



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 20, 2026 – 08:59 AM UTC

PDB ID : 4V7T / pdb_00004v7t
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 types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

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

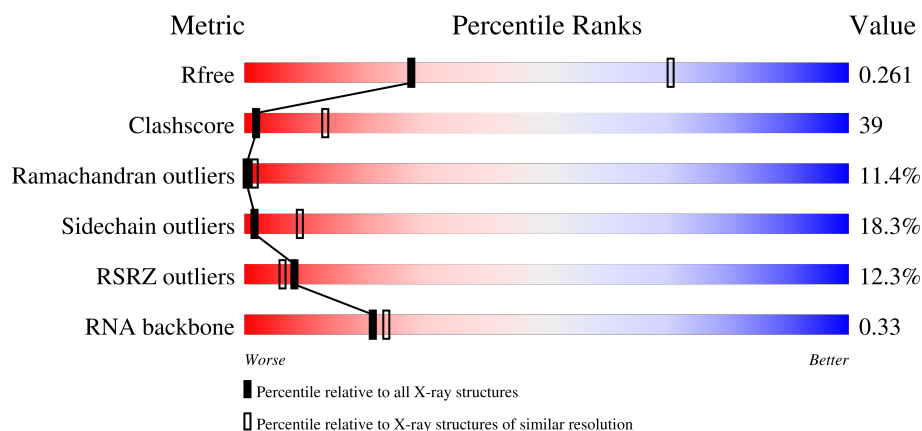
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.19 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1466 (3.20-3.20)
Clashscore	190562	1573 (3.20-3.20)
Ramachandran outliers	187476	1548 (3.20-3.20)
Sidechain outliers	187428	1547 (3.20-3.20)
RSRZ outliers	180081	1466 (3.20-3.20)
RNA backbone	3983	1222 (3.50-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. 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	24% 45% 20% 11%
2	AB	218	7% 22% 55% 19% .
2	CB	218	14% 29% 55% 14% .
3	AC	206	3% 34% 52% 11% .

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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	3062	-	-	-	X
60	MG	DA	3073	-	-	-	X
60	MG	DA	3124	-	-	-	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 (CCD ID: MG) (formula: Mg).

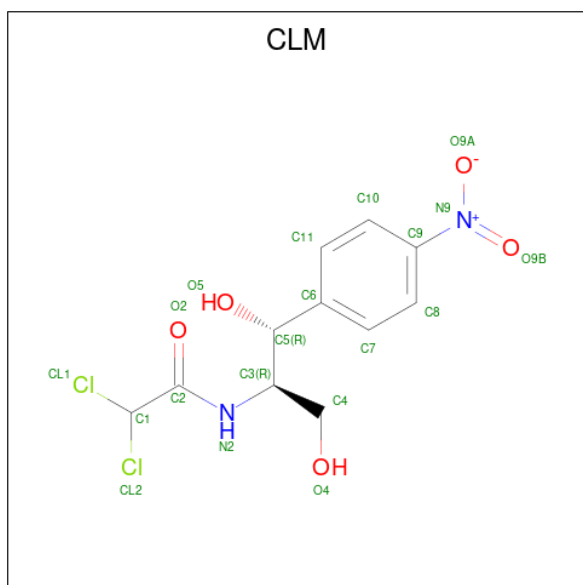
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	AA	42	Total	Mg	0	0
			42	42		
60	AN	1	Total	Mg	0	0
			1	1		
60	BA	135	Total	Mg	0	0
			135	135		
60	BB	4	Total	Mg	0	0
			4	4		
60	BL	1	Total	Mg	0	0
			1	1		
60	CA	42	Total	Mg	0	0
			42	42		
60	DA	133	Total	Mg	0	0
			133	133		
60	DB	1	Total	Mg	0	0
			1	1		
60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

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	DE	1	Total	Mg	0	0
			1	1		
60	DJ	1	Total	Mg	0	0
			1	1		

- Molecule 61 is CHLORAMPHENICOL (CCD ID: 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 (CCD ID: 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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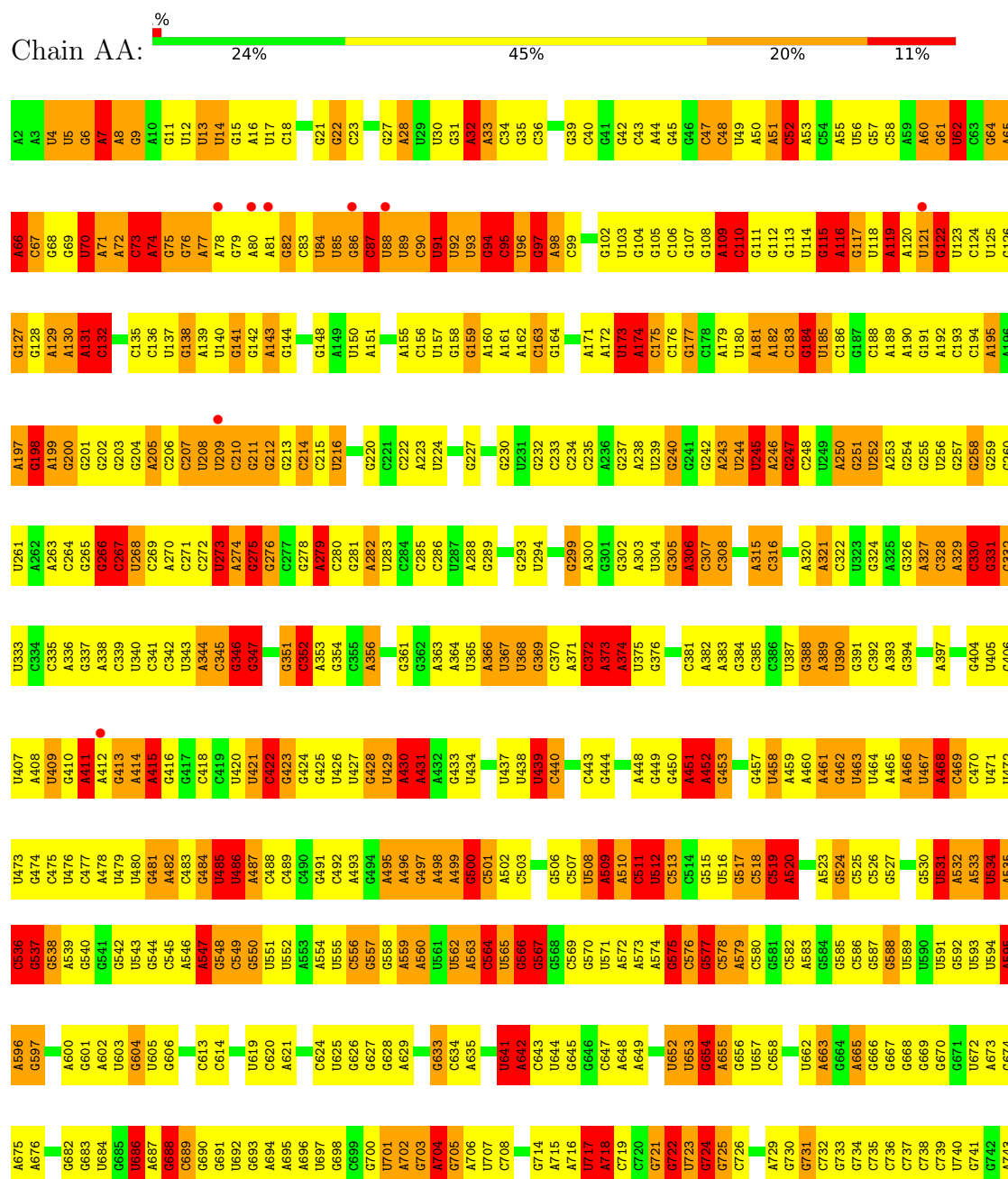
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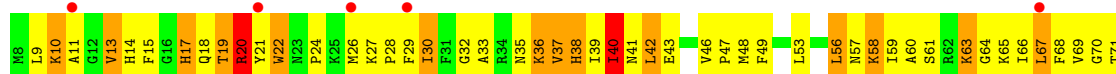
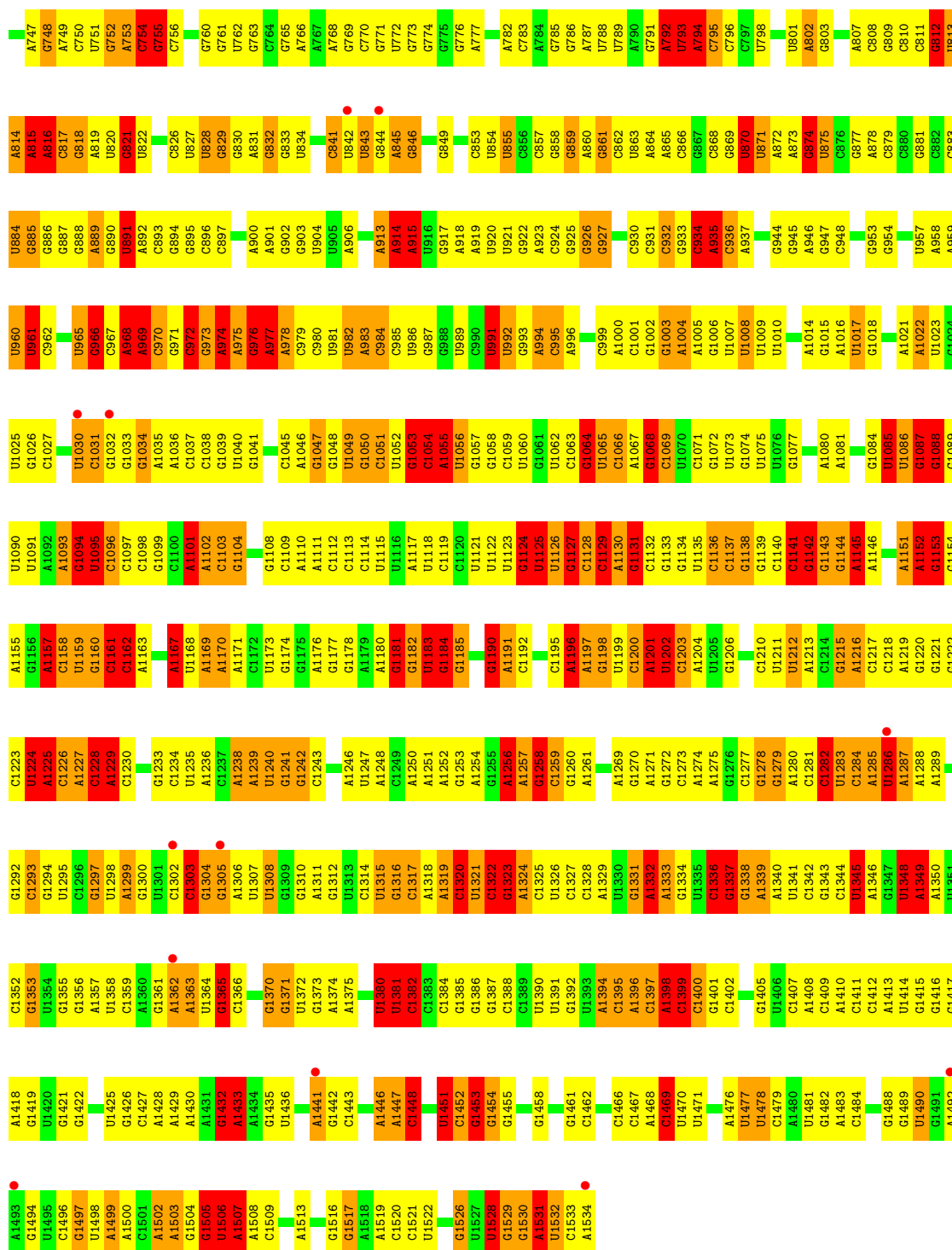
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
63	CT	2	Total O 2 2	0	0
63	CU	2	Total O 2 2	0	0
63	DA	603	Total O 603 603	0	0
63	DB	4	Total O 4 4	0	0
63	DC	10	Total O 10 10	0	0
63	DD	1	Total O 1 1	0	0
63	DE	3	Total O 3 3	0	0
63	DJ	4	Total O 4 4	0	0
63	DL	5	Total O 5 5	0	0
63	DN	2	Total O 2 2	0	0
63	DT	2	Total O 2 2	0	0
63	DU	2	Total O 2 2	0	0
63	DV	1	Total O 1 1	0	0
63	D2	1	Total O 1 1	0	0
63	D3	1	Total O 1 1	0	0
63	D4	4	Total O 4 4	0	0

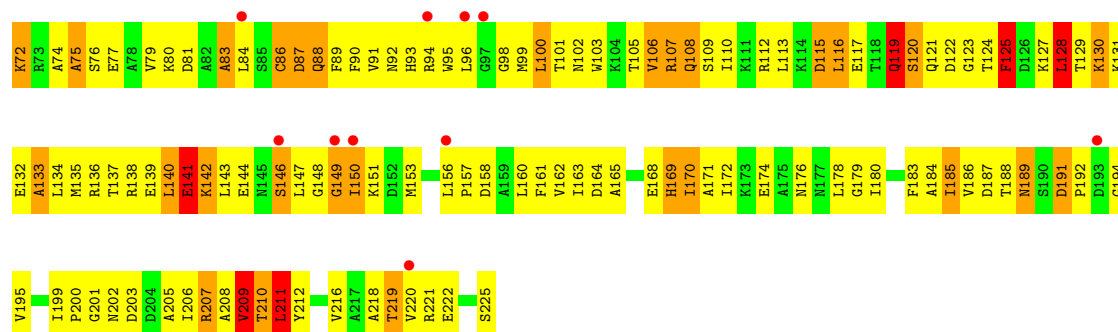
3 Residue-property plots

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

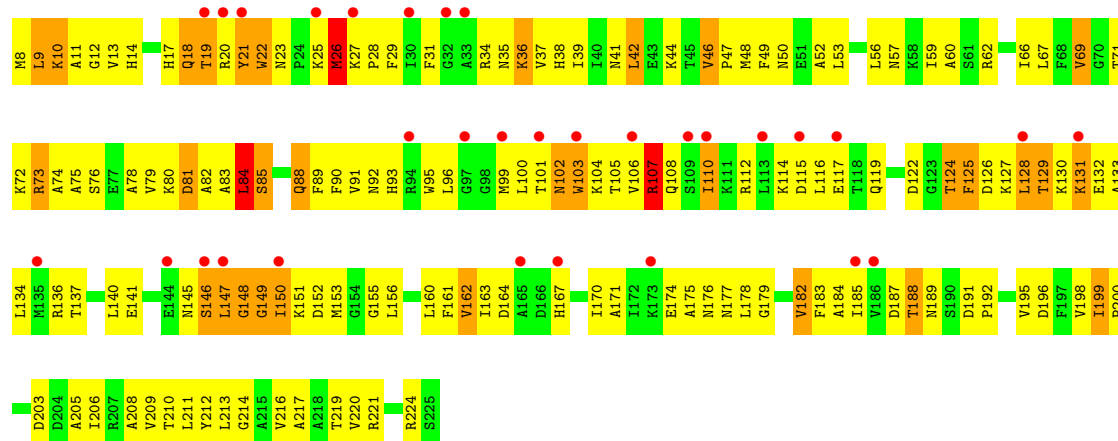
• Molecule 1: 16S rRNA



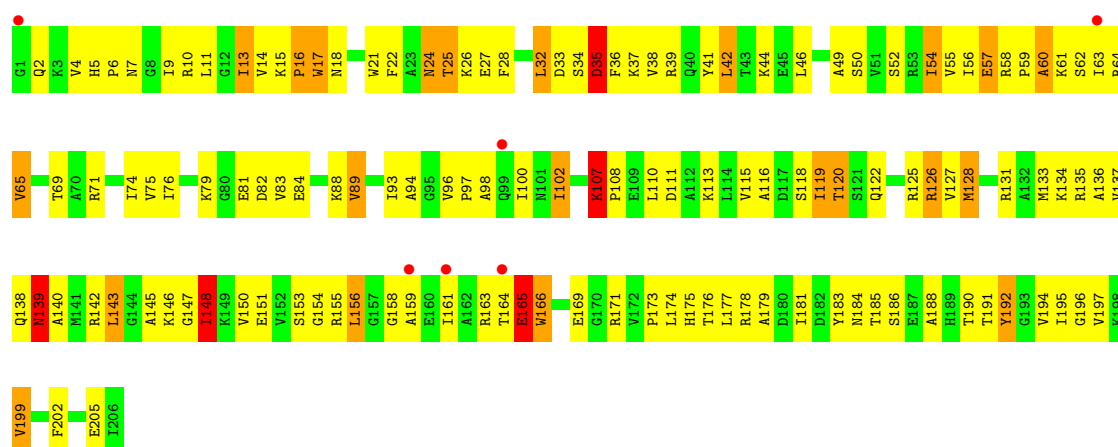




• Molecule 2: 30S ribosomal protein S2

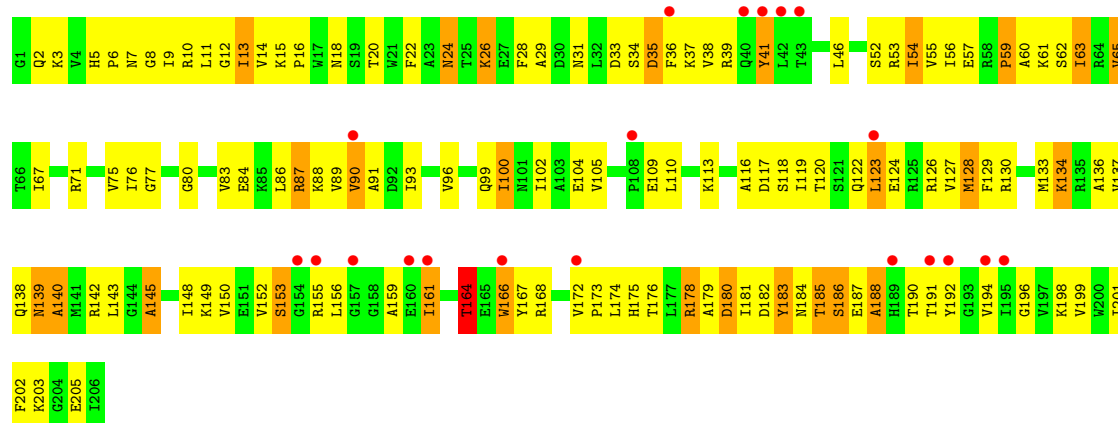


• Molecule 3: 30S ribosomal protein S3

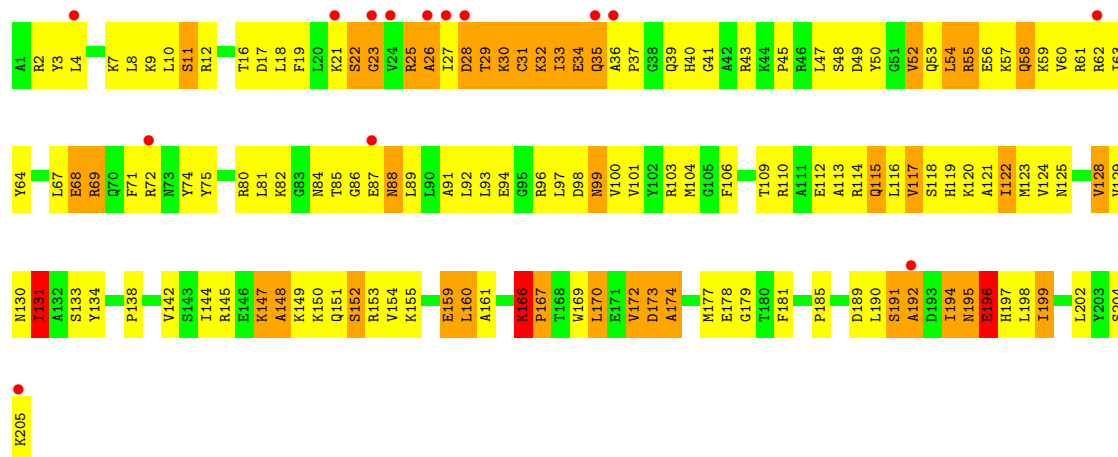


• Molecule 3: 30S ribosomal protein S3

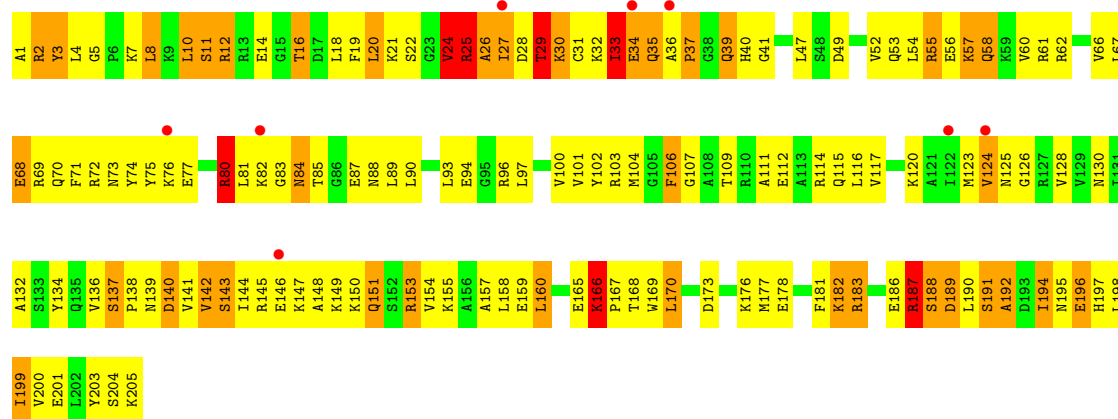




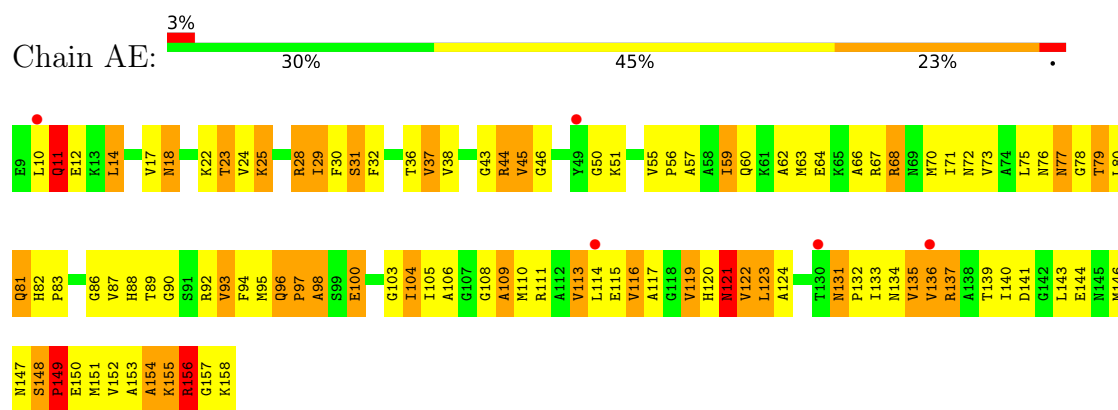
• Molecule 4: 30S ribosomal protein S4



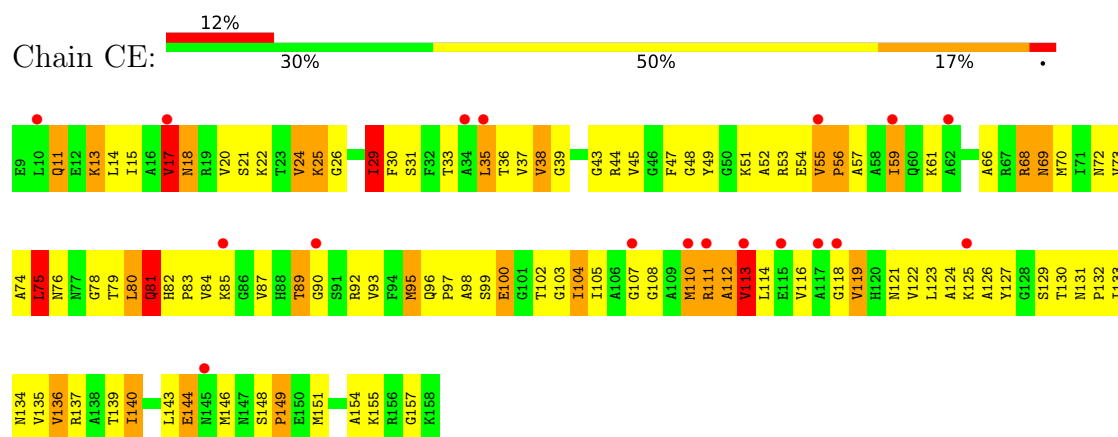
• Molecule 4: 30S ribosomal protein S4



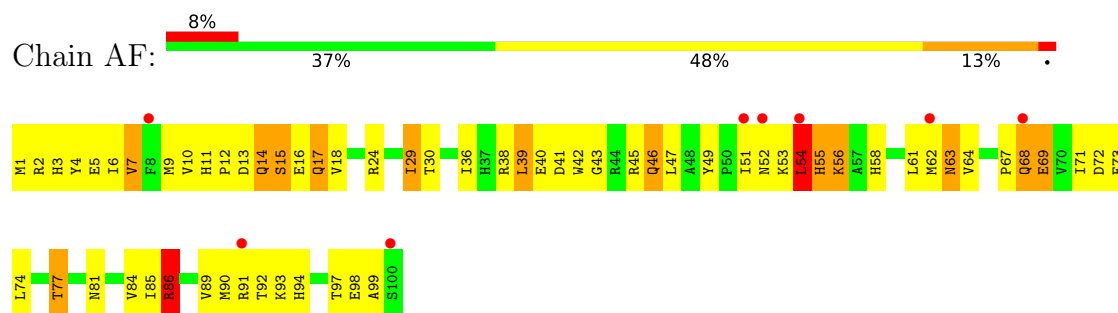
• Molecule 5: 30S ribosomal protein S5



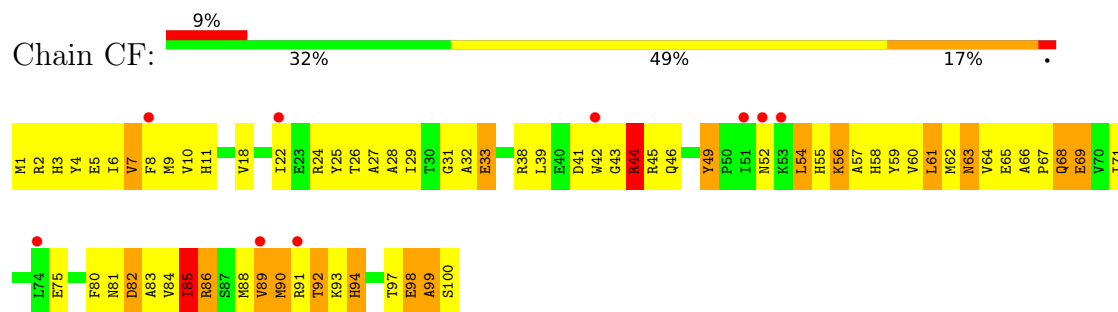
• Molecule 5: 30S ribosomal protein S5



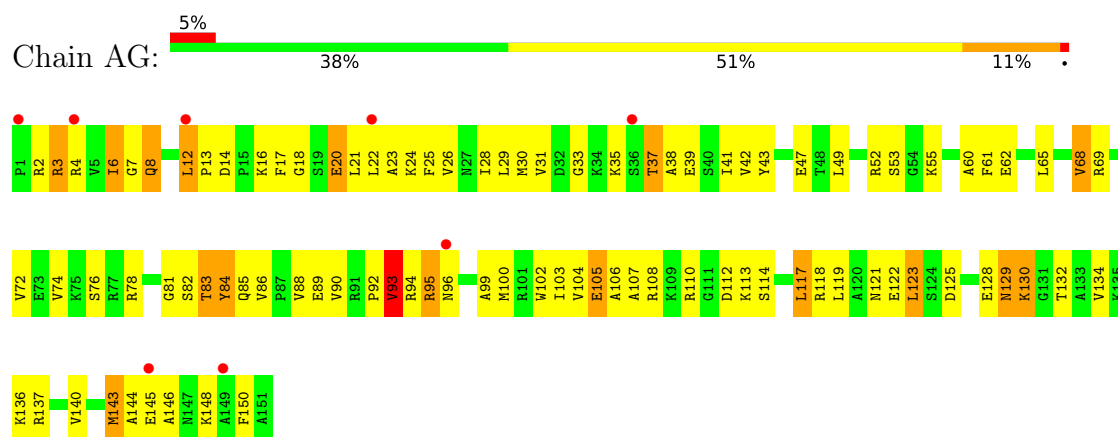
• Molecule 6: 30S ribosomal protein S6



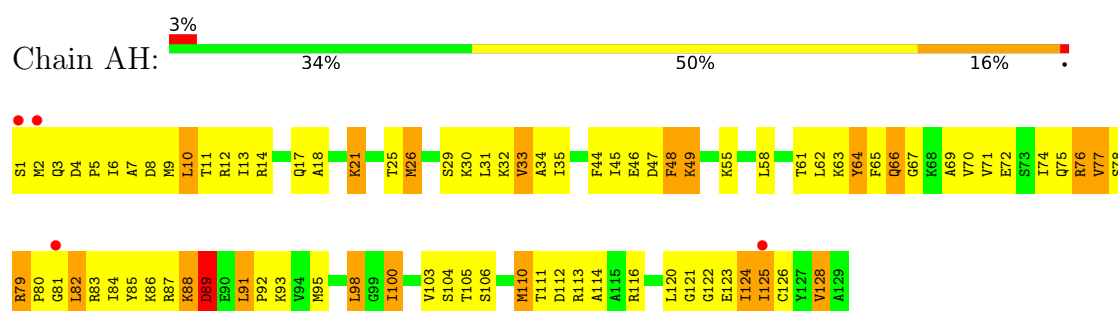
• Molecule 6: 30S ribosomal protein S6



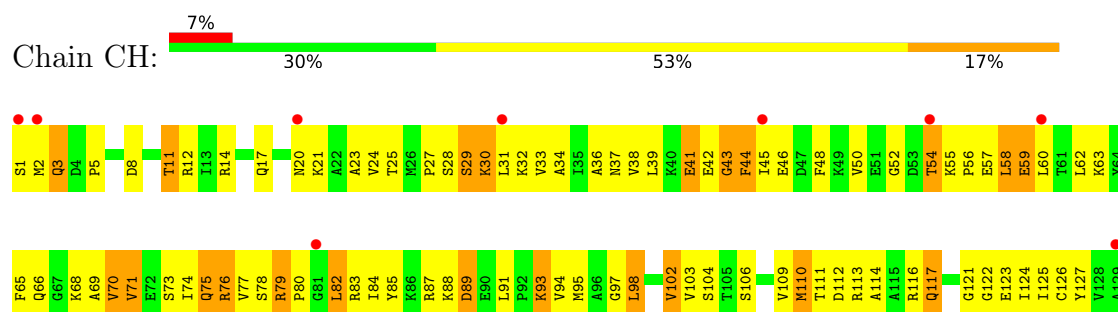
• Molecule 7: 30S ribosomal protein S7



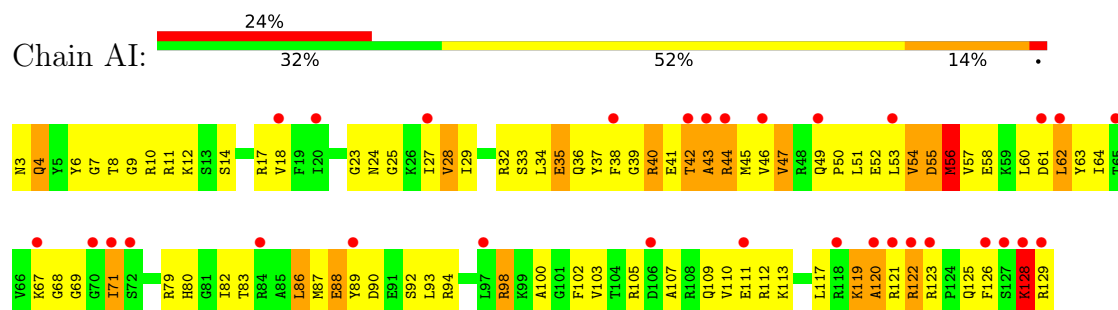
• Molecule 8: 30S ribosomal protein S8



• Molecule 8: 30S ribosomal protein S8

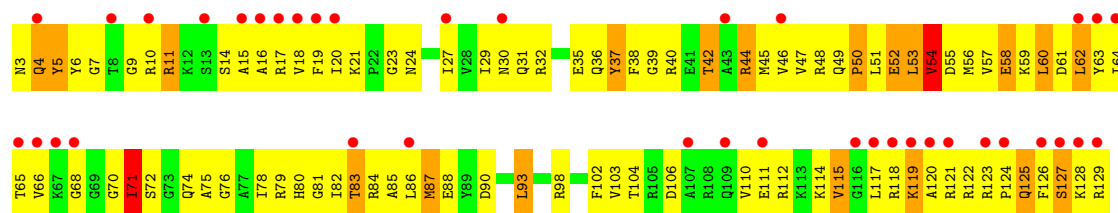


• Molecule 9: 30S ribosomal protein S9

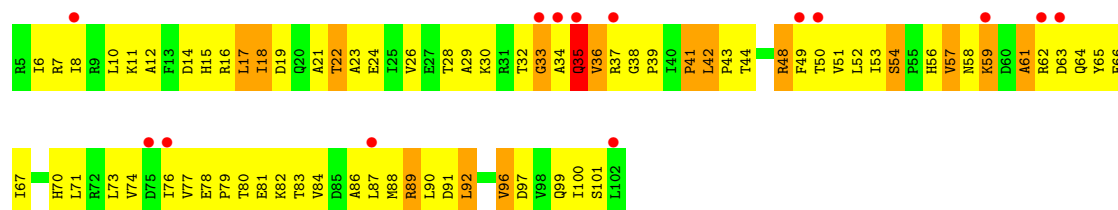


• Molecule 9: 30S ribosomal protein S9

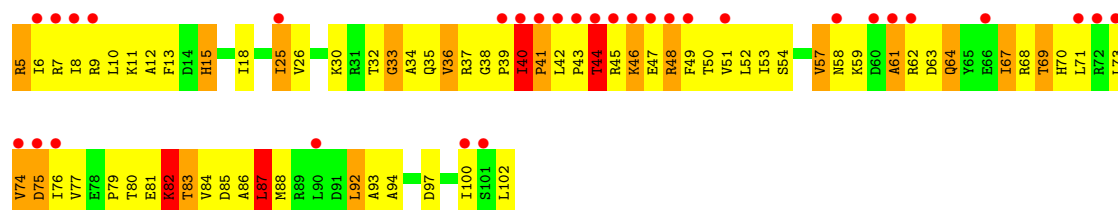




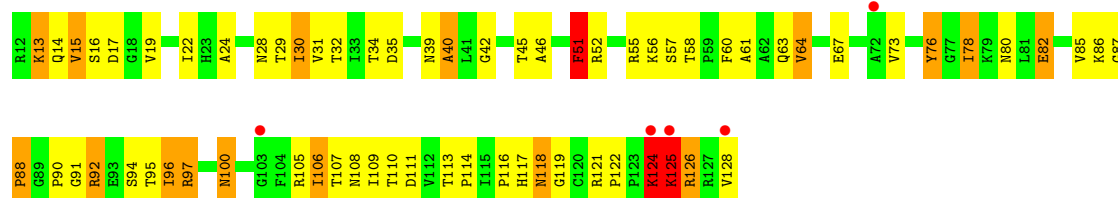
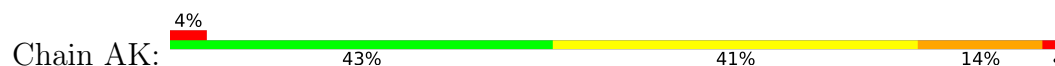
• Molecule 10: 30S ribosomal protein S10



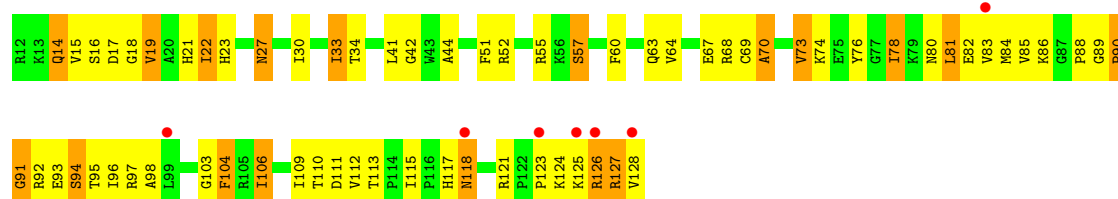
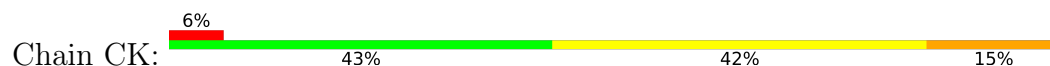
• Molecule 10: 30S ribosomal protein S10



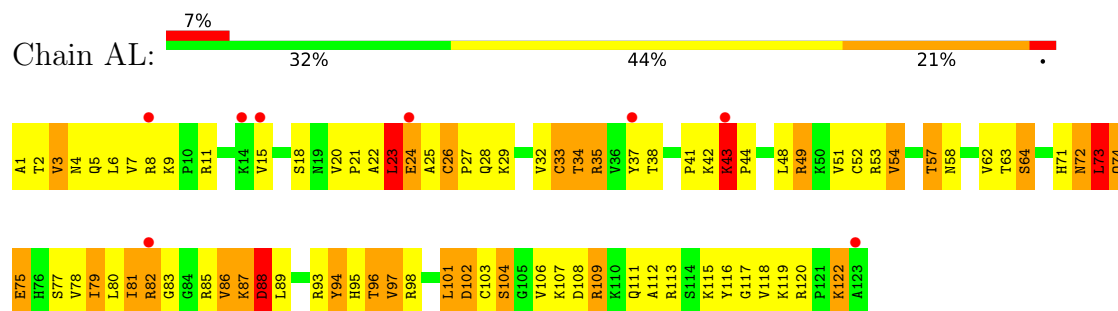
• Molecule 11: 30S ribosomal protein S11



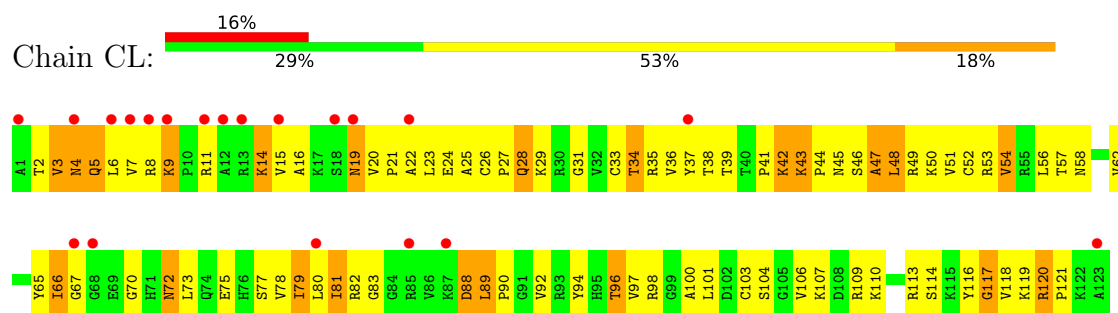
• Molecule 11: 30S ribosomal protein S11



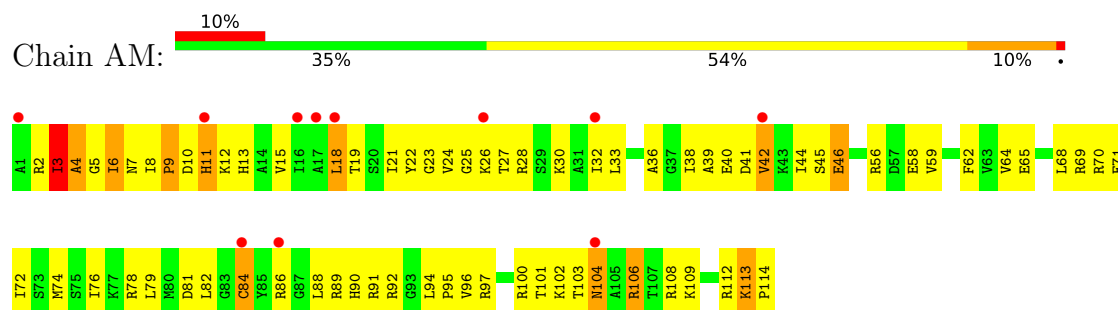
- Molecule 12: 30S ribosomal protein S12



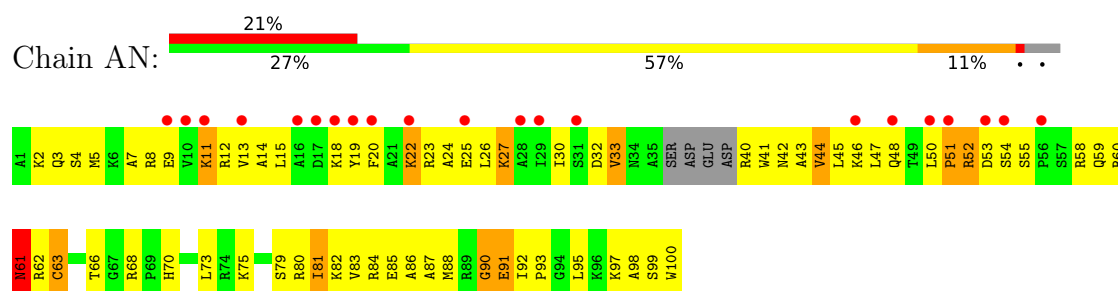
- Molecule 12: 30S ribosomal protein S12



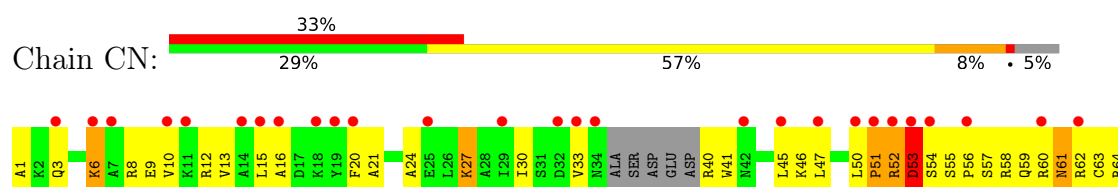
- Molecule 13: 30S ribosomal protein S13

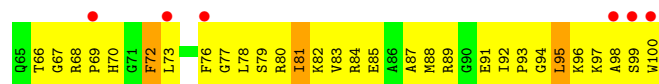


- Molecule 14: 30S ribosomal protein S14

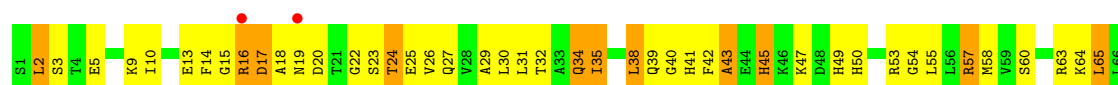


- Molecule 14: 30S ribosomal protein S14

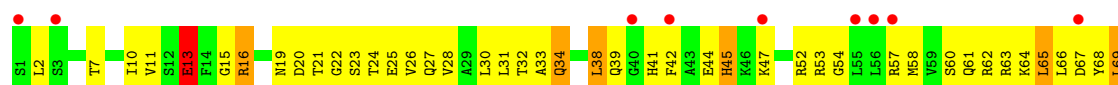




- Molecule 15: 30S ribosomal protein S15



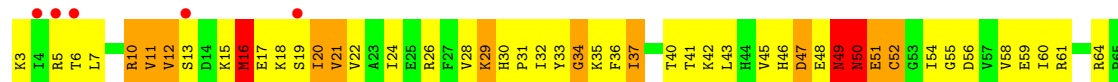
- Molecule 15: 30S ribosomal protein S15



- Molecule 16: 30S ribosomal protein S16

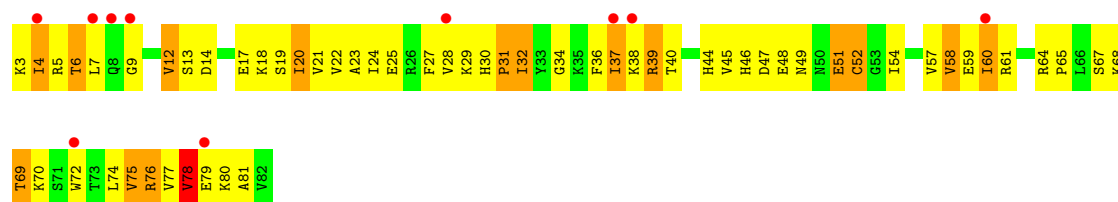


- Molecule 17: 30S ribosomal protein S17

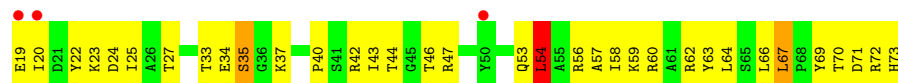


- Molecule 17: 30S ribosomal protein S17





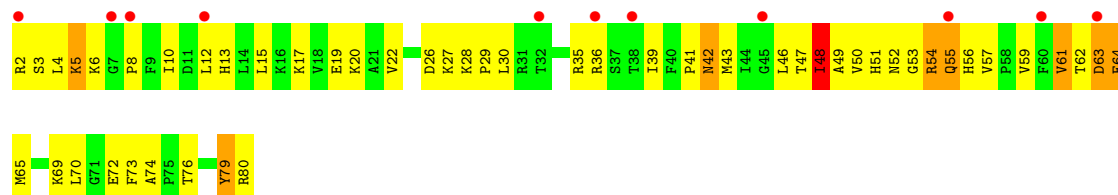
- Molecule 18: 30S ribosomal protein S18



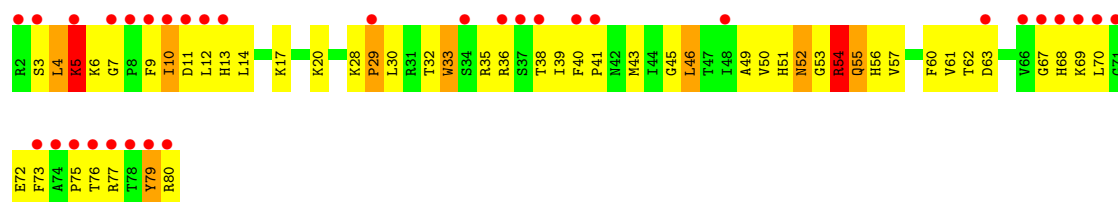
- Molecule 18: 30S ribosomal protein S18



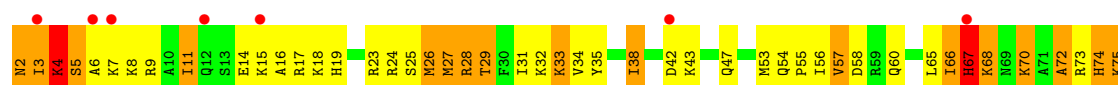
- Molecule 19: 30S ribosomal protein S19



- Molecule 19: 30S ribosomal protein S19

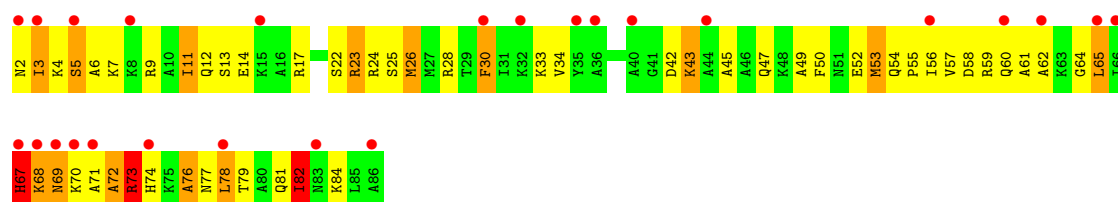


- Molecule 20: 30S ribosomal protein S20





• Molecule 20: 30S ribosomal protein S20



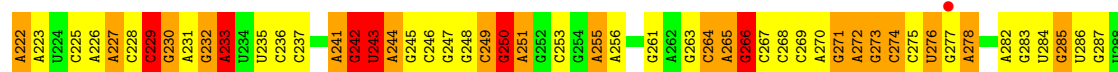
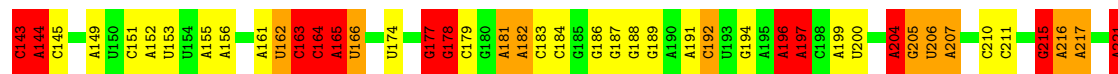
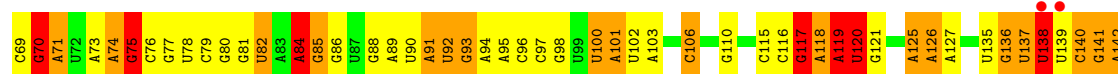
• Molecule 21: 30S ribosomal protein S21



• Molecule 21: 30S ribosomal protein S21

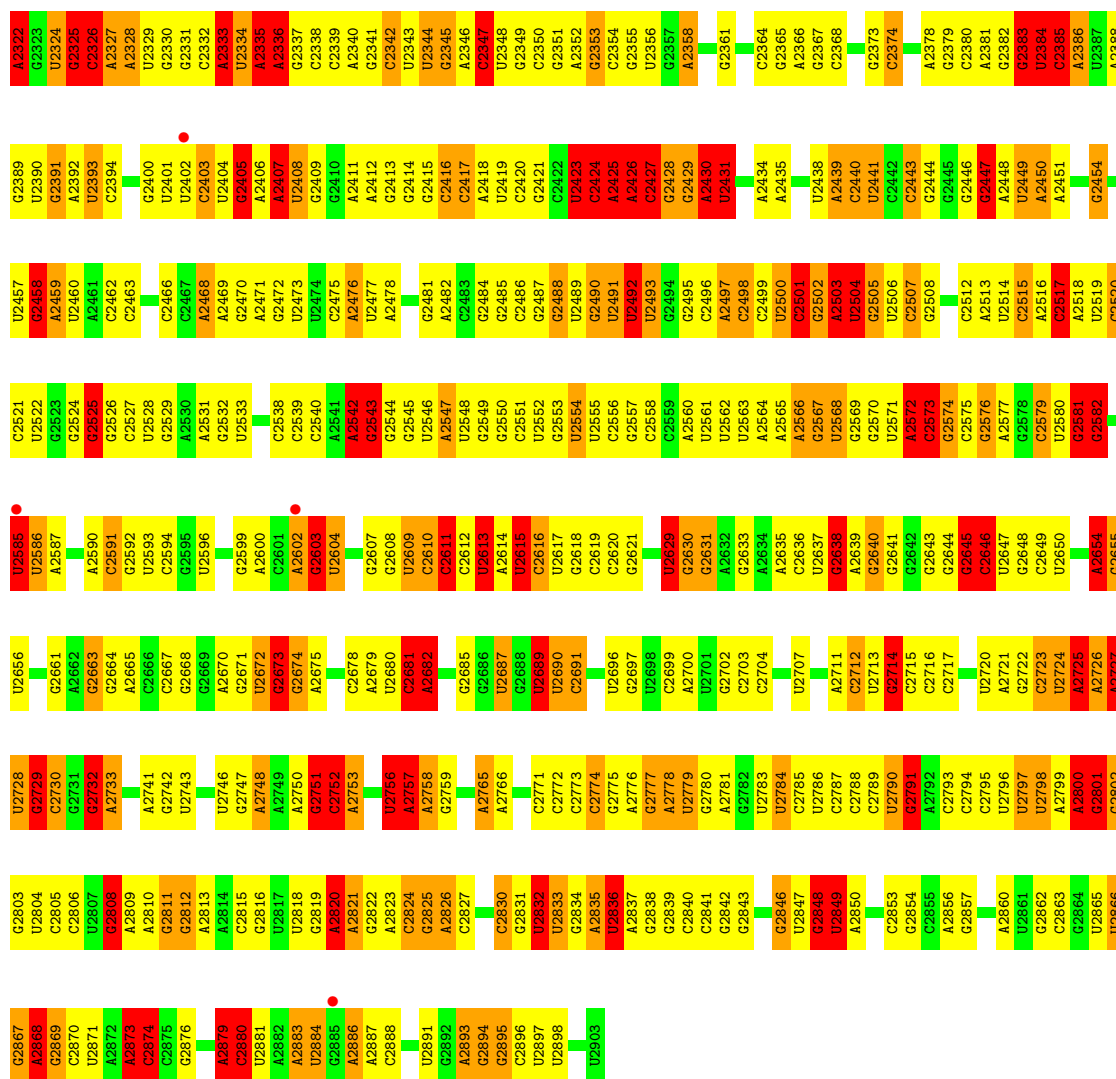


• Molecule 22: 23S rRNA



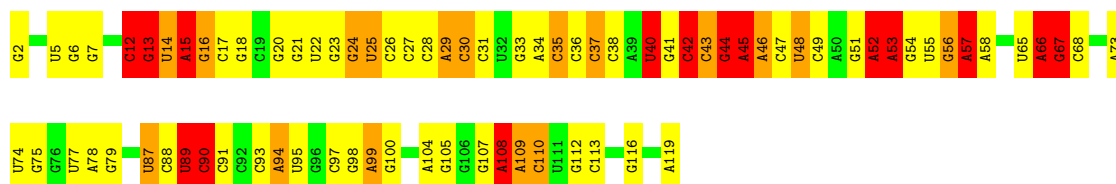
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C1296	G1167	G1233	G1166	G1099	U1035	G974	C908	U839	G774	A705	C634	U566	C494	G424	G359
C1297	G1168	G1235	C1187	A1103	G1036	A975	A909	U842	G775	A706	C635	U567	G494	G424	U360
C1298	G1169	G1236	G1168	C1104	A1039	A976	A910	U842	G776	A707	C636	U568	A497	A430	G361
C1299	C1170	G1237	A1170	G1105	A1040	G977	A911	G843	G777	G707	A637	U569	U499	U431	A362
G1238	G1171	G1238	G1171	G1106	G1041	G978	G912	G844	G778	U709	G638	U570	U499	G363	G363
G1239	C1172	G1239	C1172	G1107	G1042	A979	U913	A845	U779	U710	U639	U571	U499	C354	C354
U1240	A1175	U1240	A1175	G1108	C1043	A980	C914	U846	G780	U714	C640	A572	A503	C435	U369
C1243	G1176	C1243	G1176	U1108	C1044	A981	C915	U847	A781	A715	U641	A573	A504	C436	G370
G1244	C1177	G1244	C1177	C1109	C1045	A982	C916	C848	A782	A716	U642	A574	A505	U441	A371
A1245	G1178	A1245	G1178	G1112	G1047	C985	A918	C851	A783	A717	A643	A575	A507	G442	G372
A1246	G1179	A1246	G1179	U1113	A1048	C986	A920	C854	G786	C719	U646	A576	A508	G443	U373
G1309	U1180	G1309	U1180	C1114	A1049	C987	A921	G855	C787	A722	U647	A577	A509	C444	A374
G1310	U1181	G1310	U1181	G1115	C1050	A988	C922	G856	A788	A715	U648	A578	A510	C445	A375
G1311	U1182	G1311	U1182	G1116	C1051	A989	G923	G857	A789	G723	U649	A579	A511	G446	G376
U1312	U1183	U1312	U1183	G1117	G1052	A990	G924	G858	U790	U724	C650	C587	A512	U448	A447
U1313	U1184	U1313	U1184	C1118	G1053	A991	C925	G859	C791	G725	C651	C588	A513	A449	G377
C1314	G1185	C1314	G1185	A1057	A1067	C992	A928	U860	A792	G726	U652	U588	A514	G450	G378
C1315	G1186	C1315	G1186	U1058	U1068	C993	A929	A861	A793	A727	U653	U589	U451	G451	G380
U1316	U1187	U1316	U1187	G1059	U1069	C994	U929	G862	A794	G728	A654	U590	G452	G452	A382
G1317	U1188	G1317	U1188	C1060	U1070	C995	U931	G863	C795	G729	A655	U591	G453	A453	G381
U1318	U1189	U1318	U1189	G1061	U1071	C996	U932	C865	G799	A730	U656	A592	C523	C455	C383
G1319	U1190	G1319	U1190	G1062	U1072	A997	U933	A866	G799	G733	U657	A593	C524	A454	A384
C1320	U1191	C1320	U1191	G1063	U1073	C998	U934	C867	A800	G734	U658	C595	A526	C456	C385
A1321	G1192	A1321	G1192	C1064	U1074	U999	C935	U868	G801	A735	U659	C596	A527	A457	G386
G1322	U1193	G1322	U1193	U1065	U1075	A1000	A936	G869	A802	A736	C660	C597	A528	G458	U357
U1323	A1194	U1323	A1194	U1066	U1076	A1001	C937	U870	G809	G737	C661	U598	A529	U459	G388
G1324	U1195	G1324	U1195	U1067	U1077	A1002	C938	U871	A804	C738	U662	A599	A530	A460	G389
A1325	U1196	A1325	U1196	G1068	U1078	G1003	A941	U872	G805	G739	U663	G600	C531	C461	U390
U1326	C1200	U1326	C1200	A1069	U1079	U1004	C942	U873	G806	A740	U664	G601	C532	C462	A391
A1327	U1203	A1327	U1203	C1070	U1080	C1005	A945	G875	C807	C740	U665	A602	A533	G463	U395
U1328	U1204	U1328	U1204	G1071	U1081	U1006	C946	C876	G808	G741	U666	A603	A534	G464	G396
G1329	A1205	G1329	A1205	C1072	U1082	C1007	C947	A877	G809	U741	U667	A604	A535	G465	U397
G1330	U1206	G1330	U1206	U1073	U1083	A1008	A948	A878	U810	G745	U668	G605	A536	A466	U398
A1331	G1207	A1331	G1207	G1074	U1084	A1009	C949	G879	U811	U746	U669	A608	A537	G469	G400
G1332	C1207	G1332	C1207	C1075	U1085	A1010	G950	G880	C812	U747	C671	A609	A538	A470	U403
U1333	U1208	U1333	U1208	U1076	U1086	G1011	C951	G881	U813	U748	C672	A610	A539	A471	A404
G1334	U1209	G1334	U1209	U1077	U1087	U1012	G954	U884	C814	A749	C673	A611	A540	G472	U405
C1335	U1210	C1335	U1210	U1078	U1088	C1013	U955	A	C815	A750	C674	A612	A541	G473	G406
U1336	C1211	U1336	C1211	C1079	U1089	U1014	U956	U	C816	A751	A675	A613	A542	G474	U407
A1337	U1212	A1337	U1212	U1080	U1090	U1015	U957	C	C817	A752	G681	A614	A543	G475	U408
G1338	A1213	G1338	A1213	U1081	U1091	U1016	U958	U	C818	A753	G682	A615	A544	G476	G409
U1340	G1215	U1340	G1215	U1082	U1092	G1017	C957	C	A819	U754	U683	U616	A545	A477	G410
G1341	U1216	G1341	U1216	U1083	U1093	U1018	U959	C	A820	U755	U684	A617	A546	A478	G411
A1342	U1217	A1342	U1217	A1084	G1026	U1019	A959	G	A821	U756	U685	A618	A547	A479	G412
G1343	C1152	G1343	C1152	U1085	G1027	A960	U967	C	G822	U757	U686	A619	A548	A480	G413
U1344	C1153	U1344	C1153	A1086	A1028	A1021	G961	A892	C823	U758	U687	G620	A549	G481	A412
C1347	U1222	C1347	U1222	G1087	U1022	G1022	C962	C893	U824	C759	U688	A621	A550	A482	C413
A1348	U1223	A1348	U1223	A1088	U1023	U1023	U963	U894	A825	U761	U689	A622	A551	A483	C414
C1349	G1157	C1349	G1157	U1089	U1024	G1024	C964	U895	U826	U762	U690	A623	A552	A484	A415
C1350	U1224	C1350	U1224	A1090	G1025	G1025	C965	U896	U827	G763	U691	C623	A553	C485	U416
G1351	G1225	G1351	G1225	G1091	G1026	G1026	C966	C897	U828	A764	U692	C624	A554	C486	C417
U1352	U1159	U1352	U1159	C1092	G1027	G1027	U967	C898	A829	C765	U693	C625	A555	C487	C418
G1353	G1227	G1353	G1227	G1093	A1028	A1028	C968	C899	G830	U766	U694	C626	A556	C488	U419
A1354	U1094	A1354	U1094	U1094	U1028	U1028	C969	A900	G831	U767	U695	C627	A557	C489	G420
G1355	U1095	G1355	U1095	C1091	G1031	G1031	C970	C901	U832	U768	U696	A631	A558	C490	G421
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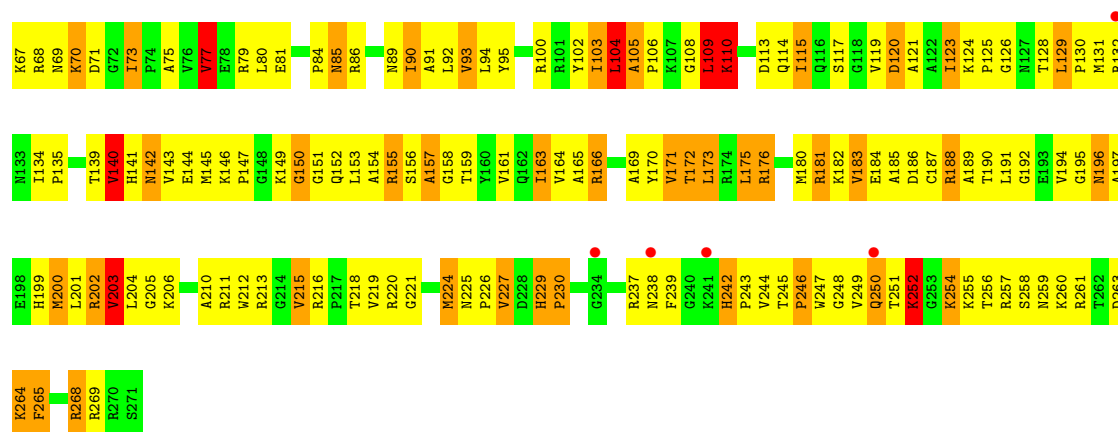
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G1361	A1434	G1500	A1570	A1637	C1708	U1778	G1842	A1919	C1991	A2058	G2057	C2262
A1365	G1435	G1501	A1571	G1638	U1712	A1780	C1843	C1920	G1992	A2059	U2187	C2263
	C1436	A1502		C1639	U1712	U1781	C1844	G1921	U1993	A2060	U2188	C2264
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G1371	U1438	A1504	C1575	A1641	U1714	U1781	G1848	U1923	C1997	A2062	G2193	C2266
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G1374	G1441	C1507	A1579	C1644	U1717	A1785	G1851	A1926	C1999	G2065	A2198	C2269
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U1406	G1477	C1550	C1615	U1681	G1755	G1814	A1876	C1961	G2029	A2094		C2294
	U1478	A1551	A1552	G1682	G1756	A1815	G1884	C1962	A2030			C2295
	G1482	C1553	A1553	U1683	U1758	C1816	U1885	U1963	A2031			C2296
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G1419	U1486	C1557	G1622	U1688	U1761	G1819	A1890	G1966	U2034	C2104		C2299
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G1421	C1488	C1558	U1624	U1693	U1763	A1821	U1892	U1968	A2042	U		C2301
G1422	C1489	U1559	C1625	G1694	C1764	U1822	A1900	A1970	C2043	G		C2302
G1423	A1490	G1560	A1626	G1695	G1765	G1823	A1901	A1971	C2044	U		C2303
	G1491	C1561	G1627	G1696	G1766	U1824	C1902	C1972	G2046	G		C2304
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A1427	C1493	U1563	U1629	A1698	U1769	G1826	G1910	A1981	G2048	A		C2306
C1428	A1494	C1564	G1630	G1699	G1770	U1833	U1911	U1982	G2049	U		C2307
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						C1836	A1913	G1984	A2052	G		C2309
						C1837	C1914					C2310
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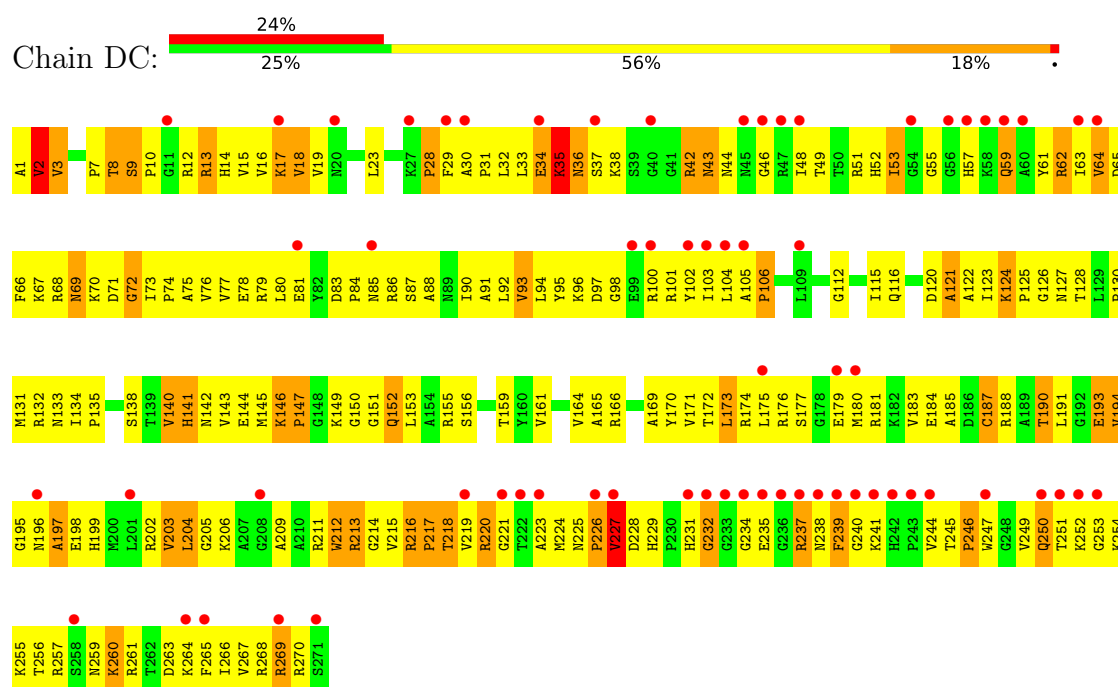
• Molecule 23: 5S rRNA

