY:O	24:BC:152:GLN:HG3	2.16	0.45
24:BC:20:ASN:HD21	24:BC:22:GLU:CG	2.30	0.45
24:BC:79:ARG:NH2	24:BC:81:GLU:OE2	2.50	0.45
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.49	0.45
29:BH:67:ALA:C	29:BH:69:ALA:N	2.69	0.45
29:BH:86:ASP:HB3	29:BH:89:LYS:HB3	1.98	0.45
31:BJ:65:THR:O	31:BJ:68:LYS:HG3	2.16	0.45
22:BA:1753:G:H5''	37:BP:92:ARG:HE	1.80	0.45
38:BQ:40:LYS:HB2	38:BQ:40:LYS:NZ	2.31	0.45
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.31	0.45
44:BW:51:GLY:O	44:BW:52:CYS:C	2.55	0.45
45:BX:31:ASN:O	45:BX:51:SER:HA	2.17	0.45
47:BZ:30:ARG:O	47:BZ:31:ILE:C	2.55	0.45
53:CA:198:G:O2'	53:CA:199:A:O5'	2.35	0.45
53:CA:276:G:OP1	17:CQ:13:SER:OG	2.24	0.45
53:CA:282:A:H2'	53:CA:283:U:C6	2.51	0.45
53:CA:552:U:C4	53:CA:553:A:N7	2.85	0.45
4:CD:186:GLU:O	4:CD:187:ARG:CB	2.65	0.45
4:CD:3:TYR:CZ	4:CD:5:GLY:HA3	2.52	0.45
54:CG:19:SER:HB3	54:CG:22:LEU:HB3	1.99	0.45
18:CR:28:LEU:C	18:CR:30:ASN:N	2.69	0.45
20:CT:42:ASP:O	20:CT:43:LYS:C	2.55	0.45
57:DA:1187:G:C8	57:DA:1187:G:OP2	2.70	0.45
57:DA:1608:A:O2'	57:DA:1610:A:OP1	2.34	0.45
57:DA:15:G:O2'	57:DA:16:C:H5'	2.16	0.45
57:DA:1817:G:H3'	24:DC:155:ARG:HH21	1.81	0.45
57:DA:1982:U:C6	57:DA:1982:U:O5'	2.69	0.45
57:DA:1767:G:N2	57:DA:1986:C:C2	2.84	0.45
57:DA:2235:G:H2'	57:DA:2236:U:C6	2.52	0.45
57:DA:2283:C:C5	57:DA:2389:G:C4	3.04	0.45
57:DA:2418:A:C6	57:DA:2419:U:N3	2.85	0.45
57:DA:2443:C:H2'	57:DA:2444:G:O4'	2.17	0.45
57:DA:2686:G:H2'	57:DA:2687:U:C6	2.52	0.45
57:DA:2874:C:O2'	57:DA:2875:C:C6	2.67	0.45
57:DA:458:G:N2	57:DA:469:G:H2'	2.31	0.45
57:DA:531:C:O5'	57:DA:532:A:H8	1.99	0.45
58:DB:11:C:C5	58:DB:12:C:C5	3.05	0.45
58:DB:16:G:H2'	58:DB:17:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:48:U:O2'	36:DO:100:HIS:CE1	2.70	0.45
59:DF:135:ILE:O	59:DF:137:PHE:N	2.49	0.45
59:DF:71:LYS:HG3	59:DF:73:VAL:H	1.79	0.45
31:DJ:55:ILE:HG13	31:DJ:55:ILE:O	2.15	0.45
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	1.97	0.45
33:DL:94:THR:O	33:DL:98:ALA:N	2.48	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:CB	2.46	0.45
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.20	0.45
39:DR:81:LYS:O	39:DR:82:HIS:C	2.55	0.45
42:DU:10:VAL:HG12	42:DU:71:ILE:HG22	1.98	0.45
43:DV:13:GLY:O	43:DV:17:SER:HB2	2.15	0.45
45:DX:37:PHE:O	45:DX:45:PHE:HD2	1.98	0.45
1:AA:1112:C:N4	3:AC:177:LEU:HD22	2.32	0.45
1:AA:1154:G:C2	1:AA:1155:A:C5	3.05	0.45
1:AA:1216:A:OP1	14:AN:4:SER:HB3	2.16	0.45
1:AA:1371:G:OP1	9:AI:69:GLY:HA2	2.17	0.45
1:AA:162:A:C8	1:AA:163:C:H1'	2.51	0.45
1:AA:363:A:O2'	1:AA:364:A:H5'	2.16	0.45
1:AA:577:G:O2'	1:AA:578:C:C5'	2.64	0.45
1:AA:665:A:N3	1:AA:732:C:H2'	2.32	0.45
1:AA:894:G:O2'	1:AA:895:G:H5'	2.17	0.45
1:AA:74:A:C6	1:AA:97:G:C6	3.05	0.45
12:AL:2:THR:HG22	12:AL:4:ASN:H	1.81	0.45
13:AM:7:ASN:HD22	13:AM:8:ILE:N	2.15	0.45
10:AJ:53:ILE:HG13	14:AN:84:ARG:CZ	2.46	0.45
1:AA:750:C:O2'	15:AO:20:ASP:OD1	2.34	0.45
17:AQ:56:ASP:OD2	17:AQ:80:LYS:HA	2.17	0.45
49:B1:33:LEU:C	49:B1:33:LEU:HD12	2.37	0.45
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.32	0.45
22:BA:1164:C:H2'	22:BA:1165:A:H8	1.80	0.45
22:BA:1416:G:O2'	22:BA:1417:C:C5'	2.64	0.45
22:BA:1476:U:C6	22:BA:1476:U:OP2	2.69	0.45
22:BA:1624:U:H2'	22:BA:1625:C:H6	1.81	0.45
22:BA:1911:U:C4	22:BA:1918:A:C4	3.05	0.45
22:BA:2019:A:C2'	22:BA:2020:A:O5'	2.65	0.45
22:BA:2197:U:C6	22:BA:2224:G:C6	3.04	0.45
22:BA:2680:U:OP1	25:BD:113:SER:HA	2.17	0.45
22:BA:1050:A:N1	22:BA:2751:G:C5	2.84	0.45
22:BA:871:U:H2'	22:BA:872:U:C6	2.51	0.45
23:BB:52:A:H4'	23:BB:53:A:OP1	2.16	0.45
24:BC:124:LYS:O	24:BC:125:PRO:C	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.17	0.45
25:BD:140:HIS:CD2	25:BD:140:HIS:N	2.84	0.45
26:BE:29:HIS:O	26:BE:33:VAL:HG23	2.16	0.45
29:BH:25:TYR:O	29:BH:29:PHE:HB3	2.16	0.45
31:BJ:12:LYS:O	31:BJ:13:ARG:HB2	2.16	0.45
31:BJ:44:TYR:C	31:BJ:45:THR:HG22	2.36	0.45
1:AA:345:C:O2	32:BK:117:SER:HA	2.16	0.45
36:BO:85:LYS:HB3	36:BO:85:LYS:HE3	1.80	0.45
38:BQ:96:ASP:OD2	38:BQ:96:ASP:C	2.55	0.45
42:BU:73:ASN:HD22	42:BU:76:THR:N	2.10	0.45
43:BV:63:ILE:HD12	43:BV:72:VAL:HG21	1.99	0.45
44:BW:8:SER:C	44:BW:9:THR:HG22	2.35	0.45
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.69	0.45
53:CA:1381:U:O2'	53:CA:1382:C:O5'	2.30	0.45
53:CA:289:G:C6	53:CA:290:C:N4	2.85	0.45
53:CA:295:C:H2'	53:CA:296:U:C6	2.47	0.45
53:CA:559:A:H4'	53:CA:560:A:H5''	1.98	0.45
53:CA:859:G:H2'	53:CA:860:A:C8	2.52	0.45
3:CC:63:ILE:O	3:CC:63:ILE:HG23	2.15	0.45
4:CD:80:ARG:HB2	4:CD:80:ARG:HE	1.43	0.45
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.52	0.45
5:CE:83:PRO:HB3	5:CE:96:GLN:HG2	1.98	0.45
54:CG:148:LYS:HD3	54:CG:148:LYS:O	2.17	0.45
54:CG:70:PRO:HD2	54:CG:95:ARG:O	2.17	0.45
10:CJ:48:ARG:HB2	10:CJ:48:ARG:CZ	2.46	0.45
12:CL:31:GLY:HA3	12:CL:54:VAL:HG12	1.98	0.45
55:CM:64:VAL:O	55:CM:65:GLU:C	2.55	0.45
56:CP:75:ILE:CG2	56:CP:80:LYS:HD2	2.46	0.45
17:CQ:30:HIS:CG	17:CQ:31:PRO:HD2	2.51	0.45
18:CR:57:ALA:O	18:CR:60:ARG:HB2	2.16	0.45
57:DA:1060:U:H4'	57:DA:1061:U:C5'	2.46	0.45
57:DA:1142:A:H4'	31:DJ:27:ARG:HH22	1.82	0.45
57:DA:1206:G:C2	57:DA:1207:C:C2	3.04	0.45
57:DA:511:U:C4'	57:DA:1235:G:H4'	2.46	0.45
57:DA:1588:G:H2'	57:DA:1589:U:C6	2.52	0.45
57:DA:1802:A:N6	57:DA:1817:G:N2	2.65	0.45
57:DA:2011:U:H2'	57:DA:2012:G:H5'	1.98	0.45
57:DA:223:A:C6	57:DA:422:A:C5	3.04	0.45
57:DA:2654:A:N6	57:DA:2667:C:H41	2.15	0.45
57:DA:2843:G:N2	57:DA:2875:C:N3	2.65	0.45
57:DA:600:G:C5'	26:DE:27:LEU:HD22	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:616:A:N3	57:DA:617:G:C8	2.85	0.45
57:DA:69:C:H2'	57:DA:70:G:H8	1.80	0.45
57:DA:712:G:C2	57:DA:720:U:O2	2.69	0.45
57:DA:845:A:H2	57:DA:934:U:O2	2.00	0.45
57:DA:915:C:O2	58:DB:100:G:H4'	2.17	0.45
24:DC:125:PRO:HA	24:DC:191:LEU:HB2	1.98	0.45
25:DD:159:LYS:HE2	25:DD:160:LYS:N	2.27	0.45
25:DD:179:ARG:H	25:DD:188:LEU:HB2	1.82	0.45
59:DF:32:LYS:HD2	59:DF:156:THR:HG21	1.99	0.45
30:DI:102:ARG:HH11	30:DI:105:LEU:HD13	1.82	0.45
32:DK:104:THR:C	32:DK:106:GLU:N	2.69	0.45
33:DL:79:LEU:CB	33:DL:113:ALA:H	2.22	0.45
35:DN:56:LYS:CD	35:DN:88:ALA:HA	2.44	0.45
37:DP:91:VAL:HG11	37:DP:96:LEU:CD1	2.41	0.45
44:DW:9:THR:OG1	44:DW:10:ARG:N	2.49	0.45
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.97	0.45
1:AA:1138:G:C2'	1:AA:1138:G:N3	2.71	0.45
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.51	0.45
1:AA:332:G:H2'	1:AA:333:U:H6	1.81	0.45
1:AA:414:A:N6	1:AA:431:A:C4	2.84	0.45
1:AA:550:G:C2'	1:AA:551:U:H5'	2.46	0.45
1:AA:577:G:H2'	1:AA:578:C:C6	2.52	0.45
1:AA:807:A:H2'	1:AA:808:C:C6	2.51	0.45
2:AB:132:GLU:O	2:AB:136:ARG:CB	2.65	0.45
2:AB:110:ILE:HD11	2:AB:147:LEU:HD13	1.91	0.45
6:AF:53:LYS:HG3	6:AF:54:LEU:N	2.32	0.45
17:AQ:12:VAL:CB	17:AQ:21:VAL:HG22	2.46	0.45
20:AT:74:HIS:O	20:AT:78:LEU:HB2	2.16	0.45
11:AK:124:LYS:HE2	21:AU:33:ARG:HH21	1.80	0.45
22:BA:1045:C:H5''	22:BA:1046:A:C5'	2.43	0.45
22:BA:1513:U:O2'	22:BA:1514:G:H5'	2.17	0.45
22:BA:2186:G:C6	22:BA:2187:U:C2	3.04	0.45
22:BA:2428:G:H5''	22:BA:2429:G:OP1	2.17	0.45
22:BA:2619:C:H5'	25:BD:155:VAL:O	2.16	0.45
22:BA:2715:C:C4	22:BA:2716:C:C5	3.05	0.45
22:BA:2853:C:H2'	22:BA:2854:G:C8	2.52	0.45
22:BA:60:G:HO2'	22:BA:61:C:P	2.39	0.45
22:BA:718:A:H2'	22:BA:719:C:H5'	1.98	0.45
22:BA:855:G:N3	44:BW:23:LYS:CD	2.76	0.45
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.98	0.45
26:BE:131:THR:HG22	26:BE:164:LEU:HD13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.32	0.45
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	2.03	0.45
31:BJ:88:THR:CG2	31:BJ:91:GLU:H	2.30	0.45
32:BK:71:ARG:HD2	32:BK:106:GLU:HG3	1.98	0.45
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.15	0.45
35:BN:30:ARG:HG2	35:BN:31:HIS:ND1	2.32	0.45
45:BX:70:LEU:HD23	45:BX:73:ARG:HH11	1.82	0.45
53:CA:1067:A:C4'	53:CA:1068:G:O5'	2.63	0.45
53:CA:1084:G:C6	53:CA:1085:U:O4	2.70	0.45
53:CA:1394:A:N6	53:CA:1501:C:H5'	2.32	0.45
53:CA:579:A:C6	53:CA:763:G:C6	3.04	0.45
53:CA:666:G:H1'	53:CA:741:G:N2	2.31	0.45
2:CB:103:TRP:CA	2:CB:106:VAL:HB	2.43	0.45
2:CB:115:ASP:O	2:CB:119:GLN:CB	2.65	0.45
2:CB:71:THR:O	2:CB:72:LYS:C	2.55	0.45
4:CD:141:VAL:HG12	4:CD:142:VAL:N	2.31	0.45
5:CE:136:VAL:O	5:CE:140:ILE:HG13	2.17	0.45
6:CF:56:LYS:O	6:CF:57:ALA:HB2	2.16	0.45
8:CH:20:ASN:O	8:CH:20:ASN:ND2	2.49	0.45
53:CA:1372:U:C5'	9:CI:71:ILE:HD11	2.47	0.45
55:CM:22:TYR:HB2	55:CM:65:GLU:HG2	1.99	0.45
21:CU:41:THR:O	21:CU:45:LYS:HB2	2.16	0.45
49:D1:46:VAL:HG22	49:D1:47:ILE:N	2.29	0.45
57:DA:1238:G:H2'	57:DA:1239:G:C8	2.51	0.45
57:DA:1281:G:C2	57:DA:1290:C:N3	2.85	0.45
57:DA:1361:G:C5	57:DA:1362:C:C5	3.05	0.45
57:DA:1417:C:H4'	57:DA:1587:G:N2	2.30	0.45
57:DA:1408:G:H22	57:DA:1595:C:H1'	1.82	0.45
57:DA:1709:U:O2'	57:DA:1710:G:H5'	2.17	0.45
57:DA:1760:C:H2'	57:DA:1761:C:O4'	2.17	0.45
57:DA:413:C:H4'	57:DA:1880:U:H4'	1.98	0.45
57:DA:2249:U:H1'	57:DA:2275:C:N4	2.32	0.45
57:DA:2391:G:O2'	57:DA:2392:A:P	2.75	0.45
57:DA:2415:G:C2	57:DA:2416:C:C2	3.05	0.45
57:DA:2814:A:C5	57:DA:2815:C:C5	3.05	0.45
57:DA:2839:G:C2	57:DA:2880:C:N3	2.85	0.45
57:DA:335:C:O2'	57:DA:336:C:O5'	2.35	0.45
57:DA:495:G:H4'	40:DS:4:ILE:O	2.16	0.45
57:DA:524:G:C4	57:DA:525:U:C5	3.05	0.45
58:DB:48:U:O2'	36:DO:100:HIS:HE1	2.00	0.45
58:DB:68:C:HO2'	58:DB:69:G:P	2.40	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:90:C:H4'	34:DM:38:ARG:NH1	2.32	0.45
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.47	0.45
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.82	0.45
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.54	0.45
32:DK:13:ASN:H	32:DK:13:ASN:ND2	2.14	0.45
34:DM:17:ASN:O	34:DM:18:ARG:HG2	2.17	0.45
37:DP:16:VAL:CG1	37:DP:19:PHE:HE2	2.30	0.45
39:DR:68:ARG:CZ	39:DR:90:ARG:HG2	2.47	0.45
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.68	0.45
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.31	0.45
1:AA:1125:U:O2'	1:AA:1126:U:H2'	2.17	0.45
1:AA:1258:G:O2'	1:AA:1259:C:H5'	2.16	0.45
1:AA:1322:C:O4'	1:AA:1322:C:O2	2.32	0.45
1:AA:1371:G:C5	1:AA:1372:U:C4	3.05	0.45
1:AA:199:A:O2'	1:AA:200:G:O4'	2.22	0.45
1:AA:322:C:H41	1:AA:328:C:H6	1.64	0.45
1:AA:917:G:H2'	1:AA:918:A:C8	2.52	0.45
2:AB:64:GLY:HA3	2:AB:158:ASP:OD2	2.17	0.45
3:AC:131:ARG:O	3:AC:135:ARG:HG2	2.16	0.45
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.31	0.45
9:AI:10:ARG:HB2	9:AI:14:SER:O	2.16	0.45
16:AP:37:GLY:HA2	16:AP:51:ARG:HH11	1.82	0.45
17:AQ:16:MET:O	17:AQ:17:GLU:C	2.54	0.45
17:AQ:47:ASP:C	17:AQ:51:GLU:OE2	2.55	0.45
18:AR:24:ASP:O	18:AR:27:THR:N	2.40	0.45
20:AT:8:LYS:HA	20:AT:11:ILE:CG2	2.44	0.45
22:BA:1660:G:N2	22:BA:2001:C:C2	2.85	0.45
22:BA:1731:G:C2	22:BA:1733:G:C5	3.04	0.45
22:BA:1766:G:N2	22:BA:1986:C:O2	2.45	0.45
22:BA:2526:G:C2	22:BA:2538:C:O2	2.69	0.45
22:BA:327:G:N2	22:BA:336:C:C2	2.85	0.45
22:BA:384:A:H2'	22:BA:385:C:H5'	1.99	0.45
22:BA:642:U:H4'	22:BA:2349:G:O2'	2.17	0.45
22:BA:885:C:H6	22:BA:885:C:O5'	1.99	0.45
25:BD:36:GLN:HB3	25:BD:49:GLN:HB3	1.99	0.45
27:BF:43:ILE:HG22	27:BF:82:TYR:CD1	2.52	0.45
29:BH:46:PHE:O	29:BH:50:ARG:NH2	2.44	0.45
31:BJ:80:HIS:HB3	31:BJ:81:ILE:HG22	1.98	0.45
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.64	0.45
33:BL:56:PRO:HB2	33:BL:58:TYR:CE2	2.52	0.45
35:BN:19:ALA:O	35:BN:22:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:69:ARG:HG2	35:BN:69:ARG:H	1.41	0.45
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.98	0.45
37:BP:53:GLY:O	37:BP:56:SER:OG	2.28	0.45
39:BR:49:ILE:O	39:BR:51:VAL:O	2.35	0.45
40:BS:37:THR:HG22	40:BS:38:TYR:CD1	2.52	0.45
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.37	0.45
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.81	0.45
53:CA:1060:U:O2'	10:CJ:54:SER:HB2	2.17	0.45
53:CA:1078:U:C5	53:CA:1079:G:C5	3.04	0.45
53:CA:1191:A:H8	53:CA:1191:A:OP2	2.00	0.45
53:CA:1285:A:C4'	53:CA:1286:U:OP1	2.60	0.45
53:CA:335:C:O2	53:CA:1433:A:H2	2.00	0.45
53:CA:274:A:O2'	53:CA:275:G:C8	2.59	0.45
53:CA:386:C:C5	53:CA:387:U:C5	3.05	0.45
53:CA:41:G:H2'	53:CA:42:G:C8	2.51	0.45
53:CA:449:G:N1	53:CA:450:G:C5	2.85	0.45
53:CA:502:A:P	12:CL:114:SER:HG	2.39	0.45
53:CA:76:G:N2	53:CA:95:C:C2	2.85	0.45
3:CC:149:LYS:CG	3:CC:168:ARG:HB2	2.46	0.45
54:CG:41:ILE:O	54:CG:45:ALA:HB3	2.17	0.45
54:CG:25:PHE:CZ	54:CG:61:PHE:HZ	2.34	0.45
9:CI:126:PHE:O	9:CI:126:PHE:CG	2.69	0.45
11:CK:51:PHE:CE2	11:CK:64:VAL:HG21	2.51	0.45
55:CM:5:GLY:C	55:CM:6:ILE:HG13	2.37	0.45
17:CQ:49:ASN:HB3	17:CQ:51:GLU:HG2	1.99	0.45
53:CA:1319:A:H5''	19:CS:4:LEU:CD1	2.47	0.45
57:DA:1080:A:HO2'	57:DA:1081:U:H6	1.62	0.45
57:DA:133:U:H2'	57:DA:134:G:O4'	2.16	0.45
57:DA:1536:C:C2	57:DA:1536:C:OP2	2.69	0.45
57:DA:1734:G:C2'	57:DA:1735:A:C8	2.96	0.45
57:DA:1717:A:N6	57:DA:1744:A:C8	2.85	0.45
57:DA:783:A:H2	57:DA:1778:U:H4'	1.82	0.45
57:DA:1785:A:H2'	57:DA:1787:A:N7	2.31	0.45
57:DA:1774:C:H4'	57:DA:1979:U:O2	2.17	0.45
57:DA:2093:G:C4'	57:DA:2093:G:OP1	2.64	0.45
57:DA:2758:A:C2'	57:DA:2759:G:H5'	2.46	0.45
57:DA:2834:G:C4	57:DA:2879:A:N6	2.84	0.45
57:DA:2894:G:O2'	57:DA:2895:G:P	2.75	0.45
57:DA:2:G:H2'	57:DA:3:U:O4'	2.17	0.45
57:DA:300:A:C5	57:DA:334:C:H4'	2.51	0.45
57:DA:364:C:H2'	57:DA:365:U:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:46:G:C2	57:DA:47:C:C5	3.05	0.45
57:DA:90:U:C4	57:DA:91:A:C5	3.05	0.45
57:DA:970:U:H1'	57:DA:985:C:OP1	2.16	0.45
24:DC:156:SER:HB3	24:DC:159:THR:CG2	2.47	0.45
24:DC:226:PRO:O	24:DC:227:VAL:C	2.55	0.45
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.47	0.45
59:DF:146:ASP:HB3	59:DF:147:ARG:H	1.61	0.45
58:DB:55:U:H5'	59:DF:24:VAL:CG2	2.47	0.45
29:DH:96:THR:O	29:DH:97:ARG:HG3	2.17	0.45
34:DM:19:GLY:N	34:DM:38:ARG:HH21	1.96	0.45
34:DM:81:ARG:HH21	34:DM:84:LYS:NZ	2.15	0.45
37:DP:88:ARG:HE	37:DP:112:ARG:NH2	1.99	0.45
38:DQ:57:ARG:CZ	38:DQ:92:LYS:HE2	2.46	0.45
40:DS:53:SER:O	40:DS:56:ALA:HB3	2.16	0.45
1:AA:1077:G:N1	1:AA:1081:A:C6	2.85	0.45
1:AA:1126:U:O4'	1:AA:1281:C:O2	2.34	0.45
1:AA:1157:A:C6	1:AA:1180:A:C5	3.05	0.45
1:AA:1241:G:N2	1:AA:1242:G:C5	2.84	0.45
1:AA:1320:C:O2'	1:AA:1321:U:O4'	2.35	0.45
1:AA:260:G:H2'	1:AA:261:U:C6	2.51	0.45
1:AA:293:G:H2'	1:AA:294:U:H6	1.82	0.45
1:AA:500:G:C6	1:AA:546:A:C2	3.04	0.45
1:AA:751:U:H2'	1:AA:752:G:O4'	2.15	0.45
1:AA:791:G:C5	1:AA:792:A:N7	2.84	0.45
2:AB:49:PHE:CB	2:AB:212:TYR:OH	2.65	0.45
3:AC:76:ILE:HA	3:AC:83:VAL:CG2	2.38	0.45
9:AI:129:ARG:HA	9:AI:129:ARG:NH1	2.32	0.45
16:AP:67:ILE:HG23	16:AP:72:ALA:HB2	1.99	0.45
17:AQ:24:ILE:HG22	17:AQ:24:ILE:O	2.17	0.45
11:AK:113:THR:HB	21:AU:28:LEU:HD11	1.98	0.45
22:BA:1405:U:C2	22:BA:1406:U:C5	3.05	0.45
22:BA:1535:A:O2'	22:BA:1536:C:OP1	2.34	0.45
22:BA:1551:A:H2'	22:BA:1552:A:O4'	2.17	0.45
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.16	0.45
22:BA:1818:U:HO2'	22:BA:1819:A:P	2.39	0.45
22:BA:1957:C:O2'	22:BA:1958:C:H5'	2.17	0.45
22:BA:2365:G:OP1	44:BW:53:GLY:HA2	2.17	0.45
22:BA:2603:G:H2'	22:BA:2604:U:H6	1.82	0.45
22:BA:2727:A:H2'	22:BA:2728:U:H6	1.82	0.45
22:BA:2823:A:C2'	22:BA:2824:C:H5'	2.47	0.45
22:BA:923:G:N2	44:BW:23:LYS:HZ3	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:957:C:O2'	22:BA:959:A:O5'	2.35	0.45
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.64	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
31:BJ:128:ASN:ND2	31:BJ:128:ASN:O	2.50	0.45
33:BL:81:ASP:O	33:BL:82:LEU:CB	2.64	0.45
33:BL:89:VAL:HA	33:BL:121:THR:O	2.17	0.45
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.76	0.45
38:BQ:91:ARG:HD3	39:BR:11:GLN:CB	2.47	0.45
41:BT:19:LYS:O	41:BT:20:ALA:C	2.54	0.45
45:BX:70:LEU:O	45:BX:74:GLY:N	2.49	0.45
45:BX:71:ARG:HE	45:BX:77:TYR:HE2	1.64	0.45
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.55	0.45
53:CA:1484:C:H2'	53:CA:1485:U:H6	1.81	0.45
53:CA:293:G:C2	53:CA:305:G:N3	2.85	0.45
53:CA:435:A:C5	53:CA:436:C:C5	3.05	0.45
53:CA:374:A:C5'	53:CA:452:A:N1	2.75	0.45
53:CA:482:A:N3	53:CA:482:A:H2'	2.31	0.45
53:CA:533:A:O2'	53:CA:535:A:OP2	2.25	0.45
53:CA:986:U:O2'	53:CA:987:G:O5'	2.35	0.45
2:CB:192:PRO:HB2	2:CB:198:VAL:HG11	1.98	0.45
4:CD:154:VAL:O	4:CD:157:ALA:HB3	2.16	0.45
54:CG:124:SER:C	54:CG:126:ALA:H	2.19	0.45
8:CH:1:SER:O	8:CH:3:GLN:N	2.49	0.45
9:CI:5:TYR:O	9:CI:19:PHE:HA	2.16	0.45
9:CI:45:MET:CE	9:CI:48:ARG:HG3	2.47	0.45
9:CI:46:VAL:O	9:CI:79:ARG:HG3	2.16	0.45
12:CL:89:LEU:HA	12:CL:90:PRO:HD2	1.60	0.45
55:CM:28:ARG:HA	55:CM:31:ALA:HB3	1.98	0.45
56:CP:40:ASN:HA	56:CP:41:PRO:HD3	1.77	0.45
18:CR:31:TYR:CG	18:CR:54:LEU:HD21	2.51	0.45
18:CR:70:THR:OG1	18:CR:71:ASP:N	2.48	0.45
48:D0:4:GLN:HG2	48:D0:4:GLN:O	2.16	0.45
57:DA:996:A:C6	57:DA:1160:G:C2	3.05	0.45
57:DA:1312:U:O2'	57:DA:1313:U:OP2	2.35	0.45
57:DA:1439:A:H5''	57:DA:1440:U:OP2	2.17	0.45
57:DA:1526:C:N4	57:DA:1527:G:C6	2.85	0.45
57:DA:1601:G:H2'	57:DA:1602:U:O4'	2.17	0.45
57:DA:1654:A:O2'	57:DA:1655:A:C8	2.48	0.45
57:DA:1828:G:O2'	57:DA:1829:A:H5'	2.17	0.45
57:DA:18:U:O2	57:DA:554:U:H5''	2.17	0.45
57:DA:1984:G:C6	57:DA:1985:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2595:G:N1	57:DA:2599:G:C6	2.85	0.45
57:DA:2620:C:H2'	57:DA:2621:G:O4'	2.17	0.45
57:DA:271:G:C6	57:DA:272:A:N6	2.85	0.45
57:DA:300:A:H1'	57:DA:333:G:N2	2.31	0.45
57:DA:362:A:C5	57:DA:363:G:C8	3.04	0.45
57:DA:45:G:N2	57:DA:434:U:C2	2.85	0.45
57:DA:623:C:O2'	57:DA:624:C:H5'	2.17	0.45
57:DA:706:A:H2'	57:DA:707:G:O4'	2.17	0.45
57:DA:727:A:H2'	57:DA:728:G:H8	1.81	0.45
25:DD:118:PHE:CE1	25:DD:119:ALA:O	2.70	0.45
25:DD:36:GLN:HE21	25:DD:38:LYS:NZ	2.14	0.45
26:DE:29:HIS:HA	26:DE:32:VAL:CG2	2.45	0.45
59:DF:46:LYS:HE2	59:DF:83:PRO:HG3	1.97	0.45
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.46	0.45
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.47	0.45
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.31	0.45
32:DK:76:VAL:CG1	32:DK:77:ILE:N	2.80	0.45
33:DL:110:VAL:O	33:DL:111:ILE:HG12	2.17	0.45
57:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.16	0.45
40:DS:59:GLU:OE2	40:DS:66:ILE:HD12	2.17	0.45
40:DS:74:ILE:HG12	40:DS:74:ILE:O	2.17	0.45
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.47	0.45
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.51	0.45
1:AA:1215:G:O2'	1:AA:1216:A:H5'	2.17	0.45
1:AA:1322:C:O2'	1:AA:1323:G:H5'	2.17	0.45
2:AB:143:LEU:HA	2:AB:146:SER:OG	2.16	0.45
2:AB:202:ASN:HB3	2:AB:208:ALA:CB	2.47	0.45
3:AC:107:LYS:HA	3:AC:108:PRO:HD2	1.79	0.45
4:AD:97:LEU:HD22	4:AD:117:VAL:HG11	1.98	0.45
4:AD:28:ASP:OD1	4:AD:33:ILE:HG12	2.17	0.45
4:AD:57:LYS:NZ	4:AD:61:ARG:HD3	2.32	0.45
4:AD:98:ASP:HB3	4:AD:114:ARG:HG2	1.99	0.45
7:AG:128:GLU:O	7:AG:129:ASN:C	2.56	0.45
8:AH:9:MET:HG3	8:AH:26:MET:SD	2.57	0.45
14:AN:44:VAL:HG23	14:AN:45:LEU:N	2.26	0.45
15:AO:29:ALA:CA	15:AO:84:LEU:HD21	2.42	0.45
20:AT:72:ALA:O	20:AT:73:ARG:C	2.55	0.45
48:B0:48:TYR:O	48:B0:49:ARG:HB2	2.17	0.45
51:B3:35:LYS:O	51:B3:40:LYS:HE2	2.17	0.45
51:B3:54:LEU:HD12	51:B3:54:LEU:HA	1.69	0.45
22:BA:1059:G:C6	22:BA:1080:A:C6	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1231:U:O5'	22:BA:1231:U:H6	1.99	0.45
22:BA:1450:G:C6	22:BA:1451:C:C4	3.04	0.45
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.17	0.45
22:BA:2822:G:H2'	22:BA:2823:A:H5''	1.98	0.45
22:BA:2836:U:H2'	22:BA:2837:A:C8	2.52	0.45
22:BA:568:U:O5'	22:BA:945:A:N6	2.50	0.45
22:BA:669:G:C2'	22:BA:669:G:N3	2.80	0.45
22:BA:749:A:H2	22:BA:753:A:HO2'	1.64	0.45
22:BA:880:G:C6	22:BA:881:G:N7	2.85	0.45
23:BB:30:C:C5	23:BB:31:C:C6	3.05	0.45
24:BC:242:HIS:O	24:BC:244:VAL:HG13	2.16	0.45
24:BC:71:ASP:OD1	24:BC:188:ARG:NH1	2.47	0.45
25:BD:98:VAL:O	25:BD:99:GLU:C	2.54	0.45
29:BH:78:VAL:CG2	29:BH:145:ASN:HD22	2.29	0.45
34:BM:47:GLU:O	34:BM:48:ALA:C	2.54	0.45
35:BN:75:ILE:HD12	35:BN:79:LEU:HD12	1.99	0.45
38:BQ:67:ALA:HB1	38:BQ:105:PHE:CE1	2.52	0.45
38:BQ:88:GLU:OE1	38:BQ:88:GLU:C	2.54	0.45
40:BS:20:VAL:HG11	40:BS:44:ALA:HA	1.98	0.45
41:BT:31:VAL:C	41:BT:32:LEU:HD23	2.37	0.45
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.16	0.45
44:BW:36:ILE:C	44:BW:37:VAL:O	2.53	0.45
53:CA:1133:G:C6	53:CA:1134:G:N7	2.85	0.45
53:CA:1292:G:C6	53:CA:1293:C:C4	3.05	0.45
53:CA:1434:A:H2'	53:CA:1435:G:O4'	2.17	0.45
53:CA:397:A:H3'	53:CA:397:A:N3	2.32	0.45
53:CA:46:G:O2'	53:CA:365:U:H1'	2.17	0.45
53:CA:913:A:OP1	12:CL:43:LYS:HE3	2.17	0.45
4:CD:150:LYS:HA	4:CD:150:LYS:HD3	1.82	0.45
6:CF:92:THR:C	6:CF:93:LYS:HG2	2.36	0.45
54:CG:61:PHE:O	54:CG:63:VAL:N	2.48	0.45
53:CA:1346:A:N1	54:CG:9:ARG:NH2	2.65	0.45
53:CA:522:C:N4	12:CL:49:ARG:HH22	1.95	0.45
56:CP:44:SER:HB2	56:CP:46:LYS:CG	2.46	0.45
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.82	0.45
57:DA:1087:G:C4	57:DA:1089:A:C2	3.05	0.45
57:DA:116:C:H2'	57:DA:117:G:O4'	2.17	0.45
57:DA:1303:G:O2'	57:DA:1304:A:C5'	2.65	0.45
57:DA:1320:C:O2'	57:DA:1321:A:H8	2.00	0.45
57:DA:1338:G:O2'	57:DA:1393:A:N1	2.45	0.45
57:DA:1441:G:C2	57:DA:1551:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1607:C:C4'	57:DA:1608:A:C8	3.00	0.45
57:DA:1666:G:O3'	32:DK:6:THR:HA	2.17	0.45
57:DA:1671:U:O2	57:DA:1673:G:H8	1.99	0.45
57:DA:1673:G:C2'	57:DA:1674:G:H5'	2.47	0.45
57:DA:1716:U:O2'	57:DA:1717:A:C5'	2.65	0.45
57:DA:1992:G:N2	57:DA:1995:U:C5	2.84	0.45
57:DA:21:A:H2'	57:DA:22:C:H6	1.82	0.45
57:DA:2218:G:H2'	57:DA:2219:U:C6	2.52	0.45
57:DA:2266:A:H4'	57:DA:2267:A:O5'	2.17	0.45
57:DA:2314:A:H5''	59:DF:34:THR:OG1	2.17	0.45
57:DA:2511:U:O4	57:DA:2575:C:N3	2.49	0.45
57:DA:2744:G:C4	57:DA:2761:A:C2	3.04	0.45
57:DA:2836:U:HO2'	57:DA:2837:A:P	2.39	0.45
57:DA:2885:G:N2	48:D0:31:LYS:HG2	2.31	0.45
57:DA:365:U:H2'	57:DA:366:C:C6	2.52	0.45
57:DA:396:G:O2'	57:DA:397:U:C5'	2.65	0.45
57:DA:600:G:N2	57:DA:605:G:O3'	2.49	0.45
57:DA:60:G:O2'	57:DA:61:C:P	2.75	0.45
57:DA:685:A:C2	57:DA:689:A:C6	3.05	0.45
57:DA:464:U:C1'	57:DA:686:U:C5	2.98	0.45
57:DA:749:A:H2'	57:DA:750:A:H8	1.82	0.45
59:DF:45:ASP:OD2	59:DF:47:LYS:HB2	2.17	0.45
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.17	0.45
35:DN:2:ARG:HD2	35:DN:5:LYS:HB3	1.99	0.45
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.99	0.45
37:DP:64:SER:O	37:DP:66:GLY:N	2.50	0.45
43:DV:36:ALA:HB1	43:DV:37:PRO:HD2	1.98	0.45
57:DA:2432:A:N1	45:DX:20:ALA:HA	2.32	0.45
1:AA:106:C:H2'	1:AA:107:G:O4'	2.17	0.45
1:AA:1176:A:H2'	1:AA:1177:G:C8	2.52	0.45
1:AA:1196:A:O2'	1:AA:1197:A:P	2.75	0.45
1:AA:1258:G:C2	1:AA:1259:C:C5	3.05	0.45
1:AA:1374:A:H2'	1:AA:1375:A:H8	1.82	0.45
1:AA:161:A:N6	1:AA:162:A:C6	2.85	0.45
1:AA:367:U:O2'	1:AA:368:U:H4'	2.17	0.45
1:AA:603:U:H2'	1:AA:604:G:H8	1.81	0.45
1:AA:69:G:H2'	1:AA:69:G:N3	2.30	0.45
3:AC:13:ILE:HD13	3:AC:13:ILE:N	2.32	0.45
10:AJ:49:PHE:CE1	10:AJ:67:ILE:HG13	2.38	0.45
12:AL:82:ARG:HH11	12:AL:82:ARG:CG	2.06	0.45
16:AP:16:PHE:O	16:AP:16:PHE:CD1	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B3:56:LEU:N	51:B3:56:LEU:HD22	2.31	0.45
22:BA:1019:U:C4	22:BA:1020:A:N6	2.85	0.45
22:BA:1380:G:N3	22:BA:1380:G:H2'	2.31	0.45
22:BA:1432:G:C2'	22:BA:1433:A:H5'	2.46	0.45
22:BA:1615:C:H2'	22:BA:1617:C:C6	2.52	0.45
22:BA:1842:G:H2'	22:BA:1843:C:H6	1.78	0.45
22:BA:191:A:H2'	22:BA:192:C:C6	2.52	0.45
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.17	0.45
22:BA:2223:G:H2'	22:BA:2224:G:H5'	1.98	0.45
22:BA:249:C:HO2'	22:BA:250:G:P	2.40	0.45
22:BA:2819:G:H5''	63:BA:3807:HOH:O	2.17	0.45
22:BA:2849:U:C6	22:BA:2867:G:N2	2.85	0.45
22:BA:441:U:H2'	22:BA:442:G:C8	2.52	0.45
22:BA:480:A:H3'	22:BA:481:G:H5''	1.99	0.45
22:BA:564:C:O2'	22:BA:565:C:H5'	2.17	0.45
22:BA:642:U:O2	22:BA:644:A:C8	2.70	0.45
22:BA:703:U:H2'	22:BA:704:G:H5'	1.98	0.45
22:BA:770:G:H5''	50:B2:10:LEU:HD23	1.99	0.45
22:BA:6:A:C2'	22:BA:7:G:H5'	2.47	0.45
24:BC:261:ARG:HG2	24:BC:261:ARG:O	2.17	0.45
25:BD:152:PRO:O	25:BD:154:LYS:N	2.50	0.45
25:BD:159:LYS:HZ2	25:BD:160:LYS:N	2.15	0.45
22:BA:801:G:C8	26:BE:50:ALA:HB2	2.52	0.45
27:BF:103:ILE:HG12	27:BF:103:ILE:H	1.55	0.45
28:BG:168:VAL:O	28:BG:170:THR:HG23	2.17	0.45
28:BG:9:VAL:HA	28:BG:47:ASN:O	2.17	0.45
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.47	0.45
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.46	0.45
32:BK:18:ARG:HD2	32:BK:18:ARG:HA	1.72	0.45
35:BN:71:ARG:NH2	35:BN:71:ARG:CG	2.62	0.45
45:BX:73:ARG:HG2	45:BX:75:GLU:HG3	1.98	0.45
53:CA:1215:G:N3	53:CA:1216:A:C8	2.85	0.45
53:CA:1526:G:OP2	21:CU:38:GLU:HB2	2.17	0.45
53:CA:234:C:O2'	53:CA:235:C:H5'	2.16	0.45
53:CA:518:C:H2'	53:CA:530:G:C8	2.52	0.45
53:CA:554:A:H2'	53:CA:555:U:H6	1.82	0.45
53:CA:71:A:C2	53:CA:72:A:C5	3.05	0.45
53:CA:71:A:O2'	53:CA:72:A:O4'	2.23	0.45
53:CA:919:A:C2	53:CA:920:U:C5	3.05	0.45
53:CA:980:C:O3'	14:CN:12:ARG:NH2	2.50	0.45
2:CB:116:LEU:HD23	2:CB:119:GLN:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:119:GLN:HE22	2:CB:136:ARG:HH12	1.65	0.45
2:CB:17:HIS:CG	2:CB:18:GLN:N	2.84	0.45
3:CC:183:TYR:HE1	3:CC:198:LYS:HB3	1.82	0.45
4:CD:29:THR:C	4:CD:31:CYS:N	2.71	0.45
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.75	0.45
53:CA:1071:C:C5'	5:CE:53:ARG:NH1	2.80	0.45
5:CE:74:ALA:O	5:CE:75:LEU:HB2	2.16	0.45
54:CG:100:MET:HE2	54:CG:100:MET:H	1.81	0.45
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.37	0.45
14:CN:72:PHE:HB2	14:CN:78:LEU:O	2.16	0.45
17:CQ:47:ASP:HB3	17:CQ:74:LEU:HB3	1.99	0.45
17:CQ:47:ASP:OD1	17:CQ:74:LEU:HD23	2.17	0.45
53:CA:1319:A:OP2	19:CS:4:LEU:HD21	2.17	0.45
57:DA:1135:C:N4	57:DA:1139:G:O6	2.50	0.45
57:DA:1171:G:C2	57:DA:1179:G:N3	2.84	0.45
57:DA:1205:A:N7	26:DE:165:HIS:ND1	2.65	0.45
57:DA:145:C:H6	57:DA:145:C:O5'	2.00	0.45
57:DA:1536:C:H5''	57:DA:1537:G:O5'	2.17	0.45
57:DA:1594:U:H2'	57:DA:1595:C:H6	1.82	0.45
57:DA:1607:C:N4	57:DA:1622:G:N7	2.65	0.45
57:DA:1867:G:O6	57:DA:1875:G:N2	2.49	0.45
57:DA:1883:U:H3'	57:DA:1884:G:H8	1.82	0.45
57:DA:195:A:C5	57:DA:198:C:C5	3.05	0.45
57:DA:2107:G:C2	57:DA:2183:A:C2	3.05	0.45
57:DA:2283:C:N4	57:DA:2389:G:C6	2.85	0.45
57:DA:263:G:H2'	57:DA:264:C:O4'	2.16	0.45
57:DA:445:C:H2'	57:DA:446:G:C8	2.51	0.45
57:DA:843:G:C6	57:DA:844:A:N6	2.85	0.45
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.47	0.45
24:DC:83:ASP:HA	24:DC:84:PRO:HD2	1.79	0.45
57:DA:1817:G:H5''	24:DC:86:ARG:NH1	2.32	0.45
57:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.17	0.45
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	2.16	0.45
26:DE:5:LEU:HD13	26:DE:122:GLU:HB2	1.98	0.45
34:DM:112:LEU:O	34:DM:112:LEU:HD13	2.17	0.45
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.38	0.45
43:DV:32:GLY:O	43:DV:33:GLY:C	2.55	0.45
43:DV:61:LEU:CD2	43:DV:61:LEU:H	2.24	0.45
57:DA:2353:G:H4'	44:DW:28:GLU:HG2	1.98	0.45
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.52	0.44
1:AA:1279:G:H1'	1:AA:1282:C:H42	1.77	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1336:C:HO2'	1:AA:1337:G:P	2.35	0.44
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.82	0.44
1:AA:206:C:H2'	1:AA:207:C:C4'	2.46	0.44
1:AA:258:G:H2'	1:AA:259:G:O4'	2.17	0.44
1:AA:531:U:C4'	1:AA:532:A:O5'	2.59	0.44
1:AA:738:C:O2'	1:AA:739:C:H5'	2.17	0.44
1:AA:773:G:C4	1:AA:774:G:C8	3.05	0.44
5:AE:149:PRO:C	5:AE:151:MET:H	2.19	0.44
5:AE:46:GLY:HA3	5:AE:70:MET:HA	1.98	0.44
8:AH:125:ILE:O	8:AH:126:CYS:HB3	2.16	0.44
8:AH:74:ILE:CD1	8:AH:128:VAL:HG22	2.47	0.44
10:AJ:89:ARG:O	10:AJ:90:LEU:HD23	2.17	0.44
12:AL:43:LYS:HZ2	12:AL:44:PRO:HD2	1.83	0.44
13:AM:86:ARG:NH2	13:AM:97:ARG:HA	2.32	0.44
19:AS:54:ARG:HG3	19:AS:54:ARG:H	1.62	0.44
20:AT:24:ARG:O	20:AT:27:MET:HB3	2.18	0.44
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.83	0.44
22:BA:1062:G:C6	22:BA:1063:G:C6	3.05	0.44
22:BA:1165:A:H2'	22:BA:1166:G:C8	2.50	0.44
22:BA:1419:A:C2	22:BA:1421:G:H1'	2.53	0.44
22:BA:1442:U:H2'	22:BA:1443:U:H6	1.82	0.44
22:BA:1866:A:H2'	22:BA:1867:G:O4'	2.17	0.44
22:BA:188:G:H2'	22:BA:189:G:O4'	2.17	0.44
22:BA:1943:U:O2	22:BA:1943:U:O4'	2.33	0.44
22:BA:1964:G:C2	22:BA:1967:C:C5	3.05	0.44
22:BA:2378:A:C5	22:BA:2379:G:H1'	2.52	0.44
22:BA:2778:A:H4'	22:BA:2779:U:OP2	2.14	0.44
22:BA:453:A:H5"	63:BA:3242:HOH:O	2.17	0.44
24:BC:106:PRO:O	24:BC:109:LEU:HD13	2.17	0.44
22:BA:1798:U:P	24:BC:255:LYS:HA	2.56	0.44
24:BC:75:ALA:HB2	24:BC:95:TYR:CD2	2.52	0.44
25:BD:140:HIS:NE2	63:BD:301:HOH:O	2.36	0.44
25:BD:151:THR:O	25:BD:153:GLY:N	2.50	0.44
26:BE:172:ALA:C	26:BE:174:GLY:H	2.20	0.44
26:BE:112:LEU:HD11	26:BE:180:LEU:O	2.17	0.44
27:BF:1:ALA:O	27:BF:2:LYS:HB3	2.17	0.44
28:BG:26:LYS:HA	28:BG:78:VAL:HG11	1.98	0.44
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.44	0.44
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.30	0.44
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.17	0.44
43:BV:88:HIS:CG	43:BV:89:ILE:N	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1229:A:O2'	53:CA:1230:C:O4'	2.35	0.44
53:CA:259:G:H2'	53:CA:260:G:O4'	2.17	0.44
53:CA:552:U:H2'	53:CA:553:A:H8	1.82	0.44
53:CA:607:A:H2'	53:CA:608:A:C8	2.52	0.44
53:CA:659:U:H6	53:CA:659:U:O5'	1.99	0.44
53:CA:892:A:H2'	53:CA:893:C:H6	1.82	0.44
2:CB:103:TRP:HA	2:CB:106:VAL:CB	2.44	0.44
2:CB:23:ASN:HB2	2:CB:189:ASN:C	2.37	0.44
3:CC:11:LEU:HA	3:CC:11:LEU:HD23	1.72	0.44
53:CA:1106:G:O2'	3:CC:168:ARG:NH1	2.50	0.44
54:CG:116:ALA:O	54:CG:120:ALA:HB3	2.18	0.44
54:CG:48:THR:O	54:CG:52:ARG:HD3	2.18	0.44
8:CH:28:SER:HA	8:CH:58:LEU:CD1	2.26	0.44
9:CI:51:LEU:HD11	9:CI:82:ILE:HG22	1.99	0.44
12:CL:72:ASN:HD21	12:CL:104:SER:H	1.65	0.44
12:CL:51:VAL:HG12	12:CL:52:CYS:N	2.32	0.44
12:CL:97:VAL:O	12:CL:98:ARG:C	2.56	0.44
55:CM:11:HIS:HA	55:CM:44:ILE:HB	1.99	0.44
55:CM:18:LEU:N	55:CM:18:LEU:HD12	2.32	0.44
15:CO:22:GLY:O	15:CO:23:SER:C	2.56	0.44
15:CO:38:LEU:HD12	15:CO:41:HIS:CB	2.47	0.44
15:CO:44:GLU:O	15:CO:45:HIS:C	2.55	0.44
15:CO:58:MET:O	15:CO:61:GLN:HB2	2.16	0.44
19:CS:33:TRP:H	19:CS:33:TRP:HE3	1.62	0.44
11:CK:125:LYS:C	21:CU:33:ARG:HE	2.21	0.44
21:CU:8:ASN:ND2	21:CU:9:GLU:H	2.15	0.44
57:DA:1099:G:H5"	57:DA:1100:C:OP2	2.16	0.44
57:DA:1056:G:H1'	57:DA:1103:A:C6	2.52	0.44
57:DA:1206:G:O2'	57:DA:1207:C:C5'	2.65	0.44
57:DA:1288:G:C8	57:DA:1327:A:N6	2.85	0.44
57:DA:128:C:H2'	57:DA:129:C:C5	2.52	0.44
57:DA:1359:A:OP1	57:DA:1360:G:OP2	2.35	0.44
57:DA:1429:G:N3	57:DA:1430:G:C8	2.85	0.44
57:DA:1565:C:O3'	24:DC:17:LYS:HE2	2.16	0.44
57:DA:1734:G:N3	57:DA:1735:A:C8	2.85	0.44
57:DA:1817:G:O2'	57:DA:1818:U:C5'	2.61	0.44
57:DA:2207:C:C4	57:DA:2218:G:N1	2.86	0.44
57:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.99	0.44
57:DA:2436:G:C2	57:DA:2437:G:C8	3.05	0.44
57:DA:2513:A:C6	57:DA:2514:U:C4	3.05	0.44
57:DA:374:A:C6	57:DA:401:A:N7	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:438:G:O6	57:DA:439:A:N6	2.50	0.44
57:DA:455:C:N3	57:DA:473:G:C5'	2.79	0.44
57:DA:476:G:HO2'	57:DA:477:A:P	2.39	0.44
57:DA:503:A:C5	57:DA:506:G:C6	3.04	0.44
57:DA:584:C:H2'	57:DA:585:G:H8	1.81	0.44
57:DA:586:A:H5'	26:DE:84:THR:HG21	1.99	0.44
58:DB:54:G:C2	59:DF:25:MET:HE1	2.52	0.44
24:DC:66:PHE:HA	24:DC:142:ASN:HD21	1.82	0.44
24:DC:147:PRO:HD3	24:DC:184:GLU:CG	2.47	0.44
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.42	0.44
36:DO:67:ASN:H	36:DO:70:ALA:HB3	1.80	0.44
40:DS:7:HIS:CE1	40:DS:10:ALA:HA	2.53	0.44
57:DA:492:A:N6	40:DS:49:LYS:HD2	2.32	0.44
41:DT:29:THR:OG1	41:DT:85:VAL:HB	2.17	0.44
44:DW:43:LYS:HD3	44:DW:43:LYS:HA	1.62	0.44
45:DX:63:ILE:HD13	45:DX:64:ASP:OD2	2.17	0.44
47:DZ:5:LYS:HE3	47:DZ:5:LYS:HB2	1.73	0.44
1:AA:1348:U:C2'	1:AA:1349:A:H8	2.30	0.44
1:AA:1363:A:C8	1:AA:1365:G:C5	3.06	0.44
1:AA:1418:A:H2'	1:AA:1419:G:O4'	2.16	0.44
1:AA:473:U:H2'	1:AA:474:G:C8	2.44	0.44
1:AA:450:G:N7	1:AA:481:G:C6	2.85	0.44
1:AA:482:A:H2'	1:AA:483:C:O4'	2.17	0.44
1:AA:554:A:O2'	1:AA:555:U:H5'	2.17	0.44
1:AA:555:U:H2'	1:AA:556:C:C6	2.52	0.44
1:AA:596:A:N3	1:AA:597:G:C8	2.85	0.44
1:AA:244:U:C6	1:AA:894:G:N2	2.85	0.44
7:AG:3:ARG:HG3	7:AG:4:ARG:N	2.31	0.44
7:AG:92:PRO:C	7:AG:93:VAL:HG22	2.38	0.44
8:AH:66:GLN:HB3	8:AH:67:GLY:H	1.52	0.44
10:AJ:63:ASP:OD2	14:AN:97:LYS:NZ	2.50	0.44
20:AT:28:ARG:O	20:AT:31:ILE:HB	2.17	0.44
20:AT:29:THR:O	20:AT:33:LYS:HE2	2.17	0.44
21:AU:10:PRO:O	21:AU:11:PHE:CB	2.63	0.44
21:AU:33:ARG:HE	21:AU:34:ARG:CG	2.30	0.44
22:BA:1229:C:H2'	22:BA:1230:A:H8	1.82	0.44
22:BA:1333:G:C2	22:BA:1334:G:C8	3.05	0.44
22:BA:1421:G:O2'	22:BA:1494:A:N6	2.50	0.44
22:BA:1507:C:H5''	22:BA:1508:A:OP2	2.17	0.44
22:BA:1664:A:H1'	22:BA:2726:A:N1	2.33	0.44
22:BA:2454:G:H1'	63:BA:3531:HOH:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2596:U:H6	22:BA:2596:U:O5'	1.99	0.44
22:BA:563:A:C6	22:BA:564:C:C4	3.05	0.44
22:BA:644:A:H2'	22:BA:645:C:C4'	2.47	0.44
24:BC:90:ILE:HA	24:BC:104:LEU:O	2.18	0.44
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.47	0.44
26:BE:147:LEU:HD13	26:BE:147:LEU:O	2.17	0.44
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.85	0.44
29:BH:57:LYS:O	29:BH:61:VAL:HG23	2.17	0.44
32:BK:69:VAL:O	32:BK:76:VAL:HG13	2.17	0.44
33:BL:30:THR:O	33:BL:32:GLY:N	2.49	0.44
33:BL:39:LYS:C	33:BL:40:SER:O	2.55	0.44
34:BM:33:LEU:HD21	34:BM:128:THR:HB	1.99	0.44
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.47	0.44
37:BP:52:ARG:O	37:BP:53:GLY:C	2.55	0.44
38:BQ:24:TYR:CG	38:BQ:25:GLY:N	2.85	0.44
38:BQ:25:GLY:O	38:BQ:29:ARG:HG3	2.17	0.44
39:BR:24:LYS:HE2	39:BR:24:LYS:HB3	1.82	0.44
22:BA:2013:A:N3	40:BS:88:ARG:NH1	2.65	0.44
42:BU:91:LYS:O	42:BU:92:VAL:HB	2.18	0.44
44:BW:28:GLU:O	44:BW:29:SER:C	2.55	0.44
47:BZ:52:PHE:C	47:BZ:52:PHE:CD2	2.89	0.44
53:CA:1046:A:O2'	53:CA:1047:G:H5'	2.16	0.44
53:CA:1119:C:OP1	9:CI:10:ARG:NH2	2.51	0.44
53:CA:1217:C:H2'	53:CA:1218:C:C6	2.52	0.44
53:CA:131:A:C6	53:CA:232:G:C6	3.06	0.44
53:CA:487:A:H3'	53:CA:488:C:H6	1.81	0.44
53:CA:491:G:HO2'	53:CA:492:C:H5'	1.80	0.44
53:CA:647:C:H2'	53:CA:648:A:C8	2.53	0.44
2:CB:34:ARG:HD3	2:CB:35:ASN:N	2.32	0.44
8:CH:36:ALA:O	8:CH:45:ILE:HD11	2.18	0.44
9:CI:117:LEU:HD23	9:CI:123:ARG:HD3	1.99	0.44
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.38	0.44
57:DA:1034:G:O6	57:DA:1122:G:C6	2.71	0.44
57:DA:1062:G:C8	57:DA:1088:A:H8	2.34	0.44
57:DA:1022:G:C6	57:DA:1140:C:C5	3.04	0.44
57:DA:139:U:N3	41:DT:1:MET:HA	2.33	0.44
57:DA:1400:U:O2'	57:DA:1401:G:O4'	2.18	0.44
57:DA:188:G:C6	57:DA:189:G:C4	3.06	0.44
57:DA:1967:C:C5'	57:DA:1967:C:H6	2.24	0.44
57:DA:2213:U:O2'	57:DA:2214:C:H5'	2.16	0.44
57:DA:2336:A:C8	44:DW:40:ARG:NH2	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2345:G:C5	57:DA:2381:A:C2	3.05	0.44
57:DA:783:A:O3'	57:DA:2588:G:H4'	2.17	0.44
57:DA:2845:U:C2	57:DA:2846:G:C8	3.05	0.44
57:DA:33:C:HO2'	57:DA:34:U:H5'	1.73	0.44
57:DA:563:A:N3	38:DQ:36:GLN:NE2	2.62	0.44
57:DA:627:A:O2'	57:DA:628:G:O5'	2.36	0.44
57:DA:638:G:H2'	57:DA:639:U:C5	2.52	0.44
57:DA:776:G:H1'	57:DA:793:A:C6	2.52	0.44
57:DA:960:A:O2'	57:DA:962:G:H5'	2.17	0.44
24:DC:250:GLN:HG2	24:DC:250:GLN:H	1.46	0.44
26:DE:52:VAL:O	26:DE:74:LYS:NZ	2.46	0.44
57:DA:2060:A:C2'	26:DE:63:LYS:NZ	2.67	0.44
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.18	0.44
57:DA:2658:C:H5''	28:DG:157:LYS:HD3	1.99	0.44
29:DH:21:VAL:HG22	29:DH:22:LYS:H	1.81	0.44
33:DL:17:LYS:HE2	33:DL:19:LEU:HD13	2.00	0.44
57:DA:873:C:C4'	34:DM:64:TRP:CD1	2.95	0.44
35:DN:72:ASP:O	35:DN:75:ILE:HG13	2.17	0.44
36:DO:26:LEU:HB3	36:DO:92:PHE:CD1	2.52	0.44
40:DS:41:LYS:C	40:DS:43:ALA:N	2.69	0.44
1:AA:1049:U:H4'	1:AA:1050:G:OP2	2.16	0.44
1:AA:1136:C:H4'	1:AA:1137:C:OP1	2.17	0.44
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.48	0.44
1:AA:1294:G:C6	1:AA:1295:U:C4	3.05	0.44
1:AA:137:U:H1'	1:AA:227:G:N2	2.31	0.44
1:AA:976:G:OP1	14:AN:70:HIS:ND1	2.48	0.44
5:AE:153:ALA:O	5:AE:154:ALA:C	2.56	0.44
8:AH:77:VAL:O	8:AH:78:SER:C	2.56	0.44
1:AA:878:A:C5'	8:AH:80:PRO:HG2	2.47	0.44
11:AK:39:ASN:O	11:AK:40:ALA:CB	2.65	0.44
15:AO:40:GLY:O	15:AO:43:ALA:HB3	2.18	0.44
21:AU:14:ALA:O	21:AU:15:LEU:HD12	2.17	0.44
21:AU:38:GLU:OE2	21:AU:41:THR:HG21	2.17	0.44
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.80	0.44
22:BA:1193:G:O2'	22:BA:1194:A:H5'	2.17	0.44
22:BA:1215:G:C5	22:BA:1216:G:N7	2.85	0.44
22:BA:1220:G:H2'	22:BA:1221:C:O4'	2.17	0.44
22:BA:1361:G:C5	22:BA:1371:G:N2	2.86	0.44
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.52	0.44
22:BA:1731:G:C5	22:BA:1733:G:N7	2.85	0.44
22:BA:2013:A:OP1	40:BS:97:LEU:N	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2390:U:OP2	51:B3:34:LYS:HE2	2.17	0.44
22:BA:282:A:H2'	22:BA:283:G:C8	2.52	0.44
22:BA:2841:C:H2'	22:BA:2842:G:H8	1.82	0.44
22:BA:395:U:O2'	22:BA:396:G:C8	2.70	0.44
22:BA:396:G:O5'	22:BA:396:G:H8	2.00	0.44
22:BA:686:U:O4	50:B2:12:ARG:NH2	2.50	0.44
22:BA:794:A:H2'	22:BA:795:C:H6	1.79	0.44
24:BC:109:LEU:CD2	24:BC:110:LYS:N	2.80	0.44
24:BC:250:GLN:HE21	24:BC:250:GLN:N	2.15	0.44
25:BD:149:ASN:CG	25:BD:150:GLN:N	2.68	0.44
27:BF:8:LYS:O	27:BF:12:VAL:CG1	2.64	0.44
27:BF:87:LYS:HG3	27:BF:88:VAL:N	2.31	0.44
31:BJ:44:TYR:O	31:BJ:45:THR:CG2	2.63	0.44
32:BK:108:ARG:HG3	32:BK:108:ARG:O	2.18	0.44
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.63	0.44
36:BO:53:THR:HB	36:BO:65:THR:CG2	2.44	0.44
37:BP:33:GLU:CG	37:BP:36:LYS:HD2	2.47	0.44
44:BW:21:GLY:O	44:BW:22:VAL:HB	2.17	0.44
22:BA:2332:C:OP1	44:BW:44:PHE:CZ	2.70	0.44
47:BZ:35:VAL:CG2	47:BZ:37:ARG:NH1	2.79	0.44
53:CA:1072:G:H2'	53:CA:1073:U:O4'	2.17	0.44
53:CA:1137:C:H4'	53:CA:1138:G:C2	2.52	0.44
53:CA:179:A:H2'	53:CA:180:U:H6	1.81	0.44
53:CA:39:G:C4	53:CA:404:G:N2	2.86	0.44
53:CA:461:A:O5'	53:CA:462:G:OP2	2.36	0.44
53:CA:983:A:O2'	53:CA:984:C:C5'	2.59	0.44
53:CA:995:C:O2'	53:CA:996:A:O5'	2.33	0.44
2:CB:83:ALA:O	2:CB:85:SER:N	2.51	0.44
3:CC:86:LEU:O	3:CC:90:VAL:HG22	2.17	0.44
4:CD:2:ARG:HH21	4:CD:114:ARG:CD	2.09	0.44
6:CF:45:ARG:HG2	6:CF:46:GLN:N	2.32	0.44
10:CJ:44:THR:HG23	10:CJ:70:HIS:CG	2.53	0.44
12:CL:80:LEU:HB3	12:CL:97:VAL:HG22	1.99	0.44
10:CJ:49:PHE:CE2	14:CN:73:LEU:HD13	2.52	0.44
56:CP:6:LEU:HD13	56:CP:17:TYR:CD2	2.53	0.44
48:D0:16:ARG:O	48:D0:19:ASP:N	2.48	0.44
57:DA:1059:G:N1	57:DA:1088:A:C2	2.86	0.44
57:DA:1244:A:O2'	26:DE:29:HIS:CE1	2.70	0.44
57:DA:1286:A:N9	57:DA:1289:C:N4	2.65	0.44
57:DA:1297:C:N3	57:DA:1298:C:C5	2.84	0.44
57:DA:1325:U:O2'	57:DA:1326:U:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1370:C:H2'	57:DA:1371:G:C8	2.52	0.44
57:DA:1429:G:O2'	57:DA:1430:G:P	2.75	0.44
57:DA:1531:C:H2'	57:DA:1532:A:O4'	2.17	0.44
57:DA:1611:C:O2'	57:DA:1612:C:O5'	2.35	0.44
57:DA:2053:G:H2'	57:DA:2054:A:O4'	2.17	0.44
57:DA:2282:G:O2'	57:DA:2283:C:OP2	2.28	0.44
57:DA:2473:U:OP2	57:DA:2473:U:H6	2.00	0.44
57:DA:2550:G:N2	57:DA:2559:C:H1'	2.32	0.44
57:DA:2568:U:H2'	57:DA:2569:G:O4'	2.18	0.44
57:DA:2693:G:O2'	57:DA:2694:G:H5'	2.18	0.44
57:DA:372:G:N2	57:DA:400:G:H2'	2.32	0.44
57:DA:3:U:C5	57:DA:4:U:C5	3.04	0.44
57:DA:544:C:N4	57:DA:550:C:N4	2.65	0.44
57:DA:571:U:O2'	57:DA:573:U:H6	1.99	0.44
57:DA:716:A:H2'	57:DA:717:C:O4'	2.17	0.44
57:DA:749:A:C2	57:DA:750:A:C8	3.06	0.44
57:DA:782:A:H8	57:DA:782:A:OP1	1.99	0.44
24:DC:16:VAL:O	24:DC:202:ARG:HA	2.18	0.44
24:DC:43:ASN:ND2	24:DC:44:ASN:H	2.15	0.44
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	2.33	0.44
25:DD:106:LYS:CB	25:DD:206:ALA:HB3	2.43	0.44
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.38	0.44
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.33	0.44
29:DH:24:GLY:O	29:DH:25:TYR:C	2.55	0.44
57:DA:636:G:O5'	33:DL:128:THR:HG23	2.16	0.44
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.82	0.44
33:DL:84:LYS:O	33:DL:85:VAL:HB	2.17	0.44
41:DT:78:SER:OG	41:DT:79:ASP:N	2.51	0.44
43:DV:44:HIS:NE2	43:DV:85:LYS:HD3	2.32	0.44
44:DW:9:THR:HG23	44:DW:10:ARG:CG	2.31	0.44
45:DX:4:CYS:CB	45:DX:9:LYS:H	2.28	0.44
46:DY:57:LEU:O	46:DY:60:LYS:HE3	2.17	0.44
1:AA:1108:G:C5	1:AA:1109:C:C6	3.06	0.44
1:AA:1430:A:C2	1:AA:1471:U:C2	3.05	0.44
1:AA:198:G:N3	1:AA:199:A:C8	2.85	0.44
1:AA:363:A:C2	1:AA:364:A:C4	3.06	0.44
1:AA:452:A:H2'	1:AA:453:G:O4'	2.18	0.44
2:AB:209:VAL:O	2:AB:211:LEU:N	2.50	0.44
3:AC:155:ARG:HG2	3:AC:159:ALA:O	2.16	0.44
4:AD:54:LEU:C	4:AD:54:LEU:CD2	2.86	0.44
5:AE:31:SER:O	5:AE:32:PHE:CD2	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:21:ILE:H	13:AM:21:ILE:HD12	1.82	0.44
15:AO:42:PHE:CD1	15:AO:55:LEU:HD22	2.53	0.44
52:B4:13:ASN:H	52:B4:13:ASN:HD22	1.65	0.44
22:BA:141:G:C5'	22:BA:142:A:C8	3.01	0.44
22:BA:142:A:H8	22:BA:142:A:H5''	1.81	0.44
22:BA:163:C:O2'	22:BA:164:C:P	2.76	0.44
22:BA:1773:A:H2'	22:BA:1774:C:H5'	1.98	0.44
22:BA:1912:A:N1	22:BA:1919:A:N7	2.66	0.44
22:BA:575:A:OP2	22:BA:2055:C:C5	2.69	0.44
22:BA:2102:G:H2'	22:BA:2103:C:C6	2.52	0.44
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.51	0.44
22:BA:898:C:C2'	22:BA:899:A:H5'	2.48	0.44
22:BA:948:C:H6	22:BA:948:C:O5'	1.99	0.44
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.52	0.44
25:BD:11:MET:H	25:BD:26:VAL:H	1.65	0.44
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	2.17	0.44
27:BF:127:TYR:O	27:BF:128:SER:CB	2.65	0.44
28:BG:116:LEU:HG	28:BG:120:ILE:HD12	1.98	0.44
28:BG:168:VAL:HG23	28:BG:168:VAL:O	2.17	0.44
29:BH:9:VAL:HG12	29:BH:9:VAL:O	2.17	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.32	0.44
33:BL:56:PRO:HB2	33:BL:58:TYR:CD2	2.52	0.44
41:BT:24:MET:HE2	41:BT:27:SER:O	2.17	0.44
43:BV:2:PHE:HD1	43:BV:50:MET:CE	2.31	0.44
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.82	0.44
44:BW:30:VAL:HG23	44:BW:59:PHE:CD1	2.53	0.44
53:CA:1009:U:H2'	53:CA:1010:U:H6	1.80	0.44
53:CA:1153:G:C6	53:CA:1154:G:N7	2.85	0.44
53:CA:219:U:H2'	53:CA:220:G:C8	2.47	0.44
53:CA:398:U:H2'	53:CA:399:G:C8	2.52	0.44
53:CA:522:C:O4'	53:CA:536:C:H4'	2.17	0.44
53:CA:502:A:C4'	53:CA:550:G:H4'	2.47	0.44
53:CA:976:G:O5'	53:CA:1358:U:O2'	2.34	0.44
53:CA:977:A:H4'	53:CA:981:U:O2	2.17	0.44
2:CB:141:GLU:HG2	2:CB:145:ASN:HD21	1.82	0.44
2:CB:13:VAL:HG23	2:CB:211:LEU:HD22	2.00	0.44
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.52	0.44
5:CE:100:GLU:CD	5:CE:100:GLU:H	2.21	0.44
5:CE:14:LEU:HD12	5:CE:15:ILE:H	1.82	0.44
11:CK:86:LYS:HA	11:CK:113:THR:OG1	2.18	0.44
12:CL:82:ARG:HB2	12:CL:97:VAL:HG12	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:8:ARG:HH11	14:CN:12:ARG:NH2	2.14	0.44
15:CO:60:SER:O	15:CO:64:LYS:HG3	2.18	0.44
20:CT:64:GLY:O	20:CT:67:HIS:HB2	2.17	0.44
57:DA:16:C:O3'	48:D0:10:SER:OG	2.36	0.44
48:D0:16:ARG:O	48:D0:17:SER:C	2.56	0.44
51:D3:41:ARG:HB3	51:D3:41:ARG:CZ	2.47	0.44
57:DA:1331:G:C4	57:DA:1333:G:N7	2.85	0.44
57:DA:1465:G:C6	57:DA:1466:U:C4	3.05	0.44
57:DA:1526:C:H2'	57:DA:1527:G:C8	2.53	0.44
57:DA:1528:A:N6	57:DA:1529:G:C2	2.85	0.44
57:DA:1710:G:H2'	57:DA:1711:A:O4'	2.17	0.44
57:DA:1865:U:O4	57:DA:1875:G:N3	2.50	0.44
57:DA:2056:G:C2	57:DA:2057:G:N7	2.85	0.44
57:DA:2061:G:C8	57:DA:2501:C:H4'	2.53	0.44
57:DA:2653:U:C4	57:DA:2654:A:C5	3.05	0.44
57:DA:289:G:H2'	57:DA:290:U:O4'	2.18	0.44
57:DA:411:G:H4'	57:DA:412:A:OP1	2.16	0.44
57:DA:571:U:C6	57:DA:575:A:N6	2.86	0.44
57:DA:597:G:C2	57:DA:661:A:C2	3.05	0.44
58:DB:24:G:H4'	58:DB:26:C:H5	1.81	0.44
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.99	0.44
25:DD:124:ARG:NH1	25:DD:125:TRP:CZ2	2.85	0.44
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.86	0.44
57:DA:443:A:C4	26:DE:40:ARG:HD3	2.52	0.44
59:DF:48:LEU:HG	59:DF:49:LEU:CD2	2.47	0.44
28:DG:122:ALA:O	28:DG:123:GLU:HB2	2.16	0.44
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.82	0.44
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.85	0.44
30:DI:11:GLN:OE1	30:DI:74:PRO:HG2	2.18	0.44
31:DJ:35:ARG:HH12	31:DJ:140:LEU:HD21	1.82	0.44
32:DK:100:PHE:N	32:DK:100:PHE:CD1	2.84	0.44
37:DP:28:LYS:HB2	37:DP:28:LYS:NZ	2.28	0.44
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.17	0.44
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.41	0.44
1:AA:376:G:H4'	16:AP:5:ARG:HD2	1.99	0.44
1:AA:427:U:OP1	4:AD:12:ARG:NH2	2.50	0.44
1:AA:4:U:H2'	1:AA:4:U:O2	2.16	0.44
1:AA:859:G:H2'	1:AA:860:A:C8	2.53	0.44
1:AA:923:A:O2'	1:AA:924:C:H5'	2.17	0.44
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.38	0.44
4:AD:57:LYS:HZ2	4:AD:61:ARG:HD3	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:16:LYS:HB3	7:AG:43:TYR:CE1	2.52	0.44
8:AH:64:TYR:CD1	8:AH:64:TYR:N	2.85	0.44
10:AJ:18:ILE:HG13	10:AJ:96:VAL:CG1	2.47	0.44
19:AS:42:ASN:ND2	19:AS:42:ASN:C	2.70	0.44
22:BA:1022:G:N2	22:BA:1142:A:H2	2.06	0.44
22:BA:1078:U:H5''	22:BA:1079:C:O5'	2.17	0.44
22:BA:1287:A:OP2	35:BN:103:ARG:HG3	2.17	0.44
22:BA:1443:U:H2'	22:BA:1444:G:C8	2.53	0.44
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.35	0.44
22:BA:1733:G:N2	22:BA:1734:G:C4	2.86	0.44
22:BA:1739:A:C2	22:BA:1740:G:H1'	2.53	0.44
22:BA:1984:G:C2	22:BA:1985:C:C6	3.05	0.44
22:BA:2276:G:H4'	22:BA:2276:G:OP2	2.17	0.44
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.17	0.44
22:BA:2425:A:H1'	22:BA:2427:C:C4	2.53	0.44
22:BA:2581:G:C4	22:BA:2610:C:C5	3.05	0.44
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.52	0.44
22:BA:2853:C:O2'	22:BA:2854:G:H5'	2.17	0.44
22:BA:62:U:C4'	22:BA:63:A:OP1	2.63	0.44
23:BB:5:U:H2'	23:BB:6:G:H8	1.82	0.44
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.57	0.44
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.17	0.44
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.31	0.44
27:BF:21:TYR:HB3	27:BF:26:GLN:HB3	1.99	0.44
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.21	0.44
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.54	0.44
33:BL:93:ASN:HD22	33:BL:94:THR:HB	1.82	0.44
36:BO:103:VAL:O	36:BO:105:ALA:O	2.36	0.44
37:BP:48:ALA:O	37:BP:49:ILE:HG12	2.18	0.44
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.48	0.44
37:BP:92:ARG:O	37:BP:93:LYS:HB2	2.17	0.44
39:BR:51:VAL:HB	39:BR:52:PRO:HD3	1.90	0.44
41:BT:68:LYS:HG2	41:BT:69:ARG:H	1.83	0.44
42:BU:25:LYS:HD2	42:BU:25:LYS:HA	1.82	0.44
43:BV:29:ILE:HD13	43:BV:31:TYR:HD2	1.82	0.44
53:CA:117:G:H2'	53:CA:118:U:O4'	2.17	0.44
53:CA:959:A:N6	53:CA:1222:G:H4'	2.32	0.44
53:CA:406:G:N7	53:CA:495:A:H2'	2.32	0.44
53:CA:729:A:H2'	53:CA:730:G:H8	1.82	0.44
53:CA:979:C:O2'	53:CA:980:C:H5'	2.16	0.44
3:CC:161:ILE:H	3:CC:161:ILE:CD1	2.27	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:116:ALA:HB2	3:CC:199:VAL:CG2	2.46	0.44
3:CC:52:SER:HB3	3:CC:53:ARG:H	1.64	0.44
4:CD:154:VAL:O	4:CD:158:LEU:HD12	2.18	0.44
4:CD:89:LEU:HD23	4:CD:199:ILE:HD11	2.00	0.44
54:CG:116:ALA:C	54:CG:120:ALA:HB3	2.38	0.44
54:CG:91:ARG:NH2	54:CG:92:PRO:HB2	2.31	0.44
12:CL:80:LEU:HB3	12:CL:97:VAL:CG2	2.47	0.44
55:CM:16:ILE:H	55:CM:16:ILE:HD12	1.83	0.44
18:CR:19:GLU:CG	18:CR:20:ILE:N	2.80	0.44
57:DA:1059:G:C6	57:DA:1080:A:N1	2.86	0.44
57:DA:1338:G:H4'	41:DT:18:GLU:CG	2.48	0.44
57:DA:1440:U:C2	57:DA:1441:G:C8	3.05	0.44
57:DA:1451:C:H4'	57:DA:1452:G:O5'	2.17	0.44
57:DA:1596:A:C6	57:DA:1597:A:C6	3.05	0.44
57:DA:1731:G:C4'	57:DA:1732:C:OP1	2.63	0.44
57:DA:1761:C:H2'	57:DA:1762:A:O4'	2.18	0.44
57:DA:1926:U:C2	57:DA:1929:G:C2	3.05	0.44
57:DA:1967:C:H2'	57:DA:1968:G:C8	2.53	0.44
57:DA:1972:G:O2'	57:DA:1973:G:H5'	2.18	0.44
57:DA:1972:G:H2'	57:DA:1973:G:C8	2.53	0.44
57:DA:2040:G:C6	57:DA:2041:U:C4	3.06	0.44
57:DA:2182:U:H2'	57:DA:2183:A:C8	2.53	0.44
57:DA:2209:G:C6	57:DA:2216:G:N1	2.86	0.44
57:DA:2199:A:C6	57:DA:2225:A:C4	3.06	0.44
57:DA:2413:G:O2'	57:DA:2414:G:H5'	2.15	0.44
57:DA:2446:G:H3'	57:DA:2447:G:H5''	1.98	0.44
57:DA:2464:G:H2'	57:DA:2465:C:O4'	2.17	0.44
57:DA:265:A:N6	57:DA:428:A:O4'	2.51	0.44
57:DA:422:A:C2	57:DA:423:A:C5	3.05	0.44
57:DA:481:G:HO2'	57:DA:507:A:N6	2.15	0.44
57:DA:533:G:O2'	57:DA:534:U:H5'	2.18	0.44
57:DA:584:C:C2	57:DA:585:G:C8	3.05	0.44
57:DA:61:C:O2'	57:DA:62:U:C5'	2.54	0.44
58:DB:17:C:N3	58:DB:68:C:N3	2.65	0.44
25:DD:202:ILE:HD12	25:DD:202:ILE:N	2.32	0.44
26:DE:135:ALA:C	26:DE:137:LYS:H	2.20	0.44
28:DG:126:THR:HG22	28:DG:127:GLN:N	2.32	0.44
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.52	0.44
31:DJ:81:ILE:HB	31:DJ:82:GLY:H	1.44	0.44
34:DM:72:PRO:O	34:DM:73:ILE:CB	2.61	0.44
35:DN:2:ARG:CD	35:DN:5:LYS:HB3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	2.17	0.44
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.32	0.44
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.44
1:AA:222:C:O2'	1:AA:223:A:H5'	2.18	0.44
1:AA:542:G:O2'	1:AA:543:U:H5'	2.17	0.44
2:AB:138:ARG:HH11	2:AB:138:ARG:HB2	1.83	0.44
4:AD:116:LEU:HB3	4:AD:122:ILE:CD1	2.47	0.44
4:AD:50:TYR:O	4:AD:53:GLN:HB3	2.18	0.44
4:AD:97:LEU:C	4:AD:97:LEU:HD23	2.37	0.44
8:AH:10:LEU:HD11	8:AH:126:CYS:HB2	1.98	0.44
8:AH:10:LEU:HA	8:AH:10:LEU:HD23	1.71	0.44
9:AI:111:GLU:HG2	9:AI:120:ALA:HB1	1.99	0.44
9:AI:49:GLN:C	9:AI:51:LEU:N	2.70	0.44
9:AI:60:LEU:H	9:AI:60:LEU:HD23	1.83	0.44
11:AK:24:ALA:CA	11:AK:29:THR:HG23	2.46	0.44
15:AO:68:TYR:HA	15:AO:71:ARG:CZ	2.47	0.44
17:AQ:20:ILE:CB	17:AQ:47:ASP:OD1	2.65	0.44
20:AT:73:ARG:O	20:AT:76:ALA:HB3	2.18	0.44
21:AU:44:ARG:HD2	21:AU:44:ARG:N	2.33	0.44
48:B0:42:ILE:CD1	48:B0:48:TYR:HB2	2.48	0.44
52:B4:4:ARG:HH11	52:B4:4:ARG:CB	2.29	0.44
22:BA:1136:G:N2	22:BA:1137:G:C4	2.86	0.44
22:BA:1263:U:O2'	48:B0:7:PRO:HD2	2.17	0.44
22:BA:136:G:C6	22:BA:142:A:N6	2.85	0.44
22:BA:1746:A:C2	22:BA:1747:U:N3	2.85	0.44
22:BA:1858:A:O2'	22:BA:1859:U:O5'	2.36	0.44
22:BA:2037:A:H2'	22:BA:2038:G:O4'	2.17	0.44
22:BA:2079:U:C2	22:BA:2080:A:C8	3.06	0.44
22:BA:2403:C:N4	22:BA:2415:G:C6	2.85	0.44
22:BA:2691:C:H6	22:BA:2691:C:O5'	1.99	0.44
22:BA:2820:A:HO2'	22:BA:2821:A:P	2.41	0.44
22:BA:303:G:C5	22:BA:304:U:C5	3.05	0.44
22:BA:522:A:C6	22:BA:523:C:N4	2.85	0.44
23:BB:65:U:H3'	23:BB:108:A:N6	2.33	0.44
24:BC:142:ASN:O	24:BC:142:ASN:CG	2.55	0.44
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.97	0.44
24:BC:21:PRO:C	24:BC:23:LEU:H	2.20	0.44
26:BE:147:LEU:O	26:BE:148:ILE:C	2.54	0.44
22:BA:38:A:N3	26:BE:43:THR:HB	2.33	0.44
27:BF:174:PHE:CD1	27:BF:176:PHE:CE1	3.05	0.44
28:BG:85:LYS:HG2	28:BG:131:VAL:CB	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:101:GLY:O	32:BK:120:PRO:HD2	2.17	0.44
32:BK:2:ILE:O	32:BK:3:GLN:HB3	2.18	0.44
22:BA:1190:G:P	33:BL:32:GLY:HA2	2.57	0.44
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.81	0.44
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	2.00	0.44
41:BT:52:GLU:HG3	41:BT:52:GLU:O	2.17	0.44
43:BV:10:LYS:NZ	43:BV:10:LYS:HB2	2.32	0.44
44:BW:50:VAL:HB	44:BW:61:LYS:HZ2	1.82	0.44
53:CA:1160:G:O6	53:CA:1181:G:C6	2.70	0.44
53:CA:977:A:H8	53:CA:1223:C:C4	2.36	0.44
53:CA:1372:U:H5''	9:CI:71:ILE:CD1	2.48	0.44
53:CA:1372:U:H5''	9:CI:71:ILE:HD11	1.98	0.44
53:CA:759:A:H2'	53:CA:760:G:H5'	2.00	0.44
53:CA:765:G:C5	53:CA:812:G:C5	3.06	0.44
53:CA:86:G:O2'	53:CA:87:C:P	2.76	0.44
53:CA:889:A:O2'	53:CA:890:G:O5'	2.35	0.44
2:CB:164:ASP:HB3	2:CB:167:HIS:CB	2.47	0.44
4:CD:24:VAL:HG23	4:CD:25:ARG:CB	2.44	0.44
4:CD:57:LYS:HE3	4:CD:61:ARG:HD2	2.00	0.44
5:CE:14:LEU:CD1	5:CE:36:THR:HG22	2.48	0.44
11:CK:103:GLY:O	11:CK:104:PHE:C	2.56	0.44
12:CL:2:THR:HG22	12:CL:4:ASN:N	2.33	0.44
53:CA:1226:C:H5	55:CM:102:LYS:HA	1.79	0.44
18:CR:39:VAL:HG12	18:CR:40:PRO:CD	2.47	0.44
20:CT:26:MET:CE	20:CT:56:ILE:HD13	2.43	0.44
21:CU:25:ALA:O	21:CU:26:GLY:C	2.55	0.44
57:DA:1268:A:O2'	57:DA:1269:A:O4'	2.23	0.44
57:DA:1506:U:O5'	57:DA:1506:U:H6	1.99	0.44
57:DA:1594:U:H2'	57:DA:1595:C:O4'	2.17	0.44
57:DA:1686:C:H2'	57:DA:1687:G:O4'	2.17	0.44
57:DA:2015:A:H5''	57:DA:2016:U:OP2	2.17	0.44
57:DA:2482:A:H2'	57:DA:2483:C:H6	1.83	0.44
57:DA:2533:U:H2'	57:DA:2534:A:O4'	2.17	0.44
57:DA:2654:A:N3	57:DA:2656:U:C4	2.86	0.44
57:DA:2663:G:H2'	57:DA:2664:G:C8	2.52	0.44
57:DA:2800:A:N3	57:DA:2801:G:H1'	2.32	0.44
57:DA:325:G:H2'	57:DA:326:G:H8	1.82	0.44
57:DA:324:A:N6	57:DA:338:G:O2'	2.47	0.44
57:DA:370:G:H8	57:DA:370:G:OP2	2.01	0.44
57:DA:227:A:H61	57:DA:410:G:H1'	1.81	0.44
57:DA:460:A:OP2	50:D2:41:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:529:A:C8	57:DA:2042:A:N1	2.86	0.44
57:DA:657:U:O2'	57:DA:658:U:H5'	2.18	0.44
57:DA:732:C:H2'	57:DA:733:G:O4'	2.18	0.44
57:DA:78:U:H2'	57:DA:79:C:C6	2.52	0.44
24:DC:106:PRO:CB	24:DC:141:HIS:HE1	2.26	0.44
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.81	0.44
25:DD:140:HIS:CD2	25:DD:140:HIS:N	2.85	0.44
29:DH:9:VAL:HG13	29:DH:10:ALA:H	1.83	0.44
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.99	0.44
31:DJ:43:GLU:C	31:DJ:45:THR:HG22	2.37	0.44
57:DA:2674:G:H4'	32:DK:30:ARG:HD2	1.99	0.44
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.47	0.44
32:DK:59:LYS:CG	32:DK:89:ASN:HA	2.47	0.44
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	2.00	0.44
35:DN:72:ASP:O	35:DN:76:VAL:HG13	2.17	0.44
36:DO:30:ARG:NH1	36:DO:102:ARG:HB2	2.31	0.44
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB1	1.98	0.44
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.82	0.44
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.81	0.44
1:AA:1093:A:N3	1:AA:1095:U:H5'	2.32	0.44
1:AA:1216:A:C2	1:AA:1217:C:C4	3.06	0.44
1:AA:129:A:O2'	1:AA:130:A:C5'	2.63	0.44
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.51	0.44
1:AA:1322:C:O2'	1:AA:1323:G:O5'	2.36	0.44
1:AA:1505:G:P	63:AA:1872:HOH:O	2.76	0.44
1:AA:173:U:H1'	1:AA:197:A:C6	2.53	0.44
1:AA:282:A:N3	1:AA:282:A:H2'	2.33	0.44
1:AA:321:A:N7	1:AA:328:C:O2'	2.43	0.44
1:AA:492:C:H2'	1:AA:493:A:C8	2.52	0.44
1:AA:760:G:N7	1:AA:761:G:C8	2.85	0.44
2:AB:132:GLU:O	2:AB:136:ARG:HB2	2.17	0.44
2:AB:187:ASP:HB2	2:AB:203:ASP:CB	2.47	0.44
4:AD:21:LYS:O	4:AD:23:GLY:N	2.51	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CB	2.48	0.44
5:AE:45:VAL:CG2	5:AE:117:ALA:HA	2.47	0.44
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.48	0.44
8:AH:4:ASP:OD1	8:AH:76:ARG:NH1	2.51	0.44
9:AI:39:GLY:O	9:AI:40:ARG:HB2	2.17	0.44
12:AL:1:ALA:HB3	12:AL:5:GLN:OE1	2.18	0.44
20:AT:27:MET:SD	20:AT:66:ILE:HD13	2.57	0.44
52:B4:33:HIS:O	52:B4:35:GLN:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1082:U:C2	22:BA:1083:U:O2	2.71	0.44
22:BA:1008:A:N6	22:BA:1136:G:C6	2.86	0.44
22:BA:1163:G:C2	22:BA:1164:C:C5	3.05	0.44
22:BA:2140:G:OP2	22:BA:2140:G:H8	2.01	0.44
22:BA:2439:A:H4'	22:BA:2440:C:O5'	2.18	0.44
22:BA:2059:A:N6	22:BA:2503:A:H2'	2.33	0.44
22:BA:2649:C:H2'	22:BA:2650:U:H6	1.83	0.44
22:BA:65:U:O2'	22:BA:66:C:H5'	2.17	0.44
24:BC:159:THR:OG1	24:BC:194:VAL:HG11	2.16	0.44
25:BD:106:LYS:CB	25:BD:206:ALA:H	2.30	0.44
27:BF:64:PRO:HA	27:BF:88:VAL:CG2	2.44	0.44
29:BH:110:VAL:O	29:BH:111:ALA:HB2	2.18	0.44
29:BH:41:LYS:O	29:BH:44:ILE:HG12	2.18	0.44
30:BI:107:GLU:HA	30:BI:110:GLN:HB3	1.98	0.44
31:BJ:24:THR:HA	31:BJ:63:ALA:HB3	1.99	0.44
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.38	0.44
32:BK:116:ILE:O	32:BK:118:LEU:O	2.35	0.44
22:BA:958:U:H5'	34:BM:14:LYS:HZ2	1.82	0.44
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.33	0.44
39:BR:74:ILE:HB	39:BR:87:GLN:HB3	1.99	0.44
40:BS:24:ILE:CG2	40:BS:71:VAL:HG11	2.47	0.44
44:BW:49:ASN:CA	44:BW:61:LYS:HB2	2.39	0.44
45:BX:42:GLU:OE2	45:BX:44:ARG:NH2	2.50	0.44
53:CA:1031:C:H5'	53:CA:1032:G:C5'	2.44	0.44
53:CA:1420:U:H2'	53:CA:1421:G:O4'	2.17	0.44
53:CA:1507:A:C6	53:CA:1530:G:C5	3.05	0.44
53:CA:356:A:H2'	53:CA:357:G:O4'	2.18	0.44
53:CA:71:A:N3	53:CA:72:A:C8	2.86	0.44
2:CB:148:GLY:O	2:CB:150:ILE:N	2.50	0.44
4:CD:116:LEU:HD21	4:CD:153:ARG:HD3	1.98	0.44
53:CA:1071:C:H5'	5:CE:53:ARG:NH1	2.33	0.44
54:CG:20:GLU:O	54:CG:23:ALA:HB3	2.18	0.44
9:CI:6:TYR:CE2	9:CI:17:ARG:HA	2.47	0.44
9:CI:4:GLN:HG2	9:CI:4:GLN:H	1.54	0.44
12:CL:9:LYS:HB2	12:CL:9:LYS:HE2	1.68	0.44
55:CM:12:LYS:CE	55:CM:12:LYS:HA	2.44	0.44
14:CN:8:ARG:NH1	14:CN:12:ARG:HH22	2.16	0.44
57:DA:1048:A:C2	57:DA:1049:C:N3	2.85	0.44
57:DA:1117:C:C2'	57:DA:1118:C:O5'	2.66	0.44
57:DA:1476:U:C5	57:DA:1514:G:C2	3.05	0.44
57:DA:1560:G:H2'	57:DA:1561:C:H6	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1712:U:C4	57:DA:1713:A:C6	3.06	0.44
57:DA:1721:G:HO2'	57:DA:1722:A:P	2.41	0.44
57:DA:1829:A:H2'	57:DA:1830:C:O4'	2.18	0.44
57:DA:1840:G:H2'	57:DA:1841:U:H6	1.83	0.44
57:DA:1867:G:H2'	57:DA:1868:C:C6	2.53	0.44
57:DA:211:C:H2'	57:DA:212:G:O4'	2.18	0.44
57:DA:192:C:OP1	57:DA:2243:U:OP1	2.35	0.44
57:DA:2476:A:C2'	57:DA:2477:U:H5'	2.48	0.44
57:DA:2590:A:H5''	24:DC:237:ARG:HE	1.82	0.44
57:DA:304:U:HO2'	57:DA:305:C:H6	1.64	0.44
57:DA:466:A:H2	57:DA:795:C:O2	2.00	0.44
57:DA:519:U:H5''	40:DS:25:ARG:NH2	2.32	0.44
57:DA:627:A:N6	33:DL:111:ILE:HB	2.33	0.44
57:DA:669:G:N3	57:DA:669:G:H2'	2.33	0.44
57:DA:801:G:H4'	63:DA:3336:HOH:O	2.18	0.44
24:DC:224:MET:O	24:DC:232:GLY:HA2	2.17	0.44
26:DE:153:LEU:HD12	26:DE:170:ARG:O	2.18	0.44
26:DE:80:SER:O	26:DE:81:GLY:O	2.36	0.44
59:DF:169:LEU:HB3	59:DF:174:PHE:HB2	2.00	0.44
32:DK:13:ASN:N	32:DK:13:ASN:HD22	2.08	0.44
34:DM:96:ILE:CD1	34:DM:102:LEU:HD11	2.43	0.44
34:DM:32:GLY:HA2	34:DM:104:GLU:HA	2.00	0.44
34:DM:76:LYS:HG2	34:DM:80:VAL:HG11	2.00	0.44
35:DN:20:MET:C	35:DN:22:ARG:H	2.21	0.44
38:DQ:78:PHE:CE2	38:DQ:109:VAL:HG22	2.53	0.44
41:DT:29:THR:HA	41:DT:87:LEU:HB2	2.00	0.44
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.82	0.44
44:DW:36:ILE:HG22	44:DW:37:VAL:O	2.17	0.44
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.52	0.44
1:AA:1191:A:C8	1:AA:1191:A:H5'	2.53	0.44
1:AA:125:U:C2'	1:AA:126:G:H5'	2.47	0.44
1:AA:1261:A:C2	1:AA:1275:A:C6	3.05	0.44
1:AA:189:A:H2'	1:AA:190:A:C8	2.53	0.44
1:AA:272:C:H2'	1:AA:273:U:C6	2.47	0.44
1:AA:45:G:H5''	1:AA:307:C:O2'	2.17	0.44
1:AA:560:A:OP2	1:AA:566:G:N2	2.50	0.44
1:AA:886:G:H2'	1:AA:887:G:O4'	2.18	0.44
1:AA:924:C:H2'	1:AA:925:G:H8	1.83	0.44
2:AB:103:TRP:NE1	2:AB:150:ILE:HD11	2.32	0.44
3:AC:138:GLN:C	3:AC:140:ALA:H	2.22	0.44
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:76:TYR:HD1	11:AK:76:TYR:N	2.15	0.44
13:AM:10:ASP:O	13:AM:11:HIS:HB2	2.18	0.44
14:AN:86:ALA:O	14:AN:91:GLU:HB2	2.18	0.44
11:AK:124:LYS:HE3	21:AU:34:ARG:HG2	2.00	0.44
22:BA:1075:C:C4	22:BA:1076:C:N4	2.86	0.44
22:BA:1560:G:H2'	22:BA:1561:C:H6	1.83	0.44
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.53	0.44
22:BA:2400:G:O2'	22:BA:2401:U:H5'	2.18	0.44
22:BA:2870:C:C4	22:BA:2871:U:C4	3.06	0.44
22:BA:359:G:C6	22:BA:360:U:C2	3.06	0.44
22:BA:360:U:C4	22:BA:361:G:C6	3.06	0.44
22:BA:55:G:H2'	22:BA:56:A:H8	1.83	0.44
22:BA:571:U:C4	22:BA:575:A:C4	3.05	0.44
22:BA:734:A:C4	22:BA:735:A:C8	3.06	0.44
22:BA:89:A:O2'	22:BA:90:U:H5'	2.17	0.44
23:BB:28:C:OP1	36:BO:36:TYR:OH	2.33	0.44
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.53	0.44
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.00	0.44
27:BF:19:PHE:HB2	27:BF:21:TYR:CE1	2.53	0.44
27:BF:41:GLU:HB2	27:BF:48:LEU:HD23	2.00	0.44
33:BL:95:LEU:HB3	33:BL:100:ILE:HG13	1.99	0.44
36:BO:54:VAL:HG22	36:BO:54:VAL:O	2.17	0.44
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.64	0.44
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.98	0.44
38:BQ:82:LEU:HD23	38:BQ:112:ALA:HB2	2.00	0.44
38:BQ:97:ILE:HD11	38:BQ:104:ALA:C	2.38	0.44
39:BR:46:GLU:HG2	39:BR:47:VAL:N	2.32	0.44
41:BT:83:ALA:O	41:BT:84:TYR:HB2	2.18	0.44
42:BU:85:ARG:HG3	42:BU:86:PHE:O	2.18	0.44
44:BW:25:PHE:C	44:BW:27:GLY:H	2.22	0.44
44:BW:71:LYS:HB3	44:BW:72:GLY:H	1.66	0.44
45:BX:10:ARG:CZ	45:BX:10:ARG:HB3	2.47	0.44
53:CA:110:C:H2'	53:CA:111:G:O4'	2.18	0.44
53:CA:1125:U:C5	10:CJ:40:ILE:HG21	2.53	0.44
53:CA:1146:A:H2'	53:CA:1147:C:C5	2.52	0.44
53:CA:1206:G:H2'	53:CA:1207:G:O4'	2.18	0.44
53:CA:1217:C:H2'	53:CA:1218:C:H6	1.82	0.44
53:CA:327:A:C2	53:CA:329:A:C4	3.06	0.44
53:CA:577:G:HO2'	53:CA:578:C:H6	1.66	0.44
53:CA:948:C:H5''	55:CM:104:ASN:CB	2.41	0.44
53:CA:982:U:H4'	53:CA:983:A:C5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:26:MET:HG2	2:CB:188:THR:HA	1.99	0.44
3:CC:76:ILE:HG12	3:CC:83:VAL:CG1	2.47	0.44
4:CD:198:LEU:HD23	4:CD:198:LEU:HA	1.68	0.44
5:CE:81:GLN:OE1	5:CE:149:PRO:HD3	2.18	0.44
5:CE:15:ILE:HD11	5:CE:37:VAL:CG2	2.48	0.44
6:CF:38:ARG:HH11	6:CF:63:ASN:ND2	2.16	0.44
9:CI:16:ALA:HA	9:CI:65:THR:O	2.18	0.44
12:CL:36:VAL:HA	12:CL:52:CYS:HA	1.99	0.44
55:CM:14:ALA:HB1	55:CM:33:LEU:CD1	2.47	0.44
14:CN:78:LEU:N	14:CN:78:LEU:HD12	2.33	0.44
57:DA:1361:G:O2'	57:DA:1362:C:H5'	2.18	0.44
57:DA:136:G:O5'	57:DA:136:G:H8	2.00	0.44
57:DA:136:G:N2	57:DA:144:A:C2	2.86	0.44
57:DA:1820:U:O2	24:DC:199:HIS:HD2	2.01	0.44
57:DA:2135:A:C8	57:DA:2135:A:OP2	2.57	0.44
57:DA:2209:G:C5	57:DA:2210:U:C4	3.06	0.44
57:DA:2221:G:C5	57:DA:2222:C:C5	3.06	0.44
57:DA:2199:A:N6	57:DA:2225:A:C8	2.86	0.44
57:DA:2353:G:N3	44:DW:30:VAL:HG13	2.33	0.44
57:DA:2408:U:O2'	57:DA:2409:G:H5'	2.17	0.44
57:DA:2482:A:H2'	57:DA:2483:C:C6	2.52	0.44
57:DA:2500:U:O2	57:DA:2504:U:C4	2.71	0.44
57:DA:2788:C:H2'	57:DA:2789:C:H6	1.83	0.44
57:DA:2788:C:H1'	57:DA:2809:A:H2	1.83	0.44
57:DA:2848:G:O2'	57:DA:2849:U:P	2.76	0.44
57:DA:3:U:H2'	57:DA:4:U:H6	1.82	0.44
57:DA:413:C:N4	63:DA:3593:HOH:O	2.50	0.44
57:DA:455:C:C3'	57:DA:456:C:H5'	2.45	0.44
57:DA:628:G:H2'	57:DA:629:G:H8	1.82	0.44
57:DA:845:A:N3	57:DA:847:U:H1'	2.32	0.44
57:DA:858:G:C5	57:DA:2268:A:C2	3.06	0.44
57:DA:969:G:H2'	57:DA:970:U:C6	2.53	0.44
57:DA:975:A:O2'	57:DA:976:G:H5'	2.18	0.44
24:DC:103:ILE:HD12	24:DC:104:LEU:H	1.83	0.44
25:DD:110:THR:HG23	25:DD:171:THR:HG22	1.98	0.44
57:DA:468:G:H5''	26:DE:55:SER:CB	2.48	0.44
59:DF:12:VAL:HG12	59:DF:16:MET:HG3	2.00	0.44
29:DH:80:ILE:HB	29:DH:101:ASP:CG	2.39	0.44
35:DN:5:LYS:HG2	35:DN:6:SER:N	2.23	0.44
38:DQ:13:HIS:O	38:DQ:17:LEU:HB2	2.18	0.44
40:DS:103:ILE:HD12	40:DS:103:ILE:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:20:ALA:O	41:DT:31:VAL:HG13	2.18	0.44
42:DU:3:LYS:O	42:DU:4:ILE:C	2.56	0.44
1:AA:1084:G:C6	1:AA:1085:U:C4	3.06	0.44
1:AA:1117:A:C6	1:AA:1184:G:O6	2.71	0.44
1:AA:1124:G:O2'	1:AA:1125:U:C6	2.71	0.44
1:AA:1180:A:H8	1:AA:1180:A:O5'	2.01	0.44
1:AA:127:G:N2	1:AA:235:C:C2	2.86	0.44
1:AA:210:C:H4'	1:AA:211:G:C2	2.52	0.44
1:AA:258:G:C6	1:AA:259:G:C5	3.06	0.44
1:AA:247:G:C5	1:AA:278:G:N2	2.85	0.44
1:AA:486:U:H6	1:AA:486:U:H5''	1.76	0.44
1:AA:737:C:C2	1:AA:738:C:C5	3.06	0.44
1:AA:769:G:C2'	1:AA:770:C:H5'	2.48	0.44
1:AA:807:A:C5	1:AA:808:C:C5	3.06	0.44
1:AA:864:A:C3'	1:AA:865:A:C8	3.00	0.44
1:AA:92:U:O2'	1:AA:93:U:C5'	2.65	0.44
1:AA:981:U:C2	1:AA:982:U:C5	3.06	0.44
3:AC:158:GLY:HA2	3:AC:192:TYR:CE1	2.53	0.44
3:AC:39:ARG:NE	3:AC:54:ILE:HD11	2.33	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CA	2.46	0.44
7:AG:25:PHE:O	7:AG:28:ILE:HB	2.18	0.44
12:AL:78:VAL:O	12:AL:101:LEU:HB3	2.17	0.44
12:AL:2:THR:HB	12:AL:5:GLN:HG3	2.00	0.44
6:AF:49:TYR:HB2	18:AR:73:HIS:CD2	2.52	0.44
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	2.32	0.44
22:BA:1287:A:H2'	22:BA:1288:G:N3	2.33	0.44
22:BA:1290:C:H2'	22:BA:1291:C:H6	1.82	0.44
22:BA:1507:C:N3	22:BA:1508:A:C2	2.86	0.44
22:BA:1673:G:C3'	22:BA:1674:G:H5'	2.47	0.44
22:BA:1733:G:C2	22:BA:1734:G:N7	2.86	0.44
22:BA:1837:C:C2	22:BA:1899:A:N6	2.86	0.44
22:BA:1838:C:N4	22:BA:1899:A:C4	2.86	0.44
22:BA:2416:C:H6	22:BA:2416:C:O5'	2.01	0.44
22:BA:302:C:H2'	22:BA:303:G:H8	1.83	0.44
22:BA:491:G:H2'	22:BA:492:A:H8	1.83	0.44
22:BA:545:U:H2'	22:BA:546:U:O3'	2.17	0.44
22:BA:729:G:C4	22:BA:1775:U:C2	3.06	0.44
22:BA:784:G:P	63:BA:3310:HOH:O	2.76	0.44
22:BA:804:A:H5''	22:BA:805:G:OP1	2.18	0.44
22:BA:915:C:O2	23:BB:100:G:H4'	2.18	0.44
22:BA:919:U:H6	22:BA:919:U:C5'	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:966:G:C5	22:BA:967:U:C4	3.05	0.44
23:BB:33:G:O2'	23:BB:34:A:H5'	2.17	0.44
24:BC:129:LEU:HB3	24:BC:134:ILE:HD11	2.00	0.44
25:BD:85:ALA:O	25:BD:86:GLU:CB	2.65	0.44
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	2.00	0.44
27:BF:66:ILE:O	27:BF:66:ILE:HG13	2.17	0.44
34:BM:54:THR:O	34:BM:57:VAL:HG22	2.18	0.44
34:BM:66:ARG:HB2	34:BM:101:VAL:O	2.17	0.44
35:BN:93:GLY:C	35:BN:95:THR:H	2.21	0.44
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.33	0.44
38:BQ:94:LEU:C	38:BQ:94:LEU:HD13	2.38	0.44
39:BR:49:ILE:CG1	39:BR:49:ILE:O	2.56	0.44
41:BT:69:ARG:NH2	41:BT:70:HIS:HA	2.33	0.44
44:BW:16:GLU:HA	44:BW:16:GLU:OE2	2.18	0.44
47:BZ:7:THR:OG1	47:BZ:34:THR:HG23	2.18	0.44
53:CA:996:A:C2	53:CA:1046:A:H5'	2.53	0.44
53:CA:1087:G:H2'	53:CA:1088:G:C8	2.50	0.44
53:CA:1098:C:C4	53:CA:1099:G:N7	2.86	0.44
53:CA:1130:A:C6	53:CA:1131:G:N7	2.86	0.44
53:CA:1226:C:H41	55:CM:102:LYS:CA	2.19	0.44
53:CA:1346:A:C8	53:CA:1348:U:C2	3.06	0.44
53:CA:245:U:H5''	53:CA:245:U:C6	2.46	0.44
53:CA:596:A:H2'	53:CA:596:A:N3	2.32	0.44
53:CA:768:A:C4	53:CA:769:G:C8	3.06	0.44
53:CA:812:G:O2'	53:CA:813:U:C6	2.65	0.44
53:CA:867:G:C4	53:CA:868:C:C5	3.06	0.44
3:CC:31:ASN:O	3:CC:35:ASP:HB2	2.18	0.44
4:CD:11:SER:O	4:CD:14:GLU:N	2.51	0.44
9:CI:85:ALA:HA	9:CI:88:GLU:OE1	2.18	0.44
11:CK:92:ARG:NH2	11:CK:111:ASP:OD1	2.51	0.44
12:CL:31:GLY:HA3	12:CL:54:VAL:CG1	2.47	0.44
15:CO:47:LYS:N	15:CO:47:LYS:HD2	2.27	0.44
53:CA:728:A:C8	15:CO:53:ARG:NH2	2.86	0.44
56:CP:44:SER:O	56:CP:46:LYS:HG3	2.18	0.44
57:DA:1057:A:C8	57:DA:1086:A:H2'	2.52	0.44
57:DA:1275:A:C4	35:DN:16:HIS:HD2	2.35	0.44
57:DA:1317:G:C2	57:DA:1336:A:C2	3.05	0.44
57:DA:1494:A:H3'	57:DA:1494:A:OP2	2.17	0.44
57:DA:1649:G:C6	57:DA:2009:A:N1	2.86	0.44
57:DA:1672:A:C2'	57:DA:1673:G:H5'	2.48	0.44
57:DA:1881:C:H2'	57:DA:1882:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2199:A:N6	57:DA:2225:A:N9	2.66	0.44
57:DA:2216:G:C2'	57:DA:2217:G:C8	2.99	0.44
57:DA:229:C:O2'	57:DA:230:G:O5'	2.35	0.44
57:DA:2345:G:H4'	57:DA:2346:A:O5'	2.18	0.44
57:DA:250:G:H2'	57:DA:251:A:C8	2.53	0.44
57:DA:2514:U:H2'	57:DA:2515:C:H6	1.81	0.44
57:DA:2552:U:N3	57:DA:2554:U:H5'	2.32	0.44
57:DA:2850:A:N7	57:DA:2868:A:O2'	2.51	0.44
57:DA:2835:A:C6	57:DA:2879:A:C4	3.05	0.44
57:DA:379:G:C6	57:DA:380:G:N7	2.86	0.44
57:DA:388:G:C5	57:DA:390:U:H2'	2.53	0.44
57:DA:663:G:O6	57:DA:664:G:C6	2.71	0.44
57:DA:669:G:N2	57:DA:670:A:C2	2.86	0.44
57:DA:702:U:C4	57:DA:703:U:C5	3.05	0.44
57:DA:747:U:H3'	57:DA:748:G:C5'	2.48	0.44
57:DA:972:A:H3'	57:DA:973:A:H5''	2.00	0.44
58:DB:57:A:C5	59:DF:25:MET:CG	3.01	0.44
58:DB:81:G:H2'	58:DB:82:U:C6	2.48	0.44
24:DC:93:VAL:CG1	24:DC:94:LEU:H	2.31	0.44
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.71	0.44
25:DD:21:SER:HB2	32:DK:73:ASP:O	2.18	0.44
35:DN:57:THR:O	35:DN:80:PHE:HD1	2.01	0.44
38:DQ:15:LYS:HD2	38:DQ:19:GLN:HE21	1.83	0.44
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.56	0.44
57:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.18	0.44
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.70	0.44
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.18	0.44
42:DU:10:VAL:HB	42:DU:70:ALA:O	2.17	0.44
43:DV:57:TYR:N	43:DV:57:TYR:CD1	2.86	0.44
57:DA:2262:U:H5''	44:DW:38:ARG:NH2	2.33	0.44
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.17	0.44
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.18	0.44
57:DA:76:C:H5''	46:DY:48:ARG:HB3	2.00	0.44
1:AA:1055:A:C8	1:AA:1055:A:O5'	2.71	0.43
1:AA:1227:A:HO2'	1:AA:1228:C:P	2.40	0.43
1:AA:1269:A:C2	1:AA:1312:G:N3	2.85	0.43
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.33	0.43
1:AA:1396:A:H4'	1:AA:1397:C:O5'	2.17	0.43
1:AA:192:A:C6	1:AA:193:C:C4	3.06	0.43
1:AA:199:A:N3	1:AA:200:G:C8	2.86	0.43
1:AA:57:G:C2	1:AA:356:A:C2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:477:C:H2'	1:AA:478:A:C8	2.53	0.43
4:AD:196:GLU:C	4:AD:198:LEU:N	2.71	0.43
1:AA:1080:A:OP1	5:AE:51:LYS:HD2	2.18	0.43
7:AG:83:THR:O	7:AG:84:TYR:C	2.55	0.43
8:AH:78:SER:OG	8:AH:83:ARG:HA	2.19	0.43
10:AJ:67:ILE:HG12	14:AN:95:LEU:HD13	1.99	0.43
11:AK:86:LYS:HG2	11:AK:114:PRO:HD3	2.00	0.43
16:AP:10:GLY:HA2	16:AP:16:PHE:HB3	2.00	0.43
50:B2:43:THR:C	50:B2:44:VAL:HG23	2.37	0.43
22:BA:1014:A:O2'	22:BA:1015:U:H5'	2.17	0.43
22:BA:1015:U:O2'	22:BA:1016:G:H5'	2.16	0.43
22:BA:1098:A:H3'	22:BA:1099:G:C8	2.53	0.43
22:BA:1130:U:HO2'	22:BA:1131:G:H8	1.64	0.43
22:BA:1341:G:H3'	22:BA:1397:U:O2	2.18	0.43
22:BA:1430:G:C4	22:BA:1431:A:C8	3.06	0.43
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.17	0.43
22:BA:164:C:H2'	22:BA:165:A:O4'	2.17	0.43
22:BA:2223:G:C2'	22:BA:2224:G:H5'	2.48	0.43
22:BA:2331:G:N2	22:BA:2385:C:C2	2.86	0.43
22:BA:2590:A:H2'	22:BA:2591:C:C6	2.53	0.43
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.18	0.43
22:BA:641:U:H5''	22:BA:642:U:OP2	2.17	0.43
22:BA:858:G:H3'	22:BA:859:G:C8	2.53	0.43
22:BA:869:G:C6	22:BA:870:U:C4	3.06	0.43
24:BC:104:LEU:HA	24:BC:104:LEU:HD12	1.69	0.43
24:BC:68:ARG:NH2	24:BC:126:GLY:O	2.51	0.43
26:BE:73:ILE:CG1	26:BE:73:ILE:O	2.63	0.43
27:BF:135:ILE:C	27:BF:137:PHE:N	2.71	0.43
27:BF:153:ILE:HG13	27:BF:153:ILE:H	1.68	0.43
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.16	0.43
29:BH:1:MET:HG2	29:BH:23:ALA:HA	2.00	0.43
31:BJ:1:MET:O	31:BJ:2:LYS:C	2.56	0.43
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.89	0.43
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.48	0.43
22:BA:1279:G:H5'	35:BN:34:ILE:HG22	2.00	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
53:CA:1261:A:N7	53:CA:1274:A:C2	2.85	0.43
53:CA:1310:G:C6	53:CA:1311:A:C6	3.06	0.43
53:CA:1251:A:H2	53:CA:1369:C:O2	2.02	0.43
53:CA:28:A:H2'	53:CA:29:U:O4'	2.18	0.43
53:CA:363:A:N6	53:CA:364:A:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:477:C:H5'	53:CA:478:A:OP1	2.18	0.43
53:CA:664:G:P	18:CR:52:ARG:HH21	2.41	0.43
53:CA:696:A:H2'	53:CA:697:U:H6	1.82	0.43
53:CA:881:G:C6	53:CA:882:C:C4	3.06	0.43
53:CA:962:C:HO2'	53:CA:963:G:H8	1.56	0.43
2:CB:151:LYS:HG3	2:CB:152:ASP:N	2.33	0.43
4:CD:176:LYS:O	4:CD:177:MET:HB2	2.18	0.43
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.45	0.43
5:CE:17:VAL:HG22	5:CE:17:VAL:O	2.17	0.43
6:CF:24:ARG:O	6:CF:28:ALA:HB2	2.17	0.43
6:CF:3:HIS:CG	6:CF:92:THR:HG23	2.53	0.43
54:CG:119:LEU:HD23	54:CG:120:ALA:N	2.33	0.43
54:CG:69:ARG:HH11	54:CG:95:ARG:NH1	2.16	0.43
10:CJ:52:LEU:CD2	10:CJ:62:ARG:HG2	2.48	0.43
10:CJ:81:GLU:O	10:CJ:86:ALA:HB3	2.17	0.43
14:CN:15:LEU:O	14:CN:54:SER:HB2	2.18	0.43
48:D0:38:LEU:H	48:D0:41:HIS:CE1	2.36	0.43
57:DA:1351:C:O3'	57:DA:1571:A:O2'	2.35	0.43
57:DA:1465:G:H2'	57:DA:1466:U:O4'	2.18	0.43
57:DA:1471:G:C5	57:DA:1472:C:C5	3.06	0.43
57:DA:1549:A:C6	57:DA:1550:C:N3	2.86	0.43
57:DA:1568:G:H21	24:DC:57:HIS:HE1	1.64	0.43
57:DA:1791:A:N6	57:DA:1828:G:O2'	2.51	0.43
57:DA:2184:A:O5'	57:DA:2184:A:H8	2.00	0.43
57:DA:228:C:C5'	57:DA:229:C:C5	3.01	0.43
57:DA:2515:C:O2'	57:DA:2516:A:H5'	2.18	0.43
57:DA:2560:A:C6	57:DA:2561:U:C4	3.05	0.43
57:DA:2741:A:C8	57:DA:2742:G:C8	3.06	0.43
57:DA:2788:C:H1'	57:DA:2809:A:C2	2.53	0.43
57:DA:293:U:H5''	57:DA:294:A:OP2	2.18	0.43
57:DA:323:C:H2'	26:DE:163:ASN:CG	2.39	0.43
57:DA:628:G:HO2'	57:DA:629:G:H8	1.65	0.43
57:DA:636:G:H3'	33:DL:128:THR:CG2	2.48	0.43
57:DA:781:A:H2'	57:DA:1777:U:C1'	2.46	0.43
57:DA:806:C:H2'	57:DA:807:U:C6	2.52	0.43
58:DB:42:C:O2'	58:DB:43:C:C5'	2.64	0.43
25:DD:10:GLY:O	25:DD:11:MET:CB	2.61	0.43
26:DE:144:GLU:O	26:DE:145:ASP:C	2.56	0.43
29:DH:8:LYS:HD2	29:DH:9:VAL:O	2.19	0.43
31:DJ:110:PRO:CG	31:DJ:111:LYS:HG2	2.46	0.43
31:DJ:43:GLU:CG	31:DJ:43:GLU:O	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.57	0.43
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.18	0.43
35:DN:51:LEU:HA	35:DN:54:LEU:HD21	2.00	0.43
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.17	0.43
57:DA:995:C:H5"	38:DQ:53:LYS:HG2	2.00	0.43
39:DR:19:THR:HG22	39:DR:20:VAL:H	1.82	0.43
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.49	0.43
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.83	0.43
41:DT:48:GLN:HA	41:DT:48:GLN:NE2	2.31	0.43
41:DT:53:VAL:CG2	41:DT:92:ASN:HD22	2.30	0.43
36:DO:20:GLU:HG3	44:DW:50:VAL:HG11	1.99	0.43
1:AA:251:G:O4'	1:AA:252:U:H5"	2.18	0.43
1:AA:327:A:H4'	1:AA:328:C:OP1	2.17	0.43
1:AA:32:A:C2	1:AA:33:A:C5	3.06	0.43
1:AA:626:G:H2'	1:AA:627:G:O4'	2.19	0.43
1:AA:715:A:H8	1:AA:715:A:O5'	2.01	0.43
1:AA:77:A:N6	1:AA:90:C:C4	2.85	0.43
1:AA:782:A:C8	1:AA:783:C:C5	3.07	0.43
3:AC:41:TYR:CZ	3:AC:89:VAL:HG21	2.53	0.43
4:AD:35:GLN:O	4:AD:36:ALA:HB2	2.18	0.43
5:AE:155:LYS:HD2	5:AE:155:LYS:N	2.33	0.43
5:AE:38:VAL:HG22	5:AE:66:ALA:HB1	2.00	0.43
6:AF:11:HIS:HA	6:AF:12:PRO:HD2	1.83	0.43
1:AA:674:G:OP1	6:AF:51:ILE:HG13	2.19	0.43
6:AF:90:MET:HB3	6:AF:91:ARG:H	1.49	0.43
9:AI:79:ARG:O	9:AI:83:THR:HG23	2.17	0.43
10:AJ:28:THR:HG22	10:AJ:28:THR:O	2.18	0.43
14:AN:61:ASN:HA	14:AN:61:ASN:HD22	1.54	0.43
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	1.99	0.43
19:AS:62:THR:O	19:AS:63:ASP:C	2.56	0.43
21:AU:33:ARG:HD3	21:AU:34:ARG:HG3	2.00	0.43
22:BA:1059:G:C2	22:BA:1080:A:N3	2.86	0.43
22:BA:1061:U:H6	22:BA:1070:A:C1'	2.31	0.43
22:BA:1446:C:H2'	22:BA:1447:C:C6	2.53	0.43
22:BA:2356:U:H5"	44:BW:16:GLU:HG3	2.00	0.43
22:BA:25:U:C5	22:BA:26:G:C6	3.06	0.43
22:BA:2673:G:N3	22:BA:2674:G:C8	2.87	0.43
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.18	0.43
22:BA:354:A:C5	22:BA:355:U:C5	3.06	0.43
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.82	0.43
24:BC:35:LYS:HB3	24:BC:35:LYS:HE3	1.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:174:GLY:O	26:BE:175:ILE:O	2.36	0.43
33:BL:101:ILE:HA	33:BL:101:ILE:HD12	1.69	0.43
34:BM:45:GLN:NE2	34:BM:125:PRO:HD3	2.33	0.43
35:BN:10:LEU:HA	35:BN:10:LEU:HD13	1.85	0.43
35:BN:60:VAL:O	35:BN:61:ALA:C	2.56	0.43
39:BR:18:GLN:O	39:BR:97:LYS:O	2.36	0.43
39:BR:54:VAL:O	39:BR:55:ASP:C	2.56	0.43
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.33	0.43
53:CA:1051:C:O2'	53:CA:1052:U:O4'	2.36	0.43
53:CA:1255:G:H2'	53:CA:1278:G:H21	1.82	0.43
53:CA:1303:C:O2	53:CA:1303:C:H2'	2.18	0.43
53:CA:1366:C:O2'	53:CA:1367:C:H6	1.96	0.43
53:CA:1402:C:H2'	53:CA:1403:C:O4'	2.17	0.43
53:CA:32:A:C2'	53:CA:33:A:C8	2.84	0.43
53:CA:160:A:H1'	53:CA:344:A:C5	2.53	0.43
53:CA:375:U:N3	53:CA:376:G:N7	2.66	0.43
53:CA:465:A:C8	53:CA:467:U:OP1	2.71	0.43
53:CA:760:G:C6	53:CA:761:G:C4	3.06	0.43
53:CA:768:A:C5	53:CA:769:G:N7	2.86	0.43
53:CA:781:A:H2	53:CA:1514:G:H4'	1.83	0.43
53:CA:821:G:H2'	53:CA:822:U:H6	1.77	0.43
53:CA:949:A:H4'	53:CA:1364:U:O4	2.18	0.43
2:CB:116:LEU:HA	2:CB:119:GLN:HB3	2.00	0.43
4:CD:123:MET:CE	4:CD:126:GLY:O	2.67	0.43
4:CD:57:LYS:HE3	4:CD:61:ARG:CD	2.48	0.43
53:CA:1381:U:N3	54:CG:77:ARG:CZ	2.81	0.43
8:CH:54:THR:C	8:CH:56:PRO:HD3	2.39	0.43
5:CE:82:HIS:HB2	8:CH:95:MET:O	2.18	0.43
9:CI:79:ARG:O	9:CI:83:THR:HG22	2.18	0.43
11:CK:74:LYS:HD2	11:CK:104:PHE:CE1	2.53	0.43
55:CM:19:THR:HA	55:CM:25:GLY:O	2.18	0.43
14:CN:20:PHE:HE1	14:CN:54:SER:CB	2.31	0.43
14:CN:89:ARG:HG3	14:CN:91:GLU:CG	2.48	0.43
18:CR:66:LEU:HD23	18:CR:66:LEU:N	2.33	0.43
21:CU:24:LYS:CE	21:CU:25:ALA:H	2.32	0.43
50:D2:11:LYS:NZ	63:D2:101:HOH:O	2.52	0.43
57:DA:1048:A:C4	57:DA:1049:C:N4	2.86	0.43
57:DA:1228:G:H2'	57:DA:1229:C:C6	2.53	0.43
57:DA:1273:U:O3'	57:DA:1274:A:H3'	2.18	0.43
57:DA:1308:A:N6	57:DA:1309:G:C2	2.86	0.43
57:DA:1667:G:O2'	57:DA:1668:A:P	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1723:G:H2'	57:DA:1724:G:C8	2.43	0.43
57:DA:183:C:O2'	57:DA:432:A:H1'	2.17	0.43
57:DA:1914:C:O2'	57:DA:1915:U:C5'	2.66	0.43
57:DA:2064:C:H2'	57:DA:2065:C:H6	1.81	0.43
57:DA:2179:C:H6	57:DA:2179:C:H5'	1.83	0.43
57:DA:2216:G:C2'	57:DA:2217:G:H8	2.22	0.43
57:DA:2057:G:C6	57:DA:2612:C:N3	2.86	0.43
57:DA:247:G:H4'	57:DA:386:G:C6	2.53	0.43
57:DA:470:A:C2	57:DA:471:A:C4	3.07	0.43
57:DA:735:A:C6	57:DA:736:C:C2	3.06	0.43
57:DA:802:A:C2	57:DA:803:U:C2	3.06	0.43
57:DA:818:G:H4'	57:DA:838:C:O3'	2.18	0.43
57:DA:919:U:C2	57:DA:920:A:N7	2.86	0.43
57:DA:956:G:C1'	34:DM:82:MET:HE1	2.46	0.43
58:DB:89:U:H3'	58:DB:90:C:C6	2.53	0.43
24:DC:123:ILE:HD12	24:DC:123:ILE:HA	1.93	0.43
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.39	0.43
24:DC:161:VAL:HG22	24:DC:175:LEU:HA	2.00	0.43
24:DC:67:LYS:HB3	24:DC:150:GLY:CA	2.45	0.43
24:DC:93:VAL:HG11	24:DC:95:TYR:CE2	2.53	0.43
25:DD:38:LYS:NZ	25:DD:38:LYS:HB3	2.33	0.43
28:DG:58:ALA:O	28:DG:59:ASP:C	2.56	0.43
32:DK:105:ARG:HB2	32:DK:108:ARG:HD2	2.00	0.43
57:DA:2683:C:OP1	37:DP:55:HIS:HB3	2.18	0.43
40:DS:36:LEU:HA	40:DS:39:THR:OG1	2.18	0.43
40:DS:36:LEU:C	40:DS:38:TYR:N	2.71	0.43
41:DT:21:SER:C	41:DT:25:GLU:HB3	2.38	0.43
43:DV:8:VAL:HG13	43:DV:66:ASP:OD2	2.19	0.43
1:AA:1233:G:H2'	1:AA:1234:C:H6	1.82	0.43
1:AA:131:A:C2	1:AA:132:C:C4	3.07	0.43
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.83	0.43
1:AA:381:C:H2'	1:AA:382:A:O4'	2.18	0.43
1:AA:499:A:O2'	1:AA:500:G:C8	2.62	0.43
1:AA:507:C:OP2	1:AA:508:U:H3'	2.19	0.43
1:AA:556:C:H2'	1:AA:557:G:O4'	2.18	0.43
1:AA:766:A:OP2	1:AA:812:G:N2	2.50	0.43
1:AA:81:A:O2'	1:AA:89:U:O2	2.31	0.43
1:AA:978:A:O2'	1:AA:979:C:H5'	2.18	0.43
3:AC:75:VAL:O	3:AC:82:ASP:HB3	2.18	0.43
4:AD:57:LYS:HG2	4:AD:202:LEU:HD22	1.99	0.43
1:AA:923:A:OP1	5:AE:25:LYS:CG	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:81:GLN:N	5:AE:81:GLN:NE2	2.66	0.43
8:AH:78:SER:CB	8:AH:84:ILE:H	2.30	0.43
12:AL:87:LYS:O	12:AL:87:LYS:HG3	2.18	0.43
13:AM:10:ASP:OD1	13:AM:11:HIS:N	2.34	0.43
14:AN:50:LEU:O	14:AN:52:ARG:N	2.51	0.43
22:BA:1106:G:N3	22:BA:1107:G:C8	2.86	0.43
22:BA:1142:A:C4	22:BA:1144:A:N7	2.86	0.43
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.18	0.43
22:BA:1287:A:H3'	22:BA:1288:G:H21	1.82	0.43
22:BA:1374:G:C2'	22:BA:1375:U:H5'	2.47	0.43
22:BA:1419:A:C5	22:BA:1421:G:C4	3.07	0.43
22:BA:1523:U:C3'	22:BA:1524:G:H5'	2.48	0.43
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.47	0.43
22:BA:1901:A:H2'	22:BA:1902:C:H6	1.83	0.43
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.17	0.43
22:BA:2462:C:H2'	22:BA:2463:C:H6	1.81	0.43
22:BA:2531:A:OP1	28:BG:174:LYS:CG	2.62	0.43
22:BA:278:A:H2'	22:BA:278:A:N3	2.32	0.43
22:BA:61:C:H6	22:BA:61:C:O5'	2.00	0.43
22:BA:636:G:H3'	33:BL:128:THR:CG2	2.47	0.43
22:BA:71:A:H3'	22:BA:71:A:OP2	2.17	0.43
22:BA:976:G:N3	22:BA:977:G:C8	2.85	0.43
24:BC:103:ILE:HG23	24:BC:104:LEU:N	2.33	0.43
24:BC:12:ARG:HA	24:BC:15:VAL:CG2	2.48	0.43
25:BD:149:ASN:C	25:BD:151:THR:N	2.70	0.43
25:BD:90:PHE:N	25:BD:90:PHE:CD1	2.86	0.43
29:BH:100:ALA:O	29:BH:101:ASP:C	2.57	0.43
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.44	0.43
36:BO:26:LEU:C	36:BO:26:LEU:HD12	2.39	0.43
38:BQ:84:LYS:O	38:BQ:85:ALA:C	2.56	0.43
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.49	0.43
44:BW:26:GLY:O	44:BW:27:GLY:O	2.36	0.43
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.46	0.43
53:CA:119:A:H5'	53:CA:120:A:O5'	2.19	0.43
53:CA:1302:C:H5''	55:CM:16:ILE:HG23	2.00	0.43
53:CA:1348:U:H2'	53:CA:1349:A:H8	1.84	0.43
53:CA:255:G:O2'	53:CA:256:U:H5'	2.18	0.43
53:CA:614:C:C4	53:CA:615:G:N7	2.87	0.43
53:CA:814:A:H5'	53:CA:1511:G:C4'	2.42	0.43
53:CA:82:G:H2'	53:CA:83:C:H4'	2.01	0.43
2:CB:96:LEU:H	2:CB:99:MET:CE	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:10:ARG:O	3:CC:15:LYS:HB2	2.18	0.43
5:CE:22:LYS:O	5:CE:29:ILE:HB	2.19	0.43
5:CE:52:ALA:HB2	5:CE:61:LYS:CE	2.48	0.43
5:CE:93:VAL:O	5:CE:93:VAL:HG23	2.18	0.43
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.66	0.43
8:CH:38:VAL:HA	8:CH:41:GLU:HG3	1.99	0.43
8:CH:57:GLU:HG3	8:CH:58:LEU:N	2.21	0.43
8:CH:94:VAL:HG21	8:CH:127:TYR:CB	2.49	0.43
9:CI:71:ILE:HD12	9:CI:72:SER:N	2.20	0.43
15:CO:32:THR:O	15:CO:33:ALA:C	2.57	0.43
21:CU:14:ALA:O	21:CU:15:LEU:C	2.57	0.43
57:DA:1055:G:H2'	57:DA:1056:G:H5'	2.00	0.43
57:DA:1056:G:H1'	57:DA:1103:A:N1	2.33	0.43
57:DA:1203:U:N3	57:DA:1204:A:C6	2.86	0.43
57:DA:1215:G:OP1	38:DQ:7:VAL:HG11	2.17	0.43
57:DA:1376:C:H5''	63:DA:3408:HOH:O	2.18	0.43
57:DA:1493:C:O2	57:DA:1493:C:H2'	2.17	0.43
57:DA:1586:A:H2'	57:DA:1587:G:C8	2.38	0.43
57:DA:1609:A:O2'	57:DA:1610:A:H5''	2.17	0.43
57:DA:1866:A:C4	57:DA:1876:A:N6	2.86	0.43
57:DA:1992:G:H4'	57:DA:1993:U:OP1	2.17	0.43
57:DA:2069:G:O2'	57:DA:2070:A:H5'	2.18	0.43
57:DA:2103:C:H2'	57:DA:2104:C:O4'	2.18	0.43
57:DA:2216:G:O2'	57:DA:2217:G:C5'	2.65	0.43
57:DA:2229:U:H2'	57:DA:2230:G:H8	1.83	0.43
57:DA:2525:G:N2	57:DA:2539:C:C2	2.86	0.43
57:DA:2597:G:H5'	24:DC:240:GLY:O	2.18	0.43
57:DA:2624:G:H2'	57:DA:2625:G:O4'	2.19	0.43
57:DA:2660:A:C2	57:DA:2661:G:C5	3.05	0.43
57:DA:2706:A:C2	57:DA:2707:U:C2	3.06	0.43
57:DA:27:G:H1'	57:DA:513:A:N6	2.34	0.43
57:DA:2868:A:C2	57:DA:2869:G:C4	3.06	0.43
57:DA:457:A:C4	57:DA:459:U:C4	3.06	0.43
57:DA:492:A:O2'	57:DA:493:G:O4'	2.36	0.43
57:DA:84:A:H2	57:DA:98:G:N3	2.16	0.43
58:DB:13:G:H5''	58:DB:13:G:C8	2.51	0.43
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.83	0.43
25:DD:32:ASN:HB2	25:DD:50:VAL:HB	2.00	0.43
28:DG:145:ALA:O	28:DG:149:ALA:HB2	2.18	0.43
28:DG:157:LYS:HB2	28:DG:157:LYS:HE2	1.87	0.43
30:DI:106:GLN:O	30:DI:106:GLN:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:41:ILE:HG22	32:DK:58:LEU:O	2.19	0.43
32:DK:64:ARG:HB2	32:DK:83:ALA:HB3	2.00	0.43
32:DK:93:GLN:HA	32:DK:94:PRO:HD2	1.79	0.43
34:DM:61:GLY:CA	34:DM:107:GLY:HA3	2.45	0.43
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	2.00	0.43
36:DO:4:LYS:HG3	36:DO:8:ILE:CD1	2.48	0.43
37:DP:62:LYS:HD3	37:DP:64:SER:HB2	1.99	0.43
39:DR:9:GLY:H	39:DR:10:LYS:NZ	2.16	0.43
1:AA:1054:C:O2	1:AA:1054:C:O4'	2.33	0.43
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.83	0.43
1:AA:1272:G:O2'	1:AA:1273:C:H5'	2.18	0.43
1:AA:118:U:C4	1:AA:288:A:C2	3.06	0.43
1:AA:425:G:C6	1:AA:426:U:C2	3.07	0.43
1:AA:862:C:C2'	1:AA:863:U:H5'	2.48	0.43
1:AA:877:G:H21	8:AH:1:SER:CB	2.19	0.43
1:AA:933:G:C5	1:AA:935:A:C8	3.06	0.43
3:AC:139:ASN:ND2	3:AC:139:ASN:C	2.71	0.43
7:AG:68:VAL:HG21	7:AG:103:ILE:CG1	2.49	0.43
11:AK:125:LYS:O	11:AK:126:ARG:CB	2.64	0.43
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.48	0.43
22:BA:1483:G:C6	22:BA:1484:U:C4	3.07	0.43
22:BA:1607:C:H4'	22:BA:1608:A:O5'	2.18	0.43
22:BA:1773:A:H2'	22:BA:1774:C:C5'	2.49	0.43
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.34	0.43
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.54	0.43
22:BA:2275:C:O3'	34:BM:83:GLY:O	2.36	0.43
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.18	0.43
22:BA:2572:A:O2'	22:BA:2573:C:P	2.77	0.43
22:BA:9:G:C6	22:BA:2629:U:C6	3.07	0.43
22:BA:2638:G:H2'	22:BA:2775:G:H22	1.83	0.43
22:BA:307:G:N2	22:BA:309:A:H3'	2.33	0.43
22:BA:686:U:O4	50:B2:12:ARG:HB3	2.19	0.43
15:AO:39:GLN:OE1	22:BA:716:A:H1'	2.18	0.43
24:BC:36:ASN:O	24:BC:37:SER:HB3	2.18	0.43
22:BA:1658:C:H5'	25:BD:138:LEU:CD2	2.49	0.43
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.48	0.43
27:BF:39:VAL:C	27:BF:41:GLU:H	2.21	0.43
28:BG:30:GLY:O	28:BG:78:VAL:HG12	2.18	0.43
28:BG:66:THR:O	28:BG:70:LEU:HG	2.18	0.43
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.52	0.43
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:8:LEU:N	32:BK:8:LEU:CD2	2.80	0.43
33:BL:130:GLY:O	33:BL:133:ALA:HB3	2.18	0.43
22:BA:1279:G:H4'	35:BN:31:HIS:CD2	2.53	0.43
41:BT:40:LYS:HA	41:BT:43:ILE:HG23	2.00	0.43
53:CA:1026:G:N2	53:CA:1036:A:H61	2.16	0.43
53:CA:112:G:N2	53:CA:113:G:H1'	2.33	0.43
53:CA:1145:A:O2'	53:CA:1146:A:C5'	2.66	0.43
53:CA:155:A:C6	53:CA:156:C:C4	3.06	0.43
53:CA:65:A:C4	53:CA:200:G:O2'	2.72	0.43
53:CA:247:G:OP1	53:CA:247:G:H4'	2.18	0.43
53:CA:705:G:H2'	53:CA:706:A:H8	1.82	0.43
53:CA:84:U:H3	53:CA:87:C:H1'	1.80	0.43
53:CA:951:G:H1'	53:CA:970:C:O2'	2.18	0.43
53:CA:992:U:H1'	53:CA:993:G:N2	2.33	0.43
2:CB:187:ASP:O	2:CB:189:ASN:N	2.51	0.43
2:CB:212:TYR:HD2	2:CB:216:VAL:HG23	1.82	0.43
2:CB:67:LEU:HD23	2:CB:67:LEU:HA	1.84	0.43
4:CD:2:ARG:NE	4:CD:114:ARG:HD2	2.34	0.43
54:CG:63:VAL:HG11	54:CG:127:ALA:CB	2.48	0.43
53:CA:640:A:C2'	8:CH:106:SER:HB2	2.48	0.43
9:CI:51:LEU:C	9:CI:53:LEU:N	2.71	0.43
10:CJ:11:LYS:HA	10:CJ:18:ILE:HD11	2.00	0.43
11:CK:85:VAL:HG11	11:CK:92:ARG:HH11	1.84	0.43
14:CN:1:ALA:HA	14:CN:67:GLY:O	2.18	0.43
14:CN:13:VAL:HG22	14:CN:59:GLN:OE1	2.19	0.43
18:CR:32:ILE:HA	18:CR:39:VAL:HG23	2.00	0.43
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.73	0.43
57:DA:56:A:C2	57:DA:115:C:C2	3.07	0.43
57:DA:1267:U:HO2'	57:DA:1268:A:C5'	2.31	0.43
57:DA:1360:G:C6	57:DA:1372:U:C2	3.07	0.43
57:DA:1465:G:C5	57:DA:1466:U:C5	3.06	0.43
57:DA:1469:A:C2	57:DA:1470:A:C6	3.06	0.43
57:DA:1476:U:O2	57:DA:1516:G:C2	2.72	0.43
57:DA:1570:A:C6	57:DA:1571:A:N1	2.87	0.43
57:DA:1629:U:H2'	57:DA:1630:A:O4'	2.19	0.43
57:DA:1793:C:H2'	57:DA:1794:A:O4'	2.18	0.43
57:DA:1915:U:O2'	57:DA:1916:A:C5'	2.65	0.43
57:DA:197:A:C5	57:DA:2430:A:C4	3.07	0.43
57:DA:2061:G:C4	57:DA:2063:C:N4	2.86	0.43
57:DA:2097:A:H2'	57:DA:2098:U:C6	2.53	0.43
57:DA:1373:A:C5'	57:DA:2212:A:H1'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2283:C:C4	57:DA:2389:G:C4	3.07	0.43
57:DA:2571:U:H6	57:DA:2571:U:O5'	2.00	0.43
57:DA:2733:A:O2'	57:DA:2734:A:H5'	2.18	0.43
57:DA:2751:G:H2'	57:DA:2751:G:N3	2.33	0.43
57:DA:2884:U:O2	48:D0:49:ARG:NE	2.51	0.43
57:DA:502:A:C6	57:DA:505:A:C5	3.06	0.43
57:DA:506:G:H4'	57:DA:507:A:H5'	1.99	0.43
57:DA:510:C:O2'	57:DA:511:U:H5'	2.18	0.43
57:DA:591:U:H2'	57:DA:592:A:C8	2.53	0.43
57:DA:699:A:C2	57:DA:734:A:H1'	2.53	0.43
57:DA:826:U:H5'	57:DA:2428:G:O2'	2.18	0.43
57:DA:866:A:N7	57:DA:914:G:N7	2.66	0.43
24:DC:128:THR:HA	24:DC:190:THR:HA	2.01	0.43
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.19	0.43
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.19	0.43
59:DF:28:PRO:HB2	59:DF:168:LEU:HD11	2.01	0.43
59:DF:37:MET:HE3	59:DF:56:LEU:HB2	2.01	0.43
59:DF:8:LYS:HG3	59:DF:12:VAL:HG21	1.99	0.43
31:DJ:49:ASP:HB2	31:DJ:121:LYS:HZ2	1.83	0.43
34:DM:72:PRO:O	34:DM:92:TRP:HA	2.19	0.43
34:DM:74:THR:OG1	34:DM:86:LYS:NZ	2.52	0.43
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.17	0.43
37:DP:65:ASN:ND2	37:DP:65:ASN:N	2.66	0.43
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.52	0.43
37:DP:47:ILE:HD11	37:DP:70:GLU:HG2	1.98	0.43
41:DT:59:ASN:O	41:DT:84:TYR:HB2	2.17	0.43
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.19	0.43
44:DW:20:LEU:N	44:DW:20:LEU:HD12	2.33	0.43
44:DW:40:ARG:NH1	44:DW:40:ARG:CG	2.59	0.43
45:DX:33:HIS:O	45:DX:34:SER:O	2.36	0.43
1:AA:1022:A:H2'	1:AA:1023:U:O4'	2.17	0.43
1:AA:15:G:N7	1:AA:1396:A:C2	2.87	0.43
1:AA:418:C:N4	63:AA:1716:HOH:O	2.51	0.43
1:AA:481:G:H3'	1:AA:481:G:C8	2.53	0.43
1:AA:748:G:C6	1:AA:749:A:C5	3.07	0.43
1:AA:801:U:H2'	1:AA:802:A:C8	2.54	0.43
1:AA:842:U:O2'	1:AA:846:G:N1	2.50	0.43
1:AA:976:G:N1	1:AA:1363:A:C2	2.86	0.43
2:AB:98:GLY:C	2:AB:100:LEU:H	2.21	0.43
2:AB:22:TRP:HA	2:AB:189:ASN:HA	2.01	0.43
2:AB:191:ASP:HA	2:AB:192:PRO:HD2	1.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:185:ILE:HA	2:AB:199:ILE:O	2.19	0.43
2:AB:88:GLN:HG3	2:AB:88:GLN:H	1.62	0.43
4:AD:110:ARG:O	4:AD:113:ALA:HB3	2.17	0.43
4:AD:48:SER:O	4:AD:52:VAL:HG13	2.18	0.43
16:AP:46:LYS:HB2	16:AP:47:GLU:H	1.60	0.43
50:B2:12:ARG:HG3	50:B2:13:ASN:ND2	2.34	0.43
22:BA:1069:A:N1	22:BA:1073:A:N6	2.66	0.43
22:BA:1072:C:H6	22:BA:1072:C:H2'	1.35	0.43
22:BA:1187:G:HO2'	22:BA:1188:U:H6	1.63	0.43
22:BA:1430:G:O2'	22:BA:1431:A:H5'	2.18	0.43
22:BA:1820:U:O2	24:BC:200:MET:N	2.51	0.43
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.34	0.43
22:BA:2319:G:O2'	22:BA:2320:U:C5	2.70	0.43
22:BA:2446:G:H5''	22:BA:2447:G:OP2	2.18	0.43
22:BA:2507:C:H5''	22:BA:2508:G:OP2	2.19	0.43
22:BA:2617:U:C2'	22:BA:2618:G:H5'	2.48	0.43
22:BA:2722:G:H8	22:BA:2722:G:O5'	2.02	0.43
22:BA:373:U:H2'	22:BA:374:A:C8	2.54	0.43
22:BA:41:C:H2'	22:BA:42:A:O4'	2.19	0.43
22:BA:434:U:C4'	22:BA:435:C:OP1	2.65	0.43
22:BA:64:A:H2'	22:BA:65:U:C6	2.53	0.43
22:BA:983:A:N6	22:BA:984:A:N1	2.67	0.43
24:BC:196:ASN:OD1	24:BC:197:ALA:N	2.51	0.43
24:BC:257:ARG:CG	24:BC:269:ARG:HH22	2.32	0.43
25:BD:104:VAL:HG13	25:BD:106:LYS:HD2	2.00	0.43
25:BD:114:LYS:CE	25:BD:114:LYS:O	2.66	0.43
26:BE:142:ALA:O	26:BE:143:LEU:HD23	2.19	0.43
28:BG:83:THR:O	28:BG:84:LYS:HB3	2.19	0.43
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.48	0.43
32:BK:88:ASN:ND2	32:BK:90:ASN:N	2.66	0.43
34:BM:53:MET:O	34:BM:56:ALA:HB3	2.18	0.43
34:BM:78:LEU:O	34:BM:80:VAL:N	2.51	0.43
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.66	0.43
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.51	0.43
37:BP:47:ILE:HA	37:BP:96:LEU:HB2	1.99	0.43
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.16	0.43
41:BT:29:THR:CB	41:BT:86:THR:HG22	2.47	0.43
42:BU:24:VAL:HG22	42:BU:35:VAL:HG22	2.01	0.43
43:BV:29:ILE:HG12	43:BV:30:ILE:N	2.34	0.43
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.19	0.43
47:BZ:52:PHE:CE2	47:BZ:53:MET:SD	3.11	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1012:A:C5	53:CA:1013:G:N7	2.86	0.43
53:CA:1108:G:OP1	3:CC:175:HIS:ND1	2.44	0.43
53:CA:1281:C:H5'	53:CA:1282:C:H5	1.83	0.43
53:CA:1319:A:C6	53:CA:1323:G:C4	3.06	0.43
53:CA:1410:A:H2'	53:CA:1411:C:C6	2.53	0.43
53:CA:182:A:C4	53:CA:184:G:N7	2.87	0.43
53:CA:355:C:H2'	53:CA:356:A:O4'	2.18	0.43
53:CA:36:C:OP1	12:CL:119:LYS:HE3	2.19	0.43
53:CA:428:G:H1'	53:CA:430:A:C8	2.53	0.43
53:CA:642:A:HO2'	53:CA:643:C:H6	1.49	0.43
53:CA:780:A:C2	53:CA:803:G:C6	3.07	0.43
2:CB:133:ALA:HA	2:CB:137:THR:CG2	2.48	0.43
53:CA:830:G:H5'	2:CB:22:TRP:HE1	1.84	0.43
4:CD:190:LEU:C	4:CD:190:LEU:HD23	2.38	0.43
5:CE:114:LEU:HD13	5:CE:122:VAL:HG11	2.00	0.43
5:CE:80:LEU:N	5:CE:121:ASN:HD21	2.16	0.43
54:CG:77:ARG:HA	54:CG:77:ARG:HD3	1.70	0.43
55:CM:47:LEU:HD23	55:CM:48:SER:N	2.33	0.43
20:CT:61:ALA:O	20:CT:67:HIS:HA	2.18	0.43
48:D0:53:VAL:O	48:D0:54:ILE:O	2.37	0.43
57:DA:1045:C:H4'	57:DA:1047:G:C4	2.53	0.43
57:DA:1312:U:C2	57:DA:1603:A:N1	2.86	0.43
57:DA:1745:A:N3	57:DA:1746:A:C8	2.86	0.43
57:DA:1999:C:H4'	57:DA:2723:C:O2	2.18	0.43
57:DA:1649:G:N1	57:DA:2009:A:C6	2.86	0.43
57:DA:203:A:H3'	57:DA:204:A:C8	2.53	0.43
57:DA:2104:C:O2	57:DA:2105:U:C5	2.56	0.43
57:DA:2269:G:C5	57:DA:2270:A:N7	2.86	0.43
57:DA:2303:G:N1	57:DA:2314:A:C5	2.86	0.43
57:DA:2407:A:C6	57:DA:2408:U:O4	2.71	0.43
57:DA:250:G:O6	57:DA:386:G:N2	2.44	0.43
57:DA:2563:U:C1'	57:DA:2566:A:N6	2.81	0.43
57:DA:2648:G:C4	57:DA:2673:G:N2	2.86	0.43
57:DA:301:G:C8	57:DA:334:C:C2	3.05	0.43
57:DA:2:G:C2	57:DA:3:U:C2	3.06	0.43
57:DA:704:G:H1'	57:DA:727:A:H61	1.82	0.43
57:DA:775:G:O6	57:DA:787:C:H2'	2.19	0.43
57:DA:91:A:H1'	57:DA:92:U:C6	2.53	0.43
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	2.19	0.43
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.48	0.43
57:DA:995:C:C2	31:DJ:3:THR:HG23	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:63:VAL:HG12	32:DK:64:ARG:CD	2.47	0.43
32:DK:87:LEU:HB3	32:DK:94:PRO:HA	2.01	0.43
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ2	1.84	0.43
36:DO:41:ALA:O	36:DO:43:ASN:N	2.45	0.43
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.18	0.43
37:DP:51:ASN:O	37:DP:52:ARG:HD3	2.19	0.43
39:DR:37:GLU:HB2	39:DR:53:PHE:CG	2.53	0.43
43:DV:21:ARG:HD3	43:DV:87:GLN:HG2	2.01	0.43
1:AA:1123:U:H5''	1:AA:1124:G:OP2	2.19	0.43
1:AA:173:U:C2	1:AA:197:A:N1	2.86	0.43
1:AA:282:A:C2	1:AA:283:U:H1'	2.54	0.43
1:AA:701:U:O2'	1:AA:702:A:P	2.76	0.43
1:AA:737:C:H2'	1:AA:738:C:H6	1.83	0.43
2:AB:67:LEU:HB3	2:AB:160:LEU:HD12	2.00	0.43
2:AB:84:LEU:HG	2:AB:84:LEU:O	2.18	0.43
8:AH:93:LYS:HE3	8:AH:116:ARG:NH1	2.32	0.43
1:AA:1371:G:OP2	9:AI:12:LYS:HD3	2.17	0.43
16:AP:71:VAL:O	16:AP:75:ILE:HG13	2.18	0.43
17:AQ:58:VAL:HG23	17:AQ:77:VAL:HG22	2.00	0.43
17:AQ:58:VAL:HG22	17:AQ:59:GLU:N	2.33	0.43
48:B0:48:TYR:CD2	48:B0:49:ARG:HG3	2.52	0.43
22:BA:1055:G:H3'	22:BA:1056:G:H8	1.83	0.43
22:BA:1343:G:C4	22:BA:1344:U:C5	3.06	0.43
22:BA:1392:A:N6	22:BA:1393:A:N6	2.67	0.43
22:BA:1498:C:O2'	22:BA:1499:C:H6	2.00	0.43
22:BA:1696:G:H5''	22:BA:1696:G:C8	2.48	0.43
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.32	0.43
22:BA:2380:C:H2'	22:BA:2381:A:H8	1.84	0.43
22:BA:2554:U:C4	22:BA:2555:U:O4	2.71	0.43
22:BA:2572:A:HO2'	22:BA:2573:C:P	2.41	0.43
22:BA:2592:G:C5	22:BA:2593:U:C4	3.07	0.43
22:BA:959:A:C6	22:BA:960:A:N1	2.87	0.43
24:BC:67:LYS:O	24:BC:68:ARG:HB2	2.18	0.43
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.34	0.43
28:BG:175:LYS:HD3	28:BG:175:LYS:HA	1.81	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
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
32:BK:85:VAL:HG11	32:BK:115:ILE:HD11	1.99	0.43
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CZ	2.36	0.43
40:BS:45:VAL:HG22	40:BS:46:LEU:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:28:GLU:HB3	44:BW:31:LEU:CG	2.48	0.43
53:CA:1370:G:H2'	53:CA:1371:G:C8	2.53	0.43
53:CA:255:G:H4'	17:CQ:18:LYS:HB2	1.99	0.43
53:CA:276:G:O2'	53:CA:277:C:C5'	2.67	0.43
53:CA:282:A:H2'	53:CA:283:U:H6	1.83	0.43
53:CA:216:U:C5'	53:CA:464:U:H4'	2.48	0.43
53:CA:661:G:C2	53:CA:662:U:C6	3.07	0.43
53:CA:754:C:C2'	53:CA:755:G:H5'	2.48	0.43
53:CA:78:A:C6	53:CA:79:G:C6	3.07	0.43
53:CA:953:G:C6	53:CA:954:G:C6	3.06	0.43
53:CA:960:U:C4'	53:CA:961:U:H5''	2.48	0.43
4:CD:96:ARG:O	4:CD:100:VAL:HG23	2.18	0.43
9:CI:117:LEU:CD2	9:CI:123:ARG:HD3	2.49	0.43
53:CA:1308:U:OP1	55:CM:95:PRO:HB3	2.18	0.43
14:CN:64:ARG:HD3	14:CN:77:GLY:O	2.18	0.43
56:CP:4:ILE:HA	56:CP:20:VAL:O	2.19	0.43
50:D2:1:MET:HG3	50:D2:2:LYS:N	2.34	0.43
57:DA:116:C:H5''	57:DA:128:C:N4	2.33	0.43
57:DA:1285:A:C6	57:DA:1329:U:C5	3.06	0.43
57:DA:1363:C:H2'	57:DA:1364:G:O4'	2.19	0.43
57:DA:1345:C:C5'	57:DA:1396:U:O4	2.66	0.43
57:DA:1512:C:C4	57:DA:1513:U:C4	3.07	0.43
57:DA:1654:A:O2'	57:DA:1655:A:O5'	2.36	0.43
57:DA:1839:G:O2'	57:DA:1840:G:H5'	2.19	0.43
57:DA:2094:A:H2'	57:DA:2095:A:H8	1.83	0.43
57:DA:2108:A:C8	57:DA:2108:A:OP2	2.72	0.43
57:DA:2303:G:C6	57:DA:2314:A:N6	2.86	0.43
57:DA:2314:A:H2'	57:DA:2315:G:C8	2.53	0.43
57:DA:2342:C:O2'	57:DA:2374:C:H5''	2.18	0.43
57:DA:2425:A:H1'	57:DA:2427:C:C4	2.54	0.43
57:DA:2440:C:C2	57:DA:2441:U:H1'	2.53	0.43
57:DA:2460:U:H2'	57:DA:2461:A:O4'	2.19	0.43
57:DA:2686:G:C5	57:DA:2687:U:C4	3.06	0.43
57:DA:297:G:H5''	42:DU:84:PHE:CB	2.36	0.43
57:DA:426:C:C2'	57:DA:427:U:H5'	2.48	0.43
57:DA:448:U:H4'	57:DA:449:A:OP2	2.18	0.43
57:DA:455:C:N3	57:DA:473:G:H4'	2.33	0.43
57:DA:590:A:C4	57:DA:591:U:C5	3.06	0.43
57:DA:753:A:O2'	57:DA:754:U:H5'	2.19	0.43
57:DA:824:U:C4	57:DA:825:A:N7	2.86	0.43
57:DA:828:U:P	57:DA:2068:U:C5	3.12	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:996:A:C5	57:DA:1160:G:C2	3.06	0.43
58:DB:42:C:O2	59:DF:89:THR:N	2.52	0.43
24:DC:123:ILE:O	24:DC:123:ILE:HG23	2.18	0.43
24:DC:69:ASN:O	24:DC:70:LYS:C	2.57	0.43
25:DD:193:VAL:O	25:DD:194:PRO:O	2.36	0.43
59:DF:43:ILE:HG23	59:DF:44:ALA:N	2.25	0.43
28:DG:11:PRO:HD2	28:DG:14:VAL:HG11	2.01	0.43
29:DH:50:ARG:HG3	29:DH:54:LEU:HG	2.01	0.43
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	2.00	0.43
34:DM:51:ARG:HB2	34:DM:51:ARG:HE	1.65	0.43
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	2.01	0.43
35:DN:52:ILE:O	35:DN:56:LYS:HB2	2.17	0.43
38:DQ:43:GLN:O	38:DQ:44:TYR:C	2.57	0.43
39:DR:33:VAL:O	39:DR:61:ALA:HB3	2.18	0.43
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.99	0.43
40:DS:28:LYS:O	40:DS:29:VAL:HG23	2.19	0.43
40:DS:50:VAL:O	40:DS:53:SER:HB3	2.19	0.43
43:DV:79:ARG:CZ	43:DV:79:ARG:HB3	2.48	0.43
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	2.00	0.43
1:AA:1108:G:OP1	3:AC:175:HIS:HB2	2.18	0.43
1:AA:517:G:O2'	1:AA:530:G:H4'	2.19	0.43
1:AA:558:G:C5	1:AA:559:A:C2	3.07	0.43
1:AA:787:A:C5	1:AA:788:U:C5	3.07	0.43
1:AA:792:A:C4	1:AA:794:A:C6	3.07	0.43
2:AB:202:ASN:HB3	2:AB:208:ALA:HB2	2.00	0.43
2:AB:209:VAL:HG23	2:AB:210:THR:N	2.31	0.43
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.26	0.43
7:AG:108:ARG:HH21	7:AG:118:ARG:HH22	1.67	0.43
12:AL:101:LEU:C	12:AL:103:CYS:H	2.22	0.43
13:AM:3:ILE:O	13:AM:5:GLY:N	2.52	0.43
14:AN:62:ARG:O	14:AN:63:CYS:C	2.55	0.43
16:AP:33:ILE:O	16:AP:34:GLU:HB3	2.19	0.43
20:AT:15:LYS:HD3	20:AT:15:LYS:C	2.38	0.43
22:BA:1079:C:C2	22:BA:1080:A:C8	3.07	0.43
22:BA:1851:U:C4	22:BA:1852:U:C4	3.07	0.43
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.67	0.43
22:BA:858:G:C4	22:BA:2268:A:C2	3.06	0.43
22:BA:2438:U:O2'	22:BA:2440:C:OP1	2.31	0.43
22:BA:24:G:O2'	40:BS:77:ASP:HB3	2.19	0.43
22:BA:2823:A:H2'	22:BA:2824:C:H5'	2.01	0.43
22:BA:28:A:C4	22:BA:513:A:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:417:C:H2'	22:BA:418:C:C6	2.54	0.43
22:BA:735:A:H3'	22:BA:736:C:H6	1.83	0.43
22:BA:669:G:C4	22:BA:801:G:C6	3.07	0.43
22:BA:675:A:C4	22:BA:804:A:C2	3.07	0.43
23:BB:22:U:H2'	23:BB:23:G:C8	2.53	0.43
24:BC:18:VAL:O	24:BC:18:VAL:HG13	2.18	0.43
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.53	0.43
28:BG:1:SER:HA	28:BG:5:LYS:HG3	2.00	0.43
29:BH:33:GLN:HE21	29:BH:33:GLN:HB2	1.59	0.43
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
31:BJ:49:ASP:HB2	31:BJ:114:LEU:HD21	2.00	0.43
22:BA:666:A:H4'	33:BL:48:ARG:HD2	2.01	0.43
33:BL:55:MET:HE2	33:BL:56:PRO:HD3	1.99	0.43
35:BN:116:VAL:HG22	35:BN:116:VAL:O	2.17	0.43
38:BQ:91:ARG:HD3	39:BR:11:GLN:HB2	2.00	0.43
39:BR:83:TYR:C	39:BR:83:TYR:CD1	2.91	0.43
43:BV:68:LYS:O	43:BV:69:GLU:O	2.36	0.43
44:BW:28:GLU:CG	44:BW:29:SER:N	2.81	0.43
47:BZ:39:ASP:OD2	47:BZ:44:ARG:NH1	2.52	0.43
53:CA:1008:U:C4	53:CA:1009:U:C4	3.07	0.43
53:CA:1026:G:H22	53:CA:1036:A:H61	1.66	0.43
53:CA:1217:C:O2'	53:CA:1218:C:C5'	2.67	0.43
53:CA:1408:A:N1	53:CA:1494:G:C5	2.87	0.43
53:CA:168:G:C6	53:CA:169:C:C5	3.07	0.43
53:CA:257:G:C2	53:CA:270:A:N1	2.87	0.43
53:CA:295:C:C6	53:CA:296:U:H5	2.37	0.43
53:CA:673:A:H1'	18:CR:63:TYR:HE2	1.82	0.43
53:CA:794:A:C8	53:CA:794:A:H5''	2.44	0.43
53:CA:80:A:H3'	53:CA:81:A:C4'	2.49	0.43
53:CA:825:A:H2'	53:CA:826:C:C6	2.54	0.43
53:CA:825:A:H2'	53:CA:826:C:H6	1.82	0.43
53:CA:861:G:C6	53:CA:862:C:C4	3.06	0.43
53:CA:854:U:H3'	53:CA:871:U:H3	1.84	0.43
3:CC:113:LYS:HE3	3:CC:184:ASN:HD21	1.83	0.43
53:CA:547:A:OP2	4:CD:1:ALA:HB3	2.19	0.43
54:CG:113:LYS:HE2	54:CG:113:LYS:HB3	1.88	0.43
54:CG:85:GLN:HE21	54:CG:85:GLN:HB3	1.56	0.43
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.33	0.43
10:CJ:59:LYS:HG3	10:CJ:59:LYS:H	1.64	0.43
55:CM:41:ASP:O	55:CM:42:VAL:HB	2.18	0.43
14:CN:1:ALA:HA	14:CN:67:GLY:C	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1027:A:N6	57:DA:1126:A:H1'	2.33	0.43
57:DA:1036:G:C5	57:DA:1120:G:C6	3.07	0.43
57:DA:1136:G:O2'	57:DA:2038:G:O2'	2.32	0.43
57:DA:1409:U:H6	57:DA:1409:U:O5'	2.02	0.43
57:DA:1737:G:N7	57:DA:1738:G:O6	2.52	0.43
57:DA:203:A:H3'	57:DA:204:A:H8	1.84	0.43
57:DA:2217:G:H2'	57:DA:2218:G:C8	2.47	0.43
57:DA:228:C:H4'	57:DA:229:C:H6	1.83	0.43
57:DA:2638:G:H1'	57:DA:2778:A:H62	1.83	0.43
57:DA:279:A:N6	57:DA:280:U:N3	2.67	0.43
57:DA:2843:G:C2	57:DA:2875:C:N3	2.87	0.43
57:DA:327:G:H2'	57:DA:328:U:O4'	2.18	0.43
57:DA:465:G:O4'	50:D2:16:HIS:CD2	2.71	0.43
57:DA:54:G:C6	57:DA:117:G:N2	2.87	0.43
57:DA:627:A:O2'	57:DA:628:G:P	2.76	0.43
57:DA:629:G:N2	57:DA:639:U:O3'	2.51	0.43
57:DA:779:U:OP1	24:DC:48:ILE:HG13	2.19	0.43
25:DD:172:VAL:HG12	25:DD:172:VAL:O	2.18	0.43
29:DH:68:ARG:HD3	29:DH:71:LYS:HB2	2.00	0.43
30:DI:102:ARG:HG2	30:DI:141:ASP:O	2.17	0.43
57:DA:1287:A:OP1	35:DN:103:ARG:HD2	2.17	0.43
35:DN:24:MET:HG2	35:DN:44:LEU:CD2	2.43	0.43
36:DO:2:ASP:O	36:DO:4:LYS:N	2.51	0.43
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.54	0.43
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.49	0.43
1:AA:115:G:H4'	1:AA:116:A:O5'	2.18	0.43
1:AA:184:G:H2'	1:AA:185:U:C6	2.54	0.43
1:AA:335:C:H2'	1:AA:336:A:C8	2.54	0.43
1:AA:342:C:H2'	1:AA:343:U:H5'	1.99	0.43
1:AA:429:U:C3'	4:AD:8:LEU:HD23	2.49	0.43
1:AA:479:U:O2'	1:AA:480:U:H5'	2.19	0.43
1:AA:753:A:H4'	1:AA:754:C:C5'	2.49	0.43
2:AB:141:GLU:O	2:AB:144:GLU:HB2	2.19	0.43
2:AB:68:PHE:CD2	2:AB:83:ALA:HB1	2.53	0.43
5:AE:148:SER:HA	5:AE:149:PRO:HD2	1.83	0.43
5:AE:60:GLN:C	5:AE:62:ALA:H	2.21	0.43
7:AG:144:ALA:C	7:AG:146:ALA:N	2.72	0.43
8:AH:8:ASP:O	8:AH:9:MET:C	2.57	0.43
12:AL:43:LYS:CB	12:AL:44:PRO:CD	2.90	0.43
16:AP:17:TYR:CD1	16:AP:17:TYR:N	2.86	0.43
16:AP:48:GLU:CG	16:AP:49:GLY:N	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.56	0.43
49:B1:42:VAL:HG12	49:B1:44:GLN:HB2	2.01	0.43
51:B3:21:PHE:O	51:B3:22:LYS:O	2.36	0.43
22:BA:1057:A:N3	22:BA:1082:U:C2	2.87	0.43
22:BA:1061:U:H6	22:BA:1070:A:N9	2.17	0.43
22:BA:1585:C:O5'	22:BA:1585:C:H6	2.01	0.43
22:BA:749:A:C5	22:BA:1618:A:N1	2.86	0.43
22:BA:1640:A:H2'	22:BA:1641:A:C8	2.53	0.43
22:BA:1713:A:H4'	22:BA:1714:U:OP1	2.18	0.43
22:BA:1728:C:O2'	22:BA:1729:U:C5	2.71	0.43
22:BA:2702:G:C6	22:BA:2703:C:C4	3.07	0.43
22:BA:2778:A:HO2'	22:BA:2779:U:P	2.41	0.43
22:BA:544:C:H2'	22:BA:544:C:O2	2.17	0.43
22:BA:750:A:C3'	22:BA:751:A:H5''	2.48	0.43
22:BA:783:A:H2'	22:BA:783:A:H8	1.35	0.43
22:BA:847:U:H2'	22:BA:848:C:H6	1.83	0.43
23:BB:24:G:C6	23:BB:56:G:C2	3.07	0.43
23:BB:90:C:OP1	34:BM:16:ARG:HB3	2.18	0.43
26:BE:28:VAL:O	26:BE:32:VAL:HG13	2.19	0.43
27:BF:30:VAL:HG13	27:BF:30:VAL:O	2.18	0.43
28:BG:31:GLU:O	28:BG:32:LEU:C	2.56	0.43
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.30	0.43
32:BK:116:ILE:HD12	32:BK:116:ILE:C	2.39	0.43
32:BK:49:ARG:O	32:BK:50:GLY:O	2.36	0.43
35:BN:28:LEU:HD23	35:BN:48:VAL:HG11	2.00	0.43
37:BP:24:THR:HG22	37:BP:87:ARG:N	2.31	0.43
37:BP:99:LEU:HD12	37:BP:99:LEU:HA	1.62	0.43
41:BT:48:GLN:NE2	41:BT:53:VAL:O	2.52	0.43
43:BV:75:GLN:HA	43:BV:75:GLN:OE1	2.19	0.43
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	2.00	0.43
53:CA:1138:G:C2'	53:CA:1139:G:OP1	2.66	0.43
53:CA:1130:A:N7	53:CA:1146:A:N6	2.67	0.43
53:CA:1255:G:H21	53:CA:1258:G:N2	2.16	0.43
53:CA:1345:U:H5''	53:CA:1346:A:OP1	2.19	0.43
53:CA:1366:C:O2'	53:CA:1367:C:C5'	2.67	0.43
53:CA:1494:G:C6	53:CA:1495:U:C4	3.07	0.43
53:CA:166:U:OP2	53:CA:166:U:C6	2.70	0.43
53:CA:17:U:H4'	53:CA:1080:A:O4'	2.19	0.43
53:CA:247:G:C6	53:CA:278:G:C6	3.06	0.43
53:CA:604:G:C5	53:CA:605:U:C4	3.07	0.43
53:CA:64:G:N7	53:CA:99:C:C4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:71:A:C2	53:CA:72:A:N7	2.87	0.43
53:CA:86:G:O2'	53:CA:87:C:OP2	2.30	0.43
4:CD:149:LYS:HZ3	4:CD:176:LYS:HD2	1.84	0.43
54:CG:103:ILE:HG22	54:CG:103:ILE:O	2.19	0.43
8:CH:104:SER:HA	8:CH:109:VAL:HG13	2.00	0.43
8:CH:54:THR:HG23	8:CH:55:LYS:N	2.29	0.43
8:CH:85:TYR:HD2	8:CH:123:GLU:HB2	1.78	0.43
9:CI:87:MET:SD	9:CI:87:MET:N	2.91	0.43
11:CK:104:PHE:N	11:CK:104:PHE:CD1	2.84	0.43
14:CN:30:ILE:O	14:CN:45:LEU:HD11	2.18	0.43
57:DA:2884:U:P	48:D0:40:HIS:HE2	2.41	0.43
49:D1:42:VAL:HG12	49:D1:42:VAL:O	2.18	0.43
57:DA:1113:U:O2'	57:DA:1114:C:C6	2.66	0.43
57:DA:1383:A:C2	57:DA:1384:A:C5	3.07	0.43
57:DA:1389:G:O2'	57:DA:1390:U:H5'	2.19	0.43
57:DA:156:A:H2'	57:DA:157:C:O4'	2.19	0.43
57:DA:1782:U:O2'	57:DA:1783:A:H5'	2.18	0.43
57:DA:1792:G:N2	57:DA:1828:G:H1'	2.33	0.43
57:DA:1965:C:H2'	57:DA:1966:A:H8	1.79	0.43
57:DA:2049:G:C6	57:DA:2050:C:C4	3.06	0.43
57:DA:2316:G:H2'	57:DA:2317:A:C8	2.54	0.43
57:DA:2344:U:HO2'	57:DA:2345:G:C5'	2.31	0.43
57:DA:2358:A:H8	57:DA:2358:A:P	2.41	0.43
57:DA:2756:U:H1'	57:DA:2757:A:C5'	2.49	0.43
57:DA:2839:G:N1	57:DA:2880:C:N4	2.67	0.43
57:DA:300:A:H1'	57:DA:333:G:H21	1.83	0.43
57:DA:375:G:N3	57:DA:375:G:H2'	2.34	0.43
57:DA:387:U:O2	57:DA:388:G:N7	2.51	0.43
57:DA:77:G:N2	57:DA:110:G:H1'	2.34	0.43
57:DA:77:G:H2'	57:DA:78:U:C6	2.54	0.43
57:DA:854:C:H2'	57:DA:855:G:C8	2.54	0.43
25:DD:174:SER:O	25:DD:175:LEU:C	2.57	0.43
25:DD:36:GLN:NE2	25:DD:38:LYS:HZ1	2.17	0.43
59:DF:102:LEU:HB3	59:DF:103:ILE:HD12	2.01	0.43
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.18	0.43
28:DG:48:THR:O	28:DG:49:LEU:CB	2.64	0.43
29:DH:2:GLN:O	29:DH:3:VAL:O	2.37	0.43
30:DI:98:GLY:HA3	30:DI:137:LEU:HA	2.01	0.43
31:DJ:29:ALA:HA	31:DJ:32:LEU:HD12	1.99	0.43
57:DA:634:C:OP2	33:DL:70:LYS:HD3	2.19	0.43
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	2.00	0.43
34:DM:36:VAL:O	34:DM:127:LYS:O	2.37	0.43
57:DA:1156:A:C8	38:DQ:50:ARG:HG2	2.54	0.43
38:DQ:91:ARG:NH2	39:DR:11:GLN:O	2.51	0.43
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.54	0.43
42:DU:39:ASN:O	42:DU:40:LEU:C	2.57	0.43
43:DV:4:ILE:HD11	43:DV:50:MET:HE2	2.01	0.43
45:DX:32:LEU:HD22	45:DX:32:LEU:N	2.33	0.43
46:DY:4:LYS:HB2	46:DY:4:LYS:HZ2	1.84	0.43
46:DY:58:ASN:C	46:DY:60:LYS:H	2.22	0.43
1:AA:103:U:H2'	1:AA:103:U:O2	2.18	0.43
1:AA:1134:G:N1	1:AA:1141:C:C4	2.87	0.43
1:AA:1154:G:N1	1:AA:1155:A:C5	2.87	0.43
1:AA:1239:A:H1'	1:AA:1241:G:C4	2.54	0.43
1:AA:1285:A:H5'	1:AA:1286:U:O4	2.19	0.43
1:AA:15:G:H2'	1:AA:16:A:C8	2.54	0.43
1:AA:647:C:H2'	1:AA:648:A:H8	1.84	0.43
1:AA:765:G:H2'	1:AA:812:G:N2	2.34	0.43
1:AA:857:C:H2'	1:AA:858:G:O4'	2.18	0.43
1:AA:917:G:C6	1:AA:918:A:C6	3.06	0.43
2:AB:30:ILE:HD11	2:AB:38:HIS:CD2	2.53	0.43
3:AC:57:GLU:HG2	3:AC:64:ARG:HB3	2.00	0.43
4:AD:101:VAL:HG13	4:AD:106:PHE:HB2	2.00	0.43
4:AD:172:VAL:HG22	4:AD:173:ASP:N	2.25	0.43
7:AG:105:GLU:HG2	7:AG:105:GLU:O	2.18	0.43
7:AG:145:GLU:HA	7:AG:148:LYS:HD2	2.00	0.43
9:AI:51:LEU:HA	9:AI:54:VAL:HG23	2.01	0.43
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	2.00	0.43
10:AJ:52:LEU:HB2	14:AN:80:ARG:HD2	1.99	0.43
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.19	0.43
11:AK:124:LYS:HE3	21:AU:34:ARG:NE	2.33	0.43
21:AU:37:TYR:HB3	21:AU:38:GLU:H	1.63	0.43
22:BA:1042:G:O2'	22:BA:1043:C:H5'	2.19	0.43
22:BA:1332:G:H2'	22:BA:1332:G:N3	2.34	0.43
22:BA:1405:U:N3	22:BA:1406:U:C4	2.87	0.43
22:BA:1450:G:C2	22:BA:1462:C:C2	3.07	0.43
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.67	0.43
22:BA:2244:U:C2'	22:BA:2245:U:H5'	2.49	0.43
22:BA:2550:G:H2'	22:BA:2551:C:C6	2.54	0.43
22:BA:2756:U:H4'	22:BA:2757:A:O5'	2.17	0.43
22:BA:2820:A:C8	22:BA:2820:A:C3'	3.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:503:A:C6	22:BA:506:G:C6	3.07	0.43
22:BA:994:C:O2	39:BR:10:LYS:NZ	2.51	0.43
24:BC:154:ALA:HB2	24:BC:161:VAL:HG23	2.01	0.43
25:BD:39:ASP:CG	25:BD:40:LEU:HD12	2.38	0.43
25:BD:56:LYS:O	25:BD:57:ALA:C	2.57	0.43
26:BE:79:ARG:O	26:BE:80:SER:C	2.56	0.43
28:BG:148:ARG:HA	28:BG:161:VAL:HG11	2.00	0.43
28:BG:2:ARG:HH21	28:BG:2:ARG:HG3	1.83	0.43
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.43
22:BA:2393:U:H5''	33:BL:62:PRO:HB3	2.00	0.43
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.69	0.43
37:BP:32:VAL:O	37:BP:33:GLU:C	2.57	0.43
45:BX:12:VAL:HG22	45:BX:28:PHE:HB2	2.00	0.43
53:CA:1276:G:H21	53:CA:1282:C:H1'	1.84	0.43
53:CA:1333:A:N6	53:CA:1334:G:C2	2.87	0.43
53:CA:181:A:HO2'	53:CA:182:A:H2	1.66	0.43
53:CA:259:G:O2'	53:CA:260:G:H5'	2.19	0.43
53:CA:374:A:H5''	53:CA:452:A:C6	2.51	0.43
53:CA:386:C:C4	53:CA:387:U:C4	3.07	0.43
53:CA:399:G:C6	53:CA:400:C:C4	3.06	0.43
53:CA:589:U:H5''	8:CH:29:SER:HB3	2.00	0.43
53:CA:675:A:H1'	11:CK:117:HIS:CE1	2.54	0.43
53:CA:867:G:H2'	53:CA:868:C:H6	1.84	0.43
53:CA:927:G:OP2	53:CA:927:G:H4'	2.19	0.43
53:CA:960:U:O2'	53:CA:1223:C:C5'	2.65	0.43
53:CA:996:A:H2'	53:CA:997:U:C5	2.54	0.43
2:CB:56:LEU:HD23	2:CB:183:PHE:CE1	2.54	0.43
2:CB:99:MET:O	2:CB:103:TRP:CB	2.67	0.43
3:CC:5:HIS:HA	3:CC:6:PRO:HD2	1.83	0.43
5:CE:11:GLN:HB3	5:CE:116:VAL:HB	2.01	0.43
6:CF:6:ILE:HD13	6:CF:62:MET:HG2	2.00	0.43
11:CK:86:LYS:HB3	11:CK:112:VAL:O	2.18	0.43
12:CL:73:LEU:HD11	12:CL:79:ILE:HG21	2.01	0.43
14:CN:8:ARG:HD2	14:CN:12:ARG:NH2	2.34	0.43
53:CA:391:G:H5''	56:CP:8:ARG:NE	2.34	0.43
14:CN:46:LYS:CE	19:CS:10:ILE:HB	2.47	0.43
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.84	0.43
49:D1:10:LEU:CD2	49:D1:20:TYR:HB3	2.47	0.43
57:DA:2371:G:O3'	49:D1:44:GLN:NE2	2.51	0.43
52:D4:16:ILE:HA	52:D4:24:ARG:O	2.19	0.43
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:117:G:H4'	57:DA:126:A:C2	2.54	0.43
57:DA:126:A:P	50:D2:19:ARG:HG3	2.59	0.43
57:DA:1388:G:HO2'	57:DA:1389:G:C5'	2.31	0.43
57:DA:1519:G:N3	57:DA:1519:G:H2'	2.33	0.43
57:DA:1571:A:H3'	57:DA:1571:A:C8	2.54	0.43
57:DA:1593:A:C6	57:DA:1594:U:C4	3.07	0.43
57:DA:1716:U:N3	57:DA:1745:A:N6	2.67	0.43
57:DA:1637:A:H5'	57:DA:1760:C:O2'	2.19	0.43
57:DA:1768:C:H2'	57:DA:1769:U:O4'	2.19	0.43
57:DA:1808:A:H3'	57:DA:1809:A:H8	1.81	0.43
57:DA:2142:A:H2'	57:DA:2144:G:P	2.59	0.43
57:DA:2249:U:H4'	57:DA:2275:C:C5	2.54	0.43
57:DA:233:A:O2'	57:DA:234:U:C6	2.67	0.43
57:DA:248:G:H5'	57:DA:250:G:N7	2.33	0.43
57:DA:2800:A:C2'	57:DA:2801:G:C4'	2.97	0.43
57:DA:2882:A:H4'	35:DN:97:ILE:HG12	2.00	0.43
57:DA:305:C:C2	57:DA:313:G:C2	3.06	0.43
57:DA:601:C:H2'	57:DA:602:A:O4'	2.18	0.43
57:DA:727:A:O2'	57:DA:728:G:O5'	2.37	0.43
57:DA:922:C:H2'	57:DA:923:G:C8	2.52	0.43
57:DA:962:G:O2'	57:DA:963:U:O5'	2.37	0.43
24:DC:52:HIS:CD2	24:DC:217:PRO:O	2.68	0.43
24:DC:44:ASN:C	24:DC:46:GLY:N	2.72	0.43
59:DF:174:PHE:CG	59:DF:175:PRO:HD2	2.54	0.43
29:DH:82:SER:O	29:DH:83:LYS:HB3	2.19	0.43
30:DI:102:ARG:HD2	30:DI:105:LEU:HB3	2.01	0.43
30:DI:96:LYS:HD2	30:DI:96:LYS:HA	1.95	0.43
31:DJ:38:GLY:O	31:DJ:40:HIS:N	2.52	0.43
33:DL:55:MET:HG3	33:DL:59:ARG:HB3	2.01	0.43
35:DN:51:LEU:HD23	35:DN:51:LEU:HA	1.88	0.43
35:DN:55:ALA:O	35:DN:80:PHE:HA	2.19	0.43
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.19	0.43
1:AA:1302:C:H6	1:AA:1302:C:H2'	1.29	0.43
1:AA:1451:U:HO2'	1:AA:1452:C:P	2.41	0.43
1:AA:431:A:N3	1:AA:431:A:H2'	2.34	0.43
1:AA:481:G:C3'	1:AA:481:G:C8	3.01	0.43
1:AA:601:G:O2'	1:AA:602:A:H5'	2.18	0.43
1:AA:675:A:H2'	1:AA:676:A:O4'	2.19	0.43
2:AB:162:VAL:HG22	2:AB:184:ALA:HB2	2.01	0.43
2:AB:165:ALA:CB	2:AB:186:VAL:HG12	2.48	0.43
2:AB:89:PHE:CE1	2:AB:153:MET:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1111:A:N1	3:AC:176:THR:HG23	2.34	0.43
1:AA:620:C:N3	4:AD:131:ILE:HG21	2.33	0.43
7:AG:107:ALA:CA	7:AG:122:GLU:HG3	2.49	0.43
14:AN:81:ILE:O	14:AN:85:GLU:HG2	2.19	0.43
16:AP:56:ARG:HD2	16:AP:56:ARG:HA	1.82	0.43
17:AQ:58:VAL:HG23	17:AQ:76:ARG:O	2.19	0.43
1:AA:263:A:P	20:AT:73:ARG:HH11	2.42	0.43
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.34	0.43
22:BA:1206:G:H2'	22:BA:1207:C:C6	2.54	0.43
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.46	0.43
22:BA:1343:G:O2'	22:BA:1384:A:N1	2.52	0.43
22:BA:1599:U:H2'	22:BA:1600:C:C6	2.54	0.43
22:BA:1909:C:C2	22:BA:1922:G:C2	3.07	0.43
22:BA:2335:A:O2'	22:BA:2336:A:C8	2.72	0.43
22:BA:2364:C:O2'	22:BA:2365:G:H5'	2.19	0.43
22:BA:1783:A:H5'	22:BA:2608:G:H4'	2.01	0.43
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.19	0.43
22:BA:26:G:C5	22:BA:27:G:C6	3.06	0.43
22:BA:275:C:N4	22:BA:276:U:C6	2.87	0.43
22:BA:2043:C:C4	22:BA:2777:G:C2	3.07	0.43
22:BA:2786:U:H2'	22:BA:2787:C:C6	2.52	0.43
22:BA:2823:A:OP2	25:BD:118:PHE:HD1	2.01	0.43
22:BA:372:G:P	45:BX:61:LYS:NZ	2.91	0.43
22:BA:370:G:C6	22:BA:424:G:C8	3.07	0.43
22:BA:756:A:H2'	22:BA:757:G:O4'	2.19	0.43
22:BA:962:G:P	63:BA:3353:HOH:O	2.77	0.43
22:BA:985:C:H6	22:BA:985:C:O5'	2.01	0.43
22:BA:2822:G:P	25:BD:115:GLY:HA3	2.58	0.43
25:BD:184:ARG:HH11	37:BP:6:GLN:CD	2.23	0.43
25:BD:186:LEU:HD12	25:BD:186:LEU:HA	1.74	0.43
25:BD:29:VAL:HB	25:BD:98:VAL:CG2	2.49	0.43
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	2.01	0.43
27:BF:172:PHE:O	27:BF:173:ASP:C	2.57	0.43
29:BH:24:GLY:O	29:BH:28:ASN:HB2	2.19	0.43
31:BJ:4:PHE:CG	31:BJ:5:THR:N	2.87	0.43
32:BK:63:VAL:HG13	32:BK:103:VAL:HG12	1.97	0.43
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.18	0.43
38:BQ:75:TYR:CE2	38:BQ:79:ILE:HG13	2.54	0.43
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.33	0.43
23:BB:77:U:P	43:BV:21:ARG:HH22	2.42	0.43
53:CA:71:A:C6	53:CA:100:G:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1105:A:H2'	53:CA:1106:G:C8	2.54	0.43
53:CA:1230:C:H5''	53:CA:1230:C:H6	1.83	0.43
53:CA:1328:C:H2'	53:CA:1329:A:H8	1.84	0.43
53:CA:1401:G:H2'	53:CA:1402:C:H6	1.84	0.43
53:CA:1494:G:N1	53:CA:1495:U:C4	2.87	0.43
53:CA:223:A:H2'	53:CA:224:U:H6	1.83	0.43
53:CA:293:G:H22	53:CA:305:G:H1'	1.83	0.43
53:CA:560:A:H4'	53:CA:561:U:C5'	2.35	0.43
53:CA:570:G:H2'	53:CA:570:G:N3	2.34	0.43
53:CA:666:G:C2	53:CA:667:G:C8	3.07	0.43
53:CA:774:G:N2	53:CA:775:G:H1'	2.34	0.43
53:CA:981:U:OP2	53:CA:982:U:H3'	2.18	0.43
2:CB:17:HIS:HB2	2:CB:37:VAL:HG21	2.01	0.43
4:CD:125:ASN:N	4:CD:141:VAL:O	2.48	0.43
4:CD:141:VAL:CG1	4:CD:142:VAL:N	2.82	0.43
6:CF:8:PHE:CZ	6:CF:60:VAL:HB	2.54	0.43
53:CA:600:A:OP2	8:CH:87:ARG:HG2	2.19	0.43
12:CL:66:ILE:HD13	12:CL:73:LEU:CD1	2.47	0.43
55:CM:11:HIS:O	55:CM:12:LYS:HG2	2.19	0.43
57:DA:1060:U:H5''	57:DA:1061:U:OP1	2.19	0.43
57:DA:1286:A:N6	57:DA:1329:U:C2	2.87	0.43
57:DA:1337:G:N2	57:DA:1338:G:H1'	2.33	0.43
57:DA:1358:G:H1'	57:DA:1374:G:N2	2.34	0.43
57:DA:1387:A:N6	57:DA:1401:G:N1	2.67	0.43
57:DA:143:C:O2'	57:DA:144:A:O4'	2.32	0.43
57:DA:1587:G:H21	57:DA:1588:G:H1'	1.83	0.43
57:DA:1636:U:H2'	57:DA:1637:A:C8	2.54	0.43
57:DA:1734:G:O2'	57:DA:1735:A:H8	2.00	0.43
57:DA:1776:G:N2	57:DA:1789:A:H1'	2.34	0.43
57:DA:2188:U:C4	57:DA:2189:U:C4	3.07	0.43
57:DA:2060:A:O4'	57:DA:2502:G:H1'	2.19	0.43
57:DA:2592:G:C5	57:DA:2593:U:C5	3.07	0.43
57:DA:319:G:C6	57:DA:333:G:C6	3.07	0.43
57:DA:224:U:C5	57:DA:420:C:H4'	2.50	0.43
57:DA:705:A:H2'	57:DA:706:A:H8	1.82	0.43
57:DA:82:U:C2	57:DA:83:A:C8	3.07	0.43
57:DA:855:G:C2'	44:DW:23:LYS:HD3	2.49	0.43
57:DA:946:C:O2'	57:DA:947:A:H5'	2.18	0.43
57:DA:956:G:C2	57:DA:962:G:O6	2.72	0.43
57:DA:994:C:OP1	38:DQ:52:ARG:NH2	2.52	0.43
58:DB:23:G:N2	58:DB:61:G:C2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:69:G:C3'	58:DB:70:C:H6	2.14	0.43
24:DC:9:SER:HA	24:DC:10:PRO:HD2	1.89	0.43
57:DA:2052:A:C8	25:DD:146:ILE:HD11	2.54	0.43
26:DE:170:ARG:CZ	26:DE:176:ASP:OD2	2.66	0.43
59:DF:12:VAL:CG1	59:DF:16:MET:HG3	2.49	0.43
59:DF:141:ASP:C	59:DF:143:ASP:H	2.23	0.43
59:DF:48:LEU:O	59:DF:52:ALA:HB2	2.19	0.43
59:DF:65:LEU:HD11	59:DF:87:LYS:NZ	2.34	0.43
29:DH:116:ARG:HH21	29:DH:118:PRO:HA	1.83	0.43
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.34	0.43
31:DJ:132:HIS:O	31:DJ:135:GLN:HB2	2.18	0.43
32:DK:30:ARG:HB3	32:DK:31:ARG:H	1.65	0.43
57:DA:637:A:P	33:DL:128:THR:HG21	2.59	0.43
34:DM:100:LYS:HD3	34:DM:100:LYS:HA	1.88	0.43
57:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.18	0.43
37:DP:44:GLY:HA3	37:DP:60:VAL:CG1	2.49	0.43
37:DP:54:LEU:HD12	37:DP:76:HIS:CB	2.48	0.43
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	2.01	0.43
41:DT:29:THR:HB	41:DT:86:THR:CA	2.49	0.43
45:DX:2:ARG:CD	45:DX:32:LEU:HD23	2.49	0.43
45:DX:44:ARG:HB3	45:DX:44:ARG:NH1	2.34	0.43
47:DZ:29:ARG:HH22	47:DZ:30:ARG:NH2	2.16	0.43
1:AA:1045:C:OP2	1:AA:1045:C:H6	2.01	0.42
1:AA:104:G:O2'	1:AA:105:G:H5'	2.19	0.42
1:AA:1160:G:O2'	1:AA:1161:C:H6	2.02	0.42
1:AA:1055:A:N6	1:AA:1206:G:C5	2.87	0.42
1:AA:335:C:O2'	1:AA:1433:A:N3	2.42	0.42
1:AA:407:U:H2'	1:AA:408:A:H8	1.83	0.42
1:AA:27:G:C5	1:AA:557:G:C2	3.07	0.42
1:AA:591:U:H2'	1:AA:592:G:H8	1.83	0.42
1:AA:723:U:H5''	21:AU:48:LYS:HG2	1.99	0.42
2:AB:103:TRP:HE1	2:AB:150:ILE:HD11	1.84	0.42
2:AB:69:VAL:HG23	2:AB:160:LEU:HD11	2.02	0.42
2:AB:40:ILE:O	2:AB:41:ASN:HB2	2.18	0.42
2:AB:77:GLU:HA	2:AB:80:LYS:HB3	2.00	0.42
3:AC:33:ASP:O	3:AC:37:LYS:CB	2.67	0.42
4:AD:130:ASN:HB3	4:AD:131:ILE:H	1.73	0.42
4:AD:191:SER:O	4:AD:192:ALA:CB	2.67	0.42
7:AG:14:ASP:OD2	7:AG:14:ASP:C	2.58	0.42
7:AG:78:ARG:HA	7:AG:82:SER:O	2.18	0.42
8:AH:85:TYR:CE2	8:AH:123:GLU:HB2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:63:LYS:HB2	8:AH:70:VAL:HG21	2.01	0.42
10:AJ:52:LEU:HD22	10:AJ:59:LYS:HA	2.00	0.42
11:AK:24:ALA:HB2	11:AK:29:THR:HG23	2.01	0.42
14:AN:40:ARG:NH1	14:AN:44:VAL:HG21	2.33	0.42
12:AL:6:LEU:HB3	17:AQ:33:TYR:CZ	2.54	0.42
18:AR:53:GLN:O	18:AR:56:ARG:HB3	2.19	0.42
22:BA:1091:G:O2'	22:BA:1092:C:O5'	2.37	0.42
22:BA:1115:G:O2'	22:BA:1116:G:P	2.76	0.42
22:BA:1349:C:O5'	22:BA:1349:C:H6	2.02	0.42
22:BA:1810:A:H2'	22:BA:1811:G:O4'	2.18	0.42
22:BA:1840:G:C2	22:BA:1841:U:C2	3.07	0.42
22:BA:18:U:C2'	22:BA:19:A:H5'	2.48	0.42
22:BA:2548:U:O2	32:BK:23:LYS:NZ	2.50	0.42
22:BA:26:G:C6	22:BA:27:G:C6	3.07	0.42
22:BA:2839:G:C5	22:BA:2840:C:C5	3.07	0.42
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.49	0.42
22:BA:541:A:H2'	22:BA:542:C:O4'	2.19	0.42
22:BA:974:G:H8	22:BA:990:A:H62	1.65	0.42
23:BB:53:A:O2'	23:BB:54:G:H5'	2.19	0.42
24:BC:27:LYS:HA	24:BC:28:PRO:HD2	1.88	0.42
25:BD:149:ASN:O	25:BD:151:THR:N	2.51	0.42
25:BD:151:THR:CG2	25:BD:152:PRO:N	2.82	0.42
25:BD:125:TRP:CG	25:BD:160:LYS:HB3	2.53	0.42
26:BE:119:ILE:HD13	26:BE:119:ILE:H	1.83	0.42
26:BE:180:LEU:HA	26:BE:180:LEU:HD23	1.73	0.42
26:BE:48:THR:HG23	26:BE:51:GLU:CD	2.39	0.42
26:BE:79:ARG:O	26:BE:81:GLY:N	2.52	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.01	0.42
31:BJ:32:LEU:O	31:BJ:36:LEU:HB2	2.19	0.42
32:BK:38:ILE:CD1	32:BK:112:PHE:HZ	2.30	0.42
32:BK:43:ILE:HD13	32:BK:43:ILE:N	2.33	0.42
33:BL:131:ALA:O	33:BL:132:ARG:C	2.55	0.42
34:BM:43:ALA:HA	34:BM:46:ILE:HG12	2.00	0.42
34:BM:78:LEU:C	34:BM:80:VAL:H	2.22	0.42
36:BO:8:ILE:O	36:BO:12:THR:N	2.49	0.42
37:BP:9:GLN:C	37:BP:11:GLN:H	2.22	0.42
39:BR:61:ALA:HB2	39:BR:98:ILE:HA	2.00	0.42
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.19	0.42
44:BW:28:GLU:CB	44:BW:31:LEU:HD11	2.48	0.42
53:CA:1150:A:O3'	10:CJ:43:PRO:HA	2.19	0.42
53:CA:1157:A:C6	53:CA:1180:A:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1348:U:O2'	53:CA:1349:A:H5'	2.19	0.42
53:CA:1480:A:H2'	53:CA:1481:U:H6	1.84	0.42
53:CA:444:G:C2	53:CA:445:G:C8	3.07	0.42
53:CA:515:G:N2	53:CA:537:G:C4	2.87	0.42
53:CA:77:A:H2'	53:CA:78:A:O4'	2.19	0.42
53:CA:960:U:H4'	53:CA:961:U:O5'	2.18	0.42
2:CB:8:MET:HB2	2:CB:9:LEU:HD23	2.00	0.42
3:CC:93:ILE:HG13	3:CC:93:ILE:O	2.19	0.42
4:CD:8:LEU:O	4:CD:12:ARG:HB2	2.19	0.42
5:CE:148:SER:H	5:CE:151:MET:CE	2.32	0.42
5:CE:15:ILE:HD11	5:CE:37:VAL:HG21	2.00	0.42
6:CF:2:ARG:HG2	6:CF:4:TYR:OH	2.19	0.42
9:CI:49:GLN:HA	9:CI:52:GLU:HG2	1.99	0.42
55:CM:80:MET:HE2	55:CM:80:MET:HB2	1.89	0.42
15:CO:69:LEU:HD11	15:CO:77:TYR:HA	2.01	0.42
56:CP:38:PHE:HE2	56:CP:51:ARG:HB3	1.84	0.42
18:CR:33:THR:C	18:CR:35:SER:H	2.23	0.42
57:DA:1063:G:O2'	57:DA:1064:C:H6	2.00	0.42
57:DA:1168:G:C2	57:DA:1182:G:C2	3.07	0.42
57:DA:1479:G:H2'	57:DA:1480:C:O4'	2.19	0.42
57:DA:1779:U:C5	57:DA:1784:A:N7	2.82	0.42
57:DA:1972:G:H2'	57:DA:1973:G:H8	1.84	0.42
57:DA:2004:G:N7	57:DA:2005:A:N7	2.67	0.42
57:DA:2236:U:H2'	57:DA:2237:G:O4'	2.18	0.42
57:DA:1783:A:C5'	57:DA:2608:G:H4'	2.49	0.42
57:DA:2653:U:N3	57:DA:2654:A:N6	2.66	0.42
57:DA:2835:A:N6	57:DA:2879:A:C4	2.87	0.42
57:DA:355:U:H2'	57:DA:356:G:H8	1.84	0.42
57:DA:48:G:N3	57:DA:48:G:H2'	2.33	0.42
57:DA:621:A:C2'	57:DA:622:G:O5'	2.66	0.42
57:DA:63:A:C8	57:DA:64:A:N7	2.87	0.42
57:DA:864:G:C6	57:DA:865:C:C4	3.07	0.42
57:DA:962:G:O2'	57:DA:963:U:C5'	2.66	0.42
24:DC:75:ALA:HB2	24:DC:95:TYR:CG	2.53	0.42
57:DA:2724:U:H5''	25:DD:123:LYS:NZ	2.34	0.42
59:DF:177:ARG:CD	59:DF:178:LYS:H	2.30	0.42
28:DG:1:SER:C	28:DG:3:VAL:N	2.72	0.42
29:DH:109:GLU:HB3	29:DH:110:VAL:H	1.59	0.42
30:DI:72:THR:HA	30:DI:73:PRO:HD2	1.86	0.42
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.19	0.42
36:DO:69:ASP:O	36:DO:70:ALA:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:30:TRP:HD1	37:DP:39:LEU:HD12	1.83	0.42
37:DP:4:ILE:O	37:DP:4:ILE:HG22	2.19	0.42
38:DQ:23:TYR:HB2	38:DQ:28:SER:HB3	2.01	0.42
39:DR:15:SER:OG	39:DR:16:GLU:N	2.52	0.42
40:DS:17:VAL:HG21	40:DS:103:ILE:HD11	2.00	0.42
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	2.01	0.42
1:AA:1009:U:O2'	1:AA:1010:U:H5'	2.19	0.42
1:AA:1026:G:C6	1:AA:1027:C:N4	2.87	0.42
1:AA:126:G:C2'	1:AA:127:G:O5'	2.67	0.42
1:AA:375:U:C4	1:AA:376:G:N7	2.87	0.42
1:AA:558:G:H8	1:AA:558:G:O5'	2.02	0.42
1:AA:695:A:C6	1:AA:696:A:C6	3.08	0.42
1:AA:923:A:C4	1:AA:924:C:C5	3.08	0.42
4:AD:89:LEU:HD21	4:AD:199:ILE:CD1	2.49	0.42
8:AH:78:SER:HA	8:AH:84:ILE:HG12	2.01	0.42
9:AI:121:ARG:O	9:AI:122:ARG:C	2.55	0.42
10:AJ:65:TYR:HB3	14:AN:95:LEU:CD1	2.48	0.42
12:AL:79:ILE:HD12	12:AL:96:THR:CG2	2.49	0.42
14:AN:11:LYS:HB2	14:AN:11:LYS:HZ3	1.84	0.42
50:B2:34:ARG:NH1	50:B2:39:ARG:HG2	2.34	0.42
52:B4:1:MET:HE1	52:B4:24:ARG:NH2	2.34	0.42
22:BA:1006:C:P	63:BA:3781:HOH:O	2.77	0.42
22:BA:1166:G:O2'	22:BA:1167:C:H5'	2.19	0.42
22:BA:151:C:C5'	22:BA:1360:G:OP1	2.67	0.42
22:BA:165:A:H2'	22:BA:166:U:C6	2.54	0.42
22:BA:1737:G:C6	22:BA:1738:G:N1	2.87	0.42
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.54	0.42
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.35	0.42
22:BA:2136:G:O6	22:BA:2156:G:C2	2.72	0.42
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.53	0.42
22:BA:2210:U:O2	22:BA:2212:A:C8	2.72	0.42
22:BA:2219:U:H2'	22:BA:2220:U:O5'	2.19	0.42
22:BA:2063:C:O2	22:BA:2451:A:C2	2.72	0.42
22:BA:312:G:H2'	22:BA:313:G:H8	1.84	0.42
22:BA:329:G:H4'	22:BA:330:A:OP1	2.19	0.42
22:BA:341:C:C2	22:BA:342:A:C8	3.07	0.42
22:BA:478:A:N6	22:BA:480:A:N6	2.66	0.42
22:BA:792:A:C4'	22:BA:793:A:H5'	2.49	0.42
23:BB:40:U:O2'	23:BB:43:C:H5	2.01	0.42
24:BC:245:THR:C	24:BC:247:TRP:H	2.22	0.42
26:BE:124:PHE:C	26:BE:124:PHE:HD1	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	2.00	0.42
27:BF:84:ILE:HG13	27:BF:84:ILE:O	2.20	0.42
29:BH:50:ARG:O	29:BH:54:LEU:HB2	2.19	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
31:BJ:74:TYR:OH	31:BJ:100:VAL:HG13	2.18	0.42
33:BL:73:ILE:C	33:BL:105:ILE:HD13	2.40	0.42
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.49	0.42
37:BP:15:ASP:C	37:BP:15:ASP:OD1	2.57	0.42
39:BR:43:ASN:HA	39:BR:43:ASN:HD22	1.57	0.42
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.39	0.42
40:BS:73:LYS:CA	40:BS:73:LYS:HE3	2.49	0.42
53:CA:1005:A:C4	53:CA:1006:G:H1'	2.53	0.42
53:CA:1151:A:OP1	10:CJ:43:PRO:HA	2.19	0.42
53:CA:1182:G:C3'	53:CA:1183:U:H5'	2.49	0.42
53:CA:1186:G:N2	53:CA:1187:G:H1'	2.33	0.42
53:CA:1296:C:H1'	53:CA:1302:C:C2	2.54	0.42
53:CA:781:A:O2'	53:CA:1522:U:O2	2.35	0.42
53:CA:275:G:HO2'	53:CA:276:G:H8	1.66	0.42
53:CA:490:C:OP1	4:CD:145:ARG:NH2	2.52	0.42
53:CA:493:A:H2'	53:CA:494:G:O4'	2.19	0.42
53:CA:575:G:C6	53:CA:821:G:N7	2.87	0.42
53:CA:664:G:N2	53:CA:666:G:C8	2.87	0.42
53:CA:683:G:C2	53:CA:684:U:C2	3.08	0.42
53:CA:864:A:H5''	5:CE:89:THR:HB	2.01	0.42
53:CA:77:A:C2	53:CA:93:U:C2	3.07	0.42
53:CA:978:A:O2'	53:CA:979:C:H5'	2.19	0.42
3:CC:187:GLU:O	3:CC:188:ALA:HB2	2.20	0.42
4:CD:60:VAL:CG2	4:CD:194:ILE:CG2	2.97	0.42
4:CD:20:LEU:HD23	4:CD:20:LEU:N	2.33	0.42
5:CE:131:ASN:ND2	5:CE:132:PRO:HD2	2.27	0.42
6:CF:46:GLN:OE1	6:CF:55:HIS:O	2.37	0.42
54:CG:60:ALA:O	54:CG:61:PHE:HD2	2.01	0.42
9:CI:56:MET:O	9:CI:58:GLU:HG2	2.19	0.42
53:CA:1523:G:P	11:CK:124:LYS:NZ	2.92	0.42
14:CN:30:ILE:C	14:CN:40:ARG:HA	2.39	0.42
15:CO:84:LEU:HA	15:CO:84:LEU:HD23	1.92	0.42
17:CQ:46:HIS:CE1	17:CQ:48:GLU:HG2	2.54	0.42
17:CQ:47:ASP:HB3	17:CQ:74:LEU:HB2	2.01	0.42
20:CT:61:ALA:O	20:CT:67:HIS:CG	2.72	0.42
11:CK:110:THR:HG22	21:CU:4:LYS:HA	2.02	0.42
52:D4:9:LYS:HD3	52:D4:9:LYS:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1130:U:HO2'	57:DA:1131:G:H8	1.59	0.42
57:DA:1208:C:O2'	57:DA:1209:U:H5'	2.19	0.42
57:DA:1324:G:N2	57:DA:1328:A:N1	2.67	0.42
57:DA:1395:A:H4'	57:DA:1397:U:C4	2.54	0.42
57:DA:1607:C:H4'	57:DA:1608:A:H8	1.82	0.42
57:DA:1758:U:O2	57:DA:1758:U:O4'	2.37	0.42
57:DA:197:A:C8	57:DA:2430:A:C5	3.07	0.42
57:DA:2029:G:C2	57:DA:2033:A:N7	2.87	0.42
57:DA:2092:U:O2	57:DA:2092:U:O5'	2.37	0.42
57:DA:2145:C:H6	57:DA:2145:C:H2'	1.65	0.42
57:DA:2274:A:C5	57:DA:2276:G:C8	3.07	0.42
57:DA:2360:G:O2'	33:DL:60:ARG:HB3	2.20	0.42
57:DA:2385:C:O2'	57:DA:2386:A:O5'	2.37	0.42
57:DA:197:A:N7	57:DA:2430:A:C4	2.87	0.42
57:DA:2478:A:C8	57:DA:2529:G:C6	3.08	0.42
57:DA:2877:G:N2	57:DA:2878:U:H1'	2.35	0.42
57:DA:2881:U:O3'	35:DN:96:ARG:NE	2.52	0.42
57:DA:404:A:N3	57:DA:406:G:C6	2.88	0.42
57:DA:46:G:N1	57:DA:47:C:C4	2.86	0.42
57:DA:629:G:H21	57:DA:640:C:P	2.42	0.42
57:DA:64:A:OP1	41:DT:77:ARG:HA	2.18	0.42
57:DA:73:A:C8	57:DA:73:A:O5'	2.62	0.42
58:DB:15:A:C4	58:DB:109:A:C6	3.06	0.42
58:DB:17:C:O2'	58:DB:18:G:O4'	2.37	0.42
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.54	0.42
57:DA:1805:A:O2'	24:DC:49:THR:HA	2.20	0.42
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.42
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.39	0.42
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.49	0.42
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.34	0.42
34:DM:7:THR:C	34:DM:9:PHE:H	2.22	0.42
35:DN:13:ASN:OD1	35:DN:14:SER:N	2.52	0.42
35:DN:64:ARG:O	35:DN:67:PHE:HB3	2.19	0.42
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.83	0.42
39:DR:39:LEU:HA	39:DR:49:ILE:CG2	2.34	0.42
39:DR:83:TYR:CD2	39:DR:83:TYR:C	2.92	0.42
40:DS:59:GLU:CD	40:DS:66:ILE:HG23	2.40	0.42
1:AA:1087:G:O2'	1:AA:1088:G:C5'	2.68	0.42
1:AA:1271:A:C2	1:AA:1272:G:C5	3.07	0.42
1:AA:1272:G:C5	1:AA:1273:C:C4	3.07	0.42
1:AA:1348:U:O2'	1:AA:1349:A:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:181:A:C6	1:AA:195:A:N7	2.88	0.42
1:AA:199:A:C2	1:AA:200:G:C4	3.07	0.42
1:AA:524:G:C6	1:AA:525:C:C4	3.08	0.42
1:AA:579:A:H2'	1:AA:580:C:C6	2.54	0.42
1:AA:604:G:C2	1:AA:635:A:C2	3.08	0.42
1:AA:723:U:O2	1:AA:855:U:O3'	2.37	0.42
1:AA:652:U:O4	1:AA:752:G:C2'	2.67	0.42
1:AA:844:G:H5''	1:AA:845:A:OP1	2.20	0.42
2:AB:10:LYS:HG3	2:AB:10:LYS:H	1.68	0.42
2:AB:123:GLY:O	2:AB:125:PHE:CD2	2.72	0.42
2:AB:35:ASN:O	2:AB:37:VAL:HG12	2.19	0.42
5:AE:37:VAL:CG1	5:AE:116:VAL:HG21	2.49	0.42
8:AH:85:TYR:C	8:AH:86:LYS:HD2	2.39	0.42
8:AH:8:ASP:HA	8:AH:11:THR:HG22	2.01	0.42
9:AI:128:LYS:HD2	9:AI:129:ARG:N	2.34	0.42
13:AM:59:VAL:HG22	13:AM:59:VAL:O	2.18	0.42
13:AM:89:ARG:CB	13:AM:96:VAL:HG22	2.49	0.42
13:AM:9:PRO:O	13:AM:10:ASP:HB2	2.20	0.42
14:AN:20:PHE:C	14:AN:22:LYS:N	2.73	0.42
14:AN:63:CYS:HB2	14:AN:79:SER:CB	2.49	0.42
15:AO:57:ARG:HB3	15:AO:57:ARG:HH11	1.85	0.42
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.42	0.42
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.19	0.42
22:BA:1354:A:C8	22:BA:1355:G:C8	3.07	0.42
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.49	0.42
22:BA:1612:C:H5'	50:B2:7:PRO:HG3	2.00	0.42
22:BA:648:G:O2'	22:BA:2351:G:OP1	2.34	0.42
22:BA:2618:G:H2'	22:BA:2619:C:C6	2.54	0.42
22:BA:2786:U:O2'	22:BA:2787:C:H5'	2.19	0.42
22:BA:2820:A:H3'	22:BA:2820:A:C8	2.54	0.42
22:BA:478:A:N6	22:BA:480:A:C6	2.87	0.42
22:BA:608:A:C6	22:BA:609:A:C6	3.07	0.42
22:BA:699:A:H4'	22:BA:1634:A:N7	2.33	0.42
22:BA:950:G:C5	22:BA:951:C:C4	3.07	0.42
24:BC:175:LEU:N	24:BC:175:LEU:HD13	2.34	0.42
24:BC:158:GLY:N	24:BC:194:VAL:HG13	2.32	0.42
25:BD:109:VAL:HG22	25:BD:203:VAL:HB	1.99	0.42
25:BD:34:VAL:HG22	25:BD:94:GLN:N	2.27	0.42
26:BE:172:ALA:O	26:BE:175:ILE:HG22	2.19	0.42
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.19	0.42
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG22	2.01	0.42
32:BK:89:ASN:HA	32:BK:89:ASN:HD22	1.57	0.42
35:BN:116:VAL:O	35:BN:117:ASP:CB	2.66	0.42
37:BP:5:LYS:O	37:BP:9:GLN:HG2	2.20	0.42
38:BQ:94:LEU:C	38:BQ:96:ASP:N	2.70	0.42
44:BW:19:ARG:NH1	44:BW:22:VAL:CG1	2.79	0.42
44:BW:49:ASN:ND2	44:BW:50:VAL:N	2.67	0.42
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.45	0.42
53:CA:1006:G:N2	53:CA:1007:U:H1'	2.35	0.42
53:CA:1162:C:C2	53:CA:1175:G:N2	2.88	0.42
53:CA:1157:A:C6	53:CA:1180:A:C5	3.07	0.42
53:CA:1157:A:C5	53:CA:1180:A:C6	3.07	0.42
53:CA:1367:C:O2'	53:CA:1368:A:O4'	2.29	0.42
53:CA:218:U:H2'	53:CA:219:U:O4'	2.19	0.42
53:CA:276:G:O2'	53:CA:277:C:O5'	2.37	0.42
53:CA:54:C:H2'	53:CA:352:C:H41	1.84	0.42
53:CA:525:C:N4	53:CA:526:C:N4	2.68	0.42
53:CA:692:U:O2'	53:CA:694:A:N7	2.42	0.42
53:CA:853:C:C4	53:CA:854:U:C5	3.08	0.42
4:CD:106:PHE:CE1	4:CD:158:LEU:HD21	2.54	0.42
5:CE:13:LYS:HD3	5:CE:14:LEU:N	2.33	0.42
5:CE:155:LYS:HB3	8:CH:70:VAL:CG2	2.48	0.42
6:CF:2:ARG:HG2	6:CF:4:TYR:CZ	2.55	0.42
54:CG:22:LEU:O	54:CG:26:VAL:HG22	2.18	0.42
8:CH:37:ASN:HA	8:CH:48:PHE:CE1	2.54	0.42