Chain BB: 33% 40% 14% 13%

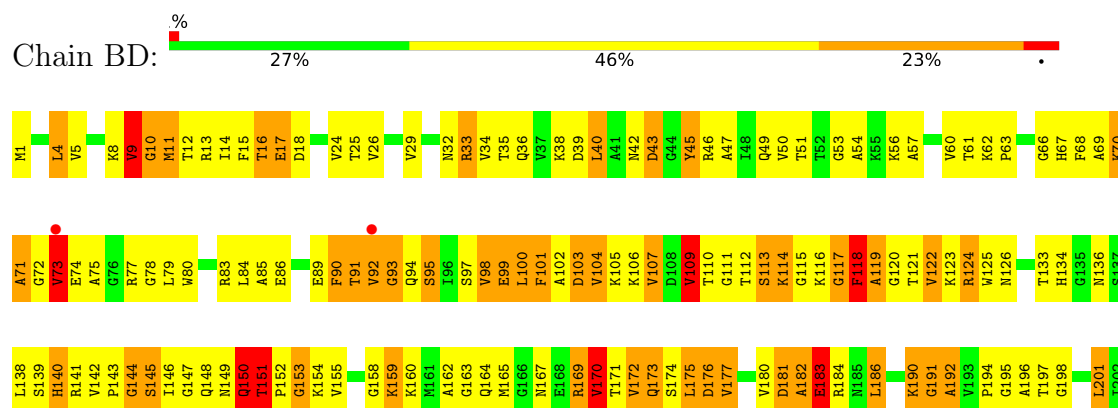




• Molecule 24: 50S ribosomal protein L2

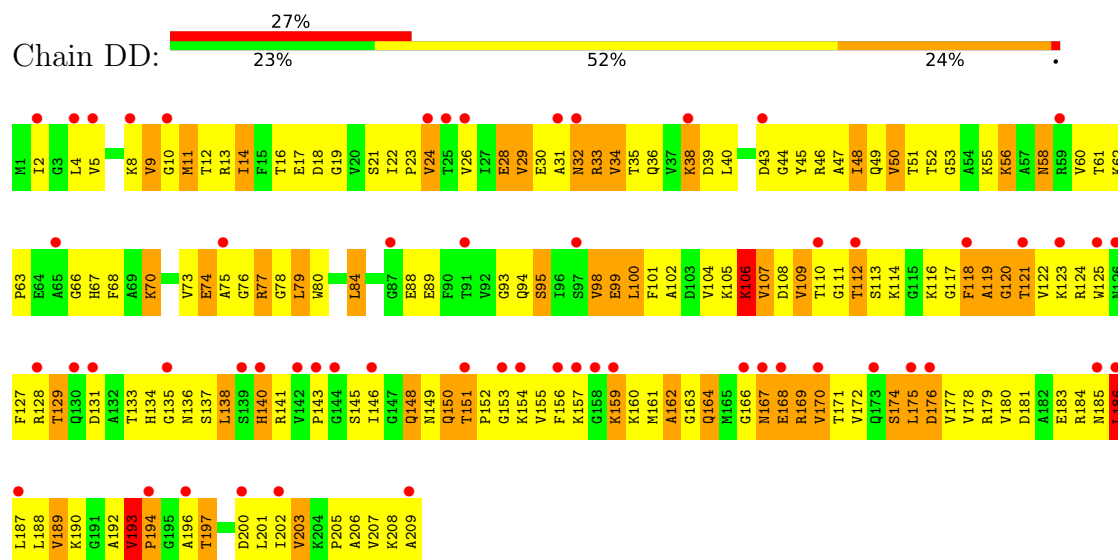


• Molecule 25: 50S ribosomal protein L3

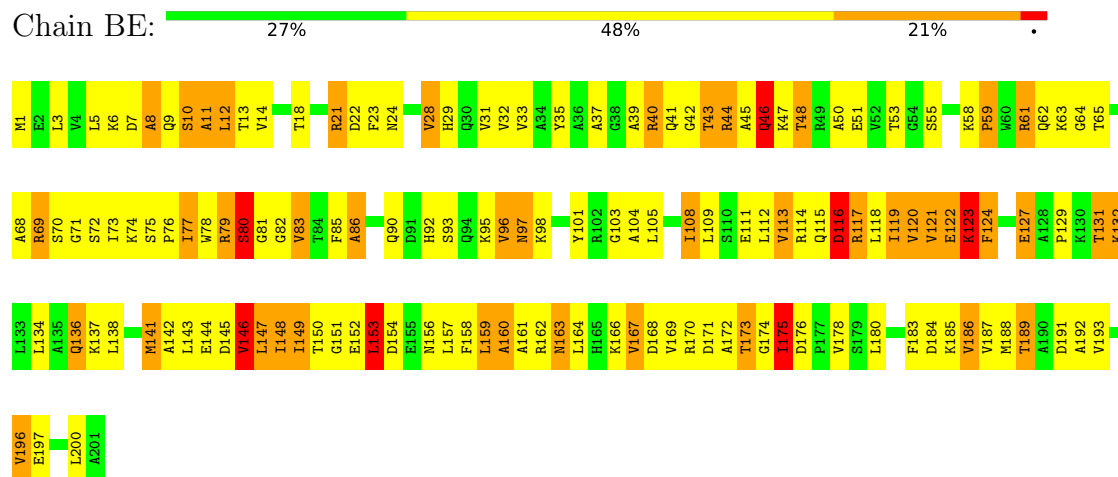




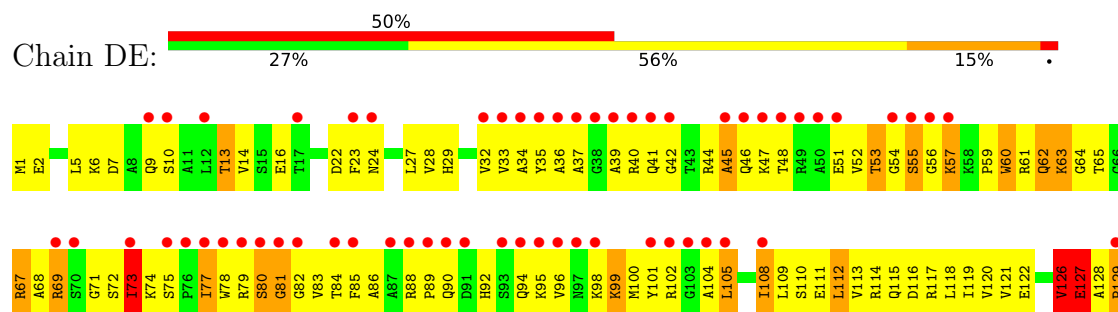
• Molecule 25: 50S ribosomal protein L3

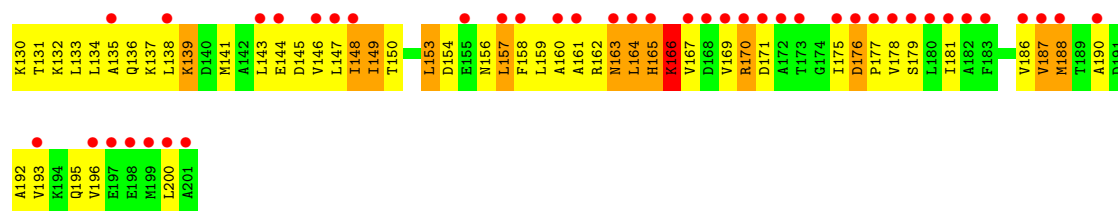


• Molecule 26: 50S ribosomal protein L4

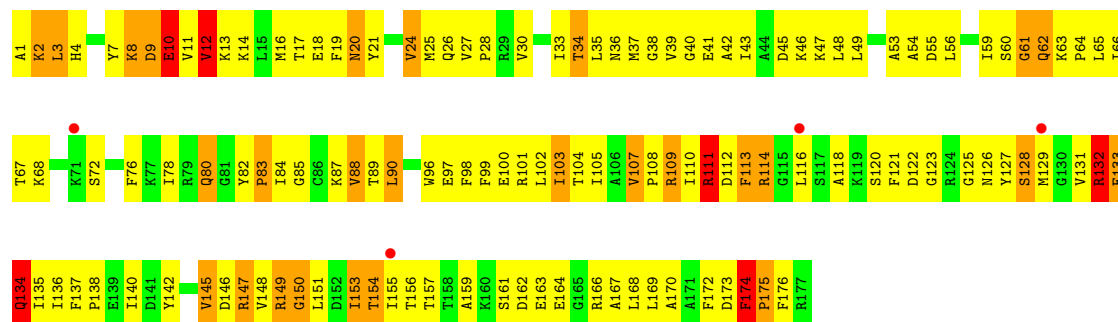


• Molecule 26: 50S ribosomal protein L4

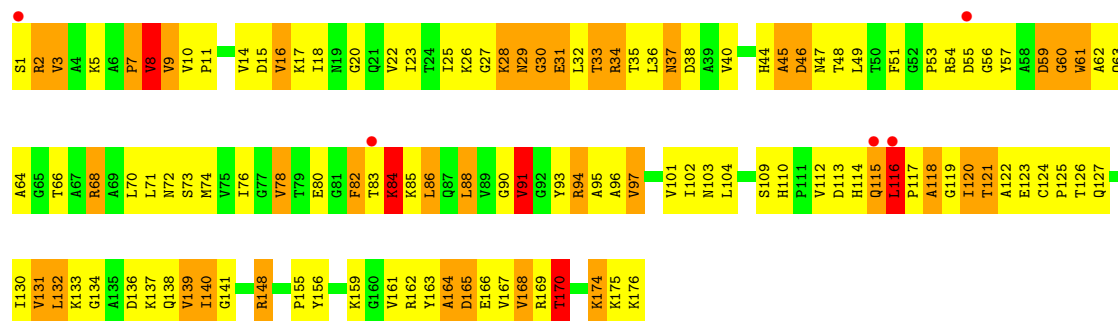




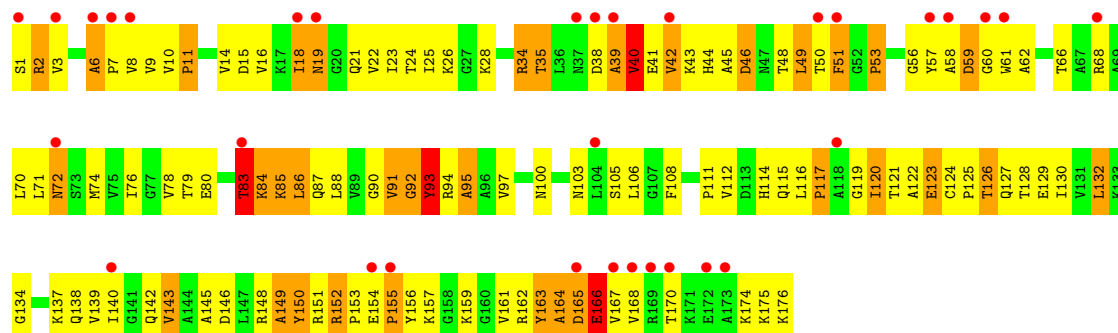
• Molecule 27: 50S ribosomal protein L5



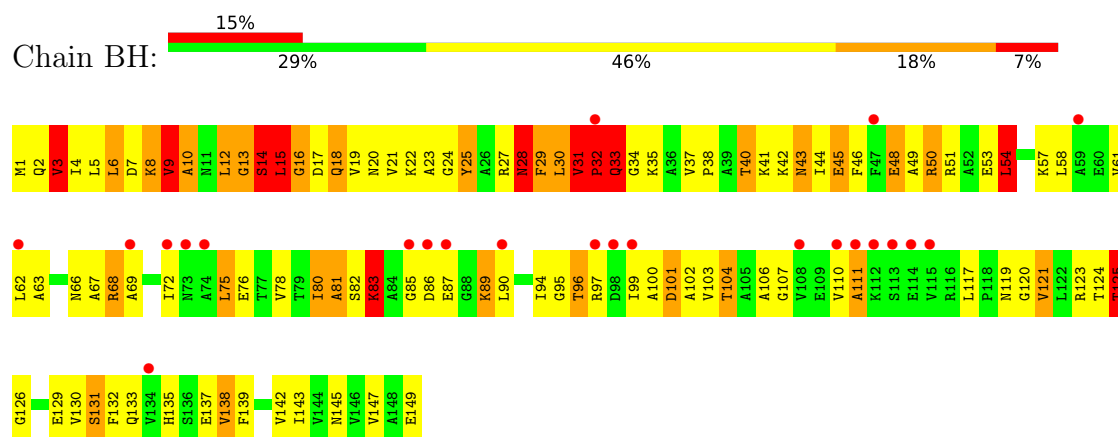
• Molecule 28: 50S ribosomal protein L6



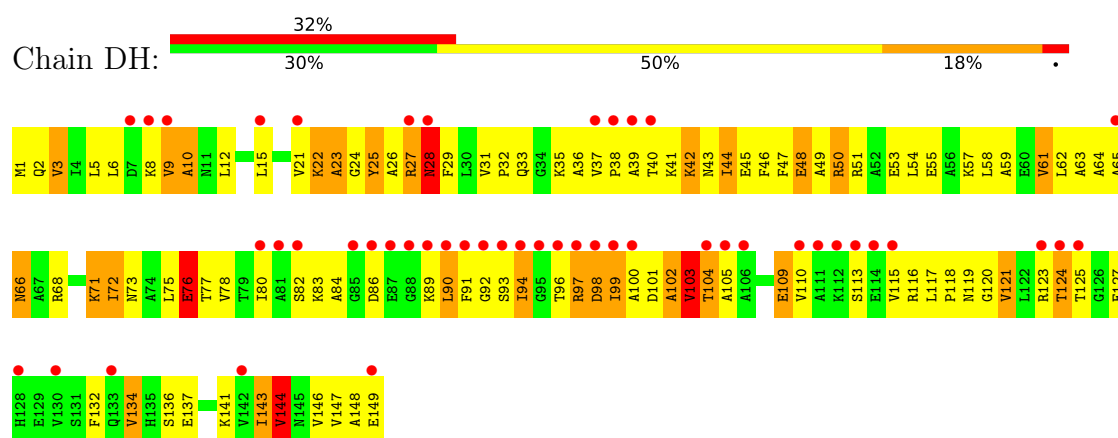
• Molecule 28: 50S ribosomal protein L6



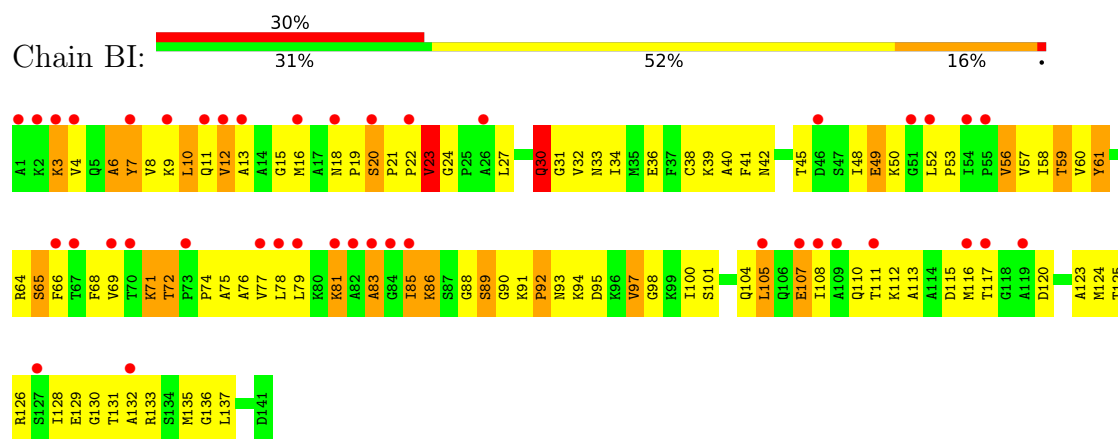
• Molecule 29: 50S ribosomal protein L9



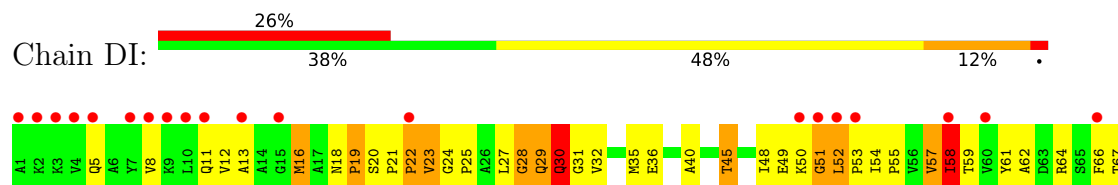
• Molecule 29: 50S ribosomal protein L9

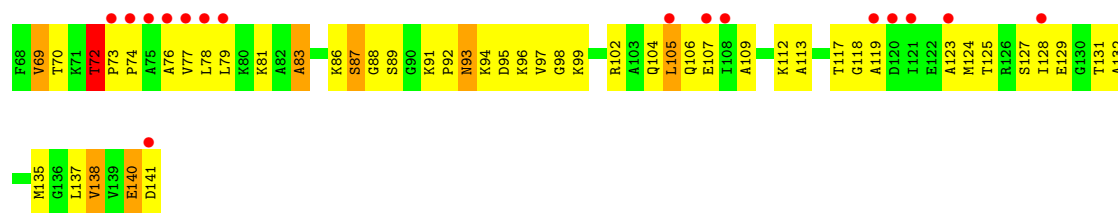


• Molecule 30: 50S ribosomal protein L11

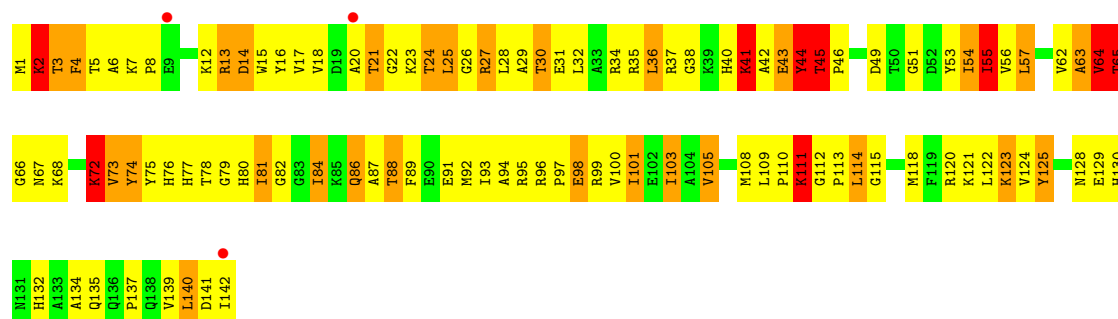


• Molecule 30: 50S ribosomal protein L11

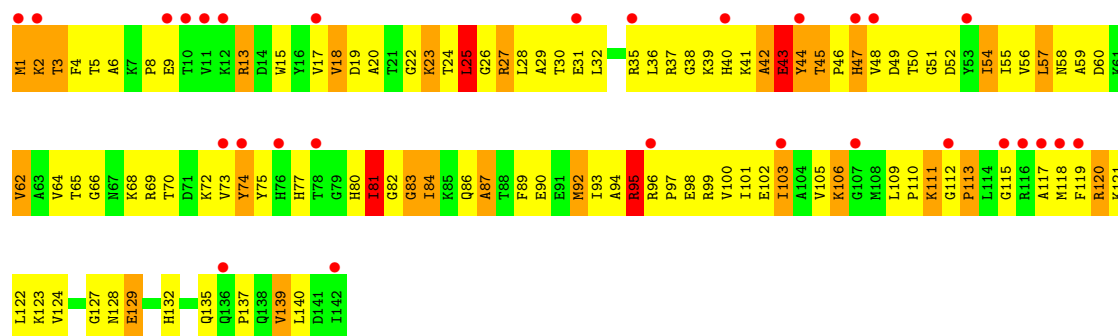




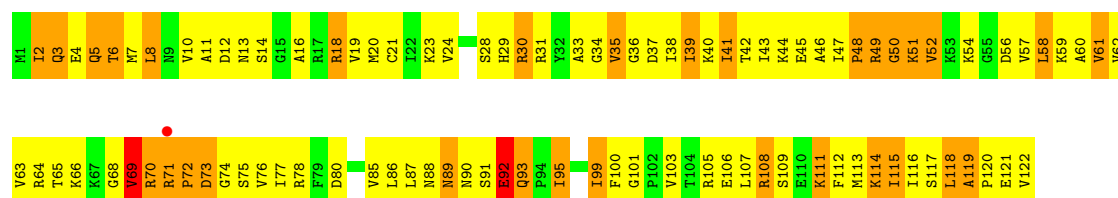
• Molecule 31: 50S ribosomal protein L13



• Molecule 31: 50S ribosomal protein L13

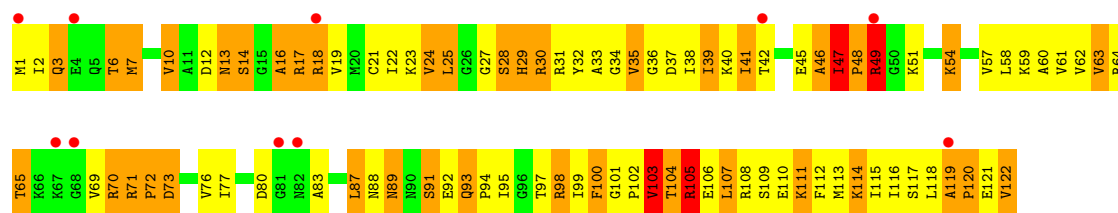


• Molecule 32: 50S ribosomal protein L14

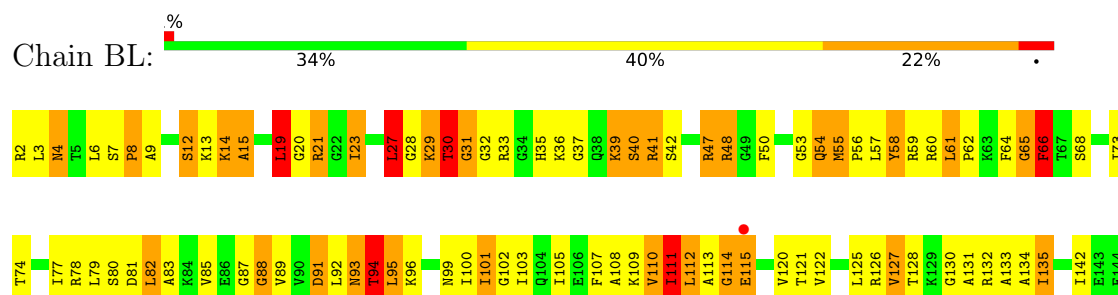


• Molecule 32: 50S ribosomal protein L14

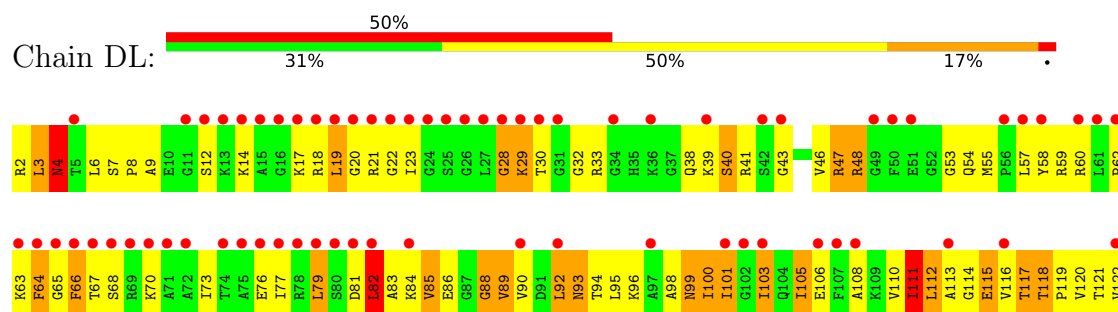




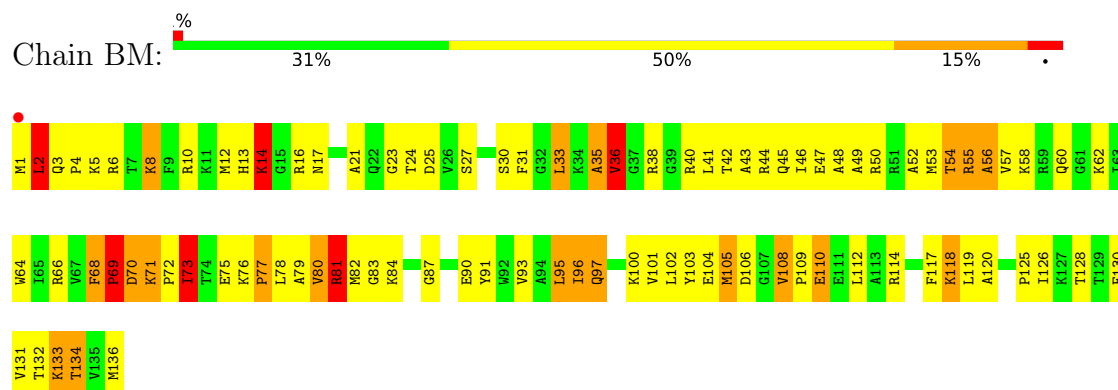
• Molecule 33: 50S ribosomal protein L15



• Molecule 33: 50S ribosomal protein L15

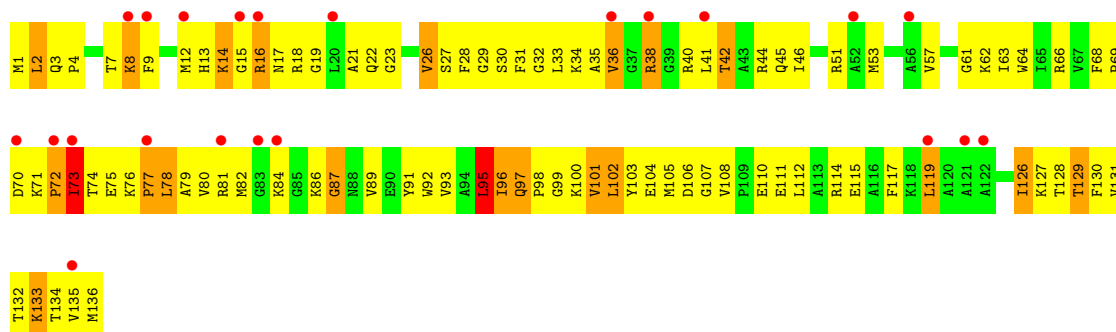


• Molecule 34: 50S ribosomal protein L16

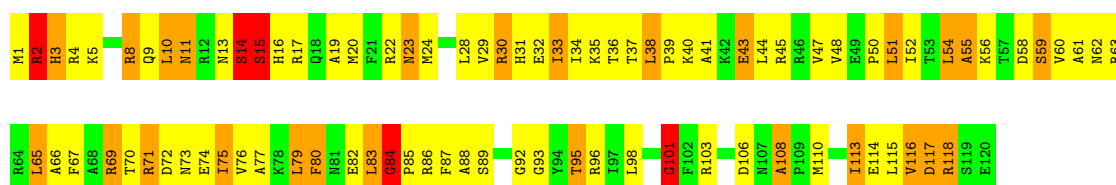


• Molecule 34: 50S ribosomal protein L16

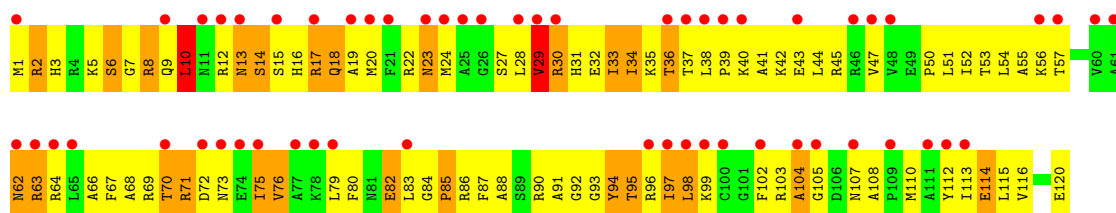




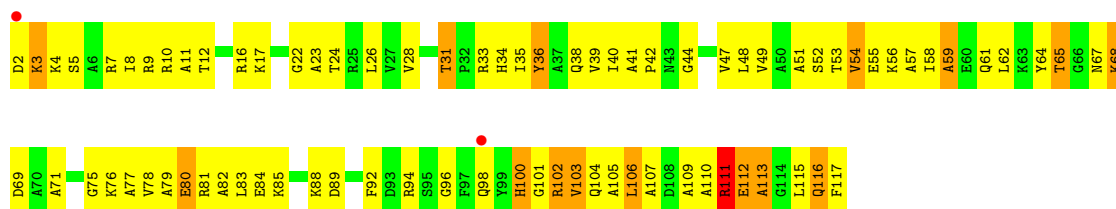
- Molecule 35: 50S ribosomal protein L17



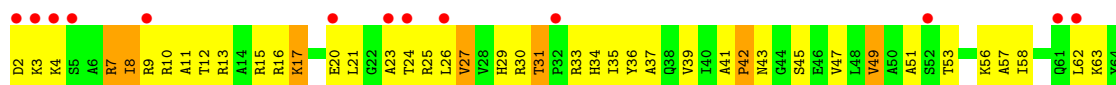
- Molecule 35: 50S ribosomal protein L17



- Molecule 36: 50S ribosomal protein L18

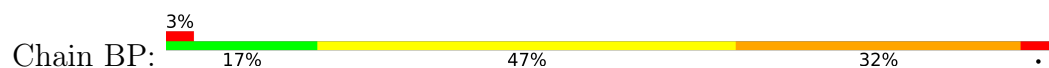


- Molecule 36: 50S ribosomal protein L18

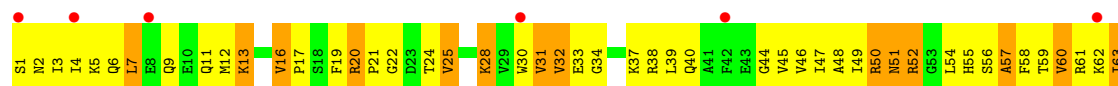




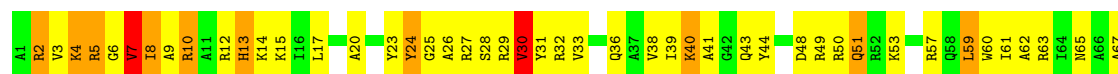
• Molecule 37: 50S ribosomal protein L19



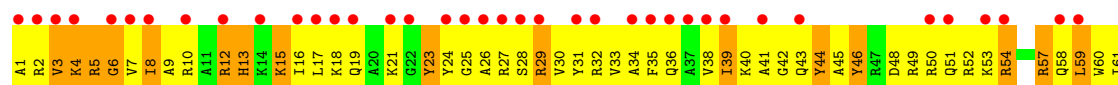
• Molecule 37: 50S ribosomal protein L19



• Molecule 38: 50S ribosomal protein L20

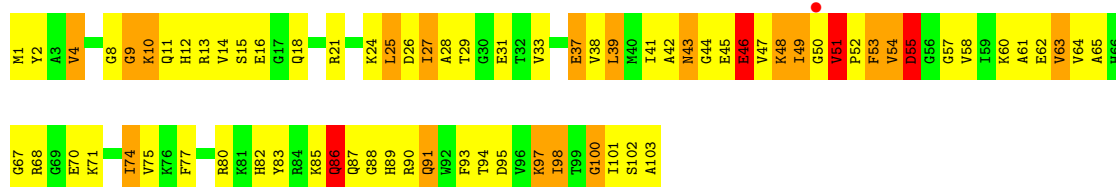


• Molecule 38: 50S ribosomal protein L20

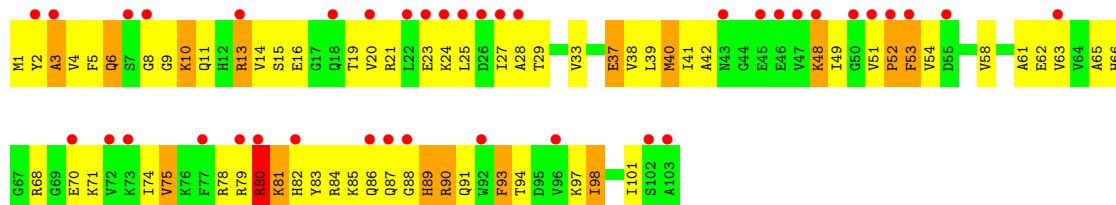


• Molecule 39: 50S ribosomal protein L21

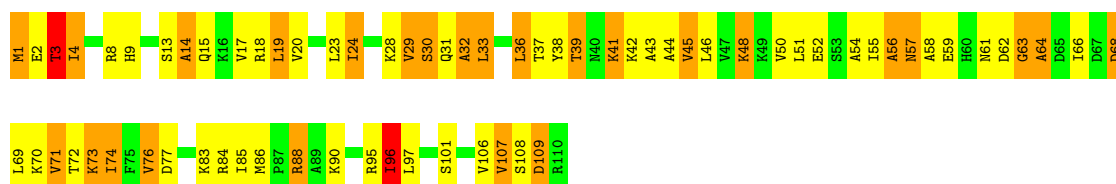




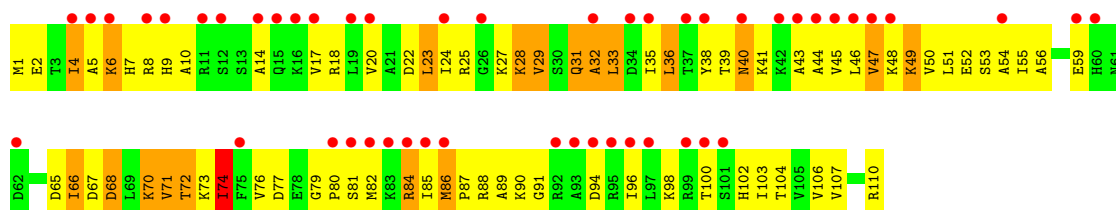
• Molecule 39: 50S ribosomal protein L21



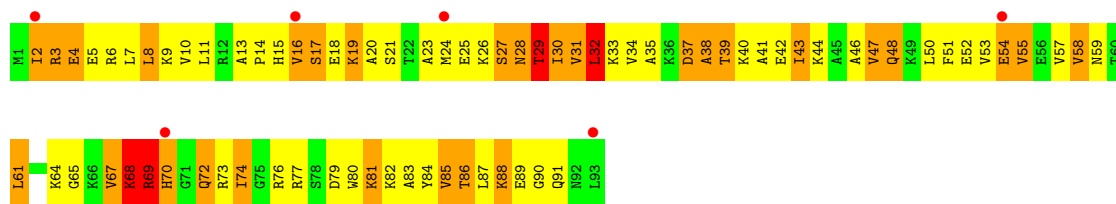
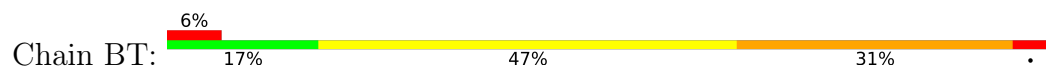
• Molecule 40: 50S ribosomal protein L22



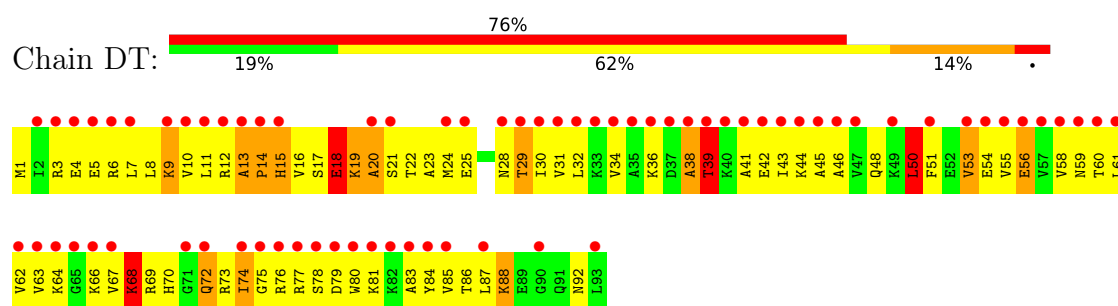
• Molecule 40: 50S ribosomal protein L22



• Molecule 41: 50S ribosomal protein L23



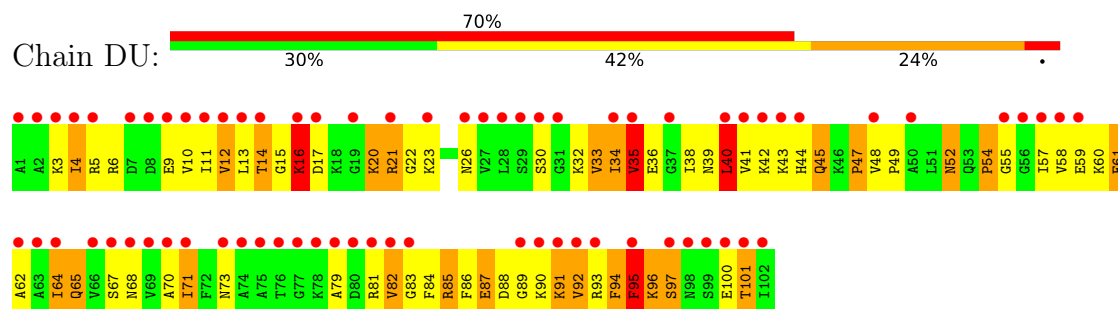
• Molecule 41: 50S ribosomal protein L23



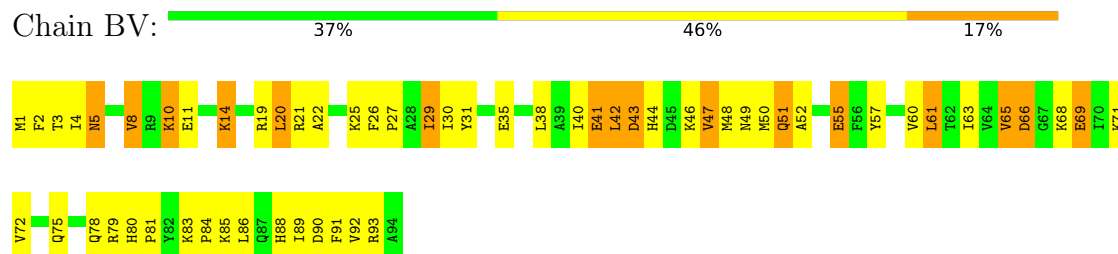
• Molecule 42: 50S ribosomal protein L24



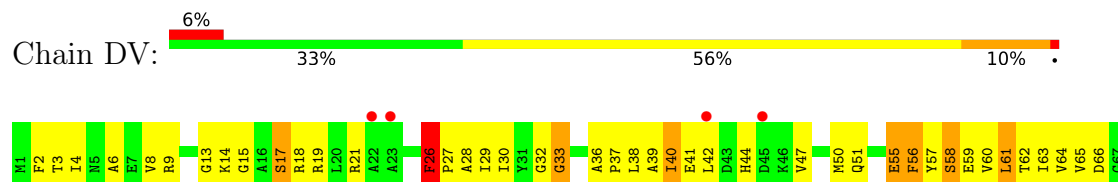
• Molecule 42: 50S ribosomal protein L24



• Molecule 43: 50S ribosomal protein L25

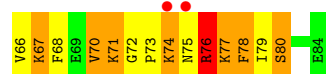
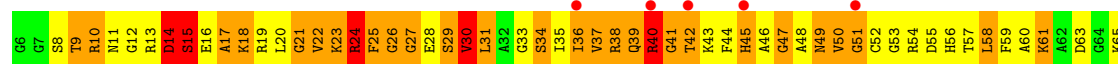


• Molecule 43: 50S ribosomal protein L25

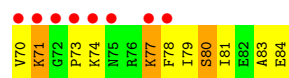
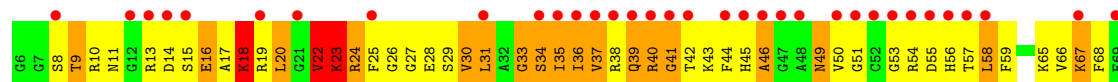




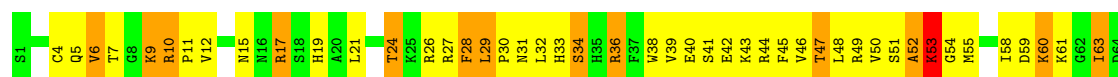
- Molecule 44: 50S ribosomal protein L27



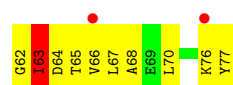
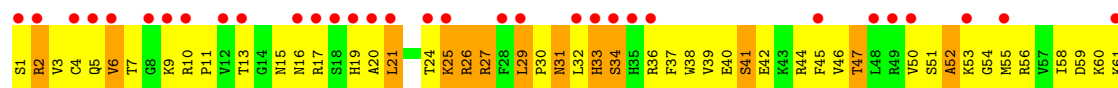
- Molecule 44: 50S ribosomal protein L27



- Molecule 45: 50S ribosomal protein L28

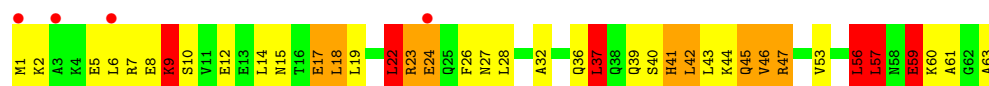


- Molecule 45: 50S ribosomal protein L28

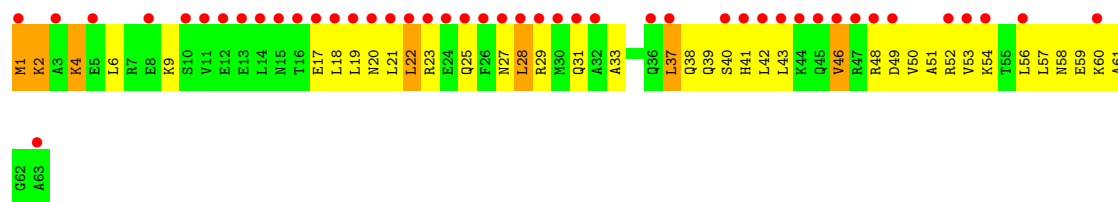
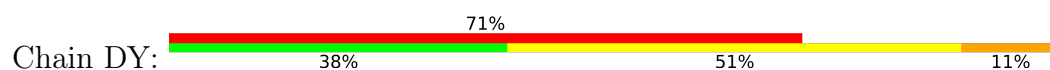


- Molecule 46: 50S ribosomal protein L29





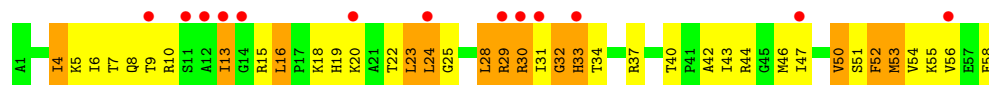
- Molecule 46: 50S ribosomal protein L29



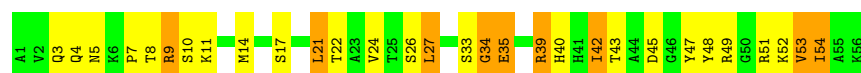
- Molecule 47: 50S ribosomal protein L30



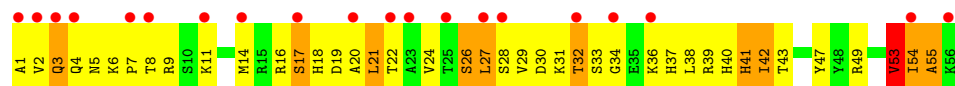
- Molecule 47: 50S ribosomal protein L30



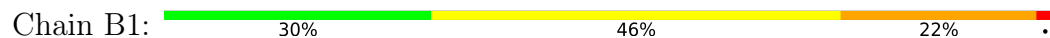
- Molecule 48: 50S ribosomal protein L32



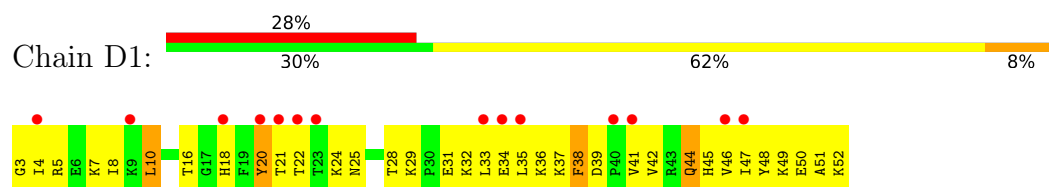
- Molecule 48: 50S ribosomal protein L32



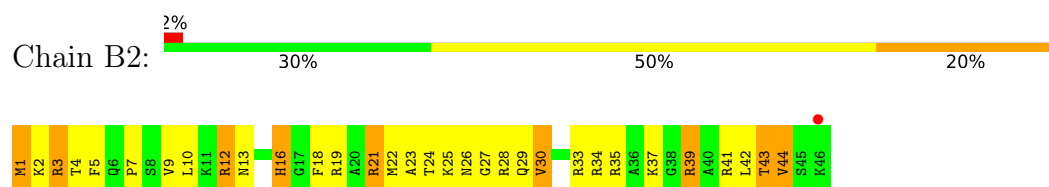
- Molecule 49: 50S ribosomal protein L33



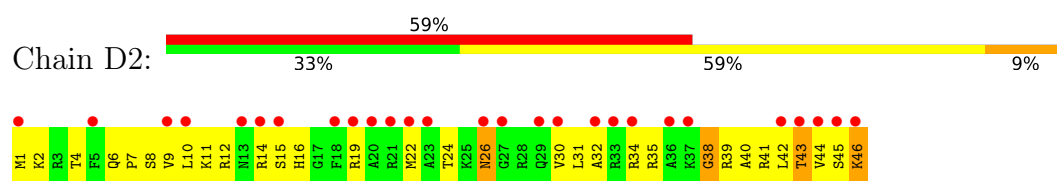
- Molecule 49: 50S ribosomal protein L33



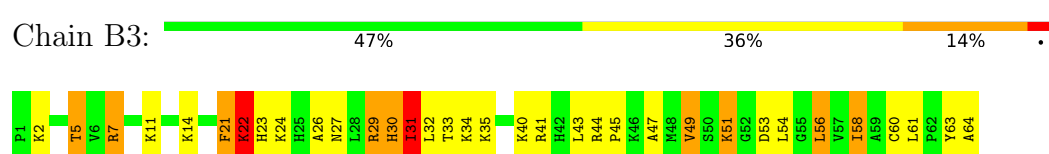
- Molecule 50: 50S ribosomal protein L34



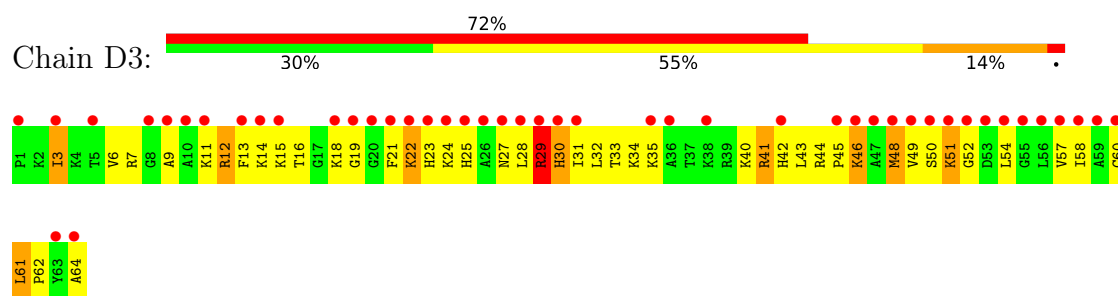
- Molecule 50: 50S ribosomal protein L34



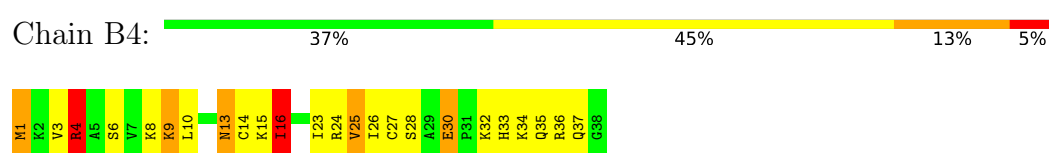
- Molecule 51: 50S ribosomal protein L35



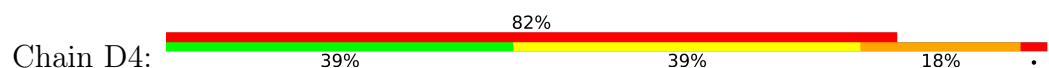
- Molecule 51: 50S ribosomal protein L35

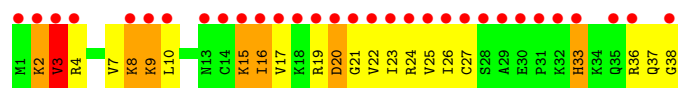


- Molecule 52: 50S ribosomal protein L36

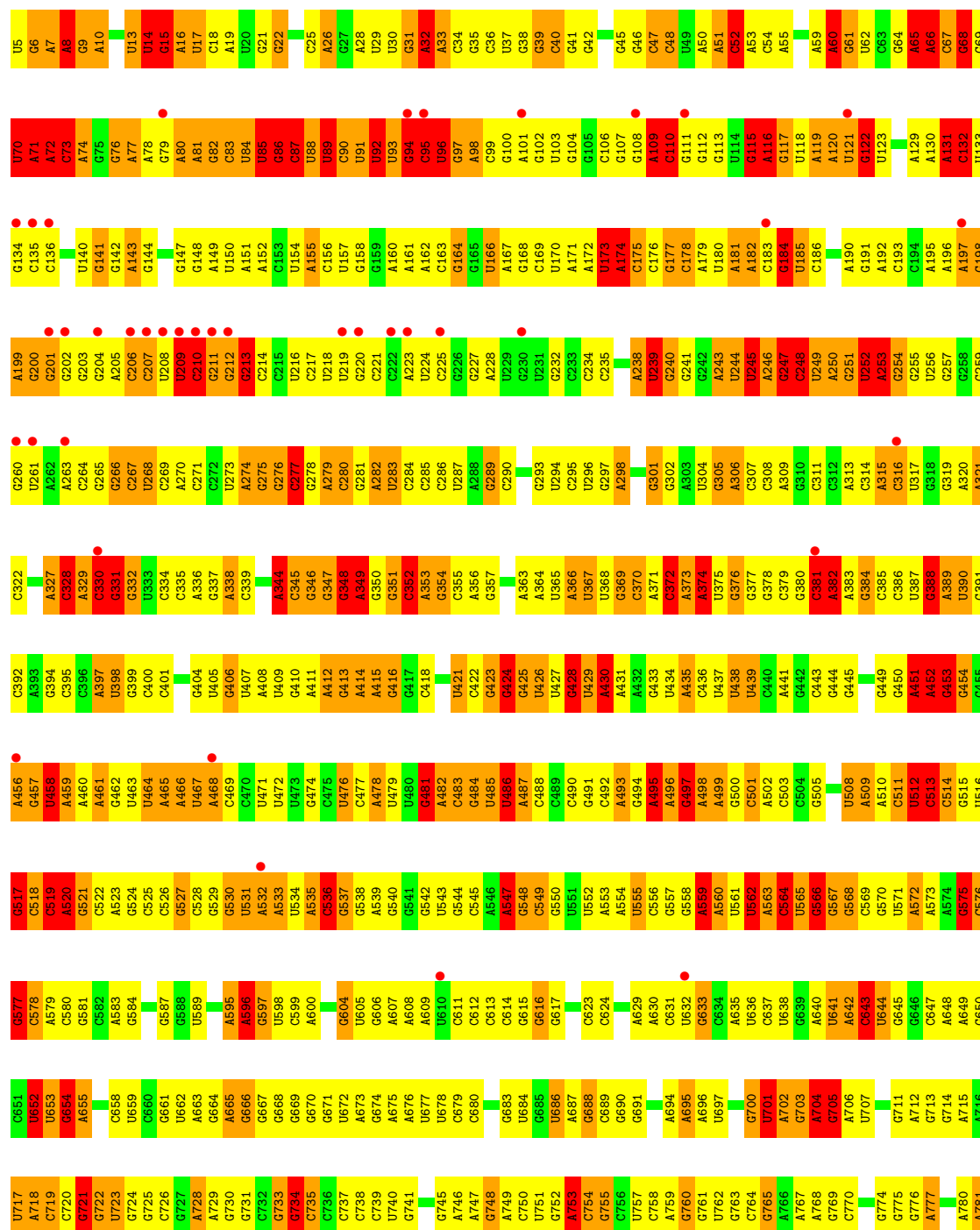
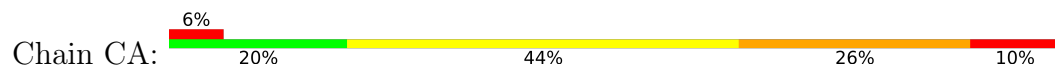


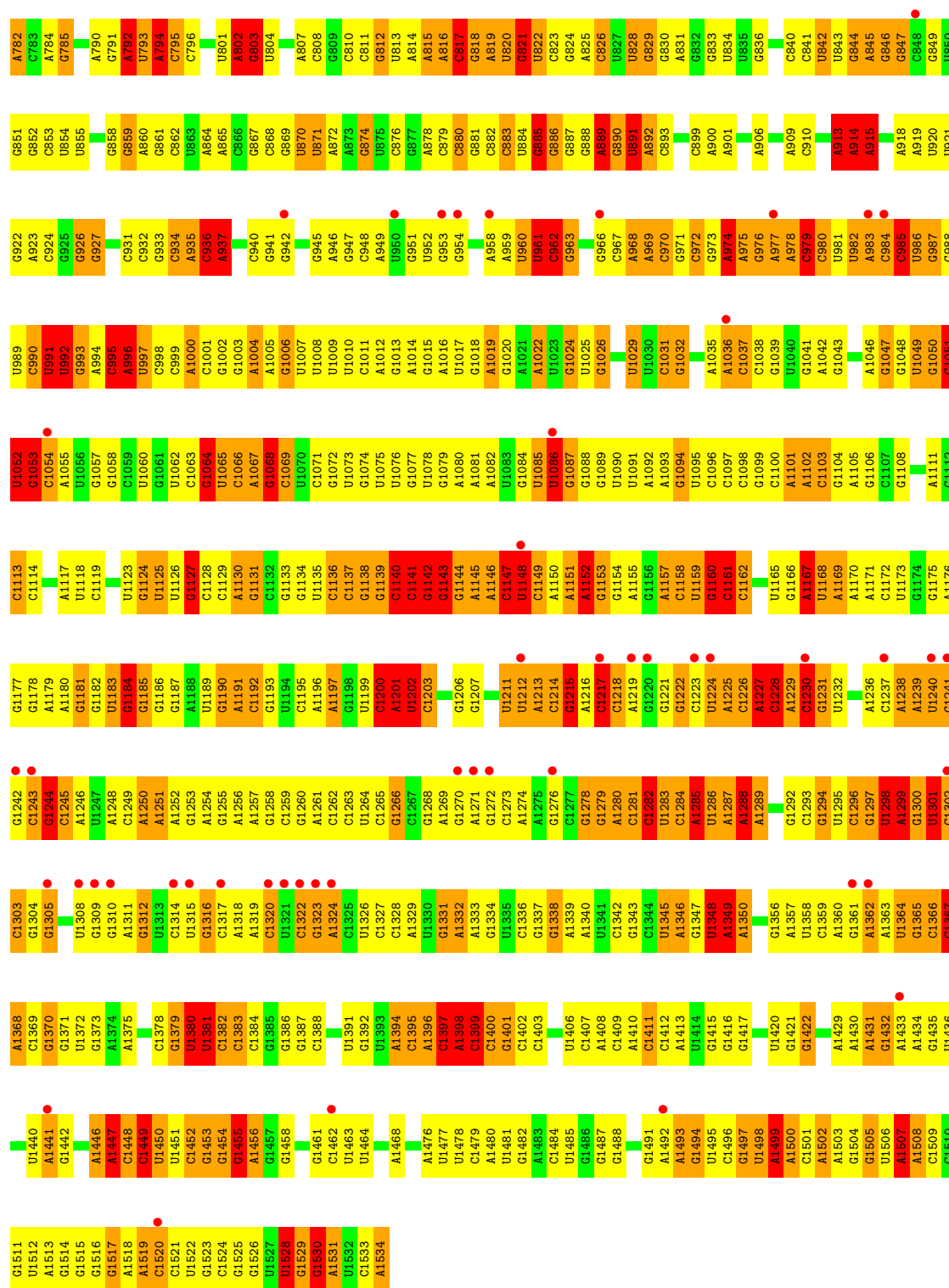
- Molecule 52: 50S ribosomal protein L36





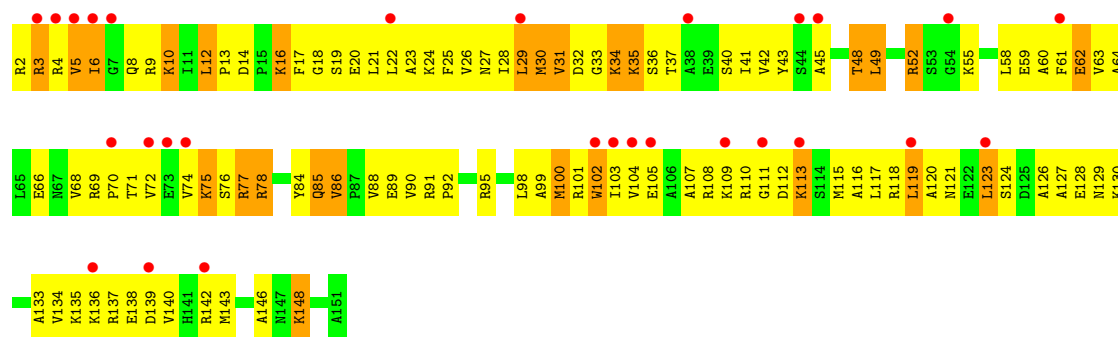
● Molecule 53: 16S rRNA



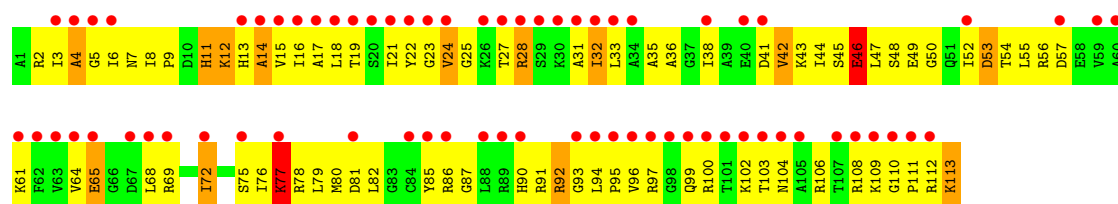


● Molecule 54: 30S ribosomal protein S7

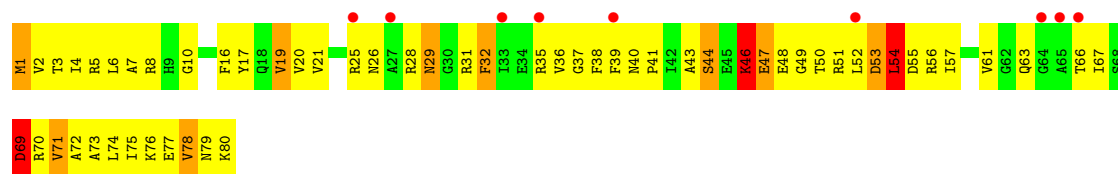




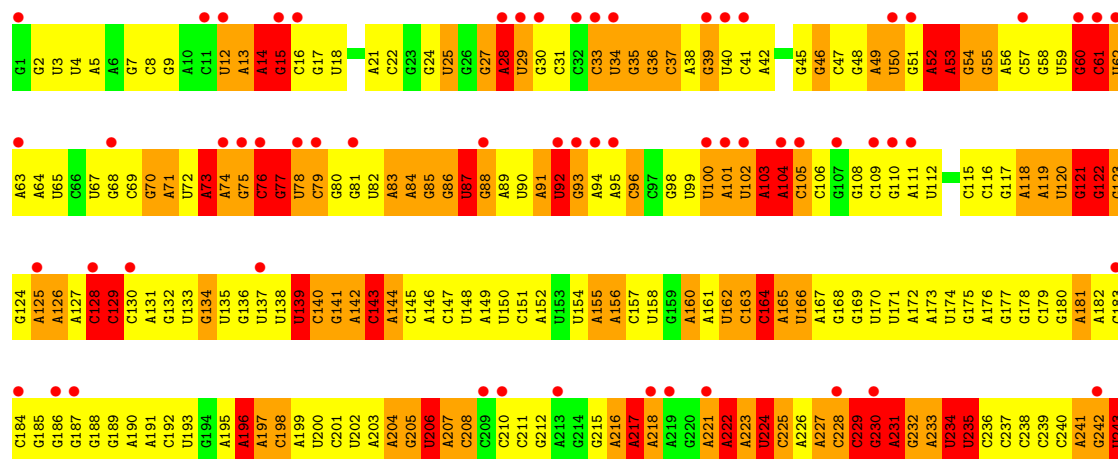
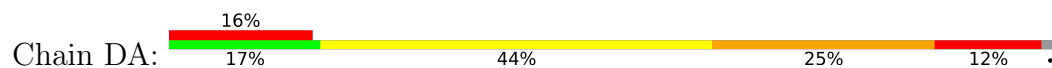
• Molecule 55: 30S ribosomal protein S13



• Molecule 56: 30S ribosomal protein S16



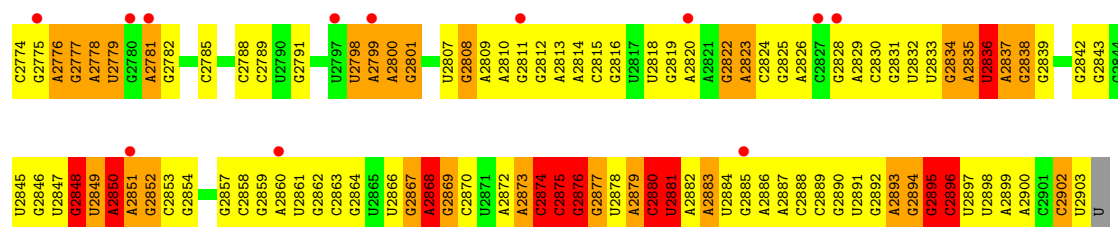
• Molecule 57: 23S rRNA



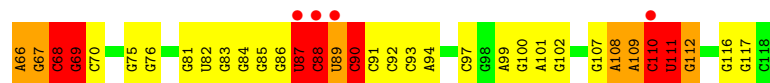
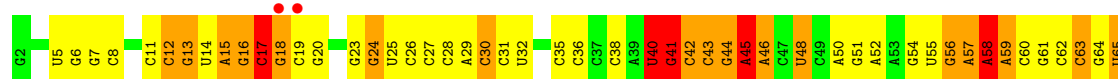


G1878	G1879	A1810	G1750	C1685	G1620	C1557	A1496	G1430	G1369	G1309	U1248	G1189	G1128
C1881	C1880	G1811	U1751	C1686	U1621	C1558	U1497	A1431	C1370	G1310	G1250	G1190	A1129
C1881	C1881	U1812	G1752	G1687	G1622	U1559	C1498	A1432	U1371	G1311	C1251	G1191	U1130
U1882	U1882	G1813	G1753	U1688	G1623	G1560	A1499	A1433	U1372	G1312	C1252	G1192	G1131
G1883	G1883	A1814	A1754	A1689	U1624	G1500	G1500	G1434	A1373	A1253	A1253	G1193	A1132
G1884	A1885	A1815	A1755	A1690	C1625	C1561	G1501	G1435	G1374	C1314	A1254	A1194	A1133
A1886	A1886	C1816	G1756	C1691	A1626	C1565	A1502	G1436	U1375	C1315	U1255	G1195	A1134
A1889	A1889	U1818	U1757	A1566	G1627	A1566	A1503	C1437	C1376	U1316	G1256	C1196	C1135
A1890	A1890	U1818	U1758	A1567	G1628	A1567	A1504	C1438	G1377	U1317	G1257	C1197	G1136
C1893	C1893	U1820	A1759	G1568	U1629	G1568	A1505	A1439	A1378	C1318	U1258	G1198	G1137
U1898	U1898	A1821	C1760	A1569	A1630	A1569	U1506	U1440	U1379	C1319	G1259	U1199	G1138
G1903	G1903	G1696	G1696	A1570	A1634	A1571	C1507	U1441	G1380	C1320	A1260	C1200	G1139
A1901	A1901	C1697	C1697	A1572	A1635	A1572	A1508	U1442	G1381	A1321	C1261	U1201	C1140
C1902	C1902	A1698	A1698	A1573	A1636	A1573	A1509	C1447	G1382	A1322	A1262	G1202	U1141
G1904	G1904	G1699	G1699	C1574	U1637	C1574	G1510	A1448	A1383	C1323	U1263	U1203	A1142
C1905	C1905	A1700	A1700	C1575	A1638	C1575	G1511	G1449	A1384	G1324	A1264	A1204	A1143
G1906	G1906	G1701	G1701	C1578	C1638	C1578	C1512	G1450	A1385	U1325	A1265	A1205	A1144
G1907	G1907	G1702	G1702	U1578	G1639	C1579	U1514	G1451	C1386	U1326	G1266	G1206	C1145
U1915	U1915	A1640	A1640	U1579	A1641	U1579	A1515	G1452	A1387	A1327	C1267	C1207	C1146
C1918	C1918	A1641	A1641	A1580	G1642	A1580	A1516	G1453	G1388	A1328	A1268	C1208	A1147
A1919	A1919	G1643	G1643	G1581	G1643	G1581	A1517	G1454	U1389	U1329	A1269	U1209	U1148
C1920	C1920	G1645	G1645	C1582	G1645	C1582	G1518	G1455	U1391	G1330	G1270	C1210	G1149
G1921	G1921	G1646	G1646	U1584	G1646	U1584	G1519	G1456	A1392	G1332	G1271	C1211	G1150
U1922	U1922	U1585	U1585	C1585	U1647	C1585	U1520	U1457	A1393	G1333	U1272	G1212	C1152
C1923	C1923	A1654	A1654	A1586	U1648	A1586	G1521	U1458	U1394	G1334	A1274	A1214	G1154
A1924	A1924	A1655	A1655	G1587	U1649	G1587	A1522	U1459	U1395	C1335	A1275	G1215	A1156
G1925	G1925	A1656	A1656	U1588	G1650	U1588	G1523	U1460	A1396	G1336	A1276	G1216	A1155
U1926	U1926	G1651	G1651	U1589	G1651	U1589	A1524	G1461	U1397	G1337	G1277	U1217	G1157
A1927	A1927	G1652	G1652	A1590	G1652	U1590	A1525	G1462	C1398	G1338	C1278	G1218	C1158
C1928	C1928	G1653	G1653	A1591	G1653	A1591	G1526	G1463	C1399	G1339	G1279	U1219	U1159
U1929	U1929	A1654	A1654	A1592	U1654	A1592	G1527	U1464	U1400	U1340	G1280	G1220	G1160
G1930	G1930	G1655	G1655	C1592	U1655	C1592	A1528	U1465	G1401	G1341	G1281	C1221	C1161
A1931	A1931	U1656	U1656	U1593	G1656	U1593	G1529	U1466	A1402	A1342	U1282	U1222	G1162
C1932	C1932	A1657	A1657	C1594	G1657	C1594	G1530	U1467	U1403	G1343	G1283	G1223	G1163
U1933	U1933	G1658	G1658	A1595	U1658	A1595	C1531	U1468	A1404	U1344	A1284	U1224	C1164
G1934	G1934	G1659	G1659	A1596	U1659	A1596	A1532	U1469	U1405	G1345	A1285	G1225	A1165
A1935	A1935	U1660	U1660	A1597	G1660	A1597	G1533	U1470	U1406	G1346	A1286	A1226	G1166
C1936	C1936	G1661	G1661	U1598	U1661	U1598	U1534	U1471	G1407	A1347	A1287	G1227	C1167
U1937	U1937	A1662	A1662	A1599	U1662	A1599	U1535	G1472	G1408	C1348	G1288	G1228	G1168
A1938	A1938	G1663	G1663	C1600	U1663	C1600	C1536	U1473	U1409	C1349	C1289	C1229	A1169
C1939	C1939	A1664	A1664	G1601	U1664	G1601	C1537	U1474	G1410	C1350	G1290	A1230	G1170
G1940	G1940	G1665	G1665	A1602	U1665	A1602	G1538	U1475	U1411	U1351	G1291	U1231	G1171
U1941	U1941	G1666	G1666	A1603	U1666	A1603	U1539	U1476	U1412	U1352	G1292	G1232	C1172
C1942	C1942	G1667	G1667	C1604	U1667	C1604	G1540	U1477	A1413	A1353	C1293	C1233	U1173
A1943	A1943	A1668	A1668	C1605	U1668	C1605	C1541	U1478	U1414	A1354	U1294	U1234	U1174
U1944	U1944	G1669	G1669	A1544	U1669	A1544	G1544	U1479	U1415	G1355	G1295	U1235	A1175
C1945	C1945	U1670	U1670	A1545	U1670	A1545	A1544	G1480	G1416	G1356	G1296	G1236	U1176
G1946	G1946	A1671	A1671	A1546	U1671	A1546	A1545	U1481	C1417	C1357	C1297	A1237	G1177
U1947	U1947	G1672	G1672	G1547	U1672	G1547	A1546	U1482	G1418	G1358	G1298	G1238	C1178
A1948	A1948	G1673	G1673	C1548	U1673	C1548	U1548	U1483	A1419	G1359	G1299	G1239	G1179
C1949	C1949	A1674	A1674	A1549	U1674	A1549	A1548	U1484	A1420	G1360	G1300	U1240	U1180
G1950	G1950	G1675	G1675	C1550	U1675	C1550	A1549	U1485	G1421	G1361	A1301	U1241	U1181
U1951	U1951	A1676	A1676	A1551	U1676	A1551	A1550	C1489	G1422	C1362	A1302	U1242	G1182
C1952	C1952	G1677	G1677	A1552	U1677	A1552	A1551	A1490	G1423	C1363	G1303	G1243	U1183
A1953	A1953	U1680	U1680	A1553	U1680	A1553	A1552	G1491	G1424	G1364	A1304	A1244	U1184
U1954	U1954	G1681	G1681	A1554	U1681	A1554	A1553	G1492	G1425	A1365	C1305	G1245	G1185
C1955	C1955	U1682	U1682	A1555	U1682	A1555	A1554	G1493	G1426	A1366	C1306	G1246	G1186
G1956	G1956	G1683	G1683	A1556	U1683	A1556	A1555	G1494	A1427	A1367	A1307	A1247	G1187
U1957	U1957	A1684	A1684	G1556	U1684	G1556	A1556	A1495	G1429	G1368	C1308	G1248	U1188

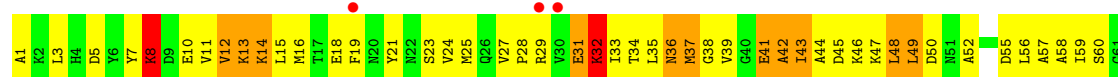




• Molecule 58: 5S rRNA



• Molecule 59: 50S ribosomal protein L5



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.46Å 434.08Å 621.23Å 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 3.19Å)	Xtriage
Refinement program	PHENIX, PHENIX (phenix.refine)	Depositor
R, R_{free}	0.191 , 0.252 0.203 , 0.261	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)	0.24 , 84.2	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	0.33	3/36834 (0.0%)	0.99	260/57462 (0.5%)
2	AB	0.63	2/1736 (0.1%)	0.90	12/2338 (0.5%)
2	CB	0.64	2/1736 (0.1%)	0.88	6/2338 (0.3%)
3	AC	0.34	0/1652	0.85	2/2225 (0.1%)
3	CC	0.33	0/1652	0.76	0/2225
4	AD	0.37	0/1665	0.83	3/2227 (0.1%)
4	CD	0.44	0/1665	0.85	3/2227 (0.1%)
5	AE	0.53	2/1119 (0.2%)	0.92	5/1504 (0.3%)
5	CE	0.44	1/1119 (0.1%)	0.85	1/1504 (0.1%)
6	AF	0.36	0/836	0.79	1/1128 (0.1%)
6	CF	0.36	0/836	0.79	1/1128 (0.1%)
7	AG	0.32	0/1196	0.83	0/1602
8	AH	0.38	0/989	0.96	4/1326 (0.3%)
8	CH	0.35	0/989	0.83	2/1326 (0.2%)
9	AI	0.29	0/1034	0.77	0/1375
9	CI	0.30	0/1034	0.74	1/1375 (0.1%)
10	AJ	0.34	0/797	0.82	2/1077 (0.2%)
10	CJ	0.32	0/797	0.82	3/1077 (0.3%)
11	AK	0.35	0/893	0.91	1/1205 (0.1%)
11	CK	0.33	0/893	0.90	2/1205 (0.2%)
12	AL	0.48	0/969	0.98	1/1300 (0.1%)
12	CL	0.56	1/969 (0.1%)	0.87	2/1300 (0.2%)
13	AM	0.32	0/893	0.79	0/1193
14	AN	0.34	0/785	0.81	3/1043 (0.3%)
14	CN	0.27	0/780	0.77	0/1036
15	AO	0.36	0/722	0.74	0/964
15	CO	0.33	0/722	0.73	0/964
16	AP	0.37	0/659	0.87	2/884 (0.2%)
17	AQ	0.41	0/658	0.88	2/881 (0.2%)
17	CQ	0.39	0/658	0.83	0/881
18	AR	0.37	0/463	0.85	0/621
18	CR	0.35	0/463	0.77	0/621

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
19	AS	0.30	0/653	0.80	0/877
19	CS	0.26	0/653	0.83	2/877 (0.2%)
20	AT	0.39	0/671	0.91	3/888 (0.3%)
20	CT	0.33	0/671	0.88	3/888 (0.3%)
21	AU	0.35	0/431	0.85	0/570
21	CU	0.37	0/431	0.87	0/570
22	BA	0.43	2/68626 (0.0%)	1.14	760/107056 (0.7%)
23	BB	0.40	0/2828	1.11	30/4410 (0.7%)
24	BC	0.52	0/2122	1.05	14/2852 (0.5%)
24	DC	0.38	0/2122	0.89	5/2852 (0.2%)
25	BD	0.63	0/1586	1.16	7/2134 (0.3%)
25	DD	0.37	0/1586	0.93	7/2134 (0.3%)
26	BE	0.53	0/1571	0.98	8/2113 (0.4%)
26	DE	0.33	0/1571	0.80	2/2113 (0.1%)
27	BF	0.41	0/1435	0.89	4/1926 (0.2%)
28	BG	0.44	0/1343	0.95	5/1816 (0.3%)
28	DG	0.31	0/1343	0.79	2/1816 (0.1%)
29	BH	0.43	1/1122 (0.1%)	0.83	4/1515 (0.3%)
29	DH	0.52	1/1122 (0.1%)	0.77	1/1515 (0.1%)
30	BI	0.35	0/1046	0.88	4/1410 (0.3%)
30	DI	0.32	0/1046	0.85	3/1410 (0.2%)
31	BJ	0.70	1/1152 (0.1%)	1.23	13/1551 (0.8%)
31	DJ	0.36	0/1152	0.91	2/1551 (0.1%)
32	BK	0.61	0/948	1.06	1/1268 (0.1%)
32	DK	0.37	0/948	0.87	2/1268 (0.2%)
33	BL	0.59	1/1054 (0.1%)	1.09	5/1403 (0.4%)
33	DL	0.33	0/1054	0.81	0/1403
34	BM	0.56	0/1093	1.06	8/1460 (0.5%)
34	DM	0.34	0/1093	0.85	2/1460 (0.1%)
35	BN	0.59	0/974	1.03	7/1301 (0.5%)
35	DN	0.37	0/974	0.89	2/1301 (0.2%)
36	BO	0.52	0/902	0.93	2/1209 (0.2%)
36	DO	0.30	0/902	0.74	0/1209
37	BP	0.54	0/929	1.04	7/1242 (0.6%)
37	DP	0.36	0/929	0.89	5/1242 (0.4%)
38	BQ	0.69	0/960	1.09	6/1278 (0.5%)
38	DQ	0.34	0/960	0.76	0/1278
39	BR	0.63	0/829	1.09	6/1107 (0.5%)
39	DR	0.31	0/829	0.71	0/1107
40	BS	0.70	0/864	1.02	0/1156
40	DS	0.38	0/864	0.82	0/1156
41	BT	0.56	0/745	1.05	6/994 (0.6%)
41	DT	0.31	0/745	0.80	1/994 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
42	BU	0.52	0/788	1.13	8/1051 (0.8%)
42	DU	0.33	0/788	0.86	2/1051 (0.2%)
43	BV	0.51	0/766	0.89	0/1025
43	DV	0.31	0/766	0.80	2/1025 (0.2%)
44	BW	0.69	0/603	1.09	3/797 (0.4%)
44	DW	0.30	0/603	0.74	0/797
45	BX	0.52	0/635	0.96	3/848 (0.4%)
45	DX	0.34	0/635	0.89	2/848 (0.2%)
46	BY	0.43	0/510	0.96	3/677 (0.4%)
46	DY	0.25	0/510	0.69	0/677
47	BZ	0.62	0/453	1.10	3/605 (0.5%)
47	DZ	0.34	0/453	0.82	1/605 (0.2%)
48	B0	0.58	0/450	0.96	0/599
48	D0	0.33	0/450	0.80	0/599
49	B1	0.39	0/417	0.88	0/554
49	D1	0.33	0/417	0.75	0/554
50	B2	0.57	0/380	0.98	2/498 (0.4%)
50	D2	0.34	0/380	0.97	3/498 (0.6%)
51	B3	0.55	0/513	1.04	1/676 (0.1%)
51	D3	0.37	0/513	0.84	1/676 (0.1%)
52	B4	0.54	0/303	1.10	3/397 (0.8%)
52	D4	0.73	2/303 (0.7%)	0.77	0/397
53	CA	0.32	5/36762 (0.0%)	0.96	231/57350 (0.4%)
54	CG	0.30	0/1188	0.86	3/1591 (0.2%)
55	CM	0.26	0/885	0.69	0/1181
56	CP	0.38	0/649	0.82	0/870
57	DA	0.32	1/68314 (0.0%)	0.99	485/106569 (0.5%)
58	DB	0.38	1/2803 (0.0%)	0.96	22/4371 (0.5%)
59	DF	0.31	0/1444	0.83	1/1937 (0.1%)
All	All	0.39	26/306773 (0.0%)	1.00	2037/458565 (0.4%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
2	CB	0	1
25	BD	0	1
35	BN	0	1
All	All	0	3

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	CB	146	SER	C-N	20.84	1.57	1.33
2	AB	107	ARG	C-N	20.48	1.60	1.33
58	DB	69	G	O3'-P	-13.44	1.41	1.61
12	CL	21	PRO	C-N	13.25	1.53	1.33
29	DH	48	GLU	C-N	12.92	1.50	1.33
1	AA	1047	G	O3'-P	-11.59	1.43	1.61
2	CB	107	ARG	C-N	10.69	1.48	1.33
2	AB	146	SER	C-N	10.02	1.49	1.33
5	AE	149	PRO	C-N	-9.05	1.21	1.33
53	CA	1396	A	O3'-P	-9.01	1.47	1.61
1	AA	1390	U	O3'-P	7.58	1.72	1.61
53	CA	562	U	O3'-P	-7.51	1.49	1.61
52	D4	33	HIS	CG-ND1	-7.43	1.30	1.38
53	CA	26	A	O3'-P	-7.06	1.50	1.61
53	CA	8	A	O3'-P	-6.95	1.50	1.61
52	D4	33	HIS	CE1-NE2	6.23	1.38	1.32
22	BA	901	C	O3'-P	-6.11	1.51	1.61
5	CE	149	PRO	C-N	-6.08	1.25	1.34
1	AA	557	G	O3'-P	-5.96	1.52	1.61
29	BH	48	GLU	C-N	-5.87	1.25	1.33
53	CA	1047	G	O3'-P	5.86	1.70	1.61
22	BA	1905	C	O3'-P	-5.76	1.52	1.61
5	AE	73	VAL	C-N	5.71	1.41	1.33
33	BL	30	THR	CA-CB	5.57	1.61	1.53
31	BJ	55	ILE	CA-CB	5.49	1.59	1.53
57	DA	1944	U	C1'-N1	5.43	1.55	1.47

All (2037) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	DB	69	G	O3'-P-O5'	-16.51	79.23	104.00
25	BD	151	THR	CA-C-N	-14.99	103.48	120.12
25	BD	151	THR	C-N-CA	-14.99	103.48	120.12
58	DB	107	G	O3'-P-O5'	-14.40	82.40	104.00
53	CA	1396	A	P-O3'-C3'	12.76	139.33	120.20
57	DA	2586	U	N1-C1'-C2'	-12.32	93.52	112.00
22	BA	2283	C	N1-C1'-C2'	-11.92	94.12	112.00
22	BA	2613	U	O3'-P-O5'	-11.82	86.26	104.00
22	BA	1603	A	P-O3'-C3'	-11.57	102.85	120.20
57	DA	1997	C	N1-C1'-C2'	-11.54	94.69	112.00
53	CA	66	A	P-O3'-C3'	-11.51	102.93	120.20
2	CB	146	SER	O-C-N	-11.51	108.76	122.11
23	BB	90	C	N1-C1'-C2'	-11.37	94.94	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	981	A	O3'-P-O5'	-11.32	87.02	104.00
22	BA	1330	C	N1-C1'-C2'	-11.24	95.13	112.00
57	DA	740	C	N1-C1'-C2'	-11.23	95.15	112.00
26	BE	39	ALA	N-CA-C	-11.16	99.67	113.28
22	BA	627	A	P-O3'-C3'	11.14	136.91	120.20
22	BA	1013	C	N1-C1'-C2'	-10.99	95.51	112.00
22	BA	531	C	P-O3'-C3'	10.98	136.67	120.20
57	DA	304	U	N1-C1'-C2'	-10.95	95.57	112.00
1	AA	52	C	N1-C1'-C2'	-10.94	95.59	112.00
22	BA	249	C	N1-C1'-C2'	10.94	130.41	114.00
22	BA	2425	A	P-O3'-C3'	10.87	136.50	120.20
53	CA	328	C	P-O3'-C3'	10.84	136.45	120.20
22	BA	2447	G	P-O3'-C3'	10.81	136.41	120.20
53	CA	132	C	N1-C1'-C2'	-10.56	96.16	112.00
53	CA	915	A	P-O3'-C3'	-10.54	104.39	120.20
22	BA	728	G	P-O3'-C3'	10.49	135.94	120.20
1	AA	1202	U	N1-C1'-C2'	-10.48	96.28	112.00
22	BA	2036	C	N1-C1'-C2'	-10.45	96.33	112.00
57	DA	2283	C	N1-C1'-C2'	-10.42	96.38	112.00
22	BA	704	G	P-O3'-C3'	10.37	135.76	120.20
22	BA	249	C	P-O3'-C3'	10.37	135.75	120.20
22	BA	302	C	N1-C1'-C2'	-10.34	96.50	112.00
2	AB	146	SER	O-C-N	-10.33	110.29	122.27
53	CA	891	U	N1-C1'-C2'	-10.30	96.55	112.00
22	BA	1247	A	P-O3'-C3'	10.24	135.56	120.20
22	BA	2727	A	P-O3'-C3'	-10.21	104.89	120.20
22	BA	1967	C	N1-C1'-C2'	-10.20	96.69	112.00
53	CA	245	U	N1-C1'-C2'	-10.18	96.74	112.00
57	DA	2504	U	N1-C1'-C2'	-10.16	96.76	112.00
57	DA	1968	G	P-O3'-C3'	-10.04	105.13	120.20
22	BA	2800	A	O3'-P-O5'	-10.04	88.94	104.00
22	BA	2385	C	N1-C1'-C2'	-10.01	96.98	112.00
22	BA	1461	C	N1-C1'-C2'	-9.97	97.05	112.00
57	DA	2137	U	N1-C1'-C2'	-9.96	97.06	112.00
2	AB	107	ARG	O-C-N	-9.96	110.85	122.20
22	BA	2424	C	P-O3'-C3'	-9.91	105.34	120.20
57	DA	1023	U	N1-C1'-C2'	-9.90	97.14	112.00
57	DA	87	U	N1-C1'-C2'	-9.85	97.23	112.00
57	DA	741	U	N1-C1'-C2'	-9.84	97.24	112.00
57	DA	533	G	P-O3'-C3'	-9.81	105.48	120.20
57	DA	961	C	P-O3'-C3'	9.77	134.86	120.20
22	BA	2573	C	P-O3'-C3'	-9.73	105.60	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2214	C	N1-C1'-C2'	-9.70	97.44	112.00
22	BA	2424	C	N1-C1'-C2'	-9.58	97.62	112.00
22	BA	805	G	P-O3'-C3'	9.57	134.56	120.20
22	BA	865	C	P-O3'-C3'	9.57	134.56	120.20
1	AA	972	C	N1-C1'-C2'	-9.57	97.65	112.00
1	AA	1047	G	P-O3'-C3'	-9.57	105.85	120.20
57	DA	1782	U	P-O3'-C3'	-9.57	105.85	120.20
22	BA	390	U	P-O3'-C3'	9.55	134.52	120.20
53	CA	352	C	N1-C1'-C2'	-9.54	97.69	112.00
22	BA	1997	C	N1-C1'-C2'	-9.53	97.71	112.00
1	AA	1283	U	N1-C1'-C2'	-9.51	97.74	112.00
22	BA	2801	G	P-O5'-C5'	-9.43	106.76	120.90
57	DA	1512	C	N1-C1'-C2'	-9.40	97.89	112.00
57	DA	2339	C	N1-C1'-C2'	-9.40	97.89	112.00
22	BA	2712	C	P-O3'-C3'	9.37	134.25	120.20
57	DA	2037	A	P-O3'-C3'	-9.37	106.15	120.20
22	BA	858	G	P-O3'-C3'	9.36	134.24	120.20
22	BA	2319	G	P-O3'-C3'	9.34	134.22	120.20
22	BA	2629	U	P-O3'-C3'	9.34	134.21	120.20
22	BA	2023	C	N1-C1'-C2'	-9.33	98.01	112.00
22	BA	783	A	P-O3'-C3'	-9.33	106.21	120.20
57	DA	206	U	N1-C1'-C2'	-9.30	98.05	112.00
1	AA	1162	C	N1-C1'-C2'	-9.29	98.06	112.00
42	BU	82	VAL	N-CA-C	9.29	120.22	111.48
22	BA	2053	G	O3'-P-O5'	-9.26	90.10	104.00
1	AA	486	U	P-O5'-C5'	-9.25	107.03	120.90
22	BA	2214	C	N1-C1'-C2'	-9.24	98.14	112.00
22	BA	2284	A	P-O3'-C3'	-9.24	106.34	120.20
57	DA	2137	U	P-O3'-C3'	-9.23	106.36	120.20
57	DA	235	U	N1-C1'-C2'	-9.22	98.17	112.00
57	DA	859	G	P-O3'-C3'	9.21	134.02	120.20
1	AA	431	A	P-O3'-C3'	-9.21	106.38	120.20
22	BA	2848	G	P-O3'-C3'	9.20	134.00	120.20
57	DA	1967	C	N1-C1'-C2'	-9.20	98.20	112.00
53	CA	14	U	N1-C1'-C2'	-9.20	98.21	112.00
22	BA	2645	G	P-O3'-C3'	9.19	133.98	120.20
22	BA	49	A	P-O3'-C3'	9.18	133.97	120.20
57	DA	2646	C	N1-C1'-C2'	-9.17	98.25	112.00
57	DA	1267	U	N1-C1'-C2'	-9.14	98.28	112.00
57	DA	1956	U	N1-C1'-C2'	-9.14	98.28	112.00
57	DA	2615	U	N1-C1'-C2'	-9.14	98.29	112.00
58	DB	110	C	N1-C1'-C2'	-9.14	98.30	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1210	G	P-O3'-C3'	9.14	133.90	120.20
57	DA	2225	A	P-O3'-C3'	9.13	133.90	120.20
53	CA	330	C	N1-C1'-C2'	-9.13	98.31	112.00
22	BA	2286	G	P-O3'-C3'	9.11	133.86	120.20
22	BA	1556	C	P-O3'-C3'	-9.10	106.56	120.20
1	AA	512	U	N1-C1'-C2'	-9.09	98.36	112.00
22	BA	2137	U	N1-C1'-C2'	-9.04	98.44	112.00
22	BA	1144	A	P-O3'-C3'	-9.03	106.66	120.20
22	BA	2035	G	P-O3'-C3'	9.01	133.72	120.20
1	AA	1228	C	N1-C1'-C2'	-9.01	98.49	112.00
22	BA	2068	U	N1-C1'-C2'	-8.99	98.51	112.00
22	BA	2321	U	N1-C1'-C2'	-8.98	98.53	112.00
1	AA	1399	C	P-O3'-C3'	8.96	133.64	120.20
22	BA	2068	U	P-O3'-C3'	-8.96	106.76	120.20
22	BA	2321	U	P-O3'-C3'	-8.95	106.78	120.20
22	BA	1941	C	N1-C1'-C2'	-8.95	98.58	112.00
53	CA	65	A	P-O3'-C3'	8.94	133.62	120.20
53	CA	1401	G	P-O3'-C3'	-8.93	106.81	120.20
22	BA	373	U	N1-C1'-C2'	-8.92	98.62	112.00
22	BA	1993	U	N1-C1'-C2'	-8.90	98.65	112.00
58	DB	69	G	P-O3'-C3'	8.90	133.55	120.20
53	CA	92	U	N1-C1'-C2'	-8.89	98.66	112.00
22	BA	2682	A	P-O5'-C5'	-8.89	107.57	120.90
22	BA	1653	G	P-O3'-C3'	8.87	133.51	120.20
23	BB	40	U	P-O3'-C3'	8.87	133.51	120.20
22	BA	1023	U	N1-C1'-C2'	-8.86	98.71	112.00
22	BA	196	A	P-O3'-C3'	8.86	133.49	120.20
53	CA	821	G	P-O3'-C3'	-8.86	106.91	120.20
22	BA	667	U	P-O3'-C3'	8.84	133.46	120.20
22	BA	1324	G	P-O3'-C3'	8.81	133.42	120.20
57	DA	1776	G	P-O3'-C3'	-8.80	107.00	120.20
1	AA	422	C	P-O3'-C3'	8.79	133.39	120.20
58	DB	68	C	N1-C1'-C2'	-8.76	98.86	112.00
22	BA	588	U	N1-C1'-C2'	-8.76	98.86	112.00
53	CA	116	A	P-O3'-C3'	-8.75	107.08	120.20
22	BA	1273	U	P-O5'-C5'	-8.74	107.78	120.90
53	CA	1068	G	P-O3'-C3'	-8.73	107.11	120.20
22	BA	2566	A	P-O3'-C3'	8.72	133.28	120.20
57	DA	1536	C	P-O3'-C3'	8.72	133.28	120.20
53	CA	1502	A	P-O3'-C3'	8.71	133.27	120.20
57	DA	2429	G	P-O3'-C3'	-8.68	107.19	120.20
22	BA	2893	A	P-O3'-C3'	8.67	133.20	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	520	A	P-O3'-C3'	-8.67	107.20	120.20
1	AA	913	A	P-O3'-C3'	8.66	133.19	120.20
57	DA	1667	G	P-O3'-C3'	8.66	133.18	120.20
54	CG	86	VAL	CA-C-N	8.65	128.69	119.78
54	CG	86	VAL	C-N-CA	8.65	128.69	119.78
22	BA	1963	U	N1-C1'-C2'	-8.65	99.03	112.00
53	CA	1086	U	N1-C1'-C2'	-8.65	99.03	112.00
57	DA	726	G	P-O3'-C3'	8.64	133.16	120.20
57	DA	2645	G	P-O3'-C3'	8.61	133.12	120.20
22	BA	2752	C	N1-C1'-C2'	-8.61	99.08	112.00
22	BA	1265	A	P-O3'-C3'	8.61	133.11	120.20
22	BA	1653	G	O3'-P-O5'	8.60	116.90	104.00
1	AA	330	C	N1-C1'-C2'	-8.59	99.11	112.00
22	BA	1008	A	P-O3'-C3'	8.59	133.08	120.20
22	BA	2347	C	N1-C1'-C2'	-8.57	99.15	112.00
57	DA	1613	G	P-O3'-C3'	-8.57	107.35	120.20
57	DA	375	G	P-O3'-C3'	-8.56	107.36	120.20
22	BA	2051	A	P-O3'-C3'	8.56	133.04	120.20
22	BA	957	C	P-O3'-C3'	8.56	133.04	120.20
22	BA	1963	U	P-O3'-C3'	-8.56	107.36	120.20
22	BA	531	C	N1-C1'-C2'	8.52	126.79	114.00
22	BA	2776	A	P-O3'-C3'	8.52	132.98	120.20
1	AA	119	A	P-O3'-C3'	8.52	132.97	120.20
22	BA	200	U	N1-C1'-C2'	-8.52	99.23	112.00
53	CA	992	U	P-O3'-C3'	8.51	132.97	120.20
1	AA	641	U	P-O3'-C3'	8.50	132.95	120.20
1	AA	352	C	N1-C1'-C2'	-8.50	99.25	112.00
57	DA	1013	C	N1-C1'-C2'	-8.50	99.25	112.00
57	DA	1158	C	N1-C1'-C2'	-8.50	99.25	112.00
1	AA	1303	C	N1-C1'-C2'	-8.49	99.26	112.00
25	DD	193	VAL	CA-C-N	8.49	130.46	119.84
25	DD	193	VAL	C-N-CA	8.49	130.46	119.84
35	BN	116	VAL	N-CA-C	8.49	115.30	106.21
1	AA	1141	C	N1-C1'-C2'	-8.49	99.27	112.00
1	AA	267	C	N1-C1'-C2'	-8.48	99.27	112.00
22	BA	1635	A	P-O3'-C3'	-8.45	107.52	120.20
22	BA	2611	C	N1-C1'-C2'	-8.45	99.32	112.00
53	CA	643	C	N1-C1'-C2'	-8.46	99.32	112.00
53	CA	1230	C	N1-C1'-C2'	-8.44	99.34	112.00
22	BA	61	C	P-O3'-C3'	-8.44	107.55	120.20
39	BR	51	VAL	CA-C-N	-8.43	112.05	120.31
39	BR	51	VAL	C-N-CA	-8.43	112.05	120.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2458	G	O3'-P-O5'	-8.41	91.38	104.00
22	BA	227	A	P-O3'-C3'	8.40	132.80	120.20
22	BA	506	G	P-O3'-C3'	8.39	132.79	120.20
22	BA	233	A	P-O3'-C3'	-8.39	107.61	120.20
57	DA	336	C	N1-C1'-C2'	-8.38	99.42	112.00
22	BA	1326	U	N1-C1'-C2'	-8.38	99.43	112.00
22	BA	2543	G	P-O5'-C5'	-8.37	108.34	120.90
57	DA	1816	C	N1-C1'-C2'	-8.36	99.46	112.00
22	BA	671	C	N1-C1'-C2'	-8.36	99.47	112.00
22	BA	1648	U	N1-C1'-C2'	-8.34	99.49	112.00
1	AA	547	A	P-O3'-C3'	8.33	132.69	120.20
22	BA	790	U	P-O3'-C3'	-8.33	107.70	120.20
22	BA	1021	A	P-O3'-C3'	-8.32	107.71	120.20
1	AA	724	G	P-O3'-C3'	-8.32	107.72	120.20
22	BA	2835	A	P-O3'-C3'	8.32	132.68	120.20
53	CA	512	U	N1-C1'-C2'	-8.32	99.52	112.00
22	BA	685	A	P-O3'-C3'	8.32	132.68	120.20
22	BA	2733	A	P-O3'-C3'	-8.31	107.74	120.20
22	BA	1815	A	P-O3'-C3'	8.30	132.66	120.20
22	BA	784	G	P-O3'-C3'	8.29	132.63	120.20
57	DA	946	C	N1-C1'-C2'	-8.29	99.57	112.00
1	AA	430	A	P-O3'-C3'	-8.29	107.77	120.20
57	DA	991	C	N1-C1'-C2'	-8.28	99.57	112.00
22	BA	482	A	P-O3'-C3'	-8.28	107.78	120.20
57	DA	2052	A	P-O3'-C3'	-8.28	107.78	120.20
22	BA	404	A	P-O3'-C3'	8.27	132.60	120.20
22	BA	449	A	P-O3'-C3'	-8.26	107.80	120.20
57	DA	2492	U	P-O3'-C3'	-8.23	107.85	120.20
53	CA	1298	U	P-O3'-C3'	8.23	132.54	120.20
22	BA	2691	C	P-O3'-C3'	-8.21	107.89	120.20
22	BA	2781	A	P-O3'-C3'	-8.21	107.89	120.20
23	BB	57	A	P-O3'-C3'	-8.19	107.91	120.20
22	BA	2447	G	O3'-P-O5'	-8.19	91.71	104.00
53	CA	486	U	P-O5'-C5'	-8.15	108.67	120.90
57	DA	2348	U	N1-C1'-C2'	-8.15	99.77	112.00
57	DA	765	C	N1-C1'-C2'	-8.14	99.78	112.00
57	DA	812	C	P-O3'-C3'	-8.14	107.98	120.20
22	BA	229	C	N1-C1'-C2'	-8.14	99.79	112.00
57	DA	2896	C	N1-C1'-C2'	-8.14	99.79	112.00
53	CA	1148	U	N1-C1'-C2'	-8.14	99.79	112.00
22	BA	812	C	N1-C1'-C2'	-8.14	99.80	112.00
22	BA	2808	G	P-O3'-C3'	8.13	132.40	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	891	U	N1-C1'-C2'	-8.12	99.82	112.00
22	BA	1236	G	P-O3'-C3'	8.11	132.36	120.20
1	AA	1348	U	N1-C1'-C2'	-8.11	99.84	112.00
22	BA	741	U	P-O5'-C5'	-8.11	108.74	120.90
31	BJ	43	GLU	N-CA-C	-8.10	101.14	111.02
1	AA	1088	G	P-O3'-C3'	-8.10	108.06	120.20
22	BA	669	G	P-O3'-C3'	8.09	132.34	120.20
31	BJ	96	ARG	CA-C-N	8.08	127.76	119.19
31	BJ	96	ARG	C-N-CA	8.08	127.76	119.19
57	DA	1565	C	P-O3'-C3'	8.08	132.32	120.20
57	DA	2458	G	P-O3'-C3'	8.08	132.32	120.20
8	AH	91	LEU	CA-C-N	8.07	129.25	120.13
8	AH	91	LEU	C-N-CA	8.07	129.25	120.13
57	DA	1417	C	N1-C1'-C2'	-8.07	99.90	112.00
22	BA	1008	A	O3'-P-O5'	8.06	116.10	104.00
31	BJ	42	ALA	N-CA-C	-8.06	100.50	111.87
22	BA	934	U	P-O3'-C3'	-8.05	108.12	120.20
22	BA	604	G	P-O3'-C3'	-8.05	108.13	120.20
53	CA	1381	U	N1-C1'-C2'	-8.04	99.94	112.00
1	AA	132	C	P-O3'-C3'	-8.04	108.14	120.20
2	CB	146	SER	CA-C-N	8.04	136.29	122.95
2	CB	146	SER	C-N-CA	8.04	136.29	122.95
57	DA	335	C	N1-C1'-C2'	-8.03	99.95	112.00
22	BA	1498	C	N1-C1'-C2'	-8.03	99.96	112.00
32	BK	2	ILE	N-CA-C	8.03	119.29	111.67
22	BA	2646	C	N1-C1'-C2'	-8.02	99.96	112.00
57	DA	1902	C	P-O3'-C3'	-8.01	108.19	120.20
22	BA	915	C	N1-C1'-C2'	-8.00	99.99	112.00
57	DA	2249	U	P-O3'-C3'	8.00	132.20	120.20
22	BA	1971	U	N1-C1'-C2'	-8.00	100.00	112.00
22	BA	2572	A	P-O3'-C3'	8.00	132.19	120.20
53	CA	344	A	P-O3'-C3'	7.99	132.18	120.20
1	AA	66	A	P-O3'-C3'	-7.98	108.23	120.20
22	BA	164	C	P-O3'-C3'	-7.98	108.23	120.20
22	BA	2729	G	P-O3'-C3'	-7.98	108.23	120.20
22	BA	1332	G	P-O3'-C3'	7.97	132.16	120.20
57	DA	831	G	P-O3'-C3'	-7.97	108.25	120.20
53	CA	1283	U	N1-C1'-C2'	-7.96	100.06	112.00
53	CA	110	C	P-O3'-C3'	-7.96	108.26	120.20
1	AA	642	A	P-O3'-C3'	-7.96	108.26	120.20
1	AA	969	A	P-O3'-C3'	-7.95	108.28	120.20
57	DA	1802	A	P-O3'-C3'	-7.95	108.28	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1809	A	P-O5'-C5'	-7.94	108.99	120.90
53	CA	248	C	N1-C1'-C2'	-7.94	100.09	112.00
22	BA	2498	C	N1-C1'-C2'	-7.93	100.11	112.00
57	DA	2880	C	N1-C1'-C2'	-7.92	100.13	112.00
22	BA	995	C	P-O3'-C3'	7.90	132.05	120.20
22	BA	301	G	P-O3'-C3'	7.89	132.04	120.20
22	BA	1522	A	P-O3'-C3'	7.89	132.03	120.20
57	DA	1682	G	P-O3'-C3'	-7.88	108.38	120.20
57	DA	2881	U	N1-C1'-C2'	-7.87	100.20	112.00
22	BA	1859	U	N1-C1'-C2'	-7.87	100.20	112.00
22	BA	403	U	P-O3'-C3'	7.86	131.99	120.20
57	DA	976	G	P-O3'-C3'	-7.86	108.42	120.20
53	CA	513	C	N1-C1'-C2'	-7.85	100.22	112.00
1	AA	1228	C	P-O3'-C3'	-7.85	108.43	120.20
22	BA	2335	A	P-O3'-C3'	-7.85	108.43	120.20
22	BA	1045	C	P-O3'-C3'	7.84	131.97	120.20
57	DA	2876	G	P-O3'-C3'	-7.84	108.43	120.20
57	DA	1982	U	N1-C1'-C2'	-7.83	100.25	112.00
58	DB	88	C	P-O3'-C3'	7.82	131.93	120.20
53	CA	721	G	P-O3'-C3'	7.82	131.93	120.20
51	B3	21	PHE	N-CA-C	7.80	123.56	113.18
22	BA	687	C	P-O3'-C3'	-7.80	108.51	120.20
50	D2	6	GLN	CA-C-N	7.79	127.81	119.78
50	D2	6	GLN	C-N-CA	7.79	127.81	119.78
1	AA	961	U	N1-C1'-C2'	-7.79	100.31	112.00
22	BA	1417	C	P-O3'-C3'	-7.79	108.52	120.20
1	AA	415	A	P-O3'-C3'	-7.78	108.54	120.20
22	BA	1942	C	P-O5'-C5'	-7.78	109.24	120.90
22	BA	2333	A	P-O3'-C3'	7.76	131.84	120.20
22	BA	2092	U	OP2-P-O3'	7.76	131.28	108.00
57	DA	915	C	N1-C1'-C2'	-7.75	100.37	112.00
37	DP	16	VAL	CA-C-N	7.75	129.11	120.66
37	DP	16	VAL	C-N-CA	7.75	129.11	120.66
1	AA	132	C	N1-C1'-C2'	-7.75	100.38	112.00
53	CA	331	G	P-O3'-C3'	-7.74	108.59	120.20
43	DV	26	PHE	CA-C-N	7.74	127.67	119.85
43	DV	26	PHE	C-N-CA	7.74	127.67	119.85
57	DA	1786	A	P-O3'-C3'	7.74	131.81	120.20
22	BA	566	U	P-O5'-C5'	-7.72	109.32	120.90
22	BA	2725	A	P-O3'-C3'	7.72	131.78	120.20
57	DA	2498	C	N1-C1'-C2'	-7.72	100.42	112.00
58	DB	17	C	N1-C1'-C2'	-7.71	100.43	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	109	A	P-O3'-C3'	7.70	131.75	120.20
22	BA	995	C	O4'-C1'-N1	-7.70	96.66	108.20
1	AA	874	G	P-O3'-C3'	-7.68	108.68	120.20
22	BA	164	C	N1-C1'-C2'	-7.68	100.48	112.00
57	DA	1064	C	N1-C1'-C2'	-7.68	100.48	112.00
22	BA	1396	U	O3'-P-O5'	-7.68	92.48	104.00
58	DB	90	C	N1-C1'-C2'	-7.67	100.49	112.00
1	AA	1336	C	P-O3'-C3'	7.67	131.71	120.20
22	BA	505	A	P-O3'-C3'	-7.67	108.69	120.20
57	DA	484	C	N1-C1'-C2'	-7.67	100.50	112.00
1	AA	279	A	P-O3'-C3'	7.65	131.68	120.20
1	AA	915	A	P-O3'-C3'	-7.65	108.72	120.20
22	BA	2312	U	P-O3'-C3'	-7.65	108.73	120.20
53	CA	1367	C	N1-C1'-C2'	-7.65	100.53	112.00
22	BA	241	A	P-O3'-C3'	7.64	131.67	120.20
57	DA	2850	A	P-O3'-C3'	-7.64	108.73	120.20
53	CA	73	C	N1-C1'-C2'	-7.64	100.54	112.00
57	DA	1145	C	N1-C1'-C2'	-7.64	100.54	112.00
20	AT	7	LYS	N-CA-C	-7.64	103.42	112.89
57	DA	1611	C	N1-C1'-C2'	-7.63	100.55	112.00
22	BA	2613	U	P-O3'-C3'	7.63	131.64	120.20
22	BA	958	U	P-O5'-C5'	-7.62	109.46	120.90
1	AA	1398	A	P-O3'-C3'	-7.61	108.78	120.20
57	DA	917	A	P-O3'-C3'	-7.61	108.78	120.20
57	DA	61	C	N1-C1'-C2'	-7.61	100.59	112.00
22	BA	2266	A	P-O3'-C3'	7.60	131.60	120.20
53	CA	1147	C	N1-C1'-C2'	-7.60	100.61	112.00
57	DA	243	U	N1-C1'-C2'	-7.59	100.61	112.00
57	DA	1418	G	P-O3'-C3'	-7.59	108.81	120.20
57	DA	92	U	N1-C1'-C2'	-7.58	100.62	112.00
57	DA	2492	U	N1-C1'-C2'	-7.58	100.63	112.00
22	BA	481	G	P-O3'-C3'	7.58	131.57	120.20
57	DA	1941	C	N1-C1'-C2'	-7.58	100.64	112.00
1	AA	1320	C	N1-C1'-C2'	-7.57	100.65	112.00
22	BA	2312	U	N1-C1'-C2'	-7.57	100.65	112.00
57	DA	222	A	P-O3'-C3'	7.56	131.55	120.20
22	BA	1329	U	P-O3'-C3'	7.56	131.54	120.20
57	DA	1289	C	N1-C1'-C2'	-7.56	100.66	112.00
1	AA	7	A	P-O3'-C3'	7.55	131.53	120.20
31	BJ	45	THR	CA-C-N	7.55	130.02	120.89
31	BJ	45	THR	C-N-CA	7.55	130.02	120.89
1	AA	87	C	N1-C1'-C2'	-7.54	100.68	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	614	A	P-O3'-C3'	7.54	131.51	120.20
22	BA	2879	A	P-O3'-C3'	7.54	131.51	120.20
1	AA	577	G	P-O3'-C3'	-7.53	108.90	120.20
22	BA	1667	G	P-O3'-C3'	7.53	131.50	120.20
23	BB	67	G	P-O5'-C5'	-7.53	109.60	120.90
22	BA	498	G	P-O5'-C5'	-7.52	109.62	120.90
22	BA	2239	G	P-O5'-C5'	-7.51	109.63	120.90
22	BA	143	C	N1-C1'-C2'	-7.51	100.74	112.00
57	DA	1275	A	P-O3'-C3'	7.51	131.47	120.20
57	DA	2095	A	P-O3'-C3'	-7.51	108.94	120.20
1	AA	889	A	P-O3'-C3'	7.50	131.46	120.20
22	BA	1417	C	N1-C1'-C2'	-7.50	100.75	112.00
57	DA	1918	A	P-O3'-C3'	7.50	131.45	120.20
22	BA	1971	U	P-O3'-C3'	-7.50	108.95	120.20
22	BA	2542	A	P-O3'-C3'	7.50	131.44	120.20
22	BA	1033	U	P-O3'-C3'	7.49	131.44	120.20
22	BA	1603	A	P-O5'-C5'	-7.49	109.66	120.90
1	AA	1095	U	N1-C1'-C2'	-7.48	100.78	112.00
53	CA	1449	C	N1-C1'-C2'	-7.48	100.79	112.00
1	AA	812	G	P-O3'-C3'	7.47	131.41	120.20
57	DA	1815	A	P-O3'-C3'	7.46	131.40	120.20
22	BA	2581	G	P-O3'-C3'	7.46	131.39	120.20
1	AA	267	C	P-O5'-C5'	-7.45	109.72	120.90
57	DA	224	U	N1-C1'-C2'	-7.45	100.82	112.00
57	DA	445	C	N1-C1'-C2'	-7.45	100.82	112.00
57	DA	2752	C	N1-C1'-C2'	-7.45	100.83	112.00
57	DA	1389	G	P-O3'-C3'	-7.43	109.05	120.20
22	BA	2800	A	P-O3'-C3'	7.43	131.34	120.20
1	AA	813	U	P-O3'-C3'	-7.43	109.06	120.20
22	BA	144	A	P-O3'-C3'	-7.42	109.06	120.20
57	DA	749	A	P-O3'-C3'	-7.42	109.07	120.20
57	DA	829	A	P-O3'-C3'	7.42	131.32	120.20
57	DA	2440	C	N1-C1'-C2'	-7.42	100.88	112.00
57	DA	1498	C	N1-C1'-C2'	-7.42	100.88	112.00
22	BA	687	C	N1-C1'-C2'	-7.40	100.90	112.00
53	CA	577	G	P-O3'-C3'	-7.40	109.10	120.20
22	BA	2021	C	O3'-P-O5'	-7.39	92.91	104.00
57	DA	1675	C	N1-C1'-C2'	-7.39	100.91	112.00
57	DA	304	U	P-O3'-C3'	-7.38	109.13	120.20
1	AA	14	U	P-O5'-C5'	-7.38	109.83	120.90
57	DA	2068	U	N1-C1'-C2'	-7.38	100.94	112.00
1	AA	984	C	N1-C1'-C2'	-7.37	100.94	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	AB	146	SER	CA-C-N	7.37	134.67	122.73
2	AB	146	SER	C-N-CA	7.37	134.67	122.73
23	BB	90	C	P-O5'-C5'	-7.37	109.85	120.90
53	CA	486	U	P-O3'-C3'	-7.37	109.15	120.20
22	BA	2200	C	N1-C1'-C2'	-7.37	100.95	112.00
22	BA	2210	U	P-O3'-C3'	7.36	131.24	120.20
22	BA	2258	C	P-O3'-C3'	7.36	131.23	120.20
22	BA	1829	A	P-O3'-C3'	-7.35	109.18	120.20
22	BA	961	C	P-O3'-C3'	7.34	131.22	120.20
39	BR	46	GLU	N-CA-C	7.34	119.61	109.18
57	DA	53	A	P-O3'-C3'	-7.34	109.19	120.20
53	CA	1052	U	N1-C1'-C2'	-7.34	100.99	112.00
22	BA	1647	U	O4'-C1'-N1	7.34	119.21	108.20
23	BB	15	A	P-O5'-C5'	-7.33	109.90	120.90
1	AA	115	G	P-O3'-C3'	7.33	131.19	120.20
22	BA	1867	G	P-O3'-C3'	-7.33	109.20	120.20
57	DA	2586	U	P-O3'-C3'	-7.33	109.21	120.20
1	AA	1258	G	P-O3'-C3'	-7.33	109.21	120.20
57	DA	217	A	P-O3'-C3'	-7.33	109.21	120.20
35	BN	84	GLY	CA-C-N	7.33	127.67	119.32
35	BN	84	GLY	C-N-CA	7.33	127.67	119.32
57	DA	1902	C	N1-C1'-C2'	-7.32	101.02	112.00
57	DA	1920	C	N1-C1'-C2'	-7.32	101.02	112.00
22	BA	2681	C	P-O3'-C3'	7.32	131.18	120.20
22	BA	435	C	N1-C1'-C2'	-7.31	101.03	112.00
1	AA	1229	A	P-O3'-C3'	-7.31	109.23	120.20
57	DA	2259	U	N1-C1'-C2'	-7.31	101.04	112.00
1	AA	315	A	P-O3'-C3'	7.31	131.16	120.20
1	AA	266	G	O3'-P-O5'	7.30	114.96	104.00
53	CA	1217	C	N1-C1'-C2'	-7.30	101.05	112.00
22	BA	1615	C	O3'-P-O5'	-7.30	93.05	104.00
1	AA	1381	U	N1-C1'-C2'	-7.30	101.05	112.00
1	AA	32	A	P-O3'-C3'	-7.29	109.27	120.20
57	DA	2874	C	P-O3'-C3'	-7.29	109.27	120.20
22	BA	727	A	P-O3'-C3'	-7.29	109.27	120.20
22	BA	2880	C	N1-C1'-C2'	-7.28	101.08	112.00
22	BA	1654	A	N9-C1'-C2'	-7.28	101.08	112.00
22	BA	2691	C	N1-C1'-C2'	-7.27	101.09	112.00
22	BA	34	U	P-O3'-C3'	7.27	131.11	120.20
57	DA	1249	U	N1-C1'-C2'	-7.26	101.10	112.00
57	DA	2611	C	N1-C1'-C2'	-7.26	101.11	112.00
22	BA	2689	U	N1-C1'-C2'	7.26	124.89	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	196	A	P-O3'-C3'	7.26	131.08	120.20
53	CA	1161	C	N1-C1'-C2'	-7.24	101.14	112.00
57	DA	933	A	P-O3'-C3'	-7.24	109.34	120.20
53	CA	32	A	P-O3'-C3'	-7.23	109.35	120.20
1	AA	536	C	N1-C1'-C2'	-7.23	101.15	112.00
22	BA	92	U	N1-C1'-C2'	-7.23	101.16	112.00
53	CA	717	U	N1-C1'-C2'	7.23	124.84	114.00
57	DA	235	U	P-O3'-C3'	-7.23	109.35	120.20
22	BA	1013	C	P-O3'-C3'	-7.22	109.36	120.20
22	BA	1766	G	P-O5'-C5'	-7.22	110.07	120.90
53	CA	566	G	P-O3'-C3'	7.22	131.02	120.20
22	BA	2458	G	P-O3'-C3'	7.21	131.02	120.20
53	CA	1499	A	P-O3'-C3'	-7.21	109.38	120.20
22	BA	1997	C	P-O3'-C3'	-7.21	109.39	120.20
22	BA	2611	C	P-O3'-C3'	-7.21	109.39	120.20
53	CA	96	U	N1-C1'-C2'	-7.21	101.19	112.00
57	DA	685	A	P-O5'-C5'	-7.21	110.09	120.90
22	BA	914	G	P-O3'-C3'	-7.20	109.40	120.20
22	BA	1859	U	P-O3'-C3'	-7.20	109.40	120.20
22	BA	1126	A	P-O3'-C3'	7.20	131.00	120.20
22	BA	2880	C	P-O5'-C5'	-7.20	110.10	120.90
53	CA	792	A	P-O3'-C3'	7.20	131.00	120.20
57	DA	576	U	N1-C1'-C2'	-7.19	101.22	112.00
22	BA	2874	C	P-O5'-C5'	-7.19	110.12	120.90
22	BA	178	G	P-O3'-C3'	-7.18	109.43	120.20
22	BA	1816	C	P-O3'-C3'	-7.18	109.44	120.20
1	AA	1053	G	P-O3'-C3'	7.17	130.96	120.20
22	BA	507	A	P-O3'-C3'	-7.17	109.44	120.20
57	DA	2023	C	N1-C1'-C2'	-7.17	101.24	112.00
53	CA	1152	A	P-O3'-C3'	-7.17	109.45	120.20
53	CA	316	C	N1-C1'-C2'	-7.17	101.25	112.00
5	AE	111	ARG	N-CA-C	-7.16	103.64	112.88
57	DA	1276	A	P-O3'-C3'	-7.16	109.46	120.20
57	DA	1612	C	N1-C1'-C2'	-7.16	101.26	112.00
22	BA	2296	U	P-O3'-C3'	7.16	130.93	120.20
57	DA	2034	U	P-O3'-C3'	-7.15	109.47	120.20
22	BA	1809	A	P-O3'-C3'	-7.15	109.47	120.20
1	AA	1157	A	P-O3'-C3'	7.15	130.92	120.20
1	AA	14	U	N1-C1'-C2'	-7.14	101.28	112.00
22	BA	1313	U	P-O3'-C3'	-7.14	109.48	120.20
22	BA	1009	A	P-O5'-C5'	-7.14	110.19	120.90
57	DA	2581	G	P-O3'-C3'	7.14	130.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1803	A	P-O3'-C3'	-7.14	109.50	120.20
57	DA	1962	C	P-O3'-C3'	7.14	130.91	120.20
57	DA	860	U	N1-C1'-C2'	-7.13	101.30	112.00
22	BA	1944	U	P-O5'-C5'	-7.13	110.20	120.90
22	BA	2325	G	P-O3'-C3'	-7.13	109.51	120.20
57	DA	1512	C	P-O3'-C3'	-7.12	109.52	120.20
1	AA	960	U	P-O3'-C3'	7.12	130.88	120.20
57	DA	730	A	P-O3'-C3'	-7.12	109.52	120.20
1	AA	1153	G	P-O3'-C3'	-7.12	109.53	120.20
53	CA	1383	C	N1-C1'-C2'	-7.12	101.33	112.00
1	AA	1432	G	P-O3'-C3'	7.11	130.87	120.20
57	DA	76	C	N1-C1'-C2'	-7.11	101.33	112.00
57	DA	957	C	P-O3'-C3'	7.11	130.86	120.20
1	AA	1395	C	P-O5'-C5'	-7.11	110.24	120.90
53	CA	424	G	P-O3'-C3'	-7.11	109.54	120.20
57	DA	164	C	P-O3'-C3'	-7.11	109.54	120.20
57	DA	1050	A	P-O3'-C3'	-7.10	109.55	120.20
57	DA	386	G	P-O3'-C3'	7.10	130.85	120.20
22	BA	1565	C	N1-C1'-C2'	7.10	124.64	114.00
1	AA	1167	A	P-O3'-C3'	7.09	130.84	120.20
57	DA	530	G	P-O3'-C3'	-7.09	109.56	120.20
24	BC	163	ILE	CB-CA-C	-7.09	103.62	111.35
57	DA	15	G	P-O3'-C3'	-7.09	109.57	120.20
57	DA	1782	U	N1-C1'-C2'	-7.09	101.37	112.00
1	AA	512	U	P-O3'-C3'	-7.08	109.57	120.20
57	DA	2299	U	N1-C1'-C2'	-7.08	101.38	112.00
23	BB	44	G	P-O3'-C3'	7.08	130.82	120.20
22	BA	954	G	P-O3'-C3'	7.08	130.81	120.20
22	BA	1635	A	P-O5'-C5'	-7.08	110.29	120.90
57	DA	2520	C	N1-C1'-C2'	-7.08	101.39	112.00
22	BA	1555	G	P-O5'-C5'	-7.07	110.29	120.90
53	CA	388	G	P-O3'-C3'	7.07	130.81	120.20
1	AA	109	A	P-O3'-C3'	7.07	130.80	120.20
57	DA	2024	G	P-O3'-C3'	-7.07	109.60	120.20
22	BA	2385	C	P-O3'-C3'	-7.07	109.60	120.20
34	BM	71	LYS	CA-C-N	7.07	128.67	119.84
34	BM	71	LYS	C-N-CA	7.07	128.67	119.84
57	DA	1144	A	P-O3'-C3'	-7.06	109.60	120.20
22	BA	829	A	P-O3'-C3'	7.06	130.79	120.20
22	BA	386	G	O3'-P-O5'	-7.05	93.42	104.00
1	AA	1224	U	P-O3'-C3'	7.05	130.77	120.20
22	BA	406	G	P-O3'-C3'	-7.05	109.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1300	G	P-O3'-C3'	7.05	130.78	120.20
22	BA	1012	U	O4'-C1'-N1	7.05	118.77	108.20
57	DA	1963	U	N1-C1'-C2'	-7.04	101.43	112.00
22	BA	2894	G	P-O3'-C3'	-7.04	109.64	120.20
22	BA	1965	C	N1-C1'-C2'	-7.04	101.44	112.00
23	BB	48	U	P-O5'-C5'	-7.03	110.35	120.90
57	DA	2669	G	P-O3'-C3'	-7.03	109.65	120.20
57	DA	2875	C	N1-C1'-C2'	-7.03	101.46	112.00
23	BB	25	U	P-O3'-C3'	-7.02	109.67	120.20
1	AA	1282	C	N1-C1'-C2'	-7.02	101.47	112.00
57	DA	2757	A	P-O3'-C3'	-7.02	109.67	120.20
57	DA	1636	U	P-O3'-C3'	-7.01	109.68	120.20
57	DA	1557	C	N1-C1'-C2'	-7.01	101.48	112.00
22	BA	2226	C	N1-C1'-C2'	-7.01	101.48	112.00
53	CA	381	C	N1-C1'-C2'	7.00	122.50	112.00
22	BA	1611	C	P-O3'-C3'	-6.99	109.71	120.20
57	DA	2347	C	N1-C1'-C2'	-6.99	101.51	112.00
1	AA	316	C	P-O3'-C3'	-6.99	109.72	120.20
22	BA	681	G	P-O5'-C5'	-6.98	110.42	120.90
22	BA	962	G	P-O5'-C5'	-6.98	110.43	120.90
22	BA	628	G	P-O5'-C5'	-6.98	110.44	120.90
37	BP	85	VAL	N-CA-C	6.96	117.92	111.45
53	CA	85	U	P-O3'-C3'	6.96	130.64	120.20
22	BA	2756	U	P-O3'-C3'	6.96	130.64	120.20
1	AA	245	U	P-O3'-C3'	-6.96	109.77	120.20
23	BB	108	A	P-O3'-C3'	6.96	130.63	120.20
42	BU	75	ALA	N-CA-C	-6.95	105.42	114.04
57	DA	104	A	P-O3'-C3'	-6.95	109.78	120.20
39	BR	9	GLY	N-CA-C	-6.94	96.72	113.18
31	BJ	64	VAL	N-CA-C	6.94	117.10	111.62
1	AA	1152	A	P-O3'-C3'	-6.94	109.79	120.20
22	BA	1427	A	P-O3'-C3'	6.94	130.60	120.20
1	AA	1332	A	P-O3'-C3'	-6.93	109.80	120.20
57	DA	2404	U	N1-C1'-C2'	-6.93	101.60	112.00
57	DA	2063	C	P-O3'-C3'	-6.93	109.80	120.20
53	CA	979	C	N1-C1'-C2'	-6.93	101.60	112.00
41	DT	13	ALA	N-CA-C	6.93	114.46	108.22
22	BA	946	C	N1-C1'-C2'	-6.93	101.61	112.00
22	BA	1063	G	P-O3'-C3'	-6.93	109.81	120.20
53	CA	1200	C	P-O3'-C3'	6.93	130.59	120.20
53	CA	1224	U	P-O3'-C3'	6.93	130.59	120.20
57	DA	623	C	N1-C1'-C2'	-6.93	101.61	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2226	C	N1-C1'-C2'	-6.93	101.61	112.00
26	BE	46	GLN	N-CA-C	6.92	125.55	110.80
22	BA	765	C	N1-C1'-C2'	-6.92	101.61	112.00
22	BA	996	A	P-O3'-C3'	-6.92	109.82	120.20
22	BA	1213	A	P-O5'-C5'	-6.92	110.52	120.90
35	DN	23	ASN	N-CA-C	-6.92	106.73	114.62
53	CA	430	A	P-O3'-C3'	-6.92	109.83	120.20
53	CA	252	U	N1-C1'-C2'	-6.91	101.63	112.00
53	CA	985	C	N1-C1'-C2'	-6.91	101.63	112.00
1	AA	1528	U	P-O3'-C3'	6.91	130.56	120.20
22	BA	961	C	O4'-C1'-N1	6.91	118.56	108.20
22	BA	1634	A	P-O3'-C3'	6.90	130.55	120.20
22	BA	705	A	P-O3'-C3'	-6.90	109.85	120.20
22	BA	1564	C	P-O3'-C3'	6.90	130.55	120.20
1	AA	305	G	P-O3'-C3'	6.89	130.54	120.20
22	BA	2543	G	P-O3'-C3'	-6.89	109.87	120.20
22	BA	250	G	P-O3'-C3'	-6.89	109.87	120.20
1	AA	1382	C	P-O3'-C3'	-6.88	109.88	120.20
4	AD	194	ILE	N-CA-C	6.88	116.62	106.85
57	DA	2493	U	P-O3'-C3'	-6.88	109.89	120.20
22	BA	1865	U	N1-C1'-C2'	6.87	124.30	114.00
57	DA	1606	C	P-O3'-C3'	6.87	130.50	120.20
22	BA	491	G	P-O3'-C3'	-6.87	109.90	120.20
57	DA	1804	C	N1-C1'-C2'	-6.86	101.70	112.00
1	AA	1478	U	P-O5'-C5'	-6.86	110.61	120.90
53	CA	1455	G	P-O3'-C3'	-6.86	109.91	120.20
22	BA	1954	G	P-O3'-C3'	6.85	130.47	120.20
22	BA	811	U	P-O3'-C3'	6.85	130.47	120.20
53	CA	374	A	P-O3'-C3'	-6.85	109.93	120.20
22	BA	1637	A	P-O5'-C5'	-6.84	110.64	120.90
22	BA	2259	U	N1-C1'-C2'	-6.84	101.73	112.00
57	DA	531	C	P-O3'-C3'	6.84	130.47	120.20
22	BA	2497	A	P-O3'-C3'	6.84	130.47	120.20
14	AN	90	GLY	N-CA-C	-6.84	105.38	111.67
53	CA	428	G	P-O3'-C3'	6.84	130.46	120.20
57	DA	2334	U	N1-C1'-C2'	6.84	124.26	114.00
53	CA	253	A	P-O3'-C3'	-6.84	109.95	120.20
22	BA	1866	A	P-O3'-C3'	-6.83	109.96	120.20
57	DA	1954	G	P-O3'-C3'	6.83	130.44	120.20
53	CA	753	A	P-O3'-C3'	6.82	130.43	120.20
23	BB	67	G	P-O3'-C3'	-6.82	109.97	120.20
22	BA	866	A	P-O3'-C3'	-6.82	109.98	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1493	C	N1-C1'-C2'	6.81	122.22	112.00
22	BA	27	G	P-O3'-C3'	6.81	130.42	120.20
22	BA	1611	C	P-O5'-C5'	-6.81	110.69	120.90
1	AA	1506	U	P-O3'-C3'	6.81	130.41	120.20
1	AA	1382	C	N1-C1'-C2'	-6.80	101.79	112.00
22	BA	1664	A	O3'-P-O5'	-6.80	93.81	104.00
22	BA	251	A	O3'-P-O5'	-6.79	93.81	104.00
22	BA	2820	A	O3'-P-O5'	-6.79	93.81	104.00
22	BA	421	C	P-O3'-C3'	6.79	130.38	120.20
22	BA	2638	G	P-O3'-C3'	6.78	130.37	120.20
4	CD	166	LYS	CA-C-N	6.78	126.81	119.90
4	CD	166	LYS	C-N-CA	6.78	126.81	119.90
53	CA	1528	U	P-O3'-C3'	6.77	130.35	120.20
57	DA	60	G	P-O3'-C3'	6.77	130.35	120.20
22	BA	934	U	N1-C1'-C2'	-6.76	101.86	112.00
53	CA	519	C	N1-C1'-C2'	-6.76	101.86	112.00
1	AA	373	A	P-O3'-C3'	-6.76	110.06	120.20
22	BA	1141	U	P-O3'-C3'	6.75	130.33	120.20
57	DA	336	C	P-O3'-C3'	-6.75	110.07	120.20
57	DA	2136	G	P-O3'-C3'	-6.75	110.08	120.20
37	BP	77	SER	CA-C-N	6.75	126.70	119.28
37	BP	77	SER	C-N-CA	6.75	126.70	119.28
53	CA	213	G	P-O3'-C3'	-6.74	110.09	120.20
1	AA	282	A	P-O3'-C3'	-6.74	110.09	120.20
42	BU	84	PHE	N-CA-C	6.74	119.66	109.41
57	DA	1255	U	N1-C1'-C2'	-6.74	101.89	112.00
53	CA	95	C	N1-C1'-C2'	-6.74	101.89	112.00
22	BA	1651	G	O3'-P-O5'	-6.73	93.90	104.00
57	DA	2314	A	P-O3'-C3'	-6.73	110.10	120.20
1	AA	537	G	P-O3'-C3'	-6.73	110.11	120.20
57	DA	812	C	N1-C1'-C2'	-6.73	101.91	112.00
1	AA	1201	A	P-O3'-C3'	6.72	130.29	120.20
53	CA	701	U	P-O3'-C3'	6.72	130.28	120.20
22	BA	2573	C	N1-C1'-C2'	-6.72	101.92	112.00
57	DA	687	C	N1-C1'-C2'	-6.72	101.92	112.00
31	BJ	27	ARG	N-CA-C	-6.72	104.10	112.90
23	BB	52	A	P-O3'-C3'	6.71	130.27	120.20
22	BA	616	A	P-O3'-C3'	-6.71	110.14	120.20
57	DA	2629	U	P-O3'-C3'	6.71	130.26	120.20
22	BA	1034	G	P-O5'-C5'	-6.71	110.84	120.90
1	AA	1162	C	P-O3'-C3'	-6.71	110.14	120.20
53	CA	547	A	P-O3'-C3'	6.71	130.26	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	534	U	N1-C1'-C2'	-6.71	101.94	112.00
22	BA	645	C	P-O5'-C5'	-6.70	110.84	120.90
24	BC	12	ARG	N-CA-C	-6.70	105.67	114.31
57	DA	2691	C	N1-C1'-C2'	-6.70	101.96	112.00
22	BA	2603	G	P-O3'-C3'	-6.69	110.17	120.20
57	DA	1136	G	P-O3'-C3'	-6.68	110.18	120.20
53	CA	1348	U	N1-C1'-C2'	-6.68	101.98	112.00
53	CA	388	G	O3'-P-O5'	-6.68	93.98	104.00
57	DA	2267	A	P-O3'-C3'	-6.67	110.19	120.20
58	DB	87	U	P-O3'-C3'	6.67	130.21	120.20
57	DA	234	U	N1-C1'-C2'	-6.67	102.00	112.00
1	AA	935	A	P-O3'-C3'	-6.67	110.20	120.20
22	BA	1965	C	P-O3'-C3'	-6.67	110.20	120.20
22	BA	2324	U	N1-C1'-C2'	6.67	124.00	114.00
22	BA	475	C	N1-C1'-C2'	-6.66	102.01	112.00
22	BA	2520	C	P-O3'-C3'	-6.66	110.21	120.20
1	AA	717	U	P-O3'-C3'	6.66	130.19	120.20
22	BA	1839	G	P-O3'-C3'	-6.66	110.21	120.20
53	CA	277	C	P-O3'-C3'	-6.66	110.22	120.20
28	BG	56	GLY	N-CA-C	-6.65	107.16	115.08
53	CA	1202	U	N1-C1'-C2'	-6.65	102.03	112.00
57	DA	531	C	N1-C1'-C2'	6.65	121.97	112.00
57	DA	827	U	P-O3'-C3'	6.65	130.17	120.20
22	BA	386	G	P-O3'-C3'	6.64	130.17	120.20
22	BA	1324	G	O3'-P-O5'	-6.64	94.04	104.00
38	BQ	7	VAL	N-CA-C	-6.64	104.29	110.53
53	CA	1399	C	P-O3'-C3'	6.64	130.16	120.20
53	CA	1301	U	P-O3'-C3'	-6.64	110.24	120.20
57	DA	1347	A	P-O3'-C3'	-6.64	110.24	120.20
22	BA	740	C	N1-C1'-C2'	-6.64	102.04	112.00
23	BB	13	G	P-O5'-C5'	-6.64	110.94	120.90
57	DA	224	U	P-O3'-C3'	-6.64	110.25	120.20
57	DA	1972	G	P-O3'-C3'	-6.64	110.25	120.20
1	AA	821	G	P-O3'-C3'	-6.63	110.25	120.20
22	BA	2225	A	P-O3'-C3'	6.63	130.15	120.20
1	AA	974	A	P-O3'-C3'	6.63	130.15	120.20
22	BA	163	C	N1-C1'-C2'	-6.63	104.06	114.00
22	BA	1555	G	P-O3'-C3'	-6.62	110.26	120.20
46	BY	56	LEU	N-CA-C	-6.62	101.34	110.35
57	DA	1998	A	P-O3'-C3'	-6.62	110.27	120.20
1	AA	500	G	P-O3'-C3'	-6.62	110.27	120.20
27	BF	174	PHE	CA-C-N	6.62	128.11	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	BF	174	PHE	C-N-CA	6.62	128.11	119.84
22	BA	2030	A	P-O3'-C3'	6.62	130.12	120.20
22	BA	587	C	N1-C1'-C2'	6.62	123.92	114.00
22	BA	1379	U	N1-C1'-C2'	-6.62	102.08	112.00
22	BA	1556	C	N1-C1'-C2'	-6.61	102.08	112.00
57	DA	1821	A	P-O3'-C3'	-6.61	110.28	120.20
22	BA	2427	C	P-O5'-C5'	-6.61	110.98	120.90
51	D3	30	HIS	CB-CA-C	-6.61	106.89	116.54
1	AA	9	G	P-O3'-C3'	-6.61	110.29	120.20
1	AA	1064	G	P-O3'-C3'	6.61	130.11	120.20
22	BA	1942	C	P-O3'-C3'	-6.61	110.29	120.20
22	BA	782	A	P-O3'-C3'	6.61	130.11	120.20
22	BA	740	C	P-O5'-C5'	-6.60	111.00	120.90
46	BY	45	GLN	N-CA-C	-6.60	101.82	110.33
1	AA	95	C	P-O3'-C3'	-6.59	110.31	120.20
22	BA	1931	U	N1-C1'-C2'	-6.59	102.11	112.00
53	CA	596	A	P-O3'-C3'	-6.59	110.31	120.20
22	BA	531	C	O3'-P-O5'	-6.59	94.12	104.00
22	BA	812	C	P-O3'-C3'	-6.59	110.32	120.20
1	AA	1320	C	P-O3'-C3'	-6.58	110.32	120.20
22	BA	52	A	P-O3'-C3'	-6.58	110.32	120.20
22	BA	2519	U	O3'-P-O5'	-6.58	94.13	104.00
57	DA	162	U	P-O3'-C3'	6.58	130.08	120.20
57	DA	164	C	N1-C1'-C2'	-6.58	102.14	112.00
57	DA	1941	C	P-O3'-C3'	-6.58	110.33	120.20
22	BA	2640	G	P-O5'-C5'	-6.58	111.04	120.90
22	BA	2454	G	P-O5'-C5'	-6.57	111.04	120.90
53	CA	734	G	P-O3'-C3'	-6.57	110.34	120.20
57	DA	2848	G	P-O3'-C3'	6.57	130.06	120.20
22	BA	119	A	P-O3'-C3'	6.57	130.05	120.20
57	DA	2447	G	P-O3'-C3'	6.57	130.05	120.20
1	AA	374	A	P-O3'-C3'	-6.57	110.35	120.20
22	BA	61	C	P-O5'-C5'	-6.57	111.05	120.90
22	BA	527	C	P-O3'-C3'	6.57	130.05	120.20
22	BA	1183	U	O3'-P-O5'	-6.57	94.15	104.00
57	DA	1804	C	P-O3'-C3'	-6.56	110.36	120.20
33	BL	110	VAL	N-CA-C	6.56	117.55	111.45
57	DA	1699	G	P-O3'-C3'	6.56	130.03	120.20
1	AA	960	U	N1-C1'-C2'	6.55	123.83	114.00
22	BA	2284	A	P-O5'-C5'	-6.55	111.07	120.90
22	BA	454	A	P-O3'-C3'	6.55	130.02	120.20
22	BA	2047	C	P-O5'-C5'	-6.55	111.08	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	210	C	N1-C1'-C2'	6.55	121.82	112.00
22	BA	126	A	P-O3'-C3'	-6.54	110.39	120.20
22	BA	1558	C	O3'-P-O5'	6.54	113.81	104.00
22	BA	1681	G	P-O3'-C3'	6.53	130.00	120.20
22	BA	1782	U	P-O3'-C3'	-6.53	110.41	120.20
22	BA	2689	U	O4'-C1'-N1	6.53	117.99	108.20
57	DA	2582	G	P-O3'-C3'	-6.53	110.41	120.20
22	BA	84	A	P-O3'-C3'	6.53	129.99	120.20
33	BL	83	ALA	N-CA-C	-6.53	105.28	113.18
22	BA	1802	A	P-O3'-C3'	-6.53	110.41	120.20
57	DA	121	G	P-O3'-C3'	-6.53	110.41	120.20
1	AA	870	U	P-O3'-C3'	6.52	129.98	120.20
1	AA	1190	G	P-O3'-C3'	6.52	129.99	120.20
53	CA	348	G	P-O3'-C3'	-6.52	110.42	120.20
22	BA	1541	C	P-O3'-C3'	-6.52	110.42	120.20
1	AA	816	A	P-O3'-C3'	-6.51	110.43	120.20
57	DA	794	A	P-O3'-C3'	-6.51	110.43	120.20
8	CH	44	PHE	N-CA-C	-6.51	104.96	114.39
57	DA	229	C	N1-C1'-C2'	-6.50	102.26	112.00
1	AA	1196	A	P-O3'-C3'	6.49	129.94	120.20
57	DA	527	C	P-O3'-C3'	6.49	129.94	120.20
57	DA	1304	A	P-O3'-C3'	-6.49	110.46	120.20
22	BA	557	C	P-O5'-C5'	-6.49	111.16	120.90
57	DA	606	U	N1-C1'-C2'	-6.49	102.26	112.00
57	DA	990	A	P-O3'-C3'	-6.49	110.47	120.20
20	AT	66	ILE	N-CA-C	-6.49	105.00	111.88
22	BA	396	G	P-O3'-C3'	-6.48	110.47	120.20
53	CA	1051	C	N1-C1'-C2'	-6.48	102.27	112.00
22	BA	221	A	P-O3'-C3'	6.48	129.92	120.20
22	BA	646	U	N1-C1'-C2'	-6.48	102.28	112.00
22	BA	2633	G	O3'-P-O5'	-6.48	94.28	104.00
53	CA	1332	A	P-O3'-C3'	-6.48	110.48	120.20
24	DC	146	LYS	CA-C-N	6.48	127.94	119.84
24	DC	146	LYS	C-N-CA	6.48	127.94	119.84
22	BA	1920	C	N1-C1'-C2'	-6.47	102.29	112.00
53	CA	564	C	N1-C1'-C2'	-6.47	102.29	112.00
57	DA	1013	C	P-O3'-C3'	-6.47	110.49	120.20
22	BA	1695	G	P-O3'-C3'	-6.47	110.50	120.20
57	DA	534	U	P-O3'-C3'	-6.47	110.49	120.20
57	DA	2251	G	P-O3'-C3'	-6.47	110.50	120.20
1	AA	216	U	P-O3'-C3'	-6.46	110.50	120.20
22	BA	2092	U	OP1-P-O3'	-6.46	88.63	108.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2759	G	P-O5'-C5'	-6.46	111.21	120.90
53	CA	247	G	P-O3'-C3'	-6.46	110.51	120.20
1	AA	991	U	P-O3'-C3'	6.46	129.88	120.20
22	BA	1286	A	P-O3'-C3'	6.46	129.88	120.20
59	DF	176	PHE	CB-CA-C	-6.45	109.12	116.54
22	BA	1499	C	P-O3'-C3'	-6.45	110.52	120.20
1	AA	439	U	P-O3'-C3'	-6.45	110.53	120.20
1	AA	968	A	P-O3'-C3'	6.45	129.87	120.20
57	DA	2334	U	P-O3'-C3'	6.45	129.87	120.20
22	BA	1118	C	P-O5'-C5'	-6.44	111.24	120.90
22	BA	1971	U	O3'-P-O5'	-6.44	94.34	104.00
22	BA	2673	G	P-O3'-C3'	-6.44	110.54	120.20
53	CA	89	U	N1-C1'-C2'	-6.44	102.34	112.00
4	CD	20	LEU	N-CA-C	-6.44	101.87	110.24
22	BA	1310	G	P-O5'-C5'	-6.44	111.24	120.90
45	BX	54	GLY	N-CA-C	-6.44	104.98	112.83
57	DA	1931	U	P-O3'-C3'	-6.44	110.54	120.20
53	CA	184	G	P-O3'-C3'	-6.44	110.55	120.20
22	BA	2832	U	P-O3'-C3'	6.43	129.85	120.20
3	AC	107	LYS	CA-C-N	6.43	125.85	118.85
3	AC	107	LYS	C-N-CA	6.43	125.85	118.85
22	BA	575	A	P-O3'-C3'	-6.43	110.56	120.20
57	DA	1207	C	N1-C1'-C2'	-6.43	102.36	112.00
53	CA	1282	C	P-O3'-C3'	-6.42	110.56	120.20
12	CL	89	LEU	CA-C-N	6.42	127.87	119.84
12	CL	89	LEU	C-N-CA	6.42	127.87	119.84
22	BA	121	G	P-O3'-C3'	-6.42	110.56	120.20
53	CA	68	G	P-O3'-C3'	-6.42	110.56	120.20
57	DA	1522	A	P-O3'-C3'	6.42	129.83	120.20
1	AA	1125	U	P-O3'-C3'	6.42	129.82	120.20
22	BA	1732	C	P-O3'-C3'	6.41	129.82	120.20
22	BA	556	A	P-O5'-C5'	-6.41	111.28	120.90
22	BA	531	C	O4'-C1'-N1	-6.41	98.59	108.20
1	AA	388	G	P-O3'-C3'	6.41	129.81	120.20
22	BA	2797	U	N1-C1'-C2'	6.41	123.61	114.00
57	DA	1674	G	P-O3'-C3'	6.40	129.80	120.20
53	CA	793	U	P-O3'-C3'	-6.40	110.60	120.20
57	DA	1615	C	P-O3'-C3'	6.40	129.80	120.20
23	BB	87	U	P-O3'-C3'	6.39	129.79	120.20
22	BA	1698	A	P-O3'-C3'	6.39	129.79	120.20
24	DC	216	ARG	CA-C-N	6.39	127.83	119.84
24	DC	216	ARG	C-N-CA	6.39	127.83	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	15	A	P-O3'-C3'	6.38	129.78	120.20
22	BA	2635	A	P-O5'-C5'	-6.38	111.33	120.90
57	DA	1483	G	P-O3'-C3'	-6.38	110.63	120.20
22	BA	1784	A	P-O3'-C3'	6.38	129.77	120.20
57	DA	867	C	N1-C1'-C2'	-6.38	102.44	112.00
58	DB	90	C	P-O3'-C3'	-6.38	110.64	120.20
22	BA	243	U	N1-C1'-C2'	-6.37	102.44	112.00
22	BA	1204	A	P-O3'-C3'	6.37	129.76	120.20
22	BA	1281	G	O3'-P-O5'	-6.37	94.44	104.00
1	AA	174	A	P-O3'-C3'	-6.37	110.64	120.20
22	BA	1627	G	P-O3'-C3'	-6.37	110.64	120.20
57	DA	763	G	P-O3'-C3'	-6.37	110.64	120.20
22	BA	1267	U	N1-C1'-C2'	-6.37	102.45	112.00
57	DA	2061	G	P-O3'-C3'	6.37	129.75	120.20
1	AA	347	G	P-O3'-C3'	-6.36	110.66	120.20
37	DP	60	VAL	N-CA-C	6.36	116.02	106.42
22	BA	1821	A	P-O3'-C3'	-6.35	110.67	120.20
58	DB	17	C	O4'-C1'-N1	6.35	118.02	108.50
1	AA	1322	C	P-O3'-C3'	6.34	129.72	120.20
22	BA	2629	U	N1-C1'-C2'	6.34	123.51	114.00
57	DA	622	G	P-O3'-C3'	-6.34	110.69	120.20
57	DA	2656	U	N1-C1'-C2'	-6.34	102.49	112.00
57	DA	2063	C	N1-C1'-C2'	-6.34	102.49	112.00
1	AA	1087	G	P-O3'-C3'	-6.34	110.70	120.20
22	BA	2200	C	P-O3'-C3'	-6.33	110.70	120.20
44	BW	21	GLY	N-CA-C	-6.33	103.90	112.57
22	BA	18	U	P-O5'-C5'	-6.33	111.41	120.90
53	CA	122	G	P-O3'-C3'	-6.33	110.71	120.20
57	DA	2312	U	P-O3'-C3'	-6.33	110.71	120.20
41	BT	85	VAL	N-CA-C	6.33	117.00	111.56
57	DA	1080	A	P-O3'-C3'	-6.33	110.71	120.20
22	BA	2874	C	N1-C1'-C2'	-6.32	102.51	112.00
57	DA	2217	G	P-O3'-C3'	-6.32	110.72	120.20
22	BA	1779	U	P-O5'-C5'	-6.32	111.42	120.90
57	DA	2384	U	N1-C1'-C2'	6.32	123.48	114.00
1	AA	1476	A	O3'-P-O5'	-6.32	94.52	104.00
57	DA	1397	U	N1-C1'-C2'	6.32	123.48	114.00
57	DA	1780	A	P-O3'-C3'	6.32	129.68	120.20
41	BT	29	THR	N-CA-C	6.31	124.25	110.80
53	CA	96	U	P-O3'-C3'	-6.31	110.73	120.20
57	DA	961	C	N1-C1'-C2'	6.31	123.47	114.00
57	DA	1560	G	P-O3'-C3'	-6.31	110.73	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1433	A	P-O3'-C3'	-6.31	110.74	120.20
1	AA	275	G	P-O3'-C3'	-6.31	110.74	120.20
53	CA	60	A	P-O3'-C3'	6.30	129.66	120.20
22	BA	961	C	O3'-P-O5'	-6.30	94.55	104.00
57	DA	2283	C	P-O3'-C3'	-6.30	110.75	120.20
57	DA	1900	A	P-O3'-C3'	6.30	129.65	120.20
57	DA	2896	C	P-O3'-C3'	-6.30	110.75	120.20
57	DA	2238	G	P-O3'-C3'	6.30	129.64	120.20
23	BB	29	A	O3'-P-O5'	-6.29	94.56	104.00
22	BA	373	U	P-O3'-C3'	-6.29	110.76	120.20
57	DA	2895	G	P-O3'-C3'	-6.29	110.76	120.20
1	AA	595	A	P-O3'-C3'	6.29	129.63	120.20
22	BA	1185	G	P-O3'-C3'	-6.29	110.77	120.20
22	BA	2383	G	P-O3'-C3'	-6.29	110.77	120.20
53	CA	495	A	P-O3'-C3'	6.29	129.63	120.20
22	BA	1493	C	P-O3'-C3'	6.29	129.63	120.20
22	BA	1331	G	P-O3'-C3'	-6.28	110.78	120.20
57	DA	1971	U	N1-C1'-C2'	-6.28	104.58	114.00
57	DA	964	C	N1-C1'-C2'	-6.27	102.59	112.00
44	BW	24	ARG	N-CA-C	-6.27	102.09	110.24
25	DD	151	THR	CA-C-N	-6.27	112.00	119.84
25	DD	151	THR	C-N-CA	-6.27	112.00	119.84
22	BA	1476	U	N1-C1'-C2'	-6.27	102.60	112.00
1	AA	13	U	P-O3'-C3'	6.27	129.60	120.20
45	DX	52	ALA	N-CA-C	-6.27	101.66	110.50
22	BA	1606	C	P-O3'-C3'	6.26	129.60	120.20
57	DA	1647	U	P-O3'-C3'	6.26	129.59	120.20
22	BA	2226	C	P-O3'-C3'	-6.26	110.81	120.20
57	DA	2392	A	P-O3'-C3'	-6.26	110.81	120.20
53	CA	1228	C	N1-C1'-C2'	-6.26	104.61	114.00
57	DA	2497	A	P-O3'-C3'	6.25	129.58	120.20
53	CA	936	C	N1-C1'-C2'	-6.25	102.62	112.00
22	BA	2492	U	N1-C1'-C2'	-6.25	102.62	112.00
57	DA	2881	U	P-O3'-C3'	-6.25	110.83	120.20
22	BA	165	A	P-O3'-C3'	-6.24	110.84	120.20
22	BA	266	G	P-O3'-C3'	-6.24	110.84	120.20
22	BA	2774	C	P-O5'-C5'	-6.24	111.54	120.90
22	BA	783	A	N9-C1'-C2'	-6.24	102.64	112.00
1	AA	531	U	P-O3'-C3'	6.24	129.55	120.20
57	DA	1539	U	N1-C1'-C2'	-6.23	102.65	112.00
22	BA	916	G	P-O3'-C3'	-6.23	110.86	120.20
57	DA	672	C	N1-C1'-C2'	-6.23	102.66	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	CT	33	LYS	N-CA-C	-6.22	104.75	112.90
57	DA	444	C	N1-C1'-C2'	-6.22	102.67	112.00
57	DA	2490	G	P-O3'-C3'	6.22	129.53	120.20
22	BA	1675	C	P-O3'-C3'	-6.22	110.87	120.20
22	BA	333	G	P-O3'-C3'	-6.22	110.87	120.20
57	DA	510	C	N1-C1'-C2'	-6.22	102.67	112.00
22	BA	807	U	P-O5'-C5'	-6.21	111.58	120.90
30	BI	94	LYS	N-CA-C	-6.21	105.49	114.12
57	DA	606	U	P-O3'-C3'	-6.21	110.88	120.20
22	BA	1626	A	P-O3'-C3'	6.21	129.51	120.20
1	AA	1505	G	P-O3'-C3'	-6.21	110.89	120.20
27	BF	12	VAL	N-CA-C	-6.21	104.28	110.30
1	AA	315	A	O3'-P-O5'	-6.20	94.70	104.00
22	BA	1885	A	P-O3'-C3'	-6.20	110.90	120.20
22	BA	2013	A	P-O3'-C3'	-6.20	110.90	120.20
1	AA	1469	C	P-O5'-C5'	-6.20	111.61	120.90
53	CA	1143	G	P-O3'-C3'	-6.19	110.91	120.20
22	BA	570	G	P-O5'-C5'	-6.19	111.61	120.90
22	BA	1333	G	P-O3'-C3'	-6.19	110.92	120.20
22	BA	138	U	N1-C1'-C2'	-6.19	102.72	112.00
22	BA	2199	A	P-O3'-C3'	-6.19	110.92	120.20
57	DA	2385	C	N1-C1'-C2'	-6.19	104.72	114.00
2	AB	109	SER	N-CA-C	-6.18	105.56	113.23
53	CA	65	A	O3'-P-O5'	6.18	113.28	104.00
53	CA	962	C	N1-C1'-C2'	-6.18	102.72	112.00
1	AA	722	G	P-O3'-C3'	-6.18	110.93	120.20
42	DU	16	LYS	CB-CA-C	-6.18	109.46	116.63
22	BA	382	A	P-O3'-C3'	-6.18	110.93	120.20
22	BA	1682	G	P-O3'-C3'	-6.18	110.93	120.20
53	CA	979	C	P-O3'-C3'	-6.18	110.93	120.20
57	DA	1648	U	N1-C1'-C2'	-6.18	102.73	112.00
22	BA	1732	C	N1-C1'-C2'	6.17	123.26	114.00
53	CA	1142	G	P-O3'-C3'	-6.17	110.94	120.20
24	BC	242	HIS	CA-C-N	6.17	127.56	119.84
24	BC	242	HIS	C-N-CA	6.17	127.56	119.84
1	AA	815	A	P-O3'-C3'	6.17	129.45	120.20
57	DA	916	G	P-O3'-C3'	-6.17	110.95	120.20
22	BA	985	C	N1-C1'-C2'	-6.16	102.76	112.00
57	DA	1558	C	P-O3'-C3'	6.16	129.44	120.20
37	BP	25	VAL	N-CA-C	6.16	122.15	109.34
57	DA	739	A	P-O3'-C3'	6.16	129.44	120.20
22	BA	1980	G	P-O3'-C3'	6.16	129.43	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1383	C	P-O3'-C3'	-6.16	110.97	120.20
22	BA	1250	G	P-O5'-C5'	-6.15	111.67	120.90
57	DA	995	C	N1-C1'-C2'	6.15	121.23	112.00
1	AA	1380	U	P-O3'-C3'	6.15	129.43	120.20
22	BA	2322	A	P-O3'-C3'	-6.15	110.97	120.20
41	BT	54	GLU	N-CA-C	6.15	118.90	111.40
53	CA	439	U	P-O5'-C5'	-6.15	111.67	120.90
57	DA	704	G	P-O3'-C3'	6.15	129.43	120.20
28	BG	82	PHE	N-CA-C	6.15	119.56	109.85
53	CA	1381	U	P-O3'-C3'	-6.14	110.98	120.20
53	CA	1447	A	P-O3'-C3'	6.14	129.42	120.20
1	AA	422	C	N1-C1'-C2'	6.14	123.21	114.00
22	BA	821	A	P-O3'-C3'	6.14	129.41	120.20
53	CA	497	G	P-O3'-C3'	-6.14	110.99	120.20
1	AA	641	U	N1-C1'-C2'	6.14	121.21	112.00
22	BA	1273	U	P-O3'-C3'	-6.14	110.99	120.20
53	CA	1498	U	P-O3'-C3'	6.13	129.40	120.20
22	BA	2417	C	P-O5'-C5'	-6.13	111.71	120.90
53	CA	453	G	P-O3'-C3'	-6.13	111.01	120.20
57	DA	868	U	P-O3'-C3'	-6.13	111.01	120.20
57	DA	2210	U	O3'-P-O5'	6.12	113.19	104.00
53	CA	92	U	P-O3'-C3'	-6.12	111.01	120.20
57	DA	991	C	P-O3'-C3'	-6.12	111.02	120.20
57	DA	271	G	P-O3'-C3'	6.12	129.37	120.20
53	CA	536	C	P-O3'-C3'	-6.11	111.03	120.20
57	DA	669	G	P-O3'-C3'	6.11	129.37	120.20
22	BA	1759	A	P-O3'-C3'	-6.11	111.03	120.20
22	BA	242	G	P-O3'-C3'	6.11	129.36	120.20
22	BA	620	G	P-O3'-C3'	6.11	129.36	120.20
57	DA	746	U	N1-C1'-C2'	6.11	121.16	112.00
53	CA	115	G	P-O3'-C3'	6.11	129.36	120.20
22	BA	1026	G	P-O3'-C3'	-6.10	111.05	120.20
22	BA	1962	C	P-O3'-C3'	6.10	129.36	120.20
20	AT	70	LYS	N-CA-C	-6.10	104.71	111.36
22	BA	2836	U	P-O5'-C5'	-6.10	111.75	120.90
23	BB	57	A	P-O5'-C5'	-6.10	111.75	120.90
22	BA	1538	G	P-O3'-C3'	-6.10	111.06	120.20
57	DA	2033	A	C4'-C3'-O3'	6.10	118.54	109.40
22	BA	1394	U	P-O3'-C3'	6.09	129.34	120.20
53	CA	1398	A	P-O3'-C3'	-6.09	111.06	120.20
1	AA	1068	G	P-O3'-C3'	-6.09	111.07	120.20
22	BA	33	C	P-O3'-C3'	6.09	129.33	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	868	U	N1-C1'-C2'	-6.09	102.87	112.00
57	DA	1554	U	N1-C1'-C2'	6.09	121.13	112.00
22	BA	120	U	P-O5'-C5'	-6.08	111.77	120.90
22	BA	1700	A	P-O3'-C3'	-6.08	111.07	120.20
53	CA	132	C	P-O3'-C3'	-6.08	111.08	120.20
57	DA	1569	A	P-O3'-C3'	-6.08	111.08	120.20
1	AA	122	G	P-O3'-C3'	-6.08	111.08	120.20
22	BA	1380	G	P-O3'-C3'	-6.08	111.08	120.20
23	BB	66	A	P-O3'-C3'	6.08	129.32	120.20
57	DA	2611	C	P-O3'-C3'	-6.08	111.08	120.20
57	DA	128	C	N1-C1'-C2'	-6.07	102.89	112.00
57	DA	1615	C	N1-C1'-C2'	6.07	123.11	114.00
22	BA	2631	G	P-O5'-C5'	-6.07	111.80	120.90
57	DA	1064	C	P-O3'-C3'	-6.07	111.09	120.20
22	BA	1386	C	P-O3'-C3'	-6.07	111.10	120.20
22	BA	621	A	P-O5'-C5'	-6.07	111.80	120.90
53	CA	248	C	P-O3'-C3'	-6.06	111.11	120.20
57	DA	2498	C	P-O3'-C3'	-6.06	111.11	120.20
38	BQ	13	HIS	N-CA-C	-6.06	104.68	111.28
1	AA	451	A	P-O3'-C3'	6.05	129.28	120.20
53	CA	654	G	P-O3'-C3'	-6.05	111.12	120.20
5	AE	131	ASN	CA-C-N	6.05	125.53	119.24
5	AE	131	ASN	C-N-CA	6.05	125.53	119.24
57	DA	2585	U	N1-C1'-C2'	6.05	121.08	112.00
22	BA	379	G	P-O5'-C5'	-6.05	111.83	120.90
22	BA	310	A	P-O3'-C3'	6.05	129.27	120.20
10	CJ	88	MET	N-CA-C	-6.04	104.81	111.82
53	CA	439	U	N1-C1'-C2'	-6.04	102.94	112.00
52	B4	28	SER	N-CA-C	-6.04	105.74	113.23
1	AA	961	U	P-O3'-C3'	-6.04	111.14	120.20
22	BA	1654	A	C3'-C2'-C1'	6.04	107.34	101.30
22	BA	2732	G	P-O3'-C3'	6.04	129.26	120.20
22	BA	1900	A	P-O3'-C3'	6.04	129.25	120.20
26	BE	117	ARG	N-CA-C	-6.04	105.56	113.17
57	DA	1386	C	N1-C1'-C2'	-6.04	102.95	112.00
57	DA	1982	U	P-O3'-C3'	-6.03	111.15	120.20
57	DA	1865	U	N1-C1'-C2'	6.03	121.05	112.00
22	BA	1821	A	P-O5'-C5'	-6.03	111.85	120.90
53	CA	481	G	P-O3'-C3'	6.03	129.24	120.20
22	BA	1901	A	P-O3'-C3'	-6.03	111.16	120.20
57	DA	671	C	N1-C1'-C2'	-6.02	104.96	114.00
22	BA	2849	U	P-O5'-C5'	-6.02	111.87	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2143	C	P-O3'-C3'	6.02	129.23	120.20
57	DA	623	C	P-O3'-C3'	-6.02	111.17	120.20
22	BA	2504	U	P-O5'-C5'	-6.02	111.88	120.90
22	BA	995	C	C2'-C3'-O3'	6.01	118.52	109.50
31	DJ	111	LYS	N-CA-C	6.01	116.90	108.00
57	DA	2289	G	P-O3'-C3'	-6.01	111.19	120.20
57	DA	2299	U	P-O3'-C3'	-6.01	111.19	120.20
22	BA	387	U	P-O5'-C5'	-6.00	111.89	120.90
22	BA	1675	C	N1-C1'-C2'	-6.00	103.01	112.00
57	DA	1416	G	P-O3'-C3'	6.00	129.19	120.20
57	DA	2609	U	N1-C1'-C2'	6.00	122.99	114.00
1	AA	884	U	P-O3'-C3'	6.00	129.19	120.20
22	BA	1734	G	P-O3'-C3'	-6.00	111.21	120.20
22	BA	906	U	P-O5'-C5'	-5.99	111.91	120.90
22	BA	1326	U	C2'-C3'-O3'	-5.99	104.71	113.70
22	BA	2468	A	P-O3'-C3'	5.99	129.19	120.20
22	BA	687	C	P-O5'-C5'	-5.99	111.91	120.90
57	DA	2034	U	N1-C1'-C2'	-5.99	103.01	112.00
1	AA	1477	U	P-O5'-C5'	-5.99	111.92	120.90
45	BX	52	ALA	N-CA-C	-5.99	102.45	110.24
53	CA	174	A	P-O3'-C3'	-5.99	111.22	120.20
22	BA	1967	C	P-O3'-C3'	-5.99	111.22	120.20
22	BA	2490	G	P-O3'-C3'	5.99	129.18	120.20
53	CA	1230	C	P-O3'-C3'	-5.99	111.22	120.20
22	BA	1398	C	N1-C1'-C2'	-5.98	103.03	112.00
22	BA	2846	G	P-O5'-C5'	-5.98	111.93	120.90
22	BA	980	A	P-O3'-C3'	-5.98	111.23	120.20
57	DA	985	C	N1-C1'-C2'	-5.98	103.03	112.00
22	BA	1458	U	P-O3'-C3'	5.97	129.16	120.20
38	BQ	3	VAL	N-CA-C	5.97	116.41	107.51
22	BA	1330	C	P-O3'-C3'	-5.97	111.25	120.20
22	BA	182	A	P-O5'-C5'	-5.97	111.95	120.90
57	DA	1920	C	P-O3'-C3'	-5.97	111.25	120.20
1	AA	316	C	P-O5'-C5'	-5.96	111.95	120.90
17	AQ	64	ARG	CA-C-N	5.96	126.27	119.83
17	AQ	64	ARG	C-N-CA	5.96	126.27	119.83
22	BA	454	A	O3'-P-O5'	-5.96	95.05	104.00
22	BA	2044	C	P-O5'-C5'	-5.96	111.95	120.90
53	CA	705	G	P-O3'-C3'	-5.96	111.25	120.20
22	BA	968	C	O3'-P-O5'	-5.96	95.06	104.00
22	BA	1437	C	P-O5'-C5'	-5.96	111.95	120.90
57	DA	973	A	P-O3'-C3'	5.96	129.14	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	192	C	P-O5'-C5'	-5.96	111.96	120.90
22	BA	117	G	P-O5'-C5'	-5.96	111.96	120.90
22	BA	2752	C	P-O3'-C3'	-5.96	111.26	120.20
53	CA	13	U	P-O3'-C3'	5.96	129.13	120.20
1	AA	85	U	P-O3'-C3'	5.95	129.13	120.20
57	DA	2150	C	N1-C1'-C2'	-5.95	103.07	112.00
57	DA	2450	A	P-O3'-C3'	-5.95	111.27	120.20
22	BA	948	C	P-O5'-C5'	-5.95	111.98	120.90
22	BA	1060	U	N1-C1'-C2'	5.95	120.93	112.00
22	BA	1266	G	P-O3'-C3'	5.95	129.12	120.20
57	DA	1717	A	P-O3'-C3'	-5.95	111.28	120.20
57	DA	1739	A	P-O3'-C3'	-5.95	111.28	120.20
22	BA	774	G	P-O3'-C3'	5.95	129.12	120.20
26	BE	146	VAL	N-CA-C	5.94	117.27	108.65
53	CA	15	G	P-O3'-C3'	-5.94	111.29	120.20
8	AH	89	ASP	N-CA-C	-5.94	105.30	112.54
34	DM	68	PHE	CA-C-N	5.93	127.26	119.84
34	DM	68	PHE	C-N-CA	5.93	127.26	119.84
53	CA	240	G	P-O3'-C3'	-5.93	111.30	120.20
22	BA	388	G	P-O5'-C5'	-5.93	112.01	120.90
57	DA	775	G	P-O3'-C3'	5.93	129.09	120.20
1	AA	1054	C	P-O5'-C5'	-5.93	112.01	120.90
16	AP	40	ASN	CA-C-N	5.93	125.61	119.56
16	AP	40	ASN	C-N-CA	5.93	125.61	119.56
22	BA	639	U	N1-C1'-C2'	5.93	120.89	112.00
22	BA	2072	C	O3'-P-O5'	-5.93	95.11	104.00
22	BA	2311	A	P-O5'-C5'	-5.93	112.01	120.90
22	BA	528	A	P-O3'-C3'	-5.92	111.31	120.20
53	CA	889	A	P-O3'-C3'	5.92	129.09	120.20
57	DA	1206	G	P-O3'-C3'	-5.92	111.31	120.20
53	CA	245	U	P-O3'-C3'	-5.92	111.33	120.20
53	CA	883	C	N1-C1'-C2'	5.92	120.87	112.00
57	DA	1970	A	P-O3'-C3'	5.92	129.07	120.20
53	CA	1298	U	O3'-P-O5'	5.91	112.87	104.00
22	BA	2024	G	P-O5'-C5'	-5.91	112.03	120.90
1	AA	1286	U	N1-C1'-C2'	5.91	120.86	112.00
53	CA	1147	C	P-O3'-C3'	-5.91	111.34	120.20
22	BA	1524	G	P-O5'-C5'	-5.91	112.04	120.90
38	BQ	30	VAL	CB-CA-C	-5.91	102.89	110.98
53	CA	643	C	P-O3'-C3'	-5.90	111.34	120.20
57	DA	370	G	P-O3'-C3'	5.90	129.05	120.20
22	BA	2517	C	P-O3'-C3'	5.90	129.05	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	559	A	P-O3'-C3'	5.90	129.05	120.20
1	AA	1124	G	P-O3'-C3'	5.90	129.04	120.20
1	AA	452	A	P-O3'-C3'	-5.89	111.36	120.20
1	AA	704	A	P-O3'-C3'	-5.89	111.36	120.20
57	DA	1207	C	P-O3'-C3'	-5.89	111.36	120.20
22	BA	119	A	O3'-P-O5'	5.89	112.84	104.00
57	DA	915	C	P-O3'-C3'	-5.89	111.36	120.20
57	DA	2286	G	P-O3'-C3'	5.89	129.03	120.20
22	BA	1273	U	N1-C1'-C2'	-5.88	103.17	112.00
22	BA	2751	G	P-O5'-C5'	-5.88	112.08	120.90
22	BA	590	A	P-O5'-C5'	-5.88	112.08	120.90
31	BJ	72	LYS	N-CA-C	5.88	118.29	110.53
22	BA	1206	G	P-O3'-C3'	-5.88	111.38	120.20
22	BA	2791	G	P-O3'-C3'	-5.88	111.38	120.20
22	BA	1112	G	P-O3'-C3'	-5.88	111.39	120.20
22	BA	1282	U	P-O5'-C5'	-5.87	112.09	120.90
22	BA	2613	U	O4'-C1'-N1	5.87	117.00	108.20
14	AN	55	SER	CA-C-N	5.87	125.56	119.05
14	AN	55	SER	C-N-CA	5.87	125.56	119.05
22	BA	443	A	P-O5'-C5'	-5.87	112.10	120.90
53	CA	1499	A	P-O5'-C5'	-5.87	112.10	120.90
22	BA	1301	A	P-O5'-C5'	-5.86	112.11	120.90
1	AA	1502	A	P-O3'-C3'	5.86	128.99	120.20
22	BA	2063	C	P-O3'-C3'	-5.86	111.42	120.20
57	DA	2036	C	N1-C1'-C2'	-5.86	103.22	112.00
1	AA	1131	G	P-O3'-C3'	-5.85	111.42	120.20
57	DA	1010	A	P-O3'-C3'	-5.85	111.42	120.20
57	DA	1272	A	P-O3'-C3'	5.85	128.98	120.20
1	AA	1055	A	P-O3'-C3'	-5.85	111.42	120.20
1	AA	1345	U	O4'-C1'-N1	5.85	116.97	108.20
22	BA	2238	G	P-O3'-C3'	5.85	128.98	120.20
42	BU	5	ARG	N-CA-C	5.85	118.75	108.75
57	DA	2836	U	N1-C1'-C2'	-5.84	103.23	112.00
22	BA	486	C	P-O3'-C3'	-5.84	111.44	120.20
33	BL	68	SER	N-CA-C	5.84	118.88	111.69
22	BA	669	G	P-O5'-C5'	5.84	129.66	120.90
57	DA	774	G	P-O3'-C3'	5.84	128.96	120.20
22	BA	995	C	N1-C1'-C2'	5.84	122.75	114.00
22	BA	1034	G	P-O3'-C3'	-5.84	111.45	120.20
22	BA	2319	G	O3'-P-O5'	5.84	112.76	104.00
53	CA	914	A	P-O3'-C3'	-5.84	111.45	120.20
31	BJ	63	ALA	CA-C-N	-5.83	116.98	123.16