11:CK:18:GLY:O	11:CK:81:LEU:HA	2.19	0.42
14:CN:20:PHE:CE1	14:CN:54:SER:HB2	2.53	0.42
15:CO:42:PHE:HB3	15:CO:52:ARG:NH2	2.35	0.42
56:CP:32:PHE:HD1	56:CP:32:PHE:O	2.03	0.42
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.63	0.42
57:DA:104:A:O2'	57:DA:105:C:O4'	2.30	0.42
57:DA:1091:G:H2'	57:DA:1092:C:C6	2.53	0.42
57:DA:1303:G:O2'	57:DA:1304:A:O5'	2.37	0.42
57:DA:1330:C:O2'	57:DA:1331:G:H8	2.02	0.42
57:DA:1365:A:H3'	57:DA:1366:A:C8	2.54	0.42
57:DA:1655:A:C6	57:DA:1656:C:C2	3.07	0.42
57:DA:1682:G:C2	57:DA:1757:A:O4'	2.73	0.42
57:DA:1862:G:C2	57:DA:1881:C:C2	3.06	0.42
57:DA:1971:U:H6	57:DA:1971:U:H2'	1.34	0.42
57:DA:206:U:H2'	57:DA:207:A:C8	2.55	0.42
57:DA:2229:U:H2'	57:DA:2230:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2414:G:C2'	57:DA:2415:G:H5'	2.49	0.42
57:DA:2030:A:C2	57:DA:2499:C:H5''	2.54	0.42
57:DA:2740:A:N6	57:DA:2764:A:C8	2.87	0.42
57:DA:301:G:C2	57:DA:317:G:C4	3.07	0.42
57:DA:373:U:C2	57:DA:374:A:N7	2.87	0.42
57:DA:377:G:N1	57:DA:378:C:C2	2.87	0.42
57:DA:3:U:C4	57:DA:4:U:C4	3.07	0.42
57:DA:582:A:H2'	57:DA:583:G:C8	2.54	0.42
57:DA:974:G:C8	57:DA:975:A:N7	2.87	0.42
25:DD:108:ASP:O	25:DD:109:VAL:HB	2.20	0.42
25:DD:166:GLY:O	25:DD:167:ASN:CB	2.67	0.42
28:DG:151:ARG:HB3	28:DG:161:VAL:HG23	2.01	0.42
31:DJ:1:MET:SD	31:DJ:2:LYS:HE3	2.59	0.42
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.18	0.42
34:DM:34:LYS:HB2	34:DM:131:VAL:HG23	2.01	0.42
57:DA:1275:A:C8	35:DN:16:HIS:CD2	3.08	0.42
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.34	0.42
37:DP:19:PHE:CD2	37:DP:19:PHE:N	2.85	0.42
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.84	0.42
43:DV:77:VAL:HG13	43:DV:77:VAL:O	2.19	0.42
57:DA:2353:G:H21	44:DW:30:VAL:CG2	2.32	0.42
1:AA:1221:G:H2'	1:AA:1222:G:C8	2.53	0.42
1:AA:1348:U:O2'	1:AA:1349:A:C5'	2.67	0.42
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.19	0.42
1:AA:1516:G:N2	1:AA:1519:A:OP2	2.51	0.42
1:AA:205:A:H3'	1:AA:206:C:C6	2.54	0.42
1:AA:421:U:H5'	1:AA:422:C:H6	1.84	0.42
1:AA:499:A:C6	1:AA:547:A:C8	3.08	0.42
1:AA:829:G:N3	1:AA:830:G:C8	2.88	0.42
1:AA:933:G:C4	1:AA:935:A:C8	3.07	0.42
2:AB:186:VAL:HG23	2:AB:186:VAL:O	2.18	0.42
5:AE:131:ASN:O	5:AE:135:VAL:HG12	2.18	0.42
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.39	0.42
15:AO:34:GLN:O	15:AO:35:ILE:C	2.58	0.42
49:B1:49:LYS:HG2	49:B1:50:GLU:N	2.24	0.42
22:BA:1073:A:H2'	22:BA:1074:G:C5'	2.41	0.42
22:BA:1127:A:N1	22:BA:2463:C:O2'	2.46	0.42
22:BA:1142:A:C5	22:BA:1144:A:C5	3.07	0.42
22:BA:1259:G:C2'	22:BA:1260:A:H5'	2.49	0.42
22:BA:1293:C:O5'	22:BA:1293:C:H6	2.01	0.42
22:BA:1507:C:C2	22:BA:1508:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1838:C:N3	22:BA:1899:A:C2	2.87	0.42
22:BA:2063:C:O2'	22:BA:2064:C:H5'	2.19	0.42
22:BA:2440:C:H2'	22:BA:2441:U:C4'	2.49	0.42
22:BA:246:C:H2'	22:BA:247:G:H5'	2.02	0.42
22:BA:2791:G:H8	22:BA:2791:G:H5''	1.84	0.42
22:BA:2820:A:H2'	25:BD:196:ALA:HB2	2.00	0.42
22:BA:2840:C:O2'	22:BA:2841:C:H5'	2.18	0.42
22:BA:651:G:C5	22:BA:652:U:C5	3.07	0.42
22:BA:833:A:H2'	22:BA:834:G:C8	2.55	0.42
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.53	0.42
24:BC:30:ALA:HA	24:BC:33:LEU:HD12	2.01	0.42
25:BD:93:GLY:O	25:BD:94:GLN:C	2.57	0.42
26:BE:168:ASP:OD1	26:BE:169:VAL:N	2.52	0.42
29:BH:9:VAL:HG12	29:BH:12:LEU:HG	2.01	0.42
31:BJ:62:VAL:HG22	31:BJ:63:ALA:N	2.34	0.42
33:BL:112:LEU:CD1	33:BL:130:GLY:HA3	2.41	0.42
23:BB:49:C:OP1	36:BO:102:ARG:CG	2.67	0.42
22:BA:2334:U:O4'	36:BO:12:THR:HG22	2.19	0.42
37:BP:105:LYS:HA	37:BP:105:LYS:HD3	1.79	0.42
37:BP:27:VAL:HG22	37:BP:83:ILE:HG12	2.01	0.42
39:BR:70:GLU:O	39:BR:71:LYS:C	2.58	0.42
40:BS:17:VAL:CG1	40:BS:76:VAL:HG11	2.41	0.42
53:CA:1184:G:HO2'	53:CA:1185:G:C5'	2.32	0.42
53:CA:168:G:H2'	53:CA:169:C:H5'	2.01	0.42
53:CA:275:G:H2'	53:CA:276:G:C8	2.54	0.42
53:CA:307:C:H5''	53:CA:308:C:OP2	2.19	0.42
53:CA:429:U:H4'	53:CA:430:A:O5'	2.18	0.42
53:CA:495:A:C2	53:CA:496:A:N6	2.88	0.42
53:CA:666:G:C5	53:CA:741:G:C6	3.07	0.42
53:CA:683:G:H2'	53:CA:684:U:O4'	2.19	0.42
53:CA:880:C:H2'	53:CA:881:G:H5'	2.00	0.42
53:CA:971:G:H5''	53:CA:972:C:H5''	2.01	0.42
2:CB:9:LEU:O	2:CB:10:LYS:HB3	2.20	0.42
4:CD:165:GLU:O	4:CD:166:LYS:HB3	2.19	0.42
4:CD:20:LEU:O	4:CD:21:LYS:C	2.56	0.42
54:CG:9:ARG:C	54:CG:10:LYS:HG3	2.39	0.42
53:CA:1118:U:H5'	9:CI:10:ARG:HH21	1.84	0.42
9:CI:112:ARG:HG3	9:CI:112:ARG:O	2.18	0.42
53:CA:1250:A:O3'	9:CI:68:GLY:HA2	2.19	0.42
53:CA:1227:A:O5'	55:CM:109:LYS:HE3	2.18	0.42
53:CA:1308:U:H5	55:CM:97:ARG:CZ	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	2.01	0.42
53:CA:1222:G:H5'	19:CS:77:ARG:HH21	1.83	0.42
49:D1:16:THR:HG21	49:D1:41:VAL:HB	2.02	0.42
57:DA:1036:G:C2	57:DA:1037:G:N7	2.87	0.42
57:DA:1048:A:H2'	57:DA:1049:C:C5	2.54	0.42
57:DA:1167:C:O2'	57:DA:1168:G:H5'	2.18	0.42
57:DA:121:G:N3	57:DA:131:A:N1	2.67	0.42
57:DA:1392:A:N6	57:DA:1393:A:N1	2.67	0.42
57:DA:1476:U:H1'	57:DA:1732:C:O2	2.19	0.42
57:DA:1497:U:H5''	57:DA:1498:C:OP2	2.19	0.42
57:DA:1500:G:N1	57:DA:1501:G:C5	2.87	0.42
57:DA:1537:G:C3'	57:DA:1538:G:H4'	2.48	0.42
57:DA:1568:G:H8	57:DA:1568:G:H2'	1.57	0.42
57:DA:1598:A:C2	57:DA:1599:U:C2	3.08	0.42
57:DA:1620:G:C6	57:DA:1621:U:C4	3.07	0.42
57:DA:1619:G:O2'	57:DA:1620:G:H5'	2.20	0.42
57:DA:1681:G:H3'	57:DA:1757:A:N1	2.34	0.42
57:DA:1716:U:O2	57:DA:1717:A:C8	2.73	0.42
57:DA:1765:U:O2'	57:DA:1766:G:H5'	2.19	0.42
57:DA:197:A:N3	57:DA:197:A:H2'	2.33	0.42
57:DA:2068:U:H5''	57:DA:2068:U:H6	1.84	0.42
57:DA:2076:U:H5''	57:DA:2238:G:N2	2.30	0.42
57:DA:206:U:H2'	57:DA:207:A:H8	1.84	0.42
57:DA:2106:U:C4	57:DA:2107:G:N7	2.88	0.42
57:DA:2231:U:H2'	57:DA:2232:C:C6	2.54	0.42
57:DA:2233:U:H2'	57:DA:2234:G:H8	1.84	0.42
57:DA:966:G:H5'	57:DA:2272:U:O2	2.19	0.42
57:DA:2492:U:H6	57:DA:2492:U:O5'	2.02	0.42
57:DA:2668:G:N3	57:DA:2669:G:C8	2.87	0.42
57:DA:2721:A:C8	57:DA:2722:G:C8	3.07	0.42
57:DA:2875:C:O2'	57:DA:2876:G:O5'	2.37	0.42
57:DA:2897:U:H2'	57:DA:2898:U:O4'	2.19	0.42
57:DA:302:C:O2'	57:DA:303:G:O5'	2.37	0.42
57:DA:333:G:HO2'	57:DA:334:C:C5'	2.32	0.42
57:DA:452:G:C6	57:DA:453:A:C6	3.08	0.42
57:DA:484:C:O2'	57:DA:485:C:C5'	2.68	0.42
57:DA:547:A:C8	57:DA:549:G:N2	2.88	0.42
57:DA:562:U:H2'	57:DA:572:A:O4'	2.19	0.42
57:DA:585:G:H2'	57:DA:1254:A:N6	2.34	0.42
57:DA:860:U:O4'	57:DA:2268:A:H5'	2.19	0.42
57:DA:976:G:C2'	57:DA:977:G:H8	2.24	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:994:C:OP2	38:DQ:49:ARG:CG	2.67	0.42
24:DC:131:MET:CG	24:DC:134:ILE:HD11	2.47	0.42
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.33	0.42
59:DF:103:ILE:H	59:DF:107:VAL:HG13	1.84	0.42
59:DF:5:ASP:C	59:DF:7:TYR:N	2.72	0.42
28:DG:164:ALA:O	28:DG:165:ASP:CB	2.67	0.42
31:DJ:37:ARG:HG3	31:DJ:118:MET:CE	2.49	0.42
31:DJ:89:PHE:CZ	31:DJ:93:ILE:HD11	2.54	0.42
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.23	0.42
32:DK:14:SER:OG	32:DK:51:LYS:N	2.50	0.42
37:DP:72:VAL:O	37:DP:72:VAL:HG23	2.20	0.42
39:DR:41:ILE:HG22	39:DR:42:ALA:N	2.34	0.42
42:DU:20:LYS:HD3	42:DU:21:ARG:O	2.19	0.42
44:DW:33:GLY:O	44:DW:34:SER:HB2	2.18	0.42
1:AA:1055:A:C5	1:AA:1206:G:C2	3.07	0.42
1:AA:1064:G:H1'	1:AA:1066:C:C5	2.54	0.42
1:AA:109:A:N6	1:AA:324:G:H1'	2.34	0.42
1:AA:10:A:HO2'	1:AA:507:C:HO2'	1.66	0.42
1:AA:1250:A:H2'	1:AA:1251:A:O4'	2.19	0.42
1:AA:1258:G:N3	1:AA:1259:C:C5	2.88	0.42
1:AA:266:G:O3'	17:AQ:68:LYS:HB2	2.19	0.42
1:AA:281:G:O2'	1:AA:282:A:OP2	2.38	0.42
1:AA:330:C:O2'	1:AA:331:G:H5'	2.19	0.42
1:AA:460:A:O3'	1:AA:462:G:OP2	2.38	0.42
1:AA:77:A:H8	1:AA:77:A:OP2	2.02	0.42
1:AA:810:C:O2'	1:AA:811:C:H5'	2.19	0.42
1:AA:841:C:H3'	1:AA:843:U:OP2	2.19	0.42
1:AA:947:G:C6	1:AA:948:C:C4	3.08	0.42
1:AA:965:U:OP1	1:AA:1198:G:H5'	2.19	0.42
2:AB:176:ASN:HD21	2:AB:194:GLY:CA	2.33	0.42
2:AB:9:LEU:HD23	2:AB:9:LEU:C	2.39	0.42
4:AD:69:ARG:NE	4:AD:69:ARG:HA	2.29	0.42
5:AE:155:LYS:CB	8:AH:70:VAL:HG13	2.50	0.42
6:AF:12:PRO:HA	6:AF:15:SER:HB2	2.02	0.42
10:AJ:26:VAL:O	10:AJ:29:ALA:HB3	2.19	0.42
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.39	0.42
12:AL:113:ARG:CB	12:AL:118:VAL:HB	2.41	0.42
13:AM:44:ILE:N	13:AM:44:ILE:HD12	2.35	0.42
15:AO:88:ARG:NH1	22:BA:716:A:OP1	2.52	0.42
17:AQ:12:VAL:HB	17:AQ:21:VAL:HG22	2.01	0.42
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:8:LYS:CA	20:AT:11:ILE:HG23	2.45	0.42
22:BA:1033:U:H4'	22:BA:1034:G:OP1	2.18	0.42
22:BA:1091:G:O2'	22:BA:1092:C:C5'	2.68	0.42
22:BA:1327:A:N6	22:BA:1328:A:C2	2.87	0.42
22:BA:182:A:H2'	22:BA:183:C:C6	2.54	0.42
22:BA:1872:A:O2'	22:BA:1873:G:O4'	2.35	0.42
22:BA:1916:A:H8	22:BA:1916:A:O5'	2.03	0.42
22:BA:2023:C:O2	22:BA:2023:C:C2'	2.63	0.42
22:BA:2078:C:C2	22:BA:2079:U:C5	3.08	0.42
22:BA:2270:A:H2'	22:BA:2271:G:O4'	2.18	0.42
22:BA:2365:G:C2'	22:BA:2366:A:C8	3.03	0.42
22:BA:2470:G:N2	22:BA:2471:A:C4	2.87	0.42
22:BA:2470:G:O2'	22:BA:2471:A:H5'	2.19	0.42
22:BA:41:C:H2'	22:BA:42:A:O5'	2.19	0.42
22:BA:627:A:C5	22:BA:637:A:C8	3.08	0.42
22:BA:941:A:H2'	22:BA:942:G:C8	2.55	0.42
25:BD:34:VAL:HG21	25:BD:90:PHE:O	2.19	0.42
25:BD:86:GLU:OE1	25:BD:86:GLU:HA	2.18	0.42
27:BF:53:ALA:C	27:BF:55:ASP:N	2.73	0.42
29:BH:129:GLU:HG2	29:BH:142:VAL:O	2.19	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
33:BL:30:THR:O	33:BL:31:GLY:C	2.58	0.42
39:BR:27:ILE:HG13	39:BR:33:VAL:HG11	2.01	0.42
42:BU:2:ALA:O	42:BU:5:ARG:NH2	2.53	0.42
42:BU:33:VAL:O	42:BU:64:ILE:HG22	2.20	0.42
43:BV:8:VAL:CG1	43:BV:38:LEU:HD11	2.49	0.42
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.34	0.42
53:CA:120:A:O5'	53:CA:120:A:C8	2.72	0.42
53:CA:1231:G:C4	53:CA:1232:U:C6	3.07	0.42
53:CA:1231:G:H2'	53:CA:1232:U:O4'	2.20	0.42
53:CA:1524:C:OP2	11:CK:124:LYS:NZ	2.47	0.42
53:CA:386:C:N4	53:CA:387:U:O4	2.52	0.42
53:CA:449:G:O2'	53:CA:450:G:H5'	2.19	0.42
53:CA:650:G:N3	53:CA:650:G:H2'	2.35	0.42
53:CA:579:A:N1	53:CA:763:G:C5	2.87	0.42
53:CA:7:A:H5'	53:CA:298:A:O4'	2.20	0.42
53:CA:987:G:H8	53:CA:987:G:O5'	2.02	0.42
2:CB:93:HIS:CG	2:CB:145:ASN:O	2.72	0.42
3:CC:20:THR:HG23	3:CC:57:GLU:HG2	2.00	0.42
5:CE:110:MET:HG2	5:CE:139:THR:HG21	2.00	0.42
6:CF:44:ARG:HA	6:CF:58:HIS:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:41:ILE:HD13	54:CG:115:MET:HB3	2.02	0.42
53:CA:1373:G:H5''	54:CG:35:LYS:HB3	2.01	0.42
9:CI:129:ARG:CZ	9:CI:129:ARG:HA	2.50	0.42
9:CI:17:ARG:HB3	9:CI:19:PHE:CE2	2.55	0.42
9:CI:29:ILE:HG13	9:CI:64:ILE:HG22	2.02	0.42
15:CO:28:VAL:HG11	15:CO:66:LEU:HD21	2.00	0.42
53:CA:376:G:O3'	56:CP:5:ARG:HD2	2.19	0.42
56:CP:7:ALA:O	56:CP:17:TYR:HA	2.20	0.42
19:CS:40:PHE:CB	19:CS:41:PRO:CD	2.96	0.42
20:CT:9:ARG:HD2	20:CT:12:GLN:HB3	2.02	0.42
20:CT:78:LEU:O	20:CT:82:ILE:HG12	2.20	0.42
48:D0:21:LEU:HD23	48:D0:21:LEU:HA	1.89	0.42
57:DA:1263:U:O4'	48:D0:6:LYS:HE3	2.20	0.42
57:DA:1112:G:O2'	57:DA:1113:U:H5'	2.18	0.42
57:DA:1025:G:H1'	57:DA:1135:C:O4'	2.19	0.42
57:DA:1255:U:H6	26:DE:68:ALA:HB2	1.84	0.42
57:DA:1314:C:OP1	57:DA:1332:G:OP1	2.37	0.42
57:DA:1369:G:C6	57:DA:1370:C:C4	3.07	0.42
57:DA:1615:C:C5	57:DA:1617:C:C4	3.07	0.42
57:DA:52:A:H2	57:DA:179:C:O4'	2.02	0.42
57:DA:1833:C:C4	57:DA:1834:U:C5	3.08	0.42
57:DA:193:U:O3'	57:DA:803:U:H4'	2.20	0.42
57:DA:1963:U:O2'	57:DA:1964:G:H5'	2.19	0.42
57:DA:2319:G:O2'	57:DA:2320:U:O5'	2.38	0.42
57:DA:2371:G:C2	57:DA:2372:U:C6	3.08	0.42
57:DA:2440:C:C4	57:DA:2441:U:H1'	2.55	0.42
57:DA:2520:C:O2'	57:DA:2521:C:C5'	2.67	0.42
57:DA:2506:U:H5	57:DA:2576:G:O6	2.02	0.42
57:DA:2706:A:N6	63:DA:3667:HOH:O	2.45	0.42
57:DA:307:G:N1	57:DA:310:A:OP2	2.53	0.42
57:DA:475:C:H2'	57:DA:476:G:N7	2.35	0.42
57:DA:582:A:H2'	57:DA:583:G:H8	1.85	0.42
57:DA:943:A:C6	57:DA:944:C:C5	3.08	0.42
24:DC:124:LYS:HG3	24:DC:125:PRO:O	2.20	0.42
24:DC:141:HIS:HB3	24:DC:142:ASN:H	1.50	0.42
24:DC:165:ALA:O	24:DC:171:VAL:HG13	2.19	0.42
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.59	0.42
25:DD:16:THR:HG23	25:DD:19:GLY:H	1.85	0.42
25:DD:68:PHE:HB2	25:DD:73:VAL:HG23	2.01	0.42
26:DE:164:LEU:HD12	26:DE:167:VAL:HG12	2.02	0.42
28:DG:71:LEU:O	28:DG:71:LEU:HD13	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:125:THR:HB	29:DH:146:VAL:HG11	2.01	0.42
29:DH:3:VAL:O	29:DH:3:VAL:HG23	2.19	0.42
29:DH:62:LEU:HD12	29:DH:63:ALA:H	1.83	0.42
31:DJ:24:THR:O	31:DJ:25:LEU:HB3	2.19	0.42
33:DL:93:ASN:O	33:DL:95:LEU:N	2.42	0.42
35:DN:34:ILE:HB	35:DN:113:ILE:HG23	2.01	0.42
35:DN:12:ARG:HG2	35:DN:16:HIS:CG	2.54	0.42
37:DP:20:ARG:HD2	37:DP:21:PRO:CD	2.47	0.42
37:DP:22:GLY:H	37:DP:46:VAL:HB	1.84	0.42
41:DT:58:VAL:HG22	41:DT:59:ASN:H	1.83	0.42
41:DT:68:LYS:HB2	41:DT:68:LYS:NZ	2.34	0.42
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.54	0.42
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.27	0.42
1:AA:1057:G:H4'	3:AC:196:GLY:N	2.35	0.42
1:AA:1342:C:H2'	1:AA:1343:G:H8	1.84	0.42
1:AA:1358:U:C6	1:AA:1359:C:C5	3.08	0.42
1:AA:1365:G:H2'	1:AA:1366:C:H6	1.82	0.42
1:AA:256:U:H6	1:AA:256:U:O5'	2.02	0.42
1:AA:160:A:O2'	1:AA:344:A:C6	2.71	0.42
1:AA:433:G:H2'	1:AA:434:U:H5'	2.02	0.42
1:AA:471:U:H2'	1:AA:472:U:O4'	2.20	0.42
1:AA:705:G:H2'	1:AA:706:A:C5'	2.49	0.42
1:AA:72:A:H2'	1:AA:73:C:H6	1.83	0.42
3:AC:42:LEU:HD12	3:AC:42:LEU:HA	1.79	0.42
4:AD:55:ARG:HH12	4:AD:58:GLN:CG	2.28	0.42
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.19	0.42
8:AH:112:ASP:O	8:AH:113:ARG:C	2.57	0.42
8:AH:1:SER:C	8:AH:3:GLN:H	2.22	0.42
15:AO:65:LEU:N	15:AO:65:LEU:CD2	2.83	0.42
17:AQ:60:ILE:CG2	17:AQ:61:ARG:N	2.81	0.42
6:AF:86:ARG:HD2	18:AR:63:TYR:O	2.20	0.42
19:AS:51:HIS:CD2	19:AS:53:GLY:N	2.83	0.42
51:B3:7:ARG:HD2	51:B3:7:ARG:HA	1.44	0.42
22:BA:1498:C:O2'	22:BA:1499:C:C5'	2.67	0.42
22:BA:1784:A:H4'	22:BA:1785:A:H5''	2.02	0.42
22:BA:1934:C:O5'	22:BA:1934:C:H6	2.02	0.42
22:BA:2243:U:C2	22:BA:2244:U:C5	3.08	0.42
22:BA:2727:A:C4	22:BA:2728:U:C5	3.08	0.42
22:BA:2870:C:C4	22:BA:2871:U:C5	3.08	0.42
22:BA:572:A:N7	63:BA:3570:HOH:O	2.50	0.42
22:BA:749:A:C5	22:BA:1618:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:857:G:H2'	22:BA:858:G:O4'	2.20	0.42
22:BA:919:U:H6	22:BA:919:U:C4'	2.33	0.42
23:BB:5:U:H2'	23:BB:6:G:C8	2.55	0.42
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.20	0.42
24:BC:269:ARG:HA	24:BC:269:ARG:HD3	1.70	0.42
24:BC:90:ILE:HG21	24:BC:102:TYR:CD1	2.53	0.42
25:BD:78:GLY:O	25:BD:80:TRP:CZ3	2.72	0.42
26:BE:122:GLU:O	26:BE:123:LYS:O	2.38	0.42
27:BF:110:ILE:O	27:BF:113:PHE:HB2	2.19	0.42
28:BG:174:LYS:C	28:BG:174:LYS:HD2	2.40	0.42
28:BG:70:LEU:O	28:BG:74:MET:HG3	2.19	0.42
41:BT:87:LEU:O	41:BT:89:GLU:N	2.53	0.42
41:BT:8:LEU:CD2	41:BT:8:LEU:N	2.83	0.42
44:BW:18:LYS:HG3	44:BW:19:ARG:HG3	2.02	0.42
53:CA:1296:C:C5	53:CA:1297:G:N2	2.87	0.42
53:CA:1446:A:H2'	53:CA:1447:A:H5''	2.01	0.42
53:CA:512:U:O2'	53:CA:513:C:C5'	2.68	0.42
53:CA:519:C:C2'	53:CA:520:A:C8	2.91	0.42
53:CA:544:G:C5	53:CA:545:C:C5	3.08	0.42
53:CA:72:A:H2'	53:CA:73:C:C6	2.54	0.42
53:CA:765:G:O6	53:CA:811:C:N4	2.52	0.42
53:CA:785:G:H2'	53:CA:785:G:N3	2.34	0.42
53:CA:858:G:N7	53:CA:869:G:C5	2.88	0.42
53:CA:878:A:C5	53:CA:879:C:C5	3.08	0.42
53:CA:940:C:H2'	53:CA:941:G:O4'	2.19	0.42
53:CA:951:G:OP2	55:CM:100:ARG:NH2	2.52	0.42
2:CB:216:VAL:O	2:CB:220:VAL:HG23	2.20	0.42
3:CC:190:THR:HG22	3:CC:191:THR:N	2.29	0.42
4:CD:100:VAL:O	4:CD:101:VAL:C	2.57	0.42
4:CD:57:LYS:HE2	4:CD:58:GLN:OE1	2.19	0.42
5:CE:73:VAL:HG12	5:CE:74:ALA:O	2.20	0.42
54:CG:112:ASP:HB3	54:CG:117:LEU:CB	2.49	0.42
9:CI:51:LEU:O	9:CI:53:LEU:N	2.52	0.42
9:CI:80:HIS:O	9:CI:83:THR:HG23	2.20	0.42
10:CJ:42:LEU:HB3	10:CJ:43:PRO:HD2	2.02	0.42
11:CK:123:PRO:O	21:CU:34:ARG:N	2.51	0.42
11:CK:92:ARG:NH2	21:CU:19:LYS:HD2	2.33	0.42
53:CA:1226:C:C4	55:CM:102:LYS:HA	2.53	0.42
57:DA:1117:C:HO2'	57:DA:1118:C:H5'	1.73	0.42
57:DA:1155:A:H5''	38:DQ:54:ARG:CZ	2.49	0.42
57:DA:1218:G:C2	57:DA:1232:G:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1255:U:H6	57:DA:1255:U:H2'	1.34	0.42
57:DA:1317:G:C5	57:DA:1318:U:C4	3.08	0.42
57:DA:137:U:H6	57:DA:137:U:O5'	2.03	0.42
57:DA:1480:C:H2'	57:DA:1481:U:O4'	2.18	0.42
57:DA:1428:C:C5	57:DA:1569:A:H5'	2.54	0.42
57:DA:1820:U:O2	24:DC:199:HIS:CD2	2.72	0.42
57:DA:1845:G:C5	57:DA:1846:G:N7	2.88	0.42
57:DA:2048:G:C6	57:DA:2049:G:C5	3.07	0.42
57:DA:1801:A:C5	57:DA:2203:U:C5	3.07	0.42
57:DA:2358:A:OP1	57:DA:2358:A:H8	2.03	0.42
57:DA:2638:G:N1	57:DA:2775:G:H2'	2.35	0.42
57:DA:2744:G:C6	57:DA:2761:A:C6	3.07	0.42
24:DC:61:TYR:CE2	24:DC:86:ARG:NH2	2.88	0.42
25:DD:146:ILE:HD12	25:DD:155:VAL:HG21	2.02	0.42
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.85	0.42
25:DD:179:ARG:HD2	25:DD:188:LEU:HD12	2.00	0.42
59:DF:14:LYS:HA	59:DF:18:GLU:HB2	2.01	0.42
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	2.02	0.42
57:DA:1070:A:H61	30:DI:8:VAL:CG1	2.33	0.42
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.88	0.42
31:DJ:92:MET:CE	31:DJ:95:ARG:HD2	2.49	0.42
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.50	0.42
35:DN:96:ARG:HH12	35:DN:116:VAL:HG13	1.83	0.42
37:DP:25:VAL:HG23	37:DP:25:VAL:O	2.19	0.42
38:DQ:39:ILE:O	38:DQ:40:LYS:C	2.58	0.42
1:AA:102:G:C4	1:AA:103:U:C5	3.08	0.42
1:AA:1091:U:O2	1:AA:1093:A:C8	2.73	0.42
1:AA:1246:A:N1	1:AA:1292:G:C6	2.88	0.42
1:AA:1349:A:O2'	1:AA:1350:A:H5'	2.20	0.42
1:AA:1409:C:C2'	1:AA:1410:A:H5'	2.49	0.42
1:AA:926:G:C6	1:AA:1505:G:C5	3.06	0.42
1:AA:208:U:H3	1:AA:212:G:H21	1.67	0.42
1:AA:92:U:C2'	1:AA:93:U:C6	2.88	0.42
3:AC:108:PRO:C	3:AC:110:LEU:H	2.23	0.42
3:AC:11:LEU:HA	3:AC:11:LEU:HD23	1.84	0.42
5:AE:152:VAL:O	5:AE:155:LYS:HD2	2.19	0.42
7:AG:88:VAL:HG22	7:AG:89:GLU:N	2.35	0.42
13:AM:32:ILE:HA	13:AM:32:ILE:HD13	1.90	0.42
16:AP:20:VAL:HG22	16:AP:32:PHE:HB2	2.01	0.42
49:B1:9:LYS:N	49:B1:9:LYS:HD3	2.34	0.42
22:BA:1060:U:C5'	22:BA:1061:U:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1235:G:H8	22:BA:1235:G:O5'	2.03	0.42
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.19	0.42
22:BA:1780:A:H3'	22:BA:1781:U:H2'	2.02	0.42
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.20	0.42
22:BA:2109:U:H2'	22:BA:2110:G:H5'	2.02	0.42
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.35	0.42
22:BA:2425:A:H5'	22:BA:2427:C:O4'	2.20	0.42
22:BA:2524:G:C2'	22:BA:2525:G:O5'	2.66	0.42
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.42	0.42
22:BA:2816:G:C4	22:BA:2831:G:C2	3.08	0.42
22:BA:605:G:H1'	22:BA:657:U:H1'	2.02	0.42
22:BA:751:A:C6	22:BA:789:A:C6	3.07	0.42
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.18	0.42
28:BG:124:CYS:HA	28:BG:125:PRO:HD2	1.78	0.42
28:BG:84:LYS:N	28:BG:84:LYS:HE2	2.35	0.42
29:BH:101:ASP:C	29:BH:104:THR:HB	2.39	0.42
29:BH:14:SER:C	29:BH:16:GLY:H	2.23	0.42
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.99	0.42
36:BO:59:ALA:HA	36:BO:62:LEU:CD1	2.48	0.42
37:BP:26:GLU:O	37:BP:26:GLU:HG2	2.17	0.42
37:BP:24:THR:HG22	37:BP:86:LYS:HB2	2.01	0.42
42:BU:3:LYS:HZ3	42:BU:82:VAL:H	1.68	0.42
46:BY:57:LEU:O	46:BY:57:LEU:HD12	2.19	0.42
22:BA:851:C:O2'	47:BZ:45:GLY:HA3	2.20	0.42
53:CA:1011:C:N3	53:CA:1019:A:C2	2.88	0.42
53:CA:1026:G:H22	53:CA:1036:A:N6	2.18	0.42
53:CA:1129:C:H1'	53:CA:1146:A:N6	2.25	0.42
53:CA:1309:G:H2'	53:CA:1310:G:H8	1.84	0.42
53:CA:193:C:H1'	20:CT:54:GLN:HE21	1.84	0.42
53:CA:197:A:H4'	53:CA:198:G:O5'	2.17	0.42
53:CA:277:C:OP1	17:CQ:44:HIS:CE1	2.66	0.42
53:CA:373:A:C5'	53:CA:373:A:C8	3.01	0.42
53:CA:372:C:HO2'	53:CA:373:A:P	2.41	0.42
53:CA:433:G:C2'	53:CA:434:U:H5'	2.49	0.42
53:CA:644:U:H2'	53:CA:645:G:C8	2.52	0.42
53:CA:668:G:O2'	53:CA:669:G:H5'	2.19	0.42
53:CA:962:C:O2'	53:CA:963:G:O4'	2.37	0.42
53:CA:995:C:HO2'	53:CA:996:A:P	2.42	0.42
53:CA:948:C:OP2	55:CM:104:ASN:HB3	2.20	0.42
15:CO:62:ARG:NH2	15:CO:88:ARG:HH21	2.18	0.42
57:DA:1387:A:O2'	57:DA:1388:G:P	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1435:G:N2	57:DA:1558:C:N4	2.67	0.42
57:DA:1455:G:O2'	57:DA:1456:G:H8	2.01	0.42
57:DA:1525:A:C6	57:DA:1526:C:N3	2.88	0.42
57:DA:1652:A:H3'	57:DA:1653:G:C8	2.55	0.42
57:DA:1936:A:H4'	57:DA:1937:A:OP2	2.19	0.42
57:DA:1954:G:O2'	57:DA:1955:U:OP2	2.37	0.42
57:DA:1981:A:O2'	57:DA:1982:U:H5''	2.20	0.42
57:DA:2025:C:H42	57:DA:2037:A:H61	1.67	0.42
57:DA:2036:C:O2'	57:DA:2037:A:H8	1.99	0.42
57:DA:1853:A:H1'	57:DA:2234:G:O4'	2.19	0.42
57:DA:233:A:HO2'	57:DA:234:U:H6	1.58	0.42
57:DA:957:C:N4	57:DA:2494:G:H21	2.18	0.42
57:DA:2499:C:C4	57:DA:2500:U:O4	2.73	0.42
57:DA:2750:A:O2'	57:DA:2751:G:OP1	2.34	0.42
57:DA:2774:C:C4	57:DA:2775:G:C5	3.07	0.42
57:DA:2838:G:H2'	57:DA:2839:G:O4'	2.19	0.42
57:DA:2845:U:H2'	57:DA:2846:G:O4'	2.20	0.42
57:DA:2846:G:P	37:DP:51:ASN:HB2	2.60	0.42
57:DA:370:G:C8	57:DA:370:G:OP2	2.73	0.42
57:DA:223:A:N6	57:DA:408:G:H5'	2.35	0.42
57:DA:216:A:N6	57:DA:432:A:H1'	2.35	0.42
57:DA:444:C:O2'	57:DA:445:C:O5'	2.37	0.42
57:DA:601:C:H4'	26:DE:99:LYS:HE2	2.01	0.42
57:DA:762:U:O2'	57:DA:763:G:H5''	2.20	0.42
57:DA:775:G:C2	57:DA:794:A:C8	3.07	0.42
57:DA:962:G:O2'	57:DA:963:U:H6	1.99	0.42
24:DC:44:ASN:C	24:DC:46:GLY:H	2.23	0.42
57:DA:323:C:C6	26:DE:165:HIS:NE2	2.88	0.42
26:DE:5:LEU:HD23	26:DE:120:VAL:HG13	2.00	0.42
59:DF:82:TYR:HA	59:DF:83:PRO:HD2	1.84	0.42
57:DA:2759:G:H21	28:DG:138:GLN:CD	2.23	0.42
28:DG:83:THR:HB	28:DG:84:LYS:H	1.72	0.42
32:DK:1:MET:HA	32:DK:33:ALA:O	2.20	0.42
32:DK:19:VAL:CG1	32:DK:41:ILE:HG12	2.50	0.42
34:DM:23:GLY:N	34:DM:100:LYS:HZ3	2.18	0.42
34:DM:97:GLN:HB2	34:DM:98:PRO:CD	2.48	0.42
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.54	0.42
37:DP:19:PHE:HE1	37:DP:58:PHE:CE1	2.37	0.42
38:DQ:61:ILE:HD12	38:DQ:61:ILE:N	2.35	0.42
40:DS:87:PRO:HG2	40:DS:87:PRO:O	2.20	0.42
42:DU:48:VAL:HA	42:DU:49:PRO:HD3	1.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:855:G:N3	44:DW:23:LYS:HG2	2.35	0.42
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.34	0.42
1:AA:1054:C:P	1:AA:1197:A:OP2	2.78	0.42
1:AA:1350:A:H2	7:AG:33:GLY:HA3	1.84	0.42
1:AA:198:G:C6	1:AA:220:G:C4	3.08	0.42
1:AA:222:C:H2'	1:AA:223:A:H8	1.85	0.42
1:AA:243:A:C2	1:AA:246:A:C8	3.08	0.42
1:AA:444:G:C2	1:AA:491:G:C4	3.08	0.42
1:AA:762:U:O2	1:AA:763:G:C8	2.73	0.42
1:AA:930:C:H2'	1:AA:931:C:O4'	2.19	0.42
1:AA:965:U:OP1	1:AA:1198:G:C5'	2.67	0.42
4:AD:145:ARG:C	4:AD:147:LYS:N	2.70	0.42
4:AD:29:THR:O	4:AD:30:LYS:HB2	2.20	0.42
1:AA:6:G:C6	5:AE:98:ALA:HB1	2.52	0.42
6:AF:97:THR:HG22	6:AF:98:GLU:N	2.34	0.42
9:AI:3:ASN:CG	9:AI:4:GLN:H	2.23	0.42
17:AQ:11:VAL:HG23	17:AQ:56:ASP:O	2.19	0.42
48:B0:33:SER:OG	48:B0:35:GLU:CG	2.65	0.42
49:B1:35:LEU:HD23	49:B1:35:LEU:C	2.40	0.42
22:BA:1001:A:H2'	22:BA:1002:G:C5'	2.49	0.42
22:BA:1106:G:C2	22:BA:1107:G:N9	2.87	0.42
22:BA:1205:A:H3'	22:BA:1206:G:H5'	2.02	0.42
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.53	0.42
22:BA:1418:G:H2'	22:BA:1579:A:N6	2.35	0.42
22:BA:2027:G:H2'	22:BA:2028:U:H6	1.84	0.42
22:BA:2058:A:H5''	22:BA:2059:A:P	2.60	0.42
22:BA:2140:G:H2'	22:BA:2141:G:H8	1.81	0.42
22:BA:184:C:O2'	22:BA:217:A:N3	2.50	0.42
22:BA:2295:C:H2'	22:BA:2296:U:C6	2.54	0.42
22:BA:2516:A:C5	22:BA:2517:C:C4	3.07	0.42
22:BA:340:A:H2'	22:BA:341:C:O4'	2.19	0.42
22:BA:400:G:C8	22:BA:400:G:H3'	2.54	0.42
22:BA:409:G:C2'	22:BA:410:G:H5'	2.49	0.42
22:BA:522:A:C5	22:BA:523:C:C4	3.07	0.42
22:BA:64:A:O2'	41:BT:70:HIS:CE1	2.72	0.42
22:BA:6:A:O2'	22:BA:7:G:H5'	2.20	0.42
24:BC:6:LYS:HB3	24:BC:7:PRO:HD2	2.01	0.42
25:BD:180:VAL:HG12	25:BD:181:ASP:N	2.35	0.42
26:BE:136:GLN:O	26:BE:137:LYS:C	2.58	0.42
27:BF:109:ARG:HH11	27:BF:138:PRO:N	2.18	0.42
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BG:59:ASP:O	28:BG:60:GLY:C	2.58	0.42
28:BG:93:TYR:O	28:BG:94:ARG:O	2.38	0.42
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.83	0.42
31:BJ:57:LEU:HA	31:BJ:57:LEU:HD12	1.88	0.42
32:BK:113:MET:O	32:BK:114:LYS:C	2.58	0.42
33:BL:40:SER:O	33:BL:41:ARG:CB	2.66	0.42
35:BN:54:LEU:HD11	35:BN:62:ASN:CG	2.40	0.42
36:BO:8:ILE:O	36:BO:11:ALA:HB3	2.20	0.42
39:BR:68:ARG:HH11	39:BR:90:ARG:HD3	1.84	0.42
41:BT:28:ASN:HA	41:BT:91:GLN:HE22	1.81	0.42
22:BA:2269:G:C4'	44:BW:18:LYS:HE2	2.36	0.42
45:BX:39:VAL:HG13	45:BX:46:VAL:HG22	2.02	0.42
53:CA:1177:G:N7	53:CA:1178:G:C5	2.88	0.42
53:CA:1454:G:O2'	53:CA:1455:G:C5'	2.68	0.42
53:CA:1518:A:C2	53:CA:1519:A:C2	3.07	0.42
53:CA:181:A:H1'	53:CA:182:A:H2	1.80	0.42
53:CA:185:U:H2'	53:CA:186:C:C6	2.54	0.42
53:CA:254:G:H5''	17:CQ:70:LYS:HD2	1.98	0.42
53:CA:374:A:H2'	53:CA:375:U:C6	2.55	0.42
2:CB:119:GLN:O	2:CB:119:GLN:HG2	2.20	0.42
2:CB:69:VAL:HB	2:CB:162:VAL:HB	2.01	0.42
2:CB:212:TYR:CD2	2:CB:216:VAL:HG23	2.54	0.42
6:CF:97:THR:O	6:CF:98:GLU:HG3	2.20	0.42
8:CH:104:SER:O	8:CH:122:GLY:HA3	2.20	0.42
12:CL:29:LYS:O	12:CL:81:ILE:HG22	2.19	0.42
15:CO:27:GLN:O	15:CO:31:LEU:HG	2.20	0.42
56:CP:38:PHE:CE2	56:CP:51:ARG:CB	3.03	0.42
19:CS:68:HIS:HB3	19:CS:72:GLU:HG3	2.01	0.42
20:CT:4:LYS:HB3	20:CT:4:LYS:HE3	1.72	0.42
57:DA:2046:G:OP1	48:D0:11:LYS:HE3	2.19	0.42
48:D0:28:SER:HB3	48:D0:39:ARG:CZ	2.49	0.42
57:DA:1107:G:H2'	57:DA:1108:U:H5'	2.02	0.42
57:DA:1126:A:OP1	57:DA:1126:A:C8	2.70	0.42
57:DA:1171:G:C4	57:DA:1179:G:N2	2.87	0.42
57:DA:121:G:O2'	57:DA:122:G:H5'	2.20	0.42
57:DA:1232:G:C4	57:DA:1233:C:C5	3.07	0.42
57:DA:1290:C:C2	57:DA:1291:C:C5	3.08	0.42
57:DA:1312:U:O2'	57:DA:1313:U:P	2.77	0.42
57:DA:1532:A:N1	57:DA:1540:G:C6	2.88	0.42
57:DA:741:U:O2'	57:DA:1676:A:OP1	2.37	0.42
57:DA:1787:A:O5'	57:DA:1787:A:C8	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1902:C:H2'	57:DA:1903:G:O4'	2.19	0.42
57:DA:1910:G:N2	57:DA:1921:G:C4	2.87	0.42
57:DA:1940:U:O2	57:DA:1940:U:H5'	2.19	0.42
57:DA:2077:A:C2	57:DA:2244:U:O2	2.73	0.42
57:DA:2305:U:H5	57:DA:2312:U:C4	2.38	0.42
57:DA:2443:C:C4	57:DA:2444:G:N7	2.88	0.42
57:DA:2458:G:O2'	57:DA:2459:A:N7	2.53	0.42
57:DA:2618:G:H2'	57:DA:2619:C:H6	1.84	0.42
57:DA:2848:G:O2'	57:DA:2849:U:C6	2.64	0.42
57:DA:34:U:HO2'	57:DA:35:G:P	2.41	0.42
57:DA:446:G:H4'	57:DA:447:A:OP1	2.20	0.42
57:DA:571:U:C4	57:DA:2030:A:C6	3.08	0.42
57:DA:665:U:C5	57:DA:666:A:N7	2.87	0.42
58:DB:18:G:C6	58:DB:19:C:C4	3.07	0.42
24:DC:213:ARG:HB3	24:DC:214:GLY:H	1.66	0.42
26:DE:165:HIS:O	26:DE:167:VAL:N	2.53	0.42
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.20	0.42
59:DF:12:VAL:O	59:DF:16:MET:HB2	2.20	0.42
28:DG:22:VAL:HG12	28:DG:23:ILE:N	2.34	0.42
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.20	0.42
31:DJ:19:ASP:HA	31:DJ:57:LEU:HB3	2.01	0.42
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.19	0.42
37:DP:28:LYS:HA	37:DP:40:GLN:O	2.20	0.42
39:DR:83:TYR:CD2	39:DR:84:ARG:N	2.87	0.42
40:DS:49:LYS:NZ	40:DS:49:LYS:CB	2.81	0.42
40:DS:70:LYS:O	40:DS:72:THR:N	2.53	0.42
43:DV:9:ARG:HD2	43:DV:40:ILE:O	2.20	0.42
44:DW:13:ARG:HG3	44:DW:14:ASP:N	2.27	0.42
1:AA:1157:A:C2	1:AA:1181:G:C4	3.07	0.42
1:AA:1323:G:C2'	1:AA:1324:A:C8	3.02	0.42
1:AA:1381:U:H2'	1:AA:1382:C:C6	2.55	0.42
1:AA:182:A:H1'	1:AA:183:C:C6	2.55	0.42
1:AA:203:G:C2	1:AA:215:C:N3	2.88	0.42
1:AA:211:G:H2'	1:AA:212:G:O5'	2.20	0.42
1:AA:322:C:H5	1:AA:328:C:C5	2.38	0.42
1:AA:425:G:C6	1:AA:426:U:N3	2.88	0.42
1:AA:532:A:H4'	1:AA:533:A:OP2	2.19	0.42
1:AA:66:A:C8	1:AA:66:A:O5'	2.73	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.08	0.42
1:AA:872:A:C4	1:AA:874:G:C8	3.07	0.42
1:AA:873:A:H4'	1:AA:874:G:OP2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:148:GLY:C	2:AB:150:ILE:N	2.73	0.42
2:AB:218:ALA:HA	2:AB:221:ARG:NH2	2.29	0.42
3:AC:174:LEU:O	3:AC:174:LEU:HD12	2.20	0.42
3:AC:59:PRO:O	3:AC:60:ALA:O	2.37	0.42
4:AD:34:GLU:C	4:AD:36:ALA:H	2.23	0.42
6:AF:40:GLU:HB2	6:AF:42:TRP:NE1	2.35	0.42
6:AF:49:TYR:CE2	6:AF:51:ILE:HB	2.53	0.42
6:AF:51:ILE:HD13	6:AF:86:ARG:HG3	2.01	0.42
10:AJ:86:ALA:O	10:AJ:90:LEU:HD12	2.20	0.42
12:AL:94:TYR:CD2	12:AL:94:TYR:N	2.87	0.42
12:AL:82:ARG:CZ	12:AL:95:HIS:HB2	2.50	0.42
13:AM:95:PRO:CG	13:AM:101:THR:HG22	2.49	0.42
14:AN:30:ILE:HG23	14:AN:44:VAL:CG1	2.48	0.42
17:AQ:12:VAL:CG1	17:AQ:21:VAL:O	2.68	0.42
20:AT:34:VAL:O	20:AT:38:ILE:HG12	2.19	0.42
11:AK:124:LYS:O	21:AU:33:ARG:NE	2.53	0.42
21:AU:38:GLU:CD	21:AU:41:THR:HG21	2.40	0.42
22:BA:244:A:OP2	51:B3:7:ARG:NH2	2.53	0.42
22:BA:1070:A:C2	30:BI:9:LYS:CG	2.99	0.42
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.55	0.42
22:BA:2134:A:OP1	22:BA:2134:A:H8	2.03	0.42
22:BA:323:C:N4	22:BA:333:G:N7	2.68	0.42
22:BA:332:A:C4	22:BA:335:C:N4	2.88	0.42
22:BA:359:G:H3'	22:BA:360:U:H6	1.85	0.42
22:BA:415:A:H1'	22:BA:1865:U:H5''	2.02	0.42
22:BA:570:G:C4	22:BA:2030:A:N7	2.87	0.42
22:BA:740:C:H5'	22:BA:1784:A:C3'	2.47	0.42
22:BA:866:A:N7	22:BA:914:G:C6	2.88	0.42
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.19	0.42
26:BE:5:LEU:HD11	26:BE:12:LEU:HD23	2.01	0.42
28:BG:112:VAL:CG2	28:BG:113:ASP:N	2.82	0.42
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.85	0.42
34:BM:42:THR:H	34:BM:45:GLN:HB2	1.85	0.42
36:BO:78:VAL:O	36:BO:79:ALA:C	2.58	0.42
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.55	0.42
38:BQ:91:ARG:CD	39:BR:11:GLN:HB2	2.50	0.42
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	2.02	0.42
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.20	0.42
44:BW:39:GLN:CG	44:BW:41:GLY:H	2.07	0.42
44:BW:47:GLY:C	44:BW:49:ASN:N	2.71	0.42
53:CA:1069:C:O2'	53:CA:1192:C:H1'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:994:A:N6	53:CA:1216:A:H5'	2.35	0.42
53:CA:1225:A:H2'	53:CA:1225:A:N3	2.35	0.42
53:CA:1515:G:H2'	53:CA:1516:G:C8	2.55	0.42
53:CA:206:C:O5'	53:CA:207:C:OP2	2.38	0.42
53:CA:330:C:H4'	53:CA:330:C:OP2	2.20	0.42
53:CA:372:C:H4'	53:CA:373:A:H5'	2.01	0.42
53:CA:415:A:H3'	53:CA:416:G:C8	2.53	0.42
53:CA:539:A:N6	53:CA:540:G:O6	2.53	0.42
53:CA:764:C:C4	53:CA:812:G:O6	2.73	0.42
53:CA:979:C:C5	53:CA:1318:A:N1	2.88	0.42
2:CB:103:TRP:CB	2:CB:106:VAL:HB	2.48	0.42
2:CB:161:PHE:HA	2:CB:183:PHE:O	2.20	0.42
6:CF:32:ALA:O	6:CF:33:GLU:HB2	2.18	0.42
6:CF:38:ARG:HD3	6:CF:39:LEU:N	2.35	0.42
6:CF:99:ALA:O	6:CF:100:SER:CB	2.68	0.42
54:CG:37:THR:HA	54:CG:40:SER:CB	2.49	0.42
8:CH:124:ILE:HG22	8:CH:125:ILE:H	1.84	0.42
11:CK:126:ARG:HB2	21:CU:33:ARG:CD	2.45	0.42
12:CL:14:LYS:C	12:CL:14:LYS:HE3	2.40	0.42
17:CQ:68:LYS:O	17:CQ:69:THR:OG1	2.37	0.42
51:D3:7:ARG:HA	51:D3:7:ARG:HD2	1.85	0.42
57:DA:1050:A:H2'	57:DA:1051:G:C8	2.55	0.42
57:DA:1285:A:H2'	57:DA:1286:A:H5''	2.01	0.42
57:DA:1324:G:O2'	57:DA:1616:A:N6	2.52	0.42
57:DA:1438:U:H5''	63:DA:3639:HOH:O	2.20	0.42
57:DA:1571:A:O5'	57:DA:1571:A:H8	2.01	0.42
57:DA:1655:A:H5'	25:DD:118:PHE:CD1	2.55	0.42
57:DA:1792:G:H22	57:DA:1828:G:H1'	1.84	0.42
57:DA:1825:U:H3'	57:DA:1825:U:C6	2.55	0.42
57:DA:1926:U:H2'	57:DA:1928:A:N7	2.34	0.42
57:DA:204:A:C4	57:DA:206:U:C4	3.08	0.42
57:DA:204:A:O4'	57:DA:206:U:C6	2.73	0.42
57:DA:2244:U:H6	57:DA:2244:U:O5'	2.03	0.42
57:DA:2408:U:O2'	57:DA:2409:G:P	2.78	0.42
57:DA:2415:G:C5	57:DA:2416:C:C4	3.08	0.42
57:DA:2530:A:C8	28:DG:156:TYR:OH	2.68	0.42
57:DA:2649:C:H2'	57:DA:2650:U:C6	2.54	0.42
57:DA:2699:C:N4	57:DA:2700:A:N6	2.68	0.42
57:DA:223:A:O2'	57:DA:408:G:N3	2.53	0.42
57:DA:534:U:H2'	57:DA:535:G:H8	1.84	0.42
57:DA:805:G:O2'	57:DA:831:G:H4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:40:U:N3	58:DB:43:C:OP2	2.53	0.42
58:DB:42:C:C2	59:DF:88:VAL:HA	2.55	0.42
24:DC:196:ASN:O	24:DC:197:ALA:CB	2.67	0.42
24:DC:30:ALA:C	24:DC:32:LEU:H	2.23	0.42
24:DC:92:LEU:HD12	24:DC:92:LEU:HA	1.95	0.42
25:DD:101:PHE:HD2	25:DD:104:VAL:HG11	1.85	0.42
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	2.00	0.42
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.66	0.42
30:DI:93:ASN:HA	30:DI:93:ASN:HD22	1.66	0.42
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.49	0.42
32:DK:61:VAL:HG23	32:DK:61:VAL:O	2.20	0.42
34:DM:76:LYS:O	34:DM:77:PRO:O	2.38	0.42
36:DO:24:THR:H	36:DO:90:VAL:HG12	1.84	0.42
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.85	0.42
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.19	0.42
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.19	0.42
41:DT:29:THR:HB	41:DT:86:THR:N	2.35	0.42
41:DT:5:GLU:CD	46:DY:18:LEU:HD21	2.40	0.42
45:DX:64:ASP:HA	45:DX:67:LEU:HD12	2.02	0.42
1:AA:1048:G:OP1	14:AN:3:GLN:N	2.48	0.42
1:AA:1089:G:C2	1:AA:1090:U:H1'	2.54	0.42
1:AA:123:U:H2'	1:AA:124:C:C6	2.55	0.42
1:AA:1374:A:H2'	1:AA:1375:A:C8	2.55	0.42
1:AA:181:A:N1	1:AA:195:A:C8	2.88	0.42
1:AA:372:C:C4'	1:AA:373:A:OP1	2.64	0.42
1:AA:42:G:C6	1:AA:43:C:C4	3.08	0.42
1:AA:501:C:O2'	1:AA:502:A:H5'	2.20	0.42
1:AA:575:G:C5	1:AA:881:G:C2	3.08	0.42
1:AA:693:G:C2'	1:AA:694:A:H5'	2.50	0.42
2:AB:184:ALA:HB3	2:AB:195:VAL:CG2	2.50	0.42
3:AC:15:LYS:HG3	3:AC:16:PRO:HD2	2.02	0.42
4:AD:167:PRO:HB2	4:AD:170:LEU:CD1	2.47	0.42
5:AE:10:LEU:H	5:AE:10:LEU:HD23	1.84	0.42
7:AG:108:ARG:HH21	7:AG:118:ARG:NH2	2.17	0.42
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.47	0.42
8:AH:79:ARG:HB2	8:AH:80:PRO:HD2	2.02	0.42
9:AI:33:SER:OG	9:AI:35:GLU:HG2	2.20	0.42
9:AI:25:GLY:HA3	9:AI:57:VAL:O	2.20	0.42
10:AJ:17:LEU:C	10:AJ:17:LEU:HD23	2.40	0.42
17:AQ:12:VAL:HG11	17:AQ:21:VAL:HG22	2.01	0.42
18:AR:33:THR:HG21	18:AR:37:LYS:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AU:16:ARG:HG2	21:AU:19:LYS:HG2	2.02	0.42
22:BA:1141:U:C5	31:BJ:65:THR:CG2	3.03	0.42
22:BA:1253:A:C5	63:BA:3330:HOH:O	2.72	0.42
22:BA:1765:U:C2'	22:BA:1766:G:H5'	2.50	0.42
22:BA:1858:A:C8	22:BA:1858:A:OP2	2.73	0.42
22:BA:1910:G:O2'	22:BA:1911:U:H5'	2.20	0.42
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.50	0.42
22:BA:2425:A:H5'	22:BA:2427:C:H5'	2.02	0.42
22:BA:2517:C:H2'	22:BA:2542:A:N7	2.35	0.42
22:BA:2574:G:C6	22:BA:2575:C:C4	3.08	0.42
22:BA:2599:G:C2	22:BA:2600:A:C4	3.08	0.42
22:BA:2830:C:C2'	22:BA:2831:G:H5'	2.49	0.42
22:BA:28:A:H2'	22:BA:29:U:H6	1.85	0.42
22:BA:332:A:C5	22:BA:335:C:C4	3.08	0.42
22:BA:418:C:H2'	22:BA:419:U:O4'	2.20	0.42
22:BA:763:G:H8	22:BA:763:G:H2'	1.37	0.42
22:BA:769:U:N3	22:BA:770:G:N7	2.68	0.42
24:BC:109:LEU:CD2	24:BC:110:LYS:H	2.28	0.42
25:BD:98:VAL:C	25:BD:100:LEU:N	2.73	0.42
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.35	0.42
27:BF:102:LEU:O	27:BF:107:VAL:HB	2.20	0.42
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.42
31:BJ:64:VAL:HG13	31:BJ:65:THR:N	2.34	0.42
35:BN:51:LEU:HD12	35:BN:51:LEU:HA	1.68	0.42
37:BP:33:GLU:HG3	37:BP:34:GLY:N	2.35	0.42
38:BQ:94:LEU:HD22	38:BQ:94:LEU:HA	1.29	0.42
40:BS:48:LYS:HD3	40:BS:52:GLU:CD	2.41	0.42
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.20	0.42
41:BT:33:LYS:HG3	41:BT:80:TRP:HE3	1.85	0.42
53:CA:102:G:H2'	53:CA:103:U:H6	1.83	0.42
53:CA:1072:G:C5	53:CA:1073:U:C5	3.08	0.42
53:CA:1146:A:C2	53:CA:1147:C:C2	3.08	0.42
53:CA:1200:C:O2'	53:CA:1201:A:P	2.78	0.42
53:CA:1242:G:N2	53:CA:1302:C:O2	2.53	0.42
53:CA:496:A:O2'	53:CA:497:G:H8	1.98	0.42
2:CB:72:LYS:O	2:CB:74:ALA:N	2.53	0.42
3:CC:53:ARG:HB2	3:CC:53:ARG:NH1	2.35	0.42
4:CD:203:TYR:C	4:CD:205:LYS:H	2.22	0.42
6:CF:66:ALA:HA	6:CF:67:PRO:HD2	1.94	0.42
10:CJ:13:PHE:CE2	10:CJ:69:THR:HG23	2.55	0.42
56:CP:52:LEU:CD2	56:CP:75:ILE:HG23	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HG21	2.02	0.42
18:CR:61:ALA:HB1	18:CR:66:LEU:HB2	2.02	0.42
19:CS:43:MET:O	19:CS:61:VAL:HG11	2.20	0.42
19:CS:62:THR:HG22	19:CS:63:ASP:N	2.32	0.42
20:CT:11:ILE:C	20:CT:13:SER:N	2.74	0.42
21:CU:31:VAL:O	21:CU:32:ARG:C	2.58	0.42
52:D4:15:LYS:O	52:D4:16:ILE:HB	2.19	0.42
57:DA:1109:C:N4	57:DA:1110:G:N1	2.68	0.42
57:DA:1142:A:N7	57:DA:1144:A:C5	2.87	0.42
57:DA:1210:G:N7	57:DA:1237:A:N6	2.68	0.42
57:DA:1295:C:H1'	35:DN:23:ASN:HD21	1.85	0.42
57:DA:1854:A:O4'	57:DA:2233:U:H4'	2.20	0.42
57:DA:1965:C:C5'	57:DA:1966:A:H5''	2.46	0.42
57:DA:2102:G:C5	57:DA:2103:C:C5	3.08	0.42
57:DA:2235:G:C4	57:DA:2236:U:C5	3.08	0.42
57:DA:2811:G:H2'	57:DA:2812:G:O4'	2.19	0.42
57:DA:321:U:C1'	26:DE:159:LEU:HG	2.49	0.42
57:DA:498:G:C6	57:DA:499:U:C4	3.07	0.42
57:DA:584:C:OP1	38:DQ:5:ARG:HD3	2.19	0.42
57:DA:196:A:N6	57:DA:831:G:H21	2.17	0.42
57:DA:861:A:O2'	57:DA:862:G:C5'	2.68	0.42
58:DB:57:A:C2'	58:DB:58:A:C8	3.01	0.42
24:DC:12:ARG:O	24:DC:14:HIS:N	2.53	0.42
24:DC:33:LEU:O	24:DC:34:GLU:CB	2.64	0.42
24:DC:76:VAL:O	24:DC:76:VAL:HG23	2.19	0.42
57:DA:469:G:OP2	26:DE:55:SER:HB3	2.20	0.42
28:DG:40:VAL:HB	28:DG:41:GLU:H	1.69	0.42
28:DG:84:LYS:HB3	28:DG:132:LEU:O	2.20	0.42
29:DH:9:VAL:HG13	29:DH:10:ALA:N	2.35	0.42
29:DH:94:ILE:HG13	29:DH:98:ASP:HB3	2.01	0.42
30:DI:132:ALA:HB1	30:DI:137:LEU:HB2	2.02	0.42
31:DJ:64:VAL:O	31:DJ:68:LYS:HE2	2.20	0.42
34:DM:78:LEU:HA	34:DM:78:LEU:HD23	1.80	0.42
35:DN:97:ILE:HD12	35:DN:99:LYS:HD3	2.01	0.42
37:DP:91:VAL:HG21	37:DP:96:LEU:HD21	2.02	0.42
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.35	0.42
40:DS:20:VAL:HG23	40:DS:23:LEU:CD1	2.44	0.42
42:DU:10:VAL:O	42:DU:21:ARG:HA	2.19	0.42
42:DU:16:LYS:HA	42:DU:16:LYS:HD3	1.77	0.42
42:DU:94:PHE:CD2	42:DU:94:PHE:O	2.73	0.42
44:DW:17:ALA:CB	44:DW:36:ILE:HA	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:23:ARG:O	46:DY:27:ASN:HB2	2.20	0.42
1:AA:15:G:C5	1:AA:1396:A:C2	3.08	0.41
1:AA:269:C:N4	1:AA:270:A:H62	2.18	0.41
1:AA:404:G:H2'	1:AA:405:U:O4'	2.20	0.41
1:AA:429:U:H1'	1:AA:430:A:C5'	2.50	0.41
1:AA:503:C:H6	1:AA:503:C:O5'	2.02	0.41
1:AA:564:C:H2'	1:AA:565:U:C6	2.55	0.41
1:AA:592:G:C6	1:AA:648:A:C6	3.08	0.41
1:AA:945:G:N3	1:AA:945:G:H2'	2.35	0.41
2:AB:116:LEU:HB3	2:AB:140:LEU:HG	2.01	0.41
2:AB:57:ASN:HD22	2:AB:57:ASN:C	2.23	0.41
3:AC:5:HIS:O	3:AC:9:ILE:HG22	2.20	0.41
5:AE:147:ASN:O	5:AE:149:PRO:HD3	2.19	0.41
6:AF:11:HIS:CD2	6:AF:12:PRO:HD2	2.54	0.41
9:AI:44:ARG:HB2	9:AI:45:MET:HE3	2.01	0.41
10:AJ:78:GLU:HA	10:AJ:79:PRO:HD2	1.91	0.41
11:AK:110:THR:HG22	21:AU:4:LYS:HB3	2.01	0.41
13:AM:5:GLY:HA3	13:AM:65:GLU:HG3	2.02	0.41
16:AP:70:ARG:O	16:AP:70:ARG:HG3	2.20	0.41
22:BA:1061:U:C5	30:BI:9:LYS:HG3	2.54	0.41
22:BA:1177:G:C5	22:BA:1178:C:C5	3.08	0.41
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.90	0.41
22:BA:1303:G:H2'	22:BA:1304:A:H8	1.85	0.41
22:BA:1319:C:O2	22:BA:1334:G:C2	2.73	0.41
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.35	0.41
22:BA:1588:G:N3	22:BA:1589:U:C6	2.87	0.41
22:BA:1712:U:C4	22:BA:1713:A:C5	3.08	0.41
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.20	0.41
22:BA:2297:A:H2'	22:BA:2297:A:N3	2.35	0.41
22:BA:229:C:H2'	22:BA:230:G:O4'	2.20	0.41
22:BA:2532:G:C5	22:BA:2533:U:C4	3.08	0.41
22:BA:377:G:H2'	22:BA:378:C:O4'	2.20	0.41
22:BA:538:A:H2'	22:BA:539:G:O4'	2.20	0.41
22:BA:920:A:H2'	22:BA:921:C:O4'	2.20	0.41
24:BC:175:LEU:HD12	24:BC:175:LEU:HA	1.81	0.41
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.17	0.41
28:BG:139:VAL:HG12	28:BG:140:ILE:N	2.35	0.41
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.41
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.41
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.49	0.41
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.83	0.41
40:BS:54:ALA:O	40:BS:57:ASN:HB2	2.20	0.41
42:BU:31:GLY:O	42:BU:66:VAL:HB	2.20	0.41
46:BY:56:LEU:HA	46:BY:59:GLU:CG	2.50	0.41
53:CA:1215:G:O2'	53:CA:1216:A:H5'	2.19	0.41
53:CA:284:C:H6	53:CA:284:C:O5'	2.03	0.41
53:CA:428:G:C2	53:CA:430:A:N6	2.88	0.41
53:CA:45:G:O2'	53:CA:46:G:H5'	2.20	0.41
53:CA:566:G:C4'	53:CA:567:G:OP1	2.67	0.41
3:CC:35:ASP:CG	3:CC:56:ILE:HD12	2.40	0.41
6:CF:11:HIS:HD2	6:CF:54:LEU:HD21	1.79	0.41
54:CG:10:LYS:H	54:CG:10:LYS:HE3	1.85	0.41
54:CG:70:PRO:HB3	54:CG:98:LEU:HD12	2.01	0.41
8:CH:124:ILE:HG22	8:CH:125:ILE:N	2.35	0.41
9:CI:35:GLU:CA	9:CI:39:GLY:HA3	2.49	0.41
11:CK:42:GLY:HA3	11:CK:73:VAL:HB	2.02	0.41
55:CM:46:GLU:O	55:CM:47:LEU:HB2	2.19	0.41
55:CM:78:ARG:HH11	55:CM:78:ARG:HG2	1.84	0.41
56:CP:20:VAL:HG21	56:CP:32:PHE:CB	2.50	0.41
53:CA:264:C:H1'	17:CQ:65:PRO:HG2	2.01	0.41
19:CS:45:GLY:N	19:CS:61:VAL:HB	2.32	0.41
21:CU:13:VAL:CG2	21:CU:15:LEU:HD23	2.49	0.41
52:D4:19:ARG:HH12	52:D4:26:ILE:CG1	2.34	0.41
57:DA:1329:U:O2'	57:DA:1330:C:P	2.78	0.41
57:DA:1439:A:C2	57:DA:1553:A:C8	3.08	0.41
57:DA:1702:G:C6	57:DA:1703:G:N7	2.88	0.41
57:DA:1745:A:C2	57:DA:1746:A:C8	3.08	0.41
57:DA:1821:A:H5'	24:DC:156:SER:OG	2.19	0.41
57:DA:1886:U:H6	57:DA:1886:U:O5'	2.02	0.41
57:DA:2456:C:H2'	57:DA:2457:U:O4'	2.20	0.41
57:DA:2654:A:H62	57:DA:2667:C:N4	2.18	0.41
57:DA:294:A:H2'	57:DA:295:G:O5'	2.20	0.41
57:DA:33:C:H4'	57:DA:34:U:OP1	2.16	0.41
57:DA:481:G:O2'	57:DA:482:A:P	2.77	0.41
57:DA:527:C:O2'	57:DA:528:A:O5'	2.38	0.41
57:DA:604:G:N1	57:DA:605:G:C6	2.88	0.41
57:DA:763:G:O2'	57:DA:764:A:H3'	2.20	0.41
57:DA:818:G:C2'	57:DA:819:A:H5''	2.50	0.41
58:DB:67:G:O2'	58:DB:68:C:O5'	2.38	0.41
58:DB:76:G:H5''	43:DV:17:SER:OG	2.21	0.41
24:DC:115:ILE:O	24:DC:116:GLN:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:135:PRO:HG2	24:DC:138:SER:OG	2.19	0.41
24:DC:174:ARG:HA	24:DC:180:MET:HG2	2.02	0.41
57:DA:729:G:O6	24:DC:206:LYS:HB2	2.20	0.41
25:DD:148:GLN:HG2	25:DD:152:PRO:CG	2.50	0.41
25:DD:22:ILE:HA	25:DD:23:PRO:HD2	1.91	0.41
59:DF:69:ALA:HB2	59:DF:82:TYR:O	2.20	0.41
30:DI:112:LYS:NZ	30:DI:128:ILE:HD12	2.34	0.41
32:DK:114:LYS:O	32:DK:117:SER:HB2	2.20	0.41
34:DM:41:LEU:HB3	34:DM:46:ILE:CG2	2.50	0.41
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.19	0.41
42:DU:59:GLU:C	42:DU:60:LYS:HD2	2.41	0.41
45:DX:1:SER:C	45:DX:3:VAL:N	2.74	0.41
1:AA:1039:G:C2'	1:AA:1040:U:H5'	2.49	0.41
1:AA:1046:A:H2'	1:AA:1047:G:H8	1.85	0.41
1:AA:1108:G:N7	1:AA:1109:C:C5	2.88	0.41
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.21	0.41
1:AA:252:U:O2'	1:AA:275:G:N2	2.53	0.41
1:AA:370:C:O2'	1:AA:371:A:H5'	2.20	0.41
1:AA:499:A:H4'	1:AA:500:G:O5'	2.20	0.41
1:AA:687:A:C2	1:AA:704:A:C5	3.07	0.41
2:AB:140:LEU:O	2:AB:141:GLU:C	2.59	0.41
2:AB:27:LYS:N	2:AB:28:PRO:CD	2.83	0.41
2:AB:81:ASP:OD1	2:AB:83:ALA:N	2.48	0.41
3:AC:137:VAL:HA	3:AC:148:ILE:CD1	2.48	0.41
4:AD:191:SER:OG	4:AD:192:ALA:N	2.48	0.41
9:AI:49:GLN:O	9:AI:51:LEU:N	2.54	0.41
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	2.20	0.41
11:AK:113:THR:HA	11:AK:114:PRO:HD3	1.82	0.41
11:AK:55:ARG:O	11:AK:58:THR:HG23	2.19	0.41
11:AK:92:ARG:O	11:AK:92:ARG:HG2	2.20	0.41
17:AQ:32:ILE:N	17:AQ:32:ILE:HD12	2.35	0.41
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.55	0.41
50:B2:24:THR:O	50:B2:25:LYS:C	2.58	0.41
22:BA:1049:C:H2'	22:BA:1050:A:H5'	2.02	0.41
22:BA:1770:G:C4'	63:BA:3730:HOH:O	2.68	0.41
22:BA:2197:U:O2'	22:BA:2198:A:C2'	2.68	0.41
22:BA:2593:U:H2'	22:BA:2594:C:H6	1.85	0.41
22:BA:263:G:H2'	22:BA:264:C:O5'	2.20	0.41
22:BA:2645:G:C3'	22:BA:2646:C:H5'	2.50	0.41
22:BA:2732:G:H8	22:BA:2732:G:OP2	2.03	0.41
22:BA:686:U:O4	50:B2:12:ARG:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:866:A:O2'	22:BA:867:C:H5'	2.20	0.41
22:BA:86:G:C2	22:BA:97:C:C2	3.08	0.41
23:BB:89:U:OP2	23:BB:89:U:C4'	2.67	0.41
24:BC:115:ILE:HA	24:BC:115:ILE:HD12	1.78	0.41
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.55	0.41
25:BD:191:GLY:O	25:BD:192:ALA:CB	2.68	0.41
26:BE:129:PRO:HG3	26:BE:156:ASN:OD1	2.20	0.41
26:BE:95:LYS:O	26:BE:96:VAL:CB	2.67	0.41
27:BF:170:ALA:O	27:BF:172:PHE:O	2.38	0.41
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.41
31:BJ:101:ILE:O	31:BJ:105:VAL:CG1	2.69	0.41
31:BJ:114:LEU:O	31:BJ:115:GLY:C	2.59	0.41
31:BJ:93:ILE:O	31:BJ:97:PRO:HG3	2.19	0.41
32:BK:107:LEU:HD12	32:BK:107:LEU:HA	1.79	0.41
35:BN:33:ILE:N	35:BN:33:ILE:HD12	2.35	0.41
37:BP:71:ARG:HD3	37:BP:73:PHE:CZ	2.55	0.41
38:BQ:8:ILE:O	38:BQ:12:ARG:HG3	2.21	0.41
39:BR:102:SER:O	39:BR:103:ALA:O	2.38	0.41
38:BQ:91:ARG:HE	39:BR:11:GLN:HB2	1.85	0.41
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.68	0.41
40:BS:4:ILE:CG2	40:BS:106:VAL:HG13	2.50	0.41
41:BT:21:SER:HA	41:BT:31:VAL:HG11	2.01	0.41
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.33	0.41
45:BX:68:ALA:C	45:BX:69:GLU:O	2.58	0.41
46:BY:47:ARG:NH2	46:BY:47:ARG:CG	2.72	0.41
46:BY:6:LEU:O	46:BY:7:ARG:HB3	2.19	0.41
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE2	2.01	0.41
53:CA:1082:A:OP1	5:CE:22:LYS:HE3	2.21	0.41
53:CA:116:A:H2'	53:CA:117:G:C8	2.54	0.41
53:CA:1179:A:H2'	53:CA:1180:A:O4'	2.20	0.41
53:CA:1241:G:H2'	53:CA:1242:G:C8	2.39	0.41
53:CA:1316:G:H22	53:CA:1318:A:H3'	1.85	0.41
53:CA:203:G:H8	53:CA:203:G:O5'	2.03	0.41
53:CA:321:A:O3'	53:CA:1436:U:H5'	2.20	0.41
53:CA:62:U:O2'	53:CA:379:C:O2	2.31	0.41
3:CC:39:ARG:C	3:CC:41:TYR:H	2.23	0.41
4:CD:117:VAL:O	4:CD:130:ASN:HA	2.20	0.41
4:CD:33:ILE:HD12	4:CD:33:ILE:HA	1.84	0.41
53:CA:674:G:H5"	6:CF:49:TYR:CE2	2.55	0.41
6:CF:80:PHE:N	6:CF:80:PHE:CD1	2.88	0.41
54:CG:27:ASN:O	54:CG:30:MET:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:4:GLN:HB3	9:CI:21:LYS:CG	2.51	0.41
12:CL:37:TYR:O	12:CL:38:THR:HG23	2.21	0.41
55:CM:15:VAL:O	55:CM:19:THR:HG23	2.19	0.41
55:CM:23:GLY:HA3	55:CM:64:VAL:HG13	2.01	0.41
56:CP:19:VAL:HG13	56:CP:37:GLY:CA	2.50	0.41
53:CA:254:G:O2'	17:CQ:17:GLU:O	2.36	0.41
57:DA:1000:A:N1	57:DA:1001:A:C2	2.89	0.41
57:DA:1298:C:H2'	57:DA:1299:G:O4'	2.20	0.41
57:DA:1386:C:HO2'	57:DA:1387:A:P	2.43	0.41
57:DA:1388:G:C2	57:DA:1389:G:C8	3.08	0.41
57:DA:1540:G:H2'	57:DA:1541:C:C6	2.55	0.41
57:DA:1802:A:P	57:DA:1815:A:H61	2.42	0.41
57:DA:1845:G:C6	57:DA:1846:G:N7	2.89	0.41
57:DA:1875:G:H8	57:DA:1875:G:OP2	2.03	0.41
57:DA:2092:U:C2'	57:DA:2093:G:C8	2.82	0.41
57:DA:2307:G:H1	59:DF:38:GLY:HA3	1.85	0.41
57:DA:2428:G:H4'	57:DA:2429:G:C5	2.55	0.41
57:DA:2516:A:C2	57:DA:2569:G:N3	2.89	0.41
57:DA:2635:A:H5''	25:DD:79:LEU:O	2.20	0.41
57:DA:379:G:N1	57:DA:380:G:C4	2.88	0.41
57:DA:581:C:H2'	57:DA:582:A:C8	2.55	0.41
57:DA:946:C:O2'	57:DA:947:A:C5'	2.68	0.41
57:DA:985:C:H6	57:DA:985:C:O5'	2.03	0.41
24:DC:130:PRO:C	24:DC:132:ARG:N	2.74	0.41
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.35	0.41
59:DF:122:ASP:HB2	59:DF:126:ASN:CB	2.49	0.41
57:DA:2529:G:C4'	28:DG:174:LYS:HD3	2.46	0.41
28:DG:7:PRO:HB3	28:DG:48:THR:HB	2.01	0.41
29:DH:40:THR:O	29:DH:42:LYS:N	2.47	0.41
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.91	0.41
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.23	0.41
31:DJ:106:LYS:HD2	31:DJ:119:PHE:HD2	1.84	0.41
31:DJ:51:GLY:HA3	31:DJ:121:LYS:HE3	2.01	0.41
34:DM:1:MET:HB3	34:DM:2:LEU:H	1.67	0.41
57:DA:1455:G:N7	35:DN:64:ARG:NH1	2.68	0.41
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.47	0.41
44:DW:37:VAL:CG2	44:DW:38:ARG:HH11	2.33	0.41
45:DX:16:ASN:N	45:DX:26:ARG:HB3	2.35	0.41
1:AA:1261:A:N3	1:AA:1275:A:C6	2.89	0.41
1:AA:1322:C:O2'	1:AA:1323:G:C5'	2.68	0.41
1:AA:158:G:C2'	1:AA:159:G:H5''	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:338:A:H2'	1:AA:339:C:O4'	2.21	0.41
1:AA:428:G:C5	1:AA:430:A:C6	3.08	0.41
1:AA:439:U:C6	4:AD:119:HIS:CD2	3.05	0.41
1:AA:55:A:C5	1:AA:56:U:C5	3.08	0.41
1:AA:652:U:H1'	1:AA:653:U:C6	2.55	0.41
1:AA:772:U:O2'	1:AA:773:G:H5'	2.21	0.41
1:AA:974:A:C4'	1:AA:975:A:H5'	2.44	0.41
1:AA:977:A:C2'	1:AA:977:A:N3	2.73	0.41
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.68	0.41
2:AB:67:LEU:O	2:AB:160:LEU:HD12	2.20	0.41
3:AC:188:ALA:O	3:AC:194:VAL:HA	2.20	0.41
4:AD:138:PRO:HA	4:AD:181:PHE:HD2	1.85	0.41
1:AA:7:A:H3'	5:AE:105:ILE:HD12	2.02	0.41
5:AE:12:GLU:CB	5:AE:38:VAL:HG12	2.49	0.41
6:AF:62:MET:O	6:AF:63:ASN:HB2	2.20	0.41
7:AG:110:ARG:HB2	7:AG:110:ARG:NH1	2.35	0.41
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.82	0.41
10:AJ:51:VAL:CG1	14:AN:80:ARG:HB2	2.50	0.41
15:AO:17:ASP:O	15:AO:20:ASP:HB3	2.19	0.41
16:AP:15:PRO:HG2	16:AP:41:PRO:HG3	2.02	0.41
17:AQ:11:VAL:HG12	17:AQ:13:SER:H	1.85	0.41
19:AS:79:TYR:O	19:AS:80:ARG:HB3	2.20	0.41
21:AU:13:VAL:HG13	21:AU:15:LEU:CG	2.41	0.41
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.20	0.41
22:BA:1131:G:N7	22:BA:2025:C:H4'	2.36	0.41
22:BA:1316:U:H2'	22:BA:1317:G:H8	1.85	0.41
22:BA:1474:U:H2'	22:BA:1475:G:H5'	2.02	0.41
22:BA:1855:U:H6	22:BA:1855:U:O5'	2.03	0.41
22:BA:1655:A:H61	22:BA:2005:A:H1'	1.85	0.41
22:BA:2145:C:OP1	22:BA:2148:G:C5	2.73	0.41
22:BA:2075:U:H2'	22:BA:2238:G:N2	2.35	0.41
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.68	0.41
22:BA:253:C:H2'	22:BA:253:C:O2	2.20	0.41
22:BA:272:A:O2'	22:BA:273:G:P	2.78	0.41
22:BA:2840:C:H2'	22:BA:2841:C:C6	2.55	0.41
22:BA:387:U:C5	22:BA:388:G:C6	3.08	0.41
22:BA:430:A:H5''	22:BA:431:U:OP2	2.20	0.41
22:BA:64:A:C5	22:BA:65:U:C4	3.08	0.41
22:BA:763:G:O2'	22:BA:764:A:H5''	2.20	0.41
24:BC:259:ASN:C	24:BC:261:ARG:N	2.73	0.41
25:BD:133:THR:O	25:BD:134:HIS:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:119:ILE:O	26:BE:119:ILE:HG12	2.21	0.41
26:BE:134:LEU:CD2	26:BE:161:ALA:HB2	2.49	0.41
26:BE:150:THR:HA	26:BE:189:THR:CG2	2.50	0.41
27:BF:121:PHE:HD1	27:BF:126:ASN:O	2.02	0.41
29:BH:41:LYS:HA	29:BH:44:ILE:CG1	2.48	0.41
29:BH:44:ILE:O	29:BH:48:GLU:HB2	2.20	0.41
30:BI:115:ASP:C	30:BI:115:ASP:OD1	2.59	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.21	0.41
31:BJ:36:LEU:HD12	31:BJ:36:LEU:HA	1.60	0.41
32:BK:65:THR:OG1	32:BK:68:GLY:N	2.44	0.41
35:BN:87:PHE:O	35:BN:89:SER:N	2.53	0.41
36:BO:104:GLN:C	36:BO:105:ALA:O	2.57	0.41
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.85	0.41
37:BP:24:THR:O	37:BP:44:GLY:O	2.38	0.41
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.82	0.41
41:BT:13:ALA:HB3	41:BT:33:LYS:HB3	2.02	0.41
41:BT:69:ARG:NE	41:BT:70:HIS:H	2.19	0.41
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.68	0.41
43:BV:5:ASN:N	43:BV:5:ASN:ND2	2.64	0.41
43:BV:66:ASP:CG	43:BV:66:ASP:O	2.58	0.41
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.67	0.41
53:CA:1002:G:C6	53:CA:1003:G:C6	3.08	0.41
53:CA:1140:C:H2'	53:CA:1141:C:H5	1.84	0.41
53:CA:1294:G:C8	53:CA:1294:G:OP2	2.74	0.41
53:CA:1386:G:N2	53:CA:1387:G:C4	2.89	0.41
53:CA:427:U:C4	53:CA:428:G:C6	3.08	0.41
53:CA:497:G:O2'	53:CA:498:A:H8	1.99	0.41
53:CA:558:G:O5'	53:CA:559:A:H3'	2.20	0.41
53:CA:605:U:H2'	53:CA:606:G:C8	2.56	0.41
53:CA:637:C:H2'	53:CA:638:U:H6	1.82	0.41
53:CA:749:A:C2	53:CA:750:C:C2	3.08	0.41
53:CA:751:U:H2'	53:CA:752:G:O4'	2.20	0.41
53:CA:803:G:H2'	53:CA:804:U:C6	2.55	0.41
53:CA:831:A:OP1	2:CB:20:ARG:HG3	2.20	0.41
53:CA:836:G:C5	53:CA:851:G:C6	3.08	0.41
53:CA:83:C:C4	53:CA:85:U:N3	2.88	0.41
53:CA:79:G:N2	53:CA:91:U:C2	2.88	0.41
2:CB:130:LYS:HD3	2:CB:130:LYS:HA	1.83	0.41
2:CB:178:LEU:HD12	2:CB:178:LEU:HA	1.80	0.41
3:CC:119:ILE:HD11	3:CC:136:ALA:CB	2.50	0.41
6:CF:43:GLY:HA2	6:CF:58:HIS:HE1	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:553:A:O4'	12:CL:27:PRO:HA	2.21	0.41
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	2.51	0.41
8:CH:85:TYR:CE1	17:CQ:36:PHE:HE2	2.38	0.41
19:CS:32:THR:O	19:CS:32:THR:HG23	2.19	0.41
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.69	0.41
52:D4:7:VAL:O	52:D4:8:LYS:O	2.38	0.41
57:DA:1335:C:H2'	57:DA:1336:A:C1'	2.51	0.41
57:DA:1512:C:H2'	57:DA:1513:U:H6	1.83	0.41
57:DA:2141:G:H2'	57:DA:2142:A:H8	1.84	0.41
57:DA:2373:G:C6	57:DA:2374:C:C4	3.08	0.41
57:DA:2567:G:H2'	57:DA:2568:U:C6	2.55	0.41
57:DA:2665:A:C2	57:DA:2666:C:N3	2.89	0.41
57:DA:2898:U:H2'	57:DA:2899:A:H8	1.85	0.41
57:DA:464:U:C6	57:DA:788:A:C2	3.08	0.41
57:DA:506:G:H4'	57:DA:509:C:O2	2.20	0.41
57:DA:575:A:C4	57:DA:576:U:C5	3.07	0.41
57:DA:579:G:C8	57:DA:2017:U:O4	2.74	0.41
57:DA:822:G:H2'	57:DA:823:C:H6	1.85	0.41
57:DA:916:G:HO2'	57:DA:917:A:P	2.42	0.41
57:DA:980:A:O5'	57:DA:982:C:N4	2.53	0.41
57:DA:984:A:O2'	57:DA:985:C:P	2.78	0.41
24:DC:198:GLU:O	24:DC:198:GLU:HG3	2.20	0.41
24:DC:245:THR:HG23	24:DC:249:VAL:O	2.19	0.41
24:DC:259:ASN:O	24:DC:260:LYS:CB	2.67	0.41
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.48	0.41
25:DD:5:VAL:HG21	25:DD:80:TRP:CG	2.55	0.41
28:DG:100:ASN:O	28:DG:115:GLN:HB2	2.19	0.41
30:DI:102:ARG:NH1	30:DI:105:LEU:HD13	2.35	0.41
32:DK:2:ILE:HD11	32:DK:65:THR:HG22	2.03	0.41
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.52	0.41
40:DS:41:LYS:O	40:DS:44:ALA:N	2.44	0.41
41:DT:14:PRO:HG2	41:DT:15:HIS:H	1.85	0.41
57:DA:301:G:O5'	42:DU:81:ARG:NH1	2.53	0.41
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.19	0.41
44:DW:37:VAL:HA	44:DW:55:ASP:O	2.20	0.41
46:DY:52:ARG:C	46:DY:54:LYS:N	2.73	0.41
1:AA:1030:U:OP2	1:AA:1031:C:O2	2.39	0.41
1:AA:1250:A:H2	1:AA:1370:G:H1'	1.85	0.41
1:AA:330:C:H5''	1:AA:330:C:C6	2.53	0.41
1:AA:414:A:HO2'	1:AA:415:A:H8	1.68	0.41
1:AA:511:C:O2'	1:AA:512:U:P	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:106:VAL:O	2:AB:110:ILE:HD13	2.20	0.41
2:AB:113:LEU:HB2	2:AB:143:LEU:HD12	2.02	0.41
4:AD:147:LYS:N	4:AD:147:LYS:CD	2.84	0.41
5:AE:108:GLY:O	5:AE:109:ALA:CB	2.69	0.41
5:AE:46:GLY:CA	5:AE:70:MET:HA	2.50	0.41
8:AH:45:ILE:CG2	8:AH:62:LEU:HD13	2.51	0.41
9:AI:18:VAL:HG11	9:AI:82:ILE:HG12	2.02	0.41
11:AK:24:ALA:CB	11:AK:29:THR:HG23	2.50	0.41
12:AL:85:ARG:HA	12:AL:93:ARG:HA	2.02	0.41
13:AM:76:ILE:O	13:AM:79:LEU:HB2	2.20	0.41
18:AR:43:ILE:HD13	18:AR:43:ILE:HA	1.83	0.41
48:B0:9:ARG:HB3	48:B0:9:ARG:CZ	2.51	0.41
49:B1:38:PHE:CZ	49:B1:43:ARG:HA	2.56	0.41
52:B4:9:LYS:HB2	52:B4:9:LYS:HE2	1.83	0.41
22:BA:1001:A:OP2	63:BA:3737:HOH:O	2.22	0.41
22:BA:1299:G:O6	22:BA:1639:C:H5''	2.20	0.41
22:BA:1535:A:H4'	22:BA:1536:C:OP2	2.18	0.41
22:BA:155:A:H2'	22:BA:156:A:C8	2.55	0.41
22:BA:1862:G:C2	22:BA:1863:G:C8	3.09	0.41
22:BA:1919:A:C2'	22:BA:1920:C:H5'	2.49	0.41
22:BA:2365:G:H4'	44:BW:59:PHE:CE2	2.55	0.41
22:BA:2682:A:C8	25:BD:11:MET:HG2	2.55	0.41
22:BA:375:G:C4	22:BA:376:G:C8	3.07	0.41
22:BA:497:A:H2'	22:BA:498:G:O4'	2.20	0.41
22:BA:861:A:H5''	22:BA:862:G:OP2	2.21	0.41
27:BF:30:VAL:HG12	27:BF:96:TRP:CH2	2.56	0.41
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.21	0.41
28:BG:82:PHE:HB2	28:BG:134:GLY:O	2.21	0.41
29:BH:72:ILE:O	29:BH:72:ILE:HG23	2.20	0.41
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.53	0.41
33:BL:56:PRO:O	33:BL:57:LEU:C	2.59	0.41
35:BN:15:SER:O	35:BN:16:HIS:C	2.58	0.41
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.93	0.41
39:BR:48:LYS:HD2	39:BR:48:LYS:O	2.20	0.41
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.85	0.41
53:CA:1026:G:H1	53:CA:1036:A:H61	1.65	0.41
53:CA:1250:A:C2	53:CA:1287:A:C6	3.08	0.41
53:CA:1328:C:H2'	53:CA:1329:A:C8	2.56	0.41
53:CA:1479:C:C2	53:CA:1480:A:C8	3.09	0.41
53:CA:273:U:C2'	53:CA:274:A:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:275:G:H2'	53:CA:276:G:H8	1.86	0.41
53:CA:408:A:C2	53:CA:435:A:C2	3.08	0.41
53:CA:66:A:C6	53:CA:67:C:N4	2.88	0.41
53:CA:926:G:H5'	53:CA:927:G:O5'	2.20	0.41
2:CB:100:LEU:C	2:CB:102:ASN:H	2.24	0.41
2:CB:164:ASP:CB	2:CB:167:HIS:HB3	2.50	0.41
2:CB:191:ASP:HA	2:CB:192:PRO:HD2	1.89	0.41
2:CB:209:VAL:CG2	2:CB:210:THR:N	2.83	0.41
3:CC:127:VAL:O	3:CC:128:MET:HB2	2.20	0.41
4:CD:107:GLY:N	4:CD:157:ALA:CB	2.83	0.41
4:CD:11:SER:HA	4:CD:18:LEU:CD1	2.50	0.41
4:CD:21:LYS:O	4:CD:21:LYS:CG	2.68	0.41
54:CG:64:ALA:HB2	54:CG:126:ALA:CB	2.47	0.41
8:CH:46:GLU:N	8:CH:63:LYS:HG3	2.35	0.41
15:CO:62:ARG:HH22	15:CO:88:ARG:NH2	2.18	0.41
19:CS:35:ARG:HA	19:CS:70:LEU:CB	2.46	0.41
49:D1:8:ILE:O	49:D1:21:THR:HA	2.21	0.41
51:D3:29:ARG:CZ	51:D3:29:ARG:CB	2.98	0.41
57:DA:1034:G:O2'	57:DA:1035:U:O4'	2.25	0.41
57:DA:1050:A:H2'	57:DA:1051:G:H8	1.85	0.41
57:DA:1203:U:H2'	57:DA:1204:A:C2	2.55	0.41
57:DA:1203:U:H3	57:DA:1204:A:N6	2.18	0.41
57:DA:122:G:O2'	57:DA:123:G:C5'	2.68	0.41
57:DA:1245:G:H4'	26:DE:33:VAL:CG1	2.41	0.41
57:DA:121:G:N2	57:DA:131:A:C4	2.88	0.41
57:DA:1331:G:C4	57:DA:1333:G:C8	3.08	0.41
57:DA:1333:G:O2'	57:DA:1334:G:H5'	2.20	0.41
57:DA:1343:G:N2	57:DA:1344:U:C2	2.88	0.41
57:DA:1510:G:H3'	57:DA:1510:G:OP2	2.20	0.41
57:DA:1515:A:H4'	57:DA:1556:C:O2'	2.21	0.41
57:DA:1585:C:H3'	57:DA:1586:A:C8	2.56	0.41
57:DA:1710:G:H4'	57:DA:2858:C:O2	2.20	0.41
57:DA:1718:G:N2	57:DA:1743:G:H1'	2.35	0.41
57:DA:1930:G:O2'	57:DA:1931:U:P	2.78	0.41
57:DA:2097:A:C6	57:DA:2098:U:C4	3.08	0.41
57:DA:2209:G:C4	57:DA:2210:U:C5	3.09	0.41
57:DA:2235:G:C6	57:DA:2236:U:C4	3.09	0.41
57:DA:2391:G:O2'	57:DA:2392:A:O5'	2.39	0.41
57:DA:1462:C:C1'	57:DA:2702:G:H21	2.33	0.41
57:DA:2770:G:O5'	57:DA:2770:G:H8	2.02	0.41
57:DA:338:G:C2'	57:DA:339:U:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:526:A:C6	57:DA:2626:C:H4'	2.55	0.41
57:DA:617:G:H2'	57:DA:618:G:H8	1.85	0.41
57:DA:653:U:H2'	57:DA:653:U:O2	2.20	0.41
57:DA:802:A:O2'	57:DA:803:U:H5'	2.21	0.41
57:DA:999:U:C2'	57:DA:1000:A:H5'	2.50	0.41
58:DB:66:A:OP2	58:DB:108:A:N6	2.54	0.41
57:DA:1568:G:N2	24:DC:57:HIS:CE1	2.89	0.41
24:DC:70:LYS:HD3	24:DC:101:ARG:NH1	2.32	0.41
24:DC:77:VAL:HA	24:DC:92:LEU:O	2.21	0.41
25:DD:119:ALA:O	25:DD:120:GLY:O	2.37	0.41
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.55	0.41
26:DE:105:LEU:HD13	26:DE:105:LEU:O	2.19	0.41
26:DE:195:GLN:H	26:DE:195:GLN:CD	2.24	0.41
26:DE:77:ILE:H	26:DE:77:ILE:HG12	1.51	0.41
59:DF:134:GLN:HG3	59:DF:149:ARG:O	2.20	0.41
29:DH:98:ASP:O	29:DH:99:ILE:HG12	2.19	0.41
57:DA:1666:G:C4'	32:DK:6:THR:HG23	2.50	0.41
33:DL:128:THR:HG22	33:DL:129:LYS:N	2.36	0.41
57:DA:910:A:H62	34:DM:12:MET:C	2.24	0.41
34:DM:73:ILE:HA	34:DM:73:ILE:HD13	1.71	0.41
38:DQ:31:TYR:O	38:DQ:33:VAL:N	2.54	0.41
57:DA:1010:A:H4'	38:DQ:75:TYR:CD2	2.56	0.41
57:DA:996:A:OP1	39:DR:10:LYS:HG2	2.20	0.41
39:DR:37:GLU:HB2	39:DR:53:PHE:CD2	2.56	0.41
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	2.02	0.41
45:DX:76:LYS:HB2	45:DX:76:LYS:HE3	1.85	0.41
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	2.21	0.41
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.54	0.41
1:AA:1528:U:H4'	1:AA:1529:G:H5'	2.01	0.41
1:AA:1533:C:C3'	1:AA:1534:A:H5''	2.48	0.41
1:AA:22:G:C6	1:AA:23:C:C4	3.08	0.41
1:AA:346:G:N3	1:AA:346:G:H2'	2.35	0.41
1:AA:439:U:H1'	4:AD:118:SER:O	2.21	0.41
1:AA:393:A:H5'	1:AA:483:C:O2'	2.21	0.41
1:AA:787:A:C6	1:AA:788:U:C4	3.09	0.41
1:AA:935:A:C2	1:AA:936:C:C2	3.09	0.41
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.55	0.41
4:AD:54:LEU:HD23	4:AD:54:LEU:C	2.41	0.41
4:AD:84:ASN:O	4:AD:85:THR:C	2.59	0.41
5:AE:109:ALA:O	5:AE:110:MET:CG	2.55	0.41
5:AE:132:PRO:HA	5:AE:135:VAL:CG1	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:37:VAL:HG12	5:AE:116:VAL:HG21	2.02	0.41
7:AG:108:ARG:HH21	7:AG:118:ARG:HH12	1.69	0.41
10:AJ:81:GLU:HA	10:AJ:84:VAL:HG12	2.03	0.41
14:AN:46:LYS:C	14:AN:48:GLN:H	2.24	0.41
17:AQ:74:LEU:CD1	17:AQ:74:LEU:C	2.88	0.41
18:AR:33:THR:OG1	18:AR:34:GLU:N	2.53	0.41
13:AM:84:CYS:HA	19:AS:73:PHE:CD2	2.55	0.41
35:BN:98:LEU:HB3	48:B0:42:ILE:HG12	2.01	0.41
22:BA:1059:G:C6	22:BA:1080:A:N1	2.89	0.41
22:BA:1121:C:H2'	22:BA:1122:G:O4'	2.21	0.41
22:BA:1139:G:C2'	22:BA:1140:C:H5'	2.50	0.41
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.55	0.41
22:BA:1217:U:OP2	38:BQ:14:LYS:NZ	2.49	0.41
22:BA:1630:A:H2'	22:BA:1631:G:H5'	2.01	0.41
22:BA:2280:G:C2	22:BA:2281:A:C8	3.09	0.41
22:BA:2504:U:H6	22:BA:2504:U:O5'	2.03	0.41
22:BA:556:A:H5''	22:BA:557:C:OP2	2.21	0.41
22:BA:610:C:H2'	22:BA:611:C:H6	1.85	0.41
22:BA:616:A:H2'	22:BA:617:G:C8	2.56	0.41
22:BA:900:A:H2'	22:BA:901:C:O4'	2.20	0.41
24:BC:32:LEU:HA	24:BC:32:LEU:HD23	1.64	0.41
24:BC:7:PRO:C	24:BC:9:SER:H	2.24	0.41
25:BD:144:GLY:O	25:BD:145:SER:HB3	2.19	0.41
25:BD:163:GLY:O	25:BD:164:GLN:C	2.58	0.41
26:BE:3:LEU:O	26:BE:11:ALA:HA	2.19	0.41
28:BG:26:LYS:CB	28:BG:32:LEU:HA	2.49	0.41
28:BG:36:LEU:HD13	28:BG:36:LEU:HA	1.73	0.41
22:BA:2748:A:H1'	28:BG:66:THR:HG23	2.02	0.41
29:BH:78:VAL:HG11	29:BH:145:ASN:CB	2.48	0.41
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.35	0.41
31:BJ:18:VAL:HG11	31:BJ:28:LEU:HD11	2.02	0.41
33:BL:82:LEU:CD2	33:BL:82:LEU:C	2.89	0.41
35:BN:52:ILE:O	35:BN:54:LEU:N	2.54	0.41
38:BQ:14:LYS:O	38:BQ:15:LYS:C	2.59	0.41
38:BQ:40:LYS:HA	38:BQ:43:GLN:HB2	2.03	0.41
40:BS:28:LYS:O	40:BS:29:VAL:C	2.59	0.41
43:BV:40:ILE:HG22	43:BV:41:GLU:H	1.82	0.41
45:BX:48:LEU:HD11	45:BX:67:LEU:HD21	2.02	0.41
46:BY:24:GLU:O	46:BY:28:LEU:HB2	2.21	0.41
22:BA:96:C:H4'	46:BY:41:HIS:CE1	2.55	0.41
53:CA:1412:C:H2'	53:CA:1413:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1453:G:C2'	53:CA:1453:G:N3	2.82	0.41
53:CA:171:A:C6	53:CA:172:A:C6	3.09	0.41
53:CA:177:G:H2'	53:CA:178:C:H5'	2.03	0.41
53:CA:652:U:O2'	53:CA:653:U:P	2.76	0.41
53:CA:687:A:C2	53:CA:700:G:N2	2.84	0.41
53:CA:931:C:H2'	53:CA:932:C:H6	1.84	0.41
53:CA:934:C:N3	53:CA:1345:U:C5	2.88	0.41
2:CB:213:LEU:HD12	2:CB:213:LEU:HA	1.87	0.41
4:CD:29:THR:HG22	4:CD:30:LYS:CD	2.50	0.41
5:CE:81:GLN:HB3	5:CE:82:HIS:H	1.71	0.41
5:CE:157:GLY:CA	8:CH:63:LYS:NZ	2.81	0.41
9:CI:7:GLY:HA3	9:CI:84:ARG:O	2.20	0.41
55:CM:35:ALA:HB3	55:CM:55:LEU:HD22	2.03	0.41
55:CM:82:LEU:HD12	55:CM:82:LEU:N	2.36	0.41
14:CN:76:PHE:CZ	14:CN:95:LEU:HD22	2.55	0.41
56:CP:6:LEU:O	56:CP:6:LEU:HD12	2.21	0.41
19:CS:10:ILE:N	19:CS:10:ILE:HD12	2.36	0.41
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.85	0.41
19:CS:20:LYS:C	19:CS:20:LYS:HD3	2.40	0.41
48:D0:28:SER:O	48:D0:36:LYS:HA	2.20	0.41
51:D3:54:LEU:O	51:D3:58:ILE:HG13	2.21	0.41
57:DA:1009:A:O2'	57:DA:1010:A:C8	2.58	0.41
57:DA:1071:G:O6	57:DA:1089:A:C2	2.73	0.41
57:DA:1171:G:H8	57:DA:1171:G:O5'	2.03	0.41
57:DA:1374:G:H2'	57:DA:1375:U:C6	2.55	0.41
57:DA:1649:G:O6	57:DA:2009:A:N6	2.53	0.41
57:DA:1717:A:C6	57:DA:1744:A:C5	3.08	0.41
57:DA:2093:G:N2	57:DA:2094:A:C8	2.88	0.41
57:DA:2232:C:OP2	45:DX:26:ARG:NH1	2.53	0.41
57:DA:2312:U:C2'	57:DA:2312:U:O2	2.68	0.41
57:DA:2356:U:H2'	57:DA:2357:G:O4'	2.21	0.41
57:DA:2414:G:H2'	57:DA:2415:G:H5'	2.01	0.41
57:DA:2474:U:O4'	57:DA:2474:U:O2	2.38	0.41
57:DA:2478:A:C8	57:DA:2529:G:C5	3.08	0.41
57:DA:2639:A:C2	57:DA:2778:A:O4'	2.74	0.41
57:DA:37:C:H1'	26:DE:45:ALA:HB2	2.02	0.41
57:DA:35:G:C5	57:DA:454:A:C2	3.08	0.41
57:DA:496:G:C2	57:DA:497:A:H1'	2.56	0.41
57:DA:764:A:C2	57:DA:781:A:C6	3.08	0.41
57:DA:777:G:C2	57:DA:778:G:C8	3.07	0.41
57:DA:904:G:C6	57:DA:905:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:988:A:C2	57:DA:989:G:C2	3.08	0.41
26:DE:148:ILE:CD1	26:DE:187:VAL:HG21	2.42	0.41
57:DA:2307:G:N1	59:DF:38:GLY:HA3	2.36	0.41
30:DI:78:LEU:O	30:DI:81:LYS:HG2	2.21	0.41
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	2.03	0.41
33:DL:88:GLY:O	33:DL:89:VAL:O	2.38	0.41
35:DN:92:GLY:N	35:DN:94:TYR:HE1	2.11	0.41
35:DN:9:GLN:O	35:DN:17:ARG:CD	2.68	0.41
36:DO:63:LYS:C	36:DO:63:LYS:HD3	2.41	0.41
37:DP:103:THR:HG22	37:DP:104:GLY:N	2.35	0.41
39:DR:39:LEU:O	39:DR:40:MET:CB	2.66	0.41
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.40	0.41
41:DT:3:ARG:O	41:DT:4:GLU:C	2.59	0.41
42:DU:47:PRO:HB3	42:DU:54:PRO:HG3	2.02	0.41
42:DU:82:VAL:O	42:DU:96:LYS:HG3	2.20	0.41
42:DU:85:ARG:NE	42:DU:85:ARG:HA	2.36	0.41
44:DW:45:HIS:O	44:DW:46:ALA:HB2	2.20	0.41
1:AA:1030:U:H5'	1:AA:1031:C:O2	2.21	0.41
1:AA:1323:G:HO2'	1:AA:1324:A:H8	1.63	0.41
1:AA:927:G:N1	1:AA:1391:U:C2	2.89	0.41
1:AA:409:U:H2'	1:AA:410:G:C8	2.56	0.41
2:AB:9:LEU:HD21	2:AB:11:ALA:O	2.20	0.41
2:AB:128:LEU:HB3	2:AB:129:THR:H	1.79	0.41
2:AB:149:GLY:O	2:AB:153:MET:HE3	2.20	0.41
2:AB:170:ILE:HG12	2:AB:170:ILE:H	1.45	0.41
2:AB:68:PHE:HE2	2:AB:88:GLN:HB2	1.84	0.41
3:AC:28:PHE:HE2	3:AC:32:LEU:HD22	1.84	0.41
4:AD:144:ILE:O	4:AD:145:ARG:C	2.59	0.41
4:AD:147:LYS:HE2	4:AD:147:LYS:H	1.86	0.41
4:AD:104:MET:HG2	4:AD:170:LEU:HD22	2.03	0.41
5:AE:149:PRO:C	5:AE:151:MET:N	2.74	0.41
5:AE:152:VAL:CA	5:AE:155:LYS:NZ	2.84	0.41
7:AG:107:ALA:HB2	7:AG:122:GLU:HG3	2.02	0.41
7:AG:68:VAL:HG21	7:AG:103:ILE:HD11	2.01	0.41
15:AO:10:ILE:HG23	15:AO:14:PHE:CE1	2.56	0.41
17:AQ:48:GLU:O	17:AQ:49:ASN:C	2.58	0.41
52:B4:9:LYS:HB3	52:B4:14:CYS:CB	2.51	0.41
22:BA:1083:U:C5	22:BA:1085:A:OP2	2.74	0.41
22:BA:1578:U:OP2	22:BA:1578:U:H6	2.03	0.41
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.20	0.41
22:BA:1780:A:OP1	63:BA:3693:HOH:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:231:A:C6	22:BA:232:G:C2	3.08	0.41
22:BA:2394:C:OP1	51:B3:29:ARG:NH2	2.53	0.41
22:BA:246:C:C2'	22:BA:247:G:H5'	2.50	0.41
22:BA:2527:C:C2'	22:BA:2528:U:H5'	2.51	0.41
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.51	0.41
22:BA:237:C:N4	22:BA:261:G:C6	2.88	0.41
22:BA:638:G:H2'	22:BA:639:U:H6	1.84	0.41
22:BA:71:A:N3	22:BA:71:A:C5'	2.84	0.41
26:BE:58:LYS:O	26:BE:59:PRO:C	2.57	0.41
26:BE:92:HIS:O	26:BE:93:SER:C	2.59	0.41
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	2.01	0.41
27:BF:90:LEU:HA	27:BF:90:LEU:HD12	1.76	0.41
29:BH:27:ARG:NH1	45:BX:59:ASP:O	2.53	0.41
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.88	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
31:BJ:37:ARG:HG3	31:BJ:118:MET:HE1	2.03	0.41
33:BL:132:ARG:HA	33:BL:142:ILE:HD11	2.03	0.41
34:BM:43:ALA:O	34:BM:47:GLU:HB2	2.20	0.41
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.20	0.41
37:BP:7:LEU:HD12	37:BP:7:LEU:HA	1.70	0.41
42:BU:35:VAL:HB	42:BU:38:ILE:CG1	2.50	0.41
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	2.02	0.41
22:BA:96:C:H4'	46:BY:41:HIS:CG	2.56	0.41
47:BZ:36:GLU:C	47:BZ:37:ARG:HD2	2.41	0.41
53:CA:1049:U:H2'	53:CA:1049:U:O2	2.21	0.41
53:CA:1124:G:O2'	53:CA:1127:G:O6	2.39	0.41
53:CA:978:A:C8	53:CA:1319:A:C2	3.08	0.41
53:CA:1333:A:H2'	53:CA:1334:G:O4'	2.20	0.41
53:CA:1386:G:N3	53:CA:1387:G:C8	2.88	0.41
53:CA:195:A:C5	53:CA:196:A:C6	3.08	0.41
53:CA:552:U:N3	53:CA:553:A:N7	2.69	0.41
53:CA:577:G:C8	53:CA:816:A:C2	3.08	0.41
53:CA:828:U:OP1	8:CH:21:LYS:HD3	2.19	0.41
53:CA:83:C:N4	53:CA:85:U:C4	2.88	0.41
53:CA:923:A:C6	53:CA:924:C:C4	3.09	0.41
2:CB:208:ALA:O	2:CB:211:LEU:HB3	2.20	0.41
3:CC:76:ILE:HD11	3:CC:102:ILE:CD1	2.45	0.41
4:CD:187:ARG:O	4:CD:189:ASP:N	2.54	0.41
4:CD:204:SER:HB2	5:CE:105:ILE:HD11	2.03	0.41
8:CH:23:ALA:HA	8:CH:62:LEU:CD2	2.51	0.41
8:CH:75:GLN:HA	8:CH:75:GLN:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:81:GLY:HA2	9:CI:84:ARG:HB2	2.03	0.41
14:CN:79:SER:HB2	14:CN:81:ILE:HD11	2.03	0.41
15:CO:11:VAL:O	15:CO:15:GLY:CA	2.69	0.41
56:CP:50:THR:O	56:CP:51:ARG:CZ	2.69	0.41
51:D3:11:LYS:C	51:D3:12:ARG:HD3	2.41	0.41
57:DA:1210:G:H5'	57:DA:1212:G:O4'	2.20	0.41
57:DA:1289:C:H1'	57:DA:1330:C:H5'	2.03	0.41
57:DA:136:G:H2'	57:DA:137:U:C6	2.54	0.41
57:DA:139:U:H2'	57:DA:139:U:O2	2.19	0.41
57:DA:1515:A:H2'	57:DA:1516:G:O4'	2.20	0.41
57:DA:151:C:OP1	57:DA:1359:A:O2'	2.26	0.41
57:DA:1551:A:H2'	57:DA:1552:A:O4'	2.20	0.41
57:DA:166:U:O2	57:DA:166:U:H2'	2.20	0.41
57:DA:1680:U:H2'	57:DA:1681:G:O4'	2.21	0.41
57:DA:1760:C:C2'	57:DA:1761:C:H5'	2.51	0.41
57:DA:1760:C:H3'	57:DA:1761:C:H6	1.85	0.41
57:DA:189:G:C2'	57:DA:190:A:O5'	2.67	0.41
57:DA:1923:U:O2'	57:DA:1924:C:H5'	2.20	0.41
57:DA:2144:G:N2	57:DA:2148:G:O6	2.53	0.41
57:DA:2196:C:N3	57:DA:2197:U:C4	2.89	0.41
57:DA:230:G:HO2'	57:DA:231:A:C5'	2.33	0.41
57:DA:2360:G:H1'	33:DL:60:ARG:NH2	2.32	0.41
57:DA:2324:U:O2	57:DA:2385:C:N4	2.54	0.41
57:DA:2660:A:C2	57:DA:2661:G:N7	2.88	0.41
57:DA:2878:U:O5'	57:DA:2878:U:H6	2.03	0.41
57:DA:2891:U:C2'	57:DA:2892:G:H5'	2.51	0.41
57:DA:301:G:C5	57:DA:302:C:N4	2.89	0.41
57:DA:303:G:H2'	57:DA:304:U:C6	2.55	0.41
57:DA:323:C:O4'	57:DA:323:C:O2	2.38	0.41
57:DA:35:G:O2'	57:DA:36:G:O5'	2.35	0.41
57:DA:457:A:N3	57:DA:459:U:O4	2.54	0.41
57:DA:496:G:H2'	57:DA:497:A:O4'	2.21	0.41
57:DA:716:A:H2'	57:DA:717:C:H5''	2.02	0.41
57:DA:807:U:C2	57:DA:808:G:C8	3.08	0.41
57:DA:918:A:H5''	58:DB:97:C:O2'	2.21	0.41
57:DA:856:G:N2	57:DA:922:C:C2	2.89	0.41
57:DA:958:U:H2'	57:DA:958:U:H6	1.49	0.41
24:DC:211:ARG:CD	24:DC:217:PRO:HD3	2.50	0.41
24:DC:35:LYS:O	24:DC:36:ASN:HB3	2.21	0.41
25:DD:177:VAL:CG1	25:DD:187:LEU:HD11	2.51	0.41
25:DD:47:ALA:HA	25:DD:84:LEU:HG	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DF:37:MET:N	59:DF:151:LEU:HB3	2.35	0.41
33:DL:131:ALA:O	33:DL:135:ILE:HG22	2.20	0.41
33:DL:63:LYS:HB3	51:D3:12:ARG:CD	2.48	0.41
34:DM:42:THR:HB	34:DM:45:GLN:CD	2.40	0.41
35:DN:29:VAL:O	35:DN:30:ARG:HB2	2.20	0.41
57:DA:533:G:OP1	38:DQ:23:TYR:HB3	2.20	0.41
39:DR:16:GLU:HA	39:DR:98:ILE:HG22	2.01	0.41
40:DS:31:GLN:O	40:DS:35:ILE:HG12	2.20	0.41
42:DU:54:PRO:CG	42:DU:55:GLY:N	2.81	0.41
44:DW:73:PRO:O	44:DW:74:LYS:C	2.58	0.41
45:DX:26:ARG:O	45:DX:27:ARG:HB3	2.21	0.41
47:DZ:26:LEU:HG	47:DZ:46:MET:HE2	2.03	0.41
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.73	0.41
1:AA:1109:C:C2	1:AA:1110:A:C8	3.08	0.41
1:AA:1272:G:C6	1:AA:1273:C:C4	3.08	0.41
1:AA:1288:A:H1'	1:AA:1352:C:O2'	2.20	0.41
1:AA:1348:U:O2'	1:AA:1349:A:H8	2.04	0.41
1:AA:372:C:H2'	1:AA:387:U:O4	2.21	0.41
1:AA:515:G:N2	1:AA:537:G:C4	2.89	0.41
1:AA:633:G:H2'	1:AA:634:C:C6	2.54	0.41
1:AA:674:G:N2	1:AA:717:U:O2	2.54	0.41
1:AA:587:G:C2	1:AA:755:G:C5	3.09	0.41
3:AC:120:THR:C	3:AC:122:GLN:H	2.23	0.41
3:AC:10:ARG:HH12	3:AC:174:LEU:HD12	1.85	0.41
5:AE:114:LEU:HG	5:AE:119:VAL:CG2	2.50	0.41
7:AG:25:PHE:HA	7:AG:100:MET:HE3	2.02	0.41
8:AH:104:SER:HB2	8:AH:125:ILE:CD1	2.50	0.41
9:AI:54:VAL:O	9:AI:55:ASP:O	2.39	0.41
1:AA:675:A:H1'	11:AK:117:HIS:CD2	2.56	0.41
12:AL:42:LYS:HB3	12:AL:42:LYS:HE2	1.89	0.41
13:AM:100:ARG:NH1	13:AM:103:THR:OG1	2.54	0.41
19:AS:55:GLN:CD	19:AS:56:HIS:H	2.24	0.41
22:BA:100:U:HO2'	22:BA:101:A:P	2.42	0.41
22:BA:1059:G:C6	22:BA:1060:U:C4	3.09	0.41
22:BA:1155:A:C2	22:BA:1157:G:C8	3.08	0.41
22:BA:115:C:C2'	22:BA:116:C:H5'	2.51	0.41
22:BA:1331:G:C5	22:BA:1333:G:N7	2.89	0.41
22:BA:1487:U:N3	22:BA:1503:A:C2	2.89	0.41
22:BA:1646:C:H5''	22:BA:1647:U:C5'	2.51	0.41
22:BA:1760:C:H3'	22:BA:1761:C:H6	1.85	0.41
22:BA:1773:A:C2'	22:BA:1774:C:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1850:G:C6	22:BA:1851:U:C4	3.09	0.41
22:BA:2198:A:C2'	22:BA:2198:A:P	3.05	0.41
22:BA:2341:G:H2'	22:BA:2342:C:H6	1.83	0.41
22:BA:2373:G:H2'	22:BA:2374:C:H6	1.84	0.41
22:BA:2403:C:N4	22:BA:2415:G:N1	2.68	0.41
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.43	0.41
22:BA:301:G:C6	22:BA:317:G:C6	3.09	0.41
22:BA:477:A:C6	22:BA:478:A:C6	3.09	0.41
22:BA:650:C:O5'	22:BA:650:C:H6	2.03	0.41
22:BA:669:G:N2	22:BA:670:A:C2	2.89	0.41
22:BA:729:G:H5''	22:BA:730:A:H5''	2.01	0.41
22:BA:987:C:N4	22:BA:988:A:C6	2.89	0.41
22:BA:996:A:N3	22:BA:997:G:C8	2.88	0.41
24:BC:156:SER:O	24:BC:157:ALA:C	2.59	0.41
25:BD:119:ALA:HB2	25:BD:165:MET:HB2	2.03	0.41
23:BB:42:C:OP1	27:BF:63:LYS:HE2	2.20	0.41
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.68	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
31:BJ:112:GLY:O	31:BJ:113:PRO:C	2.58	0.41
22:BA:1665:A:H5''	32:BK:66:LYS:HG3	2.02	0.41
34:BM:108:VAL:CG1	34:BM:112:LEU:HB3	2.51	0.41
35:BN:70:THR:CG2	35:BN:75:ILE:HD11	2.50	0.41
37:BP:12:MET:HB3	37:BP:12:MET:HE2	1.83	0.41
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.51	0.41
41:BT:43:ILE:CD1	41:BT:58:VAL:HG21	2.51	0.41
43:BV:40:ILE:CG2	43:BV:41:GLU:H	2.33	0.41
44:BW:28:GLU:H	44:BW:31:LEU:CD1	2.34	0.41
46:BY:7:ARG:HG3	46:BY:7:ARG:O	2.20	0.41
53:CA:1151:A:C2'	53:CA:1152:A:O5'	2.69	0.41
53:CA:1505:G:H2'	53:CA:1505:G:H8	1.66	0.41
53:CA:200:G:N1	53:CA:201:G:C5	2.88	0.41
53:CA:444:G:C2'	53:CA:445:G:H5'	2.51	0.41
53:CA:374:A:OP1	53:CA:452:A:N1	2.53	0.41
53:CA:642:A:O2'	53:CA:643:C:C5'	2.68	0.41
53:CA:695:A:H2'	53:CA:696:A:O4'	2.20	0.41
53:CA:704:A:O2'	53:CA:705:G:C5'	2.68	0.41
53:CA:754:C:H5''	53:CA:754:C:O2	2.20	0.41
53:CA:79:G:N1	53:CA:80:A:N6	2.68	0.41
53:CA:852:G:H2'	53:CA:853:C:O4'	2.21	0.41
53:CA:885:G:OP2	53:CA:885:G:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:124:THR:HG23	2:CB:125:PHE:H	1.85	0.41
2:CB:91:VAL:HG11	2:CB:95:TRP:HD1	1.85	0.41
4:CD:160:LEU:HA	4:CD:160:LEU:HD13	1.78	0.41
5:CE:48:GLY:CA	5:CE:66:ALA:HB2	2.47	0.41
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.41	0.41
15:CO:7:THR:O	15:CO:11:VAL:N	2.51	0.41
17:CQ:68:LYS:O	17:CQ:69:THR:HG23	2.20	0.41
19:CS:36:ARG:O	19:CS:36:ARG:HG2	2.20	0.41
20:CT:11:ILE:H	20:CT:11:ILE:HG13	1.46	0.41
48:D0:11:LYS:HD2	48:D0:14:MET:HB2	2.02	0.41
57:DA:2624:G:H1'	48:D0:18:HIS:CE1	2.56	0.41
57:DA:1019:U:O2'	57:DA:1021:A:N1	2.32	0.41
57:DA:1026:G:O2'	57:DA:1027:A:C5'	2.56	0.41
57:DA:1053:C:H42	57:DA:1054:A:N6	2.18	0.41
57:DA:1059:G:O2'	30:DI:131:THR:HG21	2.21	0.41
57:DA:1068:G:H2'	57:DA:1069:A:C8	2.56	0.41
57:DA:1083:U:H1'	57:DA:1086:A:N1	2.35	0.41
57:DA:1218:G:C6	57:DA:1232:G:C6	3.09	0.41
57:DA:1329:U:O2'	57:DA:1330:C:OP1	2.37	0.41
57:DA:1510:G:C2	57:DA:1511:G:C4	3.08	0.41
57:DA:1754:A:C6	57:DA:1755:A:C5	3.08	0.41
57:DA:49:A:N6	57:DA:177:G:C5	2.88	0.41
57:DA:1838:C:N4	57:DA:1898:U:H2'	2.35	0.41
57:DA:1904:G:H2'	57:DA:1905:C:H5'	2.03	0.41
57:DA:980:A:H2	57:DA:2038:G:O4'	2.03	0.41
57:DA:2043:C:H2'	57:DA:2044:C:H6	1.85	0.41
57:DA:2192:U:H2'	57:DA:2192:U:O2	2.20	0.41
57:DA:2423:U:H5''	57:DA:2424:C:OP1	2.20	0.41
57:DA:2259:U:C5	57:DA:2427:C:N4	2.89	0.41
57:DA:2493:U:H2'	57:DA:2494:G:H5''	2.03	0.41
57:DA:2499:C:N4	57:DA:2500:U:O4	2.53	0.41
57:DA:2611:C:O2'	57:DA:2612:C:C5'	2.68	0.41
57:DA:2725:A:C4	57:DA:2727:A:C8	3.09	0.41
57:DA:2751:G:H5'	28:DG:2:ARG:HD2	2.01	0.41
57:DA:2627:G:O2'	57:DA:2781:A:N1	2.46	0.41
57:DA:279:A:C6	57:DA:361:G:O2'	2.74	0.41
57:DA:33:C:O2'	57:DA:34:U:C5'	2.47	0.41
57:DA:614:A:C4'	57:DA:616:A:H62	2.33	0.41
57:DA:682:G:C2	57:DA:796:C:C2	3.08	0.41
59:DF:177:ARG:CZ	59:DF:178:LYS:HB3	2.51	0.41
28:DG:88:LEU:N	28:DG:128:THR:O	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:103:VAL:C	29:DH:105:ALA:H	2.23	0.41
29:DH:37:VAL:CG2	29:DH:43:ASN:HD22	2.34	0.41
29:DH:89:LYS:HB2	29:DH:90:LEU:H	1.77	0.41
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.86	0.41
33:DL:20:GLY:CA	33:DL:28:GLY:HA2	2.43	0.41
33:DL:57:LEU:HA	33:DL:60:ARG:HG3	2.02	0.41
57:DA:2484:G:OP1	34:DM:44:ARG:HD3	2.20	0.41
35:DN:8:ARG:HB2	35:DN:43:GLU:OE1	2.21	0.41
36:DO:30:ARG:NH1	36:DO:102:ARG:HE	2.19	0.41
38:DQ:72:GLY:HA3	38:DQ:113:LYS:NZ	2.36	0.41
40:DS:40:ASN:OD1	40:DS:41:LYS:N	2.54	0.41
57:DA:24:G:O2'	40:DS:77:ASP:HB3	2.21	0.41
41:DT:68:LYS:HB3	41:DT:69:ARG:H	1.53	0.41
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.36	0.41
43:DV:63:ILE:HG22	43:DV:63:ILE:O	2.21	0.41
45:DX:2:ARG:HA	45:DX:2:ARG:HD3	1.92	0.41
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	2.03	0.41
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD11	2.01	0.41
1:AA:1154:G:N3	1:AA:1155:A:C8	2.89	0.41
1:AA:1213:A:HO2'	1:AA:1214:C:P	2.43	0.41
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.55	0.41
1:AA:1241:G:C2	1:AA:1242:G:N7	2.89	0.41
1:AA:1319:A:C5	1:AA:1323:G:C4	3.09	0.41
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.20	0.41
1:AA:512:U:O5'	4:AD:40:HIS:CE1	2.74	0.41
1:AA:601:G:C2	1:AA:602:A:C4	3.08	0.41
1:AA:628:G:N2	1:AA:629:A:N3	2.68	0.41
1:AA:655:A:C2	1:AA:656:G:C4	3.09	0.41
1:AA:768:A:H2'	1:AA:769:G:O4'	2.21	0.41
4:AD:116:LEU:HA	4:AD:116:LEU:HD23	1.91	0.41
8:AH:82:LEU:HD22	8:AH:84:ILE:CD1	2.50	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.21	0.41
11:AK:110:THR:HG22	21:AU:4:LYS:HB2	2.02	0.41
11:AK:122:PRO:HG2	21:AU:33:ARG:O	2.21	0.41
12:AL:101:LEU:HB3	12:AL:102:ASP:H	1.69	0.41
12:AL:2:THR:HB	12:AL:5:GLN:H	1.85	0.41
1:AA:523:A:H61	12:AL:88:ASP:CB	2.34	0.41
1:AA:995:C:H4'	14:AN:7:ALA:HB2	2.03	0.41
20:AT:33:LYS:HE2	20:AT:33:LYS:H	1.85	0.41
22:BA:1085:A:H1'	22:BA:1105:U:H1'	2.03	0.41
22:BA:1125:G:H5'	52:B4:37:GLN:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1193:G:C2'	22:BA:1194:A:H5'	2.49	0.41
22:BA:1275:A:C2	22:BA:1295:C:O2	2.73	0.41
22:BA:1714:U:H5'	22:BA:1715:G:H5'	2.03	0.41
22:BA:1733:G:C2	22:BA:1734:G:C8	3.08	0.41
22:BA:1907:G:C2	22:BA:1924:C:C2	3.09	0.41
22:BA:2294:G:H2'	22:BA:2295:C:C6	2.56	0.41
22:BA:2641:G:H5''	31:BJ:78:THR:HB	2.03	0.41
22:BA:274:C:H2'	22:BA:275:C:O4'	2.21	0.41
22:BA:2766:A:N3	22:BA:2766:A:H2'	2.35	0.41
22:BA:285:G:C5	22:BA:356:G:C2	3.09	0.41
22:BA:527:C:C2	22:BA:2779:U:H2'	2.54	0.41
22:BA:601:C:O2	22:BA:605:G:H4'	2.21	0.41
22:BA:832:U:H2'	22:BA:833:A:C8	2.56	0.41
24:BC:171:VAL:CG2	24:BC:185:ALA:HA	2.51	0.41
24:BC:246:PRO:HG2	24:BC:247:TRP:CE3	2.51	0.41
24:BC:75:ALA:HB1	24:BC:93:VAL:HG13	2.02	0.41
25:BD:47:ALA:N	25:BD:84:LEU:HD12	2.35	0.41
27:BF:148:VAL:O	27:BF:150:GLY:N	2.52	0.41
28:BG:102:ILE:N	28:BG:114:HIS:O	2.53	0.41
31:BJ:4:PHE:CD1	31:BJ:5:THR:N	2.89	0.41
31:BJ:72:LYS:HB2	31:BJ:89:PHE:HB2	2.02	0.41
34:BM:119:LEU:HD23	34:BM:119:LEU:HA	1.92	0.41
35:BN:106:ASP:OD1	35:BN:106:ASP:C	2.59	0.41
38:BQ:10:ARG:HH11	38:BQ:10:ARG:HB2	1.86	0.41
39:BR:1:MET:HB2	39:BR:43:ASN:HD21	1.85	0.41
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.20	0.41
43:BV:43:ASP:C	43:BV:43:ASP:OD1	2.59	0.41
44:BW:50:VAL:C	44:BW:52:CYS:N	2.73	0.41
53:CA:1129:C:C1'	53:CA:1146:A:H61	2.24	0.41
53:CA:1215:G:C2'	53:CA:1216:A:H8	2.34	0.41
53:CA:1449:C:O2'	53:CA:1450:U:O4'	2.30	0.41
53:CA:1476:A:H2'	53:CA:1477:U:O4'	2.20	0.41
53:CA:1495:U:O2'	53:CA:1496:C:H5'	2.20	0.41
53:CA:415:A:N1	53:CA:428:G:O6	2.54	0.41
53:CA:204:G:C6	53:CA:465:A:C2	3.08	0.41
53:CA:542:G:H2'	53:CA:543:U:C6	2.53	0.41
53:CA:796:C:H4'	11:CK:126:ARG:NH2	2.35	0.41
53:CA:890:G:O2'	53:CA:906:A:N6	2.54	0.41
53:CA:933:G:O5'	53:CA:933:G:H8	2.04	0.41
53:CA:976:G:C2	53:CA:1363:A:C2	3.08	0.41
2:CB:161:PHE:CZ	2:CB:216:VAL:HG21	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:88:LYS:HA	3:CC:91:ALA:HB3	2.02	0.41
4:CD:107:GLY:N	4:CD:157:ALA:HB1	2.36	0.41
4:CD:72:ARG:O	4:CD:75:TYR:HB3	2.21	0.41
8:CH:93:LYS:H	8:CH:93:LYS:HD3	1.83	0.41
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.36	0.41
55:CM:13:HIS:HB3	55:CM:16:ILE:CB	2.45	0.41
55:CM:96:VAL:HG12	55:CM:96:VAL:O	2.20	0.41
17:CQ:77:VAL:HG12	17:CQ:78:VAL:N	2.35	0.41
49:D1:41:VAL:HG12	49:D1:41:VAL:O	2.21	0.41
57:DA:1071:G:N2	57:DA:1090:A:OP2	2.53	0.41
57:DA:1549:A:H2'	57:DA:1550:C:O4'	2.21	0.41
57:DA:1628:G:H2'	57:DA:1629:U:C6	2.52	0.41
57:DA:1929:G:C4'	57:DA:1930:G:OP1	2.61	0.41
57:DA:1989:G:C2'	57:DA:1990:C:H5'	2.50	0.41
57:DA:2235:G:C5	57:DA:2236:U:C5	3.09	0.41
57:DA:2290:G:C6	57:DA:2291:U:C4	3.09	0.41
57:DA:2289:G:O2'	57:DA:2290:G:H5'	2.20	0.41
57:DA:332:A:O2'	57:DA:334:C:OP2	2.34	0.41
57:DA:413:C:H2'	57:DA:414:C:C6	2.55	0.41
57:DA:460:A:H5'	41:DT:72:GLN:O	2.21	0.41
57:DA:455:C:N4	57:DA:473:G:OP2	2.52	0.41
57:DA:509:C:H2'	57:DA:509:C:H6	1.59	0.41
57:DA:13:A:C2	57:DA:525:U:C2	3.08	0.41
57:DA:708:G:C4	57:DA:709:U:C5	3.09	0.41
57:DA:850:U:O2'	47:DZ:22:THR:HG22	2.20	0.41
24:DC:159:THR:N	24:DC:194:VAL:HG13	2.35	0.41
24:DC:140:VAL:HG22	24:DC:161:VAL:O	2.20	0.41
24:DC:245:THR:C	24:DC:247:TRP:H	2.24	0.41
24:DC:62:ARG:HD3	24:DC:83:ASP:OD1	2.21	0.41
26:DE:146:VAL:HG13	26:DE:187:VAL:HG23	2.03	0.41
59:DF:100:GLU:O	59:DF:100:GLU:HG2	2.20	0.41
59:DF:102:LEU:C	59:DF:103:ILE:HD12	2.41	0.41
28:DG:70:LEU:HD12	28:DG:71:LEU:N	2.35	0.41
29:DH:58:LEU:HD12	29:DH:58:LEU:HA	1.87	0.41
29:DH:77:THR:HG22	29:DH:143:ILE:HD11	2.03	0.41
33:DL:128:THR:HG22	33:DL:130:GLY:H	1.85	0.41
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.55	0.41
37:DP:91:VAL:O	37:DP:92:ARG:HB3	2.21	0.41
44:DW:54:ARG:C	44:DW:56:HIS:H	2.24	0.41
1:AA:1125:U:OP2	1:AA:1145:A:N6	2.54	0.41
1:AA:1127:G:O2'	1:AA:1128:C:C5'	2.65	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1239:A:H1'	1:AA:1241:G:C5	2.55	0.41
1:AA:1261:A:N1	1:AA:1274:A:N3	2.68	0.41
1:AA:1324:A:H2'	1:AA:1325:C:H6	1.83	0.41
1:AA:1381:U:H2'	1:AA:1382:C:C5	2.56	0.41
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.56	0.41
1:AA:1507:A:H2'	1:AA:1508:A:C8	2.56	0.41
1:AA:162:A:N7	1:AA:163:C:H1'	2.36	0.41
1:AA:248:C:H4'	1:AA:283:U:O2'	2.21	0.41
1:AA:582:C:C4	1:AA:583:A:N7	2.89	0.41
1:AA:969:A:H2'	1:AA:970:C:H6	1.86	0.41
2:AB:20:ARG:CZ	2:AB:20:ARG:HA	2.50	0.41
3:AC:10:ARG:O	3:AC:13:ILE:N	2.54	0.41
5:AE:94:PHE:CZ	5:AE:96:GLN:HG2	2.56	0.41
6:AF:11:HIS:CD2	6:AF:13:ASP:H	2.39	0.41
6:AF:41:ASP:C	6:AF:43:GLY:H	2.24	0.41
7:AG:108:ARG:HH21	7:AG:118:ARG:NH1	2.18	0.41
9:AI:35:GLU:HG2	9:AI:35:GLU:H	1.62	0.41
11:AK:110:THR:HA	21:AU:4:LYS:HA	2.03	0.41
11:AK:15:VAL:CG1	11:AK:78:ILE:HG23	2.44	0.41
12:AL:82:ARG:HB2	12:AL:97:VAL:CG2	2.51	0.41
12:AL:82:ARG:HG3	12:AL:82:ARG:O	2.20	0.41
14:AN:20:PHE:HA	14:AN:24:ALA:CB	2.50	0.41
16:AP:77:GLU:C	16:AP:79:ASN:N	2.72	0.41
19:AS:79:TYR:CE1	19:AS:80:ARG:HB2	2.55	0.41
52:B4:13:ASN:HD22	52:B4:13:ASN:N	2.19	0.41
22:BA:1260:A:C5	22:BA:1261:C:C5	3.09	0.41
22:BA:1489:C:C2	22:BA:1501:G:N2	2.88	0.41
22:BA:1506:U:H2'	22:BA:1507:C:H6	1.83	0.41
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.21	0.41
22:BA:1997:C:O2'	22:BA:1998:A:H5'	2.20	0.41
22:BA:2065:C:H1'	22:BA:2449:U:O2	2.20	0.41
22:BA:2508:G:C2	22:BA:2582:G:C6	3.09	0.41
22:BA:221:A:C8	22:BA:266:G:C6	3.09	0.41
22:BA:2784:U:H2'	22:BA:2785:C:C6	2.56	0.41
22:BA:291:G:H1'	22:BA:350:G:N2	2.35	0.41
22:BA:806:C:C2	22:BA:807:U:C5	3.09	0.41
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.20	0.41
24:BC:43:ASN:C	24:BC:45:ASN:H	2.24	0.41
28:BG:54:ARG:HG3	28:BG:57:TYR:HD1	1.85	0.41
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.85	0.41
31:BJ:16:TYR:CD1	31:BJ:16:TYR:N	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:67:PHE:O	35:BN:71:ARG:HD2	2.21	0.41
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.49	0.41
37:BP:90:ALA:HB3	37:BP:110:LYS:HB2	2.03	0.41
22:BA:533:G:O3'	38:BQ:23:TYR:HE2	2.04	0.41
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.21	0.41
41:BT:61:LEU:HD11	41:BT:82:LYS:HB2	2.03	0.41
43:BV:14:LYS:HD2	63:BV:101:HOH:O	2.20	0.41
43:BV:40:ILE:HG22	43:BV:42:LEU:HD23	2.02	0.41
43:BV:5:ASN:N	43:BV:5:ASN:HD22	2.18	0.41
45:BX:33:HIS:O	45:BX:34:SER:O	2.39	0.41
53:CA:1075:U:H4'	53:CA:1101:A:N6	2.36	0.41
53:CA:115:G:C2	53:CA:289:G:C5	3.09	0.41
53:CA:1200:C:HO2'	53:CA:1201:A:P	2.42	0.41
53:CA:978:A:C6	53:CA:1319:A:C5	3.08	0.41
53:CA:1496:C:H2'	53:CA:1497:G:O4'	2.20	0.41
53:CA:1511:G:O2'	53:CA:1512:U:H5'	2.21	0.41
53:CA:821:G:O2'	53:CA:822:U:C5'	2.68	0.41
53:CA:98:A:H2'	53:CA:99:C:C6	2.56	0.41
2:CB:57:ASN:OD1	2:CB:219:THR:O	2.39	0.41
2:CB:42:LEU:HG	2:CB:42:LEU:H	1.44	0.41
2:CB:84:LEU:O	2:CB:84:LEU:HG	2.21	0.41
3:CC:104:GLU:HG2	3:CC:105:VAL:N	2.36	0.41
53:CA:1189:U:O2'	3:CC:175:HIS:HD2	2.04	0.41
4:CD:11:SER:HB3	4:CD:16:THR:O	2.21	0.41
4:CD:187:ARG:CZ	4:CD:191:SER:OG	2.69	0.41
4:CD:29:THR:HB	4:CD:30:LYS:HE3	2.03	0.41
4:CD:84:ASN:C	4:CD:84:ASN:ND2	2.74	0.41
5:CE:33:THR:OG1	5:CE:49:TYR:OH	2.36	0.41
5:CE:56:PRO:O	5:CE:59:ILE:HG23	2.21	0.41
12:CL:33:CYS:CA	12:CL:54:VAL:HG13	2.51	0.41
14:CN:85:GLU:O	14:CN:89:ARG:HD3	2.20	0.41
56:CP:54:LEU:O	56:CP:57:ILE:HB	2.21	0.41
19:CS:38:THR:N	19:CS:69:LYS:HD3	2.36	0.41
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.69	0.41
57:DA:2420:C:N4	51:D3:29:ARG:O	2.52	0.41
57:DA:1011:G:C2	57:DA:1013:C:C2	3.09	0.41
57:DA:1069:A:H4'	57:DA:1070:A:C5'	2.50	0.41
57:DA:1070:A:C5	57:DA:1097:U:H4'	2.55	0.41
57:DA:119:A:C5'	57:DA:120:U:OP1	2.69	0.41
57:DA:1206:G:C5	57:DA:1207:C:C4	3.09	0.41
57:DA:146:A:C6	57:DA:147:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:164:C:H2'	57:DA:165:A:O4'	2.20	0.41
57:DA:1760:C:H2'	57:DA:1761:C:H5'	2.03	0.41
57:DA:1847:A:O2'	57:DA:1848:A:O5'	2.39	0.41
57:DA:1957:C:H5'	57:DA:1984:G:O2'	2.21	0.41
57:DA:2335:A:C4	57:DA:2337:G:N7	2.89	0.41
57:DA:2358:A:C8	57:DA:2358:A:OP1	2.74	0.41
57:DA:2466:C:OP1	52:D4:4:ARG:HD2	2.21	0.41
57:DA:2603:G:C5	57:DA:2604:U:C5	3.08	0.41
57:DA:2725:A:C4	57:DA:2727:A:N7	2.89	0.41
57:DA:272:A:N3	57:DA:273:G:N7	2.69	0.41
57:DA:2843:G:N2	57:DA:2875:C:C2	2.89	0.41
57:DA:309:A:C2	57:DA:329:G:O2'	2.67	0.41
57:DA:30:G:C5	57:DA:31:C:N3	2.89	0.41
57:DA:332:A:C4	57:DA:335:C:N4	2.89	0.41
57:DA:983:A:N6	57:DA:984:A:C2	2.89	0.41
24:DC:159:THR:N	24:DC:194:VAL:CG1	2.84	0.41
26:DE:109:LEU:HA	26:DE:109:LEU:HD12	1.74	0.41
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.03	0.41
59:DF:42:ALA:HB2	59:DF:48:LEU:HD11	2.03	0.41
59:DF:49:LEU:N	59:DF:49:LEU:HD13	2.35	0.41
28:DG:152:ARG:CD	28:DG:153:PRO:HD2	2.50	0.41
28:DG:44:HIS:HE1	28:DG:46:ASP:O	2.04	0.41
29:DH:65:ALA:O	29:DH:66:ASN:C	2.58	0.41
31:DJ:89:PHE:HA	31:DJ:92:MET:HB2	2.03	0.41
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	2.03	0.41
37:DP:95:LYS:HB3	37:DP:97:TYR:CE1	2.55	0.41
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.41	0.41
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.99	0.41
46:DY:31:GLN:C	46:DY:33:ALA:N	2.73	0.41
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.21	0.41
1:AA:1004:A:C6	1:AA:1005:A:C4	3.09	0.41
1:AA:1125:U:HO2'	1:AA:1126:U:H2'	1.86	0.41
1:AA:1167:A:N7	1:AA:1169:A:C6	2.88	0.41
1:AA:15:G:C4	1:AA:16:A:C8	3.09	0.41
1:AA:198:G:O6	1:AA:220:G:C6	2.73	0.41
1:AA:335:C:H2'	1:AA:336:A:H8	1.86	0.41
2:AB:95:TRP:CZ2	2:AB:100:LEU:HD23	2.45	0.41
4:AD:103:ARG:HH12	4:AD:110:ARG:HH22	1.68	0.41
7:AG:134:VAL:O	7:AG:137:ARG:HB3	2.21	0.41
5:AE:156:ARG:HH12	8:AH:113:ARG:HH12	1.68	0.41
14:AN:48:GLN:HE21	14:AN:48:GLN:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:45:HIS:C	15:AO:47:LYS:H	2.24	0.41
17:AQ:16:MET:SD	17:AQ:20:ILE:HD12	2.61	0.41
21:AU:8:ASN:N	21:AU:8:ASN:ND2	2.67	0.41
49:B1:39:ASP:HA	49:B1:40:PRO:HD2	1.92	0.41
50:B2:1:MET:CE	50:B2:2:LYS:H	2.34	0.41
33:BL:61:LEU:HG	51:B3:23:HIS:ND1	2.36	0.41
51:B3:30:HIS:O	51:B3:31:ILE:C	2.59	0.41
22:BA:1070:A:HO2'	22:BA:1071:G:P	2.43	0.41
22:BA:1113:U:N3	22:BA:1114:C:C5	2.89	0.41
22:BA:1141:U:C5	31:BJ:65:THR:HG23	2.55	0.41
22:BA:1326:U:O2'	22:BA:1327:A:H5'	2.21	0.41
22:BA:1333:G:OP2	63:BA:3392:HOH:O	2.22	0.41
22:BA:137:U:OP2	22:BA:137:U:C5	2.74	0.41
22:BA:1826:G:C2'	22:BA:1827:U:O5'	2.68	0.41
22:BA:1837:C:N3	22:BA:1899:A:C6	2.89	0.41
22:BA:2380:C:H2'	22:BA:2381:A:C8	2.56	0.41
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.21	0.41
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.84	0.41
22:BA:273:G:N2	22:BA:365:U:C2	2.89	0.41
22:BA:329:G:O4'	22:BA:477:A:H1'	2.20	0.41
22:BA:571:U:O3'	39:BR:80:ARG:NH2	2.54	0.41
22:BA:963:U:H2'	22:BA:964:C:H6	1.84	0.41
23:BB:51:G:N2	23:BB:53:A:H62	2.19	0.41
24:BC:128:THR:HG22	24:BC:188:ARG:HD2	2.01	0.41
22:BA:2680:U:H5'	25:BD:194:PRO:HA	2.03	0.41
28:BG:27:GLY:O	28:BG:29:ASN:O	2.39	0.41
28:BG:25:ILE:HD11	28:BG:71:LEU:HD12	2.01	0.41
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.69	0.41
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	2.03	0.41
35:BN:48:VAL:O	35:BN:51:LEU:HB2	2.20	0.41
37:BP:112:ARG:O	37:BP:113:LEU:C	2.58	0.41
37:BP:50:ARG:HG3	37:BP:50:ARG:H	1.50	0.41
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.56	0.41
39:BR:62:GLU:HG3	39:BR:62:GLU:O	2.20	0.41
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.84	0.41
53:CA:1091:U:H2'	53:CA:1093:A:OP2	2.21	0.41
53:CA:1184:G:N3	53:CA:1185:G:C8	2.89	0.41
53:CA:1279:G:OP2	53:CA:1279:G:N2	2.54	0.41
53:CA:1318:A:H4'	19:CS:9:PHE:CE1	2.56	0.41
53:CA:319:G:H5'	53:CA:1468:A:H4'	2.03	0.41
53:CA:168:G:C6	53:CA:169:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:176:C:H3'	53:CA:177:G:H21	1.86	0.41
53:CA:195:A:C6	53:CA:196:A:N1	2.89	0.41
53:CA:227:G:H2'	53:CA:228:A:O4'	2.21	0.41
53:CA:293:G:N2	53:CA:305:G:H1'	2.36	0.41
53:CA:386:C:N4	53:CA:387:U:C4	2.89	0.41
53:CA:444:G:O2'	53:CA:445:G:H5'	2.20	0.41
53:CA:872:A:C4	53:CA:874:G:N7	2.89	0.41
53:CA:990:C:C2'	53:CA:991:U:O4'	2.59	0.41
4:CD:183:ARG:HE	4:CD:183:ARG:HB2	1.48	0.41
54:CG:29:LEU:O	54:CG:30:MET:O	2.39	0.41
8:CH:109:VAL:C	8:CH:110:MET:HG3	2.41	0.41
8:CH:85:TYR:HA	8:CH:123:GLU:HA	2.03	0.41
8:CH:97:GLY:O	8:CH:98:LEU:HB2	2.21	0.41
9:CI:45:MET:O	9:CI:49:GLN:HG3	2.20	0.41
10:CJ:12:ALA:N	10:CJ:18:ILE:HD12	2.36	0.41
10:CJ:38:GLY:HA2	10:CJ:39:PRO:HD2	1.89	0.41
56:CP:25:ARG:O	56:CP:26:ASN:ND2	2.54	0.41
57:DA:1085:A:H2'	57:DA:1086:A:N3	2.36	0.41
57:DA:1098:A:H2'	57:DA:1099:G:O4'	2.20	0.41
57:DA:1314:C:OP1	57:DA:1332:G:H5''	2.21	0.41
57:DA:1413:A:H2'	57:DA:1414:C:C5	2.56	0.41
57:DA:151:C:H2'	57:DA:152:A:H8	1.85	0.41
57:DA:160:A:C6	57:DA:167:A:H1'	2.56	0.41
57:DA:176:A:O5'	57:DA:176:A:H8	2.04	0.41
57:DA:1778:U:O4	57:DA:1784:A:H1'	2.21	0.41
57:DA:1799:G:O2'	57:DA:1800:C:P	2.79	0.41
57:DA:1914:C:O4'	57:DA:1914:C:O2	2.39	0.41
57:DA:1952:A:H5'	32:DK:42:THR:HG23	2.02	0.41
57:DA:1670:C:H1'	57:DA:1993:U:O2	2.20	0.41
57:DA:2489:U:C4	57:DA:2490:G:N1	2.88	0.41
57:DA:249:C:C2'	57:DA:249:C:O2	2.64	0.41
57:DA:270:A:N1	57:DA:369:U:O2'	2.42	0.41
57:DA:567:U:H2'	57:DA:568:U:O4'	2.20	0.41
57:DA:600:G:C5	57:DA:601:C:C4	3.09	0.41
57:DA:800:A:C4	57:DA:802:A:H5'	2.56	0.41
57:DA:818:G:H5'	57:DA:839:U:OP1	2.20	0.41
57:DA:957:C:H42	57:DA:2494:G:N2	2.18	0.41
57:DA:996:A:C2	57:DA:997:G:C8	3.09	0.41
58:DB:81:G:C5	58:DB:82:U:C4	3.09	0.41
25:DD:151:THR:HB	25:DD:152:PRO:HD3	2.02	0.41
25:DD:179:ARG:HH12	37:DP:7:LEU:HD11	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DF:49:LEU:N	59:DF:49:LEU:HD22	2.23	0.41
28:DG:38:ASP:O	28:DG:39:ALA:HB2	2.20	0.41
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.21	0.41
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.56	0.41
40:DS:70:LYS:HD2	40:DS:110:ARG:O	2.21	0.41
41:DT:28:ASN:O	41:DT:29:THR:CG2	2.69	0.41
45:DX:52:ALA:C	45:DX:54:GLY:N	2.75	0.41
1:AA:1305:G:H21	1:AA:1332:A:H2	1.69	0.41
1:AA:1532:U:H2'	1:AA:1534:A:H5'	2.03	0.41
1:AA:518:C:H4'	1:AA:519:C:O5'	2.21	0.41
1:AA:575:G:H4'	1:AA:576:C:O5'	2.19	0.41
1:AA:725:G:H2'	1:AA:726:C:H6	1.86	0.41
1:AA:854:U:H3'	1:AA:871:U:O4	2.21	0.41
2:AB:79:VAL:O	2:AB:83:ALA:HB3	2.21	0.41
3:AC:125:ARG:O	3:AC:126:ARG:CB	2.69	0.41
3:AC:131:ARG:HH21	3:AC:135:ARG:HH21	1.68	0.41
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.40	0.41
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.35	0.41
5:AE:155:LYS:HB3	8:AH:70:VAL:HG13	2.03	0.41
13:AM:11:HIS:C	13:AM:12:LYS:HG3	2.40	0.41
20:AT:33:LYS:HD3	20:AT:33:LYS:HA	1.81	0.41
52:B4:3:VAL:O	52:B4:37:GLN:HB3	2.21	0.41
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.56	0.41
22:BA:1246:A:H4'	26:BE:40:ARG:NH2	2.36	0.41
22:BA:1277:G:H4'	35:BN:20:MET:CE	2.51	0.41
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.85	0.41
22:BA:161:A:P	22:BA:162:U:H3'	2.61	0.41
22:BA:1847:A:O2'	22:BA:1848:A:OP1	2.33	0.41
22:BA:1885:A:O2'	22:BA:1886:U:H5'	2.21	0.41
22:BA:2197:U:C5	22:BA:2224:G:C6	3.08	0.41
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.21	0.41
22:BA:2849:U:H5''	22:BA:2867:G:N2	2.36	0.41
22:BA:786:C:H5''	22:BA:1780:A:C8	2.56	0.41
22:BA:919:U:C4'	22:BA:919:U:C6	3.03	0.41
25:BD:197:THR:HG22	25:BD:198:GLY:N	2.36	0.41
26:BE:35:TYR:O	26:BE:37:ALA:O	2.39	0.41
27:BF:137:PHE:HA	27:BF:138:PRO:HD3	1.93	0.41
22:BA:2308:G:C5	27:BF:76:PHE:HE2	2.39	0.41
28:BG:32:LEU:O	28:BG:33:THR:HG23	2.20	0.41
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.64	0.41
39:BR:46:GLU:C	39:BR:46:GLU:OE1	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:58:LEU:N	44:BW:58:LEU:CD1	2.84	0.41
53:CA:1074:G:H4'	2:CB:102:ASN:CB	2.35	0.41
53:CA:1095:U:H2'	53:CA:1096:C:H6	1.86	0.41
53:CA:1100:C:O2'	53:CA:1101:A:H5'	2.21	0.41
53:CA:1270:G:H2'	53:CA:1271:A:H8	1.86	0.41
53:CA:1238:A:N6	53:CA:1302:C:N4	2.69	0.41
53:CA:1366:C:O2'	53:CA:1367:C:H5'	2.20	0.41
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.21	0.41
53:CA:1432:G:H1'	53:CA:1468:A:N6	2.36	0.41
53:CA:201:G:N2	53:CA:217:C:H1'	2.36	0.41
53:CA:304:U:H2'	53:CA:305:G:H8	1.83	0.41
53:CA:669:G:N1	53:CA:670:G:C5	2.89	0.41
53:CA:66:A:C6	53:CA:67:C:C5	3.09	0.41
53:CA:790:A:H2'	53:CA:791:G:O4'	2.21	0.41
53:CA:824:G:H1'	8:CH:1:SER:N	2.35	0.41
53:CA:757:U:O2'	53:CA:879:C:H1'	2.21	0.41
53:CA:886:G:H2'	53:CA:887:G:O4'	2.21	0.41
53:CA:95:C:O2'	53:CA:96:U:H5'	2.20	0.41
4:CD:115:GLN:HE21	4:CD:153:ARG:HH22	1.66	0.41
53:CA:9:G:H4'	5:CE:108:GLY:H	1.86	0.41
5:CE:113:VAL:HG12	5:CE:114:LEU:N	2.35	0.41
5:CE:17:VAL:HA	5:CE:33:THR:O	2.20	0.41
9:CI:128:LYS:HG3	9:CI:128:LYS:O	2.21	0.41
10:CJ:92:LEU:O	10:CJ:94:ALA:N	2.54	0.41
11:CK:125:LYS:HB3	11:CK:126:ARG:H	1.48	0.41
53:CA:750:C:O2'	15:CO:20:ASP:HB2	2.21	0.41
15:CO:70:LYS:HD2	15:CO:77:TYR:CE2	2.55	0.41
56:CP:16:PHE:CD2	56:CP:40:ASN:HB2	2.56	0.41
17:CQ:37:ILE:HD11	17:CQ:39:ARG:CZ	2.51	0.41
48:D0:33:SER:HB3	48:D0:34:GLY:H	1.62	0.41
51:D3:30:HIS:HB3	51:D3:31:ILE:H	1.37	0.41
57:DA:102:U:H3	46:DY:2:LYS:HG2	1.86	0.41
57:DA:1112:G:H2'	57:DA:1113:U:C6	2.55	0.41
57:DA:1358:G:H8	57:DA:1358:G:O5'	2.03	0.41
57:DA:1500:G:C6	57:DA:1501:G:N7	2.89	0.41
57:DA:1478:G:C6	57:DA:1514:G:C2	3.09	0.41
57:DA:1567:G:H5''	24:DC:84:PRO:CG	2.50	0.41
57:DA:1681:G:O2'	57:DA:1762:A:H2'	2.20	0.41
57:DA:1884:G:N3	57:DA:1884:G:H2'	2.36	0.41
57:DA:2093:G:H2'	57:DA:2093:G:N3	2.35	0.41
57:DA:186:G:N2	57:DA:211:C:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2506:U:C5	57:DA:2576:G:O6	2.74	0.41
57:DA:2748:A:C6	57:DA:2749:A:C5	3.08	0.41
57:DA:289:G:C2	57:DA:352:A:C2	3.09	0.41
57:DA:320:A:N7	26:DE:132:LYS:HB2	2.36	0.41
57:DA:47:C:H6	57:DA:47:C:O5'	2.04	0.41
57:DA:546:U:H5'	57:DA:547:A:OP1	2.20	0.41
57:DA:569:U:H5''	57:DA:821:A:C2	2.56	0.41
57:DA:570:G:H2'	57:DA:571:U:H5'	2.03	0.41
57:DA:633:A:H5''	33:DL:70:LYS:HD3	2.03	0.41
57:DA:636:G:H5'	57:DA:639:U:OP1	2.21	0.41
57:DA:700:G:H2'	57:DA:701:G:O4'	2.21	0.41
57:DA:727:A:O2'	57:DA:728:G:C8	2.69	0.41
58:DB:32:U:C2	58:DB:51:G:N2	2.89	0.41
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.20	0.41
57:DA:782:A:O2'	24:DC:223:ALA:O	2.38	0.41
57:DA:1997:C:P	25:DD:129:THR:HG1	2.42	0.41
57:DA:600:G:H1'	26:DE:100:MET:HG2	2.03	0.41
26:DE:63:LYS:HA	26:DE:63:LYS:HE2	2.03	0.41
59:DF:149:ARG:HA	59:DF:149:ARG:HD3	1.80	0.41
28:DG:39:ALA:O	28:DG:40:VAL:HG13	2.21	0.41
29:DH:68:ARG:HG2	29:DH:71:LYS:HD3	2.03	0.41
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.50	0.41
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.56	0.41
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.21	0.41
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.74	0.41
31:DJ:18:VAL:CG1	31:DJ:54:ILE:HD11	2.51	0.41
31:DJ:98:GLU:HG2	31:DJ:98:GLU:H	1.64	0.41
32:DK:73:ASP:OD1	32:DK:73:ASP:N	2.36	0.41
57:DA:2494:G:O2'	34:DM:79:ALA:HA	2.21	0.41
35:DN:10:LEU:HA	35:DN:10:LEU:HD13	1.81	0.41
57:DA:2683:C:OP1	37:DP:55:HIS:CB	2.69	0.41
42:DU:21:ARG:H	42:DU:21:ARG:HG2	1.63	0.41
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.21	0.41
46:DY:1:MET:H2	46:DY:5:GLU:CG	2.34	0.41
47:DZ:51:SER:HA	47:DZ:54:VAL:HG22	2.01	0.41
1:AA:1130:A:C5	1:AA:1146:A:C6	3.09	0.40
1:AA:979:C:H1'	1:AA:1317:C:N4	2.36	0.40
1:AA:155:A:H2'	1:AA:156:C:C6	2.56	0.40
1:AA:184:G:H2'	1:AA:185:U:H5	1.83	0.40
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.40
1:AA:210:C:C4'	1:AA:211:G:N2	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:27:G:H2'	1:AA:28:A:H8	1.85	0.40
1:AA:343:U:H2'	1:AA:345:C:C5	2.56	0.40
1:AA:462:G:H3'	1:AA:463:U:C6	2.55	0.40
1:AA:574:A:H1'	1:AA:883:C:O4'	2.21	0.40
1:AA:57:G:H2'	1:AA:58:C:O4'	2.21	0.40
1:AA:625:U:H4'	16:AP:16:PHE:CZ	2.56	0.40
1:AA:75:G:N3	1:AA:76:G:H1'	2.37	0.40
1:AA:792:A:N3	1:AA:794:A:C6	2.88	0.40
1:AA:698:G:H1'	1:AA:798:U:O2'	2.21	0.40
1:AA:858:G:O2'	1:AA:859:G:H5'	2.21	0.40
1:AA:76:G:N1	1:AA:95:C:N4	2.68	0.40
4:AD:93:LEU:HD23	4:AD:93:LEU:HA	1.70	0.40
5:AE:82:HIS:HB2	5:AE:83:PRO:HD2	2.02	0.40
5:AE:89:THR:CG2	5:AE:90:GLY:N	2.67	0.40
6:AF:6:ILE:HD13	6:AF:74:LEU:HD23	2.03	0.40
7:AG:14:ASP:OD1	7:AG:17:PHE:HB2	2.21	0.40
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.20	0.40
11:AK:32:THR:HG23	11:AK:42:GLY:O	2.20	0.40
12:AL:6:LEU:HB3	17:AQ:33:TYR:CE1	2.56	0.40
12:AL:72:ASN:OD1	12:AL:104:SER:CB	2.69	0.40
15:AO:23:SER:HB3	15:AO:26:VAL:CG2	2.51	0.40
17:AQ:11:VAL:HG12	17:AQ:12:VAL:HG12	2.03	0.40
19:AS:52:ASN:HB3	19:AS:74:ALA:HB1	2.03	0.40
21:AU:24:LYS:O	21:AU:28:LEU:HB2	2.21	0.40
49:B1:46:VAL:HG12	49:B1:47:ILE:H	1.86	0.40
22:BA:1071:G:C5	22:BA:1089:A:C6	3.08	0.40
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.44	0.40
22:BA:1459:G:C6	22:BA:1461:C:C4	3.09	0.40
22:BA:1493:C:H5''	22:BA:1494:A:OP2	2.21	0.40
22:BA:1644:C:O2'	22:BA:1645:G:H5'	2.21	0.40
22:BA:182:A:C6	22:BA:183:C:C4	3.09	0.40
22:BA:1999:C:O2'	22:BA:2000:C:H5'	2.20	0.40
22:BA:2001:C:H4'	22:BA:2689:U:C2'	2.51	0.40
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.21	0.40
22:BA:2149:U:O2'	22:BA:2150:C:O4'	2.39	0.40
22:BA:2232:C:C4	22:BA:2233:U:C5	3.09	0.40
22:BA:2350:C:C2'	22:BA:2351:G:H5'	2.51	0.40
22:BA:2386:A:C2	44:BW:38:ARG:HD2	2.55	0.40
22:BA:2413:G:C4	22:BA:2414:G:C8	3.09	0.40
22:BA:2476:A:C2'	22:BA:2477:U:H5'	2.51	0.40
22:BA:2617:U:H2'	22:BA:2618:G:H5'	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2801:G:O2'	22:BA:2802:G:C5'	2.60	0.40
22:BA:2887:A:C5	22:BA:2888:C:C5	3.09	0.40
22:BA:289:G:H2'	22:BA:290:U:C6	2.56	0.40
22:BA:35:G:N2	22:BA:36:G:H1'	2.36	0.40
22:BA:465:G:H2'	22:BA:466:A:C8	2.56	0.40
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.56	0.40
22:BA:999:U:P	63:BA:3357:HOH:O	2.78	0.40
24:BC:89:ASN:O	24:BC:90:ILE:HD13	2.21	0.40
26:BE:123:LYS:HB2	26:BE:123:LYS:HE3	1.87	0.40
26:BE:196:VAL:O	26:BE:197:GLU:C	2.57	0.40
32:BK:80:ASP:OD2	37:BP:61:ARG:NH1	2.53	0.40
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	2.03	0.40
22:BA:1276:A:O2'	35:BN:20:MET:HE3	2.21	0.40
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.26	0.40
36:BO:3:LYS:CG	36:BO:4:LYS:N	2.84	0.40
37:BP:33:GLU:HG2	37:BP:36:LYS:HD2	2.02	0.40
37:BP:24:THR:HG21	37:BP:87:ARG:HB3	2.03	0.40
38:BQ:91:ARG:HB3	38:BQ:93:ILE:HG23	2.03	0.40
39:BR:28:ALA:HB3	39:BR:31:GLU:HG3	2.02	0.40
39:BR:49:ILE:C	39:BR:51:VAL:O	2.59	0.40
22:BA:565:C:P	39:BR:80:ARG:H	2.44	0.40
47:BZ:2:LYS:O	47:BZ:3:THR:O	2.39	0.40
47:BZ:35:VAL:CG2	47:BZ:37:ARG:CZ	2.99	0.40
53:CA:1035:A:H2'	53:CA:1036:A:C8	2.56	0.40
53:CA:1189:U:O2'	3:CC:175:HIS:CD2	2.74	0.40
53:CA:1215:G:C2	53:CA:1216:A:C5	3.08	0.40
53:CA:1271:A:H2'	53:CA:1272:G:C8	2.56	0.40
53:CA:1348:U:O2'	53:CA:1349:A:C5'	2.70	0.40
53:CA:1357:A:C5	53:CA:1358:U:C4	3.09	0.40
53:CA:1360:A:C2	53:CA:1361:G:H1'	2.56	0.40
53:CA:1363:A:C6	53:CA:1365:G:O6	2.73	0.40
53:CA:1252:A:H4'	53:CA:1369:C:H4'	2.03	0.40
53:CA:182:A:O2'	53:CA:183:C:H2'	2.22	0.40
53:CA:331:G:O2'	53:CA:332:G:P	2.79	0.40
53:CA:511:C:O2'	53:CA:512:U:C5'	2.63	0.40
53:CA:65:A:N1	53:CA:381:C:C5	2.90	0.40
53:CA:687:A:C2	53:CA:704:A:C6	3.09	0.40
53:CA:68:G:H5'	53:CA:171:A:O2'	2.20	0.40
53:CA:71:A:C2'	53:CA:72:A:O5'	2.69	0.40
53:CA:821:G:C4	53:CA:822:U:C5	3.09	0.40
53:CA:922:G:C6	53:CA:923:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:985:C:HO2'	53:CA:986:U:C5'	2.34	0.40
2:CB:21:TYR:CD1	2:CB:21:TYR:N	2.89	0.40
3:CC:65:VAL:HG12	3:CC:67:ILE:HD11	2.04	0.40
24:BC:186:ASP:OD1	4:CD:173:ASP:OD2	2.39	0.40
5:CE:37:VAL:HA	5:CE:47:PHE:HA	2.02	0.40
55:CM:77:LYS:C	55:CM:77:LYS:HD3	2.42	0.40
56:CP:26:ASN:HD22	56:CP:26:ASN:HA	1.63	0.40
53:CA:734:G:N2	18:CR:63:TYR:HH	2.18	0.40
50:D2:1:MET:CG	50:D2:2:LYS:N	2.85	0.40
57:DA:1082:U:H2'	57:DA:1083:U:H5'	2.03	0.40
57:DA:1356:G:N2	57:DA:1357:C:H1'	2.36	0.40
57:DA:1517:G:C6	57:DA:1518:C:C4	3.10	0.40
57:DA:1568:G:HO2'	57:DA:1569:A:P	2.44	0.40
57:DA:1612:C:N4	57:DA:1620:G:C6	2.89	0.40
57:DA:1707:G:O2'	57:DA:1708:C:H5'	2.22	0.40
57:DA:1914:C:O2'	57:DA:1915:U:H5''	2.21	0.40
57:DA:2240:U:C2	57:DA:2241:A:C8	3.09	0.40
57:DA:2266:A:N3	57:DA:2272:U:C4	2.88	0.40
57:DA:2287:A:C8	57:DA:2289:G:C8	3.09	0.40
57:DA:228:C:H4'	57:DA:229:C:C6	2.56	0.40
57:DA:231:A:O2'	57:DA:232:G:C5'	2.69	0.40
57:DA:244:A:C2'	57:DA:245:G:O4'	2.68	0.40
57:DA:2811:G:OP1	25:DD:61:THR:HB	2.21	0.40
57:DA:280:U:H2'	57:DA:281:C:C6	2.55	0.40
57:DA:2823:A:C6	57:DA:2824:C:C4	3.09	0.40
57:DA:2819:G:N3	57:DA:2828:G:C2	2.89	0.40
57:DA:2831:G:H1'	57:DA:2883:A:C2	2.56	0.40
57:DA:313:G:H2'	57:DA:314:C:C6	2.56	0.40
57:DA:262:A:H2	57:DA:430:A:H1'	1.85	0.40
57:DA:14:A:N7	57:DA:526:A:C6	2.89	0.40
57:DA:603:A:H4'	57:DA:604:G:O5'	2.21	0.40
57:DA:856:G:O4'	44:DW:23:LYS:HB3	2.22	0.40
57:DA:970:U:O5'	57:DA:970:U:H6	2.04	0.40
24:DC:15:VAL:HG13	24:DC:204:LEU:O	2.21	0.40
24:DC:29:PHE:O	24:DC:32:LEU:N	2.51	0.40
24:DC:67:LYS:CG	24:DC:150:GLY:HA2	2.51	0.40
25:DD:121:THR:HG21	25:DD:127:PHE:CD1	2.55	0.40
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.51	0.40
57:DA:673:C:H5''	26:DE:75:SER:HB2	2.03	0.40
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.86	0.40
59:DF:113:PHE:CZ	59:DF:116:LEU:HD22	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.03	0.40
30:DI:64:ARG:HB2	30:DI:64:ARG:CZ	2.51	0.40
32:DK:59:LYS:HE3	32:DK:89:ASN:OD1	2.21	0.40
34:DM:17:ASN:CB	34:DM:38:ARG:HH22	2.25	0.40
36:DO:27:VAL:O	36:DO:37:ALA:HA	2.21	0.40
37:DP:63:ILE:CA	37:DP:68:GLY:HA2	2.40	0.40
37:DP:81:ASP:HB3	37:DP:82:SER:H	1.65	0.40
38:DQ:26:ALA:HB1	38:DQ:30:VAL:HB	2.03	0.40
45:DX:66:VAL:O	45:DX:66:VAL:HG12	2.20	0.40
46:DY:52:ARG:C	46:DY:54:LYS:H	2.24	0.40
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	2.03	0.40
1:AA:1256:A:H1'	1:AA:1258:G:C6	2.55	0.40
1:AA:1365:G:O2'	1:AA:1366:C:H5'	2.22	0.40
1:AA:1381:U:O2'	1:AA:1382:C:H6	2.04	0.40
1:AA:199:A:C2	1:AA:200:G:C8	3.09	0.40
1:AA:198:G:O2'	1:AA:199:A:H5'	2.22	0.40
1:AA:49:U:C5	1:AA:364:A:C6	3.09	0.40
1:AA:723:U:OP1	21:AU:48:LYS:HD3	2.21	0.40
1:AA:877:G:N3	8:AH:1:SER:N	2.62	0.40
5:AE:79:THR:HB	5:AE:121:ASN:HD21	1.79	0.40
6:AF:1:MET:SD	6:AF:67:PRO:HD3	2.62	0.40
7:AG:74:VAL:HG21	7:AG:143:MET:HG2	2.03	0.40
11:AK:111:ASP:CB	21:AU:19:LYS:HD2	2.51	0.40
1:AA:716:A:N3	11:AK:119:GLY:HA2	2.36	0.40
11:AK:55:ARG:HE	11:AK:55:ARG:HA	1.87	0.40
11:AK:61:ALA:O	11:AK:64:VAL:HG13	2.20	0.40
15:AO:74:VAL:O	15:AO:77:TYR:N	2.54	0.40
22:BA:1076:C:C2	22:BA:1077:A:C8	3.09	0.40
22:BA:116:C:H2'	22:BA:117:G:O4'	2.22	0.40
22:BA:1233:C:C4	22:BA:1234:U:C5	3.08	0.40
22:BA:1288:G:C5	22:BA:1327:A:C2	3.10	0.40
22:BA:1328:A:C2	22:BA:1330:C:O2	2.74	0.40
22:BA:163:C:O2'	22:BA:164:C:C5'	2.68	0.40
22:BA:2261:C:N4	44:BW:10:ARG:HB3	2.37	0.40
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.56	0.40
22:BA:2555:U:C5	22:BA:2556:C:C6	3.09	0.40
22:BA:2667:C:H2'	22:BA:2668:G:O4'	2.21	0.40
22:BA:2702:G:C5	22:BA:2703:C:C4	3.09	0.40
22:BA:2043:C:N3	22:BA:2777:G:C2	2.89	0.40
22:BA:64:A:C6	22:BA:65:U:C4	3.10	0.40
23:BB:94:A:H2'	23:BB:95:U:H6	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:103:ILE:O	24:BC:104:LEU:O	2.39	0.40
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.49	0.40
24:BC:255:LYS:C	24:BC:257:ARG:N	2.74	0.40
27:BF:72:SER:CB	27:BF:80:GLN:HB2	2.50	0.40
28:BG:90:GLY:O	28:BG:91:VAL:C	2.60	0.40
29:BH:4:ILE:O	29:BH:37:VAL:HG12	2.21	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	2.21	0.40
32:BK:58:LEU:HB2	32:BK:59:LYS:H	1.46	0.40
41:BT:28:ASN:CA	41:BT:91:GLN:HE22	2.34	0.40
42:BU:50:ALA:O	42:BU:51:LEU:O	2.38	0.40
43:BV:29:ILE:HG22	43:BV:90:ASP:HA	2.02	0.40
46:BY:36:GLN:O	46:BY:37:LEU:O	2.39	0.40
53:CA:1111:A:H3'	53:CA:1111:A:C8	2.56	0.40
53:CA:1215:G:H2'	53:CA:1216:A:H8	1.87	0.40
53:CA:1493:A:H2'	53:CA:1494:G:OP1	2.21	0.40
53:CA:1528:U:O2'	53:CA:1530:G:H5''	2.21	0.40
53:CA:253:A:O2'	53:CA:254:G:O5'	2.38	0.40
53:CA:259:G:C4	53:CA:260:G:C8	3.09	0.40
53:CA:346:G:N3	53:CA:346:G:C2'	2.85	0.40
53:CA:391:G:H2'	53:CA:392:C:O4'	2.21	0.40
53:CA:757:U:H5''	53:CA:822:U:O2	2.20	0.40
53:CA:87:C:O2'	53:CA:88:U:C4'	2.67	0.40
53:CA:985:C:H2'	53:CA:986:U:C5	2.56	0.40
2:CB:124:THR:C	2:CB:126:ASP:H	2.24	0.40
2:CB:141:GLU:O	2:CB:145:ASN:N	2.53	0.40
2:CB:162:VAL:CG2	2:CB:163:ILE:N	2.85	0.40
4:CD:195:ASN:O	4:CD:197:HIS:N	2.55	0.40
4:CD:66:VAL:CG1	4:CD:70:GLN:HB3	2.51	0.40
4:CD:90:LEU:HD13	4:CD:90:LEU:HA	1.82	0.40
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	2.03	0.40
54:CG:148:LYS:HD2	11:CK:60:PHE:CD1	2.55	0.40
8:CH:104:SER:CA	8:CH:109:VAL:HG13	2.51	0.40
55:CM:8:ILE:N	55:CM:9:PRO:CD	2.84	0.40
10:CJ:64:GLN:CB	14:CN:98:ALA:HB3	2.42	0.40
15:CO:66:LEU:O	15:CO:67:ASP:C	2.59	0.40
49:D1:37:LYS:O	49:D1:48:TYR:CD2	2.74	0.40
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.88	0.40
49:D1:3:GLY:C	49:D1:5:ARG:H	2.24	0.40
57:DA:1034:G:C6	57:DA:1122:G:C6	3.09	0.40
57:DA:1147:A:H2'	57:DA:1148:U:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1228:G:H2'	57:DA:1229:C:H6	1.86	0.40
57:DA:1229:C:H2'	57:DA:1230:A:H8	1.86	0.40
57:DA:1395:A:C4	57:DA:1398:C:C5	3.08	0.40
57:DA:1653:G:H8	57:DA:1653:G:OP2	2.04	0.40
57:DA:1677:A:C8	63:DA:3747:HOH:O	2.73	0.40
57:DA:1814:G:C6	57:DA:1815:A:C6	3.09	0.40
57:DA:1965:C:H5''	57:DA:1966:A:H2'	2.03	0.40
57:DA:201:C:H6	57:DA:201:C:O5'	2.04	0.40
57:DA:201:C:OP1	45:DX:17:ARG:NH1	2.54	0.40
57:DA:2586:U:O2'	57:DA:2587:A:H5'	2.20	0.40
57:DA:2586:U:C5	57:DA:2608:G:N2	2.89	0.40
57:DA:481:G:H1'	57:DA:506:G:H21	1.86	0.40
57:DA:742:A:H2'	57:DA:743:A:H8	1.84	0.40
58:DB:56:G:H5'	59:DF:23:SER:OG	2.20	0.40
24:DC:75:ALA:HA	24:DC:95:TYR:HA	2.03	0.40
25:DD:119:ALA:HB2	25:DD:163:GLY:O	2.21	0.40
26:DE:112:LEU:HD13	26:DE:112:LEU:O	2.22	0.40
26:DE:119:ILE:CD1	26:DE:143:LEU:HD21	2.51	0.40
26:DE:187:VAL:HG12	26:DE:188:MET:N	2.36	0.40
59:DF:28:PRO:HB2	59:DF:168:LEU:CG	2.51	0.40
28:DG:1:SER:HG	28:DG:61:TRP:HE3	1.66	0.40
32:DK:104:THR:O	32:DK:106:GLU:N	2.54	0.40
34:DM:22:GLN:HB2	34:DM:100:LYS:HZ3	1.87	0.40
37:DP:59:THR:HG23	37:DP:72:VAL:CG1	2.51	0.40
37:DP:9:GLN:HB3	37:DP:12:MET:HE3	2.02	0.40
38:DQ:26:ALA:HA	38:DQ:29:ARG:CG	2.51	0.40
39:DR:33:VAL:O	39:DR:33:VAL:HG23	2.21	0.40
41:DT:73:ARG:HA	41:DT:73:ARG:HD3	1.96	0.40
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	2.02	0.40
43:DV:40:ILE:N	43:DV:40:ILE:HD13	2.36	0.40
44:DW:44:PHE:HB2	44:DW:78:PHE:H	1.85	0.40
44:DW:81:ILE:HD12	44:DW:81:ILE:C	2.41	0.40
44:DW:8:SER:O	44:DW:9:THR:CB	2.68	0.40
46:DY:23:ARG:H	46:DY:23:ARG:HG2	1.70	0.40
1:AA:112:G:C2	1:AA:113:G:C8	3.10	0.40
1:AA:1348:U:H2'	1:AA:1349:A:C8	2.55	0.40
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.51	0.40
1:AA:21:G:N2	1:AA:22:G:C6	2.89	0.40
1:AA:257:G:C2	1:AA:258:G:N7	2.90	0.40
1:AA:652:U:H1'	1:AA:653:U:C5	2.55	0.40
1:AA:974:A:H5'	1:AA:975:A:H5'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:113:LYS:HD2	3:AC:113:LYS:HA	1.83	0.40
4:AD:115:GLN:HE21	4:AD:115:GLN:HA	1.85	0.40
1:AA:429:U:O3'	4:AD:8:LEU:HD23	2.20	0.40
5:AE:10:LEU:HG	5:AE:11:GLN:N	2.36	0.40
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.22	0.40
9:AI:41:GLU:HB3	9:AI:42:THR:H	1.58	0.40
9:AI:86:LEU:O	9:AI:93:LEU:HD11	2.22	0.40
10:AJ:35:GLN:HE21	10:AJ:35:GLN:CA	2.34	0.40
11:AK:16:SER:C	11:AK:78:ILE:HG22	2.42	0.40
12:AL:62:VAL:CG2	12:AL:94:TYR:CE2	2.93	0.40
15:AO:23:SER:O	15:AO:26:VAL:N	2.52	0.40
16:AP:56:ARG:NH1	16:AP:59:HIS:CD2	2.90	0.40
18:AR:35:SER:HB3	21:AU:3:ILE:CG1	2.51	0.40
49:B1:32:LYS:HG2	49:B1:52:LYS:OXT	2.22	0.40
49:B1:42:VAL:CG1	49:B1:42:VAL:O	2.69	0.40
22:BA:1046:A:H3'	22:BA:1047:G:C5'	2.51	0.40
22:BA:1071:G:C4	22:BA:1089:A:C6	3.10	0.40
22:BA:1429:G:N3	22:BA:1568:G:C2	2.90	0.40
22:BA:1410:G:C2	22:BA:1593:A:C2	3.09	0.40
22:BA:1:G:C2'	22:BA:1:G:N3	2.81	0.40
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.21	0.40
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.69	0.40
22:BA:2440:C:H2'	22:BA:2441:U:O4'	2.21	0.40
22:BA:2515:C:O5'	22:BA:2515:C:H6	2.05	0.40
22:BA:2544:G:C2'	22:BA:2545:G:H5'	2.52	0.40
22:BA:2575:C:H5''	22:BA:2576:G:OP2	2.21	0.40
22:BA:2765:A:C2'	22:BA:2765:A:N3	2.85	0.40
22:BA:276:U:O2	22:BA:276:U:H2'	2.20	0.40
22:BA:2848:G:H8	37:BP:94:ALA:HB2	1.86	0.40
22:BA:2870:C:H2'	22:BA:2871:U:H5'	2.03	0.40
22:BA:399:U:H2'	22:BA:400:G:H5'	2.03	0.40
22:BA:498:G:C4	22:BA:499:U:C5	3.10	0.40
22:BA:579:G:H2'	22:BA:580:U:H6	1.87	0.40
22:BA:669:G:C6	22:BA:801:G:O6	2.74	0.40
22:BA:971:G:C2'	22:BA:972:A:H5'	2.51	0.40
22:BA:996:A:C2	22:BA:997:G:N9	2.89	0.40
23:BB:66:A:C2	23:BB:108:A:C2	3.09	0.40
23:BB:94:A:H2'	23:BB:95:U:C6	2.56	0.40
24:BC:16:VAL:N	24:BC:203:VAL:HG11	2.36	0.40
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.22	0.40
22:BA:1789:A:P	24:BC:220:ARG:HD3	2.61	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1813:G:H1'	24:BC:49:THR:HG21	2.02	0.40
25:BD:34:VAL:HA	25:BD:50:VAL:HG12	2.02	0.40
26:BE:8:ALA:O	26:BE:9:GLN:C	2.60	0.40
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.22	0.40
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.37	0.40
28:BG:164:ALA:C	28:BG:166:GLU:H	2.25	0.40
28:BG:25:ILE:HD11	28:BG:71:LEU:CD1	2.51	0.40
30:BI:126:ARG:H	30:BI:126:ARG:HD3	1.86	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.21	0.40
32:BK:114:LYS:HE2	32:BK:114:LYS:HA	2.04	0.40
36:BO:31:THR:CG2	36:BO:34:HIS:N	2.78	0.40
36:BO:76:LYS:O	36:BO:79:ALA:HB3	2.21	0.40
37:BP:92:ARG:O	37:BP:92:ARG:CG	2.67	0.40
22:BA:1252:G:N2	38:BQ:36:GLN:OE1	2.54	0.40
39:BR:75:VAL:HG22	39:BR:86:GLN:HG3	2.02	0.40
41:BT:30:ILE:HG12	41:BT:32:LEU:HD22	2.02	0.40
22:BA:2353:G:O2'	44:BW:31:LEU:HD23	2.21	0.40
53:CA:1004:A:C8	53:CA:1025:U:O2'	2.75	0.40
53:CA:1125:U:C2	53:CA:1127:G:N7	2.89	0.40
53:CA:1158:C:H2'	53:CA:1158:C:O2	2.21	0.40
53:CA:1215:G:O2'	53:CA:1216:A:C5'	2.69	0.40
53:CA:1346:A:H5''	9:CI:121:ARG:HH22	1.86	0.40
53:CA:1487:G:O5'	53:CA:1487:G:H8	2.04	0.40
53:CA:158:G:N2	53:CA:162:A:N6	2.69	0.40
53:CA:261:U:O2'	53:CA:263:A:N7	2.39	0.40
53:CA:676:A:C4	53:CA:677:U:C5	3.09	0.40
53:CA:737:C:H2'	53:CA:738:C:C6	2.56	0.40
53:CA:807:A:C5	53:CA:808:C:C4	3.09	0.40
53:CA:76:G:N2	53:CA:95:C:N3	2.69	0.40
5:CE:125:LYS:HB2	5:CE:125:LYS:HE3	1.63	0.40
5:CE:132:PRO:C	5:CE:134:ASN:N	2.74	0.40
6:CF:81:ASN:O	6:CF:84:VAL:HG12	2.22	0.40
10:CJ:76:ILE:HG22	10:CJ:77:VAL:N	2.36	0.40
12:CL:35:ARG:O	12:CL:53:ARG:N	2.54	0.40
10:CJ:51:VAL:CB	14:CN:80:ARG:HB2	2.48	0.40
57:DA:243:U:H3'	51:D3:7:ARG:HH22	1.87	0.40
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.36	0.40
57:DA:104:A:O2'	57:DA:105:C:H5'	2.21	0.40
57:DA:1117:C:H2'	57:DA:1118:C:H6	1.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1180:U:C4	57:DA:1181:U:C4	3.10	0.40
57:DA:1267:U:O2'	57:DA:1268:A:H8	2.04	0.40
57:DA:1379:U:C2'	57:DA:1379:U:O2	2.68	0.40
57:DA:1456:G:O2'	57:DA:1457:U:H5'	2.21	0.40
57:DA:155:A:H2'	57:DA:156:A:H8	1.87	0.40
57:DA:1569:A:N1	57:DA:1570:A:C2	2.89	0.40
57:DA:163:C:H2'	57:DA:164:C:C6	2.56	0.40
57:DA:1813:G:H2'	57:DA:1814:G:O4'	2.22	0.40
57:DA:1869:G:C2	57:DA:1873:G:C6	3.09	0.40
57:DA:1925:C:C6	57:DA:1925:C:H3'	2.56	0.40
57:DA:2021:C:H4'	57:DA:2022:U:OP2	2.21	0.40
57:DA:2135:A:C3'	57:DA:2136:G:C5'	2.89	0.40
57:DA:2187:U:O2'	57:DA:2188:U:H5'	2.22	0.40
57:DA:2314:A:N3	57:DA:2315:G:C8	2.89	0.40
57:DA:2422:C:C2'	57:DA:2423:U:H5''	2.51	0.40
57:DA:243:U:O2'	57:DA:244:A:H5'	2.22	0.40
57:DA:2515:C:H2'	57:DA:2516:A:C8	2.56	0.40
57:DA:271:G:O2'	57:DA:272:A:O4'	2.38	0.40
57:DA:2735:G:C4	57:DA:2736:A:C8	3.09	0.40
57:DA:2748:A:C6	57:DA:2749:A:C6	3.10	0.40
57:DA:458:G:H22	57:DA:469:G:H2'	1.85	0.40
57:DA:471:A:H2'	57:DA:472:A:O4'	2.22	0.40
57:DA:779:U:H5''	24:DC:42:ARG:NH2	2.36	0.40
57:DA:845:A:C2	57:DA:847:U:N1	2.89	0.40
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	2.03	0.40
26:DE:34:ALA:O	26:DE:37:ALA:HB3	2.22	0.40
59:DF:147:ARG:HG2	59:DF:149:ARG:NH1	2.34	0.40
59:DF:43:ILE:HG12	59:DF:77:LYS:CD	2.46	0.40
28:DG:5:LYS:HZ1	28:DG:61:TRP:HZ3	1.68	0.40
29:DH:8:LYS:HB3	29:DH:15:LEU:CD1	2.51	0.40
29:DH:46:PHE:CD2	29:DH:50:ARG:NH2	2.89	0.40
29:DH:48:GLU:HA	29:DH:51:ARG:HE	1.86	0.40
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	2.03	0.40
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	2.02	0.40
35:DN:75:ILE:O	35:DN:79:LEU:HB2	2.21	0.40
38:DQ:69:ARG:HH21	38:DQ:69:ARG:HB2	1.87	0.40
41:DT:18:GLU:HA	41:DT:22:THR:HG21	2.02	0.40
41:DT:39:THR:C	41:DT:41:ALA:H	2.25	0.40
44:DW:67:LYS:CB	44:DW:80:SER:HB2	2.50	0.40
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.40
1:AA:233:C:C2	1:AA:234:C:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:C5	1:AA:259:G:C8	3.10	0.40
1:AA:258:G:C2	1:AA:259:G:N9	2.90	0.40
1:AA:372:C:H5'	1:AA:373:A:OP1	2.21	0.40
1:AA:414:A:C2	1:AA:415:A:C8	3.09	0.40
1:AA:420:U:C2'	1:AA:421:U:H5''	2.51	0.40
1:AA:814:A:P	63:AA:1758:HOH:O	2.79	0.40
1:AA:833:G:H2'	1:AA:834:U:H6	1.86	0.40
1:AA:858:G:H2'	1:AA:859:G:H5'	2.02	0.40
1:AA:994:A:O2'	1:AA:995:C:H5'	2.21	0.40
4:AD:2:ARG:CZ	4:AD:114:ARG:CD	2.98	0.40
4:AD:71:PHE:O	4:AD:74:TYR:HB2	2.21	0.40
5:AE:148:SER:O	5:AE:152:VAL:HG13	2.21	0.40
8:AH:4:ASP:OD1	8:AH:7:ALA:HB2	2.22	0.40
12:AL:35:ARG:HB3	12:AL:37:TYR:CZ	2.57	0.40
14:AN:46:LYS:C	14:AN:48:GLN:N	2.74	0.40
51:B3:21:PHE:CB	51:B3:49:VAL:CG1	2.94	0.40
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.57	0.40
22:BA:1426:G:H8	22:BA:1426:G:O5'	2.05	0.40
22:BA:1460:U:H2'	22:BA:1460:U:H6	1.54	0.40
22:BA:1464:G:O2'	22:BA:1465:G:H5'	2.21	0.40
22:BA:1604:C:H2'	22:BA:1605:C:C6	2.57	0.40
22:BA:1731:G:N1	22:BA:1733:G:C6	2.89	0.40
22:BA:1733:G:O2'	22:BA:1734:G:O5'	2.39	0.40
22:BA:49:A:N6	22:BA:177:G:N9	2.70	0.40
22:BA:2078:C:H2'	22:BA:2079:U:C6	2.57	0.40
22:BA:2259:U:O2'	22:BA:2260:C:H5'	2.21	0.40
22:BA:2671:G:C6	22:BA:2672:U:C4	3.09	0.40
22:BA:659:G:C6	22:BA:660:C:C4	3.10	0.40
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.67	0.40
22:BA:950:G:C5	22:BA:951:C:C5	3.09	0.40
24:BC:145:MET:SD	24:BC:153:LEU:HD21	2.62	0.40
26:BE:46:GLN:CG	26:BE:86:ALA:HA	2.51	0.40
29:BH:4:ILE:HG12	29:BH:18:GLN:HE22	1.87	0.40
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.51	0.40
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	2.04	0.40
22:BA:1277:G:C5'	35:BN:20:MET:HE1	2.46	0.40
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.20	0.40
42:BU:48:VAL:O	42:BU:53:GLN:HB3	2.22	0.40
42:BU:86:PHE:HB3	42:BU:87:GLU:H	1.53	0.40
44:BW:23:LYS:HD2	44:BW:24:ARG:CB	2.51	0.40
53:CA:1060:U:C5'	10:CJ:53:ILE:HG12	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1067:A:O2'	53:CA:1094:G:H3'	2.20	0.40
53:CA:1087:G:C2	53:CA:1088:G:C5	3.10	0.40
53:CA:1221:G:N2	53:CA:1222:G:H1'	2.36	0.40
53:CA:1243:C:N4	53:CA:1244:G:O6	2.54	0.40
53:CA:1300:G:N2	53:CA:1334:G:H2'	2.32	0.40
53:CA:1394:A:C5	53:CA:1501:C:H4'	2.57	0.40
53:CA:158:G:H22	53:CA:162:A:N6	2.20	0.40
53:CA:243:A:H4'	53:CA:244:U:OP2	2.21	0.40
53:CA:248:C:O2'	53:CA:249:U:O4'	2.31	0.40
53:CA:408:A:C5	53:CA:409:U:C5	3.09	0.40
53:CA:527:G:C2	53:CA:528:C:C6	3.09	0.40
53:CA:818:G:O2'	53:CA:820:U:C5	2.73	0.40
53:CA:846:G:H2'	53:CA:847:G:H8	1.86	0.40
53:CA:91:U:O2'	53:CA:92:U:C5'	2.69	0.40
2:CB:122:ASP:OD1	2:CB:124:THR:HG22	2.22	0.40
3:CC:148:ILE:CD1	3:CC:201:ILE:HG12	2.49	0.40
3:CC:37:LYS:HD3	3:CC:37:LYS:HA	1.97	0.40
8:CH:38:VAL:O	8:CH:41:GLU:HB2	2.20	0.40
8:CH:39:LEU:HB2	8:CH:45:ILE:HD11	2.02	0.40
8:CH:80:PRO:HA	8:CH:83:ARG:NE	2.36	0.40
10:CJ:87:LEU:HD22	10:CJ:87:LEU:HA	1.92	0.40
11:CK:17:ASP:HA	11:CK:80:ASN:O	2.21	0.40
15:CO:70:LYS:HG3	15:CO:77:TYR:CD2	2.57	0.40
15:CO:72:LYS:HA	15:CO:72:LYS:HD3	1.81	0.40
56:CP:44:SER:HB2	56:CP:46:LYS:HG3	2.04	0.40
20:CT:49:ALA:O	20:CT:52:GLU:HB3	2.21	0.40
57:DA:1082:U:H4'	30:DI:117:THR:O	2.21	0.40
57:DA:1099:G:C6	57:DA:1100:C:C2	3.09	0.40
57:DA:1171:G:C6	57:DA:1179:G:C2	3.10	0.40
57:DA:117:G:H4'	57:DA:126:A:H2	1.86	0.40
57:DA:1255:U:O2'	57:DA:1256:G:P	2.78	0.40
57:DA:1330:C:HO2'	57:DA:1331:G:P	2.45	0.40
57:DA:1401:G:H2'	57:DA:1402:U:C5	2.52	0.40
57:DA:1411:U:H2'	57:DA:1412:U:O4'	2.22	0.40
57:DA:1612:C:O2'	57:DA:1613:G:O5'	2.39	0.40
57:DA:1802:A:H2'	57:DA:1803:A:C8	2.56	0.40
57:DA:1911:U:H2'	57:DA:1918:A:C2	2.56	0.40
57:DA:206:U:C2'	57:DA:207:A:H8	2.35	0.40
57:DA:2542:A:H4'	57:DA:2543:G:H5''	1.98	0.40
57:DA:2547:A:C8	57:DA:2566:A:C8	3.10	0.40
57:DA:2652:C:N4	57:DA:2653:U:C4	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2717:C:H2'	57:DA:2718:G:O4'	2.21	0.40
57:DA:30:G:N7	57:DA:31:C:C4	2.88	0.40
57:DA:31:C:O5'	57:DA:31:C:H6	2.04	0.40
57:DA:324:A:O2'	57:DA:325:G:O4'	2.37	0.40
57:DA:381:G:H5''	45:DX:15:ASN:ND2	2.36	0.40
57:DA:216:A:N6	57:DA:432:A:C1'	2.84	0.40
57:DA:487:C:C2'	57:DA:488:G:H5'	2.51	0.40
57:DA:545:U:H6	57:DA:545:U:H3'	1.87	0.40
57:DA:552:U:C4	57:DA:553:G:N7	2.90	0.40
57:DA:591:U:H2'	57:DA:592:A:H8	1.86	0.40
57:DA:628:G:O6	57:DA:636:G:N1	2.54	0.40
57:DA:764:A:C2	57:DA:781:A:C5	3.10	0.40
57:DA:901:C:C6	57:DA:902:C:H5	2.39	0.40
57:DA:989:G:OP2	47:DZ:13:ILE:HD11	2.21	0.40
24:DC:14:HIS:O	24:DC:16:VAL:HG23	2.20	0.40
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.52	0.40
26:DE:146:VAL:HG12	26:DE:167:VAL:HG23	2.03	0.40
26:DE:154:ASP:C	26:DE:156:ASN:H	2.24	0.40
26:DE:159:LEU:HA	26:DE:159:LEU:HD12	1.84	0.40
26:DE:175:ILE:HG23	26:DE:175:ILE:O	2.20	0.40
58:DB:31:C:C5'	59:DF:29:ARG:HH12	2.32	0.40
59:DF:97:GLU:HG2	59:DF:97:GLU:O	2.20	0.40
28:DG:145:ALA:HA	28:DG:148:ARG:HG2	2.03	0.40
28:DG:152:ARG:HA	28:DG:152:ARG:HD2	1.95	0.40
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.52	0.40
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	2.03	0.40
29:DH:57:LYS:HE3	29:DH:58:LEU:HD13	2.04	0.40
30:DI:32:VAL:HG13	30:DI:58:ILE:HD12	2.03	0.40
31:DJ:22:GLY:O	31:DJ:23:LYS:C	2.59	0.40
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.61	0.40
32:DK:103:VAL:O	32:DK:104:THR:HB	2.21	0.40
32:DK:107:LEU:C	32:DK:109:SER:N	2.75	0.40
34:DM:21:ALA:HB1	34:DM:100:LYS:HG2	2.04	0.40
39:DR:2:TYR:H	39:DR:42:ALA:HB3	1.85	0.40
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.03	0.40
1:AA:1114:C:C4	1:AA:1115:U:C5	3.09	0.40
1:AA:135:C:C2'	1:AA:136:C:H5'	2.51	0.40
1:AA:208:U:H5	1:AA:210:C:C6	2.39	0.40
1:AA:212:G:C2	1:AA:213:G:C5	3.09	0.40
1:AA:213:G:C8	1:AA:214:C:C5	3.09	0.40
1:AA:457:G:C5	1:AA:458:U:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:627:G:C4	1:AA:628:G:C8	3.09	0.40
1:AA:627:G:H2'	1:AA:628:G:H8	1.87	0.40
1:AA:723:U:H5'	21:AU:48:LYS:HE2	2.03	0.40
1:AA:771:G:H2'	1:AA:772:U:H6	1.86	0.40
1:AA:892:A:O2'	1:AA:893:C:H5'	2.22	0.40
1:AA:901:A:N7	1:AA:902:G:C1'	2.83	0.40
1:AA:920:U:O4'	1:AA:1080:A:N1	2.54	0.40
2:AB:20:ARG:HD3	2:AB:20:ARG:HA	1.84	0.40
2:AB:58:LYS:C	2:AB:58:LYS:HD3	2.42	0.40
3:AC:119:ILE:HA	3:AC:122:GLN:HG3	2.03	0.40
4:AD:104:MET:SD	4:AD:179:GLY:HA3	2.62	0.40
7:AG:3:ARG:HB2	7:AG:3:ARG:HH11	1.86	0.40
7:AG:69:ARG:CG	7:AG:95:ARG:HG2	2.48	0.40
9:AI:44:ARG:HG3	9:AI:45:MET:CE	2.51	0.40
12:AL:73:LEU:HD13	12:AL:73:LEU:HA	1.86	0.40
13:AM:113:LYS:N	13:AM:114:PRO:CD	2.77	0.40
15:AO:38:LEU:O	15:AO:41:HIS:HB3	2.21	0.40
17:AQ:15:LYS:O	17:AQ:16:MET:SD	2.79	0.40
22:BA:77:G:C2	22:BA:110:G:N3	2.90	0.40
22:BA:1210:G:OP1	22:BA:1212:G:H5'	2.21	0.40
22:BA:141:G:H5'	22:BA:142:A:N7	2.36	0.40
22:BA:142:A:O2'	22:BA:143:C:O5'	2.39	0.40
22:BA:152:A:H2'	22:BA:153:U:C6	2.57	0.40
22:BA:1576:U:O2'	22:BA:1577:C:H5'	2.21	0.40
22:BA:1870:C:H3'	22:BA:1871:A:C2	2.56	0.40
22:BA:1996:C:C4'	22:BA:1997:C:OP1	2.54	0.40
22:BA:2092:U:O2'	22:BA:2093:G:OP2	2.39	0.40
22:BA:235:U:H2'	22:BA:236:C:H6	1.87	0.40
22:BA:2444:G:P	26:BE:63:LYS:HD2	2.61	0.40
22:BA:2560:A:C5	22:BA:2561:U:C5	3.10	0.40
22:BA:2665:A:N3	22:BA:2665:A:H2'	2.36	0.40
22:BA:2802:G:H2'	22:BA:2803:G:O4'	2.21	0.40
22:BA:312:G:O2'	22:BA:313:G:H5'	2.21	0.40
22:BA:415:A:C2	22:BA:2409:G:C2	3.09	0.40
22:BA:513:A:HO2'	22:BA:514:A:H5'	1.85	0.40
22:BA:598:U:H2'	22:BA:599:A:C8	2.56	0.40
22:BA:960:A:O4'	22:BA:2457:U:H4'	2.21	0.40
24:BC:119:VAL:HG12	24:BC:130:PRO:HG2	2.02	0.40
26:BE:42:GLY:C	26:BE:43:THR:HG23	2.42	0.40
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.38	0.40
27:BF:62:GLN:HB3	27:BF:63:LYS:H	1.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:82:TYR:CD2	27:BF:83:PRO:HD2	2.54	0.40
28:BG:17:LYS:HE3	28:BG:17:LYS:HB2	1.95	0.40
28:BG:26:LYS:HD2	28:BG:32:LEU:CD2	2.52	0.40
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.69	0.40
31:BJ:45:THR:HA	31:BJ:46:PRO:HD3	1.72	0.40
32:BK:88:ASN:HD22	32:BK:91:SER:N	2.20	0.40
33:BL:80:SER:HB3	33:BL:115:GLU:CD	2.41	0.40
34:BM:126:ILE:O	34:BM:128:THR:HG23	2.22	0.40
35:BN:8:ARG:HB2	35:BN:43:GLU:CD	2.42	0.40
37:BP:64:SER:HB3	37:BP:69:VAL:CG1	2.52	0.40
22:BA:18:U:P	38:BQ:29:ARG:HH22	2.43	0.40
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.56	0.40
39:BR:87:GLN:HG2	39:BR:88:GLY:N	2.37	0.40
40:BS:33:LEU:HD11	40:BS:52:GLU:HG2	2.04	0.40
41:BT:4:GLU:CD	41:BT:5:GLU:H	2.25	0.40
44:BW:18:LYS:O	44:BW:20:LEU:HG	2.21	0.40
45:BX:21:LEU:HD23	45:BX:21:LEU:HA	1.84	0.40
53:CA:1076:U:N3	53:CA:1082:A:C2	2.89	0.40
53:CA:1165:U:H2'	53:CA:1166:G:H5'	2.04	0.40
53:CA:960:U:C4	53:CA:1225:A:H1'	2.56	0.40
53:CA:1277:C:O2'	53:CA:1279:G:C8	2.66	0.40
53:CA:1361:G:C2'	53:CA:1362:A:H5'	2.50	0.40
53:CA:1408:A:C2	53:CA:1494:G:C4	3.09	0.40
53:CA:16:A:O4'	5:CE:21:SER:HB3	2.21	0.40
53:CA:198:G:C4	53:CA:199:A:N7	2.89	0.40
53:CA:255:G:H5'	17:CQ:17:GLU:O	2.22	0.40
53:CA:369:G:H2'	53:CA:370:C:C6	2.57	0.40
53:CA:537:G:H2'	53:CA:538:G:H8	1.84	0.40
53:CA:704:A:O2'	53:CA:705:G:O5'	2.39	0.40
53:CA:722:G:H4'	53:CA:723:U:H5	1.87	0.40
53:CA:815:A:H4'	53:CA:817:C:C4	2.57	0.40
53:CA:833:G:C5	53:CA:834:U:C5	3.10	0.40
53:CA:992:U:H1'	53:CA:993:G:C2	2.56	0.40
5:CE:17:VAL:HG21	5:CE:55:VAL:HG13	2.03	0.40
54:CG:8:GLN:NE2	54:CG:9:ARG:HG2	2.36	0.40
11:CK:92:ARG:HB3	11:CK:93:GLU:H	1.63	0.40
12:CL:20:VAL:C	12:CL:22:ALA:H	2.25	0.40
55:CM:17:ALA:HB3	55:CM:18:LEU:HD12	2.04	0.40
55:CM:65:GLU:H	55:CM:65:GLU:HG3	1.70	0.40
53:CA:1271:A:O2'	14:CN:33:VAL:HG21	2.22	0.40
14:CN:72:PHE:CD1	14:CN:72:PHE:C	2.94	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:CP:51:ARG:HD3	56:CP:51:ARG:HA	1.88	0.40
17:CQ:13:SER:CB	17:CQ:21:VAL:HB	2.50	0.40
20:CT:63:LYS:O	20:CT:63:LYS:HG3	2.21	0.40
48:D0:32:THR:HG21	48:D0:47:TYR:CD2	2.56	0.40
48:D0:37:HIS:HB3	48:D0:43:THR:HG22	2.03	0.40
57:DA:1020:A:C2	57:DA:1141:U:H2'	2.56	0.40
57:DA:1293:C:H2'	57:DA:1294:U:O4'	2.21	0.40
57:DA:1304:A:HO2'	57:DA:1305:C:C5'	2.34	0.40
57:DA:1346:G:O2'	57:DA:1347:A:P	2.80	0.40
57:DA:137:U:H2'	57:DA:138:U:O4'	2.22	0.40
57:DA:1426:G:H5'	57:DA:1427:A:OP2	2.21	0.40
57:DA:1526:C:C4	57:DA:1527:G:C5	3.09	0.40
57:DA:1540:G:H2'	57:DA:1541:C:H6	1.86	0.40
57:DA:1683:U:H2'	57:DA:1684:G:C8	2.56	0.40
57:DA:1723:G:O2'	57:DA:1724:G:H5'	2.22	0.40
57:DA:1133:A:C8	57:DA:2026:U:H4'	2.57	0.40
57:DA:2102:G:H2'	57:DA:2103:C:H5'	2.04	0.40
57:DA:2297:A:HO2'	57:DA:2298:A:H8	1.63	0.40
57:DA:2413:G:H2'	57:DA:2414:G:C8	2.56	0.40
57:DA:2654:A:N3	57:DA:2656:U:O4	2.55	0.40
57:DA:349:U:H2'	57:DA:350:G:H8	1.87	0.40
57:DA:391:A:C2	57:DA:411:G:C4	3.09	0.40
57:DA:656:G:O2'	57:DA:657:U:C5'	2.70	0.40
57:DA:686:U:OP2	63:DA:3705:HOH:O	2.22	0.40
57:DA:792:A:H3'	57:DA:793:A:H5'	2.03	0.40
57:DA:88:G:C2	57:DA:89:A:C8	3.09	0.40
57:DA:9:G:C6	57:DA:2629:U:C5	3.10	0.40
58:DB:65:U:H3'	58:DB:108:A:H61	1.83	0.40
58:DB:90:C:H6	58:DB:90:C:C5'	2.33	0.40
24:DC:246:PRO:HB2	24:DC:247:TRP:CZ3	2.57	0.40
25:DD:101:PHE:HA	25:DD:104:VAL:HB	2.04	0.40
25:DD:166:GLY:O	25:DD:167:ASN:HB3	2.21	0.40
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.95	0.40
26:DE:178:VAL:HG13	26:DE:179:SER:H	1.86	0.40
59:DF:60:SER:C	59:DF:62:GLN:N	2.75	0.40
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	2.03	0.40
30:DI:127:SER:O	30:DI:131:THR:HG23	2.21	0.40
31:DJ:64:VAL:HG11	31:DJ:69:ARG:CA	2.50	0.40
57:DA:538:A:O2'	31:DJ:8:PRO:CD	2.69	0.40
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.75	0.40
33:DL:38:GLN:C	33:DL:40:SER:H	2.25	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:99:LEU:HD23	37:DP:99:LEU:HA	1.92	0.40
38:DQ:4:LYS:O	38:DQ:5:ARG:CB	2.70	0.40
57:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.47	0.40
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.21	0.40
43:DV:40:ILE:HD13	43:DV:40:ILE:H	1.87	0.40
43:DV:56:PHE:CD1	43:DV:56:PHE:C	2.95	0.40
45:DX:2:ARG:HD3	45:DX:32:LEU:HD23	2.02	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	132 (61%)	55 (26%)	29 (13%)	0	1
2	CB	216/218 (99%)	149 (69%)	49 (23%)	18 (8%)	1	5
3	AC	204/206 (99%)	153 (75%)	34 (17%)	17 (8%)	1	5
3	CC	204/206 (99%)	145 (71%)	39 (19%)	20 (10%)	0	3
4	AD	203/205 (99%)	133 (66%)	43 (21%)	27 (13%)	0	1
4	CD	203/205 (99%)	138 (68%)	42 (21%)	23 (11%)	0	2
5	AE	148/150 (99%)	103 (70%)	28 (19%)	17 (12%)	0	2
5	CE	148/150 (99%)	106 (72%)	24 (16%)	18 (12%)	0	2
6	AF	98/100 (98%)	71 (72%)	20 (20%)	7 (7%)	1	8
6	CF	98/100 (98%)	68 (69%)	19 (19%)	11 (11%)	0	2
7	AG	149/151 (99%)	108 (72%)	35 (24%)	6 (4%)	3	21
8	AH	127/129 (98%)	94 (74%)	27 (21%)	6 (5%)	2	17
8	CH	127/129 (98%)	89 (70%)	29 (23%)	9 (7%)	1	8
9	AI	125/127 (98%)	84 (67%)	30 (24%)	11 (9%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	CI	125/127 (98%)	90 (72%)	23 (18%)	12 (10%)	0	3
10	AJ	96/98 (98%)	70 (73%)	16 (17%)	10 (10%)	0	3
10	CJ	96/98 (98%)	55 (57%)	26 (27%)	15 (16%)	0	1
11	AK	115/117 (98%)	86 (75%)	20 (17%)	9 (8%)	1	6
11	CK	115/117 (98%)	86 (75%)	20 (17%)	9 (8%)	1	6
12	AL	121/123 (98%)	88 (73%)	16 (13%)	17 (14%)	0	1
12	CL	121/123 (98%)	83 (69%)	30 (25%)	8 (7%)	1	9
13	AM	112/114 (98%)	84 (75%)	19 (17%)	9 (8%)	1	6
14	AN	92/100 (92%)	58 (63%)	22 (24%)	12 (13%)	0	1
14	CN	91/100 (91%)	60 (66%)	26 (29%)	5 (6%)	2	14
15	AO	86/88 (98%)	62 (72%)	13 (15%)	11 (13%)	0	1
15	CO	86/88 (98%)	65 (76%)	18 (21%)	3 (4%)	3	24
16	AP	80/82 (98%)	56 (70%)	15 (19%)	9 (11%)	0	2
17	AQ	78/80 (98%)	55 (70%)	11 (14%)	12 (15%)	0	1
17	CQ	78/80 (98%)	61 (78%)	8 (10%)	9 (12%)	0	2
18	AR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	3	22
18	CR	53/55 (96%)	42 (79%)	10 (19%)	1 (2%)	8	39
19	AS	77/79 (98%)	59 (77%)	12 (16%)	6 (8%)	1	6
19	CS	77/79 (98%)	46 (60%)	24 (31%)	7 (9%)	1	3
20	AT	83/85 (98%)	65 (78%)	10 (12%)	8 (10%)	0	3
20	CT	83/85 (98%)	61 (74%)	13 (16%)	9 (11%)	0	2
21	AU	49/51 (96%)	26 (53%)	15 (31%)	8 (16%)	0	0
21	CU	49/51 (96%)	21 (43%)	12 (24%)	16 (33%)	0	0
24	BC	269/271 (99%)	180 (67%)	61 (23%)	28 (10%)	0	3
24	DC	269/271 (99%)	164 (61%)	72 (27%)	33 (12%)	0	2
25	BD	207/209 (99%)	141 (68%)	37 (18%)	29 (14%)	0	1
25	DD	207/209 (99%)	134 (65%)	41 (20%)	32 (16%)	0	1
26	BE	199/201 (99%)	148 (74%)	31 (16%)	20 (10%)	0	3
26	DE	199/201 (99%)	120 (60%)	54 (27%)	25 (13%)	0	1
27	BF	175/177 (99%)	127 (73%)	29 (17%)	19 (11%)	0	2
28	BG	174/176 (99%)	116 (67%)	34 (20%)	24 (14%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
28	DG	174/176 (99%)	104 (60%)	39 (22%)	31 (18%)	0	0
29	BH	147/149 (99%)	63 (43%)	52 (35%)	32 (22%)	0	0
29	DH	147/149 (99%)	73 (50%)	53 (36%)	21 (14%)	0	1
30	BI	139/141 (99%)	84 (60%)	41 (30%)	14 (10%)	0	3
30	DI	139/141 (99%)	83 (60%)	38 (27%)	18 (13%)	0	1
31	BJ	140/142 (99%)	106 (76%)	20 (14%)	14 (10%)	0	3
31	DJ	140/142 (99%)	92 (66%)	30 (21%)	18 (13%)	0	1
32	BK	120/122 (98%)	83 (69%)	20 (17%)	17 (14%)	0	1
32	DK	120/122 (98%)	77 (64%)	21 (18%)	22 (18%)	0	0
33	BL	141/143 (99%)	95 (67%)	30 (21%)	16 (11%)	0	2
33	DL	141/143 (99%)	78 (55%)	42 (30%)	21 (15%)	0	1
34	BM	134/136 (98%)	96 (72%)	24 (18%)	14 (10%)	0	3
34	DM	134/136 (98%)	94 (70%)	25 (19%)	15 (11%)	0	2
35	BN	118/120 (98%)	88 (75%)	20 (17%)	10 (8%)	1	4
35	DN	118/120 (98%)	67 (57%)	35 (30%)	16 (14%)	0	1
36	BO	114/116 (98%)	88 (77%)	17 (15%)	9 (8%)	1	6
36	DO	114/116 (98%)	79 (69%)	27 (24%)	8 (7%)	1	8
37	BP	112/114 (98%)	74 (66%)	23 (20%)	15 (13%)	0	1
37	DP	112/114 (98%)	66 (59%)	28 (25%)	18 (16%)	0	0
38	BQ	115/117 (98%)	99 (86%)	9 (8%)	7 (6%)	1	12
38	DQ	115/117 (98%)	78 (68%)	24 (21%)	13 (11%)	0	2
39	BR	101/103 (98%)	82 (81%)	11 (11%)	8 (8%)	1	6
39	DR	101/103 (98%)	70 (69%)	21 (21%)	10 (10%)	0	3
40	BS	108/110 (98%)	83 (77%)	16 (15%)	9 (8%)	1	5
40	DS	108/110 (98%)	76 (70%)	24 (22%)	8 (7%)	1	7
41	BT	91/93 (98%)	58 (64%)	20 (22%)	13 (14%)	0	1
41	DT	91/93 (98%)	49 (54%)	26 (29%)	16 (18%)	0	0
42	BU	100/102 (98%)	70 (70%)	16 (16%)	14 (14%)	0	1
42	DU	100/102 (98%)	51 (51%)	27 (27%)	22 (22%)	0	0
43	BV	92/94 (98%)	77 (84%)	14 (15%)	1 (1%)	14	51
43	DV	92/94 (98%)	65 (71%)	22 (24%)	5 (5%)	2	14