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BJ	63	ALA	C-N-CA	-5.83	116.98	123.16
1	AA	519	C	P-O3'-C3'	-5.83	111.45	120.20
22	BA	805	G	C4'-C3'-O3'	-5.83	100.65	109.40
53	CA	1215	G	P-O3'-C3'	-5.83	111.46	120.20
57	DA	1655	A	P-O3'-C3'	-5.83	111.46	120.20
22	BA	613	A	P-O3'-C3'	5.83	128.94	120.20
53	CA	961	U	N1-C1'-C2'	-5.83	103.26	112.00
53	CA	349	A	P-O3'-C3'	-5.82	111.47	120.20
57	DA	2756	U	O3'-P-O5'	5.82	112.74	104.00
1	AA	889	A	O3'-P-O5'	-5.82	95.27	104.00
22	BA	2812	G	P-O3'-C3'	-5.82	111.47	120.20
57	DA	1265	A	P-O3'-C3'	5.82	128.93	120.20
22	BA	1765	U	P-O5'-C5'	-5.82	112.18	120.90
22	BA	2656	U	P-O3'-C3'	-5.81	111.48	120.20
57	DA	407	G	P-O3'-C3'	-5.81	111.48	120.20
25	BD	172	VAL	N-CA-C	5.81	116.94	111.48
53	CA	575	G	P-O3'-C3'	5.81	128.92	120.20
1	AA	84	U	N1-C1'-C2'	5.81	120.72	112.00
22	BA	2756	U	N1-C1'-C2'	5.81	122.71	114.00
24	BC	213	ARG	N-CA-C	-5.80	105.57	114.16
53	CA	84	U	N1-C1'-C2'	5.80	120.70	112.00
22	BA	1329	U	N1-C1'-C2'	5.80	122.70	114.00
1	AA	1448	C	N1-C1'-C2'	-5.80	103.30	112.00
31	DJ	27	ARG	N-CA-C	-5.80	106.16	113.18
22	BA	2289	G	P-O3'-C3'	-5.80	111.50	120.20
57	DA	2875	C	P-O3'-C3'	-5.80	111.50	120.20
2	AB	83	ALA	N-CA-C	-5.80	106.04	113.23
30	DI	72	THR	CA-C-N	5.79	123.89	119.66
30	DI	72	THR	C-N-CA	5.79	123.89	119.66
22	BA	2682	A	P-O3'-C3'	-5.79	111.51	120.20
22	BA	2850	A	P-O3'-C3'	-5.79	111.51	120.20
1	AA	1184	G	P-O3'-C3'	-5.79	111.52	120.20
25	BD	10	GLY	N-CA-C	5.79	126.90	113.18
22	BA	763	G	P-O3'-C3'	-5.79	111.52	120.20
22	BA	62	U	P-O3'-C3'	5.79	128.88	120.20
22	BA	2873	A	O3'-P-O5'	-5.78	95.33	104.00
28	BG	165	ASP	N-CA-C	-5.78	106.84	112.97
57	DA	1942	C	P-O3'-C3'	-5.78	111.53	120.20
47	BZ	9	THR	N-CA-C	5.78	123.10	110.80
53	CA	381	C	P-O3'-C3'	5.78	128.87	120.20
53	CA	512	U	P-O3'-C3'	-5.78	111.53	120.20
22	BA	2587	A	P-O5'-C5'	-5.78	112.24	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1636	U	N1-C1'-C2'	-5.78	103.34	112.00
22	BA	215	G	P-O3'-C3'	5.77	128.86	120.20
22	BA	2092	U	N1-C1'-C2'	5.77	122.66	114.00
57	DA	1126	A	P-O3'-C3'	5.77	128.85	120.20
53	CA	238	A	P-O3'-C3'	5.77	128.85	120.20
57	DA	1558	C	N1-C1'-C2'	5.77	122.65	114.00
57	DA	2646	C	P-O5'-C5'	-5.76	112.25	120.90
22	BA	2407	A	P-O3'-C3'	-5.76	111.56	120.20
57	DA	1915	U	N1-C1'-C2'	-5.76	103.36	112.00
1	AA	1256	A	P-O3'-C3'	5.76	128.84	120.20
53	CA	1349	A	P-O3'-C3'	-5.76	111.56	120.20
22	BA	1512	C	P-O3'-C3'	-5.76	111.56	120.20
22	BA	2503	A	P-O3'-C3'	5.76	128.84	120.20
57	DA	424	G	P-O3'-C3'	-5.75	111.57	120.20
25	DD	174	SER	N-CA-C	5.75	119.77	112.87
1	AA	94	G	P-O3'-C3'	5.75	128.82	120.20
1	AA	509	A	P-O3'-C3'	-5.75	111.58	120.20
57	DA	865	C	P-O3'-C3'	5.75	128.82	120.20
57	DA	1498	C	P-O3'-C3'	-5.75	111.58	120.20
2	AB	191	ASP	CA-C-N	5.74	125.45	119.82
2	AB	191	ASP	C-N-CA	5.74	125.45	119.82
22	BA	1406	U	N1-C1'-C2'	5.74	120.61	112.00
57	DA	1398	C	P-O3'-C3'	-5.74	111.59	120.20
23	BB	14	U	P-O3'-C3'	5.74	128.81	120.20
22	BA	1272	A	P-O5'-C5'	-5.74	112.29	120.90
22	BA	1455	G	P-O5'-C5'	-5.74	112.29	120.90
23	BB	12	C	P-O3'-C3'	5.74	128.81	120.20
22	BA	2756	U	O3'-P-O5'	5.74	112.61	104.00
22	BA	1689	A	P-O3'-C3'	5.74	128.80	120.20
22	BA	2199	A	P-O5'-C5'	-5.73	112.30	120.90
22	BA	2497	A	P-O5'-C5'	5.73	129.50	120.90
22	BA	1782	U	N1-C1'-C2'	-5.73	103.40	112.00
22	BA	2615	U	P-O3'-C3'	-5.73	111.60	120.20
53	CA	802	A	P-O3'-C3'	5.73	128.80	120.20
1	AA	1337	G	P-O3'-C3'	-5.73	111.61	120.20
22	BA	2498	C	P-O5'-C5'	-5.73	112.31	120.90
6	CF	49	TYR	N-CA-C	5.73	113.37	108.22
1	AA	116	A	P-O3'-C3'	-5.72	111.62	120.20
57	DA	2542	A	P-O3'-C3'	5.72	128.78	120.20
22	BA	1072	C	N1-C1'-C2'	-5.72	105.42	114.00
22	BA	1416	G	P-O3'-C3'	5.71	128.77	120.20
22	BA	704	G	C2'-C3'-O3'	5.71	118.06	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1036	G	P-O5'-C5'	-5.71	112.34	120.90
22	BA	2242	G	O3'-P-O5'	-5.71	95.44	104.00
22	BA	2714	G	P-O3'-C3'	-5.71	111.64	120.20
57	DA	913	U	P-O3'-C3'	5.71	128.76	120.20
1	AA	575	G	P-O3'-C3'	5.71	128.76	120.20
53	CA	110	C	N1-C1'-C2'	-5.71	103.44	112.00
57	DA	52	A	P-O3'-C3'	-5.71	111.64	120.20
53	CA	508	U	P-O3'-C3'	5.71	128.76	120.20
53	CA	1141	C	N1-C1'-C2'	-5.71	103.44	112.00
37	DP	49	ILE	N-CA-C	5.70	116.69	108.48
42	BU	22	GLY	N-CA-C	5.70	118.72	111.37
22	BA	1707	G	P-O3'-C3'	-5.70	111.65	120.20
22	BA	1858	A	P-O3'-C3'	-5.70	111.65	120.20
22	BA	1224	U	N1-C1'-C2'	5.70	120.55	112.00
22	BA	2239	G	P-O3'-C3'	-5.70	111.65	120.20
22	BA	2582	G	P-O3'-C3'	-5.70	111.65	120.20
53	CA	1367	C	P-O3'-C3'	-5.70	111.65	120.20
57	DA	2216	G	P-O3'-C3'	-5.70	111.65	120.20
22	BA	305	C	P-O5'-C5'	-5.70	112.36	120.90
24	BC	92	LEU	N-CA-C	-5.70	101.20	110.20
58	DB	88	C	N1-C1'-C2'	5.70	120.54	112.00
52	B4	30	GLU	CA-C-N	5.69	126.08	119.47
52	B4	30	GLU	C-N-CA	5.69	126.08	119.47
57	DA	1247	A	P-O3'-C3'	5.69	128.74	120.20
1	AA	131	A	P-O3'-C3'	-5.69	111.66	120.20
22	BA	2591	C	P-O5'-C5'	-5.69	112.36	120.90
57	DA	1427	A	P-O3'-C3'	5.69	128.74	120.20
57	DA	2609	U	P-O3'-C3'	5.69	128.74	120.20
58	DB	107	G	P-O3'-C3'	5.69	128.74	120.20
22	BA	739	A	P-O3'-C3'	5.69	128.74	120.20
57	DA	390	U	N1-C1'-C2'	5.69	122.54	114.00
57	DA	1759	A	P-O3'-C3'	-5.69	111.66	120.20
22	BA	2431	U	P-O5'-C5'	-5.69	112.37	120.90
53	CA	794	A	P-O3'-C3'	-5.69	111.67	120.20
57	DA	411	G	P-O3'-C3'	5.69	128.73	120.20
22	BA	2585	U	O4'-C1'-N1	5.68	117.03	108.50
1	AA	891	U	P-O5'-C5'	-5.68	112.38	120.90
22	BA	200	U	P-O5'-C5'	-5.68	112.38	120.90
22	BA	390	U	C2'-C3'-O3'	5.68	118.02	109.50
22	BA	600	G	P-O5'-C5'	-5.68	112.38	120.90
53	CA	641	U	P-O3'-C3'	5.68	128.72	120.20
22	BA	207	A	O3'-P-O5'	-5.68	95.48	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1240	U	O4'-C1'-N1	-5.68	99.98	108.50
22	BA	1759	A	P-O5'-C5'	-5.68	112.38	120.90
22	BA	2868	A	P-O5'-C5'	-5.68	112.38	120.90
22	BA	459	U	N1-C1'-C2'	-5.68	103.48	112.00
22	BA	685	A	P-O5'-C5'	-5.68	112.38	120.90
53	CA	996	A	P-O3'-C3'	-5.68	111.69	120.20
22	BA	2336	A	P-O3'-C3'	5.67	128.71	120.20
22	BA	2210	U	O3'-P-O5'	5.67	112.51	104.00
1	AA	1200	C	P-O3'-C3'	5.67	128.70	120.20
34	BM	68	PHE	CA-C-N	5.67	126.92	119.84
34	BM	68	PHE	C-N-CA	5.67	126.92	119.84
39	BR	44	GLY	N-CA-C	-5.67	105.36	113.86
57	DA	2214	C	P-O3'-C3'	-5.67	111.70	120.20
57	DA	1603	A	P-O3'-C3'	-5.67	111.70	120.20
58	DB	40	U	N1-C1'-C2'	5.67	122.50	114.00
22	BA	2342	C	P-O5'-C5'	-5.66	112.41	120.90
22	BA	2540	C	P-O5'-C5'	-5.66	112.41	120.90
22	BA	2757	A	P-O3'-C3'	-5.66	111.71	120.20
29	BH	45	GLU	N-CA-C	-5.66	107.02	114.04
22	BA	1986	C	P-O5'-C5'	-5.66	112.41	120.90
22	BA	2654	A	P-O3'-C3'	5.66	128.69	120.20
46	BY	59	GLU	N-CA-C	-5.66	106.92	113.88
57	DA	1931	U	N1-C1'-C2'	-5.66	103.51	112.00
22	BA	1615	C	P-O3'-C3'	5.66	128.69	120.20
57	DA	1735	A	P-O3'-C3'	-5.66	111.72	120.20
53	CA	1201	A	P-O3'-C3'	5.65	128.68	120.20
24	BC	20	ASN	CA-C-N	5.65	125.12	119.24
24	BC	20	ASN	C-N-CA	5.65	125.12	119.24
1	AA	486	U	N1-C1'-C2'	-5.65	103.53	112.00
53	CA	86	G	P-O3'-C3'	5.65	128.68	120.20
2	CB	104	LYS	N-CA-C	-5.65	105.21	111.71
57	DA	1967	C	P-O3'-C3'	-5.65	111.73	120.20
53	CA	885	G	P-O3'-C3'	-5.65	111.73	120.20
57	DA	1839	G	P-O3'-C3'	-5.65	111.73	120.20
2	AB	107	ARG	CA-C-N	5.64	131.41	122.60
2	AB	107	ARG	C-N-CA	5.64	131.41	122.60
34	BM	108	VAL	CA-C-N	5.64	125.97	119.93
34	BM	108	VAL	C-N-CA	5.64	125.97	119.93
53	CA	1288	A	P-O3'-C3'	-5.64	111.73	120.20
1	AA	306	A	P-O3'-C3'	-5.64	111.74	120.20
22	BA	1716	U	N1-C1'-C2'	-5.64	103.54	112.00
57	DA	2147	A	P-O3'-C3'	-5.64	111.74	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1020	A	P-O3'-C3'	5.63	128.65	120.20
35	BN	79	LEU	N-CA-C	-5.63	101.96	110.24
53	CA	1052	U	P-O5'-C5'	5.63	129.35	120.90
57	DA	1213	A	P-O3'-C3'	-5.63	111.75	120.20
53	CA	1227	A	P-O3'-C3'	5.63	128.64	120.20
20	CT	78	LEU	N-CA-C	-5.63	106.96	113.88
1	AA	511	C	P-O3'-C3'	5.63	128.64	120.20
33	BL	20	GLY	N-CA-C	-5.63	106.99	115.32
22	BA	2874	C	P-O3'-C3'	-5.62	111.76	120.20
53	CA	1167	A	P-O3'-C3'	5.62	128.64	120.20
26	DE	176	ASP	CA-C-N	5.62	125.33	119.82
26	DE	176	ASP	C-N-CA	5.62	125.33	119.82
57	DA	421	C	N1-C1'-C2'	5.62	120.43	112.00
53	CA	1380	U	P-O3'-C3'	5.62	128.63	120.20
34	BM	58	LYS	CB-CA-C	-5.62	109.59	117.23
53	CA	95	C	P-O3'-C3'	-5.62	111.78	120.20
53	CA	382	A	P-O3'-C3'	5.62	128.62	120.20
57	DA	1027	A	P-O3'-C3'	-5.62	111.78	120.20
58	DB	45	A	P-O3'-C3'	-5.61	111.78	120.20
1	AA	1507	A	P-O3'-C3'	-5.61	111.79	120.20
1	AA	1225	A	P-O5'-C5'	-5.61	112.49	120.90
23	BB	25	U	N1-C1'-C2'	-5.61	103.59	112.00
53	CA	14	U	P-O3'-C3'	-5.61	111.79	120.20
57	DA	1286	A	P-O3'-C3'	5.60	128.61	120.20
53	CA	803	G	P-O3'-C3'	-5.60	111.80	120.20
1	AA	85	U	N1-C1'-C2'	5.60	122.40	114.00
1	AA	1401	G	P-O3'-C3'	-5.60	111.80	120.20
58	DB	40	U	P-O3'-C3'	5.60	128.59	120.20
1	AA	755	G	P-O3'-C3'	-5.60	111.81	120.20
1	AA	1345	U	P-O3'-C3'	5.60	128.59	120.20
1	AA	14	U	P-O3'-C3'	-5.59	111.81	120.20
22	BA	2052	A	P-O3'-C3'	-5.59	111.81	120.20
23	BB	42	C	N1-C1'-C2'	-5.59	103.61	112.00
44	BW	12	GLY	N-CA-C	-5.59	106.18	112.33
57	DA	2656	U	P-O3'-C3'	-5.59	111.81	120.20
1	AA	1161	C	N1-C1'-C2'	-5.59	103.61	112.00
22	BA	2093	G	N9-C1'-C2'	-5.59	103.61	112.00
57	DA	2585	U	P-O3'-C3'	5.59	128.59	120.20
22	BA	2260	C	P-O5'-C5'	-5.59	112.52	120.90
32	DK	47	ILE	CA-C-N	5.59	126.83	119.84
32	DK	47	ILE	C-N-CA	5.59	126.83	119.84
22	BA	811	U	O3'-P-O5'	-5.59	95.62	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1497	U	N1-C1'-C2'	5.59	122.38	114.00
57	DA	958	U	P-O3'-C3'	-5.58	111.82	120.20
1	AA	74	A	P-O3'-C3'	-5.58	111.82	120.20
22	BA	385	C	P-O3'-C3'	5.58	128.58	120.20
22	BA	1009	A	P-O3'-C3'	-5.58	111.83	120.20
22	BA	92	U	P-O3'-C3'	-5.58	111.83	120.20
22	BA	855	G	P-O3'-C3'	-5.58	111.83	120.20
23	BB	66	A	O3'-P-O5'	5.58	112.37	104.00
22	BA	390	U	N1-C1'-C2'	5.57	122.36	114.00
22	BA	2264	C	P-O5'-C5'	-5.57	112.54	120.90
1	AA	984	C	P-O3'-C3'	-5.57	111.84	120.20
22	BA	2282	G	P-O3'-C3'	5.57	128.56	120.20
57	DA	802	A	P-O3'-C3'	-5.57	111.84	120.20
57	DA	1965	C	N1-C1'-C2'	-5.57	103.64	112.00
22	BA	1848	A	P-O3'-C3'	-5.57	111.85	120.20
22	BA	2426	A	P-O3'-C3'	5.57	128.55	120.20
1	AA	1181	G	P-O3'-C3'	5.57	128.55	120.20
22	BA	1865	U	P-O3'-C3'	5.56	128.55	120.20
22	BA	2423	U	P-O3'-C3'	5.56	128.54	120.20
57	DA	1047	G	P-O3'-C3'	5.56	128.54	120.20
22	BA	1326	U	C3'-C2'-C1'	5.56	106.86	101.30
1	AA	115	G	O3'-P-O5'	5.56	112.34	104.00
22	BA	2353	G	P-O5'-C5'	-5.56	112.56	120.90
57	DA	801	G	P-O3'-C3'	5.56	128.54	120.20
22	BA	1358	G	P-O5'-C5'	-5.56	112.56	120.90
22	BA	2681	C	O3'-P-O5'	5.56	112.34	104.00
22	BA	571	U	O4'-C1'-N1	5.55	116.53	108.20
38	BQ	24	TYR	N-CA-C	5.55	118.98	110.20
53	CA	52	C	N1-C1'-C2'	-5.55	103.67	112.00
54	CG	86	VAL	N-CA-C	5.55	113.37	107.76
57	DA	1635	A	P-O5'-C5'	-5.55	112.58	120.90
1	AA	552	U	P-O3'-C3'	-5.55	111.88	120.20
1	AA	184	G	P-O3'-C3'	-5.55	111.88	120.20
1	AA	567	G	P-O5'-C5'	-5.55	112.58	120.90
57	DA	1675	C	P-O5'-C5'	-5.55	112.58	120.90
1	AA	1129	C	N1-C1'-C2'	5.54	122.32	114.00
22	BA	1672	A	P-O5'-C5'	-5.54	112.58	120.90
22	BA	2346	A	O3'-P-O5'	5.54	112.31	104.00
53	CA	717	U	P-O3'-C3'	5.54	128.51	120.20
57	DA	1327	A	C3'-C2'-C1'	5.54	106.84	101.30
57	DA	2023	C	P-O3'-C3'	-5.54	111.89	120.20
1	AA	1101	A	P-O3'-C3'	5.54	128.51	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1491	G	P-O3'-C3'	-5.54	111.89	120.20
57	DA	1602	U	N1-C1'-C2'	5.54	120.31	112.00
57	DA	2409	G	P-O3'-C3'	-5.54	111.89	120.20
22	BA	1023	U	C3'-C2'-C1'	5.54	106.83	101.30
38	BQ	97	ILE	N-CA-C	-5.54	103.53	111.17
41	BT	32	LEU	N-CA-C	5.54	117.40	108.32
57	DA	73	A	P-O3'-C3'	-5.54	111.90	120.20
57	DA	2667	C	N1-C1'-C2'	-5.54	103.70	112.00
57	DA	1079	C	N1-C1'-C2'	-5.53	103.70	112.00
22	BA	204	A	P-O3'-C3'	5.53	128.50	120.20
35	BN	101	GLY	N-CA-C	5.53	126.29	113.18
53	CA	72	A	P-O3'-C3'	-5.53	111.91	120.20
4	AD	166	LYS	CA-C-N	5.53	126.75	119.84
4	AD	166	LYS	C-N-CA	5.53	126.75	119.84
22	BA	1249	U	P-O3'-C3'	-5.53	111.91	120.20
45	BX	28	PHE	N-CA-C	-5.53	100.69	109.59
57	DA	1707	G	P-O3'-C3'	-5.53	111.91	120.20
57	DA	2683	C	N1-C1'-C2'	-5.53	103.71	112.00
22	BA	1606	C	P-O5'-C5'	-5.52	112.61	120.90
57	DA	1333	G	P-O3'-C3'	-5.52	111.91	120.20
1	AA	346	G	P-O5'-C5'	-5.52	112.62	120.90
22	BA	729	G	P-O3'-C3'	-5.52	111.92	120.20
22	BA	794	A	P-O5'-C5'	-5.52	112.62	120.90
57	DA	1063	G	P-O3'-C3'	-5.52	111.92	120.20
22	BA	1619	G	P-O3'-C3'	-5.52	111.92	120.20
57	DA	445	C	P-O3'-C3'	-5.52	111.92	120.20
57	DA	1919	A	P-O3'-C3'	-5.52	111.93	120.20
1	AA	564	C	N1-C1'-C2'	-5.51	103.73	112.00
24	BC	229	HIS	CA-C-N	5.51	126.73	119.84
24	BC	229	HIS	C-N-CA	5.51	126.73	119.84
57	DA	1963	U	P-O3'-C3'	-5.51	111.93	120.20
22	BA	1706	C	P-O3'-C3'	5.51	128.47	120.20
57	DA	139	U	N1-C1'-C2'	5.51	120.26	112.00
22	BA	977	G	P-O3'-C3'	-5.51	111.94	120.20
22	BA	1956	U	N1-C1'-C2'	-5.51	103.74	112.00
22	BA	35	G	P-O5'-C5'	-5.51	112.64	120.90
2	CB	107	ARG	O-C-N	-5.51	112.43	122.34
22	BA	1777	U	P-O5'-C5'	-5.50	112.64	120.90
53	CA	517	G	P-O3'-C3'	5.50	128.45	120.20
53	CA	937	A	P-O3'-C3'	-5.50	111.94	120.20
57	DA	1456	G	P-O3'-C3'	-5.50	111.95	120.20
34	BM	30	SER	N-CA-C	-5.50	107.21	114.31

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	382	A	O3'-P-O5'	-5.50	95.75	104.00
53	CA	913	A	O3'-P-O5'	5.50	112.25	104.00
53	CA	991	U	N1-C1'-C2'	5.50	120.25	112.00
5	CE	78	GLY	N-CA-C	-5.50	107.68	115.43
57	DA	404	A	P-O3'-C3'	5.50	128.45	120.20
57	DA	2667	C	P-O3'-C3'	-5.50	111.95	120.20
1	AA	1054	C	P-O3'-C3'	5.50	128.44	120.20
22	BA	2067	G	P-O3'-C3'	5.50	128.45	120.20
1	AA	891	U	P-O3'-C3'	-5.50	111.96	120.20
22	BA	1185	G	P-O5'-C5'	-5.49	112.66	120.90
22	BA	1272	A	P-O3'-C3'	5.49	128.44	120.20
22	BA	1459	G	P-O3'-C3'	-5.49	111.96	120.20
1	AA	686	U	N1-C1'-C2'	5.49	122.24	114.00
1	AA	1399	C	O3'-P-O5'	5.49	112.23	104.00
22	BA	1340	U	O3'-P-O5'	-5.49	95.77	104.00
29	BH	85	GLY	N-CA-C	5.49	117.40	110.38
57	DA	77	G	P-O3'-C3'	-5.49	111.97	120.20
57	DA	1785	A	P-O3'-C3'	-5.49	111.97	120.20
1	AA	91	U	N1-C1'-C2'	-5.49	103.77	112.00
22	BA	1181	U	N1-C1'-C2'	-5.49	103.77	112.00
22	BA	1689	A	P-O5'-C5'	-5.49	112.67	120.90
57	DA	1291	C	N1-C1'-C2'	-5.48	103.77	112.00
5	AE	73	VAL	O-C-N	5.48	128.94	123.18
22	BA	434	U	P-O3'-C3'	5.48	128.42	120.20
22	BA	206	U	N1-C1'-C2'	-5.48	103.78	112.00
53	CA	652	U	N1-C1'-C2'	5.48	120.22	112.00
2	CB	110	ILE	N-CA-C	-5.48	105.87	113.00
22	BA	479	A	P-O3'-C3'	5.48	128.42	120.20
33	BL	95	LEU	N-CA-C	-5.48	102.38	111.37
1	AA	173	U	O4'-C1'-N1	5.48	116.42	108.20
22	BA	782	A	P-O5'-C5'	5.48	129.12	120.90
22	BA	2811	G	O3'-P-O5'	-5.48	95.78	104.00
31	BJ	41	LYS	N-CA-C	5.48	122.47	110.80
22	BA	2309	A	P-O3'-C3'	-5.47	111.99	120.20
22	BA	489	G	O3'-P-O5'	-5.47	95.79	104.00
22	BA	996	A	C2'-C3'-O3'	-5.47	105.49	113.70
53	CA	209	U	P-O3'-C3'	5.47	128.41	120.20
53	CA	401	C	P-O5'-C5'	-5.47	112.69	120.90
6	AF	17	GLN	N-CA-C	-5.47	106.45	113.02
22	BA	398	C	P-O5'-C5'	-5.47	112.69	120.90
1	AA	686	U	P-O3'-C3'	5.47	128.40	120.20
22	BA	572	A	C3'-C2'-C1'	5.47	106.77	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	2210	U	P-O3'-C3'	5.47	128.40	120.20
47	DZ	33	HIS	N-CA-C	-5.47	106.45	113.01
53	CA	173	U	P-O3'-C3'	5.46	128.40	120.20
22	BA	1250	G	N9-C1'-C2'	5.46	122.19	114.00
57	DA	2259	U	P-O3'-C3'	-5.46	112.01	120.20
1	AA	4	U	N1-C1'-C2'	5.46	120.19	112.00
23	BB	89	U	P-O5'-C5'	-5.46	112.71	120.90
53	CA	1397	C	N1-C1'-C2'	-5.46	103.82	112.00
1	AA	331	G	P-O3'-C3'	-5.45	112.02	120.20
1	AA	1085	U	P-O3'-C3'	5.45	128.38	120.20
22	BA	2214	C	P-O3'-C3'	-5.45	112.02	120.20
53	CA	486	U	N1-C1'-C2'	-5.45	103.82	112.00
22	BA	2481	G	P-O5'-C5'	-5.45	112.72	120.90
1	AA	1526	G	P-O5'-C5'	-5.45	112.72	120.90
22	BA	556	A	P-O3'-C3'	-5.45	112.02	120.20
22	BA	1558	C	P-O3'-C3'	5.45	128.38	120.20
53	CA	458	U	N1-C1'-C2'	5.45	120.18	112.00
22	BA	2670	A	P-O5'-C5'	-5.45	112.73	120.90
57	DA	129	C	P-O3'-C3'	-5.45	112.03	120.20
57	DA	2339	C	P-O3'-C3'	-5.45	112.03	120.20
22	BA	854	C	N1-C1'-C2'	-5.44	103.83	112.00
1	AA	431	A	P-O5'-C5'	-5.44	112.74	120.90
57	DA	764	A	P-O5'-C5'	-5.44	112.73	120.90
1	AA	534	U	N1-C1'-C2'	-5.44	103.84	112.00
2	AB	106	VAL	N-CA-C	-5.44	108.54	113.71
57	DA	1460	U	P-O3'-C3'	5.44	128.36	120.20
22	BA	2687	U	N1-C1'-C2'	5.44	120.16	112.00
22	BA	727	A	P-O5'-C5'	-5.44	112.74	120.90
22	BA	475	C	P-O5'-C5'	-5.43	112.75	120.90
22	BA	1919	A	N9-C1'-C2'	-5.43	103.85	112.00
53	CA	564	C	P-O3'-C3'	-5.43	112.05	120.20
57	DA	575	A	P-O3'-C3'	-5.43	112.05	120.20
1	AA	1183	U	N1-C1'-C2'	-5.43	103.85	112.00
22	BA	70	G	O3'-P-O5'	5.43	112.15	104.00
1	AA	70	U	N1-C1'-C2'	5.43	120.15	112.00
29	BH	48	GLU	O-C-N	5.43	128.31	122.34
57	DA	1023	U	P-O3'-C3'	-5.43	112.06	120.20
1	AA	485	U	P-O3'-C3'	5.43	128.34	120.20
57	DA	2440	C	C3'-C2'-C1'	5.43	106.73	101.30
37	DP	86	LYS	N-CA-C	5.43	116.88	111.07
22	BA	1616	A	P-O5'-C5'	-5.42	112.76	120.90
22	BA	2504	U	N1-C1'-C2'	-5.42	103.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
42	BU	96	LYS	N-CA-C	-5.42	103.46	110.19
22	BA	1568	G	P-O3'-C3'	-5.42	112.07	120.20
22	BA	1634	A	O3'-P-O5'	-5.42	95.87	104.00
1	AA	754	C	N1-C1'-C2'	-5.42	103.87	112.00
22	BA	474	G	P-O3'-C3'	5.42	128.33	120.20
22	BA	2784	U	P-O5'-C5'	-5.42	112.77	120.90
1	AA	1451	U	N1-C1'-C2'	5.42	122.13	114.00
57	DA	637	A	P-O3'-C3'	5.42	128.33	120.20
57	DA	1733	G	P-O3'-C3'	-5.42	112.08	120.20
22	BA	2490	G	O3'-P-O5'	5.42	112.12	104.00
22	BA	1249	U	N1-C1'-C2'	-5.41	103.88	112.00
22	BA	2459	A	P-O3'-C3'	-5.41	112.08	120.20
22	BA	2568	U	O3'-P-O5'	-5.41	95.88	104.00
22	BA	1665	A	P-O5'-C5'	-5.41	112.78	120.90
22	BA	2137	U	P-O3'-C3'	-5.41	112.08	120.20
1	AA	1224	U	O3'-P-O5'	-5.40	95.89	104.00
1	AA	1394	A	P-O3'-C3'	5.40	128.31	120.20
22	BA	805	G	P-O5'-C5'	-5.40	112.79	120.90
22	BA	573	U	O3'-P-O5'	-5.40	95.89	104.00
1	AA	1200	C	N1-C1'-C2'	5.40	122.10	114.00
22	BA	177	G	P-O3'-C3'	5.40	128.30	120.20
22	BA	1386	C	N1-C1'-C2'	-5.40	103.90	112.00
22	BA	73	A	P-O3'-C3'	-5.40	112.11	120.20
22	BA	790	U	N1-C1'-C2'	-5.40	103.90	112.00
22	BA	920	A	P-O3'-C3'	-5.40	112.11	120.20
22	BA	2283	C	C2'-C3'-O3'	-5.39	105.61	113.70
22	BA	2714	G	P-O5'-C5'	-5.39	112.81	120.90
53	CA	87	C	N1-C1'-C2'	-5.39	103.91	112.00
57	DA	2313	C	N1-C1'-C2'	-5.39	105.91	114.00
22	BA	395	U	N1-C1'-C2'	5.39	122.09	114.00
57	DA	1119	U	O4'-C1'-N1	5.39	116.59	108.50
1	AA	245	U	N1-C1'-C2'	-5.39	103.91	112.00
1	AA	688	G	P-O3'-C3'	-5.39	112.12	120.20
22	BA	197	A	P-O3'-C3'	-5.39	112.12	120.20
57	DA	532	A	O3'-P-O5'	-5.39	95.92	104.00
53	CA	421	U	P-O3'-C3'	5.38	128.28	120.20
30	DI	105	LEU	N-CA-C	-5.38	106.48	113.16
22	BA	2343	U	N1-C1'-C2'	5.38	120.07	112.00
57	DA	1497	U	P-O3'-C3'	5.38	128.27	120.20
57	DA	1667	G	C2'-C3'-O3'	5.38	117.57	109.50
57	DA	230	G	P-O3'-C3'	-5.38	112.13	120.20
57	DA	1475	G	P-O3'-C3'	5.38	128.27	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	173	U	P-O3'-C3'	5.38	128.26	120.20
22	BA	1494	A	P-O3'-C3'	-5.38	112.14	120.20
22	BA	1157	G	P-O3'-C3'	-5.37	112.14	120.20
22	BA	2036	C	C3'-C2'-C1'	5.37	106.67	101.30
22	BA	30	G	P-O5'-C5'	-5.37	112.84	120.90
1	AA	1212	U	N1-C1'-C2'	5.37	120.06	112.00
22	BA	2215	C	P-O3'-C3'	-5.37	112.15	120.20
57	DA	964	C	C3'-C2'-C1'	5.37	106.67	101.30
22	BA	2800	A	N9-C1'-C2'	-5.37	105.95	114.00
58	DB	58	A	C3'-C2'-C1'	5.37	106.67	101.30
22	BA	2759	G	O3'-P-O5'	-5.37	95.95	104.00
22	BA	1350	C	P-O3'-C3'	-5.36	112.15	120.20
1	AA	62	U	N1-C1'-C2'	5.36	120.04	112.00
1	AA	977	A	P-O3'-C3'	-5.36	112.16	120.20
1	AA	1349	A	P-O3'-C3'	-5.36	112.16	120.20
22	BA	166	U	P-O3'-C3'	-5.36	112.16	120.20
22	BA	704	G	O3'-P-O5'	5.36	112.04	104.00
22	BA	831	G	P-O3'-C3'	-5.36	112.16	120.20
22	BA	2498	C	P-O3'-C3'	-5.36	112.16	120.20
57	DA	25	U	N1-C1'-C2'	5.36	120.04	112.00
57	DA	1077	A	P-O3'-C3'	-5.36	112.16	120.20
1	AA	1282	C	P-O3'-C3'	-5.36	112.16	120.20
29	BH	48	GLU	N-CA-C	-5.36	107.40	114.31
57	DA	459	U	N1-C1'-C2'	-5.36	103.96	112.00
57	DA	762	U	P-O3'-C3'	5.36	128.24	120.20
23	BB	53	A	P-O3'-C3'	-5.36	112.17	120.20
53	CA	452	A	P-O3'-C3'	-5.36	112.17	120.20
53	CA	793	U	O3'-P-O5'	-5.36	95.97	104.00
57	DA	741	U	P-O3'-C3'	-5.35	112.17	120.20
22	BA	729	G	P-O5'-C5'	-5.35	112.87	120.90
53	CA	509	A	P-O3'-C3'	-5.35	112.17	120.20
42	DU	91	LYS	N-CA-C	-5.35	107.30	113.88
22	BA	673	C	P-O5'-C5'	-5.35	112.88	120.90
22	BA	490	C	P-O5'-C5'	-5.35	112.88	120.90
1	AA	934	C	P-O3'-C3'	5.34	128.22	120.20
22	BA	1942	C	N1-C1'-C2'	-5.34	103.98	112.00
22	BA	2249	U	N1-C1'-C2'	5.34	122.01	114.00
22	BA	75	G	P-O3'-C3'	-5.34	112.19	120.20
22	BA	2552	U	P-O3'-C3'	-5.34	112.19	120.20
35	BN	108	ALA	CA-C-N	5.34	126.52	119.84
35	BN	108	ALA	C-N-CA	5.34	126.52	119.84
10	AJ	54	SER	CA-C-N	5.34	125.41	119.32

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	AJ	54	SER	C-N-CA	5.34	125.41	119.32
22	BA	1918	A	P-O3'-C3'	5.34	128.20	120.20
57	DA	143	C	N1-C1'-C2'	-5.33	104.00	112.00
53	CA	1064	G	P-O3'-C3'	5.33	128.20	120.20
57	DA	434	U	N1-C1'-C2'	5.33	120.00	112.00
22	BA	2450	A	P-O5'-C5'	-5.33	112.91	120.90
27	BF	62	GLN	N-CA-C	5.33	118.51	108.65
37	BP	49	ILE	N-CA-C	5.33	115.79	108.12
22	BA	533	G	P-O3'-C3'	-5.33	112.21	120.20
53	CA	70	U	P-O3'-C3'	5.33	128.19	120.20
23	BB	94	A	P-O5'-C5'	-5.32	112.92	120.90
50	B2	43	THR	N-CA-C	5.32	122.14	110.80
53	CA	1161	C	P-O3'-C3'	-5.32	112.22	120.20
57	DA	122	G	P-O3'-C3'	-5.32	112.22	120.20
57	DA	335	C	P-O3'-C3'	-5.32	112.22	120.20
22	BA	486	C	P-O5'-C5'	-5.32	112.92	120.90
22	BA	2827	C	P-O5'-C5'	-5.32	112.92	120.90
57	DA	373	U	N1-C1'-C2'	-5.32	106.02	114.00
57	DA	2226	C	C3'-C2'-C1'	5.32	106.62	101.30
22	BA	41	C	P-O5'-C5'	-5.31	112.93	120.90
57	DA	947	A	C3'-C2'-C1'	5.31	106.61	101.30
57	DA	959	A	P-O3'-C3'	-5.31	112.23	120.20
22	BA	2880	C	P-O3'-C3'	-5.31	112.23	120.20
22	BA	746	U	P-O3'-C3'	5.31	128.16	120.20
22	BA	1499	C	P-O5'-C5'	-5.31	112.94	120.90
53	CA	1127	G	P-O3'-C3'	-5.31	112.24	120.20
57	DA	129	C	P-O5'-C5'	-5.31	112.94	120.90
1	AA	28	A	P-O5'-C5'	-5.31	112.94	120.90
22	BA	2384	U	P-O3'-C3'	5.30	128.16	120.20
1	AA	361	G	P-O5'-C5'	-5.30	112.95	120.90
22	BA	197	A	P-O5'-C5'	-5.30	112.94	120.90
22	BA	1604	C	P-O5'-C5'	-5.30	112.95	120.90
53	CA	1053	G	P-O3'-C3'	5.30	128.15	120.20
57	DA	250	G	P-O3'-C3'	-5.30	112.25	120.20
57	DA	1378	A	P-O3'-C3'	5.30	128.15	120.20
57	DA	1993	U	C3'-C2'-C1'	5.30	106.60	101.30
22	BA	763	G	C3'-C2'-C1'	5.30	106.60	101.30
53	CA	1160	G	P-O3'-C3'	-5.30	112.25	120.20
1	AA	1283	U	P-O3'-C3'	-5.29	112.26	120.20
22	BA	2405	G	O3'-P-O5'	-5.29	96.06	104.00
37	BP	60	VAL	N-CA-C	5.29	115.70	107.28
53	CA	1530	G	P-O3'-C3'	-5.29	112.26	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1716	U	N1-C1'-C2'	-5.29	106.06	114.00
22	BA	739	A	C4'-C3'-C2'	5.29	107.89	102.60
22	BA	1180	U	N1-C1'-C2'	5.29	119.94	112.00
53	CA	1140	C	N1-C1'-C2'	-5.29	104.07	112.00
57	DA	1993	U	P-O5'-C5'	-5.29	112.97	120.90
57	DA	2425	A	P-O3'-C3'	5.29	128.13	120.20
1	AA	1127	G	P-O3'-C3'	-5.28	112.27	120.20
57	DA	2021	C	N1-C1'-C2'	5.28	121.93	114.00
1	AA	1095	U	C3'-C2'-C1'	5.28	106.58	101.30
24	BC	58	LYS	N-CA-C	5.28	117.84	111.40
22	BA	527	C	N1-C1'-C2'	5.28	121.92	114.00
22	BA	1498	C	P-O3'-C3'	-5.28	112.28	120.20
1	AA	519	C	N1-C1'-C2'	-5.28	104.08	112.00
22	BA	211	C	P-O5'-C5'	-5.28	112.98	120.90
22	BA	1324	G	O4'-C1'-N9	5.28	116.11	108.20
58	DB	111	U	N1-C1'-C2'	-5.28	104.09	112.00
1	AA	73	C	N1-C1'-C2'	-5.27	104.09	112.00
22	BA	2430	A	O3'-P-O5'	-5.27	96.09	104.00
57	DA	1626	A	P-O3'-C3'	5.27	128.11	120.20
57	DA	2800	A	C3'-C2'-C1'	5.27	106.57	101.30
1	AA	372	C	P-O3'-C3'	5.27	128.10	120.20
22	BA	1130	U	N1-C1'-C2'	5.27	121.90	114.00
22	BA	1239	G	O3'-P-O5'	-5.27	96.10	104.00
57	DA	1240	U	N1-C1'-C2'	5.27	119.90	112.00
22	BA	1110	G	P-O3'-C3'	5.27	128.10	120.20
22	BA	2374	C	P-O5'-C5'	-5.26	113.00	120.90
24	BC	140	VAL	N-CA-C	5.26	120.29	109.34
24	BC	203	VAL	CB-CA-C	-5.26	105.49	110.65
53	CA	1212	U	N1-C1'-C2'	5.26	119.90	112.00
58	DB	41	G	P-O3'-C3'	-5.26	112.31	120.20
22	BA	1247	A	C2'-C3'-O3'	5.26	117.39	109.50
57	DA	2520	C	C3'-C2'-C1'	5.26	106.56	101.30
22	BA	2384	U	N1-C1'-C2'	5.26	121.89	114.00
57	DA	421	C	P-O3'-C3'	5.26	128.09	120.20
57	DA	1275	A	C3'-C2'-C1'	5.26	106.76	101.50
57	DA	1345	C	N1-C1'-C2'	-5.26	106.11	114.00
53	CA	414	A	P-O3'-C3'	-5.26	112.31	120.20
57	DA	2874	C	N1-C1'-C2'	-5.26	104.11	112.00
22	BA	2609	U	O4'-C1'-N1	5.26	116.09	108.20
41	BT	72	GLN	N-CA-C	-5.26	106.01	112.90
57	DA	1981	A	P-O5'-C5'	-5.26	113.02	120.90
26	BE	55	SER	N-CA-C	5.25	116.97	109.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	628	G	P-O3'-C3'	-5.25	112.32	120.20
22	BA	682	G	P-O5'-C5'	-5.25	113.02	120.90
58	DB	69	G	OP1-P-O3'	5.25	123.76	108.00
22	BA	528	A	P-O5'-C5'	-5.25	113.03	120.90
22	BA	1932	A	P-O5'-C5'	-5.25	113.03	120.90
57	DA	244	A	C3'-C2'-C1'	5.25	106.55	101.30
57	DA	1069	A	O3'-P-O5'	5.25	111.87	104.00
57	DA	2094	A	C3'-C2'-C1'	5.25	106.55	101.30
22	BA	1920	C	P-O3'-C3'	-5.25	112.33	120.20
22	BA	2259	U	P-O5'-C5'	-5.25	113.03	120.90
20	CT	5	SER	N-CA-C	-5.25	106.11	112.88
57	DA	353	C	P-O3'-C3'	5.25	128.07	120.20
22	BA	1872	A	C3'-C2'-C1'	5.25	106.55	101.30
1	AA	1202	U	C3'-C2'-C1'	5.24	106.54	101.30
22	BA	34	U	O3'-P-O5'	-5.24	96.14	104.00
22	BA	564	C	O3'-P-O5'	-5.24	96.14	104.00
22	BA	588	U	C3'-C2'-C1'	5.24	106.54	101.30
53	CA	992	U	C2'-C3'-O3'	5.24	117.36	109.50
57	DA	1998	A	N9-C1'-C2'	-5.24	104.14	112.00
22	BA	729	G	C3'-C2'-C1'	5.24	106.54	101.30
22	BA	788	A	P-O3'-C3'	5.24	128.06	120.20
53	CA	995	C	P-O3'-C3'	-5.24	112.34	120.20
22	BA	1476	U	C3'-C2'-C1'	5.24	106.53	101.30
41	BT	23	ALA	N-CA-C	-5.24	105.47	111.07
22	BA	61	C	N1-C1'-C2'	-5.23	104.15	112.00
47	BZ	56	VAL	N-CA-C	5.23	116.23	107.18
22	BA	2488	G	P-O5'-C5'	-5.23	113.05	120.90
2	AB	149	GLY	N-CA-C	-5.23	107.14	115.66
22	BA	1838	C	P-O3'-C3'	5.23	128.05	120.20
22	BA	1996	C	C4'-C3'-C2'	5.23	107.83	102.60
57	DA	353	C	N1-C1'-C2'	5.23	119.84	112.00
57	DA	1401	G	P-O3'-C3'	-5.23	112.36	120.20
22	BA	1707	G	C3'-C2'-C1'	5.23	106.53	101.30
23	BB	90	C	P-O3'-C3'	-5.23	112.36	120.20
53	CA	817	C	P-O3'-C3'	5.23	128.04	120.20
57	DA	1993	U	P-O3'-C3'	-5.23	112.36	120.20
22	BA	206	U	P-O3'-C3'	-5.22	112.36	120.20
22	BA	2285	C	P-O5'-C5'	-5.22	113.06	120.90
22	BA	2723	C	P-O5'-C5'	-5.22	113.06	120.90
57	DA	2036	C	P-O3'-C3'	-5.22	112.36	120.20
23	BB	12	C	N1-C1'-C2'	5.22	121.83	114.00
22	BA	2836	U	N1-C1'-C2'	-5.22	104.17	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
57	DA	1141	U	P-O3'-C3'	5.22	128.03	120.20
57	DA	859	G	C2'-C3'-O3'	5.22	117.33	109.50
1	AA	247	G	N9-C1'-C2'	-5.22	104.17	112.00
39	BR	86	GLN	N-CA-C	-5.22	100.90	109.40
53	CA	173	U	O4'-C1'-N1	5.21	116.02	108.20
57	DA	1455	G	P-O3'-C3'	-5.21	112.38	120.20
22	BA	1311	G	P-O3'-C3'	5.21	128.02	120.20
36	BO	54	VAL	N-CA-C	-5.21	107.39	112.29
53	CA	765	G	P-O3'-C3'	-5.21	112.39	120.20
25	DD	186	LEU	N-CA-C	5.21	116.91	108.26
22	BA	962	G	P-O3'-C3'	-5.21	112.39	120.20
22	BA	1022	G	P-O5'-C5'	5.21	128.71	120.90
53	CA	555	U	P-O3'-C3'	-5.21	112.39	120.20
57	DA	2727	A	P-O3'-C3'	-5.21	112.39	120.20
53	CA	1507	A	P-O3'-C3'	-5.21	112.39	120.20
57	DA	2339	C	C3'-C2'-C1'	5.21	106.50	101.30
57	DA	2501	C	N1-C1'-C2'	5.21	119.81	112.00
57	DA	2868	A	C3'-C2'-C1'	5.21	106.50	101.30
57	DA	1158	C	P-O3'-C3'	-5.20	112.40	120.20
57	DA	2069	G	P-O3'-C3'	-5.20	112.40	120.20
1	AA	1094	G	P-O3'-C3'	5.20	128.00	120.20
53	CA	315	A	P-O3'-C3'	5.20	128.00	120.20
57	DA	374	A	C3'-C2'-C1'	5.20	106.50	101.30
57	DA	1612	C	C3'-C2'-C1'	5.20	106.50	101.30
57	DA	2387	U	N1-C1'-C2'	-5.20	104.20	112.00
22	BA	958	U	N1-C1'-C2'	-5.20	104.20	112.00
22	BA	2517	C	O4'-C1'-N1	5.20	116.00	108.20
5	AE	122	VAL	N-CA-C	5.20	117.11	109.63
45	DX	55	MET	N-CA-C	-5.20	107.00	113.55
1	AA	273	U	O3'-P-O5'	-5.20	96.21	104.00
22	BA	1493	C	O3'-P-O5'	-5.20	96.20	104.00
53	CA	915	A	P-O5'-C5'	-5.20	113.11	120.90
1	AA	535	A	P-O3'-C3'	5.19	127.99	120.20
57	DA	959	A	C3'-C2'-C1'	5.19	106.49	101.30
57	DA	1817	G	P-O3'-C3'	-5.19	112.42	120.20
1	AA	1297	G	P-O3'-C3'	5.19	127.98	120.20
22	BA	2307	G	P-O3'-C3'	5.19	127.98	120.20
57	DA	1693	U	N1-C1'-C2'	5.19	121.78	114.00
53	CA	1202	U	P-O3'-C3'	-5.19	112.42	120.20
57	DA	784	G	P-O3'-C3'	5.19	127.98	120.20
57	DA	638	G	P-O3'-C3'	-5.19	112.42	120.20
1	AA	1142	G	P-O3'-C3'	-5.18	112.42	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2324	U	P-O3'-C3'	5.18	127.98	120.20
22	BA	1129	A	C3'-C2'-C1'	5.18	106.48	101.30
36	BO	102	ARG	N-CA-C	-5.18	105.70	112.23
22	BA	181	A	O3'-P-O5'	-5.18	96.23	104.00
22	BA	2149	U	N1-C1'-C2'	-5.18	104.23	112.00
35	DN	6	SER	N-CA-C	5.18	114.67	107.73
22	BA	1943	U	O3'-P-O5'	5.18	111.77	104.00
22	BA	381	G	O3'-P-O5'	-5.18	96.23	104.00
57	DA	1268	A	C3'-C2'-C1'	5.18	106.48	101.30
29	DH	92	GLY	N-CA-C	5.18	117.18	110.45
1	AA	439	U	N1-C1'-C2'	-5.17	104.24	112.00
22	BA	396	G	P-O5'-C5'	-5.17	113.14	120.90
22	BA	1451	C	N1-C1'-C2'	5.17	121.76	114.00
22	BA	2034	U	N1-C1'-C2'	-5.17	104.24	112.00
22	BA	1071	G	P-O3'-C3'	5.17	127.96	120.20
1	AA	1125	U	O3'-P-O5'	5.17	111.76	104.00
22	BA	932	U	N1-C1'-C2'	-5.17	106.24	114.00
53	CA	239	U	P-O3'-C3'	-5.17	112.44	120.20
57	DA	740	C	C3'-C2'-C1'	5.17	106.47	101.30
1	AA	1365	G	P-O3'-C3'	-5.17	112.44	120.20
22	BA	1524	G	P-O3'-C3'	-5.17	112.44	120.20
57	DA	2386	A	P-O3'-C3'	-5.17	112.44	120.20
22	BA	2727	A	P-O5'-C5'	-5.17	113.15	120.90
53	CA	372	C	O4'-C1'-N1	5.17	115.95	108.20
57	DA	527	C	C2'-C3'-O3'	5.17	117.25	109.50
1	AA	1145	A	P-O3'-C3'	5.17	127.95	120.20
22	BA	698	C	P-O5'-C5'	-5.17	113.15	120.90
57	DA	628	G	C3'-C2'-C1'	5.17	106.47	101.30
57	DA	1236	G	P-O3'-C3'	5.17	127.95	120.20
57	DA	1965	C	P-O5'-C5'	-5.17	113.15	120.90
22	BA	980	A	N9-C1'-C2'	5.16	119.75	112.00
31	BJ	98	GLU	N-CA-C	-5.16	105.63	112.34
57	DA	765	C	C3'-C2'-C1'	5.16	106.46	101.30
1	AA	52	C	P-O3'-C3'	-5.16	112.46	120.20
57	DA	1838	C	P-O3'-C3'	5.16	127.94	120.20
22	BA	933	A	C3'-C2'-C1'	5.16	106.46	101.30
58	DB	111	U	P-O3'-C3'	-5.16	112.47	120.20
22	BA	794	A	P-O3'-C3'	-5.16	112.47	120.20
26	BE	176	ASP	CA-C-N	5.16	126.28	119.84
26	BE	176	ASP	C-N-CA	5.16	126.28	119.84
57	DA	1568	G	P-O3'-C3'	-5.16	112.47	120.20
22	BA	1135	C	C3'-C2'-C1'	5.15	106.45	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1227	A	O3'-P-O5'	-5.15	96.27	104.00
22	BA	2034	U	P-O3'-C3'	-5.15	112.47	120.20
1	AA	794	A	P-O3'-C3'	-5.15	112.47	120.20
22	BA	2326	C	P-O3'-C3'	5.15	127.92	120.20
22	BA	333	G	P-O5'-C5'	-5.15	113.18	120.90
57	DA	1916	A	P-O3'-C3'	-5.15	112.48	120.20
57	DA	2153	C	O3'-P-O5'	5.15	111.72	104.00
22	BA	972	A	P-O3'-C3'	5.15	127.92	120.20
22	BA	1993	U	C3'-C2'-C1'	5.15	106.45	101.30
22	BA	70	G	C4'-C3'-C2'	5.14	107.74	102.60
57	DA	527	C	P-O5'-C5'	-5.14	113.18	120.90
30	BI	72	THR	CA-C-N	5.14	125.68	120.38
30	BI	72	THR	C-N-CA	5.14	125.68	120.38
22	BA	829	A	O3'-P-O5'	-5.14	96.29	104.00
19	CS	5	LYS	N-CA-C	5.14	113.68	108.75
53	CA	974	A	P-O3'-C3'	5.14	127.91	120.20
57	DA	2593	U	P-O3'-C3'	-5.14	112.49	120.20
1	AA	914	A	C3'-C2'-C1'	5.14	106.44	101.30
1	AA	1394	A	O3'-P-O5'	-5.14	96.30	104.00
23	BB	45	A	C3'-C2'-C1'	5.14	106.44	101.30
1	AA	654	G	P-O3'-C3'	-5.13	112.50	120.20
53	CA	914	A	C3'-C2'-C1'	5.13	106.44	101.30
57	DA	2239	G	P-O3'-C3'	-5.13	112.50	120.20
24	BC	44	ASN	N-CA-C	-5.13	106.71	112.87
22	BA	640	C	P-O3'-C3'	5.13	127.90	120.20
22	BA	2501	C	N1-C1'-C2'	5.13	119.70	112.00
1	AA	520	A	P-O3'-C3'	-5.13	112.51	120.20
11	AK	92	ARG	N-CA-C	-5.13	106.97	113.18
57	DA	28	A	C3'-C2'-C1'	5.13	106.43	101.30
57	DA	484	C	P-O3'-C3'	-5.13	112.51	120.20
22	BA	931	U	P-O3'-C3'	5.13	127.89	120.20
22	BA	2297	A	P-O3'-C3'	-5.13	112.51	120.20
19	CS	33	TRP	N-CA-C	-5.13	107.00	113.20
57	DA	451	U	O4'-C1'-N1	5.13	116.19	108.50
22	BA	480	A	C2'-C3'-O3'	-5.12	106.01	113.70
37	BP	34	GLY	N-CA-C	-5.12	101.03	113.18
22	BA	1155	A	P-O5'-C5'	-5.12	113.22	120.90
57	DA	391	A	C3'-C2'-C1'	5.12	106.42	101.30
57	DA	446	G	C3'-C2'-C1'	5.12	106.62	101.50
22	BA	1966	A	P-O3'-C3'	5.12	127.88	120.20
22	BA	2319	G	C4'-C3'-O3'	5.12	117.08	109.40
1	AA	652	U	N1-C1'-C2'	5.12	119.68	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2687	U	P-O5'-C5'	-5.12	113.22	120.90
26	BE	160	ALA	N-CA-C	-5.12	103.84	110.19
1	AA	966	G	P-O3'-C3'	-5.12	112.53	120.20
50	D2	26	ASN	N-CA-C	-5.12	107.01	114.12
1	AA	91	U	C3'-C2'-C1'	5.11	106.41	101.30
1	AA	793	U	P-O3'-C3'	-5.11	112.53	120.20
22	BA	475	C	C3'-C2'-C1'	5.11	106.41	101.30
22	BA	1745	A	P-O5'-C5'	-5.11	113.23	120.90
50	B2	30	VAL	CB-CA-C	-5.11	105.33	111.88
53	CA	173	U	O3'-P-O5'	-5.11	96.33	104.00
57	DA	2566	A	P-O3'-C3'	5.11	127.87	120.20
22	BA	2368	C	P-O3'-C3'	-5.11	112.53	120.20
22	BA	1799	G	P-O3'-C3'	5.11	127.86	120.20
22	BA	802	A	P-O3'-C3'	-5.11	112.54	120.20
22	BA	809	G	P-O5'-C5'	-5.11	113.24	120.90
57	DA	687	C	C3'-C2'-C1'	5.11	106.41	101.30
57	DA	1326	U	N1-C1'-C2'	-5.11	106.34	114.00
1	AA	5	U	N1-C1'-C2'	5.11	119.66	112.00
1	AA	266	G	P-O3'-C3'	5.11	127.86	120.20
22	BA	1654	A	P-O3'-C3'	-5.11	112.54	120.20
11	CK	89	GLY	CA-C-N	5.11	126.22	119.84
11	CK	89	GLY	C-N-CA	5.11	126.22	119.84
28	DG	6	ALA	CA-C-N	5.10	126.22	119.84
28	DG	6	ALA	C-N-CA	5.10	126.22	119.84
1	AA	813	U	P-O5'-C5'	-5.10	113.25	120.90
22	BA	936	A	P-O5'-C5'	-5.10	113.25	120.90
57	DA	412	A	C3'-C2'-C1'	5.10	106.40	101.30
57	DA	1803	A	C3'-C2'-C1'	5.10	106.40	101.30
12	AL	23	LEU	N-CA-C	5.10	121.66	110.80
53	CA	1052	U	P-O3'-C3'	-5.10	112.55	120.20
57	DA	335	C	C3'-C2'-C1'	5.10	106.40	101.30
22	BA	911	A	P-O5'-C5'	-5.10	113.25	120.90
22	BA	2416	C	O3'-P-O5'	-5.10	96.35	104.00
57	DA	1681	G	P-O3'-C3'	5.10	127.84	120.20
57	DA	1738	G	P-O3'-C3'	5.10	127.85	120.20
1	AA	97	G	C3'-C2'-C1'	5.10	106.40	101.30
1	AA	330	C	P-O3'-C3'	-5.09	112.56	120.20
1	AA	1453	G	P-O3'-C3'	-5.09	112.56	120.20
22	BA	435	C	C3'-C2'-C1'	5.09	106.39	101.30
22	BA	1429	G	C3'-C2'-C1'	5.09	106.39	101.30
8	CH	3	GLN	N-CA-C	-5.09	105.73	111.28
57	DA	2498	C	C3'-C2'-C1'	5.09	106.39	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	451	A	P-O3'-C3'	5.09	127.84	120.20
1	AA	792	A	P-O3'-C3'	5.09	127.84	120.20
22	BA	490	C	N1-C1'-C2'	-5.09	106.36	114.00
22	BA	1634	A	C4'-C3'-C2'	5.09	107.69	102.60
22	BA	2758	A	P-O5'-C5'	-5.09	113.26	120.90
57	DA	605	G	C3'-C2'-C1'	5.09	106.39	101.30
1	AA	286	C	P-O5'-C5'	-5.09	113.27	120.90
22	BA	985	C	C2'-C3'-O3'	-5.09	106.07	113.70
53	CA	1065	U	O4'-C1'-N1	5.09	115.83	108.20
57	DA	1396	U	N1-C1'-C2'	5.09	119.63	112.00
57	DA	1699	G	C3'-C2'-C1'	-5.08	96.42	101.50
57	DA	783	A	C2'-C3'-O3'	-5.08	106.07	113.70
22	BA	73	A	P-O5'-C5'	-5.08	113.28	120.90
22	BA	503	A	P-O3'-C3'	5.08	127.82	120.20
57	DA	2050	C	N1-C1'-C2'	5.08	119.62	112.00
57	DA	2603	G	P-O3'-C3'	-5.08	112.58	120.20
1	AA	198	G	C3'-C2'-C1'	5.08	106.38	101.30
1	AA	566	G	P-O3'-C3'	5.08	127.82	120.20
57	DA	449	A	C3'-C2'-C1'	5.08	106.38	101.30
57	DA	2458	G	O4'-C1'-N9	5.08	115.82	108.20
1	AA	718	A	P-O3'-C3'	-5.08	112.58	120.20
22	BA	2259	U	C2'-C3'-O3'	-5.08	106.09	113.70
25	BD	109	VAL	N-CA-C	5.08	119.90	109.34
42	BU	80	ASP	N-CA-C	5.08	120.41	114.62
57	DA	1554	U	P-O3'-C3'	5.08	127.81	120.20
57	DA	477	A	C3'-C2'-C1'	5.07	106.37	101.30
1	AA	1323	G	P-O3'-C3'	-5.07	112.59	120.20
22	BA	2425	A	O4'-C1'-N9	5.07	115.81	108.20
53	CA	1282	C	N1-C1'-C2'	-5.07	104.39	112.00
57	DA	231	A	P-O3'-C3'	-5.07	112.60	120.20
57	DA	2074	U	N1-C1'-C2'	5.07	119.60	112.00
53	CA	1184	G	C3'-C2'-C1'	5.07	106.37	101.30
53	CA	1299	A	P-O3'-C3'	-5.07	112.60	120.20
22	BA	866	A	N9-C1'-C2'	-5.07	104.40	112.00
22	BA	2896	C	P-O5'-C5'	-5.07	113.30	120.90
53	CA	131	A	P-O3'-C3'	-5.07	112.60	120.20
22	BA	968	C	N1-C1'-C2'	-5.06	104.41	112.00
53	CA	1244	G	C3'-C2'-C1'	5.06	106.36	101.30
57	DA	2406	A	P-O3'-C3'	5.06	127.79	120.20
22	BA	2501	C	P-O5'-C5'	-5.06	113.31	120.90
53	CA	704	A	C3'-C2'-C1'	5.06	106.36	101.30
22	BA	1638	C	O3'-P-O5'	-5.06	96.42	104.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	DD	153	GLY	N-CA-C	-5.06	107.11	114.90
57	DA	1135	C	N1-C1'-C2'	-5.05	104.42	112.00
1	AA	110	C	N1-C1'-C2'	-5.05	104.42	112.00
23	BB	90	C	O3'-P-O5'	-5.05	96.42	104.00
1	AA	411	A	P-O3'-C3'	5.05	127.78	120.20
8	AH	47	ASP	N-CA-C	5.05	116.20	108.42
57	DA	61	C	C3'-C2'-C1'	5.05	106.35	101.30
57	DA	1758	U	P-O3'-C3'	5.05	127.78	120.20
1	AA	468	A	P-O3'-C3'	-5.05	112.62	120.20
22	BA	1062	G	C3'-C2'-C1'	5.05	106.35	101.30
22	BA	1734	G	C3'-C2'-C1'	5.05	106.35	101.30
22	BA	2273	A	P-O3'-C3'	5.05	127.77	120.20
57	DA	1956	U	P-O5'-C5'	-5.05	113.33	120.90
57	DA	805	G	P-O3'-C3'	5.05	127.77	120.20
47	BZ	8	GLN	N-CA-C	5.05	119.16	113.15
57	DA	1079	C	P-O3'-C3'	-5.05	112.63	120.20
57	DA	2578	G	P-O3'-C3'	-5.05	112.63	120.20
22	BA	693	A	P-O5'-C5'	-5.04	113.33	120.90
22	BA	946	C	C3'-C2'-C1'	5.04	106.34	101.30
53	CA	1217	C	C3'-C2'-C1'	5.04	106.34	101.30
57	DA	2023	C	O4'-C1'-N1	5.04	116.06	108.50
22	BA	391	A	P-O3'-C3'	-5.04	112.64	120.20
22	BA	1858	A	C3'-C2'-C1'	5.04	106.34	101.30
57	DA	2468	A	P-O3'-C3'	5.04	127.76	120.20
1	AA	216	U	N1-C1'-C2'	-5.04	104.44	112.00
22	BA	106	C	P-O5'-C5'	-5.04	113.34	120.90
22	BA	671	C	P-O3'-C3'	-5.04	112.64	120.20
22	BA	2830	C	P-O5'-C5'	-5.04	113.34	120.90
57	DA	129	C	N1-C1'-C2'	-5.04	104.44	112.00
1	AA	935	A	C3'-C2'-C1'	5.04	106.34	101.30
22	BA	2504	U	P-O3'-C3'	-5.04	112.65	120.20
57	DA	273	G	C3'-C2'-C1'	5.04	106.34	101.30
22	BA	2620	C	N1-C1'-C2'	5.03	119.55	112.00
57	DA	1722	A	P-O3'-C3'	-5.03	112.65	120.20
22	BA	2449	U	O4'-C1'-N1	-5.03	100.65	108.20
53	CA	1296	C	N1-C1'-C2'	5.03	119.55	112.00
57	DA	1024	G	C3'-C2'-C1'	5.03	106.33	101.30
53	CA	1285	A	P-O3'-C3'	5.03	127.75	120.20
57	DA	1020	A	P-O3'-C3'	5.03	127.75	120.20
58	DB	68	C	O4'-C1'-N1	5.03	116.05	108.50
1	AA	654	G	C3'-C2'-C1'	5.03	106.33	101.30
22	BA	2258	C	C4'-C3'-C2'	5.03	107.63	102.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1301	U	P-O5'-C5'	-5.03	113.36	120.90
53	CA	71	A	C3'-C2'-C1'	5.03	106.33	101.30
25	BD	117	GLY	N-CA-C	5.03	121.68	114.64
57	DA	1157	G	P-O3'-C3'	-5.03	112.66	120.20
22	BA	2443	C	P-O5'-C5'	-5.02	113.36	120.90
53	CA	559	A	O3'-P-O5'	5.02	111.54	104.00
28	BG	116	LEU	CA-C-N	5.02	126.12	119.84
28	BG	116	LEU	C-N-CA	5.02	126.12	119.84
53	CA	654	G	C3'-C2'-C1'	5.02	106.32	101.30
57	DA	1304	A	C3'-C2'-C1'	5.02	106.32	101.30
22	BA	1330	C	C3'-C2'-C1'	5.02	106.32	101.30
53	CA	1395	C	P-O3'-C3'	-5.02	112.67	120.20
57	DA	2150	C	P-O3'-C3'	-5.02	112.67	120.20
22	BA	485	C	P-O3'-C3'	-5.02	112.67	120.20
22	BA	2427	C	C3'-C2'-C1'	5.02	106.32	101.30
57	DA	103	A	C3'-C2'-C1'	5.02	106.32	101.30
22	BA	1303	G	P-O3'-C3'	-5.02	112.68	120.20
57	DA	576	U	C3'-C2'-C1'	5.02	106.32	101.30
57	DA	2239	G	C3'-C2'-C1'	5.02	106.32	101.30
22	BA	103	A	P-O5'-C5'	-5.01	113.38	120.90
22	BA	1385	A	P-O3'-C3'	5.01	127.72	120.20
57	DA	14	A	C3'-C2'-C1'	5.01	106.31	101.30
1	AA	184	G	C3'-C2'-C1'	5.01	106.31	101.30
22	BA	1340	U	P-O3'-C3'	5.01	127.72	120.20
30	BI	56	VAL	N-CA-C	5.01	113.81	107.70
53	CA	1211	U	P-O3'-C3'	5.01	127.72	120.20
24	DC	93	VAL	N-CA-C	5.01	115.30	110.74
1	AA	110	C	P-O5'-C5'	-5.01	113.39	120.90
1	AA	972	C	P-O3'-C3'	-5.01	112.69	120.20
1	AA	976	G	C3'-C2'-C1'	5.01	106.31	101.30
1	AA	1531	A	P-O3'-C3'	-5.01	112.69	120.20
22	BA	1839	G	P-O5'-C5'	-5.01	113.39	120.90
42	BU	31	GLY	N-CA-C	-5.01	108.41	114.92
53	CA	513	C	C3'-C2'-C1'	5.01	106.31	101.30
9	CI	42	THR	N-CA-C	-5.01	107.22	113.38
57	DA	1539	U	C3'-C2'-C1'	5.01	106.31	101.30
22	BA	243	U	P-O3'-C3'	-5.01	112.69	120.20
22	BA	2577	A	P-O5'-C5'	-5.01	113.39	120.90
53	CA	870	U	N1-C1'-C2'	5.01	121.51	114.00
10	CJ	40	ILE	CA-C-N	5.01	126.10	119.84
10	CJ	40	ILE	C-N-CA	5.01	126.10	119.84
22	BA	1695	G	P-O5'-C5'	-5.01	113.39	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2226	C	P-O5'-C5'	-5.01	113.39	120.90
57	DA	492	A	P-O3'-C3'	-5.01	112.69	120.20
53	CA	94	G	P-O3'-C3'	5.00	127.71	120.20
1	AA	816	A	C3'-C2'-C1'	5.00	106.30	101.30
22	BA	1603	A	O3'-P-O5'	-5.00	96.50	104.00
22	BA	2525	G	O3'-P-O5'	-5.00	96.50	104.00
25	BD	54	ALA	N-CA-C	-5.00	100.14	110.80
22	BA	1992	G	C4'-C3'-C2'	5.00	107.60	102.60

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 [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32895	0	16553	1465	0
2	AB	1705	0	1732	203	0
2	CB	1705	0	1732	186	0
3	AC	1625	0	1699	130	0
3	CC	1625	0	1699	130	0
4	AD	1643	0	1710	183	0
4	CD	1643	0	1710	189	0
5	AE	1106	0	1148	168	0
5	CE	1106	0	1148	129	0
6	AF	818	0	808	83	0
6	CF	818	0	808	82	0
7	AG	1182	0	1240	92	0
8	AH	979	0	1034	114	0
8	CH	979	0	1034	121	0
9	AI	1022	0	1070	96	0
9	CI	1022	0	1070	116	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	AJ	787	0	828	84	0
10	CJ	787	0	828	92	0
11	AK	877	0	887	94	0
11	CK	877	0	887	80	0
12	AL	955	0	1019	96	0
12	CL	955	0	1019	106	0
13	AM	884	0	944	73	0
14	AN	774	0	827	86	0
14	CN	769	0	822	88	0
15	AO	714	0	737	66	0
15	CO	714	0	737	62	0
16	AP	649	0	666	64	0
17	AQ	649	0	691	85	0
17	CQ	649	0	691	73	0
18	AR	456	0	478	35	0
18	CR	456	0	478	50	0
19	AS	638	0	665	50	0
19	CS	638	0	665	69	0
20	AT	665	0	714	74	0
20	CT	665	0	714	69	0
21	AU	426	0	449	81	0
21	CU	426	0	449	81	0
22	BA	61274	0	30819	2363	0
23	BB	2529	0	1281	84	0
24	BC	2083	0	2157	237	0
24	DC	2083	0	2157	271	0
25	BD	1565	0	1616	230	0
25	DD	1565	0	1616	205	0
26	BE	1552	0	1619	160	0
26	DE	1552	0	1619	190	0
27	BF	1411	0	1447	145	0
28	BG	1323	0	1374	151	0
28	DG	1323	0	1374	136	0
29	BH	1111	0	1148	115	0
29	DH	1111	0	1148	126	0
30	BI	1032	0	1088	115	0
30	DI	1032	0	1088	78	0
31	BJ	1129	0	1162	179	0
31	DJ	1129	0	1162	140	0
32	BK	939	0	1012	114	0
32	DK	939	0	1012	130	0
33	BL	1045	0	1117	126	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
33	DL	1045	0	1117	123	0
34	BM	1074	0	1157	109	0
34	DM	1074	0	1157	115	0
35	BN	961	0	1000	99	0
35	DN	961	0	1000	143	0
36	BO	892	0	923	82	0
36	DO	892	0	923	75	0
37	BP	917	0	965	145	0
37	DP	917	0	965	137	0
38	BQ	947	0	1022	162	0
38	DQ	947	0	1022	130	0
39	BR	816	0	839	119	0
39	DR	816	0	839	87	0
40	BS	857	0	922	87	0
40	DS	857	0	922	84	0
41	BT	739	0	807	118	0
41	DT	739	0	807	111	0
42	BU	780	0	834	55	0
42	DU	780	0	834	93	0
43	BV	753	0	780	75	0
43	DV	753	0	780	75	0
44	BW	596	0	610	212	0
44	DW	596	0	610	121	0
45	BX	625	0	655	71	0
45	DX	625	0	655	89	0
46	BY	509	0	543	50	0
46	DY	509	0	543	67	0
47	BZ	449	0	491	41	0
47	DZ	449	0	491	47	0
48	B0	444	0	461	34	0
48	D0	444	0	461	64	0
49	B1	410	0	440	40	0
49	D1	410	0	440	38	0
50	B2	377	0	418	39	0
50	D2	377	0	418	33	0
51	B3	504	0	574	46	0
51	D3	504	0	574	58	0
52	B4	302	0	340	39	0
52	D4	302	0	343	36	0
53	CA	32831	0	16521	1799	0
54	CG	1175	0	1230	133	0
55	CM	877	0	937	102	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	CP	639	0	656	75	0
57	DA	60995	0	30679	3812	0
58	DB	2507	0	1270	167	0
59	DF	1420	0	1460	197	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
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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	190852	18407	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 39.