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
44	BW	77/79 (98%)	31 (40%)	18 (23%)	28 (36%)	0	0
44	DW	77/79 (98%)	32 (42%)	26 (34%)	19 (25%)	0	0
45	BX	75/77 (97%)	58 (77%)	13 (17%)	4 (5%)	2	15
45	DX	75/77 (97%)	48 (64%)	19 (25%)	8 (11%)	0	2
46	BY	61/63 (97%)	40 (66%)	13 (21%)	8 (13%)	0	1
46	DY	61/63 (97%)	43 (70%)	13 (21%)	5 (8%)	1	5
47	BZ	56/58 (97%)	43 (77%)	10 (18%)	3 (5%)	2	14
47	DZ	56/58 (97%)	34 (61%)	16 (29%)	6 (11%)	0	2
48	B0	54/56 (96%)	42 (78%)	7 (13%)	5 (9%)	0	3
48	D0	54/56 (96%)	40 (74%)	7 (13%)	7 (13%)	0	1
49	B1	48/50 (96%)	35 (73%)	10 (21%)	3 (6%)	1	10
49	D1	48/50 (96%)	37 (77%)	6 (12%)	5 (10%)	0	3
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	6	34
50	D2	44/46 (96%)	30 (68%)	7 (16%)	7 (16%)	0	0
51	B3	62/64 (97%)	51 (82%)	8 (13%)	3 (5%)	2	17
51	D3	62/64 (97%)	40 (64%)	17 (27%)	5 (8%)	1	5
52	B4	36/38 (95%)	27 (75%)	6 (17%)	3 (8%)	1	5
52	D4	36/38 (95%)	22 (61%)	9 (25%)	5 (14%)	0	1
54	CG	148/150 (99%)	98 (66%)	42 (28%)	8 (5%)	2	14
55	CM	111/113 (98%)	63 (57%)	36 (32%)	12 (11%)	0	2
56	CP	78/80 (98%)	49 (63%)	19 (24%)	10 (13%)	0	1
59	DF	176/178 (99%)	98 (56%)	44 (25%)	34 (19%)	0	0
All	All	11238/11447 (98%)	7571 (67%)	2387 (21%)	1280 (11%)	0	2