All (18407) 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
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
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.24	1.13
57:DA:197:A:H62	57:DA:2430:A:H2'	1.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HH11	44:DW:40:ARG:HG2	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
1:AA:1129:C:H5''	9:AI:17:ARG:HH22	1.07	1.09
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.04	1.09
57:DA:1915:U:H2'	57:DA:1916:A:C8	1.87	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
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.32	1.09
38:BQ:69:ARG:HH21	38:BQ:69:ARG:HB2	1.12	1.09
57:DA:604:G:O2'	57:DA:605:G:H5'	1.53	1.09
57:DA:1024:G:H3'	57:DA:1025:G:H5''	1.33	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
6:AF:16:GLU:CG	4:CD:191:SER:HB2	1.84	1.08
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.15	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
22:BA:762:U:H4'	22:BA:763:G:O5'	1.52	1.07
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.15	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
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.19	1.06
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.35	1.06
32:BK:18:ARG:HH11	32:BK:18:ARG:HG3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.70	1.05
53:CA:1213:A:O2'	53:CA:1214:C:H5'	1.55	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
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.38	1.05
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.17	1.05
6:AF:16:GLU:HG2	4:CD:191:SER:CB	1.87	1.04
53:CA:373:A:O2'	53:CA:374:A:H5'	1.53	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
57:DA:2093:G:O6	57:DA:2225:A:H3'	1.58	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
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
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:112:G:H21	36:DO:45:SER:HA	1.21	1.01
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
57:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.26	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
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.43	0.99
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.27	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:2149:U:HO2'	57:DA:2150:C:H6	1.09	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
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:647:G:H2'	57:DA:648:G:H8	1.26	0.97
57:DA:2880:C:H1'	35:DN:93:GLY:H	1.25	0.97
1:AA:1338:G:H2'	1:AA:1339:A:C8	1.99	0.97
20:AT:26:MET:HE1	20:AT:56:ILE:HD11	1.45	0.97
57:DA:2321:U:O2	57:DA:2321:U:H3'	1.64	0.97
58:DB:69:G:H3'	58:DB:70:C:H6	1.29	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.13	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
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.48	0.96
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: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2060:A:H2'	26:DE:63:LYS:NZ	1.80	0.95
57:DA:2214:C:O2'	57:DA:2215:C:H5'	1.65	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
52:B4:9:LYS:HD3	52:B4:9:LYS:H	1.28	0.95
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.46	0.95
53:CA:986:U:H2'	53:CA:987:G:H8	1.22	0.95
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.27	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:407:U:H2'	53:CA:408:A:C8	2.01	0.95
53:CA:1228:C:HO2'	53:CA:1229:A:H8	0.96	0.95
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.47	0.95
57:DA:2023:C:HO2'	57:DA:2024:G:H8	1.02	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:HH11	24:BC:12:ARG:HG2	1.32	0.95
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.31	0.95
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:HH21	38:BQ:69:ARG:CB	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:HH21	46:BY:47:ARG:HG3	1.28	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:HB2	38:BQ:69:ARG:NH2	1.83	0.94
39:BR:51:VAL:HB	39:BR:52:PRO:CD	1.98	0.94
23:BB:90:C:H5''	23:BB:90:C:H6	1.32	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
20:CT:26:MET:HE1	20:CT:56:ILE:HD13	1.50	0.94
57:DA:1021:A:O2'	57:DA:1022:G:H4'	1.68	0.94
57:DA:1695:G:C8	24:DC:7:PRO:HB2	2.03	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
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:H2'	53:CA:1299:A:N3	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
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:6:G:HO2'	1:AA:7:A:H8	0.97	0.93
1:AA:373:A:O2'	1:AA:374:A:H5'	1.68	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:N	11:CK:27:ASN:HD22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2875:C:O2'	57:DA:2876:G:H8	1.49	0.93
57:DA:2092:U:HO2'	57:DA:2093:G:H5''	1.30	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:508:A:H62	40:DS:9:HIS:CE1	1.85	0.93
57:DA:2725:A:O2'	57:DA:2726:A:H2'	1.69	0.93
25:BD:12:THR:CG2	25:BD:13:ARG:H	1.82	0.93
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	1.47	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:HH11	20:CT:73:ARG:HG2	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:HD3	31:BJ:2:LYS:H	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
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
58:DB:54:G:N2	59:DF:25:MET:HE2	1.85	0.91
2:AB:108:GLN:HE21	2:AB:108:GLN:H	1.13	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HD12	3:AC:156:LEU:H	1.35	0.91
57:DA:297:G:H5''	42:DU:84:PHE:HB2	1.52	0.91
57:DA:1166:G:H22	57:DA:1184:U:H1'	1.33	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:249:C:H5''	57:DA:2394:C:O2'	1.71	0.91
57:DA:2093:G:N2	57:DA:2094:A:N7	2.19	0.91
53:CA:6:G:H2'	53:CA:6:G:N3	1.85	0.91
55:CM:95:PRO:HD3	55:CM:108:ARG:HG2	1.50	0.91
57:DA:217:A:H2'	57:DA:218:A:C8	2.05	0.91
57:DA:1469:A:H2'	57:DA:1470:A:C8	2.05	0.91
59:DF:74:ALA:HB3	59:DF:78:ILE:HB	1.53	0.91
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.51	0.90
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
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:335:C:HO2'	57:DA:336:C:H6	0.94	0.90
57:DA:1141:U:H4'	57:DA:1142:A:O5'	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.52	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:198:G:HO2'	53:CA:199:A:H8	0.94	0.90
53:CA:738:C:H2'	53:CA:739:C:H6	1.33	0.90
57:DA:1307:A:H62	57:DA:1606:C:H6	1.20	0.90
57:DA:1565:C:O2'	57:DA:1566:A:H2'	1.70	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:HE	18:CR:72:ARG:H	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:HG2	12:AL:49:ARG:NH1	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:HD3	43:BV:10:LYS:H	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
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:774:G:HO2'	57:DA:775:G:H8	1.21	0.89
57:DA:1026:G:O2'	57:DA:1027:A:H5'	1.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:16:A:O2'	53:CA:17:U:H5'	1.73	0.88
53:CA:1143:G:H2'	53:CA:1144:G:C8	2.07	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:96:U:HO2'	1:AA:97:G:H8	1.22	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:1941:C:H5'	22:BA:1941:C:C6	2.09	0.87
24:BC:166:ARG:O	24:BC:166:ARG:HG3	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:HG2	44:DW:40:ARG:NH1	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
22:BA:2813:A:H2	22:BA:2887:A:N6	1.72	0.87
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.55	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:HD12	33:BL:27:LEU:N	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
57:DA:84:A:H4'	57:DA:85:G:O5'	1.73	0.87
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
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:855:G:N2	44:BW:23:LYS:HG2	1.90	0.87
22:BA:2389:G:H5''	22:BA:2390:U:H5'	1.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.57	0.86
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.57	0.86
58:DB:69:G:H3'	58:DB:70:C:C6	2.10	0.86
1:AA:1328:C:H5''	13:AM:27:THR:HG21	1.54	0.86
1:AA:1468:A:C2'	1:AA:1469:C:H5''	2.04	0.86
22:BA:780:G:H21	22:BA:783:A:H62	1.21	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:560:A:H5'	1:AA:566:G:N2	1.91	0.86
1:AA:1277:C:HO2'	1:AA:1279:G:H8	0.91	0.86
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.58	0.86
53:CA:330:C:HO2'	53:CA:331:G:H8	0.90	0.86
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:HA	4:CD:55:ARG:HH11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.91	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
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.89	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:62:VAL:HG21	12:AL:94:TYR:CE2	2.11	0.85
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.58	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
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
57:DA:616:A:HO2'	57:DA:617:G:H8	0.91	0.85
57:DA:2385:C:HO2'	57:DA:2386:A:H8	1.24	0.85
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.23	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
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
25:BD:104:VAL:O	25:BD:177:VAL:HG21	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1931:U:H2'	57:DA:1932:A:H8	1.40	0.85
47:DZ:16:LEU:H	47:DZ:16:LEU:CD2	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
41:DT:29:THR:HB	41:DT:87:LEU:H	1.40	0.85
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.42	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:3:VAL:HG23	12:CL:4:ASN:H	1.42	0.85
12:CL:43:LYS:CB	12:CL:44:PRO:HD2	2.03	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:OP1	57:DA:1156:A:H8	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
57:DA:2728:U:HO2'	57:DA:2729:G:H8	1.24	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
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
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.85	0.84
57:DA:118:A:N3	57:DA:178:G:H1'	1.93	0.84
57:DA:1166:G:N2	57:DA:1184:U:H1'	1.92	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
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:802:A:H2'	22:BA:803:U:C6	2.13	0.84
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.75	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:802:A:H2'	57:DA:803:U:C6	2.12	0.84
57:DA:1275:A:H2'	57:DA:1275:A:N3	1.90	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
22:BA:1734:G:HO2'	22:BA:1735:A:H8	1.22	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
58:DB:54:G:H21	59:DF:25:MET:HE2	1.38	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:777:G:N7	57:DA:793:A:H2	1.74	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
57:DA:2517:C:O2'	57:DA:2518:A:H3'	1.77	0.84
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:1967:C:O2'	22:BA:1968:G:H5'	1.76	0.83
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.42	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
57:DA:2757:A:N1	28:DG:66:THR:HG21	1.93	0.83
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.60	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
32:BK:7:MET:HE1	32:BK:44:LYS:HG3	1.59	0.83
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.58	0.83
57:DA:96:C:H4'	46:DY:41:HIS:CD2	2.13	0.83
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.60	0.83
25:BD:182:ALA:C	25:BD:184:ARG:H	1.85	0.83
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.77	0.83
53:CA:1458:G:O2'	20:CT:22:SER:HB3	1.76	0.83
6:CF:86:ARG:HD3	18:CR:63:TYR:O	1.77	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:O	25:BD:150:GLN:HG3	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
58:DB:57:A:HO2'	58:DB:58:A:H8	0.84	0.83
1:AA:198:G:HO2'	1:AA:199:A:H8	0.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:932:C:H5''	54:CG:2:ARG:HD3	1.61	0.83
57:DA:2513:A:H2	25:DD:148:GLN:HE21	1.25	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
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
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:HH21	33:DL:47:ARG:HG2	1.42	0.83
1:AA:887:G:H2'	1:AA:888:G:H5'	1.61	0.83
1:AA:1138:G:N3	1:AA:1138:G:H2'	1.92	0.83
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.22	0.83
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.61	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
4:CD:123:MET:HE2	4:CD:126:GLY:O	1.78	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
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
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.41	0.82
57:DA:647:G:H2'	57:DA:648:G:C8	2.14	0.82
57:DA:2091:C:N4	57:DA:2092:U:O4	2.12	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
24:BC:20:ASN:HD22	24:BC:20:ASN:C	1.86	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:721:G:H4'	53:CA:722:G:O5'	1.77	0.82
53:CA:1067:A:H1'	53:CA:1068:G:H8	1.40	0.82
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:H	45:DX:31:ASN:ND2	1.77	0.82
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.87	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.45	0.82
20:CT:73:ARG:HH11	20:CT:73:ARG:CG	1.92	0.82
57:DA:141:G:H3'	57:DA:142:A:O4'	1.79	0.82
57:DA:1490:A:N3	57:DA:1490:A:H5'	1.94	0.82
57:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.60	0.82
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.44	0.82
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.60	0.82
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.20	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
8:AH:110:MET:HE2	8:AH:114:ALA:HB1	1.62	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:HH21	35:BN:71:ARG:CG	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:32:A:H2'	1:AA:33:A:C8	2.13	0.82
1:AA:338:A:N1	1:AA:351:G:O6	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
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
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.62	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:95:A:H1'	46:DY:40:SER:HB2	1.61	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:42:C:H41	59:DF:87:LYS:HZ3	1.24	0.82
22:BA:197:A:N6	22:BA:2430:A:H2'	1.95	0.82
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.79	0.82
53:CA:702:A:OP1	53:CA:702:A:H8	1.62	0.82
53:CA:920:U:H2'	53:CA:921:U:C6	2.15	0.82
53:CA:1347:G:N2	53:CA:1373:G:H2'	1.95	0.82
57:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.62	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
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
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
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
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
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.28	0.81
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.80	0.81
35:DN:71:ARG:HH21	35:DN:71:ARG:HB2	1.43	0.81
24:BC:123:ILE:O	24:BC:123:ILE:HG12	1.79	0.81
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.79	0.81
50:B2:43:THR:O	50:B2:44:VAL:HG23	1.81	0.81
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.45	0.81
57:DA:915:C:H2'	57:DA:916:G:C8	2.15	0.81
57:DA:2875:C:HO2'	57:DA:2876:G:H8	0.87	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
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:42:C:H41	59:DF:87:LYS:NZ	1.78	0.81
58:DB:88:C:OP2	58:DB:88:C:H3'	1.81	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:H	32:DK:111:LYS:HE3	1.46	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:867:C:O2'	57:DA:868:U:H6	1.64	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
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
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
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
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.11	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.45	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
5:AE:89:THR:HG22	5:AE:90:GLY:N	1.96	0.80
22:BA:545:U:H2'	22:BA:546:U:H4'	1.62	0.80
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.16	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:94:G:H4'	1:AA:95:C:H5''	1.61	0.80
1:AA:204:G:H3'	1:AA:205:A:C5'	2.11	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: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
57:DA:2716:C:H2'	57:DA:2717:C:H6	1.44	0.80
1:AA:1256:A:H1'	1:AA:1258:G:C5	2.16	0.80
5:AE:155:LYS:HA	5:AE:158:LYS:HZ1	1.45	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:649:G:H2'	57:DA:650:C:C6	2.15	0.80
57:DA:2092:U:O2'	57:DA:2093:G:H8	1.64	0.80
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.63	0.80
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H3'	22:BA:2198:A:OP2	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
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	1.81	0.80
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.45	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
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:459:U:O2'	22:BA:460:A:H5'	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:15:G:O4'	5:AE:28:ARG:NH1	2.15	0.79
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.96	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
57:DA:2408:U:HO2'	57:DA:2409:G:H8	0.82	0.79
42:DU:95:PHE:HD1	42:DU:95:PHE:H	1.24	0.79
44:DW:40:ARG:HH11	44:DW:40:ARG:CG	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:764:C:C2'	53:CA:765:G:H5'	2.13	0.79
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.46	0.79
57:DA:867:C:HO2'	57:DA:868:U:H6	0.82	0.79
57:DA:1290:C:HO2'	57:DA:1291:C:H6	0.81	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
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.48	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:95:A:H4'	46:DY:38:GLN:O	1.80	0.79
57:DA:575:A:O2'	57:DA:576:U:H5'	1.82	0.79
57:DA:1352:U:H5	57:DA:1377:G:C6	2.01	0.79
57:DA:1364:G:C5	45:DX:1:SER:HB2	2.18	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
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
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	1.97	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: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:616:A:C2'	57:DA:617:G:H8	1.96	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
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:982:U:H1'	53:CA:983:A:N7	1.98	0.79
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.18	0.79
57:DA:1069:A:O2'	57:DA:1070:A:H5'	1.83	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
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.48	0.79
1:AA:116:A:H2'	1:AA:117:G:H8	1.46	0.79
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.64	0.79
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.13	0.79
53:CA:78:A:H2'	53:CA:79:G:C8	2.18	0.79
53:CA:1349:A:H2'	53:CA:1350:A:C8	2.17	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
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
57:DA:1237:A:C2	57:DA:1238:G:H1'	2.18	0.79
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:654:G:H4'	8:AH:2:MET:HE1	1.65	0.78
1:AA:1361:G:H2'	1:AA:1362:A:H5'	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:18:U:O2'	22:BA:19:A:H5'	1.83	0.78
25:BD:186:LEU:HD11	37:BP:3:ILE:HD11	1.62	0.78
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.78
41:BT:50:LEU:H	41:BT:50:LEU:HD12	1.47	0.78
53:CA:801:U:H2'	53:CA:802:A:C8	2.18	0.78
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.63	0.78
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.83	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
57:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.48	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
43:BV:2:PHE:HD1	43:BV:50:MET:HE2	1.48	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:1491:G:O2'	57:DA:1492:G:H5'	1.83	0.78
57:DA:1492:G:H3'	57:DA:1493:C:H5'	1.66	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:H6	1:AA:121:U:H5''	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
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	1.99	0.78
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.65	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.64	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
53:CA:1213:A:HO2'	53:CA:1214:C:H5'	1.49	0.78
53:CA:1430:A:H2'	53:CA:1431:A:O4'	1.83	0.78
3:CC:36:PHE:HE1	14:CN:91:GLU:HB3	1.48	0.78
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.65	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:1738:G:HO2'	22:BA:1739:A:H8	1.29	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:443:A:H61	26:DE:36:ALA:HB1	1.47	0.78
57:DA:2056:G:H21	48:D0:1:ALA:H3	1.30	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
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
17:CQ:3:LYS:HZ3	17:CQ:6:THR:HG21	1.44	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:1036:G:C2'	57:DA:1037:G:H5'	2.14	0.78
57:DA:1346:G:O2'	57:DA:1347:A:H8	1.66	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
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
53:CA:1125:U:C5	10:CJ:40:ILE:HG12	2.18	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
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:357:C:H2'	22:BA:358:U:C6	2.18	0.78
22:BA:914:G:H5''	22:BA:914:G:H8	1.48	0.78
22:BA:2388:A:H5'	22:BA:2389:G:OP2	1.84	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
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:77:A:H2'	53:CA:78:A:C8	2.19	0.77
53:CA:495:A:H4'	53:CA:496:A:O5'	1.81	0.77
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.66	0.77
57:DA:449:A:O2'	57:DA:450:G:H5'	1.84	0.77
57:DA:2091:C:C4	57:DA:2092:U:C4	2.73	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
17:AQ:16:MET:HE2	17:AQ:20:ILE:HA	1.65	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
38:BQ:8:ILE:C	38:BQ:8:ILE:HD12	2.08	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:921:C:C2'	57:DA:922:C:H5'	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2143:C:H5'	57:DA:2144:G:OP2	1.83	0.77
57:DA:2232:C:P	45:DX:26:ARG:HH12	2.06	0.77
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
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
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
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.49	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:44:TYR:C	31:BJ:44:TYR:HD1	1.92	0.77
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.48	0.77
32:BK:18:ARG:HG3	32:BK:18:ARG:NH1	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:20:ALA:HA	31:DJ:23:LYS:HG3	1.64	0.77
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.48	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:H6	53:CA:239:U:C5'	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
55:CM:77:LYS:HA	55:CM:80:MET:HE2	1.67	0.77
57:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.67	0.77
57:DA:1181:U:H2'	57:DA:1182:G:H8	1.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
57:DA:1049:C:O2'	57:DA:1050:A:H5'	1.85	0.77
52:D4:19:ARG:O	52:D4:20:ASP:HB2	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:HD1	24:BC:212:TRP:O	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:57:G:H2'	1:AA:58:C:C6	2.20	0.77
1:AA:1151:A:HO2'	1:AA:1152:A:H8	0.81	0.77
1:AA:1441:A:H62	1:AA:1461:G:N2	1.83	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:915:C:O2'	57:DA:916:G:H5'	1.84	0.77
57:DA:1364:G:N7	45:DX:1:SER:HB2	1.99	0.77
57:DA:1967:C:H6	57:DA:1967:C:H5''	1.49	0.77
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.49	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:83:A:H61	57:DA:101:A:H5'	1.48	0.77
57:DA:2420:C:OP1	51:D3:33:THR:HB	1.85	0.77
1:AA:87:C:H2'	1:AA:88:U:H6	1.50	0.76
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.20	0.76
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.67	0.76
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.19	0.76
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.66	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
43:BV:10:LYS:HZ3	43:BV:10:LYS:HB2	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
22:BA:1558:C:H4'	22:BA:1559:U:O5'	1.83	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:H	28:DG:162:ARG:HD2	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:270:A:H2'	1:AA:271:C:C6	2.19	0.76
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.66	0.76
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.09	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
37:BP:4:ILE:HG22	37:BP:5:LYS:N	1.93	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: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
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
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:923:A:H5''	5:AE:25:LYS:HE2	1.65	0.76
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.50	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:323:C:H2'	26:BE:163:ASN:OD1	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:767:U:O2'	22:BA:768:G:H5'	1.86	0.76
22:BA:2579:C:OP1	63:BA:3541:HOH:O	2.02	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
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:O	40:BS:96:ILE:HG13	1.85	0.76
44:BW:30:VAL:HG22	44:BW:30:VAL:O	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:O	28:BG:10:VAL:HG23	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
57:DA:859:G:O2'	57:DA:860:U:OP2	2.02	0.76
57:DA:1386:C:HO2'	57:DA:1387:A:H8	1.33	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:HH11	32:BK:18:ARG:CG	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:510:C:H2'	57:DA:511:U:C6	2.21	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
4:AD:47:LEU:HD21	4:AD:52:VAL:HG12	1.68	0.76
53:CA:624:C:O2'	56:CP:10:GLY:HA2	1.84	0.76
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.68	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
57:DA:2680:U:OP2	25:DD:114:LYS:HD3	1.86	0.76
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:1051:G:H5'	57:DA:2752:C:H1'	1.66	0.75
58:DB:55:U:H1'	59:DF:25:MET:HE1	1.67	0.75
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.16	0.75
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:65:U:H2'	22:BA:66:C:H6	1.50	0.75
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.65	0.75
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.86	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:995:C:O2	31:DJ:3:THR:HG23	1.86	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
5:AE:11:GLN:HE21	5:AE:11:GLN:HA	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:348:G:H2'	53:CA:349:A:C8	2.18	0.75
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.21	0.75
57:DA:491:G:H2'	57:DA:492:A:C8	2.21	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
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: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
57:DA:1534:U:H6	57:DA:1538:G:N1	1.84	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1929:G:H4'	57:DA:1930:G:OP1	1.87	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
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: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
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
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:HA	42:DU:45:GLN:HE21	1.49	0.75
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	2.13	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
22:BA:2602:A:H4'	22:BA:2603:G:OP2	1.85	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
53:CA:1348:U:HO2'	53:CA:1349:A:H8	1.35	0.75
4:CD:104:MET:HG2	4:CD:104:MET:O	1.86	0.75
5:CE:13:LYS:HE2	5:CE:13:LYS:HA	1.68	0.75
57:DA:160:A:N6	57:DA:167:A:H1'	2.01	0.75
57:DA:656:G:H2'	57:DA:657:U:C6	2.22	0.75
57:DA:1070:A:H5'	57:DA:1071:G:H5''	1.68	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
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.67	0.75
1:AA:792:A:O2'	1:AA:794:A:N7	2.18	0.75
1:AA:1279:G:H2'	1:AA:1279:G:N3	2.02	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:247:G:O6	53:CA:278:G:C6	2.40	0.75
53:CA:252:U:H2'	53:CA:253:A:C8	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.51	0.75
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.52	0.75
22:BA:289:G:H2'	22:BA:290:U:O4'	1.87	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
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
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
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	1.68	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:480:A:H3'	57:DA:481:G:C5'	2.17	0.74
57:DA:1709:U:H2'	57:DA:1710:G:H8	1.51	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:321:U:HO2'	22:BA:340:A:HO2'	1.34	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:857:G:H1'	44:DW:19:ARG:NE	2.02	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
1:AA:61:G:H2'	1:AA:62:U:C6	2.22	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
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.67	0.74
53:CA:752:G:H1'	53:CA:754:C:N4	2.02	0.74
20:CT:53:MET:HE3	20:CT:54:GLN:HA	1.68	0.74
57:DA:2392:A:C8	57:DA:2429:G:C2	2.75	0.74
57:DA:2720:U:H5''	37:DP:52:ARG:NH2	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
1:AA:1129:C:C5'	9:AI:17:ARG:HH22	1.95	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
5:AE:89:THR:HG22	5:AE:90:GLY:H	1.51	0.74
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.46	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:537:G:H5''	12:CL:109:ARG:NH1	2.02	0.74
53:CA:563:A:H2'	53:CA:563:A:N3	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
57:DA:241:A:H4'	57:DA:242:G:OP1	1.88	0.74
32:DK:7:MET:HA	32:DK:7:MET:CE	2.16	0.74
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.05	0.74
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.88	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:286:U:H2'	57:DA:287:G:H8	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:464:U:H1'	57:DA:686:U:C5	2.22	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
24:DC:33:LEU:O	24:DC:34:GLU:HB3	1.86	0.74
1:AA:47:C:H4'	1:AA:48:C:O5'	1.87	0.74
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.51	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
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
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.13	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
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
57:DA:1574:C:O5'	57:DA:1574:C:H6	1.70	0.74
57:DA:2771:C:H2'	57:DA:2772:C:H6	1.52	0.74
59:DF:28:PRO:HB2	59:DF:168:LEU:HD21	1.70	0.74
1:AA:299:G:H2'	1:AA:300:A:C8	2.22	0.74
1:AA:1130:A:H5''	1:AA:1130:A:H8	1.52	0.74
6:AF:90:MET:HE1	18:AR:22:TYR:CZ	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.86	0.74
53:CA:559:A:H4'	53:CA:560:A:O5'	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
21:CU:38:GLU:N	21:CU:40:PRO:HD2	2.03	0.74
57:DA:784:G:O2'	57:DA:785:G:H8	1.69	0.74
57:DA:1654:A:HO2'	57:DA:1655:A:H8	0.80	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
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
53:CA:587:G:OP1	8:CH:80:PRO:HB3	1.88	0.74
54:CG:117:LEU:HA	54:CG:121:ASN:HB2	1.68	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:47:C:O2'	53:CA:48:C:H5'	1.87	0.73
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.22	0.73
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.29	0.73
57:DA:92:U:H2'	57:DA:93:G:O4'	1.87	0.73
57:DA:142:A:O2'	57:DA:143:C:H5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:616:A:H2'	57:DA:617:G:C8	2.24	0.73
57:DA:1399:C:O2'	57:DA:1400:U:H5'	1.89	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
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.70	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
25:BD:182:ALA:C	25:BD:184:ARG:N	2.43	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
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:974:A:H4'	1:AA:975:A:H5'	1.67	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
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
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
57:DA:1351:C:H4'	57:DA:1572:A:O4'	1.89	0.73
57:DA:1447:C:H2'	57:DA:1448:G:C8	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:538:G:H5''	12:CL:110:LYS:HB2	1.68	0.73
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.88	0.73
57:DA:873:C:H4'	34:DM:64:TRP:HE1	1.52	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
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
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:395:U:HO2'	57:DA:396:G:H8	1.36	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:2056:G:N2	48:D0:1:ALA:N	2.36	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:8:A:H62	4:AD:204:SER:HB2	1.53	0.73
1:AA:653:U:O2'	1:AA:654:G:H5'	1.89	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:173:A:H2'	57:DA:174:U:H6	1.54	0.73
57:DA:990:A:O2'	57:DA:991:C:H5''	1.87	0.73
57:DA:1655:A:H2'	57:DA:1656:C:C6	2.23	0.73
57:DA:2881:U:H2'	57:DA:2882:A:H8	1.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1299:A:H2'	1:AA:1299:A:N3	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: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
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.24	0.73
57:DA:397:U:OP2	45:DX:9:LYS:HE2	1.89	0.73
57:DA:1870:C:H5''	57:DA:1871:A:C2	2.24	0.73
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
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:P	22:BA:2198:A:H2'	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
57:DA:2448:A:HO2'	57:DA:2449:U:H5	1.37	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
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:2023:C:O2'	57:DA:2024:G:H8	1.69	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
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.54	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
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
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.69	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:79:G:H2'	53:CA:80:A:C8	2.24	0.72
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.19	0.72
54:CG:9:ARG:HD3	54:CG:24:LYS:HZ1	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.69	0.72
15:CO:63:ARG:HH22	57:DA:715:A:H5''	1.54	0.72
57:DA:100:U:H1'	57:DA:101:A:C5	2.24	0.72
57:DA:589:U:H2'	57:DA:590:A:H8	1.53	0.72
57:DA:2543:G:H2'	57:DA:2544:G:C8	2.25	0.72
14:AN:22:LYS:HG3	14:AN:23:ARG:N	2.04	0.72
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.25	0.72
51:B3:54:LEU:O	51:B3:58:ILE:HG13	1.89	0.72
53:CA:564:C:H5'	53:CA:564:C:H6	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:747:U:H2'	57:DA:2613:U:O4	1.89	0.72
57:DA:1731:G:H4'	57:DA:1732:C:OP1	1.88	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:26:GLY:O	44:BW:27:GLY:C	2.32	0.72
44:BW:37:VAL:HG13	44:BW:55:ASP:O	1.89	0.72
53:CA:66:A:H2'	53:CA:66:A:N3	2.04	0.72
53:CA:547:A:H4'	53:CA:548:G:O5'	1.89	0.72
53:CA:1279:G:H5''	10:CJ:9:ARG:HH22	1.54	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
5:CE:80:LEU:HD22	5:CE:146:MET:HE1	1.71	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: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
57:DA:963:U:HO2'	57:DA:964:C:H6	1.37	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1135:C:N4	57:DA:1139:G:C6	2.57	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
57:DA:2619:C:H5'	25:DD:157:LYS:HA	1.69	0.72
58:DB:40:U:O2	58:DB:43:C:H2'	1.89	0.72
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	1.89	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:HA	55:CM:12:LYS:HE3	1.71	0.72
57:DA:247:G:H4'	57:DA:386:G:C5	2.25	0.72
57:DA:249:C:H4'	57:DA:250:G:O5'	1.90	0.72
57:DA:980:A:H5''	57:DA:981:A:OP2	1.90	0.72
57:DA:1127:A:N7	57:DA:2488:G:O2'	2.21	0.72
57:DA:1346:G:HO2'	57:DA:1347:A:H8	1.36	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
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.37	0.72
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.15	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: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
22:BA:2615:U:O2'	22:BA:2616:C:H5'	1.90	0.72
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.66	0.72
33:BL:27:LEU:H	33:BL:27:LEU:CD1	1.91	0.72
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.72	0.72
53:CA:254:G:H5''	17:CQ:70:LYS:CD	2.20	0.72
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.25	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:36:PHE:HB3	21:CU:40:PRO:HD3	1.71	0.72
57:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.38	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
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.37	0.72
22:BA:933:A:H2'	22:BA:933:A:N3	2.04	0.72
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.90	0.72
53:CA:794:A:H5''	53:CA:794:A:H8	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
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
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	2.04	0.72
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.54	0.72
57:DA:921:C:H2'	57:DA:922:C:H5'	1.71	0.72
57:DA:2199:A:H2'	57:DA:2200:C:H6	1.55	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
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
22:BA:1045:C:C5'	22:BA:1046:A:H5'	2.20	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
4:CD:176:LYS:HE2	4:CD:178:GLU:CD	2.14	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: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
57:DA:2502:G:H5'	57:DA:2503:A:H5''	1.72	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
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.96	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:855:G:H1'	44:BW:23:LYS:HD3	1.72	0.71
22:BA:2199:A:C8	22:BA:2199:A:H5''	2.25	0.71
40:BS:73:LYS:HA	40:BS:73:LYS:CE	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:279:A:H61	57:DA:361:G:H1'	1.55	0.71
57:DA:1616:A:H2'	57:DA:1616:A:OP1	1.90	0.71
57:DA:2199:A:H2'	57:DA:2200:C:C6	2.24	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
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:876:C:C1'	8:CH:11:THR:HG21	2.20	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
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:HD13	5:AE:14:LEU:O	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:239:U:H6	53:CA:239:U:H5'	1.55	0.71
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.25	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
57:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.55	0.71
25:DD:107:VAL:H	25:DD:206:ALA:H	1.36	0.71
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.15	0.71
39:DR:1:MET:HG3	39:DR:101:ILE:HD12	1.71	0.71
1:AA:701:U:O2	1:AA:701:U:H2'	1.88	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
53:CA:1383:C:O2'	53:CA:1384:C:H5'	1.89	0.71
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.56	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
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
57:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.90	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
41:DT:13:ALA:O	41:DT:32:LEU:HB2	1.90	0.71
1:AA:68:G:C5	1:AA:69:G:H1'	2.25	0.71
1:AA:205:A:OP1	1:AA:205:A:H4'	1.91	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: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
57:DA:2893:A:H4'	57:DA:2894:G:O5'	1.89	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
46:DY:1:MET:N	46:DY:1:MET:HE2	2.05	0.71
1:AA:559:A:H4'	1:AA:560:A:O5'	1.90	0.71
22:BA:62:U:H4'	22:BA:63:A:OP1	1.90	0.71
22:BA:2197:U:O3'	22:BA:2198:A:H2'	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
57:DA:249:C:O2	57:DA:249:C:H2'	1.91	0.71
57:DA:1799:G:H4'	57:DA:1800:C:O5'	1.90	0.71
57:DA:1808:A:N7	45:DX:27:ARG:NH1	2.39	0.71
57:DA:1936:A:H2'	57:DA:1945:G:O6	1.90	0.71
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:4:ILE:CG2	37:BP:5:LYS:H	2.03	0.71
53:CA:6:G:N3	53:CA:6:G:C2'	2.54	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
57:DA:739:A:H4'	57:DA:740:C:OP1	1.89	0.71
57:DA:2379:G:H2'	57:DA:2380:C:H6	1.54	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
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.05	0.71
1:AA:642:A:H2'	1:AA:643:C:C6	2.26	0.71
1:AA:1447:A:H5''	1:AA:1448:C:H5	1.56	0.71
4:AD:21:LYS:O	4:AD:21:LYS:HD3	1.91	0.71
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:704:G:O2'	22:BA:705:A:OP2	2.09	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
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
57:DA:455:C:H3'	57:DA:456:C:H5'	1.71	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
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.04	0.71
50:D2:19:ARG:HH21	50:D2:19:ARG:HB3	1.56	0.71
1:AA:688:G:H5''	1:AA:688:G:H8	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
25:BD:149:ASN:CG	25:BD:150:GLN:H	1.98	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:O	2:AB:22:TRP:CG	2.42	0.70
5:AE:120:HIS:O	5:AE:121:ASN:HB3	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.56	0.70
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	2.21	0.70
12:AL:86:VAL:HG12	12:AL:86:VAL:O	1.91	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:781:A:H2'	57:DA:1777:U:H1'	1.73	0.70
57:DA:782:A:N7	24:DC:219:VAL:HG21	2.05	0.70
57:DA:973:A:OP1	57:DA:973:A:H8	1.74	0.70
57:DA:2296:U:H5	36:DO:9:ARG:NH2	1.89	0.70
57:DA:2311:A:H5'	57:DA:2312:U:C5	2.26	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
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.31	0.70
1:AA:89:U:O2'	1:AA:90:C:H5''	1.91	0.70
1:AA:209:U:H5'	1:AA:210:C:OP2	1.92	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
22:BA:2485:G:H5''	34:BM:45:GLN:HE21	1.55	0.70
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.73	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
53:CA:1328:C:H5''	55:CM:27:THR:HG21	1.73	0.70
53:CA:1530:G:O2'	53:CA:1531:A:C8	2.44	0.70
3:CC:126:ARG:HA	3:CC:126:ARG:HE	1.55	0.70
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	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
1:AA:1241:G:O2'	1:AA:1242:G:H8	1.73	0.70
4:AD:69:ARG:HA	4:AD:69:ARG:HE	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
35:BN:24:MET:HE3	35:BN:44:LEU:HB2	1.70	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
57:DA:1076:C:O2	30:DI:92:PRO:HG2	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:45:A:H2'	58:DB:46:A:C8	2.26	0.70
33:DL:93:ASN:CG	33:DL:94:THR:H	1.98	0.70
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.06	0.70
1:AA:1227:A:N3	1:AA:1227:A:H2'	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:923:G:H1'	44:DW:23:LYS:NZ	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
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.08	0.70
1:AA:92:U:H2'	1:AA:93:U:H6	1.56	0.70
1:AA:887:G:C2'	1:AA:888:G:H5'	2.21	0.70
2:AB:48:MET:HA	2:AB:48:MET:HE3	1.73	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:532:A:HO2'	22:BA:2021:C:H5	1.38	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:CE:82:HIS:CE1	8:CH:95:MET:HE3	2.27	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
57:DA:992:C:H5'	39:DR:87:GLN:HE22	1.55	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
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:HD2	59:DF:76:PHE:H	1.38	0.70
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.56	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:947:A:HO2'	22:BA:984:A:H2	1.39	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:79:C:H2'	57:DA:80:G:O4'	1.91	0.70
57:DA:2210:U:H4'	57:DA:2211:A:C5'	2.21	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:84:U:O2'	53:CA:85:U:H5'	1.92	0.70
53:CA:518:C:H2'	53:CA:530:G:N7	2.07	0.70
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	1.57	0.70
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
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
25:DD:116:LYS:HD3	35:DN:1:MET:HE1	1.74	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:216:A:O2'	57:DA:217:A:C8	2.25	0.70
57:DA:513:A:H2'	57:DA:514:A:C8	2.27	0.70
57:DA:2056:G:H21	48:D0:1:ALA:N	1.90	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
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:914:A:H2'	1:AA:915:A:H8	1.55	0.69
1:AA:1160:G:O6	1:AA:1181:G:C6	2.44	0.69
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.73	0.69
2:AB:108:GLN:HE21	2:AB:108:GLN:N	1.89	0.69
22:BA:163:C:H6	22:BA:163:C:OP1	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
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	1.99	0.69
53:CA:91:U:O2'	53:CA:92:U:H6	1.75	0.69
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.57	0.69
53:CA:1074:G:C4'	2:CB:102:ASN:HB2	2.22	0.69
4:CD:187:ARG:C	4:CD:189:ASP:H	2.00	0.69
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.91	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
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	2.06	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
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.57	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
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
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
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:502:A:H1'	53:CA:550:G:H5'	1.74	0.69
53:CA:1151:A:H2'	53:CA:1152:A:H8	1.57	0.69
4:CD:106:PHE:CD1	4:CD:158:LEU:HD21	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:965:C:H5''	63:DA:3344:HOH:O	1.92	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
1:AA:546:A:P	4:AD:68:GLU:HB2	2.31	0.69
1:AA:788:U:H2'	1:AA:789:U:C6	2.27	0.69
1:AA:1405:G:O4'	1:AA:1519:A:H4'	1.92	0.69
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.91	0.69
22:BA:915:C:O2'	22:BA:916:G:H5'	1.92	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
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
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
57:DA:2001:C:H4'	57:DA:2689:U:H2'	1.75	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:802:A:H2'	22:BA:803:U:H6	1.58	0.69
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.72	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:95:A:O2'	46:DY:41:HIS:HD2	1.75	0.69
57:DA:172:A:H2'	57:DA:173:A:C8	2.27	0.69
57:DA:765:C:H2'	57:DA:766:U:H6	1.57	0.69
57:DA:975:A:HO2'	57:DA:976:G:H8	1.41	0.69
57:DA:2060:A:O2'	63:DA:3511:HOH:O	2.09	0.69
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.17	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
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.56	0.69
22:BA:529:A:H4'	22:BA:530:G:OP1	1.91	0.69
22:BA:1392:A:H61	41:BT:18:GLU:CD	1.99	0.69
24:BC:52:HIS:NE2	24:BC:218:THR:HG23	2.06	0.69
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.74	0.69
33:BL:109:LYS:CG	33:BL:126:ARG:HB3	2.20	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
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.88	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
57:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.72	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
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:473:U:H2'	1:AA:474:G:H8	1.57	0.69
1:AA:1468:A:H2'	1:AA:1469:C:H5''	1.75	0.69
2:AB:119:GLN:C	2:AB:119:GLN:HE21	2.01	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:CH:76:ARG:HD3	8:CH:77:VAL:N	2.07	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
57:DA:1422:G:H4'	57:DA:1493:C:OP1	1.93	0.69
57:DA:2285:C:H5	49:D1:5:ARG:NH2	1.91	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
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.75	0.69
1:AA:731:G:OP1	1:AA:766:A:H1'	1.93	0.69
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.16	0.69
15:AO:2:LEU:HD22	15:AO:34:GLN:HG2	1.75	0.69
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.92	0.69
22:BA:434:U:H4'	22:BA:435:C:OP1	1.92	0.69
22:BA:1315:C:OP2	63:BA:3762:HOH:O	2.11	0.69
22:BA:2383:G:H5''	22:BA:2383:G:H8	1.58	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
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
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.50	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
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.23	0.69
44:BW:45:HIS:HB2	44:BW:50:VAL:HG13	1.75	0.69
49:B1:27:ARG:O	49:B1:30:PRO:HD3	1.92	0.69
53:CA:794:A:H2'	53:CA:795:C:H6	1.57	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
56:CP:57:ILE:O	56:CP:61:VAL:HG23	1.91	0.69
57:DA:41:C:H2'	57:DA:42:A:C8	2.28	0.69
57:DA:508:A:N6	40:DS:9:HIS:CE1	2.60	0.69
57:DA:746:U:H5''	57:DA:748:G:H5'	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:784:G:HO2'	57:DA:785:G:H8	1.38	0.69
57:DA:1906:G:C8	57:DA:1929:G:H2'	2.27	0.69
57:DA:2275:C:O2'	34:DM:84:LYS:HA	1.92	0.69
57:DA:2860:A:H8	57:DA:2860:A:O5'	1.74	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
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.91	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
41:BT:39:THR:HG22	41:BT:39:THR:O	1.91	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:335:C:O2'	57:DA:336:C:H6	1.72	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
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
3:AC:137:VAL:HA	3:AC:148:ILE:HD13	1.74	0.69
22:BA:509:C:H6	22:BA:509:C:C5'	2.05	0.69
24:BC:180:MET:HE2	24:BC:268:ARG:HH12	1.57	0.69
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.41	0.69
50:B2:35:ARG:HG2	50:B2:42:LEU:HD11	1.73	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:CE	54:CG:100:MET:H	2.05	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
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:2614:A:H4'	57:DA:2615:U:OP1	1.93	0.69
29:DH:1:MET:HE3	29:DH:23:ALA:HB2	1.75	0.69
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.08	0.69
1:AA:536:C:H5'	1:AA:536:C:H6	1.58	0.68
1:AA:1050:G:O2'	1:AA:1051:C:H5'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1063:C:H2'	1:AA:1064:G:H8	1.58	0.68
5:AE:110:MET:HE2	5:AE:124:ALA:HB1	1.74	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:HG3	38:BQ:27:ARG:HH11	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
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
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
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
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.75	0.68
1:AA:21:G:H2'	1:AA:22:G:C8	2.28	0.68
1:AA:82:G:N2	1:AA:84:U:H3	1.91	0.68
1:AA:642:A:H2'	1:AA:643:C:H6	1.56	0.68
1:AA:958:A:C6	1:AA:959:A:N1	2.61	0.68
22:BA:855:G:N3	44:BW:23:LYS:HD3	2.09	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:2352:A:N1	44:BW:30:VAL:HG21	2.08	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
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.18	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
18:CR:19:GLU:CD	18:CR:20:ILE:H	2.01	0.68
57:DA:375:G:C8	57:DA:375:G:H5''	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1299:G:H22	57:DA:1640:A:H5'	1.56	0.68
57:DA:1401:G:H2'	57:DA:1402:U:H6	1.56	0.68
57:DA:1739:A:H2'	57:DA:1740:G:C8	2.27	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:841:C:C2	1:AA:843:U:H5'	2.28	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
17:AQ:80:LYS:HZ3	17:AQ:80:LYS:HB2	1.57	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:87:C:O2'	53:CA:88:U:H4'	1.93	0.68
53:CA:566:G:H4'	53:CA:567:G:OP1	1.94	0.68
53:CA:998:C:H2'	53:CA:999:C:H6	1.58	0.68
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.28	0.68
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.74	0.68
21:CU:19:LYS:HZ3	21:CU:19:LYS:N	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
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:736:C:H2'	1:AA:737:C:C6	2.28	0.68
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.58	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
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.58	0.68
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.93	0.68
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.93	0.68
31:BJ:54:ILE:C	31:BJ:54:ILE:HD12	2.19	0.68
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.91	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.58	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
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.08	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
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
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.19	0.68
1:AA:182:A:N3	1:AA:184:G:C8	2.62	0.68
1:AA:202:G:N2	1:AA:466:A:H61	1.91	0.68
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.75	0.68
1:AA:1278:G:O5'	1:AA:1279:G:H5'	1.94	0.68
6:AF:3:HIS:H	6:AF:92:THR:CG2	2.04	0.68
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.24	0.68
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.94	0.68
24:BC:143:VAL:HG12	24:BC:144:GLU:O	1.94	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.09	0.68
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.92	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:36:G:C6	57:DA:445:C:N4	2.62	0.68
57:DA:181:A:H2	57:DA:434:U:H1'	1.59	0.68
57:DA:945:A:H5'	57:DA:946:C:OP2	1.94	0.68
57:DA:1398:C:HO2'	57:DA:1399:C:H6	1.42	0.68
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:486:U:C6	1:AA:486:U:H5''	2.29	0.68
1:AA:577:G:O2'	1:AA:578:C:H5'	1.92	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
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
8:CH:1:SER:C	8:CH:3:GLN:H	2.00	0.68
12:CL:50:LYS:HD2	12:CL:50:LYS:N	2.09	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:1263:U:O2'	48:D0:7:PRO:HD2	1.93	0.68
57:DA:1751:U:H2'	57:DA:1752:C:C6	2.28	0.68
57:DA:2232:C:P	45:DX:26:ARG:NH1	2.67	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
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.57	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
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.94	0.68
57:DA:184:C:H2'	57:DA:185:G:C8	2.29	0.68
57:DA:230:G:HO2'	57:DA:231:A:H8	1.40	0.68
57:DA:391:A:H2'	57:DA:392:U:H6	1.59	0.68
57:DA:512:G:OP2	57:DA:1235:G:H5'	1.93	0.68
57:DA:1935:G:H1'	57:DA:1964:G:N2	2.08	0.68
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.08	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:962:G:N2	22:BA:2250:G:H1	1.92	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.58	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: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:2529:G:H4'	28:DG:174:LYS:HD3	1.74	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
1:AA:206:C:H2'	1:AA:207:C:O4'	1.94	0.68
1:AA:1458:G:H5'	20:AT:26:MET:HB3	1.77	0.68
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.76	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:OP2	22:BA:2798:U:H2'	1.94	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
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.08	0.68
53:CA:142:G:C2	53:CA:143:A:H1'	2.28	0.68
53:CA:1147:C:HO2'	53:CA:1148:U:H6	1.40	0.68
6:CF:9:MET:HE2	6:CF:59:TYR:CZ	2.29	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
25:DD:9:VAL:O	37:DP:4:ILE:HD11	1.93	0.68
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.23	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
43:BV:2:PHE:CD1	43:BV:50:MET:HE2	2.29	0.67
53:CA:413:G:C6	4:CD:32:LYS:HE3	2.30	0.67
53:CA:738:C:H2'	53:CA:739:C:C6	2.23	0.67
53:CA:1051:C:O2'	53:CA:1052:U:O5'	2.07	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:832:U:P	33:DL:38:GLN:H	2.17	0.67
57:DA:1668:A:O4'	57:DA:1669:A:C2	2.47	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2581:G:H1	57:DA:2610:C:HO2'	1.41	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:4:LYS:HZ3	46:DY:4:LYS:HB2	1.58	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: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
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
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
53:CA:1458:G:O2'	20:CT:22:SER:CB	2.41	0.67
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.77	0.67
20:CT:42:ASP:HB3	20:CT:45:ALA:HB3	1.76	0.67
57:DA:712:G:N2	57:DA:720:U:H1'	2.09	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
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
2:AB:153:MET:HE1	2:AB:157:PRO:HG3	1.76	0.67
28:BG:61:TRP:O	28:BG:62:ALA:C	2.36	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: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
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
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
1:AA:1094:G:HO2'	1:AA:1095:U:P	2.18	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:90:MET:HE1	18:AR:22:TYR:OH	1.93	0.67
7:AG:146:ALA:C	7:AG:148:LYS:H	2.00	0.67
19:AS:51:HIS:CD2	19:AS:53:GLY:H	2.12	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
22:BA:1779:U:C5	22:BA:1784:A:N7	2.62	0.67
31:BJ:44:TYR:O	31:BJ:45:THR:HG22	1.94	0.67
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.08	0.67
52:B4:10:LEU:HB2	52:B4:33:HIS:CD2	2.29	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: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:1056:G:N2	57:DA:1102:C:H5	1.92	0.67
57:DA:1695:G:H8	24:DC:7:PRO:HB2	1.59	0.67
57:DA:2282:G:H1'	57:DA:2390:U:C5	2.28	0.67
57:DA:2389:G:C5'	57:DA:2390:U:H5'	2.23	0.67
57:DA:2756:U:O2'	57:DA:2757:A:H5'	1.95	0.67
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.94	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
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.29	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
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
57:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.60	0.67
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.08	0.67
1:AA:345:C:O2'	32:BK:116:ILE:HD13	1.94	0.67
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:996:A:N1	53:CA:1046:A:H5'	2.09	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: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
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
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:143:C:HO2'	22:BA:144:A:H8	1.42	0.67
22:BA:1157:G:N2	22:BA:1158:C:C2	2.63	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
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
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
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.08	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
22:BA:13:A:O2'	22:BA:15:G:N7	2.28	0.67
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.24	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: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
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
53:CA:1239:A:H3'	54:CG:118:ARG:HH22	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.59	0.67
14:CN:40:ARG:NH1	19:CS:6:LYS:HB2	2.10	0.67
57:DA:1669:A:N3	57:DA:1669:A:C2'	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
1:AA:624:C:H4'	16:AP:10:GLY:O	1.95	0.67
9:AI:40:ARG:CA	9:AI:44:ARG:HB3	2.23	0.67
21:AU:10:PRO:HG2	3:CC:71:ARG:NH2	2.10	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
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.20	0.67
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.52	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
53:CA:1200:C:O2'	53:CA:1201:A:OP2	2.12	0.67
2:CB:184:ALA:HB3	2:CB:195:VAL:HG21	1.76	0.67
57:DA:655:A:O2'	57:DA:656:G:C8	2.48	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
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: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
1:AA:1533:C:H3'	1:AA:1534:A:H5''	1.77	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: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
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
32:BK:5:GLN:O	32:BK:6:THR:HB	1.93	0.67
53:CA:92:U:H2'	53:CA:93:U:C5	2.30	0.67
53:CA:239:U:H5'	53:CA:239:U:C6	2.30	0.67
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.58	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:705:A:N6	57:DA:726:G:H1'	2.10	0.67
57:DA:1345:C:H3'	57:DA:1345:C:OP2	1.94	0.67
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.77	0.67
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	1.75	0.67
35:DN:22:ARG:HG2	35:DN:22:ARG:O	1.95	0.67
1:AA:382:A:H2'	1:AA:383:A:C8	2.28	0.66
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
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
53:CA:245:U:H6	53:CA:245:U:H5''	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: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
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
1:AA:1316:G:H5''	1:AA:1317:C:OP2	1.95	0.66
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
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.38	0.66
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.76	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
22:BA:1695:G:C8	24:BC:7:PRO:HG2	2.30	0.66
28:BG:137:LYS:HA	28:BG:140:ILE:HD11	1.76	0.66
33:BL:82:LEU:C	33:BL:82:LEU:HD23	2.20	0.66
54:CG:142:ARG:O	54:CG:146:ALA:HB3	1.94	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
57:DA:1324:G:H1'	57:DA:1616:A:H62	1.59	0.66
57:DA:1565:C:O2'	57:DA:1566:A:O5'	2.13	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2275:C:O2'	34:BM:84:LYS:HA	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:143:A:H2'	53:CA:143:A:N3	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
53:CA:1225:A:H4'	19:CS:77:ARG:NH1	2.10	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
57:DA:553:G:H2'	57:DA:554:U:O4'	1.95	0.66
57:DA:1311:G:H1'	57:DA:1313:U:O4	1.95	0.66
57:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.76	0.66
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.21	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
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.61	0.66
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.60	0.66
22:BA:503:A:H5'	22:BA:505:A:OP1	1.94	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
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:173:U:OP1	53:CA:198:G:H4'	1.96	0.66
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.31	0.66
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	1.95	0.66
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.77	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
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
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
1:AA:1348:U:HO2'	1:AA:1349:A:H8	1.43	0.66
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.77	0.66
22:BA:346:A:C2	22:BA:347:A:H1'	2.29	0.66
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	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
6:CF:90:MET:HE1	18:CR:60:ARG:HD3	1.77	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:243:U:HO2'	57:DA:244:A:H8	1.41	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
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
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
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.76	0.66
52:B4:10:LEU:CD1	52:B4:33:HIS:HD2	2.04	0.66
53:CA:344:A:H5''	53:CA:345:C:H5	1.60	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
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
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
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.96	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
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.61	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:142:A:H2'	22:BA:143:C:C6	2.31	0.66
22:BA:990:A:H8	22:BA:990:A:H5'	1.59	0.66
22:BA:2352:A:H5''	22:BA:2353:G:OP2	1.96	0.66
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.52	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
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.77	0.66
49:B1:10:LEU:O	49:B1:19:PHE:HB2	1.96	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:492:A:O2'	57:DA:493:G:H5'	1.95	0.66
57:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.47	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
25:DD:106:LYS:O	25:DD:107:VAL:HB	1.95	0.66
29:DH:62:LEU:C	29:DH:64:ALA:H	2.04	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:HD13	40:DS:66:ILE:H	1.61	0.66
45:DX:19:HIS:C	45:DX:21:LEU:H	2.03	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
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.76	0.66
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.29	0.66
22:BA:2249:U:O4	63:BA:3509:HOH:O	2.13	0.66
25:BD:4:LEU:HD22	25:BD:101:PHE:HE1	1.57	0.66
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:N	44:BW:31:LEU:HD23	2.09	0.66
44:BW:41:GLY:O	44:BW:42:THR:C	2.39	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:391:A:C6	57:DA:411:G:C2	2.84	0.66
57:DA:2307:G:H1'	57:DA:2308:G:C5	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2750:A:O2'	57:DA:2752:C:N4	2.29	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
22:BA:2571:U:O2'	25:BD:151:THR:HG21	1.96	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
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.11	0.66
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.03	0.66
44:BW:39:GLN:C	44:BW:41:GLY:N	2.50	0.66
44:BW:39:GLN:HE21	44:BW:43:LYS:H	1.42	0.66
44:BW:47:GLY:C	44:BW:49:ASN:H	2.04	0.66
53:CA:277:C:OP1	17:CQ:44:HIS:HE1	1.78	0.66
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.31	0.66
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.04	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
57:DA:574:A:C2	57:DA:2032:G:O2'	2.49	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: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
24:DC:62:ARG:HD3	24:DC:83:ASP:CG	2.20	0.66
43:DV:70:ILE:N	43:DV:70:ILE:HD13	2.10	0.66
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.61	0.66
1:AA:536:C:H2'	1:AA:537:G:C8	2.31	0.66
11:AK:126:ARG:C	21:AU:33:ARG:HH12	2.04	0.66
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.26	0.66
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:960:U:O2'	53:CA:1223:C:H4'	1.96	0.66
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.61	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
57:DA:573:U:H4'	57:DA:574:A:OP1	1.96	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
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.09	0.66
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.58	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
43:DV:2:PHE:HD1	43:DV:50:MET:HE3	1.61	0.66
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.09	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
22:BA:409:G:O2'	22:BA:410:G:H5'	1.96	0.65
22:BA:1438:U:O2'	22:BA:1439:A:H5'	1.95	0.65
25:BD:158:GLY:O	25:BD:159:LYS:C	2.38	0.65
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	1.78	0.65
50:B2:27:GLY:O	50:B2:30:VAL:HB	1.96	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:HD13	3:CC:161:ILE:H	1.62	0.65
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.61	0.65
57:DA:158:U:H1'	57:DA:169:G:N2	2.11	0.65
57:DA:207:A:H2'	57:DA:208:C:H6	1.58	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: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:1800:C:H5''	24:DC:145:MET:HE1	1.78	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
25:BD:92:VAL:O	25:BD:93:GLY:C	2.37	0.65
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.78	0.65
41:BT:9:LYS:O	41:BT:9:LYS:HG3	1.96	0.65
44:BW:37:VAL:HG22	44:BW:55:ASP:O	1.97	0.65
44:BW:39:GLN:HE21	44:BW:43:LYS:N	1.94	0.65
52:B4:3:VAL:O	52:B4:4:ARG:O	2.14	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:1338:G:H4'	41:DT:18:GLU:CD	2.20	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:HA	7:AG:4:ARG:NE	2.12	0.65
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.78	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
50:B2:19:ARG:O	50:B2:23:ALA:HB2	1.97	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
53:CA:1102:A:H8	53:CA:1102:A:H5''	1.60	0.65
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.96	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
21:CU:35:GLU:CG	21:CU:36:PHE:H	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:309:A:H1'	57:DA:329:G:C4	2.32	0.65
57:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.11	0.65
57:DA:1275:A:N3	57:DA:1275:A:C2'	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
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:76:G:H2'	1:AA:76:G:N3	2.11	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:1270:G:H2'	1:AA:1271:A:H8	1.62	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: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
53:CA:1301:U:O2'	53:CA:1302:C:C5	2.49	0.65
20:CT:24:ARG:HD3	20:CT:28:ARG:HH21	1.62	0.65
57:DA:2:G:C6	57:DA:3:U:C4	2.84	0.65
57:DA:2616:C:H2'	57:DA:2617:U:H6	1.60	0.65
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.11	0.65
59:DF:91:ARG:HB3	59:DF:91:ARG:NH2	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:104:MET:HE2	4:AD:170:LEU:HB2	1.79	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
29:BH:67:ALA:C	29:BH:69:ALA:H	2.04	0.65
44:BW:37:VAL:C	44:BW:38:ARG:HG2	2.21	0.65
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.95	0.65
53:CA:1525:G:OP1	21:CU:37:TYR:HD1	1.80	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
21:CU:37:TYR:O	21:CU:38:GLU:HG2	1.96	0.65
57:DA:275:C:H2'	57:DA:276:U:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1268:A:H2'	57:DA:1269:A:C8	2.32	0.65
57:DA:1511:G:O2'	57:DA:1512:C:C6	2.49	0.65
57:DA:2379:G:H2'	57:DA:2380:C:C6	2.31	0.65
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
58:DB:57:A:C6	59:DF:25:MET:CG	2.79	0.65
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.77	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
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:ND1	44:BW:45:HIS:N	2.43	0.65
46:BY:47:ARG:HH21	46:BY:47:ARG:CG	2.08	0.65
57:DA:956:G:O4'	34:DM:82:MET:HE1	1.96	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
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.60	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: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:1059:G:H5''	22:BA:1060:U:H3'	1.79	0.65
22:BA:1266:G:H5''	40:BS:15:GLN:HE22	1.62	0.65
22:BA:2752:C:H2'	22:BA:2753:A:C8	2.32	0.65
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.05	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
5:CE:131:ASN:HD22	5:CE:132:PRO:CD	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.61	0.65
1:AA:210:C:H4'	1:AA:211:G:N2	2.12	0.65
22:BA:675:A:OP1	26:BE:58:LYS:HE2	1.97	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
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
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
53:CA:519:C:O2'	53:CA:520:A:C5'	2.44	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
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:H	11:CK:27:ASN:ND2	1.94	0.65
57:DA:246:C:H2'	57:DA:247:G:H5'	1.79	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
1:AA:82:G:N2	1:AA:84:U:N3	2.44	0.65
1:AA:511:C:HO2'	1:AA:512:U:H5''	1.60	0.65
22:BA:540:C:O2'	22:BA:541:A:H5'	1.97	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
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:7:G:H2'	57:DA:8:C:O4'	1.97	0.65
57:DA:251:A:H4'	33:DL:47:ARG:NH2	2.11	0.65
57:DA:1439:A:H1'	57:DA:1553:A:N6	2.12	0.65
58:DB:81:G:C5	58:DB:82:U:C5	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:701:U:O2'	1:AA:702:A:OP2	2.15	0.65
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.31	0.65
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
15:AO:15:GLY:C	15:AO:17:ASP:H	2.05	0.65
18:AR:19:GLU:HG3	18:AR:54:LEU:HD22	1.79	0.65
22:BA:733:G:C8	22:BA:761:A:N6	2.65	0.65
22:BA:2485:G:H5''	34:BM:45:GLN:NE2	2.12	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:859:G:N2	57:DA:916:G:H2'	2.11	0.65
57:DA:1521:G:C6	57:DA:1522:A:N6	2.65	0.65
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.04	0.65
40:DS:52:GLU:O	40:DS:55:ILE:HB	1.97	0.65
40:DS:71:VAL:O	40:DS:71:VAL:HG13	1.95	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:HD3	46:DY:4:LYS:H	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
22:BA:2724:U:P	25:BD:116:LYS:HZ2	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:401:A:H2'	57:DA:402:A:C8	2.32	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
57:DA:2298:A:H2'	57:DA:2299:U:C6	2.32	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:24:MET:HE2	41:DT:24:MET: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:13:VAL:CG2	2:AB:207:ARG:HH22	2.11	0.64
2:AB:119:GLN:HA	2:AB:122:ASP:HB2	1.80	0.64
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.32	0.64
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.12	0.64
22:BA:228:C:H4'	22:BA:229:C:H5''	1.78	0.64
22:BA:303:G:H2'	22:BA:304:U:H6	1.62	0.64
22:BA:1654:A:H1'	25:BD:118:PHE:CD1	2.31	0.64
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.78	0.64
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.32	0.64
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.78	0.64
28:BG:112:VAL:HG23	28:BG:113:ASP:N	2.12	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:369:G:OP2	53:CA:388:G:N2	2.29	0.64
53:CA:1183:U:C3'	53:CA:1184:G:H5''	2.24	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
57:DA:75:G:H4'	46:DY:48:ARG:NH2	2.12	0.64
57:DA:184:C:H2'	57:DA:185:G:H8	1.60	0.64
57:DA:607:U:H5	57:DA:619:G:C4	2.16	0.64
57:DA:822:G:H5''	63:DA:3357:HOH:O	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1616:A:OP1	57:DA:1616:A:H8	1.79	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
37:DP:67:GLU:CD	37:DP:68:GLY:H	2.05	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
1:AA:64:G:H4'	1:AA:65:A:H5''	1.80	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
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.97	0.64
22:BA:646:U:H3'	22:BA:647:G:H5''	1.79	0.64
22:BA:988:A:P	47:BZ:11:SER:HB3	2.37	0.64
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.32	0.64
24:BC:185:ALA:C	24:BC:187:CYS:H	2.06	0.64
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.40	0.64
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.43	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
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
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
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
50:D2:22:MET:HG2	50:D2:22:MET:O	1.97	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:39:G:H2'	22:BA:40:U:C6	2.32	0.64
22:BA:1071:G:H1'	22:BA:1089:A:N7	2.11	0.64
22:BA:1963:U:O5'	22:BA:1963:U:H6	1.80	0.64
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2485:G:C5'	34:BM:45:GLN:HE21	2.11	0.64
25:BD:111:GLY:O	25:BD:169:ARG:O	2.16	0.64
29:BH:29:PHE:O	29:BH:33:GLN:HB3	1.98	0.64
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE1	1.78	0.64
53:CA:1218:C:H2'	53:CA:1219:A:H8	1.63	0.64
57:DA:27:G:N2	57:DA:512:G:H2'	2.12	0.64
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:810:U:O4	33:DL:30:THR:HG22	1.96	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
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:274:A:O2'	1:AA:275:G:H8	1.79	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
22:BA:819:A:OP2	22:BA:1187:G:N2	2.27	0.64
22:BA:1378:A:O2'	22:BA:1379:U:H3'	1.96	0.64
22:BA:2264:C:H41	44:BW:11:ASN:ND2	1.95	0.64
28:BG:83:THR:HA	28:BG:84:LYS:HZ2	1.56	0.64
54:CG:16:LYS:HE2	9:CI:45:MET:SD	2.38	0.64
54:CG:128:GLU:HG3	54:CG:130:LYS:H	1.61	0.64
21:CU:15:LEU:O	21:CU:15:LEU:HD12	1.96	0.64
57:DA:720:U:H2'	57:DA:721:A:C8	2.33	0.64
57:DA:2408:U:O2'	57:DA:2409:G:O5'	2.14	0.64
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.62	0.64
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.98	0.64
59:DF:129:MET:HE2	59:DF:174:PHE:CZ	2.32	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:H2'	22:BA:2267:A:N3	2.13	0.64
23:BB:24:G:N7	23:BB:56:G:H2'	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:BM:1:MET:HE3	34:BM:2:LEU:H	1.62	0.64
45:BX:30:PRO:O	45:BX:32:LEU:HD12	1.97	0.64
53:CA:1298:U:C5	54:CG:113:LYS:HA	2.32	0.64
3:CC:80:GLY:O	3:CC:83:VAL:HG22	1.97	0.64
57:DA:1901:A:O2'	57:DA:1902:C:H5'	1.98	0.64
57:DA:2615:U:C2	48:D0:3:GLN:HA	2.33	0.64
57:DA:2825:G:H3'	57:DA:2826:A:H8	1.62	0.64
25:DD:94:GLN:HG2	25:DD:94:GLN:O	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:28:A:C2	22:BA:513:A:C8	2.85	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
28:BG:86:LEU:HD12	28:BG:86:LEU:N	2.12	0.64
44:BW:18:LYS:HG3	44:BW:19:ARG:N	2.13	0.64
53:CA:413:G:N2	53:CA:428:G:O2'	2.31	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
4:CD:29:THR:C	4:CD:30:LYS:HD3	2.22	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
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
48:B0:33:SER:OG	48:B0:35:GLU:HG3	1.97	0.64
53:CA:97:G:C6	53:CA:98:A:H1'	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.38	0.64
57:DA:481:G:O2'	57:DA:482:A:OP2	2.16	0.64
57:DA:729:G:C6	24:DC:206:LYS:HB2	2.33	0.64
57:DA:832:U:OP1	33:DL:39:LYS:N	2.29	0.64
57:DA:2683:C:H2'	57:DA:2684:U:H6	1.61	0.64
58:DB:17:C:O2'	58:DB:18:G:H8	1.81	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
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:78:U:H2'	22:BA:79:C:H6	1.62	0.64
22:BA:656:G:H2'	22:BA:657:U:C6	2.32	0.64
22:BA:996:A:O2'	22:BA:997:G:H5'	1.98	0.64
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.63	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: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:29:U:H5	63:DA:3207:HOH:O	1.78	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
59:DF:90:LEU:O	59:DF:95:MET:HE3	1.97	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:O	15:AO:80:LEU:HD12	1.96	0.64
22:BA:357:C:H2'	22:BA:358:U:H6	1.60	0.64
23:BB:90:C:H5''	23:BB:90:C:C6	2.23	0.64
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.31	0.64
53:CA:202:G:HO2'	53:CA:468:A:H8	1.38	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:590:A:H2'	57:DA:591:U:H6	1.64	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
25:DD:149:ASN:O	25:DD:151:THR:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:36:ILE:HG22	6:AF:64:VAL:HG22	1.80	0.63
6:AF:52:ASN:O	6:AF:53:LYS:HB3	1.98	0.63
13:AM:18:LEU:O	13:AM:24:VAL:HG21	1.98	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
22:BA:1009:A:H8	22:BA:1009:A:O5'	1.81	0.63
22:BA:2198:A:OP2	22:BA:2198:A:C3'	2.46	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
24:BC:181:ARG:NH2	24:BC:265:PHE:HB3	2.13	0.63
28:BG:23:ILE:H	28:BG:23:ILE:HD12	1.63	0.63
40:BS:43:ALA:HA	40:BS:46:LEU:HD12	1.78	0.63
48:B0:39:ARG:HG2	48:B0:40:HIS:ND1	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
6:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.32	0.63
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.63	0.63
57:DA:1071:G:N7	57:DA:1089:A:C5	2.66	0.63
57:DA:1081:U:H4'	30:DI:123:ALA:HA	1.80	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
57:DA:2597:G:OP1	24:DC:240:GLY:HA3	1.98	0.63
59:DF:47:LYS:HA	59:DF:50:ASP:HB3	1.78	0.63
59:DF:147:ARG:HG2	59:DF:149:ARG:HH12	1.63	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:98:A:H2'	1:AA:99:C:H6	1.63	0.63
1:AA:413:G:N2	1:AA:428:G:O2'	2.31	0.63
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.33	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
32:BK:91:SER:O	32:BK:92:GLU:C	2.41	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
58:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.98	0.63
31:DJ:92:MET:HE2	31:DJ:92:MET:HA	1.79	0.63
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
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
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.98	0.63
22:BA:580:U:H2'	22:BA:581:C:H6	1.63	0.63
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.13	0.63
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.33	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
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
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.22	0.63
35:BN:58:ASP:O	35:BN:59:SER:HB3	1.96	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
49:B1:3:GLY:O	49:B1:4:ILE:HG12	1.98	0.63
53:CA:84:U:N3	53:CA:87:C:H1'	2.13	0.63
53:CA:529:G:O6	12:CL:45:ASN:HA	1.99	0.63
53:CA:1067:A:H4'	53:CA:1068:G:O5'	1.96	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
57:DA:49:A:H4'	57:DA:50:U:O5'	1.97	0.63
57:DA:477:A:H2'	57:DA:478:A:C8	2.33	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
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DF:147:ARG:O	59:DF:148:VAL:HG22	1.99	0.63
40:DS:82:MET:HE2	40:DS:84:ARG:NH1	2.13	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
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.32	0.63
53:CA:82:G:C2'	53:CA:83:C:H4'	2.29	0.63
53:CA:243:A:H4'	53:CA:244:U:H5'	1.80	0.63
53:CA:624:C:H4'	56:CP:10:GLY:C	2.23	0.63
57:DA:86:G:C2	57:DA:87:U:C4	2.86	0.63
57:DA:185:G:C6	57:DA:212:G:C2	2.86	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:2714:G:H2'	57:DA:2715:C:C6	2.32	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:596:A:H2'	1:AA:597:G:C8	2.32	0.63
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.99	0.63
8:AH:74:ILE:HD13	8:AH:128:VAL:HG13	1.79	0.63
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	1.97	0.63
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	2.21	0.63
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.63	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
22:BA:1646:C:H5''	22:BA:1647:U:O5'	1.98	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:2742:G:OP1	52:B4:36:ARG:HD3	1.99	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
38:BQ:86:SER:O	38:BQ:87:VAL:C	2.42	0.63
53:CA:1380:U:H4'	53:CA:1381:U:OP1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:69:C:H2'	57:DA:70:G:C8	2.34	0.63
57:DA:666:A:H5''	33:DL:48:ARG:HG2	1.79	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
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
44:DW:77:LYS:N	44:DW:77:LYS:HZ2	1.96	0.63
1:AA:923:A:H2'	1:AA:924:C:H6	1.63	0.63
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.33	0.63
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.28	0.63
16:AP:77:GLU:C	16:AP:79:ASN:H	2.06	0.63
22:BA:494:G:N2	40:BS:57:ASN:HD21	1.95	0.63
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.81	0.63
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.63	0.63
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.24	0.63
30:BI:116:MET:HE2	30:BI:116:MET:HA	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
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
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
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
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
57:DA:156:A:H2'	57:DA:157:C:H6	1.63	0.63
57:DA:225:C:H2'	57:DA:226:A:O4'	1.98	0.63
57:DA:491:G:O2'	57:DA:492:A:H5'	1.98	0.63
57:DA:2093:G:C6	57:DA:2225:A:C2'	2.78	0.63
57:DA:2345:G:H4'	57:DA:2346:A:C5'	2.27	0.63
24:DC:31:PRO:O	24:DC:32:LEU:HD23	1.99	0.63
25:DD:28:GLU:HA	25:DD:185:ASN:O	1.99	0.63
25:DD:184:ARG:NH2	37:DP:6:GLN:HE21	1.97	0.63
29:DH:27:ARG:HB2	29:DH:27:ARG:HH21	1.63	0.63
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.27	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1789:A:OP1	24:BC:220:ARG:HD3	1.97	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
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
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.23	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
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.64	0.63
6:CF:90:MET:CE	18:CR:60:ARG:HD3	2.28	0.63
57:DA:226:A:C2	57:DA:230:G:O6	2.51	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:1827:U:C4'	57:DA:1970:A:HO2'	2.12	0.63
57:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.99	0.63
57:DA:2902:C:H2'	57:DA:2903:U:O4'	1.98	0.63
31:DJ:41:LYS:C	31:DJ:43:GLU:N	2.56	0.63
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.62	0.63
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	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:HE2	15:AO:72:LYS:HA	1.80	0.63
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.24	0.63
21:AU:8:ASN:N	21:AU:8:ASN:HD22	1.96	0.63
22:BA:914:G:H5''	22:BA:914:G:C8	2.32	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
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
41:BT:26:LYS:O	41:BT:27:SER:HB2	1.99	0.63
49:B1:47:ILE:HD12	49:B1:47:ILE:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
54:CG:100:MET:H	54:CG:100:MET:HE2	1.62	0.63
14:CN:33:VAL:HG22	14:CN:40:ARG:HH21	1.62	0.63
57:DA:64:A:O2'	41:DT:69:ARG:HG2	1.99	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:1635:A:H2'	57:DA:1636:U:C6	2.34	0.63
57:DA:1731:G:HO2'	57:DA:1732:C:H5''	1.62	0.63
57:DA:2619:C:OP1	25:DD:157:LYS:HE2	1.98	0.63
57:DA:2886:A:H62	48:D0:39:ARG:HD3	1.63	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
17:AQ:12:VAL:HG13	17:AQ:16:MET:HE1	1.81	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
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: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: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: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
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.23	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:509:C:H5''	22:BA:509:C:C6	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.14	0.62
22:BA:2051:A:H8	22:BA:2051:A:OP2	1.82	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
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
2:CB:153:MET:HE3	2:CB:155:GLY:O	1.99	0.62
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.25	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
31:DJ:41:LYS:C	31:DJ:43:GLU:H	2.07	0.62
43:DV:55:GLU:O	43:DV:57:TYR:N	2.32	0.62
50:D2:46:LYS:HD2	50:D2:46:LYS:N	2.14	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
1:AA:1247:U:O2'	1:AA:1248:A:H5'	1.99	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
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
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:HB3	41:BT:73:ARG:CZ	2.28	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
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.34	0.62
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.17	0.62
17:CQ:13:SER:HB3	17:CQ:21:VAL:HB	1.81	0.62
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.57	0.62