All (1280) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	20	ARG
2	AB	40	ILE
2	AB	72	LYS
2	AB	75	ALA
2	AB	119	GLN
2	AB	133	ALA
2	AB	169	HIS

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Mol	Chain	Res	Type
2	AB	200	PRO
3	AC	16	PRO
3	AC	17	TRP
3	AC	60	ALA
3	AC	205	GLU
4	AD	26	ALA
4	AD	28	ASP
4	AD	29	THR
4	AD	34	GLU
4	AD	131	ILE
4	AD	159	GLU
4	AD	191	SER
4	AD	192	ALA
5	AE	44	ARG
5	AE	97	PRO
5	AE	137	ARG
5	AE	156	ARG
5	AE	157	GLY
6	AF	54	LEU
6	AF	86	ARG
7	AG	93	VAL
8	AH	26	MET
8	AH	49	LYS
8	AH	66	GLN
9	AI	8	THR
9	AI	40	ARG
9	AI	43	ALA
9	AI	55	ASP
9	AI	71	ILE
9	AI	128	LYS
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
11	AK	13	LYS
11	AK	51	PHE
11	AK	125	LYS
11	AK	126	ARG
12	AL	23	LEU
12	AL	24	GLU
12	AL	43	LYS
12	AL	75	GLU
13	AM	46	GLU