57:DA:455:C:N3	57:DA:473:G:H5'	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:518:C:H2'	1:AA:530:G:C8	2.34	0.62
1:AA:1398:A:H5''	1:AA:1398:A:C8	2.27	0.62
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.30	0.62
22:BA:143:C:O2'	22:BA:144:A:H8	1.83	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.65	0.62
22:BA:1340:U:H3'	41:BT:61:LEU:HD22	1.82	0.62
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.64	0.62
22:BA:2091:C:O2	45:BX:33:HIS:CE1	2.52	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
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
32:BK:34:GLY:O	32:BK:35:VAL:C	2.42	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
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.13	0.62
53:CA:93:U:H2'	53:CA:95:C:C5	2.34	0.62
53:CA:533:A:C2	53:CA:536:C:C5	2.87	0.62
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.81	0.62
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
29:DH:102:ALA:C	29:DH:104:THR:H	2.07	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
22:BA:21:A:O2'	22:BA:22:C:H5'	2.00	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
22:BA:1079:C:C4	22:BA:1088:A:H2	2.17	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
52:B4:25:VAL:HG11	52:B4:35:GLN:HE21	1.65	0.62
53:CA:51:A:H4'	53:CA:52:C:H5'	1.81	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
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:477:A:H2'	57:DA:478:A:H8	1.64	0.62
57:DA:726:G:H8	57:DA:726:G:OP2	1.83	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
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:6:LYS:NZ	40:DS:104:THR:HG23	2.14	0.62
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.81	0.62
1:AA:1021:A:C2'	1:AA:1022:A:H5''	2.26	0.62
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.08	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: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
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
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
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.25	0.62
39:BR:48:LYS:H	39:BR:48:LYS:HD2	1.65	0.62
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.34	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:27:G:H22	57:DA:512:G:H2'	1.65	0.62
57:DA:64:A:OP1	41:DT:77:ARG:HG2	1.98	0.62
57:DA:138:U:H2'	57:DA:140:C:H1'	1.82	0.62
57:DA:627:A:O2'	57:DA:628:G:C8	2.50	0.62
57:DA:1347:A:O2'	57:DA:1348:C:H5'	1.99	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
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: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
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.63	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:O	5:CE:59:ILE:HG13	2.00	0.62
11:CK:117:HIS:O	11:CK:118:ASN:HB2	1.99	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:36:ARG:HG2	52:D4:37:GLN:N	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
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.14	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:390:U:O2'	22:BA:391:A:OP2	2.18	0.62
22:BA:1681:G:O2'	22:BA:1762:A:H1'	1.99	0.62
22:BA:2060:A:O2'	22:BA:2061:G:OP2	2.17	0.62
22:BA:2772:C:H2'	22:BA:2773:C:H6	1.65	0.62
32:BK:95:ILE:HD12	32:BK:95:ILE:O	1.99	0.62
41:BT:15:HIS:HB3	41:BT:31:VAL:HG22	1.80	0.62
42:BU:38:ILE:HG22	42:BU:39:ASN:N	2.13	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
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
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:232:G:O2'	57:DA:233:A:H5''	1.98	0.62
57:DA:729:G:H3'	57:DA:730:A:C5'	2.30	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:2574:G:O2'	25:DD:148:GLN:HB2	1.99	0.62
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:86:G:C2	1:AA:87:C:N4	2.66	0.62
1:AA:1202:U:O4'	14:AN:68:ARG:HD2	1.99	0.62
5:AE:147:ASN:HD21	8:AH:95:MET:HE1	1.64	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
22:BA:1417:C:H2'	22:BA:1418:G:C8	2.35	0.62
22:BA:1931:U:H5'	22:BA:1931:U:C6	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
48:B0:47:TYR:CE2	48:B0:52:LYS:HB2	2.35	0.62
53:CA:279:A:C5'	53:CA:280:C:H3'	2.22	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:802:A:H2'	53:CA:803:G:H5'	1.82	0.62
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.34	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:HD23	19:CS:46:LEU:H	1.63	0.62
57:DA:754:U:H2'	57:DA:755:U:C6	2.35	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
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.80	0.62
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.35	0.62
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.81	0.62
2:AB:20:ARG:HA	2:AB:20:ARG:NH1	2.15	0.62
3:AC:156:LEU:HD12	3:AC:156:LEU:N	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
22:BA:669:G:H2'	22:BA:669:G:N3	2.15	0.62
22:BA:790:U:H2'	63:BA:3756:HOH:O	1.98	0.62
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.35	0.62
22:BA:1819:A:OP1	24:BC:154:ALA:HA	1.99	0.62
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.81	0.62
27:BF:114:ARG:HD2	27:BF:114:ARG:H	1.64	0.62
39:BR:1:MET:HA	39:BR:42:ALA:O	2.00	0.62
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:796:C:OP1	11:CK:127:ARG:HB3	2.00	0.62
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.52	0.62
17:CQ:59:GLU:HG2	17:CQ:76:ARG:HG2	1.82	0.62
57:DA:781:A:N1	57:DA:1776:G:O2'	2.29	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
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:819:A:H4'	1:AA:820:U:OP2	1.99	0.62
1:AA:1320:C:H41	19:AS:36:ARG:HG2	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.34	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
22:BA:475:C:C4	22:BA:481:G:O6	2.52	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
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	2.00	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
53:CA:1219:A:OP1	14:CN:52:ARG:HG3	2.00	0.62
3:CC:176:THR:HG22	3:CC:178:ARG:HG3	1.82	0.62
14:CN:9:GLU:HA	14:CN:12:ARG:HD2	1.81	0.62
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.65	0.62
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.63	0.62
57:DA:704:G:C2'	57:DA:726:G:H22	2.11	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
24:DC:53:ILE:HA	24:DC:214:GLY:O	2.00	0.62
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.65	0.62
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.06	0.62
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.15	0.62
4:AD:133:SER:O	4:AD:134:TYR:C	2.43	0.61
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:875:G:C2'	22:BA:876:C:H5'	2.30	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:40:GLU:O	45:BX:43:LYS:HD2	2.00	0.61
53:CA:372:C:O2'	53:CA:373:A:P	2.58	0.61
53:CA:1217:C:O2'	53:CA:1218:C:O4'	2.13	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:329:G:O6	42:DU:16:LYS:HB2	2.00	0.61
57:DA:476:G:O2'	57:DA:477:A:O5'	2.17	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
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.30	0.61
26:DE:166:LYS:HE2	26:DE:166:LYS:HA	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
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.63	0.61
1:AA:935:A:H61	7:AG:2:ARG:HB2	1.65	0.61
1:AA:1242:G:O2'	1:AA:1243:C:H5'	2.00	0.61
1:AA:1370:G:O5'	9:AI:110:VAL:HG21	1.99	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
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
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.08	0.61
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.81	0.61
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	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:5:GLN:HG3	12:CL:9:LYS:NZ	2.15	0.61
12:CL:42:LYS:HG2	12:CL:43:LYS:N	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:816:C:H2'	57:DA:817:C:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.82	0.61
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.34	0.61
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.00	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:894:U:H2'	22:BA:895:U:C6	2.35	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
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
19:CS:52:ASN:HD22	19:CS:52:ASN:C	2.07	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
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.08	0.61
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.81	0.61
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.13	0.61
29:DH:116:ARG:O	29:DH:117:LEU:HG	2.00	0.61
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.30	0.61
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.64	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
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
22:BA:2033:A:H3'	63:BA:3476:HOH:O	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:127:GLU:CD	26:BE:127:GLU:H	2.07	0.61
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.82	0.61
35:BN:103:ARG:CD	35:BN:110:MET:HE3	2.29	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
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:152:A:C2	57:DA:175:G:C2	2.88	0.61
57:DA:222:A:N6	57:DA:232:G:H1'	2.15	0.61
57:DA:586:A:H8	57:DA:586:A:O5'	1.83	0.61
57:DA:852:U:H2'	57:DA:853:C:C6	2.34	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:1905:C:N4	57:DA:1930:G:N1	2.49	0.61
57:DA:2261:C:C2	57:DA:2280:G:N2	2.68	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
2:AB:148:GLY:C	2:AB:150:ILE:H	2.07	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
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.82	0.61
22:BA:871:U:OP1	34:BM:5:LYS:HG3	2.01	0.61
22:BA:1735:A:H2'	22:BA:1736:U:C6	2.35	0.61
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.35	0.61
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.35	0.61
26:BE:147:LEU:HD23	26:BE:183:PHE:CD1	2.36	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
6:CF:43:GLY:O	6:CF:44:ARG:C	2.44	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:182:A:H2'	57:DA:183:C:C6	2.35	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
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: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
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
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
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
53:CA:1478:U:H2'	53:CA:1479:C:C6	2.36	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:HG12	11:CK:106:ILE:O	2.01	0.61
21:CU:36:PHE:CD1	21:CU:40:PRO:HB3	2.33	0.61
57:DA:244:A:H2'	57:DA:245:G:O4'	2.00	0.61
57:DA:674:G:H5''	26:DE:71:GLY:H	1.65	0.61
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:2619:C:H4'	25:DD:156:PHE:O	2.01	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
32:DK:104:THR:C	32:DK:106:GLU:H	2.07	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:820:U:H4'	1:AA:821:G:OP2	1.99	0.61
1:AA:1066:C:H5''	1:AA:1066:C:H6	1.65	0.61
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.01	0.61
4:AD:63:ILE:HG23	4:AD:64:TYR:CD1	2.35	0.61
5:AE:44:ARG:HA	5:AE:71:ILE:O	2.00	0.61
5:AE:105:ILE:HG13	5:AE:123:LEU:HA	1.83	0.61
13:AM:86:ARG:HH21	13:AM:96:VAL:HG12	1.66	0.61
20:AT:2:ASN:O	20:AT:3:ILE:C	2.43	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
53:CA:267:C:OP2	17:CQ:68:LYS:HD2	2.00	0.61
53:CA:818:G:C3'	53:CA:819:A:H5''	2.30	0.61
53:CA:961:U:H5	53:CA:1223:C:H1'	1.66	0.61
53:CA:1069:C:H4'	53:CA:1192:C:O2	2.00	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:HD22	15:CO:69:LEU:O	2.01	0.61
57:DA:151:C:H2'	57:DA:152:A:C8	2.36	0.61
57:DA:594:U:H2'	57:DA:595:C:C6	2.35	0.61
57:DA:686:U:H6	57:DA:788:A:N1	1.98	0.61
57:DA:1183:U:H2'	57:DA:1184:U:H6	1.65	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
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
42:DU:32:LYS:HE2	42:DU:65:GLN:CD	2.26	0.61
1:AA:843:U:H2'	1:AA:844:G:H5'	1.83	0.61
1:AA:1329:A:H5''	13:AM:25:GLY:H	1.66	0.61
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.17	0.61
3:AC:13:ILE:O	3:AC:15:LYS:N	2.34	0.61
13:AM:106:ARG:HA	13:AM:106:ARG:HH11	1.66	0.61
16:AP:37:GLY:HA2	16:AP:51:ARG:NH1	2.16	0.61
22:BA:728:G:HO2'	22:BA:730:A:H8	1.49	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.01	0.61
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.48	0.61
52:B4:9:LYS:C	52:B4:10:LEU:HD23	2.26	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:72:A:N6	53:CA:99:C:H1'	2.16	0.61
53:CA:1288:A:H2'	53:CA:1289:A:H8	1.65	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: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
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
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
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
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: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:269:C:H2'	53:CA:270:A:H8	1.66	0.61
53:CA:570:G:H1'	53:CA:820:U:C4	2.36	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
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
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
28:DG:43:LYS:O	28:DG:49:LEU:HD12	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.82	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
1:AA:539:A:H2'	1:AA:540:G:H8	1.60	0.61
1:AA:1142:G:C2	1:AA:1143:G:H1'	2.36	0.61
2:AB:32:GLY:HA3	2:AB:39:ILE:HG12	1.82	0.61
14:AN:40:ARG:HH12	14:AN:44:VAL:CG1	2.11	0.61
22:BA:636:G:H3'	33:BL:128:THR:HG21	1.81	0.61
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.83	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
24:BC:156:SER:O	24:BC:194:VAL:HG11	2.01	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
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: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
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
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.31	0.61
57:DA:57:C:O2'	41:DT:36:LYS:HE2	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
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
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:HA	30:DI:50:LYS:HE2	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:90:U:H2'	22:BA:91:A:C8	2.35	0.60
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.01	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
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.65	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
57:DA:457:A:N1	57:DA:470:A:H5''	2.15	0.60
57:DA:1394:U:H4'	57:DA:1603:A:H4'	1.83	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: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
57:DA:1998:A:O3'	57:DA:2724:U:H4'	2.01	0.60
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:2839:G:N2	57:DA:2880:C:C4	2.69	0.60
57:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.01	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
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
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.66	0.60
1:AA:186:C:O4'	20:AT:75:LYS:HD2	2.00	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
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.01	0.60
13:AM:86:ARG:NH2	13:AM:96:VAL:HG12	2.16	0.60
22:BA:459:U:H2'	22:BA:460:A:H8	1.65	0.60
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.83	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:HG22	3:CC:120:THR:O	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: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
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:2529:G:H4'	28:DG:174:LYS:CD	2.31	0.60
57:DA:2881:U:O2'	57:DA:2882:A:H5'	2.02	0.60
57:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.31	0.60
58:DB:13:G:H8	58:DB:13:G:H5''	1.66	0.60
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.81	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
46:DY:31:GLN:C	46:DY:33:ALA:H	2.09	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: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
22:BA:1568:G:OP1	24:BC:62:ARG:NH1	2.34	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:73:C:O2'	53:CA:74:A:H8	1.84	0.60
53:CA:464:U:O4	53:CA:466:A:H4'	2.01	0.60
53:CA:486:U:H2'	53:CA:486:U:O2	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:1666:G:O3'	32:DK:6:THR:HG23	2.01	0.60
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.84	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:7:VAL:HG13	17:AQ:30:HIS:CD2	2.35	0.60
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.83	0.60
22:BA:39:G:H2'	22:BA:40:U:H6	1.65	0.60
22:BA:332:A:C2	22:BA:335:C:C5	2.89	0.60
22:BA:571:U:C5	22:BA:575:A:C6	2.88	0.60
22:BA:1310:G:C2'	22:BA:1311:G:H5'	2.31	0.60
24:BC:225:ASN:HB3	24:BC:226:PRO:HD2	1.83	0.60
25:BD:45:TYR:N	25:BD:45:TYR:CD1	2.68	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: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
53:CA:1079:G:H2'	53:CA:1080:A:C8	2.37	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:91:A:O2'	57:DA:92:U:H6	1.84	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
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
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:BQ:63:ARG:NH2	38:BQ:95:ALA:C	2.60	0.60
41:BT:39:THR:O	41:BT:40:LYS:HB2	2.01	0.60
47:BZ:40:THR:HG23	47:BZ:43:ILE:HG23	1.84	0.60
53:CA:86:G:H1'	53:CA:87:C:O5'	2.01	0.60
53:CA:410:G:OP1	4:CD:25:ARG:HD2	2.02	0.60
53:CA:821:G:H2'	53:CA:822:U:C6	2.36	0.60
53:CA:960:U:C5'	53:CA:961:U:H5''	2.31	0.60
5:CE:129:SER:HA	63:CE:202:HOH:O	2.01	0.60
56:CP:36:VAL:O	56:CP:36:VAL:HG13	2.00	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:144:GLU:HG3	24:DC:151:GLY:N	2.16	0.60
36:DO:108:ASP:C	36:DO:110:ALA:H	2.09	0.60
39:DR:48:LYS:HD2	39:DR:48:LYS:H	1.65	0.60
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.83	0.60
1:AA:487:A:H2'	1:AA:488:C:O4'	2.01	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
5:AE:121:ASN:HD22	5:AE:121:ASN:N	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
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
24:BC:39:SER:C	24:BC:41:GLY:H	2.07	0.60
26:BE:175:ILE:HG23	26:BE:175:ILE:O	2.00	0.60
27:BF:129:MET:HE2	27:BF:153:ILE:HD11	1.82	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.00	0.60
53:CA:67:C:OP1	53:CA:199:A:H5''	2.01	0.60
53:CA:958:A:H62	19:CS:54:ARG:NH1	2.00	0.60
3:CC:13:ILE:HG22	3:CC:14:VAL:HG23	1.84	0.60
3:CC:122:GLN:HB2	3:CC:127:VAL:HG21	1.83	0.60
54:CG:75:LYS:HG3	54:CG:76:SER:N	2.17	0.60
9:CI:51:LEU:C	9:CI:53:LEU:H	2.09	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:2149:U:O2'	57:DA:2150:C:C6	2.42	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
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
4:AD:196:GLU:C	4:AD:198:LEU:H	2.08	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
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
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
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.02	0.60
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.59	0.60
24:BC:247:TRP:C	24:BC:249:VAL:H	2.10	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:B3:32:LEU:HA	51:B3:35:LYS:HD2	1.82	0.60
53:CA:960:U:O2'	53:CA:1223:C:H5''	2.01	0.60
3:CC:84:GLU:C	3:CC:86:LEU:H	2.08	0.60
3:CC:120:THR:HG23	3:CC:187:GLU:O	2.01	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
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:2361:G:OP1	51:D3:25:HIS:HA	2.02	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:53:ILE:CG2	10:AJ:61:ALA:HB1	2.31	0.60
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.14	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
19:AS:3:SER:O	19:AS:5:LYS:HG3	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
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.31	0.60
22:BA:1941:C:H6	22:BA:1941:C:C5'	2.10	0.60
22:BA:2021:C:P	48:B0:8:THR:HG21	2.42	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:27:PHE:HD1	17:CQ:36:PHE:HB3	1.66	0.60
19:CS:79:TYR:O	19:CS:80:ARG:HB2	2.00	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:1797:G:O3'	24:DC:255:LYS:O	2.20	0.60
57:DA:2056:G:N2	48:D0:1:ALA:H1	1.99	0.60
57:DA:2336:A:N7	44:DW:40:ARG:NH2	2.50	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
26:DE:44:ARG:H	26:DE:89:PRO:HA	1.66	0.60
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.66	0.60
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.67	0.60
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.37	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
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.02	0.60
14:AN:30:ILE:HG23	14:AN:44:VAL:HG12	1.83	0.60
15:AO:80:LEU:HD12	15:AO:80:LEU:C	2.27	0.60
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.32	0.60
22:BA:572:A:C2	22:BA:2033:A:C2	2.89	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:2491:U:H5''	22:BA:2570:G:H5''	1.84	0.60
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.37	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
44:BW:24:ARG:HD2	44:BW:24:ARG:C	2.25	0.60
46:BY:47:ARG:HG3	46:BY:47:ARG:NH2	2.07	0.60
53:CA:47:C:H4'	53:CA:48:C:O5'	2.00	0.60
53:CA:158:G:C5	53:CA:164:G:C6	2.90	0.60
53:CA:675:A:H1'	11:CK:117:HIS:ND1	2.17	0.60
53:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.83	0.60
2:CB:80:LYS:O	2:CB:84:LEU:N	2.34	0.60
2:CB:103:TRP:HB2	2:CB:106:VAL:HB	1.84	0.60
4:CD:94:GLU:OE1	4:CD:103:ARG:NE	2.33	0.60
8:CH:93:LYS:HD3	8:CH:93:LYS:N	2.17	0.60
56:CP:16:PHE:CE2	56:CP:40:ASN:HB2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.54	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
59:DF:129:MET:HE2	59:DF:174:PHE:HZ	1.66	0.60
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.84	0.60
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.49	0.60
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.02	0.60
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.35	0.60
1:AA:547:A:H4'	1:AA:548:G:O5'	2.02	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
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
12:AL:74:GLN:O	12:AL:75:GLU:C	2.45	0.60
22:BA:705:A:N6	22:BA:726:G:H1'	2.17	0.60
22:BA:749:A:C6	22:BA:1618:A:C2	2.89	0.60
22:BA:950:G:C6	22:BA:951:C:C4	2.90	0.60
22:BA:1011:G:H5''	38:BQ:76:SER:OG	2.02	0.60
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.02	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
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:93:U:C2	53:CA:95:C:N4	2.70	0.60
53:CA:1101:A:H1'	53:CA:1102:A:O4'	2.02	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:O2	57:DA:1379:U:H2'	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
24:DC:145:MET:HE3	24:DC:181:ARG:HH22	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:788:U:H2'	1:AA:789:U:H6	1.65	0.59
7:AG:28:ILE:HG13	7:AG:100:MET:HE3	1.84	0.59
22:BA:946:C:H2'	22:BA:947:A:H8	1.66	0.59
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.02	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
27:BF:60:SER:O	27:BF:61:GLY:C	2.45	0.59
29:BH:31:VAL:O	29:BH:32:PRO:C	2.45	0.59
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.49	0.59
38:BQ:27:ARG:HG3	38:BQ:27:ARG:NH1	2.17	0.59
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.84	0.59
41:BT:24:MET:HE2	41:BT:28:ASN:OD1	2.01	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:181:A:C2	57:DA:434:U:H1'	2.37	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:833:A:H2'	57:DA:834:G:C8	2.36	0.59
57:DA:1919:A:HO2'	57:DA:1920:C:H5'	1.65	0.59
57:DA:2142:A:H2'	57:DA:2143:C:H4'	1.83	0.59
57:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.32	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
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.84	0.59
1:AA:903:G:H2'	1:AA:904:U:H6	1.67	0.59
1:AA:1084:G:C5	1:AA:1085:U:C4	2.91	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:945:A:H5'	22:BA:946:C:OP2	2.02	0.59
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.32	0.59
22:BA:2250:G:H8	22:BA:2250:G:O5'	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:265:G:O3'	17:CQ:67:SER:HA	2.01	0.59
53:CA:404:G:O6	4:CD:1:ALA:HB2	2.01	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:1239:A:H62	53:CA:1299:A:N6	2.00	0.59
54:CG:63:VAL:HG11	54:CG:127:ALA:HB2	1.84	0.59
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.50	0.59
57:DA:203:A:H8	57:DA:203:A:O5'	1.85	0.59
57:DA:585:G:C2'	57:DA:1254:A:H61	2.14	0.59
57:DA:615:U:O4	26:DE:39:ALA:HB2	2.02	0.59
57:DA:784:G:C6	24:DC:227:VAL:HG11	2.38	0.59
57:DA:1126:A:OP1	57:DA:1126:A:H8	1.84	0.59
57:DA:1438:U:H2'	57:DA:1439:A:O4'	2.02	0.59
59:DF:91:ARG:HA	59:DF:95:MET:SD	2.42	0.59
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.26	0.59
32:DK:76:VAL:O	37:DP:71:ARG:HG3	2.02	0.59
36:DO:15:ARG:HG2	36:DO:93:ASP:OD1	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
22:BA:646:U:H3'	22:BA:647:G:C5'	2.33	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
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: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
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
54:CG:8:GLN:CD	54:CG:9:ARG:H	2.09	0.59
57:DA:395:U:O2'	57:DA:396:G:H8	1.84	0.59
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:2849:U:OP1	37:DP:92:ARG:NH1	2.36	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
1:AA:345:C:OP1	37:BP:36:LYS:HE2	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.86	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
56:CP:44:SER:H	56:CP:46:LYS:HZ2	1.50	0.59
18:CR:33:THR:HG23	18:CR:39:VAL:HG22	1.84	0.59
57:DA:45:G:H5'	57:DA:46:G:OP1	2.03	0.59
57:DA:388:G:N7	57:DA:390:U:H2'	2.18	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
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
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
25:BD:159:LYS:HZ3	25:BD:159:LYS:HA	1.66	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
31:BJ:64:VAL:HG22	31:BJ:68:LYS:HD2	1.84	0.59
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.18	0.59
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.84	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:951:G:H2'	53:CA:952:U:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:14:LEU:HD13	5:CE:36:THR:HG22	1.85	0.59
11:CK:85:VAL:HG11	11:CK:92:ARG:NH1	2.17	0.59
11:CK:124:LYS:HG3	21:CU:34:ARG:HD2	1.85	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:OE2	21:CU:35:GLU:HA	2.01	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
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
24:DC:145:MET:HE3	24:DC:181:ARG:NH2	2.16	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:65:LYS:HG2	2:AB:153:MET:HG3	1.84	0.59
2:AB:116:LEU:HD12	2:AB:140:LEU:HD11	1.84	0.59
3:AC:6:PRO:O	3:AC:10:ARG:HG2	2.03	0.59
7:AG:29:LEU:O	7:AG:29:LEU:HD23	2.02	0.59
7:AG:106:ALA:HB1	7:AG:132:THR:HB	1.82	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
22:BA:2503:A:H4'	22:BA:2504:U:OP1	2.02	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
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.66	0.59
53:CA:296:U:C2	53:CA:297:G:C8	2.90	0.59
53:CA:1478:U:H2'	53:CA:1479:C:H6	1.65	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:836:G:C6	57:DA:837:C:C4	2.91	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:33:ARG:HD3	33:DL:40:SER:HA	1.82	0.59
35:DN:16:HIS:C	35:DN:18:GLN:H	2.11	0.59
39:DR:62:GLU:OE1	39:DR:97:LYS:HD2	2.02	0.59
1:AA:674:G:H4'	18:AR:69:TYR:CD1	2.37	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:6:ILE:HB	8:AH:76:ARG:NH1	2.16	0.59
8:AH:45:ILE:HA	8:AH:63:LYS:HG3	1.84	0.59
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.37	0.59
12:AL:29:LYS:O	12:AL:81:ILE:HG22	2.02	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
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
25:BD:110:THR:CG2	25:BD:171:THR:HG22	2.31	0.59
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.18	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
42:BU:44:HIS:O	42:BU:45:GLN:C	2.46	0.59
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.03	0.59
48:B0:43:THR:HG23	48:B0:47:TYR:O	2.02	0.59
51:B3:56:LEU:HD22	51:B3:56:LEU:H	1.67	0.59
53:CA:497:G:O2'	53:CA:498:A:C8	2.53	0.59
53:CA:1124:G:O2'	53:CA:1125:U:C5	2.56	0.59
53:CA:1452:C:H5'	53:CA:1453:G:C5	2.37	0.59
53:CA:1493:A:H3'	57:DA:1913:A:H62	1.67	0.59
4:CD:39:GLN:C	4:CD:41:GLY:H	2.10	0.59
4:CD:197:HIS:O	4:CD:201:GLU:HG3	2.03	0.59
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.34	0.59
12:CL:34:THR:HG22	12:CL:35:ARG:HE	1.67	0.59
57:DA:128:C:H6	57:DA:128:C:H5''	1.67	0.59
57:DA:188:G:H2'	57:DA:189:G:H5'	1.85	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:851:C:H4'	47:DZ:46:MET:HG2	1.84	0.59
57:DA:901:C:H2'	57:DA:902:C:H6	1.66	0.59
57:DA:1183:U:H2'	57:DA:1184:U:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1274:A:C6	57:DA:1302:A:C2	2.91	0.59
57:DA:1277:G:H5'	35:DN:20:MET:HE3	1.83	0.59
58:DB:38:C:H4'	36:DO:100:HIS:NE2	2.17	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
1:AA:158:G:H2'	1:AA:159:G:H5''	1.84	0.59
11:AK:39:ASN:O	11:AK:40:ALA:HB3	2.02	0.59
12:AL:79:ILE:HD12	12:AL:96:THR:HG21	1.85	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
22:BA:558:U:H5''	31:BJ:111:LYS:HE3	1.84	0.59
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.18	0.59
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.02	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:9:THR:HG22	44:BW:10:ARG:NH1	2.17	0.59
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.66	0.59
53:CA:113:G:H1'	53:CA:354:G:H5'	1.83	0.59
53:CA:795:C:H5''	11:CK:127:ARG:HH21	1.68	0.59
53:CA:960:U:H4'	53:CA:961:U:H5''	1.84	0.59
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.67	0.59
2:CB:60:ALA:C	2:CB:62:ARG:H	2.11	0.59
6:CF:88:MET:HE3	6:CF:90:MET:SD	2.43	0.59
11:CK:104:PHE:HD1	11:CK:104:PHE:H	1.50	0.59
12:CL:27:PRO:HB2	12:CL:28:GLN:OE1	2.03	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
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
57:DA:2447:G:N7	57:DA:2500:U:H2'	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.17	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
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
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
10:AJ:51:VAL:CB	14:AN:80:ARG:HB2	2.31	0.59
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.83	0.59
22:BA:142:A:H2'	22:BA:143:C:C5	2.37	0.59
22:BA:547:A:C8	22:BA:548:G:N3	2.71	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: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
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: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
53:CA:1144:G:H21	53:CA:1146:A:N6	2.00	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
54:CG:115:MET:HE1	54:CG:119:LEU:HB3	1.84	0.59
57:DA:70:G:O2'	57:DA:71:A:H5''	2.03	0.59
57:DA:507:A:H2'	57:DA:507:A:OP2	2.02	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
59:DF:92:GLY:O	59:DF:95:MET:HB3	2.03	0.59
31:DJ:2:LYS:HB2	31:DJ:2:LYS:NZ	2.17	0.59
33:DL:81:ASP:O	33:DL:83:ALA:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.85	0.59
1:AA:1469:C:H6	1:AA:1469:C:H5'	1.67	0.59
1:AA:1520:C:C2	1:AA:1521:C:C5	2.91	0.59
4:AD:130:ASN:O	4:AD:131:ILE:C	2.45	0.59
4:AD:151:GLN:O	4:AD:152:SER:C	2.46	0.59
5:AE:136:VAL:HG22	5:AE:136:VAL:O	2.02	0.59
12:AL:3:VAL:O	12:AL:7:VAL:HG23	2.03	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
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
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:439:U:H4'	4:CD:120:LYS:HD2	1.85	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
4:CD:68:GLU:O	4:CD:69:ARG:C	2.46	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
14:CN:55:SER:C	14:CN:57:SER:H	2.10	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:17:G:H4'	38:DQ:24:TYR:HE1	1.68	0.59
57:DA:67:U:H2'	57:DA:68:G:C8	2.36	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: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
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:2421:G:N7	51:D3:30:HIS:HD2	2.01	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
28:DG:1:SER:C	28:DG:3:VAL:H	2.10	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:H	3:AC:156:LEU:CD1	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:269:C:C2'	22:BA:270:A:H5'	2.32	0.58
22:BA:962:G:H21	22:BA:2250:G:H1	1.49	0.58
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.39	0.58
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.01	0.58
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.01	0.58
25:BD:101:PHE:HE2	25:BD:203:VAL:CG2	2.15	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:29:THR:HB	41:BT:86:THR:CG2	2.33	0.58
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.33	0.58
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.85	0.58
53:CA:66:A:N6	53:CA:67:C:N4	2.50	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: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
53:CA:1130:A:C5	53:CA:1146:A:C6	2.90	0.58
2:CB:95:TRP:CH2	2:CB:171:ALA:HA	2.38	0.58
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.28	0.58
6:CF:9:MET:HE1	18:CR:64:LEU:O	2.03	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
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: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:HO2'	57:DA:985:C:P	2.26	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
36:DO:74:VAL:HB	36:DO:106:LEU:HD11	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:966:G:H2'	1:AA:967:C:C6	2.37	0.58
3:AC:143:LEU:HD22	3:AC:143:LEU:N	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
14:AN:42:ASN:C	14:AN:44:VAL:H	2.10	0.58
22:BA:60:G:O2'	22:BA:61:C:P	2.62	0.58
22:BA:564:C:C2'	22:BA:565:C:H5'	2.32	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
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
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:HG2	37:BP:52:ARG:HH11	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: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: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
5:CE:104:ILE:HA	5:CE:122:VAL:HB	1.85	0.58
54:CG:135:LYS:O	54:CG:139:ASP:HB2	2.03	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
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:2015:A:C5	48:D0:2:VAL:HG11	2.37	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.38	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
14:AN:48:GLN:HA	14:AN:48:GLN:NE2	2.18	0.58
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.68	0.58
22:BA:511:U:O4	22:BA:512:G:C2	2.55	0.58
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.85	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
24:BC:170:TYR:CE2	24:BC:184:GLU:HA	2.38	0.58
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.03	0.58
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.34	0.58
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.04	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
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:NH1	4:CD:25:ARG:HG2	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
56:CP:77:GLU:C	56:CP:79:ASN:H	2.10	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
57:DA:956:G:C1'	34:DM:82:MET:HE1	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
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)
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:144:G:C4	1:AA:179:A:C2	2.92	0.58
1:AA:330:C:H6	1:AA:330:C:H5''	1.69	0.58
1:AA:996:A:C2	1:AA:1046:A:H5'	2.38	0.58
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.16	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
2:AB:40:ILE:HG21	2:AB:201:GLY:N	2.18	0.58
4:AD:61:ARG:HG2	4:AD:71:PHE:CD2	2.38	0.58
9:AI:44:ARG:HG3	9:AI:45:MET:HE1	1.85	0.58
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.10	0.58
20:AT:27:MET:O	20:AT:31:ILE:HG13	2.03	0.58
22:BA:119:A:H4'	22:BA:120:U:O5'	2.04	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
22:BA:1130:U:O2'	22:BA:1131:G:H8	1.87	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
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
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.61	0.58
41:BT:87:LEU:HB2	41:BT:91:GLN:HE21	1.67	0.58
53:CA:818:G:H3'	53:CA:819:A:C5'	2.33	0.58
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.04	0.58
3:CC:133:MET:HB2	3:CC:150:VAL:HG21	1.84	0.58
4:CD:84:ASN:HD22	4:CD:84:ASN:C	2.10	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
57:DA:91:A:HO2'	57:DA:92:U:H6	1.51	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
57:DA:1130:U:O2'	57:DA:1131:G:C8	2.57	0.58
57:DA:1420:A:C8	57:DA:2211:A:N6	2.68	0.58
57:DA:1918:A:H4'	57:DA:1919:A:OP1	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
52:D4:3:VAL:O	52:D4:4:ARG:HB2	2.03	0.58
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.85	0.58
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.43	0.58
2:AB:103:TRP:CH2	2:AB:107:ARG:HD3	2.38	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
9:AI:56:MET:HE2	9:AI:57:VAL:H	1.68	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
22:BA:7:G:H2'	22:BA:8:C:C6	2.39	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:H5'	22:BA:2214:C:C6	2.29	0.58
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.38	0.58
40:BS:73:LYS:HA	40:BS:73:LYS:HE3	1.85	0.58
50:B2:43:THR:O	50:B2:44:VAL:CG2	2.51	0.58
53:CA:93:U:O5'	53:CA:93:U:H6	1.86	0.58
53:CA:745:G:H2'	53:CA:746:A:H8	1.69	0.58
53:CA:1533:C:C2'	53:CA:1534:A:H5''	2.32	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:154:U:H2'	57:DA:155:A:O4'	2.03	0.58
57:DA:633:A:O5'	57:DA:633:A:H8	1.85	0.58
57:DA:708:G:N2	57:DA:724:U:H1'	2.19	0.58
57:DA:740:C:C5	57:DA:1981:A:C2	2.92	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
57:DA:1255:U:HO2'	57:DA:1256:G:P	2.26	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1286:A:C6	57:DA:1289:C:N3	2.72	0.58
57:DA:1964:G:H4'	57:DA:1965:C:OP2	2.03	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
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: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
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
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:O	11:AK:22:ILE:HG13	2.02	0.58
22:BA:243:U:O2'	22:BA:244:A:H5'	2.04	0.58
22:BA:482:A:N6	22:BA:506:G:O2'	2.33	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:2498:C:O2'	22:BA:2499:C:H5'	2.04	0.58
34:BM:114:ARG:HA	34:BM:130:PHE:CE1	2.39	0.58
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.28	0.58
52:B4:9:LYS:CD	52:B4:9:LYS:N	2.66	0.58
53:CA:78:A:H2'	53:CA:79:G:H8	1.68	0.58
53:CA:375:U:OP1	56:CP:70:ARG:HD3	2.02	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:992:U:O2'	53:CA:993:G:OP2	2.17	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
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:HD22	12:CL:19:ASN:N	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
57:DA:82:U:H2'	57:DA:83:A:H5''	1.86	0.58
57:DA:815:C:P	39:DR:85:LYS:HE2	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1552:A:H2'	57:DA:1552:A:N3	2.18	0.58
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
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
34:DM:53:MET:HE1	34:DM:103:TYR:CG	2.38	0.58
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.67	0.58
49:D1:10:LEU:HD23	49:D1:20:TYR:HB3	1.86	0.58
1:AA:1087:G:O2'	1:AA:1088:G:H5'	2.03	0.58
5:AE:94:PHE:HZ	5:AE:96:GLN:CD	2.11	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
22:BA:553:G:H2'	22:BA:554:U:O4'	2.04	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
24:BC:255:LYS:C	24:BC:257:ARG:H	2.11	0.58
25:BD:126:ASN:N	25:BD:126:ASN:HD22	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
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.58
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.82	0.58
37:BP:64:SER:O	37:BP:65:ASN:C	2.46	0.58
37:BP:83:ILE:C	37:BP:83:ILE:HD13	2.29	0.58
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.34	0.58
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.19	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
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.37	0.58
53:CA:1217:C:OP1	14:CN:8:ARG:HB2	2.02	0.58
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.39	0.58
53:CA:1318:A:O2'	19:CS:36:ARG:HD3	2.03	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2602:A:OP1	57:DA:2602:A:H3'	2.02	0.58
57:DA:2629:U:H5''	57:DA:2630:G:OP1	2.03	0.58
58:DB:13:G:N2	58:DB:16:G:C4	2.72	0.58
58:DB:116:G:H2'	58:DB:117:G:H8	1.68	0.58
59:DF:60:SER:C	59:DF:62:GLN:H	2.11	0.58
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.27	0.58
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.18	0.58
37:DP:9:GLN:HB3	37:DP:12:MET:HE3	1.85	0.58
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.66	0.58
1:AA:345:C:H3'	37:BP:33:GLU:OE1	2.04	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
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
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
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
32:BK:121:GLU:O	32:BK:122:VAL:C	2.46	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
48:B0:27:LEU:HD23	48:B0:27:LEU:H	1.69	0.58
53:CA:198:G:O6	53:CA:220:G:C5	2.57	0.58
53:CA:252:U:H5'	53:CA:252:U:H6	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:3:VAL:HG23	12:CL:4:ASN:N	2.16	0.58
12:CL:41:PRO:HD2	12:CL:47:ALA:O	2.04	0.58
57:DA:117:G:N1	57:DA:119:A:N6	2.51	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
59:DF:5:ASP:C	59:DF:7:TYR:H	2.11	0.58
28:DG:19:ASN:N	28:DG:19:ASN:HD22	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:54:LEU:HA	29:DH:57:LYS:HG2	1.86	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
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.04	0.58
22:BA:623:C:H2'	22:BA:624:C:C6	2.39	0.58
22:BA:958:U:H5'	34:BM:14:LYS:HZ2	1.69	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:2862:G:H2'	22:BA:2863:C:H6	1.69	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
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.04	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:330:C:O2'	53:CA:331:G:C8	2.45	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
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.45	0.58
53:CA:1272:G:H5'	14:CN:33:VAL:HB	1.86	0.58
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.57	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
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
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
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:51:A:H4'	1:AA:52:C:O5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:619:U:H3	4:AD:130:ASN:CB	2.17	0.58
1:AA:754:C:H5''	1:AA:754:C:O2	2.03	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
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:HB2	14:AN:11:LYS:NZ	2.19	0.58
22:BA:278:A:C2	22:BA:362:A:C8	2.92	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
24:BC:173:LEU:HD22	24:BC:183:VAL:CG2	2.34	0.58
25:BD:101:PHE:N	25:BD:101:PHE:CD1	2.72	0.58
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.12	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: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
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
5:CE:52:ALA:HB2	5:CE:61:LYS:HE3	1.86	0.58
5:CE:68:ARG:O	5:CE:69:ASN:C	2.47	0.58
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.46	0.58
19:CS:52:ASN:HD21	19:CS:55:GLN:N	2.02	0.58
57:DA:104:A:H2'	57:DA:105:C:C6	2.39	0.58
57:DA:333:G:HO2'	57:DA:334:C:H6	1.50	0.58
57:DA:858:G:C4	57:DA:2268:A:C2	2.91	0.58
57:DA:1056:G:C1'	57:DA:1103:A:H61	2.16	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:415:A:H2'	1:AA:416:G:H8	1.67	0.57
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
1:AA:1261:A:N1	1:AA:1274:A:C2	2.72	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:49:A:H61	22:BA:177:G:H2'	1.69	0.57
22:BA:568:U:O2	22:BA:570:G:C8	2.56	0.57
22:BA:1063:G:H2'	22:BA:1064:C:O4'	2.04	0.57
22:BA:2428:G:OP1	22:BA:2429:G:OP1	2.22	0.57
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.29	0.57
28:BG:139:VAL:C	28:BG:141:GLY:N	2.61	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: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:264:C:O2'	17:CQ:64:ARG:HG3	2.03	0.57
53:CA:577:G:C4	53:CA:816:A:C2	2.93	0.57
53:CA:1278:G:O2'	53:CA:1279:G:C2	2.57	0.57
53:CA:1417:G:C6	53:CA:1482:G:C6	2.92	0.57
54:CG:136:LYS:O	54:CG:140:VAL:HG23	2.04	0.57
10:CJ:7:ARG:NH1	10:CJ:102:LEU:HG	2.19	0.57
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.85	0.57
55:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.85	0.57
18:CR:58:ILE:O	18:CR:62:ARG:HG3	2.04	0.57
57:DA:28:A:C6	57:DA:513:A:C8	2.91	0.57
57:DA:636:G:H3'	33:DL:128:THR:HG21	1.86	0.57
57:DA:749:A:C6	57:DA:1618:A:C2	2.92	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:2718:G:O3'	37:DP:95:LYS:HG3	2.03	0.57
57:DA:2744:G:N2	57:DA:2745:C:C2	2.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.84	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: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
1:AA:633:G:O2'	1:AA:634:C:H5'	2.05	0.57
1:AA:1160:G:C6	1:AA:1181:G:O6	2.57	0.57
3:AC:33:ASP:O	3:AC:37:LYS:HB2	2.04	0.57
19:AS:4:LEU:H	19:AS:4:LEU:HD12	1.68	0.57
22:BA:364:C:H2'	22:BA:365:U:C6	2.38	0.57
22:BA:1313:U:H2'	22:BA:1313:U:O2	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
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
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.68	0.57
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.21	0.57
39:BR:58:VAL:CG1	39:BR:102:SER:HB2	2.34	0.57
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.51	0.57
53:CA:960:U:C5	53:CA:1225:A:H1'	2.40	0.57
53:CA:1089:G:H2'	53:CA:1090:U:O4'	2.04	0.57
53:CA:1226:C:H5''	55:CM:94:LEU:HD21	1.85	0.57
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.56	0.57
53:CA:1299:A:C8	53:CA:1301:U:H1'	2.38	0.57
53:CA:1504:G:H3'	53:CA:1505:G:H5'	1.86	0.57
2:CB:105:THR:O	2:CB:108:GLN:HG2	2.04	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:O	55:CM:28:ARG:HD2	2.03	0.57
55:CM:36:ALA:HB2	55:CM:55: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:36:G:N1	57:DA:445:C:C4	2.73	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:632:A:H5''	33:DL:68:SER:OG	2.04	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
58:DB:6:G:H4'	58:DB:28:C:H4'	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:84:ILE:O	31:DJ:84:ILE:HG23	2.05	0.57
33:DL:3:LEU:O	33:DL:4:ASN:C	2.47	0.57
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.19	0.57
1:AA:842:U:H2'	1:AA:844:G:P	2.43	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:381:G:OP1	45:BX:17:ARG:HD3	2.04	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
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:H8	22:BA:1269:A:O5'	1.87	0.57
22:BA:1998:A:H2'	22:BA:1999:C:H6	1.68	0.57
23:BB:90:C:H6	23:BB:90:C:C5'	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
36:BO:106:LEU:C	36:BO:106:LEU:HD12	2.29	0.57
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.04	0.57
47:BZ:29:ARG:C	47:BZ:30:ARG:HG3	2.29	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:12:U:O2	57:DA:12:U:H2'	2.03	0.57
57:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.40	0.57
57:DA:118:A:O5'	57:DA:119:A:H5''	2.04	0.57
57:DA:482:A:N6	57:DA:506:G:C4	2.71	0.57
57:DA:851:C:C4'	47:DZ:46:MET:HG2	2.34	0.57
57:DA:1275:A:HO2'	57:DA:1276:A:C1'	2.14	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:2298:A:H5'	57:DA:2322:A:O2'	2.04	0.57
57:DA:2313:C:O2'	57:DA:2314:A:H5'	2.03	0.57
57:DA:2623:G:H21	48:D0:18:HIS:CE1	2.22	0.57
57:DA:2642:G:H5'	31:DJ:80:HIS:CE1	2.39	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
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.03	0.57
37:DP:7:LEU:O	37:DP:7:LEU:HD12	2.05	0.57
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.87	0.57
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:35:G:H2'	1:AA:36:C:C6	2.40	0.57
1:AA:306:A:H2'	1:AA:307:C:C6	2.39	0.57
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
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
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: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
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
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
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.12	0.57
38:BQ:86:SER:HB2	39:BR:50:GLY:C	2.29	0.57
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.30	0.57
40:BS:72:THR:HG21	40:BS:108:SER:OG	2.05	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
53:CA:1048:G:H21	53:CA:1214:C:H5	1.53	0.57
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.85	0.57
57:DA:206:U:O2'	57:DA:207:A:H5'	2.03	0.57
57:DA:414:C:H5''	57:DA:1879:C:O2'	2.04	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
57:DA:1738:G:HO2'	57:DA:1739:A:H8	1.49	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
24:DC:15:VAL:HG22	24:DC:204:LEU:O	2.03	0.57
59:DF:45:ASP:C	59:DF:47:LYS:H	2.12	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:688:G:H5''	1:AA:688:G:C8	2.37	0.57
1:AA:1517:G:N3	22:BA:1919:A:O2'	2.37	0.57
3:AC:34:SER:OG	3:AC:94:ALA:HA	2.03	0.57
4:AD:62:ARG:NE	4:AD:62:ARG:HA	2.19	0.57
4:AD:64:TYR:CE1	4:AD:93:LEU:HD13	2.39	0.57
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.04	0.57
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.45	0.57
22:BA:26:G:C6	22:BA:27:G:N1	2.72	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
23:BB:98:G:H1	43:BV:14:LYS:HB3	1.69	0.57
24:BC:69:ASN:O	24:BC:70:LYS:C	2.46	0.57
25:BD:29:VAL:HB	25:BD:98:VAL:HG22	1.86	0.57
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.34	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
44:BW:9:THR:HG23	44:BW:10:ARG:CD	2.19	0.57
44:BW:28:GLU:O	44:BW:30:VAL:N	2.38	0.57
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.04	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
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
53:CA:1386:G:O2'	53:CA:1387:G:H5'	2.05	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
14:CN:100:TRP:C	14:CN:100:TRP:CD1	2.83	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:83:A:P	42:DU:91:LYS:HZ2	2.27	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
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:1476:U:H1'	57:DA:1732:C:C2	2.40	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.29	0.57
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.04	0.57
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.34	0.57
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.30	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
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
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:94:A:H2'	22:BA:95:A:C8	2.40	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:2531:A:P	28:BG:174:LYS:HG3	2.43	0.57
27:BF:105:ILE:C	27:BF:108:PRO:HD2	2.30	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:68:LYS:HE2	41:BT:77:ARG:NE	2.20	0.57
53:CA:106:C:O2	53:CA:379:C:H4'	2.04	0.57
53:CA:134:G:H2'	53:CA:135:C:O4'	2.05	0.57
53:CA:246:A:C4	53:CA:282:A:N6	2.73	0.57
53:CA:740:U:O2'	53:CA:741:G:H5'	2.04	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:1409:C:H6	53:CA:1409:C:O5'	1.88	0.57
4:CD:31:CYS:O	4:CD:32:LYS:HB2	2.05	0.57
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.03	0.57
57:DA:60:G:HO2'	57:DA:61:C:P	2.27	0.57
57:DA:303:G:C2	57:DA:304:U:C2	2.93	0.57
57:DA:799:G:P	57:DA:800:A:H3'	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:AA:75:G:C5	1:AA:76:G:C8	2.91	0.57
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.40	0.57
5:AE:152:VAL:HG12	5:AE:155:LYS:HZ1	1.68	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
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
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
24:BC:20:ASN:CG	24:BC:23:LEU:HD23	2.30	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
12:CL:70:GLY:C	12:CL:98:ARG:HH22	2.13	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:263:G:H4'	57:DA:430:A:O4'	2.05	0.57
57:DA:304:U:H2'	57:DA:305:C:C6	2.39	0.57
57:DA:532:A:N1	57:DA:2020:A:O2'	2.35	0.57
57:DA:840:C:H4'	57:DA:1192:G:O2'	2.05	0.57
57:DA:984:A:O2'	57:DA:985:C:OP1	2.21	0.57
57:DA:991:C:OP2	57:DA:1186:G:OP2	2.22	0.57
57:DA:1055:G:H2'	57:DA:1055:G:N3	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2808:G:O2'	57:DA:2809:A:H8	1.88	0.57
26:DE:61:ARG:O	26:DE:61:ARG:HD2	2.05	0.57
26:DE:150:THR:O	26:DE:192:ALA:HB2	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
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
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
22:BA:2727:A:O2'	22:BA:2728:U: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: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
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
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.68	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:74:A:H4'	57:DA:75:G:O5'	2.04	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:528:A:C2	57:DA:2042:A:H2'	2.39	0.57
57:DA:600:G:H5''	26:DE:27:LEU:HD22	1.87	0.57
57:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.40	0.57
57:DA:2241:A:H2'	57:DA:2242:G:C8	2.40	0.57
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
44:DW:8:SER:O	44:DW:9:THR:HB	2.05	0.57
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.05	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
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.69	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:141:G:H5'	22:BA:142:A:C8	2.39	0.57
22:BA:752:A:N7	22:BA:1781:U:O4'	2.38	0.57
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.35	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
22:BA:2013:A:C2	40:BS:88:ARG:NH1	2.73	0.57
22:BA:2062:A:HO2'	22:BA:2063:C:H5'	1.70	0.57
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.53	0.57
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.03	0.57
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.83	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: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
53:CA:1168:U:O2	53:CA:1168:U:C2'	2.46	0.57
53:CA:1458:G:H4'	20:CT:22:SER:HB2	1.85	0.57
8:CH:1:SER:C	8:CH:3:GLN:N	2.63	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
57:DA:2230:G:C1'	45:DX:31:ASN:HB3	2.34	0.57
24:DC:72:GLY:O	24:DC:73:ILE:HD13	2.05	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.40	0.57
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.30	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
22:BA:745:G:H2'	22:BA:746:U:H5'	1.87	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:2013:A:OP1	40:BS:96:ILE:HA	2.04	0.57
28:BG:132:LEU:N	28:BG:132:LEU:HD23	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
41:BT:24:MET:O	41:BT:24:MET:HG3	2.04	0.57
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.05	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
21:CU:35:GLU:OE1	21:CU:37:TYR:CD1	2.58	0.57
57:DA:7:G:O2'	31:DJ:15:TRP:HZ2	1.87	0.57
57:DA:117:G:C6	57:DA:119:A:C6	2.93	0.57
57:DA:477:A:O2'	57:DA:478:A:H8	1.87	0.57
57:DA:850:U:HO2'	47:DZ:46:MET:HE3	1.70	0.57
57:DA:871:U:OP1	34:DM:4:PRO:HA	2.05	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
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.04	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
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:19:GLY:N	34:DM:38:ARG:NH2	2.41	0.57
1:AA:853:C:C2'	1:AA:854:U:H5'	2.34	0.56
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HB3	15:AO:9:LYS:NZ	2.19	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
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:1993:U:C4'	25:BD:133:THR:HG21	2.29	0.56
24:BC:64:VAL:O	24:BC:64:VAL:HG12	2.04	0.56
26:BE:134:LEU:HD12	26:BE:134:LEU:O	2.05	0.56
28:BG:126:THR:HG22	28:BG:127:GLN:N	2.20	0.56
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: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
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
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
56:CP:48:GLU:CD	56:CP:51:ARG:HB2	2.30	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:NE	47:DZ:37:ARG:HA	2.19	0.56
49:D1:18:HIS:HD1	49:D1:48:TYR:HH	1.53	0.56
1:AA:872:A:C8	1:AA:874:G:C8	2.93	0.56
1:AA:1071:C:H2'	1:AA:1072:G:C8	2.40	0.56
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.04	0.56
5:AE:134:ASN:O	5:AE:137:ARG:HB3	2.05	0.56
22:BA:728:G:O2'	22:BA:730:A:H8	1.88	0.56
22:BA:2307:G:N2	22:BA:2311:A:C8	2.73	0.56
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.51	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:55:MET:HE2	33:BL:56:PRO:HD3	1.87	0.56
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.34	0.56
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.70	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
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:25:ARG:HG2	4:CD:25:ARG:HH11	1.69	0.56
4:CD:190:LEU:O	4:CD:191:SER:O	2.23	0.56
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.35	0.56
55:CM:32:ILE:HD13	55:CM:32:ILE:O	2.05	0.56
56:CP:54:LEU:HD23	56:CP:54:LEU:H	1.70	0.56
20:CT:57:VAL:HG12	20:CT:71:ALA:HB2	1.87	0.56
57:DA:185:G:H2'	57:DA:186:G:H8	1.70	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: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:8:A:N6	4:AD:204:SER:HB2	2.20	0.56
1:AA:98:A:H2'	1:AA:99:C:C6	2.41	0.56
1:AA:135:C:H2'	1:AA:136:C:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:303:A:H2'	1:AA:304:U:O4'	2.05	0.56
1:AA:466:A:O2'	1:AA:467:U:C5	2.58	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:914:A:N3	1:AA:915:A:C8	2.73	0.56
1:AA:1141:C:O2'	1:AA:1142:G:O5'	2.11	0.56
4:AD:80:ARG:HH21	4:AD:81:LEU:HD21	1.71	0.56
4:AD:86:GLY:O	4:AD:89:LEU:HB3	2.06	0.56
4:AD:100:VAL:HG12	4:AD:100:VAL:O	2.05	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
14:AN:88:MET:HE1	14:AN:97:LYS:HD2	1.87	0.56
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	2.18	0.56
22:BA:1056:G:H21	22:BA:1103:A:H62	1.51	0.56
22:BA:1071:G:H1'	22:BA:1089:A:C8	2.40	0.56
22:BA:1107:G:N2	22:BA:1108:U:C2	2.72	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:1670:C:O2	25:BD:134:HIS:NE2	2.37	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
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
24:BC:140:VAL:HG13	24:BC:189:ALA:HB1	1.87	0.56
24:BC:141:HIS:CD2	24:BC:192:GLY:O	2.58	0.56
25:BD:9:VAL:CG2	25:BD:26:VAL:HB	2.33	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
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.19	0.56
29:BH:75:LEU:HD22	29:BH:143:ILE:HG12	1.88	0.56
32:BK:6:THR:HG22	32:BK:6:THR:O	2.05	0.56
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
37:BP:61:ARG:HG2	37:BP:70:GLU:CG	2.35	0.56
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.05	0.56
44:BW:28:GLU:OE2	44:BW:28:GLU:CA	2.54	0.56
45:BX:65:THR:O	45:BX:68:ALA:HB3	2.06	0.56
52:B4:9:LYS:O	52:B4:10:LEU:HD23	2.05	0.56
53:CA:238:A:C2'	53:CA:239:U:H5''	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
53:CA:1455:G:H2'	53:CA:1456:A:C8	2.40	0.56
2:CB:130:LYS:HD3	2:CB:133:ALA:HB3	1.87	0.56
11:CK:124:LYS:O	21:CU:34:ARG:HB2	2.06	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
57:DA:53:A:H2'	57:DA:54:G:C8	2.41	0.56
57:DA:108:G:H2'	57:DA:109:C:C6	2.41	0.56
57:DA:176:A:H3'	57:DA:177:G:H21	1.69	0.56
57:DA:424:G:O2'	57:DA:425:G:H5'	2.06	0.56
57:DA:589:U:H2'	57:DA:590:A:C8	2.38	0.56
57:DA:994:C:OP2	38:DQ:49:ARG:HG3	2.04	0.56
57:DA:1006:C:H6	57:DA:1006:C:O5'	1.87	0.56
57:DA:1049:C:O2	57:DA:1113:U:H4'	2.05	0.56
57:DA:1076:C:O2'	57:DA:1077:A:C8	2.58	0.56
57:DA:1400:U:O2'	57:DA:1401:G:O4'	2.18	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: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:2651:C:O2'	57:DA:2652:C:H5'	2.06	0.56
57:DA:2669:G:H2'	57:DA:2670:A:C8	2.39	0.56
57:DA:2714:G:H8	57:DA:2714:G:O5'	1.88	0.56
57:DA:2714:G:O2'	57:DA:2715:C:H5'	2.06	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
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.31	0.56
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.71	0.56
33:DL:63:LYS:C	33:DL:65:GLY:H	2.14	0.56
33:DL:93:ASN:CG	33:DL:94:THR:N	2.62	0.56
35:DN:47:VAL:O	35:DN:50:PRO:HD2	2.06	0.56
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.30	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.05	0.56
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.87	0.56
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.21	0.56
49:D1:7:LYS:O	49:D1:8:ILE:HD13	2.05	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
1:AA:1143:G:H2'	1:AA:1144:G:C8	2.40	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
22:BA:1154:G:OP1	38:BQ:57:ARG:HD3	2.05	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:119:ILE:HD13	26:BE:187:VAL:HA	1.87	0.56
26:BE:124:PHE:CD1	26:BE:124:PHE:C	2.82	0.56
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.05	0.56
28:BG:117:PRO:O	28:BG:118:ALA:O	2.24	0.56
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.30	0.56
32:BK:99:ILE:HG23	32:BK:100:PHE:N	2.20	0.56
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.41	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
53:CA:322:C:O2'	20:CT:17:ARG:HG3	2.05	0.56
53:CA:352:C:H6	53:CA:352:C:H5''	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
2:CB:9:LEU:HD12	2:CB:11:ALA:C	2.31	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
31:BJ:1:MET:HE3	31:BJ:1:MET:N	2.20	0.56
32:BK:77:ILE:HD12	32:BK:77:ILE:N	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
46:BY:23:ARG:O	46:BY:24:GLU:C	2.48	0.56
53:CA:373:A:HO2'	53:CA:374:A:H5'	1.67	0.56
53:CA:962:C:N4	53:CA:974:A:H61	2.04	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
2:CB:99:MET:O	2:CB:103:TRP:HB3	2.05	0.56
2:CB:128:LEU:O	2:CB:129:THR:C	2.49	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: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:1373:A:H2'	57:DA:1374:G:O4'	2.05	0.56
57:DA:1568:G:H21	24:DC:57:HIS:CE1	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	2.00	0.56
59:DF:7:TYR:O	59:DF:8:LYS:HG3	2.06	0.56
59:DF:147:ARG:HD2	59:DF:147:ARG:H	1.71	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
22:BA:813:U:H2'	22:BA:814:C:C6	2.40	0.56
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.35	0.56
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.06	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
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.06	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
42:BU:51:LEU:O	42:BU:52:ASN:HB2	2.04	0.56
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.87	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
53:CA:1062:U:H2'	53:CA:1063:C:C5	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:83:ARG:HG2	15:CO:83:ARG:O	2.06	0.56
57:DA:52:A:O2'	57:DA:53:A:H5'	2.05	0.56
57:DA:340:A:H2'	57:DA:341:C:O4'	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:H3'	57:DA:962:G:OP1	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
26:DE:79:ARG:O	26:DE:80:SER:C	2.49	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:367:U:C6	1:AA:394:G:N2	2.74	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
3:AC:119:ILE:HD11	3:AC:133:MET:HA	1.88	0.56
4:AD:166:LYS:HB3	4:AD:166:LYS:NZ	2.20	0.56
7:AG:39:GLU:HB2	7:AG:43:TYR:CE2	2.40	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
22:BA:2062:A:O2'	22:BA:2063:C:C5'	2.48	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
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.49	0.56
38:BQ:20:ALA:HA	38:BQ:23:TYR:CD1	2.40	0.56
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.87	0.56
50:B2:18:PHE:O	50:B2:22:MET:HB2	2.06	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
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.71	0.56
56:CP:29:ASN:OD1	56:CP:29:ASN:N	2.37	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:DB:27:C:H2'	58:DB:28:C:C6	2.39	0.56
58:DB:28:C:OP1	36:DO:31:THR:HG21	2.06	0.56
58:DB:110:C:O2'	58:DB:111:U:C5'	2.46	0.56
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	2.21	0.56
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.06	0.56
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.05	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
1:AA:86:G:N2	1:AA:87:C:N4	2.53	0.56
1:AA:1002:G:H2'	1:AA:1003:G:O4'	2.06	0.56
1:AA:1124:G:OP1	10:AJ:37:ARG:C	2.49	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
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: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
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
49:B1:29:LYS:NZ	49:B1:29:LYS:HB3	2.20	0.56
51:B3:31:ILE:O	51:B3:31:ILE:HG13	2.05	0.56
52:B4:9:LYS:HD3	52:B4:9:LYS:N	2.09	0.56
53:CA:35:G:H21	12:CL:114:SER:HB3	1.70	0.56
53:CA:174:A:H2'	53:CA:175:C:H6	1.71	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:77:G:O2'	57:DA:78:U:O4'	2.18	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:962:G:O2'	57:DA:963:U:C6	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2387:U:H1'	44:DW:38:ARG:HH12	1.70	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
58:DB:100:G:H2'	58:DB:101:A:O4'	2.06	0.56
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.38	0.56
31:DJ:64:VAL:HG11	31:DJ:69:ARG:HA	1.87	0.56
1:AA:922:G:H1'	5:AE:23:THR:HG22	1.87	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
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: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
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
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.32	0.56
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
34:BM:53:MET:HE1	34:BM:103:TYR:CD2	2.41	0.56
35:BN:38:LEU:HD12	35:BN:38:LEU:C	2.31	0.56
39:BR:9:GLY:C	39:BR:10:LYS:HD2	2.30	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:858:G:O6	53:CA:869:G:C8	2.59	0.56
53:CA:1253:G:N1	53:CA:1285:A:N6	2.54	0.56
53:CA:1348:U:O2'	53:CA:1349:A:H8	1.87	0.56
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	2.19	0.56
4:CD:137:SER:CB	4:CD:138:PRO:HD2	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
58:DB:112:G:N2	36:DO:45:SER:HA	2.05	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
42:DU:44:HIS:CD2	42:DU:57:ILE:HG21	2.40	0.56
1:AA:92:U:H2'	1:AA:93:U:C5	2.41	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
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
6:AF:85:ILE:O	6:AF:86:ARG:C	2.48	0.56
9:AI:38:PHE:HA	9:AI:41:GLU:OE1	2.06	0.56
22:BA:622:G:H2'	22:BA:623:C:H6	1.71	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
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.38	0.56
26:BE:47:LYS:HD3	26:BE:51:GLU:O	2.05	0.56
27:BF:131:VAL:CG2	27:BF:151:LEU:HG	2.36	0.56
27:BF:134:GLN:NE2	27:BF:148:VAL:O	2.39	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
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.79	0.56
48:B0:53:VAL:O	48:B0:54:ILE:C	2.49	0.56
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.68	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:44:LYS:O	2:CB:48:MET:HG3	2.05	0.56
2:CB:74:ALA:CB	2:CB:206:ILE:HD11	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:95:TRP:CZ3	2:CB:171:ALA:HA	2.41	0.56
8:CH:12:ARG:HH12	8:CH:27:PRO:HD2	1.70	0.56
11:CK:94:SER:O	11:CK:97:ARG:HB2	2.06	0.56
11:CK:121:ARG:NH2	21:CU:35:GLU:HB2	2.20	0.56
57:DA:140:C:H5'	57:DA:141:G:H21	1.70	0.56
57:DA:279:A:N6	57:DA:361:G:O2'	2.39	0.56
57:DA:571:U:HO2'	57:DA:573:U:H6	1.49	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
57:DA:1272:A:C5	57:DA:1618:A:H1'	2.40	0.56
57:DA:1343:G:H2'	57:DA:1344:U:H5	1.70	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:2020:A:H5'	48:D0:8:THR:HG22	1.88	0.56
57:DA:2800:A:C2'	57:DA:2801:G:H4'	2.36	0.56
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.71	0.56
26:DE:85:PHE:O	26:DE:86:ALA:C	2.49	0.56
59:DF:131:VAL:C	59:DF:133:GLU:H	2.13	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: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
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.21	0.56
1:AA:596:A:N6	1:AA:645:G:N1	2.54	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
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: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
22:BA:1684:G:H2'	22:BA:1685:C:C6	2.41	0.55
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.36	0.55
27:BF:38:GLY:HA2	27:BF:85:GLY:HA3	1.87	0.55
27:BF:56:LEU:HA	27:BF:59:ILE:HD12	1.87	0.55
37:BP:80:VAL:O	37:BP:81:ASP:HB3	2.06	0.55
38:BQ:106:THR:O	38:BQ:107:ALA:C	2.48	0.55
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:CD:81:LEU:O	4:CD:83:GLY:N	2.39	0.55
12:CL:33:CYS:HA	12:CL:54:VAL:HA	1.88	0.55
57:DA:92:U:O2'	57:DA:93:G:H5'	2.07	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: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: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:2591:C:OP1	24:DC:237:ARG:HD2	2.05	0.55
24:DC:231:HIS:O	24:DC:232:GLY:C	2.48	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
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.32	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: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
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
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
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.18	0.55
22:BA:545:U:O2	22:BA:545:U:O4'	2.22	0.55
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.36	0.55
22:BA:1385:A:O2'	22:BA:1396:U:O2	2.23	0.55
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.41	0.55
22:BA:1842:G:O4'	24:BC:242:HIS:CE1	2.59	0.55
22:BA:2868:A:H2'	22:BA:2869:G:C8	2.42	0.55
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.70	0.55
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	2.06	0.55
51:B3:21:PHE:HB2	51:B3:49:VAL:HG13	1.89	0.55
53:CA:263:A:OP1	20:CT:73:ARG:NH1	2.39	0.55
53:CA:1167:A:N7	53:CA:1169:A:N6	2.54	0.55
2:CB:147:LEU:HD12	2:CB:147:LEU:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:187:G:C2	57:DA:210:C:C2	2.94	0.55
57:DA:452:G:OP1	26:DE:53:THR:HG23	2.06	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
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: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
58:DB:12:C:H5''	58:DB:15:A:H62	1.70	0.55
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.31	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
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:32:ALA:O	40:DS:33:LEU:HB2	2.06	0.55
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.06	0.55
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.05	0.55
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.88	0.55
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.87	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
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.32	0.55
22:BA:907:G:C2'	22:BA:908:C:H5'	2.36	0.55
22:BA:996:A:C4'	38:BQ:91:ARG:HG2	2.33	0.55
22:BA:1653:G:H1	35:BN:11:ASN:ND2	2.04	0.55
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.07	0.55
22:BA:2347:C:OP1	22:BA:2347:C:H4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2503:A:O2'	22:BA:2505:G:OP2	2.24	0.55
24:BC:77:VAL:HG22	24:BC:77:VAL:O	2.07	0.55
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.88	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	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:65:A:H4'	53:CA:66:A:O5'	2.05	0.55
53:CA:570:G:H2'	53:CA:571:U:C6	2.41	0.55
53:CA:909:A:H2	53:CA:1413:A:N3	2.04	0.55
53:CA:922:G:H2'	53:CA:923:A:C8	2.41	0.55
53:CA:1003:G:N2	53:CA:1005:A:H5''	2.21	0.55
2:CB:147:LEU:HD12	2:CB:147:LEU:N	2.21	0.55
5:CE:44:ARG:NH2	5:CE:70:MET:HB2	2.20	0.55
5:CE:132:PRO:O	5:CE:136:VAL:HG12	2.06	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:5:ARG:O	56:CP:19:VAL:HA	2.06	0.55
56:CP:46:LYS:HE2	56:CP:47:GLU:N	2.21	0.55
57:DA:303:G:O2'	57:DA:304:U:C6	2.55	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
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
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.07	0.55
1:AA:721:G:H4'	1:AA:722:G:C5'	2.36	0.55
1:AA:937:A:N6	1:AA:1345:U:O4	2.39	0.55
6:AF:6:ILE:HG12	6:AF:89:VAL:CG2	2.22	0.55
6:AF:47:LEU:HD13	6:AF:51:ILE:HG22	1.88	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
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
29:BH:66:ASN:C	29:BH:68:ARG:H	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.12	0.55
49:B1:16:THR:HB	49:B1:41:VAL:HG21	1.88	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
53:CA:1215:G:HO2'	53:CA:1216:A:H8	1.53	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:64:A:P	41:DT:77:ARG:HG2	2.45	0.55
57:DA:70:G:H8	57:DA:70:G:OP2	1.89	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:810:U:HO2'	57:DA:811:U:H5	1.54	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:2285:C:C5	49:D1:5:ARG:NH2	2.72	0.55
57:DA:2297:A:N3	57:DA:2298:A:C8	2.74	0.55
57:DA:2591:C:P	24:DC:237:ARG:HD2	2.46	0.55
57:DA:2677:G:H2'	57:DA:2678:C:H6	1.71	0.55
58:DB:55:U:C1'	59:DF:25:MET:HE1	2.36	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
37:DP:107:ALA:O	37:DP:108:ARG:C	2.50	0.55
43:DV:56:PHE:C	43:DV:58:SER:H	2.14	0.55
1:AA:270:A:H2'	1:AA:271:C:H6	1.66	0.55
1:AA:961:U:O5'	1:AA:961:U:H6	1.90	0.55
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
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
8:AH:45:ILE:C	8:AH:63:LYS:HD2	2.31	0.55
10:AJ:21:ALA:HA	10:AJ:24:GLU:HG3	1.88	0.55
22:BA:181:A:H1'	22:BA:435:C:H5'	1.87	0.55
22:BA:1414:C:C5	22:BA:1415:U:H5	2.25	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.56	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:3:ILE:HD13	37:BP:3:ILE:C	2.31	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: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
53:CA:1181:G:H2'	53:CA:1182:G:N7	2.21	0.55
14:CN:27:LYS:HD2	14:CN:27:LYS:C	2.31	0.55
15:CO:63:ARG:HH12	57:DA:715:A:P	2.29	0.55
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.32	0.55
57:DA:447:A:H5'	57:DA:449:A:C5	2.42	0.55
57:DA:587:C:H1'	57:DA:671:C:H5'	1.89	0.55
57:DA:867:C:O2'	57:DA:868:U:C5'	2.55	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:2286:G:O6	49:D1:22:THR:HG21	2.06	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
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.06	0.55
26:DE:119:ILE:O	26:DE:119:ILE:HG13	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
35:DN:1:MET:O	35:DN:2:ARG:CB	2.55	0.55
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.87	0.55
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.07	0.55
44:DW:31:LEU:C	44:DW:33:GLY:H	2.13	0.55
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.06	0.55
1:AA:328:C:O2	1:AA:328:C:H2'	2.06	0.55
1:AA:414:A:O2'	1:AA:415:A:O4'	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:AD:191:SER:O	4:AD:192:ALA:HB2	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
22:BA:303:G:H2'	22:BA:304:U:C6	2.41	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
25:BD:143:PRO:HD2	25:BD:144:GLY:H	1.71	0.55
25:BD:151:THR:C	25:BD:153:GLY:N	2.62	0.55
34:BM:80:VAL:HG22	34:BM:81:ARG:O	2.06	0.55
39:BR:45:GLU:OE2	39:BR:45:GLU:HA	2.05	0.55
43:BV:5:ASN:ND2	43:BV:5:ASN:H	2.04	0.55
43:BV:48:MET:HE2	43:BV:84:PRO:O	2.06	0.55
45:BX:70:LEU:HB3	45:BX:75:GLU:HB2	1.89	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
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
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: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
57:DA:1155:A:H5''	38:DQ:54:ARG:NE	2.22	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
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
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:HA	37:DP:95:LYS:HE3	1.88	0.55
47:DZ:40:THR:N	47:DZ:43:ILE:HD11	2.20	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
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:2421:G:N7	51:B3:30:HIS:CD2	2.74	0.55
22:BA:2492:U:HO2'	22:BA:2493:U:H5'	1.70	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
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
49:B1:7:LYS:HG3	49:B1:23:THR:HG22	1.89	0.55
53:CA:80:A:H3'	53:CA:81:A:H4'	1.88	0.55
53:CA:157:U:C2'	53:CA:158:G:H5'	2.37	0.55
53:CA:599:C:H4'	8:CH:121:GLY:C	2.31	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
4:CD:29:THR:C	4:CD:31:CYS:H	2.15	0.55
9:CI:5:TYR:N	9:CI:5:TYR:HD2	2.04	0.55
57:DA:55:G:N2	57:DA:116:C:C2	2.75	0.55
57:DA:75:G:H4'	46:DY:48:ARG:HH21	1.72	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
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:1335:C:OP1	41:DT:68:LYS:HD2	2.05	0.55
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
24:DC:66:PHE:HB3	24:DC:150:GLY:O	2.06	0.55
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.65	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.15	0.55
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.84	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
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
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
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.54	0.55
15:AO:34:GLN:HB3	15:AO:58:MET:HE1	1.87	0.55
22:BA:45:G:H5''	22:BA:46:G:H5'	1.88	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
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
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
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
53:CA:600:A:OP1	8:CH:88:LYS:HG2	2.06	0.55
53:CA:1186:G:H4'	9:CI:111:GLU:CD	2.31	0.55
53:CA:1191:A:OP1	3:CC:2:GLN:NE2	2.40	0.55
3:CC:24:ASN:O	3:CC:28:PHE:HB2	2.06	0.55
5:CE:157:GLY:HA3	8:CH:63:LYS:CE	2.37	0.55
57:DA:123:G:O3'	57:DA:1376:C:H4'	2.06	0.55
57:DA:170:U:H2'	57:DA:171:U:H6	1.72	0.55
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1565:C:HO2'	57:DA:1566:A:P	2.29	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: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
1:AA:923:A:O4'	1:AA:1398:A:C2	2.60	0.55
1:AA:1384:C:H2'	1:AA:1385:G:H8	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
8:AH:1:SER:C	8:AH:3:GLN:N	2.62	0.55
22:BA:990:A:H8	22:BA:990:A:C5'	2.20	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
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:HH21	38:BQ:69:ARG:CG	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
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
53:CA:1343:G:H1'	9:CI:122:ARG:NH1	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:176:LYS:HE2	4:CD:178:GLU:OE1	2.07	0.55
8:CH:75:GLN:O	8:CH:126:CYS:CB	2.55	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:674:G:O3'	26:DE:60:TRP:HH2	1.89	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:2543:G:C6	57:DA:2765:A:C5	2.95	0.55
57:DA:2577:A:H2	48:D0:1:ALA:N	2.05	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
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
42:DU:52:ASN:CG	42:DU:54:PRO:HD3	2.31	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: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
1:AA:1500:A:OP2	63:AA:1872:HOH:O	2.18	0.55
6:AF:9:MET:HE3	18:AR:64:LEU:HD22	1.89	0.55
7:AG:53:SER:C	7:AG:55:LYS:H	2.15	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
22:BA:77:G:N2	22:BA:110:G:H1'	2.22	0.55
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.57	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
25:BD:11:MET:HA	25:BD:24:VAL:O	2.06	0.55
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	1.88	0.55
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:3:THR:C	47:BZ:4:ILE:HG22	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.22	0.55
51:B3:41:ARG:HG3	51:B3:44:ARG:NH2	2.22	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
53:CA:560:A:C6	5:CE:127:TYR:CE2	2.94	0.55
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.60	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
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.88	0.55
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.32	0.55
12:CL:109:ARG:CB	12:CL:118:VAL:HG21	2.36	0.55
57:DA:60:G:O2'	57:DA:61:C:OP1	2.24	0.55
57:DA:204:A:C4	57:DA:206:U:O4	2.60	0.55
57:DA:242:G:H8	51:D3:3:ILE:O	1.90	0.55
57:DA:273:G:O2'	57:DA:274:C:O4'	2.25	0.55
57:DA:422:A:H2'	57:DA:423:A:H8	1.71	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
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: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:2557:G:H2'	57:DA:2558:C:C6	2.42	0.55
57:DA:2876:G:C2	57:DA:2877:G:H1'	2.42	0.55
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.07	0.55
26:DE:72:SER:C	26:DE:74:LYS:H	2.14	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
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.88	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:60:VAL:O	4:AD:63:ILE:HG22	2.06	0.54
4:AD:117:VAL:HA	4:AD:122:ILE:HD11	1.88	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:225:C:H2'	22:BA:226:A:O4'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.39	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
22:BA:2879:A:H4'	22:BA:2880:C:OP1	2.07	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
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
53:CA:1126:U:O4	10:CJ:73:LEU:HD11	2.06	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:H	9:CI:125:GLN:HE21	1.54	0.54
11:CK:90:PRO:O	11:CK:91:GLY:C	2.50	0.54
17:CQ:13:SER:O	17:CQ:20:ILE:HB	2.07	0.54
57:DA:637:A:N6	57:DA:652:U:H4'	2.22	0.54
57:DA:784:G:C2	24:DC:227:VAL:HG21	2.42	0.54
57:DA:865:C:H5''	57:DA:866:A:OP1	2.07	0.54
57:DA:1079:C:N4	57:DA:1088:A:N3	2.55	0.54
57:DA:1263:U:HO2'	48:D0:7:PRO:HD2	1.72	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
58:DB:12:C:H5''	58:DB:15:A:N6	2.22	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:HD2	38:DQ:50:ARG:N	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:702:A:C4	22:BA:1847:A:H2	2.25	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:HI'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:118:SER:O	3:AC:122:GLN:HG2	2.06	0.54
3:AC:166:TRP:HE3	3:AC:166:TRP:N	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:580:U:O3'	38:BQ:30:VAL:CG1	2.56	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:2354:C:C4'	44:BW:31:LEU:HD22	2.37	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
27:BF:110:ILE:O	27:BF:111:ARG:C	2.49	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
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.58	0.54
34:BM:64:TRP:HZ3	34:BM:106:ASP:HB2	1.72	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: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
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
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
15:CO:63:ARG:NH2	57:DA:715:A:H5'	2.20	0.54
56:CP:5:ARG:HA	56:CP:71:VAL:HG11	1.89	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
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:1248:G:H2'	38:DQ:1:ALA:O	2.08	0.54
57:DA:1773:A:H2'	57:DA:1774:C:O4'	2.08	0.54
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:8:LYS:C	29:DH:8:LYS:HD2	2.32	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
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.21	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
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.42	0.54
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.07	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
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.41	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
3:AC:54:ILE:C	3:AC:54:ILE:HD12	2.31	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: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
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
26:BE:115:GLN:O	26:BE:116:ASP:C	2.51	0.54
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.20	0.54
29:BH:2:GLN:C	29:BH:3:VAL:HG13	2.32	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
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.14	0.54
35:BN:23:ASN:HD22	35:BN:23:ASN:N	1.95	0.54
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.89	0.54
38:BQ:91:ARG:NE	39:BR:11:GLN:HB2	2.22	0.54
53:CA:9:G:O2'	53:CA:10:A:H5'	2.08	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
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.42	0.54
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.06	0.54
12:CL:19:ASN:ND2	12:CL:19:ASN:N	2.56	0.54
17:CQ:12:VAL:HG22	17:CQ:12:VAL:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:98:G:O2'	57:DA:103:A:C8	2.61	0.54
57:DA:118:A:OP1	50:D2:22:MET:SD	2.66	0.54
57:DA:345:A:O2'	57:DA:346:A:C2	2.61	0.54
57:DA:612:G:C2	57:DA:617:G:O6	2.60	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
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
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: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:4:ILE:HD11	43:DV:50:MET:HE1	1.90	0.54
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.89	0.54
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.75	0.54
1:AA:77:A:H2'	1:AA:78:A:N7	2.22	0.54
1:AA:736:C:H2'	1:AA:737:C:H6	1.69	0.54
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.07	0.54
1:AA:1332:A:H5''	1:AA:1332:A:N3	2.23	0.54
7:AG:69:ARG:HG3	7:AG:95:ARG:CG	2.38	0.54
8:AH:17:GLN:CD	8:AH:69:ALA:HB1	2.32	0.54
11:AK:15:VAL:HG13	11:AK:78:ILE:CG2	2.37	0.54
11:AK:24:ALA:HA	11:AK:29:THR:HG23	1.90	0.54
22:BA:50:U:H4'	22:BA:51:G:OP2	2.08	0.54
22:BA:163:C:O2'	22:BA:164:C:O5'	2.22	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:622:G:H2'	22:BA:623:C:C6	2.43	0.54
22:BA:747:U:O2	22:BA:2014:A:H1'	2.08	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
38:BQ:43:GLN:HE22	39:BR:77:PHE:HD1	1.55	0.54
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.22	0.54
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	1.89	0.54
43:BV:10:LYS:HD3	43:BV:10:LYS:N	2.16	0.54
44:BW:28:GLU:CD	44:BW:29:SER:H	2.15	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
3:CC:34:SER:O	3:CC:38:VAL:HG13	2.08	0.54
4:CD:25:ARG:O	4:CD:26:ALA:C	2.50	0.54
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.22	0.54
4:CD:115:GLN:NE2	4:CD:153:ARG:HH22	2.06	0.54
56:CP:32:PHE:C	56:CP:32:PHE:CD1	2.85	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