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Mol	Chain	Res	Type
14	AN	22	LYS
14	AN	33	VAL
14	AN	51	PRO
14	AN	61	ASN
15	AO	17	ASP
16	AP	11	ALA
16	AP	80	LYS
17	AQ	12	VAL
17	AQ	16	MET
17	AQ	52	CYS
17	AQ	70	LYS
19	AS	48	ILE
19	AS	63	ASP
20	AT	3	ILE
20	AT	4	LYS
20	AT	5	SER
21	AU	11	PHE
21	AU	12	ASP
24	BC	57	HIS
24	BC	104	LEU
24	BC	105	ALA
24	BC	120	ASP
24	BC	121	ALA
24	BC	140	VAL
25	BD	43	ASP
25	BD	73	VAL
25	BD	92	VAL
25	BD	99	GLU
25	BD	103	ASP
25	BD	104	VAL
25	BD	122	VAL
25	BD	169	ARG
25	BD	183	GLU
25	BD	191	GLY
26	BE	8	ALA
26	BE	46	GLN
26	BE	79	ARG
26	BE	80	SER
26	BE	86	ALA
26	BE	175	ILE
27	BF	134	GLN
27	BF	175	PRO

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Mol	Chain	Res	Type
28	BG	7	PRO
28	BG	8	VAL
28	BG	31	GLU
28	BG	33	THR
28	BG	44	HIS
28	BG	45	ALA
28	BG	84	LYS
28	BG	94	ARG
28	BG	118	ALA
28	BG	168	VAL
29	BH	8	LYS
29	BH	9	VAL
29	BH	10	ALA
29	BH	14	SER
29	BH	28	ASN
29	BH	32	PRO
29	BH	33	GLN
29	BH	83	LYS
29	BH	101	ASP
30	BI	65	SER
30	BI	92	PRO
31	BJ	4	PHE
31	BJ	21	THR
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	45	THR
31	BJ	111	LYS
32	BK	13	ASN
32	BK	35	VAL
32	BK	46	ALA
32	BK	48	PRO
32	BK	49	ARG
32	BK	71	ARG
32	BK	72	PRO
32	BK	108	ARG
33	BL	15	ALA
33	BL	29	LYS
33	BL	66	PHE
34	BM	2	LEU
34	BM	14	LYS
34	BM	36	VAL
34	BM	54	THR

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Mol	Chain	Res	Type
34	BM	56	ALA
34	BM	60	GLN
34	BM	69	PRO
34	BM	77	PRO
35	BN	14	SER
35	BN	80	PHE
35	BN	101	GLY
35	BN	117	ASP
36	BO	3	LYS
36	BO	68	LYS
36	BO	112	GLU
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	103	THR
37	BP	105	LYS
38	BQ	87	VAL
38	BQ	91	ARG
40	BS	3	THR
40	BS	14	ALA
40	BS	19	LEU
41	BT	27	SER
41	BT	29	THR
41	BT	69	ARG
41	BT	88	LYS
42	BU	6	ARG
42	BU	51	LEU
42	BU	88	ASP
43	BV	69	GLU
44	BW	9	THR
44	BW	10	ARG
44	BW	18	LYS
44	BW	23	LYS
44	BW	27	GLY
44	BW	29	SER
44	BW	30	VAL
44	BW	48	ALA
44	BW	50	VAL
45	BX	34	SER
45	BX	53	LYS
46	BY	23	ARG
46	BY	24	GLU

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Mol	Chain	Res	Type
46	BY	37	LEU
47	BZ	3	THR
47	BZ	9	THR
48	B0	54	ILE
49	B1	51	ALA
50	B2	44	VAL
52	B4	4	ARG
52	B4	16	ILE
2	CB	81	ASP
2	CB	84	LEU
2	CB	102	ASN
2	CB	129	THR
2	CB	150	ILE
3	CC	59	PRO
3	CC	63	ILE
4	CD	24	VAL
4	CD	25	ARG
4	CD	26	ALA
4	CD	35	GLN
4	CD	80	ARG
4	CD	82	LYS
4	CD	191	SER
4	CD	192	ALA
5	CE	31	SER
5	CE	100	GLU
5	CE	144	GLU
6	CF	44	ARG
6	CF	68	GLN
6	CF	82	ASP
6	CF	99	ALA
54	CG	29	LEU
54	CG	30	MET
54	CG	31	VAL
54	CG	52	ARG
9	CI	71	ILE
11	CK	70	ALA
11	CK	118	ASN
11	CK	126	ARG
11	CK	127	ARG
55	CM	4	ALA
55	CM	65	GLU
14	CN	95	LEU

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Mol	Chain	Res	Type
56	CP	63	GLN
17	CQ	52	CYS
19	CS	46	LEU
20	CT	3	ILE
20	CT	43	LYS
20	CT	65	LEU
21	CU	4	LYS
21	CU	8	ASN
21	CU	9	GLU
21	CU	15	LEU
21	CU	23	GLU
21	CU	32	ARG
21	CU	35	GLU
21	CU	36	PHE
21	CU	38	GLU
24	DC	9	SER
24	DC	28	PRO
24	DC	69	ASN
24	DC	140	VAL
24	DC	217	PRO
24	DC	232	GLY
24	DC	269	ARG
25	DD	11	MET
25	DD	14	ILE
25	DD	31	ALA
25	DD	74	GLU
25	DD	77	ARG
25	DD	95	SER
25	DD	102	ALA
25	DD	112	THR
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	62	GLN
26	DE	73	ILE
26	DE	99	LYS
26	DE	116	ASP

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Mol	Chain	Res	Type
26	DE	127	GLU
59	DF	10	GLU
59	DF	12	VAL
59	DF	32	LYS
59	DF	36	ASN
59	DF	42	ALA
59	DF	43	ILE
59	DF	112	ASP
59	DF	114	ARG
59	DF	120	SER
59	DF	122	ASP
59	DF	137	PHE
59	DF	145	VAL
59	DF	148	VAL
28	DG	49	LEU
28	DG	59	ASP
28	DG	95	ALA
28	DG	165	ASP
29	DH	3	VAL
29	DH	9	VAL
29	DH	10	ALA
29	DH	39	ALA
29	DH	76	GLU
29	DH	98	ASP
29	DH	102	ALA
30	DI	22	PRO
30	DI	29	GLN
30	DI	58	ILE
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	83	GLY
31	DJ	95	ARG
32	DK	18	ARG
32	DK	29	HIS
32	DK	49	ARG
32	DK	71	ARG
32	DK	110	GLU
32	DK	120	PRO
33	DL	4	ASN
33	DL	29	LYS
33	DL	41	ARG
33	DL	82	LEU

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Mol	Chain	Res	Type
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	73	ILE
34	DM	77	PRO
34	DM	135	VAL
35	DN	10	LEU
35	DN	30	ARG
35	DN	63	ARG
35	DN	104	ALA
37	DP	25	VAL
37	DP	50	ARG
37	DP	83	ILE
37	DP	94	ALA
37	DP	108	ARG
37	DP	112	ARG
38	DQ	23	TYR
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	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	96	LYS
43	DV	56	PHE
43	DV	58	SER
44	DW	9	THR
44	DW	34	SER
44	DW	35	ILE
44	DW	83	ALA
45	DX	41	SER
47	DZ	30	ARG
48	D0	54	ILE

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Mol	Chain	Res	Type
50	D2	40	ALA
51	D3	3	ILE
51	D3	29	ARG
51	D3	51	LYS
52	D4	3	VAL
52	D4	8	LYS
52	D4	20	ASP
2	AB	17	HIS
2	AB	18	GLN
2	AB	21	TYR
2	AB	22	TRP
2	AB	37	VAL
2	AB	63	LYS
2	AB	125	PHE
2	AB	140	LEU
2	AB	189	ASN
2	AB	210	THR
2	AB	211	LEU
3	AC	14	VAL
3	AC	126	ARG
3	AC	165	GLU
4	AD	22	SER
4	AD	23	GLY
4	AD	31	CYS
4	AD	33	ILE
4	AD	35	GLN
4	AD	147	LYS
4	AD	148	ALA
4	AD	150	LYS
4	AD	152	SER
4	AD	173	ASP
4	AD	174	ALA
5	AE	11	GLN
5	AE	50	GLY
5	AE	98	ALA
5	AE	121	ASN
5	AE	154	ALA
7	AG	95	ARG
7	AG	129	ASN
8	AH	48	PHE
8	AH	77	VAL
8	AH	88	LYS

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Mol	Chain	Res	Type
10	AJ	74	VAL
10	AJ	101	SER
12	AL	33	CYS
12	AL	73	LEU
12	AL	88	ASP
12	AL	97	VAL
12	AL	117	GLY
13	AM	4	ALA
14	AN	27	LYS
14	AN	44	VAL
14	AN	52	ARG
16	AP	10	GLY
16	AP	16	PHE
16	AP	36	VAL
17	AQ	34	GLY
17	AQ	75	VAL
18	AR	47	ARG
19	AS	27	LYS
20	AT	67	HIS
21	AU	8	ASN
24	BC	188	ARG
24	BC	239	PHE
25	BD	144	GLY
25	BD	153	GLY
25	BD	170	VAL
25	BD	192	ALA
26	BE	45	ALA
26	BE	116	ASP
26	BE	123	LYS
26	BE	153	LEU
26	BE	173	THR
27	BF	61	GLY
28	BG	9	VAL
28	BG	30	GLY
28	BG	53	PRO
28	BG	60	GLY
28	BG	164	ALA
28	BG	170	THR
29	BH	3	VAL
29	BH	15	LEU
29	BH	34	GLY
29	BH	54	LEU

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Mol	Chain	Res	Type
29	BH	81	ALA
29	BH	107	GLY
29	BH	111	ALA
29	BH	121	VAL
29	BH	131	SER
30	BI	30	GLN
30	BI	105	LEU
31	BJ	14	ASP
31	BJ	81	ILE
32	BK	50	GLY
32	BK	93	GLN
33	BL	27	LEU
33	BL	31	GLY
33	BL	65	GLY
33	BL	88	GLY
33	BL	111	ILE
33	BL	114	GLY
34	BM	35	ALA
34	BM	55	ARG
35	BN	59	SER
35	BN	84	GLY
36	BO	22	GLY
36	BO	58	ILE
36	BO	113	ALA
37	BP	15	ASP
38	BQ	4	LYS
39	BR	49	ILE
39	BR	55	ASP
40	BS	64	ALA
40	BS	96	ILE
41	BT	16	VAL
41	BT	38	ALA
41	BT	39	THR
41	BT	68	LYS
41	BT	70	HIS
42	BU	18	LYS
42	BU	45	GLN
42	BU	98	ASN
44	BW	15	SER
44	BW	33	GLY
44	BW	34	SER
44	BW	37	VAL

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Mol	Chain	Res	Type
44	BW	40	ARG
44	BW	47	GLY
44	BW	51	GLY
44	BW	74	LYS
46	BY	22	LEU
48	B0	34	GLY
48	B0	35	GLU
48	B0	51	ARG
51	B3	22	LYS
51	B3	30	HIS
2	CB	26	MET
2	CB	85	SER
2	CB	128	LEU
2	CB	148	GLY
2	CB	149	GLY
2	CB	205	ALA
3	CC	60	ALA
3	CC	77	GLY
3	CC	87	ARG
3	CC	100	ILE
3	CC	140	ALA
3	CC	178	ARG
3	CC	205	GLU
4	CD	12	ARG
4	CD	27	ILE
4	CD	29	THR
4	CD	39	GLN
4	CD	47	LEU
4	CD	187	ARG
4	CD	188	SER
5	CE	29	ILE
5	CE	68	ARG
5	CE	69	ASN
5	CE	81	GLN
5	CE	104	ILE
5	CE	111	ARG
5	CE	143	LEU
6	CF	85	ILE
6	CF	94	HIS
6	CF	98	GLU
54	CG	36	SER
54	CG	62	GLU

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Mol	Chain	Res	Type
54	CG	113	LYS
54	CG	133	ALA
8	CH	2	MET
8	CH	30	LYS
8	CH	43	GLY
8	CH	117	GLN
9	CI	44	ARG
9	CI	54	VAL
9	CI	58	GLU
10	CJ	34	ALA
10	CJ	44	THR
10	CJ	46	LYS
10	CJ	57	VAL
10	CJ	74	VAL
10	CJ	83	THR
10	CJ	93	ALA
11	CK	14	GLN
11	CK	90	PRO
11	CK	91	GLY
11	CK	104	PHE
12	CL	8	ARG
12	CL	16	ALA
12	CL	34	THR
12	CL	43	LYS
12	CL	117	GLY
55	CM	11	HIS
55	CM	14	ALA
55	CM	49	GLU
55	CM	76	ILE
14	CN	21	ALA
14	CN	53	ASP
15	CO	13	GLU
56	CP	31	ARG
56	CP	78	VAL
17	CQ	69	THR
17	CQ	76	ARG
18	CR	70	THR
19	CS	4	LEU
19	CS	7	GLY
20	CT	82	ILE
21	CU	30	GLU
21	CU	31	VAL

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Mol	Chain	Res	Type
21	CU	34	ARG
24	DC	3	VAL
24	DC	34	GLU
24	DC	35	LYS
24	DC	36	ASN
24	DC	59	GLN
24	DC	121	ALA
24	DC	141	HIS
25	DD	93	GLY
25	DD	118	PHE
25	DD	119	ALA
25	DD	120	GLY
25	DD	136	ASN
25	DD	143	PRO
25	DD	176	ASP
26	DE	22	ASP
26	DE	69	ARG
26	DE	80	SER
26	DE	81	GLY
26	DE	96	VAL
26	DE	153	LEU
26	DE	165	HIS
26	DE	188	MET
59	DF	8	LYS
59	DF	41	GLU
59	DF	67	THR
59	DF	76	PHE
59	DF	113	PHE
59	DF	138	PRO
28	DG	40	VAL
28	DG	83	THR
28	DG	85	LYS
28	DG	86	LEU
28	DG	92	GLY
28	DG	93	TYR
28	DG	123	GLU
28	DG	125	PRO
28	DG	126	THR
28	DG	149	ALA
28	DG	150	TYR
28	DG	164	ALA
29	DH	61	VAL

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Mol	Chain	Res	Type
29	DH	66	ASN
29	DH	72	ILE
29	DH	97	ARG
29	DH	99	ILE
30	DI	23	VAL
30	DI	30	GLN
30	DI	51	GLY
30	DI	52	LEU
30	DI	62	ALA
30	DI	69	VAL
30	DI	140	GLU
31	DJ	39	LYS
31	DJ	84	ILE
31	DJ	87	ALA
32	DK	16	ALA
32	DK	30	ARG
32	DK	35	VAL
32	DK	46	ALA
32	DK	93	GLN
32	DK	98	ARG
32	DK	103	VAL
32	DK	104	THR
33	DL	66	PHE
33	DL	115	GLU
34	DM	14	LYS
35	DN	2	ARG
35	DN	91	ALA
35	DN	102	PHE
36	DO	3	LYS
36	DO	72	ALA
36	DO	90	VAL
37	DP	32	VAL
37	DP	51	ASN
37	DP	85	VAL
38	DQ	5	ARG
38	DQ	86	SER
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	8	GLY
39	DR	40	MET
40	DS	40	ASN
40	DS	71	VAL

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Mol	Chain	Res	Type
41	DT	18	GLU
41	DT	19	LYS
41	DT	39	THR
41	DT	68	LYS
41	DT	74	ILE
42	DU	4	ILE
42	DU	87	GLU
42	DU	88	ASP
42	DU	89	GLY
42	DU	95	PHE
42	DU	97	SER
43	DV	33	GLY
43	DV	55	GLU
44	DW	18	LYS
44	DW	26	GLY
44	DW	33	GLY
44	DW	46	ALA
44	DW	53	GLY
44	DW	57	THR
44	DW	71	LYS
45	DX	2	ARG
45	DX	25	LYS
45	DX	34	SER
46	DY	9	LYS
46	DY	22	LEU
46	DY	37	LEU
47	DZ	4	ILE
47	DZ	13	ILE
48	D0	21	LEU
48	D0	55	ALA
49	D1	35	LEU
49	D1	36	LYS
50	D2	24	THR
50	D2	43	THR
51	D3	6	VAL
51	D3	22	LYS
2	AB	33	ALA
2	AB	58	LYS
2	AB	128	LEU
2	AB	142	LYS
2	AB	150	ILE
2	AB	219	THR

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Mol	Chain	Res	Type
3	AC	192	TYR
4	AD	124	VAL
4	AD	167	PRO
4	AD	195	ASN
4	AD	196	GLU
5	AE	109	ALA
5	AE	149	PRO
6	AF	7	VAL
9	AI	119	LYS
11	AK	97	ARG
12	AL	102	ASP
13	AM	3	ILE
13	AM	113	LYS
14	AN	41	TRP
14	AN	43	ALA
15	AO	45	HIS
16	AP	49	GLY
16	AP	78	VAL
17	AQ	11	VAL
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	67	SER
21	AU	23	GLU
24	BC	22	GLU
24	BC	77	VAL
24	BC	149	LYS
24	BC	157	ALA
24	BC	196	ASN
24	BC	224	MET
24	BC	243	PRO
24	BC	265	PHE
25	BD	71	ALA
25	BD	107	VAL
25	BD	118	PHE
25	BD	173	GLN
25	BD	182	ALA
25	BD	190	LYS
26	BE	11	ALA
26	BE	69	ARG
27	BF	111	ARG
27	BF	132	ARG
27	BF	147	ARG

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Mol	Chain	Res	Type
27	BF	174	PHE
28	BG	28	LYS
29	BH	7	ASP
29	BH	30	LEU
29	BH	89	LYS
29	BH	125	THR
30	BI	59	THR
31	BJ	2	LYS
31	BJ	65	THR
31	BJ	74	TYR
32	BK	73	ASP
32	BK	75	SER
32	BK	92	GLU
33	BL	19	LEU
33	BL	58	TYR
33	BL	64	PHE
33	BL	94	THR
35	BN	3	HIS
35	BN	15	SER
35	BN	55	ALA
36	BO	59	ALA
36	BO	77	ALA
36	BO	111	ARG
37	BP	65	ASN
38	BQ	86	SER
39	BR	53	PHE
41	BT	86	THR
42	BU	8	ASP
42	BU	85	ARG
42	BU	87	GLU
42	BU	92	VAL
44	BW	22	VAL
44	BW	26	GLY
44	BW	39	GLN
44	BW	41	GLY
46	BY	9	LYS
46	BY	41	HIS
49	B1	4	ILE
51	B3	31	ILE
2	CB	73	ARG
3	CC	130	ARG
3	CC	145	ALA

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Mol	Chain	Res	Type
3	CC	164	THR
3	CC	173	PRO
3	CC	186	SER
3	CC	188	ALA
4	CD	3	TYR
4	CD	33	ILE
4	CD	40	HIS
5	CE	38	VAL
5	CE	43	GLY
5	CE	75	LEU
5	CE	112	ALA
6	CF	92	THR
8	CH	29	SER
8	CH	41	GLU
9	CI	11	ARG
9	CI	52	GLU
9	CI	55	ASP
10	CJ	87	LEU
11	CK	88	PRO
12	CL	42	LYS
12	CL	47	ALA
55	CM	45	SER
55	CM	46	GLU
55	CM	77	LYS
56	CP	47	GLU
56	CP	53	ASP
17	CQ	12	VAL
17	CQ	31	PRO
17	CQ	79	GLU
20	CT	72	ALA
20	CT	77	ASN
21	CU	7	GLU
21	CU	11	PHE
24	DC	13	ARG
24	DC	37	SER
24	DC	88	ALA
24	DC	98	GLY
24	DC	195	GLY
24	DC	237	ARG
25	DD	107	VAL
25	DD	169	ARG
25	DD	197	THR

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Mol	Chain	Res	Type
26	DE	13	THR
26	DE	45	ALA
26	DE	46	GLN
26	DE	166	LYS
59	DF	37	MET
59	DF	116	LEU
59	DF	133	GLU
28	DG	9	VAL
28	DG	11	PRO
28	DG	39	ALA
28	DG	45	ALA
28	DG	80	GLU
28	DG	117	PRO
28	DG	155	PRO
29	DH	23	ALA
29	DH	28	ASN
29	DH	124	THR
30	DI	19	PRO
30	DI	35	MET
31	DJ	44	TYR
31	DJ	112	GLY
31	DJ	113	PRO
32	DK	6	THR
32	DK	14	SER
32	DK	17	ARG
32	DK	72	PRO
33	DL	43	GLY
33	DL	64	PHE
33	DL	88	GLY
33	DL	117	THR
34	DM	95	LEU
35	DN	8	ARG
35	DN	82	GLU
36	DO	8	ILE
37	DP	33	GLU
37	DP	65	ASN
37	DP	93	LYS
37	DP	109	ILE
38	DQ	4	LYS
38	DQ	29	ARG
38	DQ	32	ARG
38	DQ	39	ILE

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Mol	Chain	Res	Type
38	DQ	87	VAL
39	DR	3	ALA
39	DR	29	THR
39	DR	65	ALA
40	DS	32	ALA
41	DT	38	ALA
41	DT	66	LYS
42	DU	40	LEU
42	DU	54	PRO
44	DW	16	GLU
44	DW	23	LYS
44	DW	24	ARG
44	DW	36	ILE
44	DW	39	GLN
45	DX	21	LEU
48	D0	32	THR
48	D0	53	VAL
50	D2	4	THR
2	AB	96	LEU
3	AC	35	ASP
3	AC	100	ILE
3	AC	139	ASN
3	AC	148	ILE
4	AD	125	ASN
4	AD	197	HIS
5	AE	23	THR
6	AF	39	LEU
6	AF	56	LYS
7	AG	130	LYS
9	AI	37	TYR
9	AI	120	ALA
10	AJ	36	VAL
11	AK	124	LYS
12	AL	22	ALA
12	AL	72	ASN
12	AL	77	SER
13	AM	104	ASN
14	AN	63	CYS
15	AO	16	ARG
15	AO	24	THR
15	AO	72	LYS
15	AO	86	LEU

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Mol	Chain	Res	Type
17	AQ	10	ARG
19	AS	5	LYS
24	BC	109	LEU
24	BC	135	PRO
24	BC	246	PRO
24	BC	264	LYS
25	BD	72	GLY
25	BD	109	VAL
25	BD	119	ALA
25	BD	175	LEU
25	BD	181	ASP
26	BE	10	SER
27	BF	2	LYS
27	BF	10	GLU
27	BF	54	ALA
27	BF	113	PHE
28	BG	61	TRP
28	BG	91	VAL
28	BG	97	VAL
28	BG	119	GLY
29	BH	16	GLY
29	BH	29	PHE
29	BH	40	THR
29	BH	138	VAL
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
32	BK	3	GLN
32	BK	69	VAL
33	BL	40	SER
33	BL	54	GLN
35	BN	2	ARG
37	BP	5	LYS
37	BP	51	ASN
37	BP	93	LYS
38	BQ	5	ARG
39	BR	51	VAL
39	BR	91	GLN
39	BR	100	GLY
41	BT	35	ALA
41	BT	90	GLY
42	BU	38	ILE

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Mol	Chain	Res	Type
44	BW	14	ASP
44	BW	25	PHE
44	BW	70	VAL
45	BX	17	ARG
47	BZ	34	THR
49	B1	50	GLU
2	CB	18	GLN
2	CB	22	TRP
3	CC	180	ASP
4	CD	11	SER
5	CE	56	PRO
8	CH	98	LEU
10	CJ	61	ALA
10	CJ	82	LYS
55	CM	42	VAL
55	CM	93	GLY
15	CO	19	ASN
56	CP	54	LEU
56	CP	69	ASP
17	CQ	78	VAL
19	CS	3	SER
20	CT	67	HIS
20	CT	76	ALA
21	CU	10	PRO
21	CU	26	GLY
24	DC	64	VAL
24	DC	72	GLY
24	DC	147	PRO
24	DC	227	VAL
24	DC	238	ASN
24	DC	239	PHE
25	DD	43	ASP
25	DD	106	LYS
25	DD	109	VAL
25	DD	145	SER
25	DD	167	ASN
26	DE	148	ILE
26	DE	187	VAL
59	DF	70	ARG
59	DF	83	PRO
59	DF	94	ARG
59	DF	104	THR

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Mol	Chain	Res	Type
59	DF	142	TYR
28	DG	46	ASP
28	DG	91	VAL
28	DG	166	GLU
29	DH	121	VAL
29	DH	144	VAL
30	DI	87	SER
30	DI	119	ALA
31	DJ	25	LEU
31	DJ	74	TYR
31	DJ	120	ARG
32	DK	89	ASN
32	DK	105	ARG
32	DK	119	ALA
33	DL	93	ASN
33	DL	99	ASN
33	DL	100	ILE
34	DM	69	PRO
34	DM	70	ASP
34	DM	87	GLY
34	DM	106	ASP
34	DM	111	GLU
34	DM	134	THR
35	DN	13	ASN
35	DN	17	ARG
35	DN	105	GLY
36	DO	7	ARG
37	DP	20	ARG
38	DQ	44	TYR
39	DR	53	PHE
39	DR	80	ARG
39	DR	98	ILE
42	DU	34	ILE
42	DU	67	SER
42	DU	101	THR
45	DX	33	HIS
46	DY	46	VAL
49	D1	50	GLU
50	D2	8	SER
50	D2	39	ARG
3	AC	65	VAL
3	AC	107	LYS

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Mol	Chain	Res	Type
3	AC	145	ALA
3	AC	191	THR
4	AD	166	LYS
5	AE	77	ASN
5	AE	144	GLU
6	AF	15	SER
6	AF	63	ASN
7	AG	84	TYR
9	AI	56	MET
9	AI	122	ARG
10	AJ	35	GLN
11	AK	88	PRO
12	AL	122	LYS
13	AM	6	ILE
13	AM	84	CYS
14	AN	91	GLU
15	AO	43	ALA
15	AO	68	TYR
17	AQ	5	ARG
18	AR	54	LEU
20	AT	72	ALA
20	AT	74	HIS
21	AU	37	TYR
24	BC	59	GLN
24	BC	64	VAL
24	BC	110	LYS
24	BC	150	GLY
24	BC	252	LYS
25	BD	145	SER
25	BD	150	GLN
26	BE	53	THR
26	BE	70	SER
26	BE	83	VAL
26	BE	96	VAL
27	BF	20	ASN
27	BF	83	PRO
27	BF	133	GLU
27	BF	150	GLY
28	BG	16	VAL
28	BG	20	GLY
28	BG	46	ASP
29	BH	25	TYR

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Mol	Chain	Res	Type
29	BH	35	LYS
30	BI	3	LYS
30	BI	20	SER
31	BJ	13	ARG
31	BJ	125	TYR
32	BK	5	GLN
32	BK	119	ALA
34	BM	73	ILE
34	BM	81	ARG
34	BM	134	THR
37	BP	2	ASN
37	BP	20	ARG
38	BQ	95	ALA
39	BR	98	ILE
40	BS	56	ALA
40	BS	57	ASN
41	BT	55	VAL
42	BU	101	THR
44	BW	36	ILE
44	BW	76	ARG
44	BW	78	PHE
46	BY	46	VAL
46	BY	57	LEU
52	B4	8	LYS
2	CB	177	ASN
2	CB	179	GLY
2	CB	188	THR
2	CB	200	PRO
3	CC	24	ASN
3	CC	65	VAL
3	CC	128	MET
4	CD	68	GLU
4	CD	196	GLU
5	CE	113	VAL
8	CH	74	ILE
9	CI	103	VAL
9	CI	119	LYS
10	CJ	36	VAL
10	CJ	75	ASP
15	CO	87	ARG
56	CP	43	ALA
56	CP	46	LYS

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Mol	Chain	Res	Type
17	CQ	81	ALA
19	CS	54	ARG
19	CS	79	TYR
20	CT	73	ARG
24	DC	96	LYS
24	DC	106	PRO
24	DC	197	ALA
24	DC	204	LEU
25	DD	99	GLU
26	DE	60	TRP
59	DF	31	GLU
59	DF	82	TYR
59	DF	84	ILE
59	DF	175	PRO
28	DG	152	ARG
29	DH	25	TYR
29	DH	103	VAL
29	DH	143	ILE
30	DI	83	ALA
31	DJ	13	ARG
31	DJ	42	ALA
32	DK	48	PRO
33	DL	19	LEU
33	DL	105	ILE
35	DN	36	THR
35	DN	70	THR
36	DO	109	ALA
37	DP	63	ILE
37	DP	113	LEU
38	DQ	6	GLY
38	DQ	58	GLN
39	DR	89	HIS
42	DU	12	VAL
43	DV	84	PRO
44	DW	41	GLY
44	DW	49	ASN
45	DX	27	ARG
46	DY	2	LYS
47	DZ	52	PHE
48	D0	17	SER
49	D1	38	PHE
52	D4	16	ILE

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Mol	Chain	Res	Type
2	AB	120	SER
2	AB	141	GLU
3	AC	173	PRO
5	AE	104	ILE
10	AJ	33	GLY
11	AK	40	ALA
13	AM	11	HIS
15	AO	2	LEU
15	AO	35	ILE
19	AS	22	VAL
19	AS	26	ASP
20	AT	76	ALA
21	AU	33	ARG
21	AU	36	PHE
24	BC	37	SER
24	BC	230	PRO
25	BD	11	MET
26	BE	13	THR
27	BF	128	SER
27	BF	149	ARG
29	BH	31	VAL
30	BI	7	TYR
33	BL	41	ARG
38	BQ	101	ASP
40	BS	32	ALA
42	BU	26	ASN
42	BU	53	GLN
44	BW	17	ALA
45	BX	69	GLU
4	CD	166	LYS
5	CE	89	THR
6	CF	63	ASN
6	CF	69	GLU
8	CH	58	LEU
9	CI	31	GLN
9	CI	127	SER
10	CJ	41	PRO
17	CQ	4	ILE
26	DE	129	PRO
59	DF	88	VAL
28	DG	170	THR
29	DH	134	VAL

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Mol	Chain	Res	Type
30	DI	31	GLY
31	DJ	23	LYS
31	DJ	43	GLU
33	DL	28	GLY
34	DM	16	ARG
36	DO	27	VAL
37	DP	57	ALA
40	DS	29	VAL
41	DT	50	LEU
42	DU	33	VAL
42	DU	41	VAL
42	DU	52	ASN
45	DX	63	ILE
47	DZ	32	GLY
48	D0	26	SER
4	AD	172	VAL
5	AE	148	SER
10	AJ	41	PRO
12	AL	86	VAL
16	AP	42	ILE
21	AU	52	VAL
25	BD	93	GLY
27	BF	11	VAL
30	BI	97	VAL
31	BJ	73	VAL
34	BM	87	GLY
37	BP	4	ILE
37	BP	104	GLY
39	BR	27	ILE
55	CM	50	GLY
26	DE	82	GLY
36	DO	42	PRO
41	DT	53	VAL
42	DU	35	VAL
7	AG	6	ILE
10	AJ	42	LEU
11	AK	15	VAL
15	AO	85	GLY
20	AT	57	VAL
24	BC	28	PRO
29	BH	13	GLY
29	BH	80	ILE

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Mol	Chain	Res	Type
40	BS	63	GLY
48	B0	53	VAL
4	CD	37	PRO
5	CE	17	VAL
10	CJ	33	GLY
14	CN	56	PRO
56	CP	49	GLY
24	DC	246	PRO
25	DD	44	GLY
30	DI	138	VAL
31	DJ	139	VAL
33	DL	46	VAL
37	DP	34	GLY
40	DS	74	ILE
41	DT	16	VAL
49	D1	4	ILE
2	AB	209	VAL
12	AL	41	PRO
16	AP	15	PRO
26	BE	59	PRO
29	BH	103	VAL
30	BI	23	VAL
6	CF	64	VAL
12	CL	7	VAL
19	CS	29	PRO
24	DC	2	VAL
26	DE	126	VAL
59	DF	125	GLY
28	DG	97	VAL
30	DI	28	GLY
35	DN	85	PRO
39	DR	52	PRO
42	DU	47	PRO
42	DU	64	ILE
44	DW	22	VAL
50	D2	38	GLY
52	D4	21	GLY
12	AL	54	VAL
13	AM	9	PRO
14	AN	81	ILE
30	BI	31	GLY
3	CC	54	ILE

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Mol	Chain	Res	Type
14	CN	51	PRO
24	DC	226	PRO
25	DD	2	ILE
59	DF	81	GLY
28	DG	53	PRO
28	DG	119	GLY
34	DM	36	VAL
35	DN	29	VAL
47	DZ	50	VAL
27	BF	145	VAL
37	BP	34	GLY
9	CI	50	PRO
10	CJ	25	ILE

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/180 (100%)	142 (79%)	38 (21%)	1	6
2	CB	180/180 (100%)	156 (87%)	24 (13%)	4	18
3	AC	170/170 (100%)	142 (84%)	28 (16%)	2	10
3	CC	170/170 (100%)	152 (89%)	18 (11%)	6	27
4	AD	172/172 (100%)	146 (85%)	26 (15%)	3	14
4	CD	172/172 (100%)	140 (81%)	32 (19%)	1	8
5	AE	113/113 (100%)	90 (80%)	23 (20%)	1	6
5	CE	113/113 (100%)	94 (83%)	19 (17%)	2	10
6	AF	87/87 (100%)	75 (86%)	12 (14%)	3	16
6	CF	87/87 (100%)	75 (86%)	12 (14%)	3	16
7	AG	124/124 (100%)	108 (87%)	16 (13%)	4	19
8	AH	104/104 (100%)	87 (84%)	17 (16%)	2	11
8	CH	104/104 (100%)	87 (84%)	17 (16%)	2	11
9	AI	105/105 (100%)	84 (80%)	21 (20%)	1	6

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
9	CI	105/105 (100%)	89 (85%)	16 (15%)	3	13
10	AJ	86/86 (100%)	72 (84%)	14 (16%)	2	11
10	CJ	86/86 (100%)	77 (90%)	9 (10%)	7	28
11	AK	90/90 (100%)	73 (81%)	17 (19%)	1	8
11	CK	90/90 (100%)	77 (86%)	13 (14%)	3	15
12	AL	103/103 (100%)	82 (80%)	21 (20%)	1	6
12	CL	103/103 (100%)	86 (84%)	17 (16%)	2	10
13	AM	92/92 (100%)	87 (95%)	5 (5%)	22	58
14	AN	79/83 (95%)	72 (91%)	7 (9%)	9	35
14	CN	79/83 (95%)	67 (85%)	12 (15%)	3	13
15	AO	76/76 (100%)	67 (88%)	9 (12%)	5	23
15	CO	76/76 (100%)	69 (91%)	7 (9%)	9	33
16	AP	65/65 (100%)	57 (88%)	8 (12%)	4	21
17	AQ	74/74 (100%)	58 (78%)	16 (22%)	1	5
17	CQ	74/74 (100%)	61 (82%)	13 (18%)	2	9
18	AR	48/48 (100%)	46 (96%)	2 (4%)	30	65
18	CR	48/48 (100%)	44 (92%)	4 (8%)	11	40
19	AS	70/70 (100%)	61 (87%)	9 (13%)	4	19
19	CS	70/70 (100%)	62 (89%)	8 (11%)	5	24
20	AT	65/65 (100%)	49 (75%)	16 (25%)	0	2
20	CT	65/65 (100%)	53 (82%)	12 (18%)	1	8
21	AU	44/44 (100%)	33 (75%)	11 (25%)	0	2
21	CU	44/44 (100%)	33 (75%)	11 (25%)	0	2
24	BC	216/216 (100%)	169 (78%)	47 (22%)	1	5
24	DC	216/216 (100%)	189 (88%)	27 (12%)	4	21
25	BD	164/164 (100%)	131 (80%)	33 (20%)	1	6
25	DD	164/164 (100%)	141 (86%)	23 (14%)	3	16
26	BE	165/165 (100%)	123 (74%)	42 (26%)	0	2
26	DE	165/165 (100%)	147 (89%)	18 (11%)	6	26
27	BF	148/148 (100%)	127 (86%)	21 (14%)	3	15
28	BG	137/137 (100%)	108 (79%)	29 (21%)	1	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	DG	137/137 (100%)	118 (86%)	19 (14%)	3	16
29	BH	114/114 (100%)	96 (84%)	18 (16%)	2	12
29	DH	114/114 (100%)	94 (82%)	20 (18%)	2	9
30	BI	109/109 (100%)	91 (84%)	18 (16%)	2	10
30	DI	109/109 (100%)	102 (94%)	7 (6%)	17	52
31	BJ	116/116 (100%)	87 (75%)	29 (25%)	0	2
31	DJ	116/116 (100%)	102 (88%)	14 (12%)	5	22
32	BK	103/103 (100%)	86 (84%)	17 (16%)	2	10
32	DK	103/103 (100%)	81 (79%)	22 (21%)	1	5
33	BL	102/102 (100%)	77 (76%)	25 (24%)	0	2
33	DL	102/102 (100%)	87 (85%)	15 (15%)	3	14
34	BM	109/109 (100%)	85 (78%)	24 (22%)	1	5
34	DM	109/109 (100%)	97 (89%)	12 (11%)	6	26
35	BN	100/100 (100%)	77 (77%)	23 (23%)	1	3
35	DN	100/100 (100%)	82 (82%)	18 (18%)	1	9
36	BO	86/86 (100%)	69 (80%)	17 (20%)	1	7
36	DO	86/86 (100%)	79 (92%)	7 (8%)	11	42
37	BP	99/99 (100%)	69 (70%)	30 (30%)	0	0
37	DP	99/99 (100%)	88 (89%)	11 (11%)	6	25
38	BQ	89/89 (100%)	75 (84%)	14 (16%)	2	12
38	DQ	89/89 (100%)	75 (84%)	14 (16%)	2	12
39	BR	84/84 (100%)	68 (81%)	16 (19%)	1	8
39	DR	84/84 (100%)	71 (84%)	13 (16%)	2	12
40	BS	93/93 (100%)	71 (76%)	22 (24%)	1	3
40	DS	93/93 (100%)	77 (83%)	16 (17%)	2	10
41	BT	80/80 (100%)	59 (74%)	21 (26%)	0	2
41	DT	80/80 (100%)	74 (92%)	6 (8%)	13	45
42	BU	83/83 (100%)	66 (80%)	17 (20%)	1	6
42	DU	83/83 (100%)	72 (87%)	11 (13%)	4	18
43	BV	78/78 (100%)	59 (76%)	19 (24%)	0	2
43	DV	78/78 (100%)	67 (86%)	11 (14%)	3	16

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
44	BW	59/59 (100%)	42 (71%)	17 (29%)	0	1
44	DW	59/59 (100%)	46 (78%)	13 (22%)	1	5
45	BX	67/67 (100%)	51 (76%)	16 (24%)	0	3
45	DX	67/67 (100%)	58 (87%)	9 (13%)	4	18
46	BY	55/55 (100%)	42 (76%)	13 (24%)	1	3
46	DY	55/55 (100%)	52 (94%)	3 (6%)	21	57
47	BZ	48/48 (100%)	34 (71%)	14 (29%)	0	1
47	DZ	48/48 (100%)	40 (83%)	8 (17%)	2	10
48	B0	47/47 (100%)	38 (81%)	9 (19%)	1	8
48	D0	47/47 (100%)	40 (85%)	7 (15%)	3	14
49	B1	45/45 (100%)	36 (80%)	9 (20%)	1	6
49	D1	45/45 (100%)	41 (91%)	4 (9%)	9	35
50	B2	38/38 (100%)	31 (82%)	7 (18%)	1	8
50	D2	38/38 (100%)	34 (90%)	4 (10%)	7	28
51	B3	51/51 (100%)	44 (86%)	7 (14%)	3	17
51	D3	51/51 (100%)	42 (82%)	9 (18%)	2	9
52	B4	34/34 (100%)	29 (85%)	5 (15%)	3	14
52	D4	34/34 (100%)	27 (79%)	7 (21%)	1	6
54	CG	123/123 (100%)	101 (82%)	22 (18%)	2	9
55	CM	91/91 (100%)	80 (88%)	11 (12%)	5	22
56	CP	65/65 (100%)	52 (80%)	13 (20%)	1	6
59	DF	149/149 (100%)	123 (83%)	26 (17%)	2	10
All	All	9331/9339 (100%)	7772 (83%)	1559 (17%)	2	10

All (1559) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	10	LYS
2	AB	13	VAL
2	AB	15	PHE
2	AB	19	THR
2	AB	20	ARG
2	AB	22	TRP
2	AB	30	ILE

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Mol	Chain	Res	Type
2	AB	36	LYS
2	AB	38	HIS
2	AB	42	LEU
2	AB	56	LEU
2	AB	57	ASN
2	AB	67	LEU
2	AB	73	ARG
2	AB	86	CYS
2	AB	87	ASP
2	AB	88	GLN
2	AB	90	PHE
2	AB	94	ARG
2	AB	100	LEU
2	AB	102	ASN
2	AB	108	GLN
2	AB	112	ARG
2	AB	115	ASP
2	AB	116	LEU
2	AB	119	GLN
2	AB	125	PHE
2	AB	128	LEU
2	AB	130	LYS
2	AB	141	GLU
2	AB	143	LEU
2	AB	156	LEU
2	AB	170	ILE
2	AB	185	ILE
2	AB	206	ILE
2	AB	207	ARG
2	AB	209	VAL
2	AB	219	THR
3	AC	2	GLN
3	AC	13	ILE
3	AC	17	TRP
3	AC	24	ASN
3	AC	25	THR
3	AC	26	LYS
3	AC	28	PHE
3	AC	32	LEU
3	AC	35	ASP
3	AC	36	PHE
3	AC	42	LEU

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Mol	Chain	Res	Type
3	AC	50	SER
3	AC	58	ARG
3	AC	69	THR
3	AC	79	LYS
3	AC	89	VAL
3	AC	106	ARG
3	AC	119	ILE
3	AC	127	VAL
3	AC	139	ASN
3	AC	143	LEU
3	AC	148	ILE
3	AC	156	LEU
3	AC	161	ILE
3	AC	165	GLU
3	AC	166	TRP
3	AC	184	ASN
3	AC	199	VAL
4	AD	11	SER
4	AD	19	PHE
4	AD	21	LYS
4	AD	25	ARG
4	AD	30	LYS
4	AD	31	CYS
4	AD	43	ARG
4	AD	52	VAL
4	AD	54	LEU
4	AD	55	ARG
4	AD	57	LYS
4	AD	58	GLN
4	AD	69	ARG
4	AD	88	ASN
4	AD	99	ASN
4	AD	115	GLN
4	AD	122	ILE
4	AD	127	ARG
4	AD	131	ILE
4	AD	147	LYS
4	AD	160	LEU
4	AD	166	LYS
4	AD	170	LEU
4	AD	178	GLU
4	AD	193	ASP

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Mol	Chain	Res	Type
4	AD	205	LYS
5	AE	10	LEU
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	28	ARG
5	AE	31	SER
5	AE	68	ARG
5	AE	75	LEU
5	AE	79	THR
5	AE	81	GLN
5	AE	95	MET
5	AE	96	GLN
5	AE	100	GLU
5	AE	113	VAL
5	AE	116	VAL
5	AE	119	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	135	VAL
5	AE	136	VAL
5	AE	141	ASP
5	AE	155	LYS
5	AE	156	ARG
6	AF	14	GLN
6	AF	17	GLN
6	AF	24	ARG
6	AF	29	ILE
6	AF	38	ARG
6	AF	46	GLN
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	86	ARG
7	AG	3	ARG
7	AG	8	GLN
7	AG	12	LEU
7	AG	21	LEU
7	AG	22	LEU
7	AG	37	THR

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Mol	Chain	Res	Type
7	AG	47	GLU
7	AG	62	GLU
7	AG	68	VAL
7	AG	83	THR
7	AG	85	GLN
7	AG	93	VAL
7	AG	105	GLU
7	AG	117	LEU
7	AG	123	LEU
7	AG	143	MET
8	AH	21	LYS
8	AH	29	SER
8	AH	30	LYS
8	AH	64	TYR
8	AH	65	PHE
8	AH	72	GLU
8	AH	76	ARG
8	AH	79	ARG
8	AH	82	LEU
8	AH	86	LYS
8	AH	89	ASP
8	AH	98	LEU
8	AH	100	ILE
8	AH	110	MET
8	AH	111	THR
8	AH	120	LEU
8	AH	128	VAL
9	AI	4	GLN
9	AI	21	LYS
9	AI	28	VAL
9	AI	35	GLU
9	AI	37	TYR
9	AI	42	THR
9	AI	44	ARG
9	AI	47	VAL
9	AI	48	ARG
9	AI	54	VAL
9	AI	56	MET
9	AI	62	LEU
9	AI	67	LYS
9	AI	87	MET
9	AI	88	GLU

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Mol	Chain	Res	Type
9	AI	98	ARG
9	AI	105	ARG
9	AI	106	ASP
9	AI	125	GLN
9	AI	126	PHE
9	AI	128	LYS
10	AJ	6	ILE
10	AJ	22	THR
10	AJ	32	THR
10	AJ	35	GLN
10	AJ	48	ARG
10	AJ	49	PHE
10	AJ	50	THR
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	70	HIS
10	AJ	73	LEU
10	AJ	89	ARG
10	AJ	92	LEU
10	AJ	96	VAL
11	AK	17	ASP
11	AK	30	ILE
11	AK	35	ASP
11	AK	51	PHE
11	AK	55	ARG
11	AK	64	VAL
11	AK	76	TYR
11	AK	78	ILE
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	118	ASN
11	AK	124	LYS
11	AK	125	LYS
11	AK	127	ARG
11	AK	128	VAL
12	AL	3	VAL
12	AL	17	LYS
12	AL	18	SER
12	AL	20	VAL
12	AL	26	CYS

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Mol	Chain	Res	Type
12	AL	34	THR
12	AL	35	ARG
12	AL	38	THR
12	AL	41	PRO
12	AL	43	LYS
12	AL	49	ARG
12	AL	51	VAL
12	AL	57	THR
12	AL	63	THR
12	AL	64	SER
12	AL	74	GLN
12	AL	87	LYS
12	AL	88	ASP
12	AL	94	TYR
12	AL	104	SER
12	AL	109	ARG
13	AM	3	ILE
13	AM	7	ASN
13	AM	42	VAL
13	AM	58	GLU
13	AM	106	ARG
14	AN	13	VAL
14	AN	58	ARG
14	AN	59	GLN
14	AN	61	ASN
14	AN	73	LEU
14	AN	96	LYS
14	AN	99	SER
15	AO	16	ARG
15	AO	34	GLN
15	AO	57	ARG
15	AO	63	ARG
15	AO	65	LEU
15	AO	67	ASP
15	AO	80	LEU
15	AO	84	LEU
15	AO	86	LEU
16	AP	6	LEU
16	AP	19	VAL
16	AP	33	ILE
16	AP	46	LYS
16	AP	55	ASP

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Mol	Chain	Res	Type
16	AP	63	GLN
16	AP	68	SER
16	AP	77	GLU
17	AQ	3	LYS
17	AQ	16	MET
17	AQ	20	ILE
17	AQ	28	VAL
17	AQ	29	LYS
17	AQ	37	ILE
17	AQ	47	ASP
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	51	GLU
17	AQ	54	ILE
17	AQ	64	ARG
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	78	VAL
17	AQ	80	LYS
18	AR	20	ILE
18	AR	54	LEU
19	AS	42	ASN
19	AS	54	ARG
19	AS	55	GLN
19	AS	57	VAL
19	AS	59	VAL
19	AS	60	PHE
19	AS	61	VAL
19	AS	64	GLU
19	AS	79	TYR
20	AT	2	ASN
20	AT	4	LYS
20	AT	11	ILE
20	AT	26	MET
20	AT	27	MET
20	AT	28	ARG
20	AT	29	THR
20	AT	33	LYS
20	AT	35	TYR
20	AT	38	ILE
20	AT	42	ASP
20	AT	53	MET

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Mol	Chain	Res	Type
20	AT	67	HIS
20	AT	75	LYS
20	AT	77	ASN
20	AT	84	LYS
21	AU	4	LYS
21	AU	8	ASN
21	AU	9	GLU
21	AU	10	PRO
21	AU	15	LEU
21	AU	18	PHE
21	AU	27	VAL
21	AU	33	ARG
21	AU	37	TYR
21	AU	38	GLU
21	AU	42	THR
24	BC	2	VAL
24	BC	12	ARG
24	BC	20	ASN
24	BC	27	LYS
24	BC	35	LYS
24	BC	38	LYS
24	BC	43	ASN
24	BC	49	THR
24	BC	70	LYS
24	BC	73	ILE
24	BC	77	VAL
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	100	ARG
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	142	ASN
24	BC	155	ARG
24	BC	163	ILE

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Mol	Chain	Res	Type
24	BC	164	VAL
24	BC	166	ARG
24	BC	171	VAL
24	BC	172	THR
24	BC	173	LEU
24	BC	175	LEU
24	BC	176	ARG
24	BC	181	ARG
24	BC	200	MET
24	BC	201	LEU
24	BC	202	ARG
24	BC	203	VAL
24	BC	212	TRP
24	BC	215	VAL
24	BC	216	ARG
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	258	SER
24	BC	268	ARG
25	BD	4	LEU
25	BD	9	VAL
25	BD	13	ARG
25	BD	14	ILE
25	BD	16	THR
25	BD	33	ARG
25	BD	40	LEU
25	BD	43	ASP
25	BD	45	TYR
25	BD	67	HIS
25	BD	73	VAL
25	BD	79	LEU
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	95	SER
25	BD	98	VAL
25	BD	100	LEU
25	BD	101	PHE
25	BD	113	SER
25	BD	114	LYS
25	BD	118	PHE

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Mol	Chain	Res	Type
25	BD	124	ARG
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	170	VAL
25	BD	176	ASP
25	BD	177	VAL
25	BD	183	GLU
25	BD	186	LEU
25	BD	203	VAL
25	BD	207	VAL
26	BE	12	LEU
26	BE	18	THR
26	BE	21	ARG
26	BE	24	ASN
26	BE	40	ARG
26	BE	43	THR
26	BE	44	ARG
26	BE	48	THR
26	BE	61	ARG
26	BE	62	GLN
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	78	TRP
26	BE	80	SER
26	BE	90	GLN
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	116	ASP
26	BE	118	LEU
26	BE	119	ILE
26	BE	121	VAL
26	BE	122	GLU
26	BE	123	LYS
26	BE	124	PHE
26	BE	127	GLU
26	BE	131	THR
26	BE	132	LYS
26	BE	136	GLN
26	BE	141	MET

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Mol	Chain	Res	Type
26	BE	146	VAL
26	BE	147	LEU
26	BE	149	ILE
26	BE	153	LEU
26	BE	159	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	170	ARG
26	BE	171	ASP
26	BE	186	VAL
26	BE	189	THR
27	BF	3	LEU
27	BF	8	LYS
27	BF	9	ASP
27	BF	12	VAL
27	BF	17	THR
27	BF	24	VAL
27	BF	34	THR
27	BF	35	LEU
27	BF	36	ASN
27	BF	46	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	90	LEU
27	BF	103	ILE
27	BF	109	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	154	THR
27	BF	157	THR
27	BF	166	ARG
28	BG	2	ARG
28	BG	8	VAL
28	BG	29	ASN
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	40	VAL
28	BG	55	ASP
28	BG	59	ASP
28	BG	68	ARG

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Mol	Chain	Res	Type
28	BG	78	VAL
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	88	LEU
28	BG	91	VAL
28	BG	101	VAL
28	BG	115	GLN
28	BG	116	LEU
28	BG	120	ILE
28	BG	121	THR
28	BG	123	GLU
28	BG	131	VAL
28	BG	132	LEU
28	BG	138	GLN
28	BG	148	ARG
28	BG	165	ASP
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	18	GLN
29	BH	25	TYR
29	BH	28	ASN
29	BH	31	VAL
29	BH	33	GLN
29	BH	43	ASN
29	BH	50	ARG
29	BH	54	LEU
29	BH	68	ARG
29	BH	75	LEU
29	BH	83	LYS
29	BH	96	THR
29	BH	104	THR
29	BH	125	THR
29	BH	135	HIS
30	BI	2	LYS
30	BI	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL

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Mol	Chain	Res	Type
30	BI	30	GLN
30	BI	37	PHE
30	BI	39	LYS
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
30	BI	124	MET
30	BI	126	ARG
30	BI	135	MET
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	3	THR
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	34	ARG
31	BJ	36	LEU
31	BJ	40	HIS
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	67	ASN
31	BJ	69	ARG
31	BJ	72	LYS
31	BJ	86	GLN
31	BJ	103	ILE
31	BJ	105	VAL
31	BJ	109	LEU
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	123	LYS
31	BJ	129	GLU
31	BJ	135	GLN
31	BJ	140	LEU

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Mol	Chain	Res	Type
32	BK	8	LEU
32	BK	18	ARG
32	BK	23	LYS
32	BK	41	ILE
32	BK	42	THR
32	BK	51	LYS
32	BK	52	VAL
32	BK	54	LYS
32	BK	58	LEU
32	BK	61	VAL
32	BK	73	ASP
32	BK	89	ASN
32	BK	95	ILE
32	BK	105	ARG
32	BK	111	LYS
32	BK	114	LYS
32	BK	118	LEU
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	8	PRO
33	BL	12	SER
33	BL	14	LYS
33	BL	19	LEU
33	BL	21	ARG
33	BL	27	LEU
33	BL	30	THR
33	BL	35	HIS
33	BL	47	ARG
33	BL	55	MET
33	BL	61	LEU
33	BL	66	PHE
33	BL	82	LEU
33	BL	91	ASP
33	BL	93	ASN
33	BL	94	THR
33	BL	101	ILE
33	BL	111	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	127	VAL
33	BL	135	ILE

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Mol	Chain	Res	Type
34	BM	2	LEU
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	24	THR
34	BM	25	ASP
34	BM	27	SER
34	BM	33	LEU
34	BM	36	VAL
34	BM	58	LYS
34	BM	70	ASP
34	BM	75	GLU
34	BM	76	LYS
34	BM	80	VAL
34	BM	81	ARG
34	BM	90	GLU
34	BM	96	ILE
34	BM	97	GLN
34	BM	102	LEU
34	BM	110	GLU
34	BM	118	LYS
34	BM	131	VAL
34	BM	133	LYS
34	BM	134	THR
35	BN	2	ARG
35	BN	3	HIS
35	BN	8	ARG
35	BN	10	LEU
35	BN	11	ASN
35	BN	14	SER
35	BN	15	SER
35	BN	22	ARG
35	BN	23	ASN
35	BN	30	ARG
35	BN	33	ILE
35	BN	35	LYS
35	BN	38	LEU
35	BN	43	GLU
35	BN	51	LEU
35	BN	54	LEU
35	BN	69	ARG
35	BN	71	ARG

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Mol	Chain	Res	Type
35	BN	75	ILE
35	BN	86	ARG
35	BN	95	THR
35	BN	96	ARG
35	BN	118	ARG
36	BO	5	SER
36	BO	9	ARG
36	BO	16	ARG
36	BO	17	LYS
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	80	GLU
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	116	GLN
37	BP	3	ILE
37	BP	6	GLN
37	BP	7	LEU
37	BP	14	GLN
37	BP	16	VAL
37	BP	18	SER
37	BP	19	PHE
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	35	SER
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	56	SER
37	BP	61	ARG
37	BP	64	SER
37	BP	72	VAL
37	BP	75	THR
37	BP	79	VAL

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Mol	Chain	Res	Type
37	BP	80	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	93	LYS
37	BP	95	LYS
37	BP	96	LEU
37	BP	99	LEU
37	BP	101	GLU
37	BP	109	ILE
38	BQ	2	ARG
38	BQ	8	ILE
38	BQ	10	ARG
38	BQ	50	ARG
38	BQ	63	ARG
38	BQ	65	ASN
38	BQ	69	ARG
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	14	VAL
39	BR	25	LEU
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	51	VAL
39	BR	54	VAL
39	BR	55	ASP
39	BR	63	VAL
39	BR	85	LYS
39	BR	86	GLN
39	BR	97	LYS
40	BS	1	MET
40	BS	3	THR

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Mol	Chain	Res	Type
40	BS	4	ILE
40	BS	7	HIS
40	BS	24	ILE
40	BS	30	SER
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	76	VAL
40	BS	88	ARG
40	BS	96	ILE
40	BS	101	SER
40	BS	107	VAL
40	BS	109	ASP
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	17	SER
41	BT	19	LYS
41	BT	28	ASN
41	BT	29	THR
41	BT	30	ILE
41	BT	31	VAL
41	BT	32	LEU
41	BT	37	ASP
41	BT	43	ILE
41	BT	48	GLN
41	BT	58	VAL
41	BT	61	LEU
41	BT	64	LYS
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	74	ILE
42	BU	6	ARG

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Mol	Chain	Res	Type
42	BU	8	ASP
42	BU	18	LYS
42	BU	20	LYS
42	BU	23	LYS
42	BU	26	ASN
42	BU	29	SER
42	BU	42	LYS
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	80	ASP
42	BU	86	PHE
42	BU	87	GLU
42	BU	92	VAL
42	BU	99	SER
42	BU	102	ILE
43	BV	1	MET
43	BV	3	THR
43	BV	5	ASN
43	BV	8	VAL
43	BV	10	LYS
43	BV	12	GLN
43	BV	14	LYS
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	43	ASP
43	BV	46	LYS
43	BV	51	GLN
43	BV	55	GLU
43	BV	60	VAL
43	BV	61	LEU
43	BV	66	ASP
44	BW	14	ASP
44	BW	15	SER
44	BW	23	LYS
44	BW	24	ARG
44	BW	25	PHE
44	BW	38	ARG
44	BW	40	ARG

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Mol	Chain	Res	Type
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	61	LYS
44	BW	67	LYS
44	BW	71	LYS
44	BW	76	ARG
44	BW	77	LYS
44	BW	80	SER
45	BX	6	VAL
45	BX	10	ARG
45	BX	19	HIS
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	41	SER
45	BX	47	THR
45	BX	53	LYS
45	BX	60	LYS
45	BX	63	ILE
45	BX	65	THR
45	BX	71	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	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	2	LYS
47	BZ	3	THR
47	BZ	4	ILE

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Mol	Chain	Res	Type
47	BZ	5	LYS
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	30	ARG
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	43	ILE
47	BZ	51	SER
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG
48	B0	17	SER
48	B0	21	LEU
48	B0	22	THR
48	B0	26	SER
48	B0	27	LEU
48	B0	39	ARG
48	B0	42	ILE
49	B1	4	ILE
49	B1	9	LYS
49	B1	16	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
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
51	B3	5	THR
51	B3	7	ARG
51	B3	22	LYS
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS

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Mol	Chain	Res	Type
51	B3	56	LEU
52	B4	1	MET
52	B4	4	ARG
52	B4	9	LYS
52	B4	13	ASN
52	B4	27	CYS
2	CB	9	LEU
2	CB	10	LYS
2	CB	14	HIS
2	CB	19	THR
2	CB	21	TYR
2	CB	22	TRP
2	CB	26	MET
2	CB	34	ARG
2	CB	36	LYS
2	CB	39	ILE
2	CB	42	LEU
2	CB	46	VAL
2	CB	69	VAL
2	CB	88	GLN
2	CB	103	TRP
2	CB	124	THR
2	CB	125	PHE
2	CB	131	LYS
2	CB	147	LEU
2	CB	164	ASP
2	CB	177	ASN
2	CB	182	VAL
2	CB	191	ASP
2	CB	196	ASP
3	CC	26	LYS
3	CC	30	ASP
3	CC	35	ASP
3	CC	41	TYR
3	CC	53	ARG
3	CC	106	ARG
3	CC	123	LEU
3	CC	126	ARG
3	CC	134	LYS
3	CC	139	ASN
3	CC	153	SER
3	CC	161	ILE

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Mol	Chain	Res	Type
3	CC	164	THR
3	CC	166	TRP
3	CC	178	ARG
3	CC	183	TYR
3	CC	185	THR
3	CC	194	VAL
4	CD	2	ARG
4	CD	8	LEU
4	CD	16	THR
4	CD	24	VAL
4	CD	25	ARG
4	CD	29	THR
4	CD	30	LYS
4	CD	34	GLU
4	CD	55	ARG
4	CD	57	LYS
4	CD	62	ARG
4	CD	80	ARG
4	CD	84	ASN
4	CD	106	PHE
4	CD	119	HIS
4	CD	125	ASN
4	CD	127	ARG
4	CD	137	SER
4	CD	140	ASP
4	CD	142	VAL
4	CD	147	LYS
4	CD	151	GLN
4	CD	153	ARG
4	CD	160	LEU
4	CD	168	THR
4	CD	170	LEU
4	CD	182	LYS
4	CD	183	ARG
4	CD	187	ARG
4	CD	189	ASP
4	CD	194	ILE
4	CD	199	ILE
5	CE	11	GLN
5	CE	13	LYS
5	CE	18	ASN
5	CE	24	VAL

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Mol	Chain	Res	Type
5	CE	25	LYS
5	CE	59	ILE
5	CE	75	LEU
5	CE	80	LEU
5	CE	81	GLN
5	CE	87	VAL
5	CE	91	SER
5	CE	95	MET
5	CE	99	SER
5	CE	119	VAL
5	CE	131	ASN
5	CE	133	ILE
5	CE	134	ASN
5	CE	136	VAL
5	CE	144	GLU
6	CF	33	GLU
6	CF	38	ARG
6	CF	44	ARG
6	CF	52	ASN
6	CF	54	LEU
6	CF	56	LYS
6	CF	58	HIS
6	CF	61	LEU
6	CF	72	ASP
6	CF	86	ARG
6	CF	89	VAL
6	CF	98	GLU
54	CG	3	ARG
54	CG	5	VAL
54	CG	6	ILE
54	CG	10	LYS
54	CG	12	LEU
54	CG	16	LYS
54	CG	55	LYS
54	CG	58	LEU
54	CG	66	GLU
54	CG	75	LYS
54	CG	77	ARG
54	CG	78	ARG
54	CG	85	GLN
54	CG	90	VAL
54	CG	100	MET

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Mol	Chain	Res	Type
54	CG	102	TRP
54	CG	112	ASP
54	CG	119	LEU
54	CG	123	LEU
54	CG	137	ARG
54	CG	139	ASP
54	CG	148	LYS
8	CH	2	MET
8	CH	11	THR
8	CH	37	ASN
8	CH	42	GLU
8	CH	46	GLU
8	CH	50	VAL
8	CH	54	THR
8	CH	59	GLU
8	CH	73	SER
8	CH	75	GLN
8	CH	76	ARG
8	CH	78	SER
8	CH	79	ARG
8	CH	82	LEU
8	CH	89	ASP
8	CH	93	LYS
8	CH	110	MET
9	CI	3	ASN
9	CI	4	GLN
9	CI	5	TYR
9	CI	36	GLN
9	CI	37	TYR
9	CI	45	MET
9	CI	53	LEU
9	CI	54	VAL
9	CI	60	LEU
9	CI	61	ASP
9	CI	83	THR
9	CI	87	MET
9	CI	93	LEU
9	CI	125	GLN
9	CI	126	PHE
9	CI	129	ARG
10	CJ	11	LYS
10	CJ	15	HIS

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Mol	Chain	Res	Type
10	CJ	48	ARG
10	CJ	59	LYS
10	CJ	67	ILE
10	CJ	69	THR
10	CJ	82	LYS
10	CJ	87	LEU
10	CJ	92	LEU
11	CK	12	ARG
11	CK	27	ASN
11	CK	33	ILE
11	CK	34	THR
11	CK	57	SER
11	CK	73	VAL
11	CK	78	ILE
11	CK	81	LEU
11	CK	94	SER
11	CK	95	THR
11	CK	105	ARG
11	CK	115	ILE
11	CK	128	VAL
12	CL	3	VAL
12	CL	4	ASN
12	CL	5	GLN
12	CL	9	LYS
12	CL	18	SER
12	CL	19	ASN
12	CL	28	GLN
12	CL	39	THR
12	CL	48	LEU
12	CL	49	ARG
12	CL	57	THR
12	CL	62	VAL
12	CL	72	ASN
12	CL	88	ASP
12	CL	96	THR
12	CL	107	LYS
12	CL	120	ARG
55	CM	12	LYS
55	CM	24	VAL
55	CM	28	ARG
55	CM	32	ILE
55	CM	46	GLU

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Mol	Chain	Res	Type
55	CM	53	ASP
55	CM	77	LYS
55	CM	91	ARG
55	CM	92	ARG
55	CM	100	ARG
55	CM	113	LYS
14	CN	3	GLN
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	58	ARG
14	CN	61	ASN
14	CN	63	CYS
14	CN	65	GLN
14	CN	72	PHE
14	CN	96	LYS
14	CN	100	TRP
15	CO	16	ARG
15	CO	34	GLN
15	CO	38	LEU
15	CO	39	GLN
15	CO	45	HIS
15	CO	65	LEU
15	CO	80	LEU
56	CP	1	MET
56	CP	3	THR
56	CP	19	VAL
56	CP	29	ASN
56	CP	32	PHE
56	CP	35	ARG
56	CP	41	PRO
56	CP	44	SER
56	CP	46	LYS
56	CP	54	LEU
56	CP	56	ARG
56	CP	69	ASP
56	CP	71	VAL
17	CQ	3	LYS
17	CQ	6	THR
17	CQ	7	LEU
17	CQ	20	ILE

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Mol	Chain	Res	Type
17	CQ	32	ILE
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	51	GLU
17	CQ	52	CYS
17	CQ	58	VAL
17	CQ	60	ILE
17	CQ	75	VAL
17	CQ	80	LYS
18	CR	25	ILE
18	CR	44	THR
18	CR	65	SER
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	11	ASP
19	CS	52	ASN
19	CS	54	ARG
19	CS	55	GLN
19	CS	56	HIS
19	CS	73	PHE
20	CT	11	ILE
20	CT	26	MET
20	CT	30	PHE
20	CT	35	TYR
20	CT	42	ASP
20	CT	47	GLN
20	CT	53	MET
20	CT	67	HIS
20	CT	68	LYS
20	CT	69	ASN
20	CT	73	ARG
20	CT	82	ILE
21	CU	4	LYS
21	CU	9	GLU
21	CU	13	VAL
21	CU	17	ARG
21	CU	18	PHE
21	CU	19	LYS
21	CU	27	VAL
21	CU	32	ARG
21	CU	36	PHE

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Mol	Chain	Res	Type
21	CU	37	TYR
21	CU	53	LYS
24	DC	23	LEU
24	DC	35	LYS
24	DC	43	ASN
24	DC	51	ARG
24	DC	53	ILE
24	DC	62	ARG
24	DC	90	ILE
24	DC	102	TYR
24	DC	124	LYS
24	DC	152	GLN
24	DC	164	VAL
24	DC	172	THR
24	DC	173	LEU
24	DC	187	CYS
24	DC	188	ARG
24	DC	190	THR
24	DC	203	VAL
24	DC	212	TRP
24	DC	213	ARG
24	DC	220	ARG
24	DC	227	VAL
24	DC	228	ASP
24	DC	235	GLU
24	DC	251	THR
24	DC	260	LYS
24	DC	267	VAL
24	DC	269	ARG
25	DD	24	VAL
25	DD	28	GLU
25	DD	32	ASN
25	DD	33	ARG
25	DD	34	VAL
25	DD	38	LYS
25	DD	48	ILE
25	DD	50	VAL
25	DD	55	LYS
25	DD	58	ASN
25	DD	62	LYS
25	DD	79	LEU
25	DD	84	LEU

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Mol	Chain	Res	Type
25	DD	100	LEU
25	DD	106	LYS
25	DD	121	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	148	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	189	VAL
25	DD	193	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	63	LYS
26	DE	67	ARG
26	DE	73	ILE
26	DE	77	ILE
26	DE	78	TRP
26	DE	91	ASP
26	DE	108	ILE
26	DE	112	LEU
26	DE	126	VAL
26	DE	127	GLU
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
59	DF	13	LYS
59	DF	25	MET
59	DF	47	LYS
59	DF	48	LEU
59	DF	49	LEU
59	DF	76	PHE
59	DF	77	LYS
59	DF	94	ARG
59	DF	97	GLU
59	DF	110	ILE
59	DF	111	ARG
59	DF	113	PHE
59	DF	119	LYS
59	DF	131	VAL

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Mol	Chain	Res	Type
59	DF	133	GLU
59	DF	134	GLN
59	DF	135	ILE
59	DF	139	GLU
59	DF	142	TYR
59	DF	147	ARG
59	DF	148	VAL
59	DF	151	LEU
59	DF	160	LYS
59	DF	166	ARG
59	DF	172	PHE
59	DF	177	ARG
28	DG	2	ARG
28	DG	18	ILE
28	DG	19	ASN
28	DG	21	GLN
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	93	TYR
28	DG	120	ILE
28	DG	132	LEU
28	DG	143	VAL
28	DG	162	ARG
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	8	LYS
29	DH	22	LYS
29	DH	25	TYR
29	DH	27	ARG
29	DH	28	ASN
29	DH	44	ILE
29	DH	50	ARG
29	DH	57	LYS
29	DH	66	ASN
29	DH	68	ARG
29	DH	76	GLU

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Mol	Chain	Res	Type
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	103	VAL
29	DH	104	THR
29	DH	109	GLU
29	DH	119	ASN
29	DH	132	PHE
29	DH	144	VAL
30	DI	7	TYR
30	DI	16	MET
30	DI	30	GLN
30	DI	58	ILE
30	DI	68	PHE
30	DI	72	THR
30	DI	93	ASN
31	DJ	3	THR
31	DJ	25	LEU
31	DJ	34	ARG
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	52	ASP
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	80	HIS
31	DJ	81	ILE
31	DJ	95	ARG
31	DJ	106	LYS
31	DJ	129	GLU
31	DJ	139	VAL
32	DK	3	GLN
32	DK	7	MET
32	DK	13	ASN
32	DK	25	LEU
32	DK	39	ILE
32	DK	41	ILE
32	DK	47	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	65	THR
32	DK	73	ASP
32	DK	79	PHE

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Mol	Chain	Res	Type
32	DK	87	LEU
32	DK	91	SER
32	DK	95	ILE
32	DK	100	PHE
32	DK	103	VAL
32	DK	105	ARG
32	DK	106	GLU
32	DK	107	LEU
32	DK	111	LYS
32	DK	114	LYS
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
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	118	THR
33	DL	141	LYS
33	DL	143	GLU
34	DM	8	LYS
34	DM	33	LEU
34	DM	38	ARG
34	DM	73	ILE
34	DM	78	LEU
34	DM	89	VAL
34	DM	95	LEU
34	DM	97	GLN
34	DM	105	MET
34	DM	115	GLU
34	DM	126	ILE
34	DM	129	THR
35	DN	14	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	29	VAL
35	DN	33	ILE

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Mol	Chain	Res	Type
35	DN	34	ILE
35	DN	53	THR
35	DN	62	ASN
35	DN	63	ARG
35	DN	69	ARG
35	DN	75	ILE
35	DN	90	ARG
35	DN	94	TYR
35	DN	95	THR
35	DN	97	ILE
35	DN	98	LEU
35	DN	107	ASN
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	115	LEU
36	DO	117	PHE
37	DP	6	GLN
37	DP	7	LEU
37	DP	13	LYS
37	DP	19	PHE
37	DP	28	LYS
37	DP	31	VAL
37	DP	52	ARG
37	DP	83	ILE
37	DP	86	LYS
37	DP	95	LYS
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	10	ARG
38	DQ	12	ARG
38	DQ	13	HIS
38	DQ	15	LYS
38	DQ	35	PHE
38	DQ	46	TYR
38	DQ	50	ARG
38	DQ	54	ARG
38	DQ	57	ARG
38	DQ	63	ARG

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Mol	Chain	Res	Type
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	96	ASP
39	DR	6	GLN
39	DR	10	LYS
39	DR	13	ARG
39	DR	37	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	83	TYR
39	DR	86	GLN
39	DR	90	ARG
39	DR	93	PHE
40	DS	6	LYS
40	DS	22	ASP
40	DS	23	LEU
40	DS	31	GLN
40	DS	36	LEU
40	DS	45	VAL
40	DS	46	LEU
40	DS	66	ILE
40	DS	70	LYS
40	DS	74	ILE
40	DS	76	VAL
40	DS	81	SER
40	DS	84	ARG
40	DS	86	MET
40	DS	88	ARG
40	DS	107	VAL
41	DT	9	LYS
41	DT	12	ARG
41	DT	18	GLU
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
42	DU	13	LEU
42	DU	14	THR
42	DU	16	LYS
42	DU	17	ASP

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Mol	Chain	Res	Type
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU
42	DU	45	GLN
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
43	DV	17	SER
43	DV	26	PHE
43	DV	40	ILE
43	DV	44	HIS
43	DV	51	GLN
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
43	DV	90	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	30	VAL
44	DW	37	VAL
44	DW	39	GLN
44	DW	40	ARG
44	DW	58	LEU
44	DW	68	PHE
44	DW	76	ARG
44	DW	77	LYS
44	DW	80	SER
45	DX	5	GLN
45	DX	6	VAL
45	DX	26	ARG
45	DX	29	LEU
45	DX	31	ASN
45	DX	46	VAL
45	DX	47	THR
45	DX	63	ILE
45	DX	73	ARG
46	DY	1	MET
46	DY	4	LYS

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Mol	Chain	Res	Type
46	DY	28	LEU
47	DZ	16	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	37	ARG
47	DZ	50	VAL
47	DZ	53	MET
48	D0	3	GLN
48	D0	5	ASN
48	D0	22	THR
48	D0	41	HIS
48	D0	42	ILE
48	D0	49	ARG
48	D0	53	VAL
49	D1	10	LEU
49	D1	20	TYR
49	D1	35	LEU
49	D1	44	GLN
50	D2	9	VAL
50	D2	26	ASN
50	D2	33	ARG
50	D2	46	LYS
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	29	ARG
51	D3	41	ARG
51	D3	46	LYS
51	D3	48	MET
51	D3	51	LYS
51	D3	61	LEU
52	D4	2	LYS
52	D4	3	VAL
52	D4	9	LYS
52	D4	11	CYS
52	D4	13	ASN
52	D4	15	LYS
52	D4	17	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (333) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	14	HIS
2	AB	38	HIS
2	AB	57	ASN
2	AB	102	ASN
2	AB	108	GLN
2	AB	119	GLN
2	AB	169	HIS
3	AC	5	HIS
3	AC	24	ASN
3	AC	68	HIS
3	AC	138	GLN
3	AC	139	ASN
4	AD	40	HIS
4	AD	53	GLN
4	AD	58	GLN
4	AD	70	GLN
4	AD	73	ASN
4	AD	84	ASN
4	AD	99	ASN
4	AD	119	HIS
4	AD	163	GLN
5	AE	11	GLN
5	AE	42	ASN
5	AE	72	ASN
5	AE	77	ASN
5	AE	121	ASN
6	AF	11	HIS
6	AF	46	GLN
6	AF	52	ASN
6	AF	68	GLN
7	AG	85	GLN
7	AG	121	ASN
7	AG	147	ASN
8	AH	3	GLN
8	AH	17	GLN
8	AH	20	ASN
8	AH	117	GLN
9	AI	3	ASN
9	AI	4	GLN
9	AI	80	HIS
9	AI	125	GLN
10	AJ	20	GLN
10	AJ	35	GLN

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Mol	Chain	Res	Type
10	AJ	58	ASN
10	AJ	64	GLN
11	AK	100	ASN
11	AK	108	ASN
12	AL	4	ASN
12	AL	45	ASN
12	AL	74	GLN
13	AM	7	ASN
14	AN	42	ASN
14	AN	48	GLN
14	AN	61	ASN
15	AO	19	ASN
15	AO	36	ASN
15	AO	45	HIS
15	AO	61	GLN
16	AP	29	ASN
16	AP	59	HIS
16	AP	63	GLN
17	AQ	44	HIS
17	AQ	49	ASN
18	AR	30	ASN
18	AR	53	GLN
18	AR	73	HIS
19	AS	42	ASN
20	AT	12	GLN
20	AT	47	GLN
20	AT	51	ASN
20	AT	54	GLN
20	AT	60	GLN
20	AT	74	HIS
20	AT	77	ASN
21	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	59	GLN
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

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Mol	Chain	Res	Type
25	BD	32	ASN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
25	BD	150	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	62	GLN
26	BE	97	ASN
26	BE	136	GLN
27	BF	22	ASN
27	BF	26	GLN
27	BF	134	GLN
28	BG	72	ASN
28	BG	114	HIS
29	BH	2	GLN
29	BH	18	GLN
29	BH	20	ASN
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	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	5	GLN
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	99	ASN
33	BL	104	GLN
34	BM	88	ASN
35	BN	9	GLN
35	BN	11	ASN
35	BN	23	ASN

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Mol	Chain	Res	Type
35	BN	62	ASN
35	BN	73	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
36	BO	100	HIS
37	BP	9	GLN
37	BP	74	GLN
38	BQ	13	HIS
38	BQ	19	GLN
38	BQ	43	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	15	GLN
40	BS	40	ASN
40	BS	57	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
45	BX	5	GLN
45	BX	15	ASN
45	BX	22	ASN
46	BY	15	ASN
46	BY	27	ASN
46	BY	41	HIS
48	B0	3	GLN

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Mol	Chain	Res	Type
50	B2	6	GLN
50	B2	13	ASN
50	B2	16	HIS
50	B2	26	ASN
51	B3	27	ASN
52	B4	13	ASN
52	B4	33	HIS
52	B4	35	GLN
2	CB	18	GLN
2	CB	23	ASN
2	CB	38	HIS
2	CB	108	GLN
2	CB	145	ASN
2	CB	169	HIS
2	CB	176	ASN
2	CB	177	ASN
3	CC	2	GLN
3	CC	7	ASN
3	CC	18	ASN
3	CC	31	ASN
3	CC	68	HIS
3	CC	139	ASN
3	CC	184	ASN
4	CD	70	GLN
4	CD	84	ASN
4	CD	115	GLN
4	CD	119	HIS
4	CD	125	ASN
4	CD	163	GLN
5	CE	11	GLN
5	CE	76	ASN
5	CE	121	ASN
5	CE	131	ASN
6	CF	11	HIS
6	CF	58	HIS
6	CF	81	ASN
54	CG	67	ASN
54	CG	85	GLN
8	CH	3	GLN
8	CH	17	GLN
9	CI	3	ASN
9	CI	4	GLN

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Mol	Chain	Res	Type
9	CI	49	GLN
9	CI	74	GLN
9	CI	109	GLN
9	CI	125	GLN
10	CJ	70	HIS
11	CK	27	ASN
11	CK	108	ASN
12	CL	4	ASN
12	CL	5	GLN
12	CL	19	ASN
12	CL	72	ASN
12	CL	74	GLN
12	CL	111	GLN
55	CM	90	HIS
14	CN	65	GLN
15	CO	27	GLN
15	CO	34	GLN
15	CO	39	GLN
15	CO	45	HIS
56	CP	18	GLN
56	CP	26	ASN
17	CQ	44	HIS
17	CQ	49	ASN
19	CS	51	HIS
19	CS	52	ASN
19	CS	56	HIS
20	CT	12	GLN
20	CT	74	HIS
21	CU	8	ASN
24	DC	14	HIS
24	DC	20	ASN
24	DC	43	ASN
24	DC	52	HIS
24	DC	57	HIS
24	DC	59	GLN
24	DC	89	ASN
24	DC	116	GLN
24	DC	133	ASN
24	DC	196	ASN
25	DD	36	GLN
25	DD	49	GLN
25	DD	58	ASN

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Mol	Chain	Res	Type
25	DD	126	ASN
25	DD	136	ASN
25	DD	140	HIS
25	DD	150	GLN
25	DD	185	ASN
26	DE	29	HIS
59	DF	126	ASN
28	DG	19	ASN
28	DG	21	GLN
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
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	77	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	54	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	16	HIS
35	DN	18	GLN
35	DN	23	ASN
35	DN	31	HIS
35	DN	73	ASN
35	DN	107	ASN
36	DO	29	HIS
36	DO	38	GLN
37	DP	2	ASN
37	DP	6	GLN
37	DP	9	GLN

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Mol	Chain	Res	Type
37	DP	65	ASN
37	DP	114	ASN
38	DQ	19	GLN
38	DQ	71	ASN
38	DQ	80	ASN
39	DR	6	GLN
39	DR	82	HIS
39	DR	86	GLN
39	DR	87	GLN
40	DS	31	GLN
40	DS	57	ASN
41	DT	15	HIS
41	DT	48	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	52	ASN
42	DU	53	GLN
43	DV	51	GLN
43	DV	80	HIS
43	DV	88	HIS
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN
45	DX	35	HIS
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
47	DZ	19	HIS
48	D0	41	HIS
50	D2	6	GLN
50	D2	16	HIS
50	D2	26	ASN
50	D2	29	GLN
51	D3	27	ASN
51	D3	30	HIS
51	D3	42	HIS
52	D4	37	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	478 (31%)	237 (15%)
22	BA	2850/2903 (98%)	829 (29%)	411 (14%)
23	BB	117/118 (99%)	31 (26%)	17 (14%)
53	CA	1529/1530 (99%)	540 (35%)	242 (15%)
57	DA	2838/2904 (97%)	1042 (36%)	504 (17%)
58	DB	116/117 (99%)	37 (31%)	17 (14%)
All	All	8982/9105 (98%)	2957 (32%)	1428 (15%)

All (2957) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	7	A
1	AA	8	A
1	AA	9	G
1	AA	14	U
1	AA	22	G
1	AA	31	G
1	AA	32	A
1	AA	33	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	61	G
1	AA	65	A
1	AA	66	A
1	AA	67	C
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G
1	AA	76	G
1	AA	77	A
1	AA	79	G
1	AA	82	G
1	AA	83	C
1	AA	85	U

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Mol	Chain	Res	Type
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	92	U
1	AA	93	U
1	AA	94	G
1	AA	95	C
1	AA	96	U
1	AA	97	G
1	AA	98	A
1	AA	109	A
1	AA	110	C
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	132	C
1	AA	138	G
1	AA	141	G
1	AA	143	A
1	AA	159	G
1	AA	163	C
1	AA	164	G
1	AA	174	A
1	AA	175	C
1	AA	177	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	184	G
1	AA	185	U
1	AA	195	A
1	AA	197	A
1	AA	198	G
1	AA	199	A

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Mol	Chain	Res	Type
1	AA	200	G
1	AA	205	A
1	AA	207	C
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	211	G
1	AA	212	G
1	AA	214	C
1	AA	232	G
1	AA	240	G
1	AA	243	A
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	253	A
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	273	U
1	AA	274	A
1	AA	275	G
1	AA	276	G
1	AA	279	A
1	AA	285	C
1	AA	289	G
1	AA	299	G
1	AA	305	G
1	AA	306	A
1	AA	307	C
1	AA	308	C
1	AA	316	C
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G

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Mol	Chain	Res	Type
1	AA	332	G
1	AA	344	A
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	356	A
1	AA	367	U
1	AA	368	U
1	AA	369	G
1	AA	373	A
1	AA	374	A
1	AA	384	G
1	AA	388	G
1	AA	389	A
1	AA	390	U
1	AA	392	C
1	AA	406	G
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	431	A
1	AA	438	U
1	AA	439	U
1	AA	448	A
1	AA	451	A
1	AA	452	A
1	AA	453	G
1	AA	458	U
1	AA	459	A

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Mol	Chain	Res	Type
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	487	A
1	AA	495	A
1	AA	496	A
1	AA	497	G
1	AA	498	A
1	AA	499	A
1	AA	500	G
1	AA	501	C
1	AA	508	U
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	513	C
1	AA	518	C
1	AA	519	C
1	AA	520	A
1	AA	524	G
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	537	G
1	AA	538	G
1	AA	548	G
1	AA	549	C
1	AA	550	G
1	AA	556	C
1	AA	559	A

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Mol	Chain	Res	Type
1	AA	560	A
1	AA	562	U
1	AA	563	A
1	AA	564	C
1	AA	566	G
1	AA	567	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	C
1	AA	577	G
1	AA	579	A
1	AA	588	G
1	AA	595	A
1	AA	596	A
1	AA	597	G
1	AA	604	G
1	AA	633	G
1	AA	642	A
1	AA	649	A
1	AA	653	U
1	AA	654	G
1	AA	655	A
1	AA	663	A
1	AA	665	A
1	AA	682	G
1	AA	688	G
1	AA	700	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	717	U
1	AA	718	A
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	733	G
1	AA	748	G
1	AA	752	G
1	AA	753	A

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Mol	Chain	Res	Type
1	AA	754	C
1	AA	755	G
1	AA	776	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	795	C
1	AA	802	A
1	AA	813	U
1	AA	814	A
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	828	U
1	AA	829	G
1	AA	832	G
1	AA	841	C
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	855	U
1	AA	859	G
1	AA	861	G
1	AA	870	U
1	AA	871	U
1	AA	874	G
1	AA	875	U
1	AA	884	U
1	AA	885	G
1	AA	889	A
1	AA	890	G
1	AA	914	A
1	AA	915	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	936	C

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Mol	Chain	Res	Type
1	AA	960	U
1	AA	961	U
1	AA	965	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	982	U
1	AA	983	A
1	AA	984	C
1	AA	985	C
1	AA	989	U
1	AA	992	U
1	AA	993	G
1	AA	995	C
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1017	U
1	AA	1018	G
1	AA	1022	A
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1037	C
1	AA	1050	G
1	AA	1051	C
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1085	U

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Mol	Chain	Res	Type
1	AA	1086	U
1	AA	1087	G
1	AA	1088	G
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1096	C
1	AA	1101	A
1	AA	1102	A
1	AA	1103	C
1	AA	1104	G
1	AA	1113	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1128	C
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1133	G
1	AA	1135	U
1	AA	1137	C
1	AA	1138	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1144	G
1	AA	1145	A
1	AA	1151	A
1	AA	1152	A
1	AA	1153	G
1	AA	1157	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1167	A
1	AA	1168	U
1	AA	1169	A

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Mol	Chain	Res	Type
1	AA	1170	A
1	AA	1178	G
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1191	A
1	AA	1192	C
1	AA	1196	A
1	AA	1197	A
1	AA	1198	G
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1203	C
1	AA	1212	U
1	AA	1213	A
1	AA	1224	U
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1229	A
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	G
1	AA	1256	A
1	AA	1257	A
1	AA	1258	G
1	AA	1259	C
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1282	C
1	AA	1283	U
1	AA	1284	C
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C

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Mol	Chain	Res	Type
1	AA	1297	G
1	AA	1299	A
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1308	U
1	AA	1315	U
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1324	A
1	AA	1332	A
1	AA	1333	A
1	AA	1337	G
1	AA	1338	G
1	AA	1346	A
1	AA	1348	U
1	AA	1349	A
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1370	G
1	AA	1371	G
1	AA	1380	U
1	AA	1381	U
1	AA	1382	C
1	AA	1394	A
1	AA	1395	C
1	AA	1396	A
1	AA	1397	C
1	AA	1398	A
1	AA	1399	C
1	AA	1400	C
1	AA	1402	C
1	AA	1408	A
1	AA	1432	G
1	AA	1433	A

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Mol	Chain	Res	Type
1	AA	1441	A
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1469	C
1	AA	1470	U
1	AA	1490	U
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1498	U
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	27	G
22	BA	28	A
22	BA	34	U
22	BA	35	G
22	BA	42	A
22	BA	43	G
22	BA	46	G
22	BA	49	A
22	BA	50	U
22	BA	52	A
22	BA	53	A

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Mol	Chain	Res	Type
22	BA	61	C
22	BA	63	A
22	BA	70	G
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	76	C
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	102	U
22	BA	117	G
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	126	A
22	BA	127	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	145	C
22	BA	149	A
22	BA	162	U
22	BA	163	C
22	BA	164	C
22	BA	165	A
22	BA	174	U
22	BA	196	A
22	BA	197	A
22	BA	199	A
22	BA	204	A

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Mol	Chain	Res	Type
22	BA	205	G
22	BA	206	U
22	BA	207	A
22	BA	215	G
22	BA	216	A
22	BA	217	A
22	BA	221	A
22	BA	222	A
22	BA	223	A
22	BA	230	G
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	268	C
22	BA	271	G
22	BA	272	A
22	BA	273	G
22	BA	274	C
22	BA	276	U
22	BA	278	A
22	BA	285	G
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	329	G
22	BA	330	A

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Mol	Chain	Res	Type
22	BA	345	A
22	BA	346	A
22	BA	347	A
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	387	U
22	BA	388	G
22	BA	389	G
22	BA	391	A
22	BA	395	U
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	421	C
22	BA	422	A
22	BA	423	A
22	BA	424	G
22	BA	435	C
22	BA	436	C
22	BA	443	A
22	BA	449	A
22	BA	451	U
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	461	C
22	BA	462	C
22	BA	475	C
22	BA	476	G
22	BA	479	A
22	BA	480	A

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Mol	Chain	Res	Type
22	BA	481	G
22	BA	482	A
22	BA	483	A
22	BA	489	G
22	BA	490	C
22	BA	491	G
22	BA	504	A
22	BA	505	A
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	526	A
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	538	A
22	BA	541	A
22	BA	544	C
22	BA	546	U
22	BA	548	G
22	BA	549	G
22	BA	550	C
22	BA	553	G
22	BA	555	G
22	BA	556	A
22	BA	563	A
22	BA	564	C
22	BA	572	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	588	U
22	BA	603	A
22	BA	604	G
22	BA	605	G

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Mol	Chain	Res	Type
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	618	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	664	G
22	BA	668	A
22	BA	669	G
22	BA	670	A
22	BA	685	A
22	BA	686	U
22	BA	688	U
22	BA	705	A
22	BA	706	A
22	BA	714	U
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	751	A
22	BA	752	A
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G

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Mol	Chain	Res	Type
22	BA	775	G
22	BA	776	G
22	BA	777	G
22	BA	782	A
22	BA	783	A
22	BA	784	G
22	BA	785	G
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	858	G
22	BA	859	G
22	BA	860	U
22	BA	865	C
22	BA	866	A
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
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	946	C

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Mol	Chain	Res	Type
22	BA	955	U
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	1004	U
22	BA	1005	C
22	BA	1008	A
22	BA	1009	A
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1014	A
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
22	BA	1044	C
22	BA	1046	A
22	BA	1047	G
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1064	C
22	BA	1065	U

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Mol	Chain	Res	Type
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1078	U
22	BA	1082	U
22	BA	1083	U
22	BA	1084	A
22	BA	1088	A
22	BA	1090	A
22	BA	1098	A
22	BA	1111	A
22	BA	1112	G
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
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
22	BA	1144	A
22	BA	1151	A
22	BA	1156	A
22	BA	1157	G
22	BA	1158	C
22	BA	1169	A
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	1182	G
22	BA	1185	G
22	BA	1186	G
22	BA	1205	A

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Mol	Chain	Res	Type
22	BA	1206	G
22	BA	1207	C
22	BA	1210	G
22	BA	1213	A
22	BA	1227	G
22	BA	1236	G
22	BA	1237	A
22	BA	1238	G
22	BA	1248	G
22	BA	1249	U
22	BA	1250	G
22	BA	1251	C
22	BA	1253	A
22	BA	1255	U
22	BA	1256	G
22	BA	1261	C
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	1281	G
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1290	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1321	A
22	BA	1324	G
22	BA	1325	U
22	BA	1326	U
22	BA	1327	A
22	BA	1329	U
22	BA	1330	C
22	BA	1331	G
22	BA	1332	G
22	BA	1336	A
22	BA	1341	G
22	BA	1343	G

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Mol	Chain	Res	Type
22	BA	1344	U
22	BA	1349	C
22	BA	1352	U
22	BA	1359	A
22	BA	1360	G
22	BA	1365	A
22	BA	1374	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1385	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	1403	A
22	BA	1413	A
22	BA	1416	G
22	BA	1417	C
22	BA	1419	A
22	BA	1420	A
22	BA	1421	G
22	BA	1427	A
22	BA	1428	C
22	BA	1429	G
22	BA	1430	G
22	BA	1434	A
22	BA	1437	C
22	BA	1440	U
22	BA	1451	C
22	BA	1452	G
22	BA	1455	G
22	BA	1459	G
22	BA	1460	U
22	BA	1461	C
22	BA	1475	G
22	BA	1476	U
22	BA	1477	A
22	BA	1482	G

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Mol	Chain	Res	Type
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	1507	C
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	1527	G
22	BA	1528	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1539	U
22	BA	1555	G
22	BA	1556	C
22	BA	1558	C
22	BA	1559	U
22	BA	1566	A
22	BA	1567	G
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	1603	A
22	BA	1607	C
22	BA	1608	A

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Mol	Chain	Res	Type
22	BA	1610	A
22	BA	1616	A
22	BA	1626	A
22	BA	1627	G
22	BA	1634	A
22	BA	1635	A
22	BA	1646	C
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	1693	U
22	BA	1694	C
22	BA	1695	G
22	BA	1696	G
22	BA	1697	G
22	BA	1698	A
22	BA	1699	G
22	BA	1700	A
22	BA	1701	A
22	BA	1707	G
22	BA	1713	A
22	BA	1714	U
22	BA	1715	G
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	1735	A
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1744	A

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Mol	Chain	Res	Type
22	BA	1755	A
22	BA	1764	C
22	BA	1769	U
22	BA	1773	A
22	BA	1776	G
22	BA	1780	A
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	1802	A
22	BA	1808	A
22	BA	1809	A
22	BA	1816	C
22	BA	1819	A
22	BA	1821	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
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	1900	A
22	BA	1901	A
22	BA	1902	C
22	BA	1906	G
22	BA	1907	G

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Mol	Chain	Res	Type
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	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1943	U
22	BA	1944	U
22	BA	1945	G
22	BA	1954	G
22	BA	1955	U
22	BA	1960	A
22	BA	1962	C
22	BA	1963	U
22	BA	1964	G
22	BA	1966	A
22	BA	1967	C
22	BA	1968	G
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1986	C
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1996	C
22	BA	1997	C
22	BA	2022	U
22	BA	2023	C
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2036	C

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Mol	Chain	Res	Type
22	BA	2037	A
22	BA	2043	C
22	BA	2049	G
22	BA	2051	A
22	BA	2052	A
22	BA	2055	C
22	BA	2056	G
22	BA	2059	A
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
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
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	2181	U
22	BA	2183	A
22	BA	2184	A
22	BA	2185	U

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Mol	Chain	Res	Type
22	BA	2187	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	2223	G
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2250	G
22	BA	2258	C
22	BA	2259	U
22	BA	2266	A
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	2298	A
22	BA	2305	U
22	BA	2307	G
22	BA	2308	G
22	BA	2309	A
22	BA	2310	C
22	BA	2311	A
22	BA	2312	U
22	BA	2320	U
22	BA	2321	U

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Mol	Chain	Res	Type
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2333	A
22	BA	2334	U
22	BA	2335	A
22	BA	2336	A
22	BA	2337	G
22	BA	2344	U
22	BA	2345	G
22	BA	2347	C
22	BA	2358	A
22	BA	2361	G
22	BA	2383	G
22	BA	2384	U
22	BA	2385	C
22	BA	2386	A
22	BA	2392	A
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2427	C
22	BA	2428	G
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	2476	A
22	BA	2491	U
22	BA	2493	U
22	BA	2497	A

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Mol	Chain	Res	Type
22	BA	2500	U
22	BA	2501	C
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2507	C
22	BA	2515	C
22	BA	2518	A
22	BA	2525	G
22	BA	2529	G
22	BA	2543	G
22	BA	2547	A
22	BA	2554	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2574	G
22	BA	2576	G
22	BA	2579	C
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G
22	BA	2604	U
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	2621	G
22	BA	2629	U
22	BA	2630	G
22	BA	2638	G
22	BA	2645	G
22	BA	2646	C
22	BA	2654	A
22	BA	2655	G
22	BA	2661	G
22	BA	2663	G

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Mol	Chain	Res	Type
22	BA	2672	U
22	BA	2673	G
22	BA	2681	C
22	BA	2682	A
22	BA	2690	U
22	BA	2713	U
22	BA	2714	G
22	BA	2724	U
22	BA	2725	A
22	BA	2726	A
22	BA	2727	A
22	BA	2728	U
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	2753	A
22	BA	2756	U
22	BA	2757	A
22	BA	2758	A
22	BA	2765	A
22	BA	2771	C
22	BA	2778	A
22	BA	2779	U
22	BA	2791	G
22	BA	2797	U
22	BA	2798	U
22	BA	2800	A
22	BA	2801	G
22	BA	2808	G
22	BA	2809	A
22	BA	2812	G
22	BA	2818	U
22	BA	2820	A
22	BA	2821	A
22	BA	2824	C
22	BA	2825	G
22	BA	2826	A
22	BA	2833	U
22	BA	2835	A

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Mol	Chain	Res	Type
22	BA	2836	U
22	BA	2849	U
22	BA	2866	U
22	BA	2867	G
22	BA	2868	A
22	BA	2869	G
22	BA	2873	A
22	BA	2874	C
22	BA	2879	A
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	24	G
23	BB	25	U
23	BB	30	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	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C

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Mol	Chain	Res	Type
23	BB	91	C
23	BB	99	A
23	BB	108	A
23	BB	109	A
53	CA	6	G
53	CA	7	A
53	CA	8	A
53	CA	9	G
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	16	A
53	CA	17	U
53	CA	19	A
53	CA	22	G
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

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Mol	Chain	Res	Type
53	CA	86	G
53	CA	87	C
53	CA	88	U
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	92	U
53	CA	93	U
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	119	A
53	CA	120	A
53	CA	121	U
53	CA	122	G
53	CA	131	A
53	CA	132	C
53	CA	133	U
53	CA	141	G
53	CA	143	A
53	CA	144	G
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	184	G
53	CA	185	U
53	CA	198	G
53	CA	199	A
53	CA	200	G
53	CA	201	G
53	CA	206	C

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Mol	Chain	Res	Type
53	CA	207	C
53	CA	208	U
53	CA	209	U
53	CA	210	C
53	CA	211	G
53	CA	212	G
53	CA	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	254	G
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	289	G
53	CA	294	U
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

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Mol	Chain	Res	Type
53	CA	330	C
53	CA	331	G
53	CA	332	G
53	CA	338	A
53	CA	339	C
53	CA	344	A
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	367	U
53	CA	368	U
53	CA	369	G
53	CA	372	C
53	CA	373	A
53	CA	374	A
53	CA	376	G
53	CA	381	C
53	CA	382	A
53	CA	384	G
53	CA	389	A
53	CA	390	U
53	CA	397	A
53	CA	398	U
53	CA	406	G
53	CA	412	A
53	CA	413	G
53	CA	414	A
53	CA	415	A
53	CA	416	G
53	CA	421	U
53	CA	422	C
53	CA	423	G
53	CA	424	G
53	CA	425	G
53	CA	426	U
53	CA	428	G
53	CA	429	U

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Mol	Chain	Res	Type
53	CA	430	A
53	CA	435	A
53	CA	438	U
53	CA	452	A
53	CA	453	G
53	CA	454	G
53	CA	456	A
53	CA	457	G
53	CA	458	U
53	CA	459	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	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	516	U

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Mol	Chain	Res	Type
53	CA	517	G
53	CA	518	C
53	CA	519	C
53	CA	520	A
53	CA	521	G
53	CA	524	G
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	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	604	G
53	CA	616	G
53	CA	617	G
53	CA	633	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

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Mol	Chain	Res	Type
53	CA	665	A
53	CA	666	G
53	CA	688	G
53	CA	689	C
53	CA	695	A
53	CA	700	G
53	CA	701	U
53	CA	702	A
53	CA	703	G
53	CA	704	A
53	CA	705	G
53	CA	718	A
53	CA	719	C
53	CA	721	G
53	CA	722	G
53	CA	723	U
53	CA	724	G
53	CA	728	A
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	758	C
53	CA	760	G
53	CA	777	A
53	CA	781	A
53	CA	782	A
53	CA	785	G
53	CA	792	A
53	CA	793	U
53	CA	794	A
53	CA	795	C
53	CA	803	G
53	CA	810	C
53	CA	812	G
53	CA	815	A
53	CA	816	A
53	CA	817	C
53	CA	818	G

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Mol	Chain	Res	Type
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	826	C
53	CA	828	U
53	CA	829	G
53	CA	841	C
53	CA	842	U
53	CA	843	U
53	CA	844	G
53	CA	845	A
53	CA	846	G
53	CA	847	G
53	CA	849	G
53	CA	859	G
53	CA	870	U
53	CA	871	U
53	CA	874	G
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	970	C

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Mol	Chain	Res	Type
53	CA	972	C
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	980	C
53	CA	982	U
53	CA	983	A
53	CA	984	C
53	CA	985	C
53	CA	986	U
53	CA	987	G
53	CA	990	C
53	CA	991	U
53	CA	992	U
53	CA	993	G
53	CA	995	C
53	CA	996	A
53	CA	997	U
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	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	1064	G

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Mol	Chain	Res	Type
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	1094	G
53	CA	1101	A
53	CA	1102	A
53	CA	1103	C
53	CA	1113	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	1144	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1148	U
53	CA	1149	C
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	1162	C
53	CA	1168	U
53	CA	1169	A

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Mol	Chain	Res	Type
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	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1203	C
53	CA	1211	U
53	CA	1212	U
53	CA	1213	A
53	CA	1214	C
53	CA	1215	G
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	1231	G
53	CA	1238	A
53	CA	1239	A
53	CA	1240	U
53	CA	1241	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

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Mol	Chain	Res	Type
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
53	CA	1288	A
53	CA	1289	A
53	CA	1294	G
53	CA	1295	U
53	CA	1297	G
53	CA	1299	A
53	CA	1300	G
53	CA	1301	U
53	CA	1302	C
53	CA	1303	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	1332	A
53	CA	1338	G
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	1367	C
53	CA	1368	A
53	CA	1370	G
53	CA	1379	G
53	CA	1381	U

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Mol	Chain	Res	Type
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	1400	C
53	CA	1411	C
53	CA	1422	G
53	CA	1429	A
53	CA	1431	A
53	CA	1432	G
53	CA	1441	A
53	CA	1446	A
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1450	U
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1455	G
53	CA	1456	A
53	CA	1491	G
53	CA	1493	A
53	CA	1494	G
53	CA	1497	G
53	CA	1499	A
53	CA	1502	A
53	CA	1503	A
53	CA	1505	G
53	CA	1507	A
53	CA	1508	A
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1529	G
53	CA	1530	G
53	CA	1531	A
53	CA	1534	A
57	DA	12	U
57	DA	14	A

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Mol	Chain	Res	Type
57	DA	15	G
57	DA	27	G
57	DA	28	A
57	DA	34	U
57	DA	35	G
57	DA	36	G
57	DA	37	C
57	DA	39	G
57	DA	46	G
57	DA	49	A
57	DA	50	U
57	DA	52	A
57	DA	53	A
57	DA	55	G
57	DA	61	C
57	DA	62	U
57	DA	70	G
57	DA	71	A
57	DA	73	A
57	DA	74	A
57	DA	75	G
57	DA	76	C
57	DA	77	G
57	DA	78	U
57	DA	79	C
57	DA	83	A
57	DA	84	A
57	DA	85	G
57	DA	86	G
57	DA	87	U
57	DA	88	G
57	DA	91	A
57	DA	92	U
57	DA	93	G
57	DA	96	C
57	DA	100	U
57	DA	101	A
57	DA	102	U
57	DA	103	A
57	DA	104	A
57	DA	118	A
57	DA	119	A

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Mol	Chain	Res	Type
57	DA	120	U
57	DA	121	G
57	DA	122	G
57	DA	123	G
57	DA	126	A
57	DA	128	C
57	DA	129	C
57	DA	134	G
57	DA	139	U
57	DA	140	C
57	DA	141	G
57	DA	142	A
57	DA	143	C
57	DA	144	A
57	DA	150	U
57	DA	155	A
57	DA	156	A
57	DA	160	A
57	DA	161	A
57	DA	162	U
57	DA	163	C
57	DA	164	C
57	DA	165	A
57	DA	166	U
57	DA	180	G
57	DA	181	A
57	DA	196	A
57	DA	197	A
57	DA	199	A
57	DA	204	A
57	DA	205	G
57	DA	206	U
57	DA	207	A
57	DA	208	C
57	DA	215	G
57	DA	216	A
57	DA	217	A
57	DA	221	A
57	DA	222	A
57	DA	223	A
57	DA	224	U
57	DA	225	C

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Mol	Chain	Res	Type
57	DA	227	A
57	DA	228	C
57	DA	229	C
57	DA	230	G
57	DA	231	A
57	DA	232	G
57	DA	233	A
57	DA	234	U
57	DA	235	U
57	DA	241	A
57	DA	242	G
57	DA	243	U
57	DA	244	A
57	DA	245	G
57	DA	248	G
57	DA	249	C
57	DA	250	G
57	DA	251	A
57	DA	255	A
57	DA	264	C
57	DA	265	A
57	DA	266	G
57	DA	271	G
57	DA	272	A
57	DA	273	G
57	DA	274	C
57	DA	277	G
57	DA	280	U
57	DA	281	C
57	DA	284	U
57	DA	285	G
57	DA	294	A
57	DA	295	G
57	DA	299	A
57	DA	301	G
57	DA	302	C
57	DA	303	G
57	DA	304	U
57	DA	305	C
57	DA	311	A
57	DA	312	G
57	DA	314	C

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Mol	Chain	Res	Type
57	DA	315	G
57	DA	322	A
57	DA	323	C
57	DA	324	A
57	DA	325	G
57	DA	329	G
57	DA	330	A
57	DA	334	C
57	DA	335	C
57	DA	336	C
57	DA	343	C
57	DA	351	C
57	DA	353	C
57	DA	354	A
57	DA	362	A
57	DA	367	G
57	DA	370	G
57	DA	371	A
57	DA	372	G
57	DA	373	U
57	DA	374	A
57	DA	375	G
57	DA	383	C
57	DA	385	C
57	DA	387	U
57	DA	388	G
57	DA	389	G
57	DA	390	U
57	DA	391	A
57	DA	392	U
57	DA	395	U
57	DA	396	G
57	DA	397	U
57	DA	398	C
57	DA	399	U
57	DA	404	A
57	DA	405	U
57	DA	406	G
57	DA	407	G
57	DA	408	G
57	DA	411	G
57	DA	412	A

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Mol	Chain	Res	Type
57	DA	413	C
57	DA	424	G
57	DA	428	A
57	DA	430	A
57	DA	436	C
57	DA	442	G
57	DA	443	A
57	DA	444	C
57	DA	445	C
57	DA	446	G
57	DA	447	A
57	DA	449	A
57	DA	450	G
57	DA	451	U
57	DA	455	C
57	DA	457	A
57	DA	459	U
57	DA	460	A
57	DA	461	C
57	DA	475	C
57	DA	476	G
57	DA	477	A
57	DA	478	A
57	DA	479	A
57	DA	480	A
57	DA	481	G
57	DA	482	A
57	DA	484	C
57	DA	485	C
57	DA	490	C
57	DA	491	G
57	DA	492	A
57	DA	498	G
57	DA	502	A
57	DA	504	A
57	DA	505	A
57	DA	507	A
57	DA	510	C
57	DA	511	U
57	DA	512	G
57	DA	527	C
57	DA	528	A

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Mol	Chain	Res	Type
57	DA	529	A
57	DA	530	G
57	DA	531	C
57	DA	532	A
57	DA	533	G
57	DA	534	U
57	DA	544	C
57	DA	545	U
57	DA	546	U
57	DA	547	A
57	DA	548	G
57	DA	549	G
57	DA	550	C
57	DA	562	U
57	DA	563	A
57	DA	571	U
57	DA	572	A
57	DA	573	U
57	DA	574	A
57	DA	575	A
57	DA	576	U
57	DA	577	G
57	DA	586	A
57	DA	590	A
57	DA	603	A
57	DA	604	G
57	DA	605	G
57	DA	606	U
57	DA	613	A
57	DA	614	A
57	DA	615	U
57	DA	616	A
57	DA	617	G
57	DA	618	G
57	DA	621	A
57	DA	622	G
57	DA	623	C
57	DA	627	A
57	DA	628	G
57	DA	629	G
57	DA	637	A
57	DA	638	G

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Mol	Chain	Res	Type
57	DA	639	U
57	DA	640	C
57	DA	643	A
57	DA	645	C
57	DA	646	U
57	DA	654	A
57	DA	656	G
57	DA	657	U
57	DA	662	G
57	DA	664	G
57	DA	669	G
57	DA	671	C
57	DA	672	C
57	DA	673	C
57	DA	686	U
57	DA	687	C
57	DA	688	U
57	DA	695	G
57	DA	699	A
57	DA	705	A
57	DA	717	C
57	DA	726	G
57	DA	727	A
57	DA	728	G
57	DA	729	G
57	DA	730	A
57	DA	739	A
57	DA	740	C
57	DA	741	U
57	DA	746	U
57	DA	747	U
57	DA	748	G
57	DA	749	A
57	DA	750	A
57	DA	751	A
57	DA	753	A
57	DA	756	A
57	DA	757	G
57	DA	763	G
57	DA	764	A
57	DA	775	G
57	DA	776	G

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Mol	Chain	Res	Type
57	DA	782	A
57	DA	783	A
57	DA	784	G
57	DA	785	G
57	DA	789	A
57	DA	790	U
57	DA	792	A
57	DA	794	A
57	DA	798	G
57	DA	800	A
57	DA	801	G
57	DA	802	A
57	DA	803	U
57	DA	805	G
57	DA	806	C
57	DA	812	C
57	DA	819	A
57	DA	827	U
57	DA	828	U
57	DA	829	A
57	DA	830	G
57	DA	831	G
57	DA	832	U
57	DA	846	U
57	DA	847	U
57	DA	858	G
57	DA	859	G
57	DA	860	U
57	DA	861	A
57	DA	862	G
57	DA	866	A
57	DA	867	C
57	DA	868	U
57	DA	873	C
57	DA	875	G
57	DA	877	A
57	DA	878	A
57	DA	902	C
57	DA	910	A
57	DA	912	C
57	DA	914	G
57	DA	915	C

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Mol	Chain	Res	Type
57	DA	916	G
57	DA	917	A
57	DA	922	C
57	DA	932	U
57	DA	933	A
57	DA	934	U
57	DA	941	A
57	DA	944	C
57	DA	946	C
57	DA	947	A
57	DA	953	G
57	DA	958	U
57	DA	959	A
57	DA	960	A
57	DA	961	C
57	DA	962	G
57	DA	963	U
57	DA	964	C
57	DA	965	C
57	DA	973	A
57	DA	974	G
57	DA	976	G
57	DA	977	G
57	DA	983	A
57	DA	985	C
57	DA	989	G
57	DA	990	A
57	DA	991	C
57	DA	992	C
57	DA	995	C
57	DA	996	A
57	DA	1005	C
57	DA	1008	A
57	DA	1009	A
57	DA	1010	A
57	DA	1011	G
57	DA	1012	U
57	DA	1013	C
57	DA	1020	A
57	DA	1021	A
57	DA	1022	G
57	DA	1023	U

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Mol	Chain	Res	Type
57	DA	1024	G
57	DA	1025	G
57	DA	1026	G
57	DA	1027	A
57	DA	1033	U
57	DA	1034	G
57	DA	1035	U
57	DA	1037	G
57	DA	1039	A
57	DA	1044	C
57	DA	1045	C
57	DA	1046	A
57	DA	1047	G
57	DA	1050	A
57	DA	1055	G
57	DA	1056	G
57	DA	1057	A
57	DA	1060	U
57	DA	1061	U
57	DA	1063	G
57	DA	1064	C
57	DA	1065	U
57	DA	1066	U
57	DA	1068	G
57	DA	1069	A
57	DA	1070	A
57	DA	1071	G
57	DA	1072	C
57	DA	1073	A
57	DA	1074	G
57	DA	1075	C
57	DA	1076	C
57	DA	1077	A
57	DA	1078	U
57	DA	1079	C
57	DA	1080	A
57	DA	1081	U
57	DA	1083	U
57	DA	1088	A
57	DA	1089	A
57	DA	1091	G
57	DA	1097	U

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Mol	Chain	Res	Type
57	DA	1100	C
57	DA	1103	A
57	DA	1111	A
57	DA	1112	G
57	DA	1113	U
57	DA	1114	C
57	DA	1115	G
57	DA	1126	A
57	DA	1127	A
57	DA	1128	G
57	DA	1129	A
57	DA	1130	U
57	DA	1132	U
57	DA	1133	A
57	DA	1135	C
57	DA	1136	G
57	DA	1139	G
57	DA	1142	A
57	DA	1144	A
57	DA	1145	C
57	DA	1156	A
57	DA	1157	G
57	DA	1158	C
57	DA	1159	U
57	DA	1169	A
57	DA	1172	C
57	DA	1174	U
57	DA	1176	U
57	DA	1194	A
57	DA	1204	A
57	DA	1205	A
57	DA	1206	G
57	DA	1207	C
57	DA	1208	C
57	DA	1211	C
57	DA	1227	G
57	DA	1231	U
57	DA	1235	G
57	DA	1237	A
57	DA	1241	A
57	DA	1242	U
57	DA	1246	A

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Mol	Chain	Res	Type
57	DA	1247	A
57	DA	1248	G
57	DA	1249	U
57	DA	1250	G
57	DA	1253	A
57	DA	1255	U
57	DA	1256	G
57	DA	1257	C
57	DA	1262	A
57	DA	1264	A
57	DA	1265	A
57	DA	1266	G
57	DA	1267	U
57	DA	1268	A
57	DA	1269	A
57	DA	1271	G
57	DA	1272	A
57	DA	1273	U
57	DA	1274	A
57	DA	1275	A
57	DA	1276	A
57	DA	1277	G
57	DA	1278	C
57	DA	1286	A
57	DA	1287	A
57	DA	1288	G
57	DA	1289	C
57	DA	1290	C
57	DA	1291	C
57	DA	1292	G
57	DA	1300	G
57	DA	1301	A
57	DA	1304	A
57	DA	1305	C
57	DA	1311	G
57	DA	1313	U
57	DA	1314	C
57	DA	1315	C
57	DA	1321	A
57	DA	1324	G
57	DA	1325	U
57	DA	1326	U

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Mol	Chain	Res	Type
57	DA	1327	A
57	DA	1328	A
57	DA	1329	U
57	DA	1330	C
57	DA	1331	G
57	DA	1332	G
57	DA	1333	G
57	DA	1334	G
57	DA	1336	A
57	DA	1337	G
57	DA	1338	G
57	DA	1340	U
57	DA	1341	G
57	DA	1344	U
57	DA	1345	C
57	DA	1346	G
57	DA	1347	A
57	DA	1349	C
57	DA	1352	U
57	DA	1355	G
57	DA	1365	A
57	DA	1374	G
57	DA	1376	C
57	DA	1379	U
57	DA	1382	G
57	DA	1383	A
57	DA	1385	A
57	DA	1386	C
57	DA	1387	A
57	DA	1388	G
57	DA	1389	G
57	DA	1397	U
57	DA	1398	C
57	DA	1399	C
57	DA	1400	U
57	DA	1401	G
57	DA	1402	U
57	DA	1403	A
57	DA	1404	C
57	DA	1416	G
57	DA	1417	C
57	DA	1418	G

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Mol	Chain	Res	Type
57	DA	1419	A
57	DA	1421	G
57	DA	1426	G
57	DA	1427	A
57	DA	1428	C
57	DA	1430	G
57	DA	1434	A
57	DA	1438	U
57	DA	1440	U
57	DA	1452	G
57	DA	1453	A
57	DA	1455	G
57	DA	1456	G
57	DA	1457	U
57	DA	1458	U
57	DA	1459	G
57	DA	1460	U
57	DA	1461	C
57	DA	1470	A
57	DA	1478	G
57	DA	1481	U
57	DA	1482	G
57	DA	1483	G
57	DA	1484	U
57	DA	1490	A
57	DA	1491	G
57	DA	1492	G
57	DA	1493	C
57	DA	1494	A
57	DA	1497	U
57	DA	1498	C
57	DA	1499	C
57	DA	1503	A
57	DA	1504	A
57	DA	1507	C
57	DA	1508	A
57	DA	1509	A
57	DA	1510	G
57	DA	1511	G
57	DA	1512	C
57	DA	1520	U
57	DA	1522	A

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Mol	Chain	Res	Type
57	DA	1523	U
57	DA	1524	G
57	DA	1530	G
57	DA	1531	C
57	DA	1532	A
57	DA	1534	U
57	DA	1535	A
57	DA	1536	C
57	DA	1537	G
57	DA	1538	G
57	DA	1539	U
57	DA	1540	G
57	DA	1541	C
57	DA	1555	G
57	DA	1556	C
57	DA	1557	C
57	DA	1558	C
57	DA	1559	U
57	DA	1560	G
57	DA	1561	C
57	DA	1566	A
57	DA	1567	G
57	DA	1568	G
57	DA	1569	A
57	DA	1570	A
57	DA	1583	A
57	DA	1584	U
57	DA	1585	C
57	DA	1586	A
57	DA	1600	C
57	DA	1603	A
57	DA	1607	C
57	DA	1608	A
57	DA	1609	A
57	DA	1610	A
57	DA	1612	C
57	DA	1613	G
57	DA	1616	A
57	DA	1618	A
57	DA	1626	A
57	DA	1635	A
57	DA	1636	U

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Mol	Chain	Res	Type
57	DA	1640	A
57	DA	1646	C
57	DA	1647	U
57	DA	1648	U
57	DA	1649	G
57	DA	1650	A
57	DA	1653	G
57	DA	1654	A
57	DA	1655	A
57	DA	1663	G
57	DA	1668	A
57	DA	1669	A
57	DA	1670	C
57	DA	1674	G
57	DA	1675	C
57	DA	1681	G
57	DA	1682	G
57	DA	1683	U
57	DA	1694	C
57	DA	1695	G
57	DA	1696	G
57	DA	1698	A
57	DA	1699	G
57	DA	1700	A
57	DA	1701	A
57	DA	1707	G
57	DA	1713	A
57	DA	1714	U
57	DA	1715	G
57	DA	1717	A
57	DA	1718	G
57	DA	1722	A
57	DA	1723	G
57	DA	1728	C
57	DA	1729	U
57	DA	1730	C
57	DA	1731	G
57	DA	1732	C
57	DA	1733	G
57	DA	1734	G
57	DA	1735	A
57	DA	1739	A

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Mol	Chain	Res	Type
57	DA	1740	G
57	DA	1750	G
57	DA	1754	A
57	DA	1758	U
57	DA	1759	A
57	DA	1760	C
57	DA	1764	C
57	DA	1773	A
57	DA	1776	G
57	DA	1777	U
57	DA	1780	A
57	DA	1781	U
57	DA	1782	U
57	DA	1783	A
57	DA	1784	A
57	DA	1785	A
57	DA	1786	A
57	DA	1787	A
57	DA	1788	C
57	DA	1800	C
57	DA	1802	A
57	DA	1803	A
57	DA	1804	C
57	DA	1808	A
57	DA	1809	A
57	DA	1810	A
57	DA	1811	G
57	DA	1815	A
57	DA	1816	C
57	DA	1817	G
57	DA	1818	U
57	DA	1820	U
57	DA	1821	A
57	DA	1822	C
57	DA	1827	U
57	DA	1829	A
57	DA	1830	C
57	DA	1832	C
57	DA	1838	C
57	DA	1839	G
57	DA	1840	G
57	DA	1847	A

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Mol	Chain	Res	Type
57	DA	1848	A
57	DA	1857	G
57	DA	1870	C
57	DA	1873	G
57	DA	1875	G
57	DA	1877	A
57	DA	1884	G
57	DA	1889	A
57	DA	1900	A
57	DA	1901	A
57	DA	1902	C
57	DA	1903	G
57	DA	1906	G
57	DA	1913	A
57	DA	1914	C
57	DA	1915	U
57	DA	1916	A
57	DA	1919	A
57	DA	1920	C
57	DA	1927	A
57	DA	1930	G
57	DA	1931	U
57	DA	1932	A
57	DA	1937	A
57	DA	1938	A
57	DA	1939	U
57	DA	1941	C
57	DA	1942	C
57	DA	1943	U
57	DA	1944	U
57	DA	1945	G
57	DA	1946	U
57	DA	1955	U
57	DA	1956	U
57	DA	1963	U
57	DA	1964	G
57	DA	1966	A
57	DA	1967	C
57	DA	1968	G
57	DA	1970	A
57	DA	1971	U
57	DA	1972	G

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Mol	Chain	Res	Type
57	DA	1973	G
57	DA	1975	G
57	DA	1981	A
57	DA	1982	U
57	DA	1983	G
57	DA	1989	G
57	DA	1991	U
57	DA	1993	U
57	DA	1996	C
57	DA	1997	C
57	DA	1998	A
57	DA	2015	A
57	DA	2020	A
57	DA	2021	C
57	DA	2022	U
57	DA	2023	C
57	DA	2024	G
57	DA	2030	A
57	DA	2031	A
57	DA	2033	A
57	DA	2034	U
57	DA	2035	G
57	DA	2036	C
57	DA	2037	A
57	DA	2043	C
57	DA	2052	A
57	DA	2055	C
57	DA	2056	G
57	DA	2060	A
57	DA	2061	G
57	DA	2062	A
57	DA	2063	C
57	DA	2068	U
57	DA	2069	G
57	DA	2072	C
57	DA	2080	A
57	DA	2092	U
57	DA	2093	G
57	DA	2094	A
57	DA	2095	A
57	DA	2104	C
57	DA	2107	G

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Mol	Chain	Res	Type
57	DA	2108	A
57	DA	2109	U
57	DA	2110	G
57	DA	2134	A
57	DA	2135	A
57	DA	2136	G
57	DA	2137	U
57	DA	2138	G
57	DA	2139	U
57	DA	2143	C
57	DA	2144	G
57	DA	2145	C
57	DA	2147	A
57	DA	2148	G
57	DA	2149	U
57	DA	2150	C
57	DA	2152	G
57	DA	2153	C
57	DA	2154	A
57	DA	2156	G
57	DA	2157	G
57	DA	2180	U
57	DA	2181	U
57	DA	2183	A
57	DA	2187	U
57	DA	2191	A
57	DA	2192	U
57	DA	2198	A
57	DA	2199	A
57	DA	2203	U
57	DA	2204	G
57	DA	2210	U
57	DA	2211	A
57	DA	2212	A
57	DA	2213	U
57	DA	2214	C
57	DA	2215	C
57	DA	2216	G
57	DA	2217	G
57	DA	2225	A
57	DA	2226	C
57	DA	2227	A

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Mol	Chain	Res	Type
57	DA	2238	G
57	DA	2239	G
57	DA	2240	U
57	DA	2243	U
57	DA	2249	U
57	DA	2250	G
57	DA	2259	U
57	DA	2260	C
57	DA	2266	A
57	DA	2267	A
57	DA	2268	A
57	DA	2275	C
57	DA	2276	G
57	DA	2277	G
57	DA	2279	G
57	DA	2283	C
57	DA	2284	A
57	DA	2286	G
57	DA	2287	A
57	DA	2289	G
57	DA	2296	U
57	DA	2297	A
57	DA	2298	A
57	DA	2299	U
57	DA	2305	U
57	DA	2306	C
57	DA	2308	G
57	DA	2309	A
57	DA	2310	C
57	DA	2311	A
57	DA	2312	U
57	DA	2313	C
57	DA	2314	A
57	DA	2320	U
57	DA	2325	G
57	DA	2332	C
57	DA	2334	U
57	DA	2335	A
57	DA	2337	G
57	DA	2338	C
57	DA	2339	C
57	DA	2345	G

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Mol	Chain	Res	Type
57	DA	2347	C
57	DA	2348	U
57	DA	2349	G
57	DA	2358	A
57	DA	2379	G
57	DA	2382	G
57	DA	2383	G
57	DA	2384	U
57	DA	2385	C
57	DA	2386	A
57	DA	2387	U
57	DA	2388	A
57	DA	2392	A
57	DA	2394	C
57	DA	2401	U
57	DA	2402	U
57	DA	2403	C
57	DA	2404	U
57	DA	2405	G
57	DA	2406	A
57	DA	2407	A
57	DA	2408	U
57	DA	2409	G
57	DA	2410	G
57	DA	2423	U
57	DA	2424	C
57	DA	2426	A
57	DA	2427	C
57	DA	2428	G
57	DA	2429	G
57	DA	2430	A
57	DA	2431	U
57	DA	2435	A
57	DA	2439	A
57	DA	2440	C
57	DA	2441	U
57	DA	2447	G
57	DA	2448	A
57	DA	2459	A
57	DA	2460	U
57	DA	2475	C
57	DA	2476	A

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Mol	Chain	Res	Type
57	DA	2490	G
57	DA	2491	U
57	DA	2492	U
57	DA	2493	U
57	DA	2494	G
57	DA	2498	C
57	DA	2499	C
57	DA	2502	G
57	DA	2503	A
57	DA	2504	U
57	DA	2505	G
57	DA	2518	A
57	DA	2519	U
57	DA	2520	C
57	DA	2521	C
57	DA	2529	G
57	DA	2534	A
57	DA	2542	A
57	DA	2543	G
57	DA	2544	G
57	DA	2547	A
57	DA	2554	U
57	DA	2567	G
57	DA	2573	C
57	DA	2574	G
57	DA	2578	G
57	DA	2582	G
57	DA	2583	G
57	DA	2585	U
57	DA	2602	A
57	DA	2609	U
57	DA	2610	C
57	DA	2611	C
57	DA	2612	C
57	DA	2613	U
57	DA	2614	A
57	DA	2615	U
57	DA	2616	C
57	DA	2629	U
57	DA	2630	G
57	DA	2632	A
57	DA	2646	C

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Mol	Chain	Res	Type
57	DA	2654	A
57	DA	2655	G
57	DA	2656	U
57	DA	2657	A
57	DA	2658	C
57	DA	2660	A
57	DA	2667	C
57	DA	2668	G
57	DA	2669	G
57	DA	2682	A
57	DA	2683	C
57	DA	2690	U
57	DA	2691	C
57	DA	2712	C
57	DA	2713	U
57	DA	2714	G
57	DA	2718	G
57	DA	2725	A
57	DA	2726	A
57	DA	2727	A
57	DA	2728	U
57	DA	2729	G
57	DA	2732	G
57	DA	2736	A
57	DA	2739	U
57	DA	2748	A
57	DA	2750	A
57	DA	2751	G
57	DA	2752	C
57	DA	2753	A
57	DA	2756	U
57	DA	2757	A
57	DA	2758	A
57	DA	2765	A
57	DA	2766	A
57	DA	2777	G
57	DA	2778	A
57	DA	2779	U
57	DA	2791	G
57	DA	2799	A
57	DA	2801	G
57	DA	2808	G

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Mol	Chain	Res	Type
57	DA	2820	A
57	DA	2822	G
57	DA	2823	A
57	DA	2833	U
57	DA	2834	G
57	DA	2835	A
57	DA	2836	U
57	DA	2837	A
57	DA	2838	G
57	DA	2848	G
57	DA	2849	U
57	DA	2850	A
57	DA	2851	A
57	DA	2852	G
57	DA	2861	U
57	DA	2866	U
57	DA	2867	G
57	DA	2868	A
57	DA	2869	G
57	DA	2872	A
57	DA	2874	C
57	DA	2875	C
57	DA	2876	G
57	DA	2877	G
57	DA	2879	A
57	DA	2880	C
57	DA	2881	U
57	DA	2883	A
57	DA	2894	G
57	DA	2895	G
57	DA	2896	C
57	DA	2902	C
58	DB	12	C
58	DB	13	G
58	DB	15	A
58	DB	16	G
58	DB	17	C
58	DB	18	G
58	DB	24	G
58	DB	25	U
58	DB	30	C
58	DB	35	C

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Mol	Chain	Res	Type
58	DB	36	C
58	DB	41	G
58	DB	42	C
58	DB	43	C
58	DB	44	G
58	DB	45	A
58	DB	46	A
58	DB	48	U
58	DB	57	A
58	DB	58	A
58	DB	59	A
58	DB	63	C
58	DB	64	G
58	DB	65	U
58	DB	66	A
58	DB	67	G
58	DB	68	C
58	DB	69	G
58	DB	87	U
58	DB	88	C
58	DB	89	U
58	DB	90	C
58	DB	91	C
58	DB	99	A
58	DB	109	A
58	DB	110	C
58	DB	111	U

All (1428) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	13	U
1	AA	30	U
1	AA	32	A
1	AA	47	C
1	AA	51	A
1	AA	52	C
1	AA	60	A
1	AA	61	G
1	AA	64	G
1	AA	66	A

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Mol	Chain	Res	Type
1	AA	71	A
1	AA	73	C
1	AA	74	A
1	AA	85	U
1	AA	87	C
1	AA	91	U
1	AA	92	U
1	AA	94	G
1	AA	95	C
1	AA	97	G
1	AA	109	A
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	121	U
1	AA	129	A
1	AA	131	A
1	AA	173	U
1	AA	174	A
1	AA	181	A
1	AA	184	G
1	AA	197	A
1	AA	198	G
1	AA	199	A
1	AA	243	A
1	AA	245	U
1	AA	246	A
1	AA	250	A
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	275	G
1	AA	279	A
1	AA	305	G
1	AA	306	A
1	AA	315	A
1	AA	327	A
1	AA	330	C
1	AA	331	G
1	AA	344	A

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Mol	Chain	Res	Type
1	AA	346	G
1	AA	347	G
1	AA	351	G
1	AA	352	C
1	AA	366	A
1	AA	368	U
1	AA	372	C
1	AA	373	A
1	AA	388	G
1	AA	389	A
1	AA	411	A
1	AA	414	A
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	U
1	AA	451	A
1	AA	452	A
1	AA	466	A
1	AA	468	A
1	AA	484	G
1	AA	486	U
1	AA	487	A
1	AA	495	A
1	AA	496	A
1	AA	497	G
1	AA	499	A
1	AA	500	G
1	AA	508	U
1	AA	509	A
1	AA	511	C
1	AA	512	U
1	AA	517	G
1	AA	519	C
1	AA	531	U
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	537	G
1	AA	547	A

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Mol	Chain	Res	Type
1	AA	548	G
1	AA	549	C
1	AA	559	A
1	AA	563	A
1	AA	564	C
1	AA	566	G
1	AA	575	G
1	AA	577	G
1	AA	595	A
1	AA	596	A
1	AA	641	U
1	AA	642	A
1	AA	653	U
1	AA	654	G
1	AA	686	U
1	AA	688	G
1	AA	701	U
1	AA	704	A
1	AA	717	U
1	AA	718	A
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	724	G
1	AA	752	G
1	AA	754	C
1	AA	755	G
1	AA	792	A
1	AA	794	A
1	AA	812	G
1	AA	813	U
1	AA	815	A
1	AA	816	A
1	AA	817	C
1	AA	821	G
1	AA	870	U
1	AA	874	G
1	AA	884	U
1	AA	885	G
1	AA	889	A
1	AA	891	U
1	AA	913	A

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Mol	Chain	Res	Type
1	AA	914	A
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	965	U
1	AA	968	A
1	AA	969	A
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	976	G
1	AA	977	A
1	AA	982	U
1	AA	984	C
1	AA	991	U
1	AA	994	A
1	AA	1049	U
1	AA	1050	G
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1066	C
1	AA	1068	G
1	AA	1085	U
1	AA	1087	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1127	G
1	AA	1129	C
1	AA	1130	A
1	AA	1136	C
1	AA	1138	G
1	AA	1141	C
1	AA	1142	G
1	AA	1151	A
1	AA	1152	A
1	AA	1157	A
1	AA	1158	C

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Mol	Chain	Res	Type
1	AA	1161	C
1	AA	1168	U
1	AA	1169	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1190	G
1	AA	1191	A
1	AA	1196	A
1	AA	1197	A
1	AA	1200	C
1	AA	1201	A
1	AA	1202	U
1	AA	1215	G
1	AA	1224	U
1	AA	1228	C
1	AA	1229	A
1	AA	1239	A
1	AA	1241	G
1	AA	1256	A
1	AA	1258	G
1	AA	1282	C
1	AA	1283	U
1	AA	1297	G
1	AA	1303	C
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1345	U
1	AA	1348	U
1	AA	1362	A
1	AA	1365	G
1	AA	1380	U
1	AA	1381	U
1	AA	1394	A
1	AA	1395	C

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Mol	Chain	Res	Type
1	AA	1396	A
1	AA	1398	A
1	AA	1399	C
1	AA	1432	G
1	AA	1447	A
1	AA	1448	C
1	AA	1451	U
1	AA	1453	G
1	AA	1454	G
1	AA	1498	U
1	AA	1502	A
1	AA	1505	G
1	AA	1506	U
1	AA	1528	U
1	AA	1530	G
1	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	35	G
22	BA	49	A
22	BA	52	A
22	BA	60	G
22	BA	62	U
22	BA	63	A
22	BA	70	G
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	84	A
22	BA	85	G
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

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Mol	Chain	Res	Type
22	BA	143	C
22	BA	144	A
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	216	A
22	BA	221	A
22	BA	229	C
22	BA	232	G
22	BA	241	A
22	BA	243	U
22	BA	249	C
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	333	G
22	BA	345	A
22	BA	346	A
22	BA	369	U
22	BA	373	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

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Mol	Chain	Res	Type
22	BA	422	A
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	506	G
22	BA	507	A
22	BA	509	C
22	BA	512	G
22	BA	513	A
22	BA	527	C
22	BA	529	A
22	BA	531	C
22	BA	533	G
22	BA	555	G
22	BA	571	U
22	BA	572	A
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	667	U
22	BA	669	G
22	BA	685	A

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Mol	Chain	Res	Type
22	BA	687	C
22	BA	704	G
22	BA	727	A
22	BA	729	G
22	BA	739	A
22	BA	746	U
22	BA	747	U
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	782	A
22	BA	790	U
22	BA	800	A
22	BA	802	A
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	946	C
22	BA	957	C
22	BA	958	U
22	BA	961	C
22	BA	972	A
22	BA	984	A
22	BA	985	C
22	BA	989	G
22	BA	990	A
22	BA	995	C
22	BA	996	A
22	BA	1008	A
22	BA	1009	A
22	BA	1011	G

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Mol	Chain	Res	Type
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	1027	A
22	BA	1033	U
22	BA	1045	C
22	BA	1048	A
22	BA	1060	U
22	BA	1062	G
22	BA	1071	G
22	BA	1073	A
22	BA	1110	G
22	BA	1112	G
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
22	BA	1135	C
22	BA	1141	U
22	BA	1144	A
22	BA	1157	G
22	BA	1181	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	1250	G
22	BA	1265	A
22	BA	1267	U
22	BA	1275	A
22	BA	1276	A
22	BA	1286	A
22	BA	1287	A
22	BA	1289	C
22	BA	1300	G
22	BA	1320	C
22	BA	1321	A

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Mol	Chain	Res	Type
22	BA	1324	G
22	BA	1326	U
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	1394	U
22	BA	1396	U
22	BA	1398	C
22	BA	1416	G
22	BA	1417	C
22	BA	1427	A
22	BA	1429	G
22	BA	1434	A
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

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Mol	Chain	Res	Type
22	BA	1615	C
22	BA	1626	A
22	BA	1634	A
22	BA	1647	U
22	BA	1648	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	1707	G
22	BA	1713	A
22	BA	1714	U
22	BA	1716	U
22	BA	1732	C
22	BA	1733	G
22	BA	1734	G
22	BA	1759	A
22	BA	1780	A
22	BA	1784	A
22	BA	1785	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	1821	A
22	BA	1828	G
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

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Mol	Chain	Res	Type
22	BA	1871	A
22	BA	1872	A
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	1966	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1992	G
22	BA	1993	U
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	2060	A
22	BA	2062	A
22	BA	2067	G
22	BA	2068	U
22	BA	2092	U
22	BA	2093	G
22	BA	2136	G
22	BA	2146	C
22	BA	2148	G
22	BA	2149	U
22	BA	2150	C
22	BA	2199	A
22	BA	2210	U
22	BA	2214	C

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Mol	Chain	Res	Type
22	BA	2225	A
22	BA	2238	G
22	BA	2249	U
22	BA	2258	C
22	BA	2266	A
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
22	BA	2327	A
22	BA	2333	A
22	BA	2335	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	2392	A
22	BA	2405	G
22	BA	2407	A
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2427	C
22	BA	2439	A
22	BA	2458	G
22	BA	2468	A
22	BA	2490	G

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Mol	Chain	Res	Type
22	BA	2492	U
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	2603	G
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	2673	G
22	BA	2681	C
22	BA	2689	U
22	BA	2712	C
22	BA	2725	A
22	BA	2727	A
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	2790	U
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

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Mol	Chain	Res	Type
22	BA	2866	U
22	BA	2868	A
22	BA	2873	A
22	BA	2879	A
22	BA	2880	C
22	BA	2893	A
22	BA	2894	G
23	BB	12	C
23	BB	14	U
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
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	65	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

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Mol	Chain	Res	Type
53	CA	85	U
53	CA	86	G
53	CA	87	C
53	CA	89	U
53	CA	90	C
53	CA	92	U
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	109	A
53	CA	115	G
53	CA	116	A
53	CA	119	A
53	CA	131	A
53	CA	132	C
53	CA	173	U
53	CA	174	A
53	CA	181	A
53	CA	184	G
53	CA	197	A
53	CA	199	A
53	CA	213	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	253	A
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

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Mol	Chain	Res	Type
53	CA	331	G
53	CA	347	G
53	CA	348	G
53	CA	351	G
53	CA	352	C
53	CA	353	A
53	CA	366	A
53	CA	368	U
53	CA	369	G
53	CA	372	C
53	CA	373	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
53	CA	429	U
53	CA	430	A
53	CA	438	U
53	CA	451	A
53	CA	452	A
53	CA	453	G
53	CA	481	G
53	CA	482	A
53	CA	484	G
53	CA	486	U
53	CA	495	A
53	CA	497	G
53	CA	499	A
53	CA	500	G
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	520	A
53	CA	531	U

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Mol	Chain	Res	Type
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	575	G
53	CA	577	G
53	CA	595	A
53	CA	596	A
53	CA	641	U
53	CA	643	C
53	CA	652	U
53	CA	654	G
53	CA	686	U
53	CA	688	G
53	CA	701	U
53	CA	704	A
53	CA	717	U
53	CA	718	A
53	CA	721	G
53	CA	722	G
53	CA	733	G
53	CA	734	G
53	CA	753	A
53	CA	792	A
53	CA	794	A
53	CA	802	A
53	CA	815	A
53	CA	816	A
53	CA	817	C
53	CA	821	G
53	CA	870	U
53	CA	874	G
53	CA	884	U
53	CA	885	G
53	CA	889	A
53	CA	891	U
53	CA	913	A

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Mol	Chain	Res	Type
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	969	A
53	CA	974	A
53	CA	975	A
53	CA	977	A
53	CA	978	A
53	CA	979	C
53	CA	982	U
53	CA	983	A
53	CA	984	C
53	CA	985	C
53	CA	992	U
53	CA	995	C
53	CA	996	A
53	CA	1049	U
53	CA	1051	C
53	CA	1052	U
53	CA	1064	G
53	CA	1066	C
53	CA	1067	A
53	CA	1068	G
53	CA	1085	U
53	CA	1086	U
53	CA	1101	A
53	CA	1102	A
53	CA	1124	G
53	CA	1127	G
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

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Mol	Chain	Res	Type
53	CA	1148	U
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	1167	A
53	CA	1168	U
53	CA	1184	G
53	CA	1190	G
53	CA	1191	A
53	CA	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1215	G
53	CA	1217	C
53	CA	1227	A
53	CA	1229	A
53	CA	1244	G
53	CA	1278	G
53	CA	1282	C
53	CA	1283	U
53	CA	1285	A
53	CA	1287	A
53	CA	1288	A
53	CA	1298	U
53	CA	1299	A
53	CA	1301	U
53	CA	1331	G
53	CA	1345	U
53	CA	1348	U
53	CA	1349	A
53	CA	1366	C
53	CA	1367	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

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Mol	Chain	Res	Type
53	CA	1399	C
53	CA	1447	A
53	CA	1449	C
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1455	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
57	DA	13	A
57	DA	14	A
57	DA	27	G
57	DA	28	A
57	DA	33	C
57	DA	35	G
57	DA	36	G
57	DA	49	A
57	DA	52	A
57	DA	53	A
57	DA	60	G
57	DA	61	C
57	DA	70	G
57	DA	73	A
57	DA	75	G
57	DA	76	C
57	DA	77	G
57	DA	84	A
57	DA	86	G
57	DA	87	U
57	DA	91	A
57	DA	92	U
57	DA	103	A
57	DA	104	A
57	DA	119	A
57	DA	121	G
57	DA	122	G
57	DA	125	A

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Mol	Chain	Res	Type
57	DA	128	C
57	DA	129	C
57	DA	143	C
57	DA	162	U
57	DA	163	C
57	DA	164	C
57	DA	196	A
57	DA	197	A
57	DA	204	A
57	DA	206	U
57	DA	207	A
57	DA	215	G
57	DA	217	A
57	DA	222	A
57	DA	223	A
57	DA	224	U
57	DA	227	A
57	DA	229	C
57	DA	230	G
57	DA	231	A
57	DA	232	G
57	DA	234	U
57	DA	241	A
57	DA	243	U
57	DA	244	A
57	DA	249	C
57	DA	250	G
57	DA	273	G
57	DA	301	G
57	DA	302	C
57	DA	303	G
57	DA	321	U
57	DA	324	A
57	DA	329	G
57	DA	335	C
57	DA	336	C
57	DA	370	G
57	DA	374	A
57	DA	375	G
57	DA	386	G
57	DA	388	G
57	DA	389	G

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Mol	Chain	Res	Type
57	DA	390	U
57	DA	391	A
57	DA	395	U
57	DA	396	G
57	DA	397	U
57	DA	404	A
57	DA	406	G
57	DA	407	G
57	DA	411	G
57	DA	412	A
57	DA	423	A
57	DA	424	G
57	DA	442	G
57	DA	443	A
57	DA	444	C
57	DA	445	C
57	DA	446	G
57	DA	449	A
57	DA	454	A
57	DA	459	U
57	DA	474	G
57	DA	475	C
57	DA	476	G
57	DA	477	A
57	DA	479	A
57	DA	480	A
57	DA	484	C
57	DA	489	G
57	DA	491	G
57	DA	492	A
57	DA	503	A
57	DA	505	A
57	DA	510	C
57	DA	527	C
57	DA	530	G
57	DA	532	A
57	DA	533	G
57	DA	571	U
57	DA	572	A
57	DA	573	U
57	DA	575	A
57	DA	576	U

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Mol	Chain	Res	Type
57	DA	603	A
57	DA	604	G
57	DA	605	G
57	DA	615	U
57	DA	617	G
57	DA	620	G
57	DA	621	A
57	DA	622	G
57	DA	627	A
57	DA	628	G
57	DA	637	A
57	DA	638	G
57	DA	639	U
57	DA	655	A
57	DA	656	G
57	DA	669	G
57	DA	670	A
57	DA	672	C
57	DA	685	A
57	DA	687	C
57	DA	704	G
57	DA	726	G
57	DA	727	A
57	DA	730	A
57	DA	739	A
57	DA	740	C
57	DA	762	U
57	DA	763	G
57	DA	765	C
57	DA	775	G
57	DA	777	G
57	DA	782	A
57	DA	783	A
57	DA	788	A
57	DA	794	A
57	DA	800	A
57	DA	802	A
57	DA	827	U
57	DA	828	U
57	DA	829	A
57	DA	830	G
57	DA	831	G

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Mol	Chain	Res	Type
57	DA	859	G
57	DA	860	U
57	DA	861	A
57	DA	865	C
57	DA	867	C
57	DA	868	U
57	DA	913	U
57	DA	915	C
57	DA	916	G
57	DA	931	U
57	DA	933	A
57	DA	945	A
57	DA	946	C
57	DA	947	A
57	DA	957	C
57	DA	959	A
57	DA	961	C
57	DA	962	G
57	DA	963	U
57	DA	964	C
57	DA	973	A
57	DA	975	A
57	DA	976	G
57	DA	984	A
57	DA	989	G
57	DA	990	A
57	DA	991	C
57	DA	1008	A
57	DA	1009	A
57	DA	1010	A
57	DA	1011	G
57	DA	1020	A
57	DA	1021	A
57	DA	1023	U
57	DA	1024	G
57	DA	1025	G
57	DA	1026	G
57	DA	1027	A
57	DA	1033	U
57	DA	1034	G
57	DA	1050	A
57	DA	1060	U

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Mol	Chain	Res	Type
57	DA	1063	G
57	DA	1064	C
57	DA	1069	A
57	DA	1074	G
57	DA	1077	A
57	DA	1078	U
57	DA	1079	C
57	DA	1080	A
57	DA	1110	G
57	DA	1112	G
57	DA	1114	C
57	DA	1126	A
57	DA	1129	A
57	DA	1135	C
57	DA	1136	G
57	DA	1141	U
57	DA	1144	A
57	DA	1156	A
57	DA	1157	G
57	DA	1158	C
57	DA	1204	A
57	DA	1206	G
57	DA	1207	C
57	DA	1210	G
57	DA	1213	A
57	DA	1247	A
57	DA	1249	U
57	DA	1254	A
57	DA	1255	U
57	DA	1256	G
57	DA	1265	A
57	DA	1267	U
57	DA	1268	A
57	DA	1272	A
57	DA	1274	A
57	DA	1275	A
57	DA	1276	A
57	DA	1287	A
57	DA	1288	G
57	DA	1289	C
57	DA	1291	C
57	DA	1300	G

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Mol	Chain	Res	Type
57	DA	1303	G
57	DA	1304	A
57	DA	1312	U
57	DA	1313	U
57	DA	1314	C
57	DA	1325	U
57	DA	1327	A
57	DA	1329	U
57	DA	1333	G
57	DA	1340	U
57	DA	1346	G
57	DA	1385	A
57	DA	1386	C
57	DA	1388	G
57	DA	1397	U
57	DA	1398	C
57	DA	1399	C
57	DA	1400	U
57	DA	1401	G
57	DA	1416	G
57	DA	1417	C
57	DA	1418	G
57	DA	1427	A
57	DA	1429	G
57	DA	1451	C
57	DA	1455	G
57	DA	1456	G
57	DA	1482	G
57	DA	1483	G
57	DA	1489	C
57	DA	1491	G
57	DA	1492	G
57	DA	1497	U
57	DA	1498	C
57	DA	1508	A
57	DA	1510	G
57	DA	1511	G
57	DA	1536	C
57	DA	1537	G
57	DA	1539	U
57	DA	1555	G
57	DA	1557	C

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Mol	Chain	Res	Type
57	DA	1558	C
57	DA	1560	G
57	DA	1565	C
57	DA	1568	G
57	DA	1569	A
57	DA	1603	A
57	DA	1606	C
57	DA	1611	C
57	DA	1612	C
57	DA	1613	G
57	DA	1615	C
57	DA	1634	A
57	DA	1635	A
57	DA	1636	U
57	DA	1647	U
57	DA	1648	U
57	DA	1649	G
57	DA	1653	G
57	DA	1654	A
57	DA	1667	G
57	DA	1669	A
57	DA	1674	G
57	DA	1675	C
57	DA	1681	G
57	DA	1682	G
57	DA	1693	U
57	DA	1695	G
57	DA	1698	A
57	DA	1700	A
57	DA	1706	C
57	DA	1713	A
57	DA	1717	A
57	DA	1722	A
57	DA	1731	G
57	DA	1733	G
57	DA	1734	G
57	DA	1735	A
57	DA	1738	G
57	DA	1739	A
57	DA	1758	U
57	DA	1759	A
57	DA	1775	U

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Mol	Chain	Res	Type
57	DA	1776	G
57	DA	1780	A
57	DA	1782	U
57	DA	1784	A
57	DA	1785	A
57	DA	1786	A
57	DA	1787	A
57	DA	1799	G
57	DA	1802	A
57	DA	1803	A
57	DA	1808	A
57	DA	1809	A
57	DA	1810	A
57	DA	1815	A
57	DA	1816	C
57	DA	1817	G
57	DA	1821	A
57	DA	1828	G
57	DA	1838	C
57	DA	1839	G
57	DA	1847	A
57	DA	1857	G
57	DA	1900	A
57	DA	1901	A
57	DA	1913	A
57	DA	1915	U
57	DA	1918	A
57	DA	1919	A
57	DA	1929	G
57	DA	1931	U
57	DA	1936	A
57	DA	1941	C
57	DA	1942	C
57	DA	1943	U
57	DA	1945	G
57	DA	1954	G
57	DA	1956	U
57	DA	1962	C
57	DA	1963	U
57	DA	1965	C
57	DA	1967	C
57	DA	1972	G

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Mol	Chain	Res	Type
57	DA	1980	G
57	DA	1981	A
57	DA	1982	U
57	DA	1992	G
57	DA	1993	U
57	DA	1996	C
57	DA	1997	C
57	DA	2021	C
57	DA	2023	C
57	DA	2024	G
57	DA	2030	A
57	DA	2034	U
57	DA	2036	C
57	DA	2051	A
57	DA	2060	A
57	DA	2061	G
57	DA	2063	C
57	DA	2067	G
57	DA	2068	U
57	DA	2069	G
57	DA	2092	U
57	DA	2094	A
57	DA	2133	G
57	DA	2135	A
57	DA	2136	G
57	DA	2143	C
57	DA	2148	G
57	DA	2149	U
57	DA	2150	C
57	DA	2199	A
57	DA	2210	U
57	DA	2214	C
57	DA	2216	G
57	DA	2225	A
57	DA	2226	C
57	DA	2238	G
57	DA	2239	G
57	DA	2249	U
57	DA	2258	C
57	DA	2259	U
57	DA	2266	A
57	DA	2267	A

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Mol	Chain	Res	Type
57	DA	2275	C
57	DA	2276	G
57	DA	2282	G
57	DA	2283	C
57	DA	2286	G
57	DA	2288	A
57	DA	2289	G
57	DA	2296	U
57	DA	2298	A
57	DA	2299	U
57	DA	2311	A
57	DA	2314	A
57	DA	2334	U
57	DA	2337	G
57	DA	2339	C
57	DA	2344	U
57	DA	2347	C
57	DA	2348	U
57	DA	2384	U
57	DA	2386	A
57	DA	2387	U
57	DA	2391	G
57	DA	2404	U
57	DA	2406	A
57	DA	2407	A
57	DA	2408	U
57	DA	2409	G
57	DA	2425	A
57	DA	2427	C
57	DA	2428	G
57	DA	2429	G
57	DA	2439	A
57	DA	2440	C
57	DA	2447	G
57	DA	2450	A
57	DA	2458	G
57	DA	2459	A
57	DA	2490	G
57	DA	2492	U
57	DA	2493	U
57	DA	2497	A
57	DA	2498	C

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Mol	Chain	Res	Type
57	DA	2503	A
57	DA	2504	U
57	DA	2517	C
57	DA	2520	C
57	DA	2542	A
57	DA	2543	G
57	DA	2566	A
57	DA	2567	G
57	DA	2572	A
57	DA	2573	C
57	DA	2581	G
57	DA	2582	G
57	DA	2601	C
57	DA	2609	U
57	DA	2611	C
57	DA	2613	U
57	DA	2615	U
57	DA	2645	G
57	DA	2654	A
57	DA	2656	U
57	DA	2657	A
57	DA	2667	C
57	DA	2668	G
57	DA	2681	C
57	DA	2682	A
57	DA	2689	U
57	DA	2691	C
57	DA	2712	C
57	DA	2714	G
57	DA	2725	A
57	DA	2727	A
57	DA	2728	U
57	DA	2750	A
57	DA	2752	C
57	DA	2756	U
57	DA	2757	A
57	DA	2776	A
57	DA	2777	G
57	DA	2778	A
57	DA	2781	A
57	DA	2798	U
57	DA	2832	U

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Mol	Chain	Res	Type
57	DA	2836	U
57	DA	2837	A
57	DA	2848	G
57	DA	2850	A
57	DA	2851	A
57	DA	2866	U
57	DA	2868	A
57	DA	2873	A
57	DA	2874	C
57	DA	2875	C
57	DA	2876	G
57	DA	2880	C
57	DA	2893	A
57	DA	2895	G
58	DB	12	C
58	DB	13	G
58	DB	16	G
58	DB	17	C
58	DB	40	U
58	DB	41	G
58	DB	42	C
58	DB	45	A
58	DB	56	G
58	DB	58	A
58	DB	66	A
58	DB	68	C
58	DB	88	C
58	DB	90	C
58	DB	108	A
58	DB	110	C
58	DB	111	U

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 carbohydrates in this entry.

5.6 Ligand geometry

Of 365 ligands modelled in this entry, 364 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
61	CLM	BA	3136	-	19,20,20	2.56	4 (21%)	23,27,27	2.08	7 (30%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	CLM	BA	3136	-	-	2/20/22/22	0/1/1/1

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
61	BA	3136	CLM	O9B-N9	7.70	1.35	1.22
61	BA	3136	CLM	C11-C6	5.42	1.47	1.39
61	BA	3136	CLM	C2-N2	4.05	1.42	1.34
61	BA	3136	CLM	C8-C9	2.51	1.43	1.38

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	BA	3136	CLM	C3-N2-C2	-5.07	114.11	123.07
61	BA	3136	CLM	C6-C5-C3	4.57	119.68	111.64
61	BA	3136	CLM	C4-C3-N2	3.04	114.10	109.27
61	BA	3136	CLM	O4-C4-C3	3.00	118.37	111.09
61	BA	3136	CLM	O5-C5-C3	2.64	115.05	107.99
61	BA	3136	CLM	C5-C3-N2	2.51	114.80	110.05
61	BA	3136	CLM	O9B-N9-C9	2.32	122.08	118.80

There are no chirality outliers.

All (2) torsion outliers are listed below:

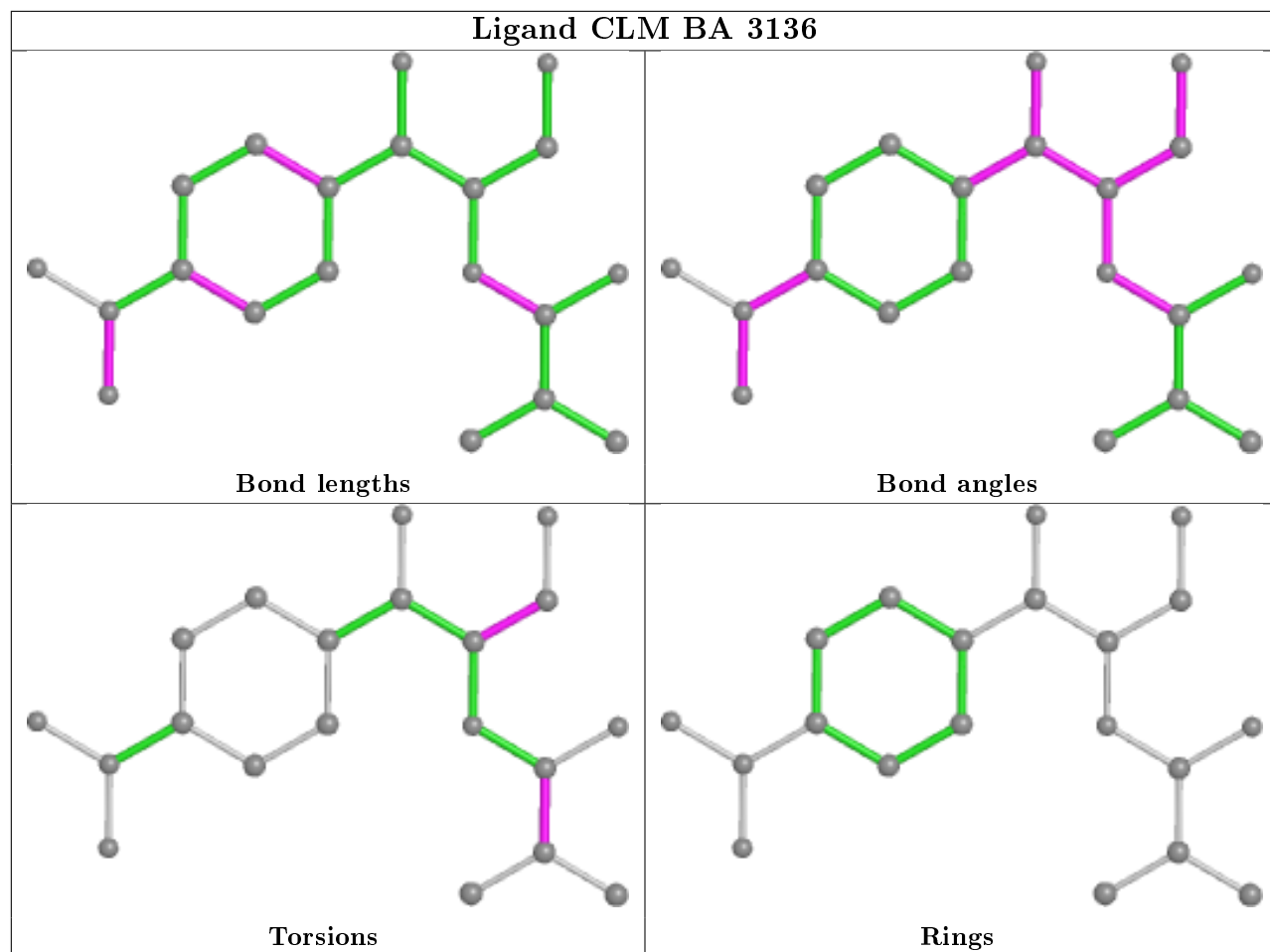
Mol	Chain	Res	Type	Atoms
61	BA	3136	CLM	N2-C3-C4-O4
61	BA	3136	CLM	CL2-C1-C2-N2

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
61	BA	3136	CLM	1	0

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



5.7 Other polymers [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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AA	1533/1533 (100%)	-0.64	16 (1%) 82 72	28, 82, 201, 415	0
2	AB	218/218 (100%)	1.62	69 (31%) 0 0	117, 160, 233, 278	0
2	CB	218/218 (100%)	1.15	42 (19%) 1 1	121, 173, 237, 292	0
3	AC	206/206 (100%)	0.48	13 (6%) 20 11	64, 107, 164, 196	0
3	CC	206/206 (100%)	1.04	27 (13%) 3 2	79, 158, 229, 303	0
4	AD	205/205 (100%)	-0.08	6 (2%) 51 36	45, 89, 164, 275	0
4	CD	205/205 (100%)	-0.30	1 (0%) 91 86	39, 61, 122, 254	0
5	AE	150/150 (100%)	-0.17	1 (0%) 87 81	57, 81, 142, 210	0
5	CE	150/150 (100%)	0.33	3 (2%) 65 51	67, 99, 157, 252	0
6	AF	100/100 (100%)	0.08	4 (4%) 38 25	55, 103, 161, 189	0
6	CF	100/100 (100%)	-0.05	1 (1%) 82 72	72, 116, 176, 217	0
7	AG	151/151 (100%)	0.46	13 (8%) 10 5	88, 150, 218, 247	0
8	AH	129/129 (100%)	0.14	7 (5%) 25 14	44, 82, 127, 184	0
8	CH	129/129 (100%)	0.60	8 (6%) 20 11	68, 113, 170, 246	0
9	AI	127/127 (100%)	0.99	24 (18%) 1 1	72, 154, 248, 287	0
9	CI	127/127 (100%)	1.95	50 (39%) 0 0	116, 201, 289, 319	0
10	AJ	98/98 (100%)	0.73	16 (16%) 1 1	78, 127, 203, 244	0
10	CJ	98/98 (100%)	2.74	54 (55%) 0 0	114, 204, 278, 301	0
11	AK	117/117 (100%)	0.81	15 (12%) 3 2	47, 117, 196, 238	0
11	CK	117/117 (100%)	0.22	5 (4%) 35 22	68, 117, 175, 239	0
12	AL	123/123 (100%)	-0.18	1 (0%) 86 78	24, 57, 121, 180	0
12	CL	123/123 (100%)	0.44	7 (5%) 23 13	44, 89, 144, 226	0
13	AM	114/114 (100%)	0.63	15 (13%) 3 2	90, 158, 240, 281	0
14	AN	96/100 (96%)	0.44	12 (12%) 3 2	76, 122, 214, 271	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
14	CN	95/100 (95%)	2.51	44 (46%) 0 0	123, 239, 369, 399	0
15	AO	88/88 (100%)	-0.42	0 100 100	40, 81, 123, 187	0
15	CO	88/88 (100%)	-0.00	0 100 100	76, 122, 190, 265	0
16	AP	82/82 (100%)	0.47	8 (9%) 7 4	46, 79, 155, 228	0
17	AQ	80/80 (100%)	0.38	6 (7%) 14 8	36, 79, 146, 244	0
17	CQ	80/80 (100%)	0.96	10 (12%) 3 2	61, 112, 163, 194	0
18	AR	55/55 (100%)	0.20	2 (3%) 42 27	60, 92, 174, 242	0
18	CR	55/55 (100%)	-0.01	0 100 100	48, 91, 159, 236	0
19	AS	79/79 (100%)	1.23	22 (27%) 0 0	95, 156, 236, 256	0
19	CS	79/79 (100%)	2.85	45 (56%) 0 0	206, 416, 490, 515	0
20	AT	85/85 (100%)	-0.26	0 100 100	46, 83, 124, 174	0
20	CT	85/85 (100%)	1.06	17 (20%) 1 1	76, 142, 200, 234	0
21	AU	51/51 (100%)	1.82	21 (41%) 0 0	91, 152, 216, 243	0
21	CU	51/51 (100%)	0.50	3 (5%) 22 13	82, 115, 208, 290	0
22	BA	2854/2903 (98%)	-0.56	38 (1%) 77 65	7, 31, 162, 401	0
23	BB	118/118 (100%)	-0.70	0 100 100	20, 45, 78, 115	0
24	BC	271/271 (100%)	-0.37	5 (1%) 68 55	13, 41, 96, 201	0
24	DC	271/271 (100%)	0.61	29 (10%) 6 3	45, 101, 160, 200	0
25	BD	209/209 (100%)	-0.48	0 100 100	7, 29, 80, 144	0
25	DD	209/209 (100%)	0.92	37 (17%) 1 1	60, 123, 193, 270	0
26	BE	201/201 (100%)	-0.37	0 100 100	7, 42, 105, 189	0
26	DE	201/201 (100%)	1.85	72 (35%) 0 0	68, 254, 429, 475	0
27	BF	177/177 (100%)	0.03	5 (2%) 53 37	33, 78, 142, 205	0
28	BG	176/176 (100%)	-0.12	2 (1%) 80 69	23, 62, 124, 215	0
28	DG	176/176 (100%)	2.07	80 (45%) 0 0	79, 207, 297, 363	0
29	BH	149/149 (100%)	3.00	61 (40%) 0 0	41, 178, 274, 301	0
29	DH	149/149 (100%)	2.64	63 (42%) 0 0	93, 182, 270, 305	0
30	BI	141/141 (100%)	2.33	64 (45%) 0 0	171, 257, 316, 355	0
30	DI	141/141 (100%)	3.92	101 (71%) 0 0	227, 344, 382, 400	0
31	BJ	142/142 (100%)	-0.55	0 100 100	9, 23, 68, 127	0
31	DJ	142/142 (100%)	0.62	15 (10%) 6 3	63, 122, 184, 223	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
32	BK	122/122 (100%)	-0.51	0 100 100	14, 31, 84, 254	0
32	DK	122/122 (100%)	0.78	18 (14%) 2 1	57, 106, 172, 204	0
33	BL	143/143 (100%)	-0.53	0 100 100	9, 37, 80, 126	0
33	DL	143/143 (100%)	1.53	45 (31%) 0 0	68, 176, 296, 329	0
34	BM	136/136 (100%)	-0.56	0 100 100	9, 29, 71, 133	0
34	DM	136/136 (100%)	0.84	19 (13%) 2 1	47, 126, 187, 223	0
35	BN	120/120 (100%)	-0.55	0 100 100	10, 25, 48, 123	0
35	DN	120/120 (100%)	1.56	42 (35%) 0 0	90, 149, 231, 305	0
36	BO	116/116 (100%)	-0.33	0 100 100	28, 49, 93, 126	0
36	DO	116/116 (100%)	1.51	35 (30%) 0 0	132, 176, 238, 280	0
37	BP	114/114 (100%)	-0.37	1 (0%) 84 75	17, 39, 95, 184	0
37	DP	114/114 (100%)	1.07	22 (19%) 1 1	63, 122, 187, 204	0
38	BQ	117/117 (100%)	-0.64	0 100 100	7, 20, 46, 100	0
38	DQ	117/117 (100%)	0.99	21 (17%) 1 1	78, 127, 221, 298	0
39	BR	103/103 (100%)	-0.51	1 (0%) 82 72	7, 34, 78, 139	0
39	DR	103/103 (100%)	2.41	50 (48%) 0 0	80, 157, 275, 306	0
40	BS	110/110 (100%)	-0.58	0 100 100	8, 23, 56, 172	0
40	DS	110/110 (100%)	1.70	40 (36%) 0 0	69, 142, 254, 323	0
41	BT	93/93 (100%)	-0.12	2 (2%) 62 48	22, 53, 135, 194	0
41	DT	93/93 (100%)	2.14	38 (40%) 0 0	125, 241, 359, 398	0
42	BU	102/102 (100%)	-0.11	1 (0%) 82 72	22, 54, 111, 237	0
42	DU	102/102 (100%)	3.84	64 (62%) 0 0	135, 334, 460, 561	0
43	BV	94/94 (100%)	-0.30	0 100 100	18, 47, 89, 149	0
43	DV	94/94 (100%)	1.09	20 (21%) 0 1	109, 156, 208, 233	0
44	BW	79/79 (100%)	-0.19	2 (2%) 57 43	13, 36, 90, 194	0
44	DW	79/79 (100%)	2.00	35 (44%) 0 0	99, 166, 250, 315	0
45	BX	77/77 (100%)	-0.43	0 100 100	17, 42, 87, 113	0
45	DX	77/77 (100%)	0.78	12 (15%) 2 1	72, 122, 190, 222	0
46	BY	63/63 (100%)	-0.18	1 (1%) 72 59	34, 73, 121, 155	0
46	DY	63/63 (100%)	1.65	20 (31%) 0 0	159, 374, 464, 494	0
47	BZ	58/58 (100%)	-0.55	0 100 100	7, 26, 61, 84	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
47	DZ	58/58 (100%)	0.60	5 (8%) 10 5	80, 142, 228, 257	0
48	B0	56/56 (100%)	-0.71	0 100 100	6, 26, 80, 127	0
48	D0	56/56 (100%)	1.28	12 (21%) 0 1	75, 148, 244, 284	0
49	B1	50/50 (100%)	0.72	3 (6%) 21 12	42, 66, 121, 173	0
49	D1	50/50 (100%)	2.09	24 (48%) 0 0	114, 179, 216, 264	0
50	B2	46/46 (100%)	-0.60	0 100 100	11, 27, 56, 164	0
50	D2	46/46 (100%)	1.27	9 (19%) 1 1	79, 130, 179, 205	0
51	B3	64/64 (100%)	-0.59	0 100 100	11, 29, 53, 81	0
51	D3	64/64 (100%)	1.69	24 (37%) 0 0	85, 145, 232, 281	0
52	B4	38/38 (100%)	0.17	1 (2%) 56 40	29, 53, 95, 103	0
52	D4	38/38 (100%)	2.60	24 (63%) 0 0	87, 165, 229, 248	0
53	CA	1530/1530 (100%)	-0.10	38 (2%) 57 43	43, 110, 301, 420	0
54	CG	150/150 (100%)	2.22	70 (46%) 0 0	101, 233, 303, 344	0
55	CM	113/113 (100%)	2.49	63 (55%) 0 0	226, 447, 522, 562	0
56	CP	80/80 (100%)	0.92	16 (20%) 1 1	49, 105, 165, 226	0
57	DA	2841/2904 (97%)	0.17	82 (2%) 51 36	51, 132, 279, 491	0
58	DB	117/117 (100%)	-0.23	0 100 100	107, 180, 240, 264	0
59	DF	178/178 (100%)	2.38	101 (56%) 0 0	175, 239, 286, 345	0
All	All	20431/20552 (99%)	0.31	2121 (10%) 6 4	6, 103, 285, 562	0

All (2121) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
29	DH	92	GLY	21.7
14	CN	33	VAL	20.2
29	DH	124	THR	20.0
30	DI	51	GLY	19.6
29	DH	91	PHE	17.2
42	DU	74	ALA	16.6
14	CN	34	ASN	16.0
55	CM	93	GLY	15.9
29	BH	86	ASP	15.5
29	BH	122	LEU	15.3
29	BH	92	GLY	15.1
30	DI	50	LYS	15.0
29	BH	91	PHE	14.5

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Mol	Chain	Res	Type	RSRZ
29	BH	90	LEU	14.3
42	DU	97	SER	13.7
28	DG	7	PRO	12.7
29	DH	123	ARG	12.3
42	DU	75	ALA	12.3
29	BH	84	ALA	12.2
17	AQ	82	VAL	12.2
42	DU	12	VAL	11.9
30	DI	4	VAL	11.8
42	DU	87	GLU	11.8
42	DU	76	THR	11.7
42	DU	86	PHE	11.5
42	DU	35	VAL	11.4
59	DF	129	MET	11.3
10	CJ	8	ILE	11.1
59	DF	141	ASP	11.1
29	BH	118	PRO	11.1
30	BI	52	LEU	11.0
16	AP	81	ALA	10.9
29	BH	93	SER	10.9
30	DI	17	ALA	10.9
30	BI	46	ASP	10.8
29	BH	117	LEU	10.7
29	BH	123	ARG	10.7
14	CN	52	ARG	10.6
41	DT	55	VAL	10.6
29	DH	93	SER	10.5
29	BH	85	GLY	10.3
19	CS	29	PRO	9.9
46	DY	63	ALA	9.9
55	CM	94	LEU	9.8
19	CS	60	PHE	9.6
41	DT	15	HIS	9.6
19	CS	28	LYS	9.6
19	CS	23	GLU	9.5
29	DH	105	ALA	9.5
42	DU	85	ARG	9.4
39	DR	50	GLY	9.4
29	BH	87	GLU	9.4
30	DI	93	ASN	9.4
38	DQ	81	GLY	9.2
14	CN	49	THR	9.1

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Mol	Chain	Res	Type	RSRZ
51	D3	20	GLY	9.1
54	CG	71	THR	9.1
29	DH	131	SER	9.1
22	BA	2154	A	9.1
26	DE	144	GLU	9.0
29	BH	105	ALA	9.0
30	DI	15	GLY	8.9
14	CN	32	ASP	8.9
29	BH	148	ALA	8.9
42	DU	88	ASP	8.9
39	DR	26	ASP	8.8
30	DI	56	VAL	8.8
57	DA	613	A	8.8
9	CI	66	VAL	8.8
42	DU	42	LYS	8.7
28	DG	83	THR	8.7
30	DI	5	GLN	8.7
35	DN	63	ARG	8.7
29	BH	143	ILE	8.6
30	DI	83	ALA	8.6
19	CS	25	GLY	8.5
29	BH	88	GLY	8.4
39	DR	96	VAL	8.4
46	DY	62	GLY	8.4
30	DI	95	ASP	8.4
19	CS	73	PHE	8.4
9	CI	42	THR	8.4
54	CG	70	PRO	8.3
29	BH	126	GLY	8.3
29	DH	121	VAL	8.3
29	DH	119	ASN	8.2
10	CJ	72	ARG	8.2
22	BA	2179	C	8.1
29	BH	128	HIS	8.0
53	CA	209	U	8.0
29	BH	146	VAL	8.0
29	DH	86	ASP	8.0
30	DI	18	ASN	8.0
30	DI	58	ILE	8.0
29	BH	145	ASN	8.0
59	DF	83	PRO	8.0
30	DI	121	ILE	7.9

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Mol	Chain	Res	Type	RSRZ
30	DI	57	VAL	7.9
46	DY	35	GLY	7.9
39	DR	22	LEU	7.8
54	CG	65	LEU	7.8
42	DU	73	ASN	7.7
30	DI	72	THR	7.7
29	BH	125	THR	7.7
39	DR	27	ILE	7.7
30	DI	66	PHE	7.7
10	CJ	74	VAL	7.7
42	DU	2	ALA	7.7
26	DE	175	ILE	7.7
54	CG	95	ARG	7.6
36	DO	61	GLN	7.6
16	AP	82	ALA	7.6
9	AI	42	THR	7.6
29	BH	134	VAL	7.6
29	DH	143	ILE	7.6
29	BH	74	ALA	7.5
30	DI	55	PRO	7.5
29	DH	85	GLY	7.5
51	D3	21	PHE	7.5
33	DL	82	LEU	7.5
29	DH	146	VAL	7.4
26	DE	164	LEU	7.4
29	DH	133	GLN	7.4
16	AP	80	LYS	7.4
30	BI	2	LYS	7.4
9	CI	127	SER	7.4
29	DH	87	GLU	7.4
9	AI	89	TYR	7.4
29	BH	89	LYS	7.3
39	DR	20	VAL	7.3
54	CG	72	VAL	7.3
29	DH	112	LYS	7.3
22	BA	2143	C	7.3
55	CM	108	ARG	7.3
39	DR	52	PRO	7.2
54	CG	150	PHE	7.2
30	BI	13	ALA	7.2
54	CG	151	ALA	7.2
30	DI	2	LYS	7.2

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Mol	Chain	Res	Type	RSRZ
10	CJ	76	ILE	7.2
41	DT	43	ILE	7.2
22	BA	2147	A	7.2
49	D1	35	LEU	7.2
53	CA	461	A	7.2
29	BH	147	VAL	7.2
28	DG	104	LEU	7.1
57	DA	1536	C	7.1
29	BH	79	THR	7.1
29	DH	125	THR	7.1
29	BH	71	LYS	7.1
30	DI	138	VAL	7.1
37	DP	109	ILE	7.1
40	DS	70	LYS	7.0
29	DH	82	SER	7.0
29	DH	88	GLY	7.0
57	DA	139	U	7.0
26	DE	180	LEU	7.0
54	CG	102	TRP	7.0
36	DO	62	LEU	7.0
30	BI	139	VAL	7.0
55	CM	46	GLU	7.0
9	CI	65	THR	7.0
29	BH	98	ASP	7.0
30	BI	67	THR	7.0
26	DE	190	ALA	6.9
41	DT	72	GLN	6.9
26	DE	24	ASN	6.9
39	DR	103	ALA	6.9
29	BH	124	THR	6.9
41	DT	16	VAL	6.9
30	DI	21	PRO	6.9
9	CI	57	VAL	6.9
26	DE	171	ASP	6.9
57	DA	2157	G	6.9
30	DI	22	PRO	6.8
48	D0	56	LYS	6.8
42	DU	34	ILE	6.8
29	BH	73	ASN	6.8
12	CL	123	ALA	6.8
59	DF	155	ILE	6.7
28	DG	51	PHE	6.7

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Mol	Chain	Res	Type	RSRZ
30	DI	12	VAL	6.7
38	DQ	36	GLN	6.7
29	BH	113	SER	6.7
57	DA	2146	C	6.7
22	BA	2180	U	6.7
54	CG	58	LEU	6.6
26	DE	119	ILE	6.6
29	DH	90	LEU	6.6
52	D4	10	LEU	6.6
28	DG	8	VAL	6.6
54	CG	87	PRO	6.6
28	DG	32	LEU	6.6
30	DI	16	MET	6.6
30	DI	60	VAL	6.5
57	DA	1537	G	6.5
10	CJ	7	ARG	6.5
36	DO	60	GLU	6.5
29	DH	144	VAL	6.5
19	CS	26	ASP	6.5
30	BI	66	PHE	6.5
29	BH	80	ILE	6.4
40	DS	110	ARG	6.4
30	DI	119	ALA	6.4
10	CJ	99	GLN	6.4
55	CM	63	VAL	6.4
52	D4	38	GLY	6.4
59	DF	39	VAL	6.4
9	CI	15	ALA	6.4
10	CJ	75	ASP	6.4
44	DW	52	CYS	6.4
30	DI	59	THR	6.3
22	BA	138	U	6.3
30	DI	140	GLU	6.3
29	DH	89	LYS	6.3
35	DN	75	ILE	6.3
28	DG	101	VAL	6.3
30	BI	11	GLN	6.3
29	DH	145	ASN	6.3
54	CG	64	ALA	6.3
10	CJ	73	LEU	6.3
59	DF	105	ILE	6.2
26	DE	186	VAL	6.2

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Mol	Chain	Res	Type	RSRZ
54	CG	7	GLY	6.2
2	AB	51	GLU	6.2
57	DA	1535	A	6.2
22	BA	2146	C	6.2
53	CA	210	C	6.2
53	CA	1224	U	6.2
10	CJ	77	VAL	6.1
48	D0	36	LYS	6.1
42	DU	13	LEU	6.1
54	CG	61	PHE	6.1
30	DI	123	ALA	6.1
25	DD	91	THR	6.1
28	DG	165	ASP	6.1
42	DU	11	ILE	6.1
42	DU	41	VAL	6.1
59	DF	9	ASP	6.1
10	CJ	91	ASP	6.0
42	DU	4	ILE	6.0
41	DT	83	ALA	6.0
9	CI	4	GLN	6.0
55	CM	42	VAL	6.0
44	DW	29	SER	6.0
59	DF	153	ILE	6.0
19	CS	36	ARG	6.0
39	DR	63	VAL	6.0
57	DA	2799	A	6.0
26	DE	147	LEU	6.0
29	DH	147	VAL	6.0
26	DE	172	ALA	6.0
26	DE	122	GLU	6.0
14	CN	40	ARG	6.0
19	CS	11	ASP	6.0
9	CI	39	GLY	5.9
30	DI	68	PHE	5.9
41	DT	2	ILE	5.9
10	CJ	10	LEU	5.9
44	DW	34	SER	5.9
29	DH	127	GLU	5.9
22	BA	139	U	5.9
2	AB	73	ARG	5.9
22	BA	2110	G	5.9
54	CG	15	PRO	5.9

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Mol	Chain	Res	Type	RSRZ
59	DF	131	VAL	5.9
19	CS	30	LEU	5.8
30	DI	61	TYR	5.8
26	DE	143	LEU	5.8
10	CJ	34	ALA	5.8
51	D3	9	ALA	5.8
42	DU	78	LYS	5.8
54	CG	73	GLU	5.8
2	AB	220	VAL	5.8
33	DL	92	LEU	5.8
2	AB	26	MET	5.8
30	DI	48	ILE	5.8
59	DF	94	ARG	5.8
54	CG	143	MET	5.7
42	DU	77	GLY	5.7
29	BH	81	ALA	5.7
14	CN	25	GLU	5.7
52	D4	1	MET	5.7
37	DP	73	PHE	5.7
10	CJ	6	ILE	5.7
29	DH	128	HIS	5.7
46	DY	36	GLN	5.7
59	DF	150	GLY	5.7
29	DH	120	GLY	5.6
40	DS	94	ASP	5.6
59	DF	24	VAL	5.6
10	CJ	40	ILE	5.6
10	CJ	71	LEU	5.6
19	CS	59	VAL	5.6
10	CJ	100	ILE	5.6
56	CP	47	GLU	5.6
30	BI	86	LYS	5.6
29	DH	122	LEU	5.5
9	AI	129	ARG	5.5
30	DI	52	LEU	5.5
9	AI	128	LYS	5.5
10	CJ	39	PRO	5.5
40	DS	32	ALA	5.5
28	DG	56	GLY	5.5
54	CG	136	LYS	5.5
42	DU	70	ALA	5.5
41	DT	42	GLU	5.5

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Mol	Chain	Res	Type	RSRZ
22	BA	2149	U	5.5
28	DG	72	ASN	5.4
55	CM	62	PHE	5.4
57	DA	228	C	5.4
52	D4	8	LYS	5.4
33	DL	5	THR	5.4
54	CG	75	LYS	5.4
30	DI	120	ASP	5.4
57	DA	1075	C	5.4
30	BI	141	ASP	5.4
49	D1	46	VAL	5.3
14	CN	48	GLN	5.3
33	DL	122	VAL	5.3
9	CI	16	ALA	5.3
46	DY	13	GLU	5.3
30	DI	62	ALA	5.3
22	BA	546	U	5.3
9	CI	63	TYR	5.3
2	AB	64	GLY	5.3
42	DU	19	GLY	5.3
55	CM	109	LYS	5.3
30	BI	132	ALA	5.3
4	AD	35	GLN	5.3
42	DU	59	GLU	5.3
30	BI	78	LEU	5.3
57	DA	1175	A	5.3
29	BH	119	ASN	5.3
22	BA	2138	G	5.3
19	CS	70	LEU	5.3
28	DG	102	ILE	5.3
40	DS	5	ALA	5.3
10	CJ	11	LYS	5.2
59	DF	152	ASP	5.2
29	BH	149	GLU	5.2
29	DH	129	GLU	5.2
33	DL	142	ILE	5.2
54	CG	54	GLY	5.2
26	DE	187	VAL	5.2
42	DU	50	ALA	5.2
19	CS	37	SER	5.2
30	BI	22	PRO	5.2
32	DK	110	GLU	5.2

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Mol	Chain	Res	Type	RSRZ
40	DS	26	GLY	5.2
29	BH	130	VAL	5.2
30	DI	14	ALA	5.2
28	DG	33	THR	5.1
54	CG	38	ALA	5.1
56	CP	52	LEU	5.1
40	DS	4	ILE	5.1
36	DO	103	VAL	5.1
21	AU	22	CYS	5.1
36	DO	65	THR	5.1
54	CG	18	GLY	5.1
3	CC	108	PRO	5.1
19	CS	58	PRO	5.1
39	DR	87	GLN	5.1
30	DI	43	ALA	5.1
42	DU	5	ARG	5.1
2	AB	150	ILE	5.1
2	CB	110	ILE	5.1
29	BH	144	VAL	5.1
30	DI	65	SER	5.1
41	DT	35	ALA	5.1
33	DL	107	PHE	5.1
51	D3	50	SER	5.1
55	CM	111	PRO	5.1
42	DU	51	LEU	5.1
30	BI	21	PRO	5.1
35	DN	78	LYS	5.1
47	DZ	1	ALA	5.1
51	D3	22	LYS	5.1
19	CS	27	LYS	5.1
22	BA	1175	A	5.0
24	DC	232	GLY	5.1
14	CN	19	TYR	5.0
54	CG	90	VAL	5.0
37	DP	37	LYS	5.0
10	AJ	102	LEU	5.0
41	DT	65	GLY	5.0
30	DI	67	THR	5.0
30	DI	97	VAL	5.0
57	DA	1067	A	5.0
2	AB	135	MET	5.0
19	CS	65	MET	5.0

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Mol	Chain	Res	Type	RSRZ
42	DU	72	PHE	5.0
26	DE	121	VAL	5.0
29	DH	142	VAL	5.0
19	CS	47	THR	5.0
55	CM	67	ASP	5.0
59	DF	10	GLU	5.0
57	DA	1078	U	5.0
8	CH	129	ALA	5.0
54	CG	55	LYS	5.0
54	CG	48	THR	5.0
14	CN	16	ALA	5.0
13	AM	42	VAL	5.0
46	DY	29	ARG	4.9
3	CC	195	ILE	4.9
25	DD	10	GLY	4.9
49	D1	34	GLU	4.9
2	AB	50	ASN	4.9
26	DE	201	ALA	4.9
26	DE	198	GLU	4.9
9	CI	128	LYS	4.9
10	CJ	26	VAL	4.9
55	CM	97	ARG	4.9
30	BI	12	VAL	4.9
54	CG	69	ARG	4.9
24	DC	240	GLY	4.9
30	DI	23	VAL	4.9
2	AB	59	ILE	4.9
43	DV	94	ALA	4.9
28	DG	79	THR	4.9
46	DY	37	LEU	4.9
54	CG	44	SER	4.9
26	DE	127	GLU	4.9
30	BI	77	VAL	4.9
34	DM	135	VAL	4.9
26	DE	25	GLU	4.9
18	AR	19	GLU	4.8
48	D0	34	GLY	4.8
10	CJ	41	PRO	4.8
3	AC	64	ARG	4.8
43	DV	69	GLU	4.8
14	CN	61	ASN	4.8
19	CS	79	TYR	4.8

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Mol	Chain	Res	Type	RSRZ
9	AI	31	GLN	4.8
2	AB	66	ILE	4.8
30	DI	98	GLY	4.8
41	DT	71	GLY	4.8
17	CQ	7	LEU	4.8
30	DI	46	ASP	4.8
46	DY	31	GLN	4.8
30	BI	16	MET	4.8
39	DR	55	ASP	4.8
2	CB	129	THR	4.8
55	CM	59	VAL	4.8
35	DN	113	ILE	4.8
33	DL	101	ILE	4.7
30	DI	141	ASP	4.7
39	DR	88	GLY	4.7
1	AA	86	G	4.7
42	DU	28	LEU	4.7
43	DV	42	LEU	4.7
30	DI	41	PHE	4.7
29	DH	126	GLY	4.7
9	CI	3	ASN	4.7
30	BI	33	ASN	4.7
59	DF	51	ASN	4.7
41	DT	56	GLU	4.7
57	DA	137	U	4.7
57	DA	846	U	4.7
10	AJ	63	ASP	4.7
28	DG	1	SER	4.7
29	DH	141	LYS	4.7
55	CM	76	ILE	4.7
2	AB	45	THR	4.7
53	CA	211	G	4.7
54	CG	76	SER	4.7
29	BH	116	ARG	4.7
19	AS	38	THR	4.7
29	BH	70	GLU	4.7
22	BA	2145	C	4.7
10	CJ	80	THR	4.6
19	CS	80	ARG	4.6
55	CM	92	ARG	4.6
17	CQ	6	THR	4.6
55	CM	110	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
59	DF	41	GLU	4.6
41	DT	36	LYS	4.6
33	DL	88	GLY	4.6
25	DD	95	SER	4.6
25	DD	96	ILE	4.6
30	DI	109	ALA	4.6
26	DE	177	PRO	4.6
10	CJ	65	TYR	4.6
55	CM	112	ARG	4.6
28	DG	84	LYS	4.6
22	BA	2150	C	4.6
26	DE	42	GLY	4.6
53	CA	1534	A	4.6
3	CC	194	VAL	4.6
26	DE	188	MET	4.6
29	BH	112	LYS	4.6
33	DL	106	GLU	4.6
42	DU	26	ASN	4.6
14	CN	62	ARG	4.6
46	DY	14	LEU	4.6
2	AB	67	LEU	4.6
59	DF	171	ALA	4.6
42	DU	31	GLY	4.5
39	DR	45	GLU	4.5
30	DI	125	THR	4.5
37	DP	42	PHE	4.5
28	DG	57	TYR	4.5
26	DE	173	THR	4.5
9	CI	129	ARG	4.5
28	DG	31	GLU	4.5
30	BI	60	VAL	4.5
57	DA	2145	C	4.5
29	BH	121	VAL	4.5
49	D1	52	LYS	4.5
2	AB	89	PHE	4.5
57	DA	645	C	4.5
21	AU	31	VAL	4.5
30	DI	94	LYS	4.5
28	DG	140	ILE	4.5
29	BH	75	LEU	4.5
38	DQ	28	SER	4.5
54	CG	17	PHE	4.5

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Mol	Chain	Res	Type	RSRZ
3	AC	99	GLN	4.5
30	DI	3	LYS	4.5
14	CN	53	ASP	4.5
42	DU	17	ASP	4.5
40	DS	43	ALA	4.5
42	DU	71	ILE	4.5
30	DI	75	ALA	4.5
14	AN	20	PHE	4.5
26	DE	48	THR	4.4
30	BI	1	ALA	4.4
30	DI	103	ALA	4.4
33	DL	108	ALA	4.4
35	DN	62	ASN	4.4
9	CI	64	ILE	4.4
55	CM	45	SER	4.4
57	DA	1077	A	4.4
3	CC	154	GLY	4.4
46	DY	24	GLU	4.4
44	DW	50	VAL	4.4
21	AU	49	ALA	4.4
28	DG	55	ASP	4.4
35	DN	38	LEU	4.4
57	DA	931	U	4.4
19	CS	24	SER	4.4
26	DE	103	GLY	4.4
28	DG	106	LEU	4.4
28	DG	45	ALA	4.4
10	CJ	63	ASP	4.4
49	D1	23	THR	4.4
42	DU	94	PHE	4.4
30	DI	69	VAL	4.4
54	CG	66	GLU	4.4
36	DO	40	ILE	4.4
55	CM	38	ILE	4.4
33	DL	4	ASN	4.4
11	AK	18	GLY	4.4
33	DL	28	GLY	4.4
3	CC	123	LEU	4.4
39	DR	66	HIS	4.4
2	CB	109	SER	4.4
42	DU	82	VAL	4.4
10	CJ	9	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
54	CG	149	ALA	4.4
38	DQ	87	VAL	4.4
36	DO	52	SER	4.4
42	DU	30	SER	4.4
3	CC	143	LEU	4.4
4	AD	24	VAL	4.4
19	CS	12	LEU	4.3
26	DE	23	PHE	4.3
35	DN	74	GLU	4.3
36	DO	56	LYS	4.3
10	CJ	97	ASP	4.3
22	BA	2148	G	4.3
25	DD	180	VAL	4.3
36	DO	24	THR	4.3
59	DF	110	ILE	4.3
33	DL	80	SER	4.3
26	DE	41	GLN	4.3
49	D1	21	THR	4.3
30	BI	47	SER	4.3
59	DF	115	GLY	4.3
28	DG	82	PHE	4.3
42	DU	36	GLU	4.3
54	CG	132	THR	4.3
34	DM	136	MET	4.3
35	DN	28	LEU	4.3
57	DA	1420	A	4.3
29	BH	94	ILE	4.3
41	DT	33	LYS	4.3
29	BH	127	GLU	4.3
52	D4	36	ARG	4.3
36	DO	27	VAL	4.3
55	CM	31	ALA	4.3
59	DF	53	ALA	4.3
53	CA	954	G	4.3
41	DT	3	ARG	4.3
42	DU	27	VAL	4.3
48	D0	25	THR	4.3
31	DJ	44	TYR	4.3
55	CM	95	PRO	4.3
39	DR	43	ASN	4.3
59	DF	116	LEU	4.3
33	DL	113	ALA	4.3

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Mol	Chain	Res	Type	RSRZ
55	CM	54	THR	4.2
42	DU	69	VAL	4.2
39	DR	29	THR	4.2
30	DI	118	GLY	4.2
52	D4	25	VAL	4.2
19	CS	63	ASP	4.2
42	DU	79	ALA	4.2
30	BI	58	ILE	4.2
51	D3	60	CYS	4.2
49	B1	52	LYS	4.2
22	BA	2136	G	4.2
39	DR	51	VAL	4.2
35	DN	39	PRO	4.2
59	DF	93	GLU	4.2
2	CB	31	PHE	4.2
42	DU	25	LYS	4.2
51	D3	10	ALA	4.2
44	DW	56	HIS	4.2
52	D4	26	ILE	4.2
20	CT	40	ALA	4.2
24	DC	99	GLU	4.2
55	CM	80	MET	4.2
21	AU	30	GLU	4.2
28	DG	166	GLU	4.2
36	DO	41	ALA	4.2
2	AB	29	PHE	4.2
49	D1	29	LYS	4.2
33	DL	81	ASP	4.2
9	CI	56	MET	4.2
54	CG	106	ALA	4.2
9	CI	10	ARG	4.2
14	CN	60	ARG	4.2
26	DE	148	ILE	4.2
57	DA	136	G	4.2
26	DE	193	VAL	4.2
10	AJ	91	ASP	4.1
57	DA	2181	U	4.1
49	D1	26	LYS	4.1
1	AA	1030	U	4.1
10	AJ	75	ASP	4.1
39	DR	65	ALA	4.1
49	D1	20	TYR	4.1

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Mol	Chain	Res	Type	RSRZ
30	DI	54	ILE	4.1
59	DF	117	SER	4.1
53	CA	950	U	4.1
26	DE	4	VAL	4.1
52	D4	15	LYS	4.1
14	CN	26	LEU	4.1
40	DS	16	LYS	4.1
9	CI	117	LEU	4.1
30	BI	68	PHE	4.1
35	DN	111	ALA	4.1
54	CG	80	GLY	4.1
13	AM	114	PRO	4.1
22	BA	2155	U	4.1
25	DD	185	ASN	4.1
35	DN	98	LEU	4.1
10	CJ	98	VAL	4.1
39	DR	25	LEU	4.1
3	CC	90	VAL	4.1
9	CI	126	PHE	4.1
25	DD	26	VAL	4.1
29	DH	2	GLN	4.1
54	CG	84	TYR	4.1
59	DF	140	ILE	4.1
17	AQ	6	THR	4.1
54	CG	53	SER	4.1
24	DC	100	ARG	4.1
30	BI	3	LYS	4.1
33	DL	144	GLU	4.1
39	DR	34	GLU	4.1
42	DU	37	GLY	4.1
53	CA	1314	C	4.1
2	AB	152	ASP	4.0
2	AB	28	PRO	4.0
33	DL	89	VAL	4.0
37	DP	33	GLU	4.0
44	DW	51	GLY	4.0
39	DR	61	ALA	4.0
48	D0	22	THR	4.0
29	DH	118	PRO	4.0
54	CG	8	GLN	4.0
36	DO	46	GLU	4.0
30	DI	31	GLY	4.0

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Mol	Chain	Res	Type	RSRZ
39	DR	92	TRP	4.0
26	DE	183	PHE	4.0
19	AS	29	PRO	4.0
2	AB	68	PHE	4.0
2	CB	87	ASP	4.0
1	AA	1534	A	4.0
25	DD	186	LEU	4.0
3	AC	63	ILE	4.0
29	DH	73	ASN	4.0
10	CJ	66	GLU	4.0
29	BH	76	GLU	4.0
10	CJ	36	VAL	4.0
12	CL	80	LEU	4.0
42	DU	21	ARG	4.0
57	DA	546	U	4.0
35	DN	46	ARG	4.0
10	CJ	51	VAL	4.0
53	CA	1271	A	4.0
35	DN	70	THR	4.0
9	AI	62	LEU	4.0
51	D3	13	PHE	4.0
17	CQ	37	ILE	3.9
28	DG	120	ILE	3.9
30	BI	35	MET	3.9
39	DR	28	ALA	3.9
2	AB	186	VAL	3.9
39	DR	33	VAL	3.9
9	CI	116	GLY	3.9
21	CU	7	GLU	3.9
26	DE	131	THR	3.9
54	CG	67	ASN	3.9
35	DN	118	ARG	3.9
42	DU	10	VAL	3.9
50	D2	42	LEU	3.9
59	DF	34	THR	3.9
43	DV	68	LYS	3.9
53	CA	208	U	3.9
27	BF	77	LYS	3.9
30	DI	20	SER	3.9
59	DF	31	GLU	3.9
40	DS	20	VAL	3.9
28	DG	52	GLY	3.9

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Mol	Chain	Res	Type	RSRZ
35	DN	36	THR	3.9
39	DR	62	GLU	3.9
55	CM	4	ALA	3.9
44	DW	73	PRO	3.9
52	D4	9	LYS	3.9
40	DS	22	ASP	3.9
57	DA	1173	U	3.9
4	AD	27	ILE	3.9
21	CU	8	ASN	3.9
28	DG	100	ASN	3.9
41	DT	14	PRO	3.9
59	DF	67	THR	3.8
9	CI	55	ASP	3.8
26	DE	157	LEU	3.8
29	DH	84	ALA	3.8
54	CG	68	VAL	3.8
54	CG	74	VAL	3.8
57	DA	1870	C	3.8
30	DI	53	PRO	3.8
3	CC	86	LEU	3.8
22	BA	2144	G	3.8
25	DD	104	VAL	3.8
30	BI	51	GLY	3.8
56	CP	80	LYS	3.8
9	CI	62	LEU	3.8
10	CJ	30	LYS	3.8
41	BT	16	VAL	3.8
14	AN	29	ILE	3.8
2	CB	113	LEU	3.8
3	CC	36	PHE	3.8
28	DG	50	THR	3.8
30	BI	114	ALA	3.8
55	CM	28	ARG	3.8
44	DW	62	ALA	3.8
52	D4	35	GLN	3.8
30	DI	122	GLU	3.8
39	DR	102	SER	3.8
52	D4	14	CYS	3.8
44	DW	58	LEU	3.8
57	DA	1172	C	3.8
3	CC	106	ARG	3.8
28	DG	110	HIS	3.8

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Mol	Chain	Res	Type	RSRZ
33	DL	77	ILE	3.8
52	D4	33	HIS	3.8
22	BA	2139	U	3.8
32	DK	103	VAL	3.8
30	DI	44	LYS	3.8
43	DV	5	ASN	3.8
54	CG	142	ARG	3.8
29	BH	77	THR	3.8
3	CC	179	ALA	3.7
29	DH	116	ARG	3.7
55	CM	82	LEU	3.7
40	DS	47	VAL	3.7
59	DF	77	LYS	3.7
26	DE	170	ARG	3.7
59	DF	30	VAL	3.7
32	DK	68	GLY	3.7
39	DR	24	LYS	3.7
19	CS	43	MET	3.7
39	DR	60	LYS	3.7
28	DG	130	ILE	3.7
9	AI	38	PHE	3.7
42	DU	98	ASN	3.7
28	DG	6	ALA	3.7
2	CB	160	LEU	3.7
9	AI	20	ILE	3.7
36	DO	87	ILE	3.7
25	DD	103	ASP	3.7
42	DU	48	VAL	3.7
57	DA	2602	A	3.7
3	CC	42	LEU	3.7
18	AR	73	HIS	3.7
29	BH	78	VAL	3.7
41	DT	58	VAL	3.7
56	CP	39	PHE	3.7
2	AB	48	MET	3.7
33	DL	125	LEU	3.7
3	CC	35	ASP	3.7
2	CB	17	HIS	3.7
35	DN	29	VAL	3.7
44	DW	45	HIS	3.7
25	DD	43	ASP	3.7
54	CG	146	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
10	AJ	35	GLN	3.7
42	DU	53	GLN	3.7
4	AD	26	ALA	3.6
39	DR	95	ASP	3.6
59	DF	163	GLU	3.6
2	CB	32	GLY	3.6
24	DC	241	LYS	3.6
29	BH	120	GLY	3.6
38	DQ	82	LEU	3.6
41	DT	32	LEU	3.6
29	BH	72	ILE	3.6
30	BI	65	SER	3.6
59	DF	54	ALA	3.6
19	AS	45	GLY	3.6
14	CN	23	ARG	3.6
2	AB	157	PRO	3.6
21	AU	27	VAL	3.6
2	AB	193	ASP	3.6
30	BI	107	GLU	3.6
9	CI	9	GLY	3.6
17	CQ	77	VAL	3.6
30	DI	139	VAL	3.6
34	DM	37	GLY	3.6
59	DF	146	ASP	3.6
2	CB	66	ILE	3.6
9	CI	67	LYS	3.6
34	DM	36	VAL	3.6
28	DG	61	TRP	3.6
31	DJ	74	TYR	3.6
44	DW	35	ILE	3.6
30	BI	53	PRO	3.6
35	DN	72	ASP	3.6
40	DS	48	LYS	3.6
42	DU	20	LYS	3.6
32	DK	89	ASN	3.6
1	AA	461	A	3.6
43	DV	60	VAL	3.6
19	AS	60	PHE	3.6
33	DL	83	ALA	3.6
31	DJ	128	ASN	3.6
2	CB	186	VAL	3.6
3	CC	160	GLU	3.6

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Mol	Chain	Res	Type	RSRZ
10	AJ	8	ILE	3.6
21	AU	53	LYS	3.6
28	DG	113	ASP	3.6
44	DW	67	LYS	3.6
55	CM	104	ASN	3.6
14	CN	31	SER	3.6
31	DJ	98	GLU	3.5
9	CI	8	THR	3.5
22	BA	277	G	3.5
30	BI	134	SER	3.5
42	DU	80	ASP	3.5
28	DG	85	LYS	3.5
1	AA	88	U	3.5
30	DI	107	GLU	3.5
17	CQ	60	ILE	3.5
30	DI	42	ASN	3.5
55	CM	98	GLY	3.5
30	DI	117	THR	3.5
14	CN	50	LEU	3.5
29	DH	74	ALA	3.5
30	DI	33	ASN	3.5
38	DQ	1	ALA	3.5
41	DT	60	THR	3.5
31	DJ	136	GLN	3.5
26	DE	128	ALA	3.5
41	DT	70	HIS	3.5
28	DG	16	VAL	3.5
29	BH	131	SER	3.5
33	DL	70	LYS	3.5
49	D1	49	LYS	3.5
19	CS	74	ALA	3.5
30	DI	84	GLY	3.5
36	DO	113	ALA	3.5
43	DV	6	ALA	3.5
6	CF	8	PHE	3.5
35	DN	82	GLU	3.5
8	CH	1	SER	3.5
20	CT	3	ILE	3.5
29	DH	77	THR	3.5
30	BI	87	SER	3.5
33	DL	57	LEU	3.5
2	CB	33	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
59	DF	38	GLY	3.5
41	DT	76	ARG	3.5
59	DF	55	ASP	3.5
30	DI	45	THR	3.5
59	DF	104	THR	3.5
54	CG	13	PRO	3.5
2	CB	27	LYS	3.5
28	DG	41	GLU	3.5
36	DO	88	LYS	3.5
44	DW	28	GLU	3.5
2	CB	150	ILE	3.5
2	AB	87	ASP	3.5
3	CC	32	LEU	3.5
30	DI	63	ASP	3.5
41	DT	75	GLY	3.5
57	DA	1076	C	3.5
10	CJ	5	ARG	3.5
29	DH	20	ASN	3.5
57	DA	2147	A	3.5
8	AH	129	ALA	3.5
3	CC	41	TYR	3.5
30	DI	47	SER	3.5
44	DW	81	ILE	3.5
42	DU	62	ALA	3.5
55	CM	81	ASP	3.5
10	CJ	101	SER	3.5
54	CG	43	TYR	3.5
7	AG	79	VAL	3.5
56	CP	20	VAL	3.5
35	DN	56	LYS	3.5
19	CS	22	VAL	3.4
7	AG	7	GLY	3.4
21	AU	4	LYS	3.4
38	DQ	94	LEU	3.4
53	CA	953	G	3.4
45	DX	20	ALA	3.4
2	AB	95	TRP	3.4
24	DC	236	GLY	3.4
29	DH	40	THR	3.4
2	CB	165	ALA	3.4
28	DG	58	ALA	3.4
39	DR	38	VAL	3.4

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Mol	Chain	Res	Type	RSRZ
43	DV	57	TYR	3.4
14	CN	100	TRP	3.4
59	DF	130	GLY	3.4
29	DH	106	ALA	3.4
54	CG	88	VAL	3.4
34	DM	72	PRO	3.4
42	DU	43	LYS	3.4
59	DF	96	TRP	3.4
35	DN	37	THR	3.4
38	DQ	117	ALA	3.4
40	DS	17	VAL	3.4
55	CM	30	LYS	3.4
11	AK	20	ALA	3.4
44	DW	19	ARG	3.4
55	CM	75	SER	3.4
29	BH	64	ALA	3.4
50	D2	33	ARG	3.4
10	CJ	78	GLU	3.4
47	DZ	33	HIS	3.4
21	AU	50	SER	3.4
26	DE	56	GLY	3.4
14	CN	51	PRO	3.4
29	DH	117	LEU	3.4
36	DO	25	ARG	3.4
30	BI	4	VAL	3.4
51	D3	57	VAL	3.4
12	CL	79	ILE	3.4
13	AM	32	ILE	3.4
51	D3	19	GLY	3.4
10	AJ	101	SER	3.4
21	AU	28	LEU	3.3
26	DE	118	LEU	3.3
2	CB	181	PRO	3.3
22	BA	2181	U	3.3
50	D2	32	ALA	3.3
24	DC	63	ILE	3.3
19	CS	64	GLU	3.3
24	DC	47	ARG	3.3
11	AK	110	THR	3.3
34	DM	41	LEU	3.3
40	DS	3	THR	3.3
30	BI	40	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
54	CG	78	ARG	3.3
35	DN	73	ASN	3.3
26	DE	179	SER	3.3
30	DI	32	VAL	3.3
33	DL	74	THR	3.3
7	AG	81	GLY	3.3
53	CA	94	G	3.3
54	CG	51	GLN	3.3
27	BF	116	LEU	3.3
28	DG	168	VAL	3.3
30	BI	42	ASN	3.3
40	DS	40	ASN	3.3
25	DD	38	LYS	3.3
28	DG	48	THR	3.3
30	DI	81	LYS	3.3
46	DY	10	SER	3.3
37	DP	11	GLN	3.3
3	AC	91	ALA	3.3
39	DR	23	GLU	3.3
40	DS	68	ASP	3.3
30	DI	128	ILE	3.3
31	DJ	142	ILE	3.3
31	DJ	53	TYR	3.3
57	DA	94	A	3.3
14	CN	78	LEU	3.3
55	CM	68	LEU	3.3
9	AI	61	ASP	3.3
9	CI	19	PHE	3.3
41	DT	1	MET	3.3
54	CG	14	ASP	3.3
20	CT	2	ASN	3.3
2	AB	56	LEU	3.3
40	DS	19	LEU	3.3
44	DW	31	LEU	3.3
10	CJ	96	VAL	3.3
50	D2	18	PHE	3.3
57	DA	93	G	3.3
16	AP	47	GLU	3.3
10	CJ	38	GLY	3.3
25	DD	47	ALA	3.3
37	DP	114	ASN	3.3
30	DI	27	LEU	3.3

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Mol	Chain	Res	Type	RSRZ
21	AU	52	VAL	3.3
28	DG	131	VAL	3.3
21	AU	23	GLU	3.3
52	D4	23	ILE	3.3
19	AS	2	ARG	3.3
2	AB	192	PRO	3.3
36	DO	63	LYS	3.3
37	DP	96	LEU	3.3
59	DF	151	LEU	3.3
30	BI	99	LYS	3.3
30	DI	25	PRO	3.3
38	DQ	86	SER	3.3
30	DI	130	GLY	3.3
26	DE	12	LEU	3.3
34	DM	103	TYR	3.3
2	CB	30	ILE	3.2
48	D0	33	SER	3.2
50	D2	36	ALA	3.2
26	DE	35	TYR	3.2
44	DW	14	ASP	3.2
26	DE	146	VAL	3.2
28	DG	5	LYS	3.2
29	BH	106	ALA	3.2
2	AB	151	LYS	3.2
11	CK	125	LYS	3.2
35	DN	112	TYR	3.2
52	D4	24	ARG	3.2
2	AB	184	ALA	3.2
9	AI	18	VAL	3.2
30	BI	138	VAL	3.2
39	DR	6	GLN	3.2
54	CG	19	SER	3.2
19	CS	76	THR	3.2
59	DF	76	PHE	3.2
1	AA	85	U	3.2
9	AI	96	GLU	3.2
19	AS	12	LEU	3.2
9	CI	107	ALA	3.2
9	CI	89	TYR	3.2
39	DR	53	PHE	3.2
9	CI	20	ILE	3.2
45	DX	19	HIS	3.2

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Mol	Chain	Res	Type	RSRZ
55	CM	44	ILE	3.2
47	DZ	7	THR	3.2
54	CG	86	VAL	3.2
9	CI	38	PHE	3.2
46	DY	45	GLN	3.2
38	DQ	38	VAL	3.2
39	DR	48	LYS	3.2
53	CA	79	G	3.2
30	DI	127	SER	3.2
22	BA	885	C	3.2
24	DC	26	GLY	3.2
30	DI	137	LEU	3.2
19	CS	38	THR	3.2
49	D1	22	THR	3.2
59	DF	86	CYS	3.2
28	DG	87	GLN	3.2
42	DU	24	VAL	3.2
2	AB	185	ILE	3.2
10	CJ	49	PHE	3.2
8	AH	1	SER	3.2
21	AU	6	ARG	3.2
27	BF	79	ARG	3.2
10	CJ	22	THR	3.2
40	DS	34	ASP	3.2
16	AP	4	ILE	3.1
2	AB	165	ALA	3.1
2	AB	216	VAL	3.1
30	BI	29	GLN	3.1
30	DI	82	ALA	3.1
59	DF	44	ALA	3.1
13	AM	113	LYS	3.1
2	AB	84	LEU	3.1
29	DH	27	ARG	3.1
44	DW	21	GLY	3.1
44	DW	84	GLU	3.1
39	DR	64	VAL	3.1
59	DF	11	VAL	3.1
10	CJ	50	THR	3.1
44	DW	63	ASP	3.1
30	DI	91	LYS	3.1
2	AB	224	ARG	3.1
30	DI	40	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
45	DX	21	LEU	3.1
53	CA	1031	C	3.1
59	DF	35	LEU	3.1
2	AB	199	ILE	3.1
34	DM	17	ASN	3.1
40	DS	101	SER	3.1
31	DJ	118	MET	3.1
33	DL	86	GLU	3.1
29	DH	140	ALA	3.1
46	DY	21	LEU	3.1
2	AB	114	LYS	3.1
24	BC	236	GLY	3.1
30	BI	95	ASP	3.1
57	DA	318	C	3.1
2	CB	159	ALA	3.1
12	AL	123	ALA	3.1
19	AS	39	ILE	3.1
24	DC	239	PHE	3.1
28	DG	19	ASN	3.1
10	AJ	90	LEU	3.1
14	CN	18	LYS	3.1
39	BR	50	GLY	3.1
45	DX	17	ARG	3.1
14	CN	6	LYS	3.1
21	AU	51	ALA	3.1
39	DR	19	THR	3.1
59	DF	82	TYR	3.1
14	CN	76	PHE	3.1
57	DA	1044	C	3.1
43	DV	35	GLU	3.1
30	BI	96	LYS	3.1
50	D2	37	LYS	3.1
9	AI	127	SER	3.1
49	D1	14	ALA	3.1
3	AC	167	TYR	3.1
14	CN	71	GLY	3.1
26	DE	90	GLN	3.1
30	BI	97	VAL	3.1
40	DS	27	LYS	3.1
49	D1	6	GLU	3.1
57	DA	101	A	3.1
28	DG	68	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
59	DF	109	ARG	3.1
41	DT	74	ILE	3.1
52	D4	11	CYS	3.1
24	DC	244	VAL	3.1
35	DN	20	MET	3.1
59	DF	127	TYR	3.0
52	D4	37	GLN	3.0
17	CQ	22	VAL	3.0
19	AS	31	ARG	3.0
29	DH	148	ALA	3.0
9	CI	37	TYR	3.0
19	CS	8	PRO	3.0
25	DD	173	GLN	3.0
32	DK	82	ASN	3.0
45	DX	18	SER	3.0
28	DG	42	VAL	3.0
59	DF	156	THR	3.0
19	AS	14	LEU	3.0
54	CG	16	LYS	3.0
57	DA	1171	G	3.0
1	AA	87	C	3.0
10	AJ	89	ARG	3.0
59	DF	114	ARG	3.0
34	DM	1	MET	3.0
34	DM	110	GLU	3.0
19	CS	61	VAL	3.0
19	CS	66	VAL	3.0
2	AB	158	ASP	3.0
20	CT	43	LYS	3.0
25	DD	97	SER	3.0
26	DE	176	ASP	3.0
53	CA	958	A	3.0
28	DG	137	LYS	3.0
29	BH	139	PHE	3.0
20	CT	86	ALA	3.0
1	AA	78	A	3.0
6	AF	51	ILE	3.0
9	CI	111	GLU	3.0
30	DI	129	GLU	3.0
57	DA	138	U	3.0
59	DF	135	ILE	3.0
25	DD	24	VAL	3.0

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Mol	Chain	Res	Type	RSRZ
25	DD	4	LEU	3.0
2	AB	166	ASP	3.0
42	DU	1	ALA	3.0
53	CA	86	G	3.0
26	DE	102	ARG	3.0
19	CS	71	GLY	3.0
42	DU	89	GLY	3.0
19	CS	39	ILE	3.0
56	CP	57	ILE	3.0
28	DG	24	THR	3.0
30	BI	37	PHE	3.0
21	AU	3	ILE	3.0
24	BC	235	GLU	3.0
30	BI	120	ASP	3.0
39	DR	98	ILE	3.0
35	DN	76	VAL	3.0
40	DS	15	GLN	3.0
41	DT	64	LYS	3.0
55	CM	74	MET	3.0
59	DF	172	PHE	3.0
57	DA	1066	U	3.0
57	DA	2151	U	3.0
33	DL	31	GLY	3.0
39	DR	8	GLY	3.0
14	CN	42	ASN	3.0
55	CM	29	SER	3.0
29	BH	135	HIS	3.0
49	D1	43	ARG	3.0
1	AA	412	A	3.0
39	DR	31	GLU	3.0
59	DF	139	GLU	3.0
57	DA	2797	U	2.9
9	CI	90	ASP	2.9
52	D4	21	GLY	2.9
19	AS	48	ILE	2.9
59	DF	98	PHE	2.9
59	DF	174	PHE	2.9
7	AG	82	SER	2.9
24	DC	237	ARG	2.9
38	DQ	73	ILE	2.9
3	AC	98	ALA	2.9
35	DN	21	PHE	2.9

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Mol	Chain	Res	Type	RSRZ
28	DG	94	ARG	2.9
14	AN	42	ASN	2.9
2	AB	188	THR	2.9
46	DY	32	ALA	2.9
7	AG	61	PHE	2.9
29	BH	129	GLU	2.9
19	AS	46	LEU	2.9
26	DE	43	THR	2.9
55	CM	70	ARG	2.9
38	DQ	111	LYS	2.9
59	DF	68	LYS	2.9
30	BI	18	ASN	2.9
41	DT	69	ARG	2.9
26	DE	98	LYS	2.9
57	DA	2152	G	2.9
7	AG	4	ARG	2.9
9	AI	49	GLN	2.9
19	AS	37	SER	2.9
32	DK	75	SER	2.9
7	AG	58	LEU	2.9
8	CH	60	LEU	2.9
11	AK	33	ILE	2.9
13	AM	38	ILE	2.9
4	AD	28	ASP	2.9
35	DN	102	PHE	2.9
55	CM	105	ALA	2.9
6	AF	62	MET	2.9
46	DY	59	GLU	2.9
2	CB	190	SER	2.9
37	DP	71	ARG	2.9
42	DU	83	GLY	2.9
59	DF	128	SER	2.9
9	CI	27	ILE	2.9
8	AH	23	ALA	2.9
16	AP	22	ALA	2.9
30	DI	26	ALA	2.9
59	DF	50	ASP	2.9
30	DI	19	PRO	2.9
19	AS	15	LEU	2.9
22	BA	2106	U	2.9
29	DH	19	VAL	2.9
32	DK	69	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
57	DA	2313	C	2.9
8	CH	44	PHE	2.9
19	CS	62	THR	2.9
28	DG	164	ALA	2.9
37	DP	74	GLN	2.9
26	DE	40	ARG	2.9
26	DE	197	GLU	2.9
59	DF	124	ARG	2.9
9	CI	99	LYS	2.9
11	AK	41	LEU	2.9
14	CN	15	LEU	2.9
25	DD	5	VAL	2.8
29	BH	142	VAL	2.8
41	BT	1	MET	2.8
14	CN	22	LYS	2.8
40	DS	21	ALA	2.8
51	D3	46	LYS	2.8
59	DF	112	ASP	2.8
35	DN	95	THR	2.8
14	CN	69	PRO	2.8
36	DO	50	ALA	2.8
2	AB	101	THR	2.8
19	CS	5	LYS	2.8
42	DU	58	VAL	2.8
11	CK	20	ALA	2.8
26	DE	200	LEU	2.8
30	BI	137	LEU	2.8
19	CS	48	ILE	2.8
59	DF	108	PRO	2.8
28	DG	49	LEU	2.8
41	DT	12	ARG	2.8
1	AA	1492	A	2.8
11	AK	83	VAL	2.8
28	DG	35	THR	2.8
59	DF	99	PHE	2.8
24	DC	231	HIS	2.8
14	CN	21	ALA	2.8
21	AU	20	ARG	2.8
40	DS	84	ARG	2.8
57	DA	1278	C	2.8
54	CG	81	GLY	2.8
31	DJ	119	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
39	DR	46	GLU	2.8
4	AD	21	LYS	2.8
2	CB	147	LEU	2.8
28	DG	81	GLY	2.8
36	DO	19	GLN	2.8
42	DU	40	LEU	2.8
7	AG	150	PHE	2.8
28	DG	161	VAL	2.8
57	DA	343	C	2.8
24	DC	238	ASN	2.8
30	DI	86	LYS	2.8
26	DE	104	ALA	2.8
49	D1	15	GLY	2.8
57	DA	2402	U	2.8
1	AA	79	G	2.8
9	AI	40	ARG	2.8
17	AQ	13	SER	2.8
22	BA	2153	C	2.8
30	DI	124	MET	2.8
57	DA	2107	G	2.8
40	DS	72	THR	2.8
2	AB	201	GLY	2.8
9	CI	6	TYR	2.8
30	DI	92	PRO	2.8
49	D1	30	PRO	2.8
14	AN	30	ILE	2.8
17	AQ	19	SER	2.8
46	DY	34	SER	2.8
10	AJ	87	LEU	2.8
26	DE	156	ASN	2.8
30	DI	10	LEU	2.8
40	DS	69	LEU	2.8
30	BI	54	ILE	2.8
37	DP	111	GLU	2.8
1	AA	81	A	2.8
2	CB	146	SER	2.8
13	AM	18	LEU	2.8
28	DG	116	LEU	2.8
40	DS	23	LEU	2.8
59	DF	74	ALA	2.8
11	AK	32	THR	2.8
29	DH	115	VAL	2.8

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Mol	Chain	Res	Type	RSRZ
56	CP	35	ARG	2.8
59	DF	173	ASP	2.8
53	CA	202	G	2.7
53	CA	1270	G	2.7
57	DA	62	U	2.7
21	AU	37	TYR	2.7
33	DL	20	GLY	2.7
55	CM	77	LYS	2.7
44	DW	37	VAL	2.7
20	CT	67	HIS	2.7
26	DE	87	ALA	2.7
54	CG	50	ALA	2.7
55	CM	22	TYR	2.7
19	AS	10	ILE	2.7
20	CT	66	ILE	2.7
11	AK	17	ASP	2.7
55	CM	107	THR	2.7
35	DN	100	CYS	2.7
59	DF	143	ASP	2.7
20	CT	33	LYS	2.7
55	CM	61	LYS	2.7
24	BC	234	GLY	2.7
53	CA	1317	C	2.7
57	DA	33	C	2.7
10	AJ	74	VAL	2.7
28	DG	173	ALA	2.7
32	DK	112	PHE	2.7
43	DV	23	ALA	2.7
2	CB	180	ILE	2.7
44	DW	69	GLU	2.7
59	DF	126	ASN	2.7
14	CN	64	ARG	2.7
14	CN	73	LEU	2.7
22	BA	2108	A	2.7
2	CB	15	PHE	2.7
3	AC	169	GLU	2.7
49	D1	31	GLU	2.7
21	AU	34	ARG	2.7
50	D2	34	ARG	2.7
2	CB	103	TRP	2.7
2	CB	158	ASP	2.7
22	BA	2152	G	2.7

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Mol	Chain	Res	Type	RSRZ
44	DW	60	ALA	2.7
9	CI	58	GLU	2.7
59	DF	59	ILE	2.7
10	CJ	35	GLN	2.7
9	CI	68	GLY	2.7
2	AB	65	LYS	2.7
13	AM	40	GLU	2.7
25	DD	8	LYS	2.7
26	DE	178	VAL	2.7
28	DG	118	ALA	2.7
37	DP	32	VAL	2.7
24	DC	48	ILE	2.7
2	CB	41	ASN	2.7
22	BA	1065	U	2.7
29	DH	13	GLY	2.7
11	AK	62	ALA	2.7
33	DL	90	VAL	2.7
36	DO	57	ALA	2.7
9	AI	92	SER	2.7
39	DR	7	SER	2.7
21	AU	8	ASN	2.7
10	AJ	76	ILE	2.7
32	DK	38	ILE	2.7
57	DA	2306	C	2.7
59	DF	66	ILE	2.7
26	DE	5	LEU	2.7
42	DU	47	PRO	2.7
33	DL	115	GLU	2.7
56	CP	19	VAL	2.7
14	CN	43	ALA	2.7
33	DL	23	ILE	2.7
38	DQ	85	ALA	2.7
3	CC	85	LYS	2.7
22	BA	1072	C	2.7
33	DL	19	LEU	2.7
34	DM	16	ARG	2.7
8	CH	92	PRO	2.7
25	DD	205	PRO	2.7
29	DH	95	GLY	2.7
51	D3	23	HIS	2.7
12	CL	81	ILE	2.7
10	CJ	37	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
17	AQ	69	THR	2.7
54	CG	139	ASP	2.7
16	AP	45	GLU	2.7
59	DF	75	GLY	2.6
21	CU	9	GLU	2.6
36	DO	59	ALA	2.6
51	D3	1	PRO	2.6
17	CQ	5	ARG	2.6
36	DO	64	TYR	2.6
46	BY	7	ARG	2.6
30	BI	63	ASP	2.6
43	DV	64	VAL	2.6
52	D4	34	LYS	2.6
50	D2	12	ARG	2.6
2	AB	213	LEU	2.6
31	DJ	17	VAL	2.6
31	DJ	141	ASP	2.6
37	DP	110	LYS	2.6
42	DU	3	LYS	2.6
57	DA	356	G	2.6
39	DR	21	ARG	2.6
24	DC	102	TYR	2.6
29	BH	102	ALA	2.6
30	DI	13	ALA	2.6
40	DS	24	ILE	2.6
51	D3	63	TYR	2.6
55	CM	35	ALA	2.6
59	DF	175	PRO	2.6
51	D3	14	LYS	2.6
3	AC	111	ASP	2.6
19	CS	57	VAL	2.6
24	DC	81	GLU	2.6
40	DS	95	ARG	2.6
57	DA	2104	C	2.6
37	BP	65	ASN	2.6
42	DU	68	ASN	2.6
48	D0	23	ALA	2.6
39	DR	35	PHE	2.6
9	AI	27	ILE	2.6
3	CC	107	LYS	2.6
29	DH	81	ALA	2.6
59	DF	154	THR	2.6

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Mol	Chain	Res	Type	RSRZ
59	DF	178	LYS	2.6
54	CG	52	ARG	2.6
12	CL	92	VAL	2.6
35	DN	114	GLU	2.6
36	DO	66	GLY	2.6
26	DE	9	GLN	2.6
3	AC	79	LYS	2.6
30	DI	39	LYS	2.6
3	CC	171	ARG	2.6
59	DF	157	THR	2.6
2	AB	27	LYS	2.6
24	DC	103	ILE	2.6
55	CM	55	LEU	2.6
44	DW	42	THR	2.6
25	DD	19	GLY	2.6
28	DG	60	GLY	2.6
30	DI	24	GLY	2.6
54	CG	140	VAL	2.6
59	DF	92	GLY	2.6
44	DW	71	LYS	2.6
10	CJ	16	ARG	2.6
10	CJ	20	GLN	2.6
10	CJ	89	ARG	2.6
21	AU	32	ARG	2.6
59	DF	79	ARG	2.6
33	DL	58	TYR	2.6
54	CG	47	GLU	2.6
2	AB	72	LYS	2.6
57	DA	1459	G	2.6
2	AB	8	MET	2.6
53	CA	1036	A	2.6
14	AN	31	SER	2.6
19	CS	21	ALA	2.6
26	DE	26	ALA	2.6
26	DE	55	SER	2.6
10	CJ	92	LEU	2.6
17	CQ	76	ARG	2.6
33	DL	30	THR	2.6
34	DM	129	THR	2.6
44	BW	45	HIS	2.6
2	CB	82	ALA	2.6
41	DT	13	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
51	D3	64	ALA	2.6
37	DP	8	GLU	2.6
36	DO	90	VAL	2.6
29	BH	99	ILE	2.6
31	DJ	54	ILE	2.6
36	DO	58	ILE	2.6
59	DF	78	ILE	2.6
34	DM	79	ALA	2.5
59	DF	2	LYS	2.5
26	DE	120	VAL	2.5
10	CJ	60	ASP	2.5
54	CG	56	SER	2.5
55	CM	88	LEU	2.5
30	BI	19	PRO	2.5
17	AQ	3	LYS	2.5
24	DC	245	THR	2.5
45	DX	53	LYS	2.5
10	CJ	27	GLU	2.5
54	CG	77	ARG	2.5
17	CQ	45	VAL	2.5
26	DE	32	VAL	2.5
13	AM	41	ASP	2.5
14	CN	45	LEU	2.5
22	BA	884	U	2.5
28	DG	105	SER	2.5
46	DY	49	ASP	2.5
49	D1	12	SER	2.5
20	CT	84	LYS	2.5
22	BA	2107	G	2.5
28	DG	53	PRO	2.5
51	D3	48	MET	2.5
41	DT	59	ASN	2.5
12	CL	93	ARG	2.5
30	DI	104	GLN	2.5
2	AB	153	MET	2.5
19	AS	26	ASP	2.5
29	BH	47	PHE	2.5
1	AA	80	A	2.5
22	BA	654	A	2.5
57	DA	316	C	2.5
11	AK	128	VAL	2.5
37	DP	30	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
44	DW	39	GLN	2.5
51	D3	55	GLY	2.5
11	CK	99	LEU	2.5
36	DO	26	LEU	2.5
7	AG	77	ARG	2.5
28	DG	76	ILE	2.5
35	DN	24	MET	2.5
9	CI	14	SER	2.5
9	CI	95	SER	2.5
14	CN	93	PRO	2.5
29	DH	70	GLU	2.5
54	CG	59	GLU	2.5
54	CG	62	GLU	2.5
19	CS	49	ALA	2.5
37	DP	79	VAL	2.5
54	CG	147	ASN	2.5
3	CC	66	THR	2.5
3	CC	166	TRP	2.5
19	AS	30	LEU	2.5
45	DX	49	ARG	2.5
28	DG	115	GLN	2.5
55	CM	37	GLY	2.5
24	BC	239	PHE	2.5
35	DN	33	ILE	2.5
2	AB	195	VAL	2.5
8	AH	24	VAL	2.5
19	AS	63	ASP	2.5
10	CJ	90	LEU	2.5
22	BA	2885	G	2.5
54	CG	79	VAL	2.5
44	BW	40	ARG	2.5
45	DX	48	LEU	2.5
25	DD	90	PHE	2.5
56	CP	76	LYS	2.5
53	CA	1441	A	2.5
2	CB	225	SER	2.5
26	DE	76	PRO	2.5
30	DI	64	ARG	2.5
8	CH	74	ILE	2.5
14	CN	29	ILE	2.5
53	CA	955	U	2.5
57	DA	1731	G	2.5

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Mol	Chain	Res	Type	RSRZ
57	DA	2307	G	2.5
44	DW	38	ARG	2.5
59	DF	132	ARG	2.5
25	DD	187	LEU	2.5
59	DF	58	ALA	2.5
22	BA	2142	A	2.5
55	CM	100	ARG	2.5
3	CC	91	ALA	2.5
35	DN	115	LEU	2.5
11	AK	125	LYS	2.5
28	DG	111	PRO	2.5
40	DS	13	SER	2.5
38	DQ	22	GLY	2.5
11	AK	72	ALA	2.5
54	CG	130	LYS	2.5
43	DV	91	PHE	2.5
54	CG	63	VAL	2.4
32	DK	33	ALA	2.4
26	DE	154	ASP	2.4
40	DS	2	GLU	2.4
11	AK	84	MET	2.4
14	CN	97	LYS	2.4
24	DC	104	LEU	2.4
47	DZ	55	LYS	2.4
2	CB	34	ARG	2.4
9	AI	126	PHE	2.4
19	CS	40	PHE	2.4
38	DQ	114	ALA	2.4
22	BA	2109	U	2.4
14	AN	51	PRO	2.4
25	DD	1	MET	2.4
9	CI	72	SER	2.4
10	CJ	33	GLY	2.4
55	CM	23	GLY	2.4
31	DJ	35	ARG	2.4
59	DF	7	TYR	2.4
14	CN	11	LYS	2.4
30	DI	38	CYS	2.4
55	CM	84	CYS	2.4
2	CB	106	VAL	2.4
19	AS	70	LEU	2.4
36	DO	28	VAL	2.4

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Mol	Chain	Res	Type	RSRZ
49	D1	42	VAL	2.4
55	CM	91	ARG	2.4
10	CJ	12	ALA	2.4
54	CG	107	ALA	2.4
2	CB	144	GLU	2.4
20	CT	8	LYS	2.4
30	BI	48	ILE	2.4
30	DI	49	GLU	2.4
26	DE	184	ASP	2.4
57	DA	1090	A	2.4
14	CN	72	PHE	2.4
29	DH	132	PHE	2.4
8	AH	60	LEU	2.4
11	AK	36	ARG	2.4
13	AM	94	LEU	2.4
25	DD	188	LEU	2.4
28	DG	86	LEU	2.4
30	BI	111	THR	2.4
36	DO	115	LEU	2.4
44	DW	6	GLY	2.4
29	BH	132	PHE	2.4
57	DA	405	U	2.4
1	AA	1362	A	2.4
30	BI	20	SER	2.4
20	CT	65	LEU	2.4
33	DL	79	LEU	2.4
14	AN	16	ALA	2.4
19	CS	13	HIS	2.4
33	DL	143	GLU	2.4
43	DV	55	GLU	2.4
51	D3	3	ILE	2.4
8	CH	58	LEU	2.4
2	AB	63	LYS	2.4
40	DS	31	GLN	2.4
53	CA	1312	G	2.4
57	DA	1116	G	2.4
34	DM	6	ARG	2.4
30	DI	108	ILE	2.4
28	DG	171	LYS	2.4
30	BI	10	LEU	2.4
9	CI	76	GLY	2.4
24	DC	46	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
25	DD	203	VAL	2.4
26	DE	28	VAL	2.4
40	DS	105	VAL	2.4
59	DF	169	LEU	2.4
2	AB	200	PRO	2.4
35	DN	25	ALA	2.4
36	DO	51	ALA	2.4
51	D3	5	THR	2.4
30	BI	121	ILE	2.4
48	D0	41	HIS	2.4
55	CM	32	ILE	2.4
16	AP	19	VAL	2.4
48	D0	24	VAL	2.4
59	DF	145	VAL	2.4
5	CE	117	ALA	2.4
51	D3	51	LYS	2.4
25	DD	176	ASP	2.4
33	DL	91	ASP	2.4
29	DH	113	SER	2.4
54	CG	85	GLN	2.4
55	CM	73	SER	2.4
9	AI	91	GLU	2.4
2	AB	159	ALA	2.4
9	AI	16	ALA	2.4
52	D4	32	LYS	2.4
19	AS	47	THR	2.4
30	BI	100	ILE	2.4
39	DR	59	ILE	2.4
45	DX	13	THR	2.4
55	CM	103	THR	2.4
14	AN	33	VAL	2.3
29	DH	3	VAL	2.3
32	DK	37	ASP	2.3
55	CM	96	VAL	2.3
57	DA	279	A	2.3
2	AB	80	LYS	2.3
36	DO	112	GLU	2.3
7	AG	84	TYR	2.3
59	DF	118	ALA	2.3
10	AJ	10	LEU	2.3
2	AB	19	THR	2.3
28	DG	103	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
32	DK	104	THR	2.3
14	CN	77	GLY	2.3
14	AN	25	GLU	2.3
26	DE	10	SER	2.3
28	DG	95	ALA	2.3
30	BI	103	ALA	2.3
38	DQ	97	ILE	2.3
42	DU	57	ILE	2.3
24	BC	250	GLN	2.3
14	AN	19	TYR	2.3
25	DD	2	ILE	2.3
44	DW	48	ALA	2.3
53	CA	1315	U	2.3
5	CE	107	GLY	2.3
25	DD	166	GLY	2.3
30	DI	88	GLY	2.3
30	BI	5	GLN	2.3
35	DN	43	GLU	2.3
59	DF	164	GLU	2.3
8	CH	127	TYR	2.3
2	AB	127	LYS	2.3
25	DD	55	LYS	2.3
33	DL	68	SER	2.3
30	BI	98	GLY	2.3
42	DU	100	GLU	2.3
2	AB	163	ILE	2.3
24	DC	94	LEU	2.3
9	CI	40	ARG	2.3
19	CS	31	ARG	2.3
30	BI	102	ARG	2.3
40	DS	18	ARG	2.3
2	AB	160	LEU	2.3
9	CI	86	LEU	2.3
9	CI	106	ASP	2.3
24	DC	109	LEU	2.3
29	DH	83	LYS	2.3
53	CA	1257	A	2.3
56	CP	17	TYR	2.3
44	DW	41	GLY	2.3
28	DG	129	GLU	2.3
1	AA	1032	G	2.3
57	DA	1407	G	2.3

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Mol	Chain	Res	Type	RSRZ
2	AB	118	THR	2.3
49	D1	16	THR	2.3
53	CA	80	A	2.3
33	DL	78	ARG	2.3
36	DO	16	ARG	2.3
2	AB	44	LYS	2.3
2	CB	61	SER	2.3
37	DP	84	SER	2.3
44	DW	18	LYS	2.3
10	AJ	98	VAL	2.3
19	AS	7	GLY	2.3
28	BG	15	ASP	2.3
30	BI	32	VAL	2.3
44	DW	59	PHE	2.3
41	DT	79	ASP	2.3
42	BU	87	GLU	2.3
53	CA	81	A	2.3
57	DA	1084	A	2.3
9	AI	53	LEU	2.3
49	D1	13	SER	2.3
2	AB	180	ILE	2.3
14	AN	23	ARG	2.3
56	CP	9	HIS	2.3
24	DC	29	PHE	2.3
26	DE	11	ALA	2.3
32	DK	76	VAL	2.3
13	AM	83	GLY	2.3
22	BA	2402	U	2.3
53	CA	1230	C	2.3
55	CM	113	LYS	2.3
26	DE	51	GLU	2.3
32	DK	106	GLU	2.3
59	DF	45	ASP	2.3
1	AA	844	G	2.3
13	AM	91	ARG	2.3
40	DS	66	ILE	2.3
3	AC	65	VAL	2.3
28	DG	9	VAL	2.3
30	DI	7	TYR	2.3
41	DT	47	VAL	2.3
59	DF	142	TYR	2.3
32	DK	101	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
14	AN	32	ASP	2.3
24	DC	20	ASN	2.3
57	DA	653	U	2.3
10	CJ	52	LEU	2.3
28	DG	147	LEU	2.3
51	D3	56	LEU	2.3
59	DF	168	LEU	2.3
4	CD	27	ILE	2.3
29	DH	130	VAL	2.3
2	AB	149	GLY	2.2
24	DC	234	GLY	2.2
53	CA	1138	G	2.2
13	AM	84	CYS	2.2
25	DD	181	ASP	2.2
51	D3	54	LEU	2.2
28	DG	155	PRO	2.2
34	DM	46	ILE	2.2
41	DT	34	VAL	2.2
34	DM	35	ALA	2.2
35	DN	27	SER	2.2
44	DW	53	GLY	2.2
54	CG	128	GLU	2.2
29	DH	51	ARG	2.2
45	DX	10	ARG	2.2
2	CB	127	LYS	2.2
29	BH	83	LYS	2.2
41	DT	37	ASP	2.2
43	DV	84	PRO	2.2
55	CM	72	ILE	2.2
24	DC	64	VAL	2.2
3	AC	80	GLY	2.2
33	DL	16	GLY	2.2
37	DP	101	GLU	2.2
3	AC	106	ARG	2.2
43	DV	70	ILE	2.2
2	AB	181	PRO	2.2
28	DG	167	VAL	2.2
46	DY	3	ALA	2.2
50	D2	29	GLN	2.2
53	CA	971	G	2.2
14	CN	79	SER	2.2
39	DR	12	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
3	CC	63	ILE	2.2
39	DR	5	PHE	2.2
43	DV	45	ASP	2.2
10	CJ	64	GLN	2.2
12	CL	91	GLY	2.2
20	CT	35	TYR	2.2
21	AU	35	GLU	2.2
52	D4	12	ARG	2.2
55	CM	106	ARG	2.2
26	DE	185	LYS	2.2
42	DU	46	LYS	2.2
59	DF	62	GLN	2.2
35	DN	79	LEU	2.2
26	DE	181	ILE	2.2
52	D4	19	ARG	2.2
2	CB	75	ALA	2.2
19	CS	75	PRO	2.2
24	DC	45	ASN	2.2
38	DQ	90	ASP	2.2
28	DG	96	ALA	2.2
2	AB	17	HIS	2.2
22	BA	2105	U	2.2
53	CA	1235	U	2.2
34	DM	12	MET	2.2
56	CP	60	TRP	2.2
3	AC	100	ILE	2.2
10	CJ	25	ILE	2.2
25	DD	70	LYS	2.2
41	DT	67	VAL	2.2
49	D1	36	LYS	2.2
55	CM	26	LYS	2.2
7	AG	80	GLY	2.2
29	DH	60	GLU	2.2
30	DI	76	ALA	2.2
52	D4	20	ASP	2.2
57	DA	88	G	2.2
57	DA	329	G	2.2
57	DA	1079	C	2.2
2	AB	41	ASN	2.2
28	DG	11	PRO	2.2
55	CM	18	LEU	2.2
10	CJ	56	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
20	CT	7	LYS	2.2
28	DG	44	HIS	2.2
30	BI	38	CYS	2.2
39	DR	54	VAL	2.2
52	D4	16	ILE	2.2
43	DV	82	TYR	2.2
43	DV	86	LEU	2.2
49	D1	33	LEU	2.2
28	DG	162	ARG	2.2
57	DA	1043	C	2.2
32	DK	53	LYS	2.2
39	DR	32	THR	2.2
2	CB	22	TRP	2.2
28	DG	18	ILE	2.2
59	DF	148	VAL	2.2
5	CE	157	GLY	2.2
53	CA	1313	U	2.2
57	DA	2142	A	2.2
9	AI	29	ILE	2.2
9	CI	83	THR	2.2
30	DI	131	THR	2.2
2	CB	79	VAL	2.2
29	DH	9	VAL	2.2
26	DE	174	GLY	2.2
57	DA	367	G	2.2
19	CS	2	ARG	2.2
29	DH	15	LEU	2.2
40	DS	44	ALA	2.2
59	DF	49	LEU	2.2
59	DF	138	PRO	2.2
2	CB	13	VAL	2.2
9	AI	88	GLU	2.2
25	DD	25	THR	2.2
33	DL	121	THR	2.2
39	DR	47	VAL	2.2
33	DL	87	GLY	2.2
26	DE	21	ARG	2.2
57	DA	1606	C	2.2
25	DD	182	ALA	2.2
53	CA	1032	G	2.2
57	DA	2133	G	2.2
2	AB	168	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
9	CI	41	GLU	2.2
11	CK	83	VAL	2.2
28	DG	10	VAL	2.2
34	DM	131	VAL	2.2
47	DZ	54	VAL	2.2
3	CC	58	ARG	2.2
9	AI	32	ARG	2.2
26	DE	47	LYS	2.2
21	AU	29	ALA	2.1
19	AS	44	ILE	2.1
19	CS	41	PRO	2.1
57	DA	1217	U	2.1
32	DK	77	ILE	2.1
41	DT	31	VAL	2.1
44	DW	70	VAL	2.1
55	CM	89	ARG	2.1
53	CA	1015	G	2.1
2	AB	14	HIS	2.1
31	DJ	75	TYR	2.1
2	AB	183	PHE	2.1
7	AG	17	PHE	2.1
14	CN	59	GLN	2.1
34	DM	60	GLN	2.1
2	CB	28	PRO	2.1
28	DG	25	ILE	2.1
41	DT	82	LYS	2.1
57	DA	1164	C	2.1
59	DF	32	LYS	2.1
59	DF	46	LYS	2.1
8	AH	53	ASP	2.1
28	DG	160	GLY	2.1
49	B1	3	GLY	2.1
57	DA	12	U	2.1
33	DL	75	ALA	2.1
46	DY	44	LYS	2.1
53	CA	1272	G	2.1
17	CQ	32	ILE	2.1
25	DD	73	VAL	2.1
36	DO	55	GLU	2.1
41	DT	91	GLN	2.1
59	DF	134	GLN	2.1
33	DL	114	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
59	DF	23	SER	2.1
48	D0	27	LEU	2.1
20	CT	83	ASN	2.1
29	DH	56	ALA	2.1
42	DU	64	ILE	2.1
56	CP	45	GLU	2.1
57	DA	39	G	2.1
55	CM	57	ASP	2.1
20	CT	71	ALA	2.1
36	DO	77	ALA	2.1
40	DS	54	ALA	2.1
49	B1	51	ALA	2.1
53	CA	87	C	2.1
2	CB	176	ASN	2.1
9	CI	46	VAL	2.1
59	DF	20	ASN	2.1
54	CG	6	ILE	2.1
41	DT	49	LYS	2.1
14	CN	98	ALA	2.1
27	BF	118	ALA	2.1
38	DQ	41	ALA	2.1
13	AM	11	HIS	2.1
27	BF	139	GLU	2.1
43	DV	59	GLU	2.1
48	D0	35	GLU	2.1
33	DL	73	ILE	2.1
42	DU	38	ILE	2.1
57	DA	436	C	2.1
57	DA	587	C	2.1
30	DI	11	GLN	2.1
38	DQ	32	ARG	2.1
40	DS	97	LEU	2.1
59	DF	125	GLY	2.1
19	AS	8	PRO	2.1
24	DC	121	ALA	2.1
55	CM	34	ALA	2.1
59	DF	106	ALA	2.1
28	DG	23	ILE	2.1
7	AG	22	LEU	2.1
9	AI	60	LEU	2.1
13	AM	2	ARG	2.1
30	DI	28	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
33	DL	21	ARG	2.1
54	CG	12	LEU	2.1
59	DF	15	LEU	2.1
3	CC	145	ALA	2.1
30	DI	89	SER	2.1
38	DQ	37	ALA	2.1
3	CC	126	ARG	2.1
25	DD	14	ILE	2.1
33	DL	102	GLY	2.1
57	DA	810	U	2.1
10	CJ	47	GLU	2.1
20	CT	63	LYS	2.1
35	DN	77	ALA	2.1
35	DN	71	ARG	2.1
36	DO	111	ARG	2.1
37	DP	4	ILE	2.1
52	D4	6	SER	2.1
59	DF	33	ILE	2.1
10	AJ	50	THR	2.1
32	DK	90	ASN	2.1
2	AB	24	PRO	2.1
2	AB	69	VAL	2.1
9	CI	123	ARG	2.1
5	AE	114	LEU	2.1
22	BA	1171	G	2.1
55	CM	47	LEU	2.1
10	AJ	49	PHE	2.1
37	DP	62	LYS	2.1
25	DD	9	VAL	2.1
26	DE	167	VAL	2.1
45	DX	12	VAL	2.1
54	CG	144	ALA	2.1
56	CP	7	ALA	2.1
30	DI	78	LEU	2.1
45	DX	32	LEU	2.1
6	AF	37	HIS	2.1
9	CI	49	GLN	2.0
11	CK	67	GLU	2.0
52	B4	12	ARG	2.0
31	DJ	18	VAL	2.0
37	DP	29	VAL	2.0
55	CM	85	TYR	2.0

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Mol	Chain	Res	Type	RSRZ
2	CB	200	PRO	2.0
57	DA	2106	U	2.0
59	DF	22	ASN	2.0
8	AH	125	ILE	2.0
11	AK	99	LEU	2.0
30	BI	24	GLY	2.0
40	DS	33	LEU	2.0
6	AF	68	GLN	2.0
57	DA	1073	A	2.0
30	BI	23	VAL	2.0
39	DR	58	VAL	2.0
48	D0	20	ALA	2.0
56	CP	21	VAL	2.0
28	BG	25	ILE	2.0
29	DH	94	ILE	2.0
35	DN	83	LEU	2.0
46	DY	56	LEU	2.0
49	D1	40	PRO	2.0
51	D3	58	ILE	2.0
59	DF	84	ILE	2.0
59	DF	176	PHE	2.0
2	AB	191	ASP	2.0
14	CN	99	SER	2.0
55	CM	71	GLU	2.0
38	DQ	35	PHE	2.0
36	DO	80	GLU	2.0
2	AB	38	HIS	2.0
2	CB	38	HIS	2.0
28	DG	73	SER	2.0
57	DA	1622	G	2.0
30	BI	34	ILE	2.0
40	DS	99	ARG	2.0
44	DW	7	GLY	2.0
9	CI	124	PRO	2.0
53	CA	1209	C	2.0
56	CP	48	GLU	2.0
37	DP	36	LYS	2.0
2	AB	113	LEU	2.0
2	CB	67	LEU	2.0
30	BI	6	ALA	2.0
35	DN	45	ARG	2.0
43	DV	26	PHE	2.0

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Mol	Chain	Res	Type	RSRZ
57	DA	549	G	2.0
57	DA	344	A	2.0
57	DA	1744	A	2.0
20	CT	70	LYS	2.0
3	CC	163	ARG	2.0
13	AM	33	LEU	2.0
35	DN	30	ARG	2.0
35	DN	116	VAL	2.0

6.2 Non-standard residues in protein, DNA, RNA chains ⓘ

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

6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

6.4 Ligands ⓘ

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
60	MG	DA	3124	1/1	0.10	0.50	211,211,211,211	0
60	MG	DA	3025	1/1	0.12	1.43	253,253,253,253	0
60	MG	DA	3063	1/1	0.26	0.97	305,305,305,305	0
60	MG	DA	3062	1/1	0.27	2.37	262,262,262,262	0
60	MG	DA	3130	1/1	0.41	1.45	305,305,305,305	0
60	MG	DA	3019	1/1	0.48	0.89	252,252,252,252	0
60	MG	DA	3061	1/1	0.49	0.61	210,210,210,210	0
60	MG	DA	3037	1/1	0.50	0.18	203,203,203,203	0
60	MG	CA	1602	1/1	0.54	0.17	131,131,131,131	0
60	MG	DA	3105	1/1	0.54	0.23	305,305,305,305	0
60	MG	DA	3083	1/1	0.55	0.10	176,176,176,176	0
60	MG	DA	3127	1/1	0.56	1.91	274,274,274,274	0
60	MG	DE	301	1/1	0.58	0.31	191,191,191,191	0
60	MG	DA	3117	1/1	0.61	0.12	99,99,99,99	0
60	MG	DA	3085	1/1	0.62	0.16	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	DA	3026	1/1	0.62	0.20	139,139,139,139	0
60	MG	DA	3011	1/1	0.63	0.27	215,215,215,215	0
60	MG	DA	3048	1/1	0.63	0.16	243,243,243,243	0
60	MG	DA	3075	1/1	0.63	0.51	229,229,229,229	0
60	MG	DJ	201	1/1	0.65	1.44	331,331,331,331	0
60	MG	DA	3044	1/1	0.66	0.13	230,230,230,230	0
60	MG	DA	3002	1/1	0.67	0.39	229,229,229,229	0
60	MG	CA	1630	1/1	0.69	0.12	176,176,176,176	0
60	MG	DA	3090	1/1	0.70	0.20	209,209,209,209	0
60	MG	DA	3077	1/1	0.71	0.79	259,259,259,259	0
60	MG	BA	3054	1/1	0.72	0.21	214,214,214,214	0
60	MG	DA	3030	1/1	0.72	0.20	66,66,66,66	0
60	MG	DA	3122	1/1	0.72	0.11	155,155,155,155	0
60	MG	DA	3008	1/1	0.72	0.23	153,153,153,153	0
60	MG	DA	3072	1/1	0.73	0.12	193,193,193,193	0
60	MG	DA	3107	1/1	0.73	0.60	201,201,201,201	0
60	MG	BA	3068	1/1	0.73	0.11	174,174,174,174	0
60	MG	DA	3007	1/1	0.74	0.50	188,188,188,188	0
60	MG	DA	3073	1/1	0.74	1.21	276,276,276,276	0
60	MG	DA	3133	1/1	0.74	0.26	241,241,241,241	0
60	MG	DA	3108	1/1	0.74	0.31	123,123,123,123	0
60	MG	DA	3132	1/1	0.75	0.24	225,225,225,225	0
60	MG	DA	3017	1/1	0.76	0.23	147,147,147,147	0
60	MG	DA	3006	1/1	0.76	0.12	149,149,149,149	0
60	MG	DA	3110	1/1	0.76	0.24	174,174,174,174	0
60	MG	CA	1629	1/1	0.76	0.20	214,214,214,214	0
60	MG	AN	201	1/1	0.77	0.20	219,219,219,219	0
60	MG	DA	3109	1/1	0.77	0.33	169,169,169,169	0
60	MG	DA	3041	1/1	0.77	0.20	133,133,133,133	0
60	MG	CA	1622	1/1	0.77	0.12	196,196,196,196	0
60	MG	CA	1615	1/1	0.78	0.18	243,243,243,243	0
60	MG	DA	3023	1/1	0.78	0.18	90,90,90,90	0
60	MG	CA	1618	1/1	0.78	0.17	141,141,141,141	0
60	MG	DA	3013	1/1	0.78	0.36	209,209,209,209	0
60	MG	DA	3082	1/1	0.79	0.11	214,214,214,214	0
60	MG	AA	1610	1/1	0.79	0.08	200,200,200,200	0
60	MG	BA	3135	1/1	0.79	0.38	204,204,204,204	0
60	MG	CA	1623	1/1	0.80	0.12	79,79,79,79	0
60	MG	CA	1617	1/1	0.80	0.14	205,205,205,205	0
60	MG	DA	3027	1/1	0.80	0.54	277,277,277,277	0
60	MG	CA	1628	1/1	0.81	0.34	259,259,259,259	0
60	MG	BB	201	1/1	0.81	0.22	246,246,246,246	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	DA	3024	1/1	0.81	0.14	147,147,147,147	0
60	MG	DA	3005	1/1	0.82	0.43	280,280,280,280	0
60	MG	CA	1601	1/1	0.82	0.08	123,123,123,123	0
60	MG	BA	3024	1/1	0.82	0.35	206,206,206,206	0
60	MG	CA	1616	1/1	0.82	0.35	279,279,279,279	0
60	MG	DA	3098	1/1	0.83	0.22	218,218,218,218	0
60	MG	BA	3058	1/1	0.83	0.18	106,106,106,106	0
60	MG	DA	3125	1/1	0.83	0.10	132,132,132,132	0
60	MG	BA	3086	1/1	0.83	0.20	144,144,144,144	0
60	MG	CA	1610	1/1	0.84	0.09	220,220,220,220	0
60	MG	DA	3056	1/1	0.84	0.37	243,243,243,243	0
60	MG	DA	3032	1/1	0.84	0.19	193,193,193,193	0
60	MG	DA	3050	1/1	0.84	0.17	89,89,89,89	0
60	MG	DA	3028	1/1	0.84	0.39	195,195,195,195	0
60	MG	DA	3046	1/1	0.84	0.17	152,152,152,152	0
60	MG	AA	1618	1/1	0.85	0.68	217,217,217,217	0
60	MG	CA	1612	1/1	0.85	0.26	133,133,133,133	0
60	MG	BA	3097	1/1	0.85	0.15	182,182,182,182	0
60	MG	DA	3070	1/1	0.85	0.20	61,61,61,61	0
60	MG	DA	3040	1/1	0.86	0.21	120,120,120,120	0
60	MG	DA	3001	1/1	0.86	0.12	149,149,149,149	0
60	MG	BA	3092	1/1	0.86	0.07	30,30,30,30	0
60	MG	DA	3126	1/1	0.86	0.17	129,129,129,129	0
60	MG	DA	3068	1/1	0.87	0.28	225,225,225,225	0
60	MG	DA	3091	1/1	0.87	0.16	167,167,167,167	0
60	MG	DA	3103	1/1	0.87	0.16	36,36,36,36	0
60	MG	DA	3074	1/1	0.87	0.45	239,239,239,239	0
60	MG	DA	3003	1/1	0.87	0.97	253,253,253,253	0
60	MG	DA	3057	1/1	0.88	0.39	257,257,257,257	0
60	MG	CA	1642	1/1	0.88	0.07	121,121,121,121	0
60	MG	CA	1606	1/1	0.88	0.14	77,77,77,77	0
60	MG	DA	3045	1/1	0.88	0.14	76,76,76,76	0
60	MG	DA	3087	1/1	0.88	0.15	178,178,178,178	0
60	MG	CA	1632	1/1	0.88	0.17	143,143,143,143	0
60	MG	DA	3004	1/1	0.89	0.16	86,86,86,86	0
60	MG	BA	3044	1/1	0.89	0.16	56,56,56,56	0
60	MG	DA	3010	1/1	0.89	0.65	261,261,261,261	0
60	MG	DA	3101	1/1	0.89	0.11	73,73,73,73	0
60	MG	AA	1603	1/1	0.89	0.10	131,131,131,131	0
60	MG	CA	1640	1/1	0.89	0.29	171,171,171,171	0
60	MG	CA	1608	1/1	0.89	0.22	82,82,82,82	0
60	MG	DA	3119	1/1	0.89	0.22	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	DA	3079	1/1	0.89	0.13	149,149,149,149	0
60	MG	DA	3012	1/1	0.89	0.12	57,57,57,57	0
60	MG	BA	3069	1/1	0.89	0.19	223,223,223,223	0
60	MG	DA	3112	1/1	0.89	0.08	114,114,114,114	0
60	MG	CA	1614	1/1	0.89	0.65	271,271,271,271	0
60	MG	AA	1617	1/1	0.90	0.13	111,111,111,111	0
60	MG	BA	3117	1/1	0.90	0.09	79,79,79,79	0
60	MG	DA	3029	1/1	0.90	0.17	135,135,135,135	0
60	MG	DB	201	1/1	0.90	0.12	109,109,109,109	0
60	MG	DA	3014	1/1	0.90	0.40	177,177,177,177	0
60	MG	DA	3071	1/1	0.90	0.09	136,136,136,136	0
60	MG	AA	1614	1/1	0.90	0.54	201,201,201,201	0
60	MG	CA	1634	1/1	0.90	0.16	200,200,200,200	0
60	MG	DA	3069	1/1	0.90	0.12	93,93,93,93	0
60	MG	BA	3132	1/1	0.90	0.40	145,145,145,145	0
60	MG	BA	3004	1/1	0.90	0.13	150,150,150,150	0
60	MG	DA	3022	1/1	0.90	0.17	118,118,118,118	0
60	MG	BA	3103	1/1	0.90	0.20	8,8,8,8	0
60	MG	DA	3094	1/1	0.91	0.21	98,98,98,98	0
60	MG	DA	3043	1/1	0.91	0.22	112,112,112,112	0
60	MG	DA	3129	1/1	0.91	0.62	271,271,271,271	0
60	MG	DA	3095	1/1	0.91	0.15	110,110,110,110	0
60	MG	CA	1607	1/1	0.91	0.21	222,222,222,222	0
60	MG	DA	3042	1/1	0.91	0.14	166,166,166,166	0
60	MG	DA	3086	1/1	0.91	0.10	185,185,185,185	0
60	MG	DA	3031	1/1	0.91	0.10	121,121,121,121	0
60	MG	DC	301	1/1	0.91	0.15	134,134,134,134	0
60	MG	CA	1611	1/1	0.91	0.18	116,116,116,116	0
60	MG	DA	3058	1/1	0.91	0.10	204,204,204,204	0
60	MG	DA	3096	1/1	0.91	0.29	180,180,180,180	0
60	MG	BA	3022	1/1	0.91	0.11	20,20,20,20	0
60	MG	CA	1624	1/1	0.91	0.31	123,123,123,123	0
60	MG	DA	3121	1/1	0.91	0.15	114,114,114,114	0
60	MG	DA	3084	1/1	0.91	0.26	157,157,157,157	0
60	MG	BA	3089	1/1	0.91	0.08	39,39,39,39	0
60	MG	AA	1627	1/1	0.91	0.17	165,165,165,165	0
60	MG	DA	3078	1/1	0.92	0.11	95,95,95,95	0
60	MG	DA	3097	1/1	0.92	0.20	143,143,143,143	0
60	MG	DA	3049	1/1	0.92	0.14	150,150,150,150	0
60	MG	BA	3047	1/1	0.92	0.13	112,112,112,112	0
60	MG	AA	1620	1/1	0.92	0.08	120,120,120,120	0
62	ZN	D4	101	1/1	0.92	0.09	197,197,197,197	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3094	1/1	0.92	0.07	42,42,42,42	0
60	MG	AA	1639	1/1	0.92	0.06	92,92,92,92	0
60	MG	AA	1638	1/1	0.92	0.11	139,139,139,139	0
60	MG	CA	1631	1/1	0.92	0.20	111,111,111,111	0
60	MG	CA	1637	1/1	0.92	0.19	140,140,140,140	0
60	MG	DA	3100	1/1	0.92	0.24	149,149,149,149	0
60	MG	BB	202	1/1	0.93	0.09	54,54,54,54	0
60	MG	DA	3131	1/1	0.93	0.10	104,104,104,104	0
60	MG	BA	3087	1/1	0.93	0.12	182,182,182,182	0
60	MG	AA	1623	1/1	0.93	0.07	104,104,104,104	0
60	MG	DA	3060	1/1	0.93	0.07	144,144,144,144	0
60	MG	DA	3053	1/1	0.93	0.10	78,78,78,78	0
60	MG	DA	3067	1/1	0.93	0.11	95,95,95,95	0
60	MG	CA	1627	1/1	0.93	0.33	220,220,220,220	0
60	MG	DA	3052	1/1	0.93	0.20	105,105,105,105	0
60	MG	DA	3120	1/1	0.93	0.14	84,84,84,84	0
60	MG	BA	3090	1/1	0.93	0.14	93,93,93,93	0
60	MG	BA	3012	1/1	0.93	0.13	5,5,5,5	0
60	MG	DA	3034	1/1	0.93	0.21	156,156,156,156	0
60	MG	BA	3134	1/1	0.93	0.11	145,145,145,145	0
60	MG	BA	3003	1/1	0.94	0.13	44,44,44,44	0
60	MG	BA	3002	1/1	0.94	0.09	60,60,60,60	0
60	MG	BA	3055	1/1	0.94	0.36	240,240,240,240	0
60	MG	BA	3001	1/1	0.94	0.07	84,84,84,84	0
60	MG	CA	1620	1/1	0.94	0.20	209,209,209,209	0
60	MG	DA	3038	1/1	0.94	0.18	163,163,163,163	0
60	MG	DA	3081	1/1	0.94	0.22	143,143,143,143	0
60	MG	DA	3059	1/1	0.94	0.38	241,241,241,241	0
60	MG	DA	3123	1/1	0.94	0.14	65,65,65,65	0
60	MG	AA	1604	1/1	0.94	0.10	112,112,112,112	0
60	MG	AA	1607	1/1	0.94	0.10	98,98,98,98	0
60	MG	DA	3018	1/1	0.94	0.21	225,225,225,225	0
60	MG	AA	1629	1/1	0.94	0.14	227,227,227,227	0
60	MG	CA	1639	1/1	0.94	0.06	148,148,148,148	0
60	MG	DA	3128	1/1	0.94	0.26	138,138,138,138	0
60	MG	AA	1622	1/1	0.94	0.16	185,185,185,185	0
60	MG	BA	3075	1/1	0.94	0.19	74,74,74,74	0
60	MG	DA	3102	1/1	0.94	0.16	105,105,105,105	0
60	MG	DA	3016	1/1	0.95	0.12	75,75,75,75	0
60	MG	AA	1630	1/1	0.95	0.14	209,209,209,209	0
60	MG	DA	3009	1/1	0.95	0.11	75,75,75,75	0
60	MG	CA	1604	1/1	0.95	0.04	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3041	1/1	0.95	0.14	12,12,12,12	0
60	MG	CA	1641	1/1	0.95	0.18	73,73,73,73	0
60	MG	DA	3106	1/1	0.95	0.10	55,55,55,55	0
60	MG	BA	3091	1/1	0.95	0.14	131,131,131,131	0
60	MG	CA	1613	1/1	0.95	0.08	116,116,116,116	0
60	MG	BA	3124	1/1	0.95	0.16	22,22,22,22	0
60	MG	CA	1636	1/1	0.95	0.10	130,130,130,130	0
60	MG	CA	1638	1/1	0.95	0.11	106,106,106,106	0
60	MG	BA	3123	1/1	0.95	0.56	112,112,112,112	0
60	MG	DA	3051	1/1	0.95	0.09	49,49,49,49	0
60	MG	BA	3073	1/1	0.95	0.09	116,116,116,116	0
60	MG	BA	3118	1/1	0.95	0.29	136,136,136,136	0
60	MG	AA	1609	1/1	0.95	0.10	47,47,47,47	0
60	MG	BA	3114	1/1	0.95	0.15	148,148,148,148	0
60	MG	BA	3104	1/1	0.95	0.18	27,27,27,27	0
60	MG	BA	3057	1/1	0.95	0.06	43,43,43,43	0
60	MG	BA	3082	1/1	0.95	0.17	98,98,98,98	0
60	MG	DA	3093	1/1	0.95	0.30	166,166,166,166	0
60	MG	DA	3076	1/1	0.95	0.08	110,110,110,110	0
60	MG	BA	3033	1/1	0.95	0.16	89,89,89,89	0
60	MG	BA	3051	1/1	0.95	0.10	48,48,48,48	0
60	MG	DA	3092	1/1	0.95	0.12	209,209,209,209	0
60	MG	CA	1625	1/1	0.95	0.21	160,160,160,160	0
60	MG	BA	3046	1/1	0.95	0.12	142,142,142,142	0
60	MG	BA	3007	1/1	0.95	0.10	84,84,84,84	0
60	MG	AA	1608	1/1	0.95	0.14	38,38,38,38	0
60	MG	BA	3060	1/1	0.96	0.26	257,257,257,257	0
60	MG	BA	3122	1/1	0.96	0.12	25,25,25,25	0
60	MG	AA	1613	1/1	0.96	0.09	56,56,56,56	0
60	MG	BA	3008	1/1	0.96	0.16	29,29,29,29	0
60	MG	DA	3047	1/1	0.96	0.14	82,82,82,82	0
60	MG	AA	1601	1/1	0.96	0.15	93,93,93,93	0
60	MG	DA	3099	1/1	0.96	0.15	96,96,96,96	0
60	MG	BA	3014	1/1	0.96	0.17	75,75,75,75	0
60	MG	DA	3035	1/1	0.96	0.36	228,228,228,228	0
60	MG	DA	3111	1/1	0.96	0.11	89,89,89,89	0
60	MG	DA	3064	1/1	0.96	0.13	65,65,65,65	0
60	MG	BB	204	1/1	0.96	0.11	30,30,30,30	0
60	MG	DA	3036	1/1	0.96	0.15	111,111,111,111	0
60	MG	CA	1603	1/1	0.96	0.16	140,140,140,140	0
60	MG	DA	3033	1/1	0.96	0.07	91,91,91,91	0
62	ZN	B4	101	1/1	0.96	0.05	81,81,81,81	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3056	1/1	0.96	0.12	86,86,86,86	0
60	MG	BA	3111	1/1	0.96	0.13	93,93,93,93	0
60	MG	BA	3010	1/1	0.96	0.09	48,48,48,48	0
60	MG	BA	3106	1/1	0.96	0.14	13,13,13,13	0
60	MG	BA	3115	1/1	0.96	0.18	8,8,8,8	0
60	MG	DA	3104	1/1	0.96	0.15	48,48,48,48	0
60	MG	CA	1633	1/1	0.96	0.07	82,82,82,82	0
60	MG	DA	3015	1/1	0.96	0.26	277,277,277,277	0
60	MG	BA	3005	1/1	0.96	0.07	60,60,60,60	0
60	MG	AA	1635	1/1	0.96	0.21	198,198,198,198	0
60	MG	DA	3021	1/1	0.96	0.15	169,169,169,169	0
60	MG	DA	3080	1/1	0.96	0.25	70,70,70,70	0
60	MG	BA	3100	1/1	0.96	0.17	26,26,26,26	0
60	MG	AA	1633	1/1	0.96	0.09	52,52,52,52	0
60	MG	AA	1636	1/1	0.96	0.18	149,149,149,149	0
60	MG	DA	3113	1/1	0.96	0.06	123,123,123,123	0
60	MG	CA	1619	1/1	0.96	0.26	243,243,243,243	0
60	MG	BA	3083	1/1	0.96	0.10	52,52,52,52	0
60	MG	DA	3066	1/1	0.96	0.12	65,65,65,65	0
60	MG	AA	1619	1/1	0.96	0.06	165,165,165,165	0
60	MG	BA	3078	1/1	0.96	0.07	49,49,49,49	0
60	MG	BA	3085	1/1	0.97	0.13	24,24,24,24	0
60	MG	CA	1605	1/1	0.97	0.17	47,47,47,47	0
60	MG	BA	3045	1/1	0.97	0.12	13,13,13,13	0
60	MG	CA	1609	1/1	0.97	0.13	71,71,71,71	0
60	MG	CA	1635	1/1	0.97	0.09	85,85,85,85	0
60	MG	AA	1626	1/1	0.97	0.20	185,185,185,185	0
60	MG	DA	3114	1/1	0.97	0.24	166,166,166,166	0
60	MG	BA	3061	1/1	0.97	0.12	11,11,11,11	0
60	MG	AA	1628	1/1	0.97	0.06	70,70,70,70	0
60	MG	BA	3079	1/1	0.97	0.11	20,20,20,20	0
60	MG	DA	3116	1/1	0.97	0.10	59,59,59,59	0
60	MG	AA	1637	1/1	0.97	0.11	34,34,34,34	0
60	MG	BA	3015	1/1	0.97	0.07	30,30,30,30	0
60	MG	BA	3071	1/1	0.97	0.11	8,8,8,8	0
60	MG	AA	1616	1/1	0.97	0.13	123,123,123,123	0
60	MG	BA	3009	1/1	0.97	0.15	12,12,12,12	0
60	MG	BA	3049	1/1	0.97	0.11	72,72,72,72	0
60	MG	BA	3076	1/1	0.97	0.06	31,31,31,31	0
60	MG	BA	3048	1/1	0.97	0.14	18,18,18,18	0
60	MG	AA	1625	1/1	0.97	0.22	31,31,31,31	0
60	MG	AA	1632	1/1	0.97	0.10	53,53,53,53	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3035	1/1	0.97	0.20	241,241,241,241	0
60	MG	DA	3039	1/1	0.97	0.15	59,59,59,59	0
60	MG	BA	3098	1/1	0.97	0.12	46,46,46,46	0
60	MG	BA	3084	1/1	0.97	0.13	9,9,9,9	0
60	MG	DA	3118	1/1	0.97	0.06	75,75,75,75	0
60	MG	BA	3107	1/1	0.97	0.19	8,8,8,8	0
60	MG	CA	1621	1/1	0.97	0.17	60,60,60,60	0
61	CLM	BA	3136	20/20	0.97	0.20	2,26,77,92	0
60	MG	AA	1612	1/1	0.97	0.14	103,103,103,103	0
60	MG	DA	3088	1/1	0.97	0.21	102,102,102,102	0
60	MG	BA	3030	1/1	0.97	0.13	34,34,34,34	0
60	MG	BA	3039	1/1	0.98	0.20	9,9,9,9	0
60	MG	BA	3101	1/1	0.98	0.06	105,105,105,105	0
60	MG	BA	3027	1/1	0.98	0.12	34,34,34,34	0
60	MG	BA	3096	1/1	0.98	0.17	59,59,59,59	0
60	MG	BA	3112	1/1	0.98	0.16	33,33,33,33	0
60	MG	BA	3021	1/1	0.98	0.11	15,15,15,15	0
60	MG	BA	3059	1/1	0.98	0.16	147,147,147,147	0
60	MG	AA	1615	1/1	0.98	0.04	127,127,127,127	0
60	MG	BA	3119	1/1	0.98	0.14	15,15,15,15	0
60	MG	DA	3055	1/1	0.98	0.10	121,121,121,121	0
60	MG	BA	3025	1/1	0.98	0.10	38,38,38,38	0
60	MG	BA	3050	1/1	0.98	0.10	12,12,12,12	0
60	MG	BA	3081	1/1	0.98	0.04	41,41,41,41	0
60	MG	BA	3108	1/1	0.98	0.17	6,6,6,6	0
60	MG	BA	3102	1/1	0.98	0.10	14,14,14,14	0
60	MG	BA	3006	1/1	0.98	0.05	47,47,47,47	0
60	MG	BA	3064	1/1	0.98	0.08	8,8,8,8	0
60	MG	CA	1626	1/1	0.98	0.22	27,27,27,27	0
60	MG	BA	3029	1/1	0.98	0.20	10,10,10,10	0
60	MG	BA	3017	1/1	0.98	0.07	27,27,27,27	0
60	MG	DA	3020	1/1	0.98	0.19	36,36,36,36	0
60	MG	BA	3080	1/1	0.98	0.14	25,25,25,25	0
60	MG	BA	3125	1/1	0.98	0.11	26,26,26,26	0
60	MG	BA	3077	1/1	0.98	0.13	151,151,151,151	0
60	MG	AA	1624	1/1	0.98	0.07	139,139,139,139	0
60	MG	AA	1641	1/1	0.98	0.16	27,27,27,27	0
60	MG	DA	3089	1/1	0.98	0.06	81,81,81,81	0
60	MG	DA	3115	1/1	0.98	0.19	69,69,69,69	0
60	MG	AA	1640	1/1	0.98	0.25	189,189,189,189	0
60	MG	BA	3131	1/1	0.98	0.09	96,96,96,96	0
60	MG	DA	3065	1/1	0.98	0.12	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3130	1/1	0.98	0.44	257,257,257,257	0
60	MG	AA	1606	1/1	0.98	0.11	58,58,58,58	0
60	MG	BA	3028	1/1	0.98	0.07	45,45,45,45	0
60	MG	DA	3054	1/1	0.98	0.13	125,125,125,125	0
60	MG	AA	1611	1/1	0.98	0.10	81,81,81,81	0
60	MG	AA	1634	1/1	0.98	0.07	58,58,58,58	0
60	MG	BA	3113	1/1	0.98	0.10	34,34,34,34	0
60	MG	BA	3109	1/1	0.98	0.10	105,105,105,105	0
60	MG	BA	3088	1/1	0.98	0.10	22,22,22,22	0
60	MG	BA	3074	1/1	0.98	0.17	15,15,15,15	0
60	MG	BA	3011	1/1	0.98	0.08	149,149,149,149	0
60	MG	BA	3127	1/1	0.98	0.10	21,21,21,21	0
60	MG	BA	3023	1/1	0.99	0.12	8,8,8,8	0
60	MG	BA	3121	1/1	0.99	0.14	5,5,5,5	0
60	MG	BA	3099	1/1	0.99	0.10	32,32,32,32	0
60	MG	AA	1621	1/1	0.99	0.14	35,35,35,35	0
60	MG	BA	3032	1/1	0.99	0.16	6,6,6,6	0
60	MG	BB	203	1/1	0.99	0.10	16,16,16,16	0
60	MG	BL	201	1/1	0.99	0.07	34,34,34,34	0
60	MG	BA	3036	1/1	0.99	0.15	30,30,30,30	0
60	MG	BA	3013	1/1	0.99	0.18	6,6,6,6	0
60	MG	BA	3095	1/1	0.99	0.12	13,13,13,13	0
60	MG	BA	3065	1/1	0.99	0.15	27,27,27,27	0
60	MG	BA	3129	1/1	0.99	0.15	15,15,15,15	0
60	MG	BA	3070	1/1	0.99	0.11	76,76,76,76	0
60	MG	BA	3072	1/1	0.99	0.16	81,81,81,81	0
60	MG	BA	3116	1/1	0.99	0.06	14,14,14,14	0
60	MG	BA	3052	1/1	0.99	0.09	12,12,12,12	0
60	MG	BA	3031	1/1	0.99	0.12	15,15,15,15	0
60	MG	BA	3126	1/1	0.99	0.14	32,32,32,32	0
60	MG	BA	3133	1/1	0.99	0.14	5,5,5,5	0
60	MG	AA	1605	1/1	0.99	0.12	30,30,30,30	0
60	MG	BA	3128	1/1	0.99	0.13	6,6,6,6	0
60	MG	BA	3120	1/1	0.99	0.06	44,44,44,44	0
60	MG	BA	3026	1/1	0.99	0.18	122,122,122,122	0
60	MG	BA	3053	1/1	0.99	0.10	35,35,35,35	0
60	MG	AA	1602	1/1	0.99	0.08	117,117,117,117	0
60	MG	BA	3093	1/1	0.99	0.10	68,68,68,68	0
60	MG	BA	3110	1/1	0.99	0.09	65,65,65,65	0
60	MG	BA	3043	1/1	0.99	0.25	19,19,19,19	0
60	MG	BA	3105	1/1	0.99	0.15	11,11,11,11	0
60	MG	BA	3067	1/1	0.99	0.11	22,22,22,22	0

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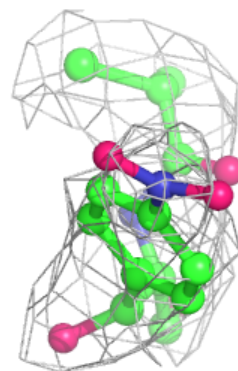
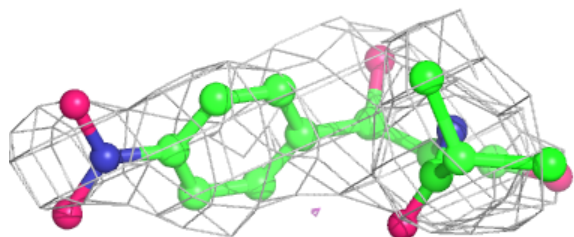
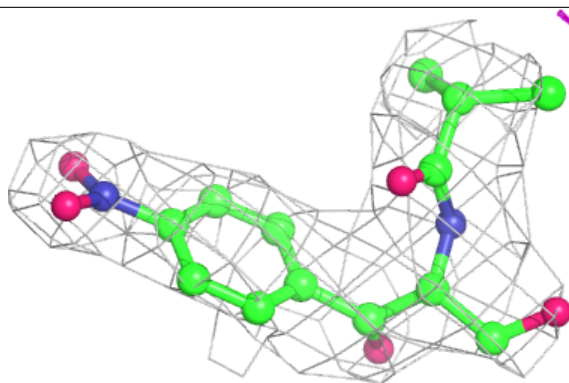
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
60	MG	BA	3019	1/1	0.99	0.15	50,50,50,50	0
60	MG	BA	3038	1/1	0.99	0.17	21,21,21,21	0
60	MG	BA	3016	1/1	0.99	0.07	5,5,5,5	0
60	MG	BA	3034	1/1	0.99	0.09	9,9,9,9	0
60	MG	AA	1631	1/1	0.99	0.13	95,95,95,95	0
60	MG	BA	3066	1/1	0.99	0.11	14,14,14,14	0
60	MG	BA	3020	1/1	0.99	0.11	21,21,21,21	0
60	MG	BA	3042	1/1	0.99	0.13	34,34,34,34	0
60	MG	BA	3040	1/1	0.99	0.12	11,11,11,11	0
60	MG	AA	1642	1/1	0.99	0.09	42,42,42,42	0
60	MG	BA	3037	1/1	0.99	0.16	7,7,7,7	0
60	MG	BA	3018	1/1	1.00	0.30	10,10,10,10	0
60	MG	BA	3063	1/1	1.00	0.12	11,11,11,11	0
60	MG	BA	3062	1/1	1.00	0.13	9,9,9,9	0

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

Electron density around CLM BA 3136:

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



6.5 Other polymers [i](#)

There are no such residues in this entry.