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
59:DF:177:ARG:NH1	59:DF:178:LYS:HB3	2.21	0.54
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.88	0.54
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.73	0.54
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.33	0.54
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.07	0.54
44:DW:37:VAL:C	44:DW:39:GLN:H	2.15	0.54
1:AA:230:G:H5''	16:AP:31:ARG:HH21	1.72	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
20:AT:68:LYS:HB2	20:AT:68:LYS:HZ3	1.72	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
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
22:BA:2722:G:H4'	35:BN:3:HIS:O	2.07	0.54
25:BD:106:LYS:HD2	25:BD:106:LYS:N	2.22	0.54
30:BI:27:LEU:C	30:BI:27:LEU:HD12	2.33	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: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
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
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
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
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
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:257:ARG:CZ	24:DC:266:ILE:HD11	2.38	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
46:DY:1:MET:HE2	46:DY:1:MET:H3	1.70	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
1:AA:32:A:H2'	1:AA:33:A:H8	1.68	0.54
1:AA:247:G:C6	1:AA:278:G:C2	2.96	0.54
1:AA:613:C:H2'	1:AA:614:C:H6	1.71	0.54
1:AA:706:A:O2'	11:AK:30:ILE:HD11	2.07	0.54
1:AA:914:A:C4	1:AA:915:A:C8	2.96	0.54
1:AA:1158:C:O2	1:AA:1158:C:H2'	2.06	0.54
1:AA:1343:G:O3'	9:AI:123:ARG:HB3	2.08	0.54
3:AC:164:THR:O	3:AC:165:GLU:C	2.49	0.54
5:AE:64:GLU:HG2	5:AE:68:ARG:NH2	2.23	0.54
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.21	0.54
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.89	0.54
7:AG:146:ALA:C	7:AG:148:LYS:N	2.65	0.54
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.73	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: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
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.30	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
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:85:LYS:HG2	28:BG:131:VAL:HG12	1.88	0.54
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.22	0.54
29:BH:43:ASN:N	29:BH:43:ASN:HD22	2.05	0.54
45:BX:29:LEU:N	45:BX:29:LEU:CD2	2.71	0.54
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.30	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
10:CJ:5:ARG:C	10:CJ:6:ILE:HD12	2.33	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:95:A:H2'	57:DA:96:C:C5'	2.37	0.54
57:DA:224:U:O4	57:DA:420:C:H5'	2.08	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:1304:A:O2'	57:DA:1305:C:O5'	2.23	0.54
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:1800:C:C5'	24:DC:145:MET:HE1	2.38	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:2620:C:O4'	25:DD:161:MET:HG3	2.07	0.54
24:DC:260:LYS:HA	24:DC:263:ASP:OD1	2.08	0.54
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.21	0.54
29:DH:66:ASN:HD22	29:DH:137:GLU:HB3	1.73	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
35:DN:9:GLN:C	35:DN:10:LEU:O	2.50	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:204:G:C1'	1:AA:465:A:C2	2.90	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: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
1:AA:1143:G:O2'	1:AA:1144:G:H5'	2.07	0.54
1:AA:1343:G:H1'	9:AI:122:ARG:NH1	2.23	0.54
1:AA:1356:G:H2'	1:AA:1357:A:H8	1.68	0.54
3:AC:22:PHE:CD2	3:AC:22:PHE:C	2.85	0.54
3:AC:136:ALA:O	3:AC:140:ALA:HB2	2.07	0.54
7:AG:29:LEU:HD23	7:AG:29:LEU:C	2.33	0.54
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:74:A:H5'	22:BA:75:G:O4'	2.06	0.54
22:BA:459:U:H2'	22:BA:460:A:C8	2.42	0.54
22:BA:528:A:C2	22:BA:2042:A:H2'	2.42	0.54
22:BA:1269:A:OP2	63:BA:3379:HOH:O	2.19	0.54
22:BA:1842:G:O4'	24:BC:242:HIS:HE1	1.90	0.54
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	2.07	0.54
23:BB:27:C:OP1	36:BO:34:HIS:HE1	1.91	0.54
23:BB:89:U:H3'	23:BB:90:C:C5'	2.37	0.54
24:BC:80:LEU:HA	24:BC:90:ILE:O	2.07	0.54
26:BE:41:GLN:OE1	26:BE:43:THR:HG21	2.08	0.54
26:BE:170:ARG:HG2	26:BE:170:ARG:HH21	1.71	0.54
37:BP:111:GLU:CD	37:BP:111:GLU:H	2.16	0.54
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.88	0.54
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.05	0.54
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.37	0.54
53:CA:106:C:O2'	53:CA:107:G:H5'	2.08	0.54
53:CA:441:A:C2	53:CA:497:G:C6	2.95	0.54
53:CA:483:C:H2'	53:CA:484:G:C8	2.43	0.54
53:CA:520:A:OP1	12:CL:48:LEU:HG	2.07	0.54
53:CA:577:G:N9	53:CA:816:A:C2	2.76	0.54
53:CA:644:U:H2'	53:CA:645:G:H8	1.72	0.54
53:CA:1261:A:N7	53:CA:1274:A:H2	2.06	0.54
5:CE:14:LEU:HD12	5:CE:15:ILE:N	2.23	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:156:A:H3'	57:DA:156:A:OP2	2.07	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
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: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:2269:G:O3'	44:DW:18:LYS:HE2	2.08	0.54
57:DA:2337:G:H2'	57:DA:2337:G:N3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.14	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
1:AA:57:G:C6	1:AA:356:A:N1	2.76	0.54
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.08	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
4:AD:28:ASP:C	4:AD:29:THR:O	2.49	0.54
8:AH:88:LYS:HA	8:AH:91:LEU:CD1	2.36	0.54
12:AL:43:LYS:HZ2	12:AL:44:PRO:HD2	1.73	0.54
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.28	0.54
22:BA:247:G:H4'	22:BA:386:G:C5	2.42	0.54
22:BA:1252:G:N1	38:BQ:36:GLN:OE1	2.38	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:H8	22:BA:2352:A:O5'	1.91	0.54
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.90	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
34:BM:49:ALA:O	34:BM:50:ARG:C	2.50	0.54
35:BN:71:ARG:HG3	35:BN:71:ARG:NH2	2.21	0.54
36:BO:31:THR:HG22	36:BO:34:HIS:O	2.08	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
52:B4:4:ARG:HG3	52:B4:6:SER:O	2.08	0.54
53:CA:15:G:H8	53:CA:15:G:H5'	1.73	0.54
53:CA:405:U:O4	4:CD:1:ALA:HB1	2.07	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:737:C:OP1	6:CF:91:ARG:HD2	2.08	0.54
53:CA:769:G:H4'	53:CA:1513:A:H4'	1.89	0.54
53:CA:1391:U:H2'	53:CA:1392:G:H8	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:164:ASP:CG	2:CB:203:ASP:HB2	2.32	0.54
9:CI:45:MET:HE3	9:CI:48:ARG:HG3	1.89	0.54
10:CJ:25:ILE:HG22	10:CJ:25:ILE:O	2.08	0.54
12:CL:24:GLU:O	12:CL:25:ALA:HB3	2.08	0.54
57:DA:100:U:C6	57:DA:100:U:OP1	2.61	0.54
57:DA:740:C:O2'	57:DA:741:U:C5'	2.56	0.54
57:DA:740:C:C5'	57:DA:1784:A:H3'	2.38	0.54
57:DA:974:G:H1'	57:DA:975:A:C8	2.41	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
24:DC:29:PHE:C	24:DC:31:PRO:HD2	2.32	0.54
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.08	0.54
25:DD:79:LEU:N	25:DD:79:LEU:HD22	2.22	0.54
28:DG:132:LEU:HD12	28:DG:132:LEU:N	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
38:DQ:25:GLY:C	38:DQ:27:ARG:H	2.15	0.54
1:AA:49:U:C4	1:AA:364:A:C6	2.96	0.54
1:AA:70:U:O2'	1:AA:71:A:C8	2.61	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:652:U:O2'	1:AA:653:U:O5'	2.26	0.54
1:AA:919:A:O2'	1:AA:920:U:H5'	2.07	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
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: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
3:CC:12:GLY:O	3:CC:13:ILE:HD13	2.08	0.54
12:CL:36:VAL:HG23	12:CL:36:VAL:O	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
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
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:H2'	57:DA:2766:A:N3	2.22	0.54
58:DB:81:G:C4	58:DB:82:U:C5	2.96	0.54
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.22	0.54
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.56	0.54
38:DQ:79:ILE:HD13	38:DQ:79:ILE:C	2.32	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
42:DU:94:PHE:O	42:DU:95:PHE:C	2.50	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
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.43	0.54
1:AA:11:G:C5	1:AA:12:U:C5	2.96	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
1:AA:1210:C:H2'	1:AA:1211:U:H5'	1.89	0.54
1:AA:1323:G:H2'	1:AA:1324:A:H8	1.73	0.54
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.73	0.54
5:AE:17:VAL:HG22	5:AE:18:ASN:H	1.73	0.54
5:AE:37:VAL:HG11	5:AE:113:VAL:HA	1.90	0.54
22:BA:85:G:OP1	42:BU:27:VAL:HG11	2.08	0.54
22:BA:958:U:H5'	34:BM:14:LYS:NZ	2.22	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
24:BC:24:HIS:CG	24:BC:25:LYS:N	2.76	0.54
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.90	0.54
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.71	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
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.38	0.54
33:BL:85:VAL:CG2	33:BL:94:THR:HG23	2.38	0.54
38:BQ:86:SER:O	38:BQ:88:GLU:N	2.41	0.54
44:BW:29:SER:HA	44:BW:63:ASP:HB3	1.90	0.54
44:BW:40:ARG:HG3	44:BW:56:HIS:ND1	2.23	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
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
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
57:DA:238:C:H2'	57:DA:239:C:O4'	2.07	0.54
57:DA:373:U:HO2'	57:DA:374:A:H8	1.51	0.54
57:DA:1009:A:O2'	57:DA:1010:A:C8	2.58	0.54
57:DA:1114:C:O2'	57:DA:1115:G:O4'	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2384:U:H6	57:DA:2384:U:OP2	1.90	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
58:DB:50:A:OP1	36:DO:68:LYS:HB2	2.07	0.54
24:DC:95:TYR:C	24:DC:97:ASP:H	2.14	0.54
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.08	0.54
25:DD:33:ARG:HD2	25:DD:33:ARG:H	1.72	0.54
25:DD:181:ASP:C	25:DD:183:GLU:H	2.16	0.54
26:DE:196:VAL:HG13	26:DE:200:LEU:HD23	1.89	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
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
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
1:AA:1363:A:O2'	1:AA:1365:G:N7	2.41	0.53
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
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:H6	22:BA:2449:U:O5'	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
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: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:N3	53:CA:496:A:C2'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
57:DA:585:G:H1'	57:DA:1256:G:N2	2.23	0.53
57:DA:751:A:O5'	40:DS:90:LYS:HA	2.08	0.53
57:DA:973:A:H1'	57:DA:1188:U:C6	2.42	0.53
57:DA:1117:C:H2'	57:DA:1118:C:C6	2.43	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
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
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:CZ	38:DQ:10:ARG:HB2	2.37	0.53
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.43	0.53
1:AA:49:U:O4	1:AA:365:U:C5	2.57	0.53
1:AA:337:G:H2'	1:AA:338:A:C8	2.42	0.53
1:AA:802:A:H5''	1:AA:803:G:OP2	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
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
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.07	0.53
7:AG:113:LYS:HB2	7:AG:117:LEU:HD12	1.90	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
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
23:BB:116:G:H4'	36:BO:54:VAL:HG22	1.90	0.53
24:BC:71:ASP:HA	24:BC:117:SER:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.00	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
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.66	0.53
34:BM:46:ILE:HD12	34:BM:46:ILE:C	2.32	0.53
35:BN:74:GLU:O	35:BN:77:ALA:HB3	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
53:CA:1337:G:H5''	53:CA:1338:G:OP1	2.08	0.53
15:CO:70:LYS:HA	15:CO:77:TYR:HB2	1.90	0.53
20:CT:26:MET:C	20:CT:26:MET:HE2	2.33	0.53
57:DA:195:A:C6	57:DA:198:C:C5	2.96	0.53
57:DA:227:A:O2'	57:DA:228:C:O5'	2.25	0.53
57:DA:471:A:H8	57:DA:471:A:O5'	1.91	0.53
57:DA:857:G:O2'	44:DW:19:ARG:CZ	2.57	0.53
57:DA:1507:C:H5'	57:DA:1508:A:OP2	2.08	0.53
57:DA:2022:U:O2'	57:DA:2616:C:O2'	2.24	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
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
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.08	0.53
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.72	0.53
40:DS:82:MET:HE2	40:DS:84:ARG:HH12	1.72	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
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
1:AA:1326:U:H2'	1:AA:1327:C:C6	2.43	0.53
7:AG:94:ARG:O	7:AG:95:ARG:C	2.52	0.53
14:AN:20:PHE:C	14:AN:22:LYS:H	2.16	0.53
15:AO:2:LEU:O	15:AO:3:SER:C	2.51	0.53
22:BA:285:G:N3	22:BA:285:G:H2'	2.21	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	2.92	0.53
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.07	0.53
24:BC:173:LEU:O	24:BC:180:MET:HA	2.07	0.53
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.08	0.53
25:BD:114:LYS:HZ2	25:BD:116:LYS:HE2	1.73	0.53
25:BD:121:THR:O	25:BD:122:VAL:CB	2.57	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
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
5:CE:112:ALA:O	5:CE:113:VAL:C	2.52	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
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
57:DA:1210:G:H5''	57:DA:1211:C:H3'	1.91	0.53
57:DA:2352:A:H8	57:DA:2352:A:O5'	1.91	0.53
57:DA:2461:A:H1'	57:DA:2492:U:C2	2.42	0.53
57:DA:2590:A:H5''	24:DC:237:ARG:NE	2.22	0.53
57:DA:2674:G:O3'	32:DK:30:ARG:HG2	2.07	0.53
58:DB:15:A:OP1	58:DB:108:A:H5'	2.08	0.53
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.39	0.53
26:DE:108:ILE:O	26:DE:108:ILE:HD13	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
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.33	0.53
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.09	0.53
37:DP:65:ASN:HD22	37:DP:65:ASN:N	2.05	0.53
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.91	0.53
47:DZ:15:ARG:HD2	47:DZ:15:ARG:N	2.24	0.53
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:AA:1081:A:H5'	5:AE:22:LYS:HG3	1.89	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:544:C:C4	22:BA:550:C:N4	2.77	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
39:BR:1:MET:O	39:BR:1:MET:HG3	2.08	0.53
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.42	0.53
47:BZ:22:THR:O	47:BZ:23:LEU:C	2.52	0.53
53:CA:140:U:O2	53:CA:183:C:N4	2.42	0.53
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.09	0.53
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.67	0.53
4:CD:148:ALA:O	4:CD:151:GLN:HB2	2.07	0.53
9:CI:5:TYR:N	9:CI:5:TYR:CD2	2.75	0.53
11:CK:17:ASP:OD2	11:CK:80:ASN:HB2	2.09	0.53
15:CO:57:ARG:O	15:CO:61:GLN:HG2	2.09	0.53
57:DA:55:G:C2	57:DA:116:C:C2	2.96	0.53
57:DA:260:G:C6	57:DA:261:G:C5	2.95	0.53
57:DA:415:A:C2	57:DA:2409:G:C6	2.96	0.53
57:DA:600:G:H5'	26:DE:27:LEU:HD13	1.90	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
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
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: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
59:DF:32:LYS:HB3	59:DF:156:THR:HB	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:AL:58:ASN:OD1	12:AL:58:ASN:C	2.51	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
32:BK:107:LEU:C	32:BK:109:SER:H	2.17	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:198:G:O2'	53:CA:199:A:C8	2.55	0.53
53:CA:277:C:H2'	53:CA:278:G:C8	2.43	0.53
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:640:A:O2'	8:CH:106:SER:HB2	2.09	0.53
53:CA:781:A:H2'	53:CA:782:A:H5'	1.89	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
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:196:A:H61	57:DA:831:G:H21	1.55	0.53
57:DA:230:G:O2'	57:DA:231:A:H8	1.90	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:381:G:C5'	45:DX:15:ASN:HD22	2.21	0.53
57:DA:443:A:H2'	26:DE:40:ARG:NE	2.23	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2638:G:H1'	57:DA:2778:A:N6	2.23	0.53
24:DC:132:ARG:O	24:DC:132:ARG:HG3	2.08	0.53
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.09	0.53
59:DF:103:ILE:HG22	59:DF:103:ILE:O	2.08	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
1:AA:66:A:N6	1:AA:104:G:C2	2.77	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: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
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.08	0.53
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.56	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:7:ASN:O	13:AM:9:PRO:HD3	2.09	0.53
13:AM:23:GLY:HA3	13:AM:64:VAL:HG12	1.91	0.53
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.49	0.53
22:BA:346:A:H2'	22:BA:347:A:H8	1.73	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
22:BA:1839:G:H2'	22:BA:1840:G:H8	1.72	0.53
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.43	0.53
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.43	0.53
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.34	0.53
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.21	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
36:BO:67:ASN:O	36:BO:68:LYS:C	2.51	0.53
38:BQ:63:ARG:HH22	38:BQ:95:ALA:C	2.17	0.53
53:CA:119:A:H4'	53:CA:120:A:O5'	2.08	0.53
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.08	0.53
53:CA:1190:G:O3'	3:CC:2:GLN:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.08	0.53
2:CB:80:LYS:O	2:CB:81:ASP:C	2.51	0.53
4:CD:106:PHE:HB3	4:CD:154:VAL:HG23	1.91	0.53
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.39	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
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
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
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:2577:A:C2	48:D0:1:ALA:N	2.77	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
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
45:DX:52:ALA:C	45:DX:54:GLY:H	2.16	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
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
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: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
22:BA:2197:U:HO2'	22:BA:2198:A:C2'	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:57:A:C4	27:BF:25:MET:HB3	2.43	0.53
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.09	0.53
27:BF:34:THR:CG2	27:BF:89:THR:HG23	2.35	0.53
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.74	0.53
40:BS:14:ALA:O	40:BS:15:GLN:C	2.51	0.53
42:BU:73:ASN:HD21	42:BU:76:THR:HG23	1.73	0.53
53:CA:567:G:H1'	63:CA:1820:HOH:O	2.07	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
2:CB:9:LEU:C	2:CB:11:ALA:H	2.16	0.53
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.38	0.53
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.91	0.53
19:CS:52:ASN:HD22	19:CS:54:ARG:H	1.57	0.53
57:DA:90:U:H3'	57:DA:91:A:H5''	1.91	0.53
57:DA:183:C:H2'	57:DA:184:C:H5'	1.89	0.53
57:DA:271:G:O2'	57:DA:272:A:C5'	2.56	0.53
57:DA:739:A:O2'	57:DA:740:C:H5	1.85	0.53
57:DA:927:A:H2'	57:DA:928:A:C8	2.44	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: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:2721:A:C2	57:DA:2873:A:C5	2.97	0.53
57:DA:2734:A:C8	57:DA:2735:G:C8	2.96	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:HG12	41:DT:34:VAL:O	2.09	0.53
42:DU:54:PRO:HG2	42:DU:55:GLY:N	2.20	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
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.07	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
8:AH:63:LYS:C	8:AH:64:TYR:HD1	2.17	0.53
15:AO:60:SER:O	15:AO:64:LYS:HG3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:46:HIS:HA	17:AQ:70:LYS:HE3	1.91	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
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:1817:G:OP1	24:BC:86:ARG:NH2	2.42	0.53
22:BA:1869:G:N2	22:BA:1873:G:C6	2.77	0.53
22:BA:2800:A:H8	22:BA:2800:A:H5''	1.73	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
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
42:BU:100:GLU:O	42:BU:101:THR:HB	2.08	0.53
44:BW:58:LEU:HD23	44:BW:79:ILE:HD12	1.91	0.53
53:CA:391:G:H5''	56:CP:8:ARG:CD	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
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.24	0.53
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.37	0.53
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.38	0.53
8:CH:114:ALA:O	8:CH:117:GLN:HB3	2.09	0.53
20:CT:72:ALA:C	20:CT:74:HIS:H	2.17	0.53
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.24	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
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
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:NZ	25:DD:56:LYS:HB3	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
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.09	0.53
2:AB:61:SER:C	2:AB:63:LYS:H	2.16	0.53
3:AC:24:ASN:HD22	3:AC:25:THR:H	1.55	0.53
12:AL:24:GLU:O	12:AL:25:ALA:C	2.51	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
16:AP:11:ALA:O	16:AP:12:LYS:C	2.52	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
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
47:BZ:2:LYS:O	47:BZ:2:LYS:HE2	2.09	0.53
50:B2:12:ARG:CZ	50:B2:12:ARG:HB2	2.38	0.53
53:CA:166:U:OP2	53:CA:166:U:H6	1.92	0.53
53:CA:177:G:O2'	53:CA:1448:C:H4'	2.09	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
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:1493:A:C8	53:CA:1493:A:OP1	2.62	0.53
53:CA:1523:G:P	11:CK:124:LYS:HZ3	2.32	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
21:CU:16:ARG:HD2	21:CU:19:LYS:NZ	2.24	0.53
57:DA:370:G:C6	57:DA:424:G:C5	2.97	0.53
57:DA:1008:A:H5''	31:DJ:37:ARG:HH22	1.74	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:1614:A:N6	40:DS:91:GLY:HA2	2.24	0.53
57:DA:1638:C:H4'	57:DA:2710:C:O2	2.09	0.53
57:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
32:DK:70:ARG:HH11	32:DK:76:VAL:CG2	2.21	0.53
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.09	0.53
34:DM:38:ARG:O	34:DM:126:ILE:HG21	2.08	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
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
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.71	0.53
1:AA:66:A:O4'	1:AA:173:U:C4	2.62	0.53
1:AA:107:G:C2'	1:AA:108:G:H5'	2.39	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:1034:G:H2'	1:AA:1035:A:C8	2.43	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
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	2.22	0.53
12:AL:87:LYS:HB2	12:AL:87:LYS:NZ	2.24	0.53
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.09	0.53
22:BA:933:A:N3	22:BA:933:A:C2'	2.72	0.53
22:BA:1298:C:C2	22:BA:1643:G:N2	2.77	0.53
22:BA:2068:U:H6	22:BA:2068:U:H5''	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
22:BA:2681:C:C2	22:BA:2724:U:O4	2.61	0.53
22:BA:2729:G:H5''	22:BA:2729:G:H8	1.74	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
31:BJ:49:ASP:C	31:BJ:49:ASP:OD2	2.50	0.53
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.24	0.53
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.44	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
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.90	0.53
53:CA:85:U:O4'	53:CA:85:U:O2	2.27	0.53
53:CA:198:G:N3	53:CA:199:A:C8	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:H	6:CF:6:ILE:HD12	1.72	0.53
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.24	0.53
8:CH:59:GLU:C	8:CH:60:LEU:HD12	2.34	0.53
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.33	0.53
57:DA:234:U:O2'	57:DA:235:U:C5'	2.52	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
57:DA:1049:C:H2'	57:DA:1050:A:H8	1.74	0.53
57:DA:1341:G:C2	41:DT:84:TYR:CE2	2.97	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
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
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.34	0.53
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.74	0.53
45:DX:19:HIS:C	45:DX:21:LEU:N	2.66	0.53
46:DY:28:LEU:O	46:DY:28:LEU:HD22	2.09	0.53
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
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
2:AB:149:GLY:O	2:AB:153:MET:HE3	2.09	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
5:AE:147:ASN:ND2	8:AH:95:MET:HE1	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:82:ARG:HB2	12:AL:97:VAL:HG23	1.91	0.52
22:BA:88:G:C2	22:BA:89:A:C8	2.97	0.52
22:BA:403:U:O2'	22:BA:404:A:OP2	2.18	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
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
26:BE:131:THR:HG23	26:BE:160:ALA:HA	1.89	0.52
27:BF:123:GLY:HA2	27:BF:162:ASP:OD2	2.09	0.52
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.08	0.52
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.10	0.52
32:BK:99:ILE:CG2	32:BK:100:PHE:N	2.72	0.52
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.09	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
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
4:CD:93:LEU:O	4:CD:96:ARG:HG3	2.09	0.52
4:CD:100:VAL:HG21	4:CD:136:VAL:HG21	1.91	0.52
5:CE:104:ILE:N	5:CE:122:VAL:H	2.00	0.52
54:CG:41:ILE:HG21	54:CG:115:MET:HE3	1.90	0.52
12:CL:75:GLU:C	12:CL:77:SER:H	2.18	0.52
55:CM:64:VAL:HG12	55:CM:65:GLU:N	2.20	0.52
14:CN:33:VAL:HG22	14:CN:40:ARG:NH2	2.23	0.52
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:322:A:H3'	26:DE:163:ASN:HD21	1.74	0.52
57:DA:508:A:N6	40:DS:9:HIS:NE2	2.56	0.52
57:DA:727:A:C2'	57:DA:728:G:C8	2.92	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:1277:G:O2'	35:DN:24:MET:HB2	2.09	0.52
57:DA:1364:G:N2	57:DA:1367:A:OP2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1441:G:C2	57:DA:1442:U:C2	2.97	0.52
57:DA:1567:G:H5''	24:DC:84:PRO:HG3	1.90	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:2886:A:N7	48:D0:39:ARG:NE	2.57	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
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.90	0.52
32:DK:107:LEU:C	32:DK:109:SER:H	2.16	0.52
35:DN:2:ARG:O	35:DN:2:ARG:HD2	2.09	0.52
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.09	0.52
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.90	0.52
1:AA:809:G:C6	1:AA:810:C:C5	2.97	0.52
1:AA:1399:C:H4'	1:AA:1400:C:O5'	2.08	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
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
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: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:2572:A:N7	25:BD:150:GLN:HB3	2.23	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
26:BE:75:SER:HB3	26:BE:78:TRP:HB2	1.91	0.52
41:BT:15:HIS:O	41:BT:17:SER:N	2.43	0.52
48:B0:27:LEU:H	48:B0:27:LEU:CD2	2.22	0.52
50:B2:12:ARG:HB2	50:B2:12:ARG:NH2	2.25	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:577:G:H4'	53:CA:816:A:H2'	1.92	0.52
53:CA:765:G:O6	53:CA:811:C:C5	2.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:176:ASN:C	2:CB:178:LEU:H	2.17	0.52
3:CC:116:ALA:HB2	3:CC:199:VAL:HG21	1.91	0.52
6:CF:5:GLU:OE2	18:CR:23:LYS:HE2	2.09	0.52
55:CM:68:LEU:O	55:CM:72:ILE:HG22	2.09	0.52
57:DA:53:A:C2	57:DA:179:C:H4'	2.44	0.52
57:DA:632:A:H4'	33:DL:68:SER:HA	1.91	0.52
57:DA:748:G:O5'	40:DS:89:ALA:HB2	2.08	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
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: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
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: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
34:DM:119:LEU:O	34:DM:119:LEU:HD23	2.09	0.52
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.91	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:HD13	46:DY:57:LEU:O	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
1:AA:76:G:C2	1:AA:95:C:N3	2.77	0.52
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.45	0.52
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
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
20:AT:4:LYS:O	20:AT:5:SER:C	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:907:G:H2'	22:BA:908:C:H5'	1.91	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
24:BC:80:LEU:HD13	24:BC:109:LEU:HG	1.91	0.52
24:BC:259:ASN:C	24:BC:261:ARG:H	2.17	0.52
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.54	0.52
29:BH:27:ARG:HH12	29:BH:38:PRO:HG3	1.74	0.52
31:BJ:27:ARG:HH11	31:BJ:27:ARG:HG2	1.74	0.52
32:BK:111:LYS:HE2	32:BK:111:LYS:H	1.72	0.52
35:BN:13:ASN:O	35:BN:14:SER:C	2.53	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:587:G:H4'	8:CH:3:GLN:CA	2.37	0.52
53:CA:1239:A:H3'	54:CG:118:ARG:NH2	2.24	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:58:G:N2	57:DA:59:U:H1'	2.24	0.52
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:379:G:C5	57:DA:396:G:C6	2.97	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:OP2	57:DA:1337:G:C8	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:O2	57:DA:2021:C:H2'	2.09	0.52
57:DA:2185:U:H2'	57:DA:2186:G:H8	1.75	0.52
57:DA:2812:G:C6	57:DA:2813:A:C6	2.97	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:59:PRO:HB2	26:DE:67:ARG:NH2	2.24	0.52
26:DE:65:THR:HG23	26:DE:67:ARG:HG3	1.92	0.52
59:DF:177:ARG:CZ	59:DF:178:LYS:H	2.22	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:13:LYS:HD2	37:DP:13:LYS:H	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: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
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
2:AB:105:THR:HG22	2:AB:105:THR:O	2.10	0.52
4:AD:75:TYR:CD1	4:AD:75:TYR:C	2.87	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: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
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.09	0.52
25:BD:67:HIS:HD1	25:BD:67:HIS:C	2.18	0.52
25:BD:149:ASN:CG	25:BD:150:GLN:N	2.68	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
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.19	0.52
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.35	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
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:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.52
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.09	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: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
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
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
2:CB:47:PRO:HA	2:CB:50:ASN:HB2	1.91	0.52
2:CB:170:ILE:O	2:CB:174:GLU:HG3	2.09	0.52
3:CC:33:ASP:O	3:CC:37:LYS:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:33:GLY:O	10:CJ:35:GLN:N	2.42	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
57:DA:40:U:C4	57:DA:41:C:C4	2.97	0.52
57:DA:64:A:H8	57:DA:64:A:O5'	1.93	0.52
57:DA:372:G:P	45:DX:61:LYS:HZ1	2.33	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:736:C:O5'	57:DA:736:C:H6	1.92	0.52
57:DA:749:A:H1'	57:DA:1618:A:OP1	2.08	0.52
57:DA:845:A:N1	57:DA:932:U:O2	2.42	0.52
57:DA:858:G:H2'	57:DA:2268:A:N3	2.25	0.52
57:DA:1087:G:C5	57:DA:1089:A:C2	2.97	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: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
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.08	0.52
25:DD:111:GLY:HA3	25:DD:194:PRO:HG2	1.89	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
51:D3:50:SER:O	51:D3:52:GLY:N	2.42	0.52
1:AA:188:C:O2	1:AA:188:C:H2'	2.08	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
2:AB:75:ALA:O	2:AB:79:VAL:HG23	2.09	0.52
5:AE:86:GLY:O	5:AE:93:VAL:HB	2.10	0.52
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
22:BA:49:A:N6	22:BA:177:G:C4	2.78	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
22:BA:1524:G:O2'	22:BA:1525:A:H5'	2.10	0.52
22:BA:2345:G:C4	22:BA:2381:A:C2	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O	29:BH:96:THR:HG23	2.10	0.52
33:BL:7:SER:HB2	33:BL:8:PRO:CD	2.40	0.52
48:B0:45:ASP:O	48:B0:52:LYS:HE3	2.09	0.52
53:CA:115:G:C2	53:CA:289:G:N7	2.77	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
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
10:CJ:80:THR:HB	10:CJ:82:LYS:NZ	2.24	0.52
57:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.45	0.52
57:DA:223:A:C5	57:DA:422:A:N7	2.77	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:929:U:H1'	47:DZ:25:GLY:O	2.09	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:2049:G:N2	57:DA:2620:C:C2	2.77	0.52
57:DA:2191:A:H3'	57:DA:2192:U:H6	1.73	0.52
57:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.45	0.52
57:DA:2748:A:C2	57:DA:2757:A:C5	2.97	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
32:DK:121:GLU:O	32:DK:122:VAL:C	2.53	0.52
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.09	0.52
44:DW:70:VAL:HG22	44:DW:70:VAL:O	2.10	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
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
2:AB:49:PHE:C	2:AB:49:PHE:CD1	2.88	0.52
2:AB:59:ILE:C	2:AB:59:ILE:HD12	2.35	0.52
2:AB:141:GLU:HA	2:AB:144:GLU:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:165:ALA:HA	2:AB:172:ILE:HD11	1.92	0.52
3:AC:22:PHE:CD1	10:AJ:12:ALA:HA	2.45	0.52
5:AE:149:PRO:HG2	5:AE:150:GLU:H	1.74	0.52
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.74	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
22:BA:215:G:C4'	22:BA:216:A:H4'	2.40	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:976:G:C2	22:BA:977:G:N7	2.77	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
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
45:BX:19:HIS:C	45:BX:21:LEU:H	2.17	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
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
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:659:G:H4'	26:DE:95:LYS:HD3	1.91	0.52
57:DA:720:U:H2'	57:DA:721:A:H8	1.74	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
24:DC:19:VAL:HG12	24:DC:19:VAL:O	2.09	0.52
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:113:SER:OG	25:DD:114:LYS:N	2.41	0.52
59:DF:103:ILE:HG21	59:DF:173:ASP:O	2.09	0.52
29:DH:66:ASN:HA	29:DH:137:GLU:CD	2.34	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
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.24	0.52
1:AA:215:C:O2'	1:AA:216:U:H5'	2.09	0.52
1:AA:563:A:N3	1:AA:563:A:C2'	2.67	0.52
1:AA:1279:G:N3	1:AA:1279:G:C2'	2.71	0.52
7:AG:110:ARG:HB2	7:AG:110:ARG:HH11	1.75	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
22:BA:581:C:H2'	22:BA:582:A:H8	1.75	0.52
22:BA:747:U:C4	22:BA:2613:U:C4	2.98	0.52
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.91	0.52
22:BA:947:A:O2'	22:BA:984:A:C2	2.58	0.52
22:BA:983:A:C6	22:BA:984:A:C2	2.98	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
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.88	0.52
26:BE:127:GLU:CD	26:BE:127:GLU:N	2.68	0.52
28:BG:68:ARG:HD2	28:BG:68:ARG:C	2.34	0.52
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.91	0.52
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	2.10	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
48:B0:33:SER:O	48:B0:34:GLY:O	2.28	0.52
53:CA:36:C:H4'	12:CL:118:VAL:O	2.10	0.52
53:CA:725:G:H2'	53:CA:726:C:H6	1.75	0.52
53:CA:1301:U:O2'	53:CA:1302:C:H5	1.90	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
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:78:VAL:C	56:CP:80:LYS:H	2.18	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:54:G:H2'	57:DA:55:G:O4'	2.08	0.52
57:DA:797:G:OP1	26:DE:57:LYS:HG2	2.10	0.52
57:DA:857:G:H1'	44:DW:19:ARG:HE	1.71	0.52
57:DA:1206:G:H2'	57:DA:1207:C:C6	2.45	0.52
57:DA:1255:U:H5'	57:DA:2502:G:H22	1.74	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:2314:A:C2	57:DA:2315:G:C5	2.97	0.52
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.10	0.52
26:DE:105:LEU:O	26:DE:109:LEU:HB2	2.09	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
36:DO:29:HIS:HB3	36:DO:36:TYR:HB2	1.92	0.52
40:DS:49:LYS:HB3	40:DS:49:LYS:HZ3	1.74	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
1:AA:89:U:O2'	1:AA:90:C:C5'	2.57	0.52
1:AA:901:A:C5	1:AA:902:G:H1'	2.45	0.52
1:AA:945:G:C6	1:AA:1337:G:C5	2.98	0.52
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.58	0.52
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.74	0.52
2:AB:138:ARG:HA	2:AB:141:GLU:CD	2.35	0.52
4:AD:114:ARG:O	4:AD:115:GLN:C	2.53	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
19:AS:47:THR:O	19:AS:48:ILE:C	2.53	0.52
22:BA:136:G:H2'	22:BA:137:U:C5	2.45	0.52
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
22:BA:1079:C:C4	22:BA:1080:A:N7	2.78	0.52
25:BD:151:THR:C	25:BD:153:GLY:H	2.17	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
35:BN:83:LEU:O	35:BN:84:GLY:C	2.52	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.25	0.52
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.35	0.52
45:BX:29:LEU:HD23	45:BX:29:LEU:H	1.74	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
53:CA:569:C:H5''	53:CA:570:G:OP1	2.09	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
4:CD:61:ARG:HG3	4:CD:71:PHE:CD2	2.44	0.52
6:CF:81:ASN:O	6:CF:82:ASP:C	2.53	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
57:DA:125:A:H5''	50:D2:19:ARG:HB2	1.92	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:372:G:C8	45:DX:56:ARG:HG2	2.45	0.52
57:DA:412:A:N7	57:DA:2412:A:H1'	2.24	0.52
57:DA:855:G:H21	44:DW:23:LYS:HZ2	1.57	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
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.75	0.52
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.92	0.52
37:DP:52:ARG:HG2	37:DP:52:ARG:NH1	2.24	0.52
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	1.91	0.52
50:D2:38:GLY:O	50:D2:42:LEU:HD13	2.10	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
5:AE:82:HIS:CE1	8:AH:95:MET:HE2	2.45	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
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.58	0.52
22:BA:1179:G:N1	22:BA:1180:U:O2'	2.43	0.52
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.91	0.52
22:BA:1653:G:H4'	22:BA:1654:A:O5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.25	0.52
22:BA:1871:A:H8	22:BA:1872:A:C6	2.28	0.52
22:BA:2689:U:H5''	22:BA:2690:U:OP2	2.09	0.52
25:BD:91:THR:C	25:BD:93:GLY:N	2.67	0.52
25:BD:101:PHE:N	25:BD:101:PHE:HD1	2.08	0.52
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.52	0.52
27:BF:173:ASP:O	27:BF:174:PHE:C	2.53	0.52
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.25	0.52
38:BQ:4:LYS:NZ	38:BQ:7:VAL:HG13	2.25	0.52
40:BS:56:ALA:O	40:BS:57:ASN:C	2.51	0.52
41:BT:24:MET:HE3	41:BT:24:MET:HA	1.91	0.52
44:BW:8:SER:C	44:BW:9:THR:HG22	2.35	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
50:B2:3:ARG:NH2	50:B2:3:ARG:CG	2.64	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
2:CB:19:THR:OG1	2:CB:20:ARG:N	2.41	0.52
3:CC:84:GLU:C	3:CC:86:LEU:N	2.68	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:82:U:H2'	57:DA:83:A:O4'	2.10	0.52
57:DA:126:A:H2'	50:D2:46:LYS:CE	2.40	0.52
57:DA:511:U:H5''	57:DA:512:G:OP2	2.09	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:1820:U:OP1	24:DC:176:ARG:NE	2.43	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
24:DC:76:VAL:O	24:DC:93:VAL:O	2.28	0.52
59:DF:3:LEU:HG	59:DF:100:GLU:CD	2.35	0.52
59:DF:58:ALA:HB1	59:DF:139:GLU:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DF:74:ALA:HB1	59:DF:76:PHE:CD2	2.45	0.52
32:DK:99:ILE:HD12	32:DK:118:LEU:HB2	1.91	0.52
35:DN:31:HIS:C	35:DN:33:ILE:H	2.17	0.52
38:DQ:4:LYS:O	38:DQ:5:ARG:HB2	2.10	0.52
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.09	0.52
45:DX:6:VAL:CG1	45:DX:50:VAL:HG12	2.40	0.52
45:DX:6:VAL:HG12	45:DX:50:VAL:HG12	1.92	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:1111:A:C2	3:AC:176:THR:HG23	2.46	0.52
1:AA:1112:C:H1'	3:AC:178:ARG:HD3	1.91	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
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:16:MET:HG3	17:AQ:19:SER:C	2.35	0.52
17:AQ:60:ILE:HG22	17:AQ:61:ARG:N	2.25	0.52
22:BA:460:A:OP1	50:B2:41:ARG:NH1	2.38	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
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.44	0.52
24:BC:131:MET:HE2	24:BC:187:CYS:O	2.10	0.52
25:BD:101:PHE:O	25:BD:102:ALA:C	2.53	0.52
27:BF:39:VAL:HG13	27:BF:84:ILE:HD12	1.90	0.52
27:BF:131:VAL:C	27:BF:132:ARG:HG3	2.34	0.52
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.25	0.52
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.62	0.52
31:BJ:123:LYS:CD	31:BJ:123:LYS:N	2.73	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:33:LYS:HG3	41:BT:80:TRP:CE3	2.44	0.52
41:BT:39:THR:O	41:BT:39:THR:CG2	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.25	0.52
53:CA:94:G:O2'	53:CA:95:C:H5'	2.09	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:926:G:C6	53:CA:1505:G:C6	2.98	0.52
53:CA:989:U:H2'	53:CA:990:C:H5'	1.92	0.52
53:CA:1077:G:C2	53:CA:1081:A:C2	2.98	0.52
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.91	0.52
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.93	0.52
54:CG:35:LYS:O	9:CI:42:THR:HG21	2.10	0.52
56:CP:69:ASP:O	56:CP:70:ARG:C	2.53	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
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
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:65:THR:CG2	26:DE:67:ARG:HG3	2.40	0.52
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.25	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
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.74	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
38:DQ:46:TYR:CD2	38:DQ:46:TYR:C	2.87	0.52
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ2	1.74	0.52
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.92	0.52
51:D3:23:HIS:O	51:D3:46:LYS:HB2	2.09	0.52
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
1:AA:1530:G:O2'	1:AA:1531:A:H8	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:45:VAL:HG22	5:AE:117:ALA:HA	1.92	0.51
5:AE:135:VAL:O	5:AE:139:THR:HG23	2.09	0.51
14:AN:63:CYS:SG	14:AN:66:THR:OG1	2.61	0.51
16:AP:48:GLU:CD	16:AP:49:GLY:H	2.17	0.51
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.91	0.51
21:AU:18:PHE:C	21:AU:19:LYS:HE2	2.34	0.51
21:AU:45:LYS:HA	21:AU:45:LYS:HE3	1.92	0.51
22:BA:137:U:O2'	22:BA:138:U:P	2.68	0.51
22:BA:247:G:H4'	22:BA:386:G:C6	2.44	0.51
22:BA:271:G:O2'	22:BA:272:A:H5''	2.09	0.51
22:BA:580:U:C2	22:BA:581:C:C5	2.98	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:1833:C:C5	22:BA:1834:U:H5	2.28	0.51
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:2838:G:H1'	35:BN:45:ARG:NH1	2.24	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
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.73	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
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.22	0.51
53:CA:82:G:N7	53:CA:89:U:C4	2.78	0.51
53:CA:1195:C:H2'	53:CA:1197:A:O4'	2.10	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
57:DA:74:A:H5'	46:DY:48:ARG:HH22	1.74	0.51
57:DA:183:C:O5'	57:DA:183:C:H6	1.91	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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:HA	29:DH:109:GLU:OE2	2.10	0.51
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.91	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
51:D3:41:ARG:O	51:D3:41:ARG:HD2	2.10	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
1:AA:1458:G:OP1	20:AT:26:MET:HA	2.09	0.51
9:AI:49:GLN:C	9:AI:51:LEU:H	2.17	0.51
10:AJ:67:ILE:CG1	14:AN:95:LEU:HD13	2.40	0.51
11:AK:116:PRO:C	11:AK:118:ASN:H	2.17	0.51
16:AP:2:VAL:HG23	16:AP:65:ALA:HA	1.91	0.51
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.10	0.51
22:BA:511:U:C5	22:BA:512:G:C5	2.98	0.51
22:BA:580:U:O2'	38:BQ:30:VAL:HG13	2.10	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
22:BA:996:A:O3'	38:BQ:91:ARG:HG2	2.10	0.51
22:BA:1073:A:P	22:BA:1073:A:H8	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
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
36:BO:55:GLU:O	36:BO:56:LYS:C	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:CB:95:TRP:HZ2	2:CB:100:LEU:HD13	1.74	0.51
2:CB:206:ILE:C	2:CB:208:ALA:H	2.18	0.51
3:CC:53:ARG:HH11	3:CC:53:ARG:HB2	1.75	0.51
6:CF:67:PRO:O	6:CF:68:GLN:C	2.52	0.51
15:CO:16:ARG:HB2	15:CO:23:SER:CB	2.40	0.51
56:CP:32:PHE:C	56:CP:32:PHE:HD1	2.17	0.51
56:CP:66:THR:HG22	56:CP:67:ILE:N	2.25	0.51
18:CR:28:LEU:C	18:CR:30:ASN:H	2.17	0.51
21:CU:28:LEU:HD23	21:CU:28:LEU:C	2.35	0.51
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.58	0.51
57:DA:417:C:H2'	57:DA:418:C:H6	1.76	0.51
57:DA:466:A:P	50:D2:34:ARG:HH21	2.33	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:674:G:H5''	26:DE:71:GLY:N	2.24	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
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
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.74	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
34:DM:136:MET:HE2	43:DV:57:TYR:CD2	2.45	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
46:DY:1:MET:HE2	46:DY:1:MET:H1	1.73	0.51
49:D1:32:LYS:HE3	49:D1:52:LYS:OXT	2.09	0.51
52:D4:19:ARG:HH12	52:D4:26:ILE:HG13	1.76	0.51
1:AA:57:G:H2'	1:AA:58:C:H6	1.73	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:626:G:C4	1:AA:627:G:C8	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:914:A:O2'	1:AA:915:A:C5'	2.58	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
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.10	0.51
7:AG:136:LYS:O	7:AG:140:VAL:HG23	2.10	0.51
8:AH:63:LYS:C	8:AH:64:TYR:CD1	2.88	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
12:AL:7:VAL:HG13	17:AQ:30:HIS:HD2	1.75	0.51
14:AN:40:ARG:HH12	14:AN:44:VAL:HG21	1.73	0.51
21:AU:10:PRO:HG2	3:CC:71:ARG:CZ	2.40	0.51
22:BA:69:C:H2'	22:BA:70:G:C8	2.46	0.51
22:BA:511:U:C5	22:BA:512:G:C4	2.97	0.51
22:BA:947:A:H2'	22:BA:948:C:C6	2.45	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
23:BB:89:U:OP2	23:BB:89:U:H4'	2.11	0.51
27:BF:118:ALA:HB2	27:BF:176:PHE:CD2	2.45	0.51
27:BF:122:ASP:OD1	27:BF:126:ASN:HB2	2.10	0.51
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.35	0.51
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.51
32:BK:29:HIS:O	32:BK:30:ARG:C	2.53	0.51
34:BM:52:ALA:O	34:BM:53:MET:C	2.52	0.51
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.64	0.51
45:BX:30:PRO:HD2	45:BX:32:LEU:HD11	1.92	0.51
45:BX:70:LEU:O	45:BX:71:ARG:C	2.53	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:CJ:8:ILE:HG22	10:CJ:100:ILE:HG12	1.92	0.51
10:CJ:15:HIS:CA	10:CJ:18:ILE:HG22	2.30	0.51
19:CS:36:ARG:O	19:CS:69:LYS:HD2	2.10	0.51
57:DA:28:A:O2'	57:DA:29:U:H5'	2.09	0.51
57:DA:53:A:O2'	57:DA:54:G:H5'	2.10	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:811:U:H5''	57:DA:812:C:OP2	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:2331:G:H4'	44:DW:41:GLY:N	2.25	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
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.11	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
25:DD:107:VAL:H	25:DD:206:ALA:N	2.05	0.51
26:DE:72:SER:O	26:DE:74:LYS:N	2.43	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
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
38:DQ:74:SER:O	38:DQ:78:PHE:HB2	2.09	0.51
45:DX:24:THR:O	45:DX:25:LYS:C	2.53	0.51
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.10	0.51
1:AA:15:G:C4'	5:AE:28:ARG:NH1	2.73	0.51
1:AA:264:C:H2'	1:AA:265:G:O4'	2.10	0.51
1:AA:275:G:H8	1:AA:275:G:H5''	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:1303:C:O2'	1:AA:1304:G:C5'	2.58	0.51
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.40	0.51
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.25	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:31:C:H4'	22:BA:1238:G:H4'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:244:A:H2'	22:BA:245:G:O4'	2.11	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
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:2730:C:O3'	25:BD:174:SER:HB3	2.11	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:4:ILE:HG12	29:BH:18:GLN:NE2	2.24	0.51
29:BH:12:LEU:HB2	29:BH:19:VAL:HG11	1.93	0.51
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.45	0.51
31:BJ:122:LEU:C	31:BJ:123:LYS:HD2	2.36	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
44:BW:39:GLN:O	44:BW:40:ARG:C	2.53	0.51
47:BZ:7:THR:HG22	47:BZ:32:GLY:HA2	1.92	0.51
53:CA:129:A:O2'	53:CA:130:A:C8	2.63	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
53:CA:1248:A:O2'	9:CI:37:TYR:HD1	1.94	0.51
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.91	0.51
3:CC:137:VAL:O	3:CC:138:GLN:C	2.53	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
20:CT:11:ILE:C	20:CT:13:SER:H	2.18	0.51
57:DA:63:A:N6	57:DA:91:A:N6	2.57	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2812:G:N2	57:DA:2889:C:C2	2.78	0.51
57:DA:2852:G:H2'	57:DA:2853:C:O4'	2.09	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
28:DG:92:GLY:O	28:DG:93:TYR:C	2.52	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:782:A:H2'	1:AA:783:C:O4'	2.10	0.51
1:AA:1151:A:C4	1:AA:1152:A:N7	2.79	0.51
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.10	0.51
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.46	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
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
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
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:H8	22:BA:2082:A:O5'	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
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:27:LEU:N	33:BL:27:LEU:CD1	2.60	0.51
33:BL:57:LEU:C	33:BL:59:ARG:H	2.19	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
33:BL:101:ILE:HG23	33:BL:102:GLY:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:560:A:N7	53:CA:566:G:C4	2.78	0.51
53:CA:562:U:H4'	53:CA:563:A:O5'	2.10	0.51
53:CA:568:G:N2	53:CA:883:C:C2	2.79	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:952:U:H5	55:CM:102:LYS:HZ1	1.58	0.51
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.23	0.51
12:CL:6:LEU:HA	12:CL:9:LYS:O	2.11	0.51
55:CM:75:SER:C	55:CM:77:LYS:H	2.18	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
57:DA:86:G:C2	57:DA:87:U:C5	2.99	0.51
57:DA:118:A:C8	57:DA:119:A:C8	2.99	0.51
57:DA:223:A:C5	57:DA:422:A:C8	2.99	0.51
57:DA:270:A:N1	57:DA:369:U:O2'	2.42	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:1087:G:N2	57:DA:1103:A:H1'	2.25	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:2283:C:H6	57:DA:2283:C:H5''	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
58:DB:58:A:C2'	58:DB:59:A:C8	2.77	0.51
59:DF:129:MET:HG3	59:DF:153:ILE:HD12	1.91	0.51
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.36	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
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.09	0.51
49:D1:16:THR:CG2	49:D1:41:VAL:HB	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:1320:C:N3	19:AS:35:ARG:NH1	2.58	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
16:AP:75:ILE:C	16:AP:77:GLU:H	2.18	0.51
17:AQ:20:ILE:HB	17:AQ:47:ASP:OD1	2.11	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
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.46	0.51
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.44	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
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.83	0.51
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.10	0.51
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.83	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
39:BR:48:LYS:H	39:BR:48:LYS:CD	2.23	0.51
48:B0:54:ILE:O	48:B0:54:ILE:HG22	2.11	0.51
53:CA:66:A:H5'	53:CA:67:C:OP2	2.11	0.51
53:CA:247:G:C6	53:CA:278:G:N1	2.79	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
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.10	0.51
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
2:CB:76:SER:O	2:CB:79:VAL:HG12	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
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
57:DA:230:G:C2	57:DA:231:A:N7	2.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:C8	57:DA:1439:A:C3'	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: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
25:DD:17:GLU:CD	25:DD:17:GLU:H	2.19	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
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.17	0.51
38:DQ:96:ASP:OD1	38:DQ:96:ASP:C	2.54	0.51
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.92	0.51
52:D4:22:VAL:O	52:D4:24:ARG:HG3	2.11	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.51
1:AA:1161:C:O2'	1:AA:1162:C:C5'	2.58	0.51
4:AD:147:LYS:O	4:AD:149:LYS:HB2	2.10	0.51
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.91	0.51
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.74	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
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
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.26	0.51
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.51
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
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:O	25:BD:92:VAL:HG12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.35	0.51
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.25	0.51
42:BU:42:LYS:N	42:BU:42:LYS:HD3	2.25	0.51
44:BW:35:ILE:HG12	44:BW:35:ILE:O	2.10	0.51
45:BX:32:LEU:HD12	45:BX:32:LEU:H	1.75	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:926:G:H3'	53:CA:1505:G:H21	1.76	0.51
53:CA:996:A:H2'	53:CA:997:U:C6	2.46	0.51
53:CA:1499:A:O2'	53:CA:1500:A:H5'	2.11	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:132:G:N2	57:DA:148:U:C2	2.79	0.51
57:DA:223:A:N6	57:DA:422:A:C6	2.78	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
57:DA:1220:G:C2	57:DA:1230:A:C2	2.99	0.51
57:DA:1263:U:O2'	48:D0:6:LYS:HG3	2.11	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: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
57:DA:2264:C:H41	44:DW:11:ASN:ND2	2.08	0.51
57:DA:2683:C:H2'	57:DA:2684:U:C6	2.42	0.51
58:DB:40:U:O2'	58:DB:45:A:N6	2.43	0.51
24:DC:2:VAL:O	24:DC:3:VAL:HB	2.11	0.51
24:DC:127:ASN:O	24:DC:191:LEU:HD22	2.10	0.51
28:DG:70:LEU:O	28:DG:74:MET:HB2	2.10	0.51
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.35	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
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	1.91	0.51
1:AA:71:A:HO2'	1:AA:72:A:P	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:AB:187:ASP:HB2	2:AB:203:ASP:CG	2.36	0.51
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.75	0.51
15:AO:34:GLN:CB	15:AO:58:MET:HE1	2.40	0.51
22:BA:976:G:H2'	22:BA:976:G:N3	2.25	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
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
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
52:B4:24:ARG:HG2	52:B4:24:ARG:NH2	2.26	0.51
53:CA:68:G:N2	53:CA:152:A:H1'	2.26	0.51
53:CA:750:C:H4'	15:CO:20:ASP:HB2	1.92	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
2:CB:23:ASN:HB2	2:CB:189:ASN:O	2.11	0.51
54:CG:59:GLU:C	54:CG:61:PHE:H	2.17	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
56:CP:48:GLU:CD	56:CP:51:ARG:HE	2.18	0.51
57:DA:78:U:C2'	57:DA:79:C:H5'	2.41	0.51
57:DA:111:A:C2	57:DA:112:U:C2	2.98	0.51
57:DA:156:A:H2'	57:DA:157:C:C6	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:628:G:H2'	57:DA:629:G:C8	2.46	0.51
57:DA:696:G:C2	57:DA:767:U:O2	2.63	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: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:1789:A:OP1	24:DC:220:ARG:HD3	2.11	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:OP2	57:DA:2603:G:H4'	2.11	0.51
57:DA:2636:C:H2'	57:DA:2637:U:C6	2.45	0.51
58:DB:24:G:H1'	58:DB:27:C:H41	1.73	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
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.78	0.51
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.76	0.51
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.24	0.51
37:DP:56:SER:O	37:DP:75:THR:HG22	2.10	0.51
40:DS:68:ASP:OD1	40:DS:68:ASP:N	2.43	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
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.10	0.51
1:AA:16:A:C2'	1:AA:17:U:H5'	2.41	0.51
1:AA:61:G:H2'	1:AA:62:U:H6	1.74	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:641:U:H4'	8:AH:106:SER:O	2.10	0.51
1:AA:669:G:O2'	1:AA:670:G:H5'	2.11	0.51
1:AA:1380:U:H5'	1:AA:1381:U:OP1	2.11	0.51
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.78	0.51
2:AB:110:ILE:HD12	2:AB:147:LEU:CD1	2.37	0.51
5:AE:77:ASN:CG	5:AE:78:GLY:N	2.67	0.51
7:AG:78:ARG:HH22	7:AG:81:GLY:HA2	1.75	0.51
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.40	0.51
11:AK:22:ILE:HD13	11:AK:95:THR:CG2	2.32	0.51
12:AL:120:ARG:C	12:AL:122:LYS:H	2.19	0.51
22:BA:38:A:O2'	26:BE:43:THR:HA	2.10	0.51
22:BA:395:U:O2'	22:BA:396:G:N7	2.41	0.51
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.46	0.51
22:BA:657:U:O2'	22:BA:658:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1157:G:H2'	22:BA:1158:C:C6	2.45	0.51
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.93	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
26:BE:58:LYS:HE3	26:BE:62:GLN:HE21	1.74	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
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: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:673:A:H1'	18:CR:63:TYR:CE2	2.46	0.51
53:CA:765:G:H1'	53:CA:812:G:N2	2.26	0.51
53:CA:1134:G:N1	53:CA:1141:C:C4	2.78	0.51
2:CB:102:ASN:O	2:CB:102:ASN:CG	2.52	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
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
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:379:G:C6	57:DA:380:G:C5	2.99	0.51
57:DA:616:A:H4'	26:DE:101:TYR:CZ	2.45	0.51
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:1651:G:N2	57:DA:2007:U:C2	2.79	0.51
57:DA:1936:A:H2	57:DA:1943:U:O4	1.94	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:H8	57:DA:2138:G:OP2	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.35	0.51
26:DE:139:LYS:HB2	26:DE:139:LYS:NZ	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
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.18	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
1:AA:257:G:H2'	1:AA:258:G:H8	1.76	0.51
1:AA:654:G:C4'	8:AH:2:MET:HE1	2.38	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
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
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: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
23:BB:2:G:C6	23:BB:119:A:C2	2.98	0.51
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.23	0.51
27:BF:128:SER:OG	27:BF:154:THR:HB	2.10	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
34:BM:109:PRO:O	34:BM:110:GLU:C	2.53	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:64:G:C8	53:CA:99:C:N4	2.78	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
4:CD:11:SER:O	4:CD:12:ARG:C	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:223:A:C6	57:DA:422:A:N7	2.79	0.51
57:DA:298:G:H8	57:DA:298:G:O5'	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:511:U:C5'	57:DA:1235:G:H4'	2.40	0.51
57:DA:527:C:O2'	57:DA:528:A:P	2.69	0.51
57:DA:528:A:C2	57:DA:2043:C:H4'	2.46	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
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
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
32:DK:119:ALA:O	32:DK:120:PRO:C	2.54	0.51
36:DO:8:ILE:H	36:DO:8:ILE:HD12	1.75	0.51
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.23	0.51
43:DV:72:VAL:HA	43:DV:92:VAL:O	2.10	0.51
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.91	0.51
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
1:AA:932:C:OP1	7:AG:3:ARG:HB3	2.12	0.50
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
3:AC:76:ILE:C	3:AC:82:ASP:HB2	2.36	0.50
5:AE:114:LEU:HD21	5:AE:122:VAL:HG23	1.92	0.50
9:AI:117:LEU:HD23	9:AI:123:ARG:HD3	1.93	0.50
13:AM:4:ALA:HB2	13:AM:59:VAL:HG13	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.12	0.50
13:AM:86:ARG:HH22	13:AM:97:ARG:HA	1.76	0.50
14:AN:47:LEU:O	14:AN:47:LEU:HD23	2.11	0.50
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.59	0.50
22:BA:747:U:OP2	40:BS:90:LYS:NZ	2.42	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
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.74	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:140:U:H2'	53:CA:141:G:O4'	2.11	0.50
53:CA:148:G:N1	53:CA:149:A:C5	2.78	0.50
53:CA:295:C:C4	53:CA:296:U:C4	2.99	0.50
53:CA:643:C:H5''	8:CH:31:LEU:HD13	1.93	0.50
53:CA:1157:A:C2	53:CA:1181:G:C8	2.99	0.50
53:CA:1452:C:H5'	53:CA:1453:G:C4	2.46	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
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: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
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:H5''	57:DA:1991:U:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2788:C:H2'	57:DA:2789:C:C6	2.45	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
30:DI:28:GLY:O	30:DI:29:GLN:C	2.54	0.50
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.40	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:4:CYS:HB3	45:DX:9:LYS:N	2.26	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
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
3:AC:35:ASP:C	3:AC:37:LYS:H	2.18	0.50
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.76	0.50
5:AE:80:LEU:HD12	5:AE:146:MET:HE1	1.94	0.50
7:AG:96:ASN:N	7:AG:96:ASN:OD1	2.44	0.50
7:AG:144:ALA:C	7:AG:146:ALA:H	2.17	0.50
13:AM:24:VAL:HG23	13:AM:24:VAL:O	2.10	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:415:A:C5	22:BA:416:U:C5	2.98	0.50
22:BA:758:C:O2	22:BA:1981:A:H2	1.94	0.50
22:BA:856:G:C1'	44:BW:23:LYS:HB3	2.36	0.50
22:BA:919:U:C6	22:BA:919:U:H3'	2.46	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: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
63:BA:3241:HOH:O	26:BE:81:GLY:HA2	2.12	0.50
25:BD:74:GLU:O	25:BD:75:ALA:C	2.53	0.50
26:BE:153:LEU:C	26:BE:153:LEU:HD12	2.37	0.50
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.11	0.50
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HD3	2.46	0.50
31:BJ:140:LEU:HD13	31:BJ:140:LEU:C	2.36	0.50
33:BL:40:SER:O	33:BL:41:ARG:HB2	2.12	0.50
34:BM:70:ASP:OD1	34:BM:70:ASP:C	2.54	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:CG2	43:BV:65:VAL:O	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:688:G:H8	53:CA:688:G:H5''	1.76	0.50
53:CA:961:U:O4	53:CA:983:A:N6	2.44	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
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
57:DA:21:A:H2'	57:DA:22:C:C6	2.46	0.50
57:DA:163:C:O2'	57:DA:164:C:O4'	2.23	0.50
57:DA:247:G:C8	57:DA:249:C:C6	2.99	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:527:C:N3	57:DA:2779:U:H2'	2.26	0.50
57:DA:656:G:O2'	57:DA:657:U:H5'	2.10	0.50
57:DA:1014:A:C2	57:DA:1149:G:C2	2.99	0.50
57:DA:1021:A:C2'	57:DA:1022:G:H4'	2.40	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:1722:A:N6	57:DA:1739:A:C8	2.79	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: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
58:DB:84:G:N2	58:DB:93:C:C2	2.78	0.50
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
47:DZ:51:SER:C	47:DZ:53:MET:H	2.19	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
1:AA:1074:G:C6	1:AA:1075:U:C4	2.99	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
22:BA:412:A:O2'	22:BA:413:C:H5'	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
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:66:ASN:C	29:BH:68:ARG:N	2.69	0.50
29:BH:95:GLY:C	29:BH:97:ARG:H	2.19	0.50
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	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
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
53:CA:900:A:H8	53:CA:900:A:O5'	1.94	0.50
53:CA:926:G:H3'	53:CA:1505:G:N2	2.26	0.50
53:CA:1446:A:H2'	53:CA:1447:A:H5'	1.93	0.50
3:CC:6:PRO:HG2	3:CC:183:TYR:CD2	2.47	0.50
5:CE:105:ILE:HG22	5:CE:105:ILE:O	2.10	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
8:CH:41:GLU:C	8:CH:43:GLY:H	2.20	0.50
12:CL:65:TYR:HE1	12:CL:67:GLY:HA2	1.77	0.50
20:CT:2:ASN:O	20:CT:3:ILE:C	2.54	0.50
57:DA:45:G:C5'	57:DA:46:G:H5'	2.42	0.50
57:DA:191:A:C2	57:DA:192:C:C2	2.99	0.50
57:DA:432:A:H8	57:DA:432:A:O5'	1.93	0.50
57:DA:443:A:N6	26:DE:36:ALA:HB1	2.20	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
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: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:2631:G:N2	57:DA:2788:C:C2	2.79	0.50
57:DA:2648:G:H2'	57:DA:2649:C:O4'	2.10	0.50
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.12	0.50
25:DD:196:ALA:O	25:DD:197:THR:C	2.55	0.50
26:DE:16:GLU:HG3	26:DE:16:GLU:O	2.12	0.50
26:DE:188:MET:HE3	26:DE:193:VAL:HG22	1.94	0.50
29:DH:62:LEU:C	29:DH:64:ALA:N	2.65	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.24	0.50
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.92	0.50
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.27	0.50
1:AA:119:A:C2	1:AA:240:G:C8	3.00	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
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:1239:A:H62	1:AA:1299:A:H61	1.53	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
12:AL:42:LYS:O	12:AL:43:LYS:C	2.55	0.50
13:AM:2:ARG:HG3	13:AM:56:ARG:HH12	1.77	0.50
13:AM:10:ASP:CG	13:AM:44:ILE:HB	2.37	0.50
15:AO:24:THR:HG22	15:AO:69:LEU:HD12	1.94	0.50
17:AQ:47:ASP:C	17:AQ:51:GLU:OE2	2.55	0.50
20:AT:55:PRO:HG2	20:AT:56:ILE:H	1.77	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
28:BG:29:ASN:CG	28:BG:30:GLY:H	2.19	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:93:ASN:HD22	33:BL:93:ASN:C	2.17	0.50
33:BL:95:LEU:HB3	33:BL:100:ILE:CG1	2.42	0.50
36:BO:47:VAL:HG23	36:BO:47:VAL:O	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
50:B2:43:THR:O	50:B2:44:VAL:CB	2.59	0.50
53:CA:130:A:O2'	53:CA:131:A:O5'	2.23	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
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: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
3:CC:110:LEU:O	3:CC:110:LEU:HD23	2.11	0.50
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:14:A:C6	57:DA:526:A:C2	3.00	0.50
57:DA:664:G:H4'	57:DA:941:A:OP1	2.11	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: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
59:DF:90:LEU:HB3	59:DF:95:MET:HG3	1.92	0.50
59:DF:105:ILE:C	59:DF:108:PRO:HD2	2.37	0.50
30:DI:61:TYR:HE2	30:DI:67:THR:H	1.58	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
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.26	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:675:A:OP1	18:AR:70:THR:HG21	2.10	0.50
1:AA:794:A:H2'	1:AA:795:C:C6	2.47	0.50
1:AA:1417:G:C6	1:AA:1482:G:C6	3.00	0.50
1:AA:1421:G:C6	1:AA:1422:G:N7	2.79	0.50
2:AB:66:ILE:HG13	2:AB:220:VAL:HG11	1.93	0.50
5:AE:60:GLN:C	5:AE:62:ALA:N	2.68	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
20:AT:16:ALA:O	20:AT:17:ARG:C	2.55	0.50
22:BA:603:A:C8	22:BA:655:A:C6	2.99	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
26:BE:12:LEU:HD13	26:BE:12:LEU:O	2.12	0.50
29:BH:119:ASN:C	29:BH:121:VAL:H	2.18	0.50
31:BJ:123:LYS:N	31:BJ:123:LYS:HD2	2.25	0.50
34:BM:31:PHE:CZ	34:BM:110:GLU:HA	2.47	0.50
34:BM:45:GLN:O	34:BM:46:ILE:C	2.54	0.50
34:BM:62:LYS:HB3	34:BM:106:ASP:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BV:68:LYS:O	43:BV:69:GLU:C	2.54	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
4:CD:187:ARG:HG3	4:CD:191:SER:OG	2.12	0.50
54:CG:9:ARG:HD3	54:CG:24:LYS:NZ	2.26	0.50
54:CG:74:VAL:CG1	54:CG:143:MET:HB2	2.42	0.50
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	1.92	0.50
18:CR:28:LEU:C	18:CR:30:ASN:N	2.69	0.50
57:DA:117:G:C2	57:DA:119:A:N6	2.79	0.50
57:DA:222:A:H3'	57:DA:421:C:H5'	1.94	0.50
57:DA:236:C:H2'	57:DA:237:C:H6	1.76	0.50
57:DA:382:A:H2'	57:DA:383: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
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: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
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
28:DG:154:GLU:C	28:DG:156:TYR:H	2.19	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
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.26	0.50
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.18	0.50
40:DS:27:LYS:O	40:DS:28:LYS:O	2.30	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
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
1:AA:66:A:O2'	1:AA:67:C:H5'	2.12	0.50
1:AA:92:U:O2'	1:AA:93:U: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:AC:35:ASP:OD1	3:AC:56:ILE:HG21	2.11	0.50
4:AD:22:SER:O	4:AD:23:GLY:C	2.55	0.50
11:AK:76:TYR:CD1	11:AK:76:TYR:N	2.80	0.50
21:AU:8:ASN:O	21:AU:11:PHE:HE2	1.95	0.50
21:AU:24:LYS:HG2	21:AU:25:ALA:N	2.27	0.50
22:BA:1110:G:O2'	22:BA:1111:A:P	2.70	0.50
22:BA:1338:G:O2'	22:BA:1393:A:N1	2.44	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:2052:A:O4'	25:BD:147:GLY:HA3	2.11	0.50
22:BA:2061:G:H5''	22:BA:2503:A:C2	2.46	0.50
22:BA:2407:A:H2'	22:BA:2408:U:C6	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
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.37	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:N	44:BW:71:LYS:HD2	2.25	0.50
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.26	0.50
53:CA:5:U:H4'	53:CA:6:G:H5''	1.93	0.50
53:CA:80:A:C6	53:CA:81:A:O2'	2.65	0.50
53:CA:113:G:C1'	53:CA:354:G:H5'	2.40	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:1013:G:H22	53:CA:1015:G:H3'	1.76	0.50
53:CA:1501:C:N4	53:CA:1504:G:C2	2.79	0.50
4:CD:60:VAL:HG22	4:CD:194:ILE:HG21	1.93	0.50
4:CD:115:GLN:NE2	4:CD:153:ARG:NH2	2.59	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
10:CJ:52:LEU:CD2	10:CJ:59:LYS:HA	2.42	0.50
11:CK:124:LYS:O	21:CU:33:ARG:NE	2.44	0.50
56:CP:67:ILE:O	56:CP:67:ILE:HG23	2.12	0.50
20:CT:42:ASP:O	20:CT:43:LYS:C	2.55	0.50
57:DA:486:C:H2'	57:DA:487:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H6	57:DA:991:C:O5'	1.93	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
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
39:DR:81:LYS:O	39:DR:82:HIS:C	2.55	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
51:D3:22:LYS:H	51:D3:48:MET:CB	2.23	0.50
1:AA:15:G:H2'	1:AA:16:A:H8	1.76	0.50
1:AA:43:C:H2'	1:AA:44:A:O4'	2.11	0.50
1:AA:259:G:C4	1:AA:260:G:C8	3.00	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
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
5:AE:63:MET:O	5:AE:67:ARG:HG2	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
8:AH:4:ASP:HB2	8:AH:80:PRO:HG3	1.92	0.50
8:AH:48:PHE:O	8:AH:49:LYS:CB	2.59	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
15:AO:23:SER:O	15:AO:24:THR:C	2.54	0.50
22:BA:7:G:H2'	22:BA:8:C:H6	1.75	0.50
22:BA:88:G:C6	22:BA:89:A:N7	2.80	0.50
22:BA:95:A:O2'	46:BY:41:HIS:HD2	1.95	0.50
22:BA:142:A:O2'	22:BA:143:C:O4'	2.30	0.50
22:BA:242:G:H5''	51:B3:63:TYR:CE2	2.47	0.50
22:BA:994:C:O3'	22:BA:995:C:H3'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:2545:G:O2'	22:BA:2546:U:H5'	2.12	0.50
24:BC:185:ALA:C	24:BC:187:CYS:N	2.67	0.50
29:BH:58:LEU:HA	29:BH:61:VAL:HB	1.93	0.50
29:BH:67:ALA:C	29:BH:69:ALA:N	2.69	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.26	0.50
38:BQ:96:ASP:C	38:BQ:96:ASP:OD2	2.55	0.50
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.27	0.50
39:BR:101:ILE:HG22	39:BR:101:ILE:O	2.12	0.50
44:BW:40:ARG:NH1	44:BW:45:HIS:NE2	2.58	0.50
44:BW:51:GLY:O	44:BW:52:CYS:C	2.55	0.50
47:BZ:30:ARG:O	47:BZ:31:ILE:C	2.55	0.50
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.41	0.50
53:CA:71:A:C2	53:CA:72:A:C8	3.00	0.50
53:CA:123:U:OP1	53:CA:311:C:O2'	2.28	0.50
53:CA:309:A:O2'	53:CA:607:A:N1	2.33	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:642:A:O2'	53:CA:643:C:O5'	2.30	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
53:CA:1287:A:O2'	53:CA:1288:A:C8	2.60	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
4:CD:186:GLU:O	4:CD:187:ARG:HB2	2.10	0.50
5:CE:132:PRO:O	5:CE:134:ASN:N	2.45	0.50
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.11	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:299:A:N3	57:DA:319:G:O2'	2.38	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
57:DA:726:G:O2'	57:DA:727:A:OP2	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:DC:62:ARG:HG2	24:DC:62:ARG:NH2	2.21	0.50
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.39	0.50
25:DD:159:LYS:HE2	25:DD:159:LYS:HA	1.93	0.50
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.92	0.50
59:DF:113:PHE:CE2	59:DF:116:LEU:HD22	2.47	0.50
31:DJ:60:ASP:OD1	31:DJ:60:ASP:N	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:91:U:H2'	1:AA:92:U:C1'	2.42	0.50
1:AA:716:A:C6	1:AA:717:U:N3	2.79	0.50
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.59	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: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
22:BA:522:A:C6	22:BA:523:C:C4	2.99	0.50
22:BA:729:G:N3	22:BA:729:G:C2'	2.72	0.50
22:BA:764:A:H3'	22:BA:765:C:H5'	1.94	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:2336:A:N6	44:BW:40:ARG:HB3	2.26	0.50
22:BA:2516:A:C2	22:BA:2569:G:C4	3.00	0.50
23:BB:54:G:H2'	23:BB:55:U:H6	1.77	0.50
24:BC:21:PRO:C	24:BC:23:LEU:H	2.20	0.50
24:BC:124:LYS:O	24:BC:125:PRO:C	2.53	0.50
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.11	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:44:TYR:C	31:BJ:45:THR:HG22	2.36	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)
49:B1:33:LEU:C	49:B1:33:LEU:HD12	2.37	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
53:CA:995:C:N3	53:CA:1046:A:O2'	2.43	0.50
53:CA:1092:A:C6	53:CA:1183:U:O2	2.64	0.50
53:CA:1114:C:O2'	14:CN:99:SER:HB2	2.12	0.50
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.27	0.50
6:CF:81:ASN:O	6:CF:83:ALA:N	2.45	0.50
11:CK:15:VAL:O	11:CK:16:SER:HB2	2.11	0.50
11:CK:96:ILE:HG21	11:CK:109:ILE:HD11	1.93	0.50
55:CM:13:HIS:NE2	55:CM:41:ASP:HA	2.25	0.50
55:CM:64:VAL:O	55:CM:65:GLU:C	2.55	0.50
57:DA:49:A:C8	57:DA:51:G:C2	2.99	0.50
57:DA:108:G:H2'	57:DA:109:C:H6	1.77	0.50
57:DA:120:U:C2	57:DA:149:A:C6	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:850:U:O2'	47:DZ:46:MET:HE3	2.12	0.50
57:DA:975:A:H2'	57:DA:976:G:C8	2.47	0.50
57:DA:1286:A:C6	57:DA:1329:U:C2	3.00	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:2092:U:HO2'	57:DA:2093:G:H8	1.03	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
58:DB:57:A:N6	59:DF:25:MET:SD	2.85	0.50
58:DB:108:A:HO2'	58:DB:109:A:P	2.35	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
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.54	0.50
32:DK:104:THR:C	32:DK:106:GLU:N	2.69	0.50
35:DN:75:ILE:O	35:DN:75:ILE:HD12	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.38	0.50
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.12	0.50
1:AA:40:C:H2'	1:AA:40:C:O2	2.12	0.50
1:AA:244:U:O4	1:AA:906:A:H1'	2.12	0.50
1:AA:321:A:N7	1:AA:328:C:O2'	2.43	0.50
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
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
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
17:AQ:16:MET:O	17:AQ:17:GLU:C	2.54	0.50
21:AU:32:ARG:HG2	21:AU:32:ARG:O	2.12	0.50
22:BA:49:A:C6	22:BA:177:G:C4	3.00	0.50
22:BA:117:G:C6	22:BA:119:A:N6	2.80	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:1257:C:H5'	26:BE:78:TRP:CH2	2.46	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
23:BB:35:C:H2'	23:BB:36:C:O4'	2.10	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
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1517:G:C8	57:DA:1920:C:OP1	2.64	0.50
2:CB:71:THR:O	2:CB:72:LYS:C	2.55	0.50
4:CD:2:ARG:HE	4:CD:114:ARG:HD2	1.77	0.50
8:CH:89:ASP:OD1	8:CH:89:ASP:N	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:380:G:O3'	45:DX:15:ASN:HB2	2.12	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
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
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
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
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.12	0.50
35:DN:24:MET:HE1	35:DN:40:LYS:HD2	1.94	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
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.93	0.50
1:AA:36:C:OP1	12:AL:119:LYS:HE3	2.12	0.49
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.60	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
1:AA:1195:C:H2'	1:AA:1197:A:H5'	1.94	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
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:O	19:AS:80:ARG:HG3	2.12	0.49
22:BA:272:A:O2'	22:BA:273:G:O5'	2.29	0.49
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.11	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
22:BA:1909:C:C2	22:BA:1922:G:N2	2.80	0.49
22:BA:2006:C:O5'	22:BA:2006:C:H6	1.95	0.49
22:BA:2084:C:O5'	22:BA:2084:C:H6	1.94	0.49
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.42	0.49
25:BD:40:LEU:H	25:BD:40:LEU:HD12	1.77	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
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.49
34:BM:50:ARG:O	34:BM:53:MET:HB3	2.12	0.49
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	1.94	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
52:B4:15:LYS:O	52:B4:16:ILE:O	2.30	0.49
53:CA:14:U:O2	53:CA:16:A:C8	2.65	0.49
53:CA:121:U:OP1	53:CA:121:U:H3'	2.11	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
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:1293:C:H2'	53:CA:1294:G:H8	1.73	0.49
4:CD:191:SER:O	4:CD:192:ALA:CB	2.60	0.49
54:CG:4:ARG:HH11	54:CG:4:ARG:HG2	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:333:G:O2'	57:DA:334:C:H6	1.93	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
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
57:DA:855:G:O2'	44:DW:23:LYS:HD3	2.12	0.49
57:DA:1206:G:H2'	57:DA:1207:C:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.68	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
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.12	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
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:286:U:H2'	22:BA:287:G:O4'	2.12	0.49
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.48	0.49
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.93	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:2313:C:H5''	27:BF:87:LYS:HD3	1.93	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
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
25:BD:98:VAL:O	25:BD:99:GLU:C	2.54	0.49
25:BD:151:THR:O	25:BD:152:PRO:C	2.48	0.49
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.12	0.49
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.69	0.49
31:BJ:21:THR:O	31:BJ:23:LYS:N	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG23	1.94	0.49
33:BL:87:GLY:O	33:BL:88:GLY:C	2.55	0.49
36:BO:110:ALA:O	36:BO:113:ALA:HB3	2.12	0.49
41:BT:19:LYS:O	41:BT:20:ALA:C	2.54	0.49
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.75	0.49
44:BW:36:ILE:C	44:BW:37:VAL:O	2.53	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
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
2:CB:131:LYS:O	2:CB:131:LYS:HE3	2.11	0.49
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.11	0.49
54:CG:124:SER:C	54:CG:126:ALA:H	2.19	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
55:CM:5:GLY:C	55:CM:6:ILE:HG13	2.37	0.49
57:DA:81:G:H2'	57:DA:82:U:O4'	2.12	0.49
57:DA:228:C:H5'	57:DA:229:C:H5	1.77	0.49
57:DA:478:A:C6	57:DA:480:A:C6	3.00	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:1774:C:O2	24:DC:10:PRO:HB2	2.12	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:H6	57:DA:2232:C:O5'	1.94	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
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
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
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.12	0.49
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:186:C:H4'	20:AT:75:LYS:HG3	1.94	0.49
1:AA:1270:G:H8	1:AA:1270:G:OP2	1.94	0.49
8:AH:63:LYS:O	8:AH:70:VAL:HG23	2.12	0.49
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:HG22	16:AP:78:VAL:O	2.11	0.49
18:AR:66:LEU:O	18:AR:67:LEU:HD23	2.12	0.49
20:AT:72:ALA:O	20:AT:73:ARG:C	2.55	0.49
21:AU:34:ARG:HD3	21:AU:39:LYS:NZ	2.27	0.49
22:BA:49:A:H61	22:BA:177:G:C2'	2.24	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
22:BA:1223:G:P	39:BR:68:ARG:HH12	2.34	0.49
22:BA:1244:A:O5'	33:BL:7:SER:HB3	2.12	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:1798:U:OP1	24:BC:257:ARG:HB2	2.12	0.49
22:BA:1847:A:N3	22:BA:1847:A:H2'	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:2512:C:O2'	25:BD:159:LYS:HE3	2.12	0.49
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.27	0.49
24:BC:39:SER:C	24:BC:41:GLY:N	2.69	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
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
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.28	0.49
31:BJ:130:HIS:HD2	31:BJ:132:HIS:N	2.01	0.49
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.12	0.49
32:BK:12:ASP:HB3	32:BK:85:VAL:HG13	1.93	0.49
34:BM:47:GLU:O	34:BM:48:ALA:C	2.54	0.49
41:BT:31:VAL:C	41:BT:32:LEU:HD23	2.37	0.49
41:BT:51:PHE:O	41:BT:53:VAL:HG13	2.12	0.49
53:CA:54:C:H2'	53:CA:352:C:N4	2.27	0.49
53:CA:82:G:C6	53:CA:89:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:131:A:C2	53:CA:132:C:N3	2.81	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:937:A:C2	53:CA:1379:G:C6	3.00	0.49
53:CA:1240:U:O2'	54:CG:37:THR:HB	2.12	0.49
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.74	0.49
2:CB:75:ALA:HB2	2:CB:209:VAL:HG21	1.94	0.49
5:CE:18:ASN:OD1	5:CE:18:ASN:N	2.46	0.49
6:CF:92:THR:C	6:CF:93:LYS:HG2	2.36	0.49
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.27	0.49
57:DA:2:G:C5	57:DA:3:U:C4	3.00	0.49
57:DA:228:C:H5'	57:DA:229:C:C5	2.47	0.49
57:DA:590:A:C5	57:DA:591:U:C5	3.00	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:H6	57:DA:1965:C:H5''	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: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:2880:C:H1'	35:DN:93:GLY:N	2.09	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:O	31:DJ:45:THR:HG23	2.12	0.49
35:DN:56:LYS:HE2	35:DN:87:PHE:O	2.12	0.49
37:DP:56:SER:O	37:DP:57:ALA:HB2	2.11	0.49
1:AA:274:A:H4'	1:AA:275:G:O5'	2.11	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
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
2:AB:184:ALA:HB3	2:AB:195:VAL:HG21	1.94	0.49
13:AM:39:ALA:HB3	13:AM:42:VAL:HG13	1.95	0.49
22:BA:273:G:O2'	22:BA:274:C:O4'	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1313:U:O2	22:BA:1313:U:C2'	2.60	0.49
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:HH21	35:BN:71:ARG:HG2	1.74	0.49
37:BP:92:ARG:HH11	37:BP:92:ARG:HB2	1.78	0.49
39:BR:10:LYS:HD2	39:BR:10:LYS:N	2.27	0.49
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.37	0.49
41:BT:31:VAL:HA	41:BT:84:TYR:H	1.77	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:261:U:OP1	20:CT:70:LYS:HE2	2.13	0.49
53:CA:491:G:C2'	53:CA:492:C:H5'	2.43	0.49
53:CA:762:U:H6	53:CA:762:U:O5'	1.95	0.49
53:CA:770:C:O2'	53:CA:899:C:N3	2.42	0.49
53:CA:821:G:O2'	53:CA:822:U:H5'	2.12	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
4:CD:28:ASP:O	4:CD:29:THR:O	2.29	0.49
4:CD:29:THR:C	4:CD:31:CYS:N	2.71	0.49
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.37	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
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
57:DA:785:G:O2'	57:DA:1779:U:C5'	2.60	0.49
57:DA:1070:A:H61	30:DI:8:VAL:HB	1.77	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:2056:G:N3	57:DA:2056:G:H2'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:179:ARG:NH1	37:DP:7:LEU:HD11	2.27	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
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
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.48	0.49
38:DQ:39:ILE:O	38:DQ:42:GLY:N	2.45	0.49
39:DR:2:TYR:CE1	39:DR:13:ARG:HD2	2.47	0.49
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.93	0.49
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.27	0.49
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.38	0.49
1:AA:57:G:N1	1:AA:356:A:C2	2.81	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: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
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
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ2	1.77	0.49
22:BA:93:G:O2'	22:BA:94:A:H5'	2.12	0.49
22:BA:221:A:C8	22:BA:266:G:O6	2.66	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: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
22:BA:1019:U:H2'	22:BA:1020:A:C8	2.48	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:HE2	2.13	0.49
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.12	0.49
22:BA:1409:U:O2'	22:BA:1410:G:H5'	2.13	0.49
22:BA:2611:C:O5'	22:BA:2611:C:H6	1.95	0.49
22:BA:2853:C:H2'	22:BA:2854:G:H8	1.77	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
26:BE:172:ALA:C	26:BE:174:GLY:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:40:HIS:NE2	31:BJ:41:LYS:HE3	2.27	0.49
33:BL:39:LYS:C	33:BL:40:SER:O	2.55	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
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:59:A:H2'	53:CA:59:A:N3	2.27	0.49
53:CA:119:A:H5'	53:CA:120:A:H5'	1.93	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:O2	53:CA:209:U:H2'	2.11	0.49
53:CA:210:C:O2	53:CA:210:C:H2'	2.13	0.49
53:CA:1067:A:O3'	53:CA:1094:G:H5'	2.11	0.49
53:CA:1365:G:C2	53:CA:1366:C:C2	3.01	0.49
2:CB:23:ASN:HB2	2:CB:189:ASN:C	2.37	0.49
3:CC:59:PRO:O	3:CC:61:LYS:N	2.45	0.49
11:CK:125:LYS:C	21:CU:33:ARG:HE	2.21	0.49
12:CL:97:VAL:O	12:CL:98:ARG:C	2.56	0.49
55:CM:87:GLY:O	55:CM:91:ARG:HD2	2.12	0.49
15:CO:22:GLY:O	15:CO:23:SER:C	2.56	0.49
15:CO:44:GLU:O	15:CO:45:HIS:C	2.55	0.49
20:CT:79:THR:O	20:CT:82:ILE:HG13	2.13	0.49
57:DA:71:A:OP2	57:DA:71:A:H3'	2.12	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: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
58:DB:88:C:O2'	58:DB:89:U:OP2	2.23	0.49
24:DC:166:ARG:O	24:DC:166:ARG:HG3	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:518:C:H4'	1:AA:519:C:H5''	1.94	0.49
1:AA:642:A:C5	8:AH:106:SER:HA	2.47	0.49
1:AA:1322:C:O2'	1:AA:1323:G:P	2.70	0.49
1:AA:1370:G:C5'	9:AI:110:VAL:HG21	2.43	0.49
1:AA:1453:G:H2'	1:AA:1453:G:N3	2.27	0.49
4:AD:2:ARG:NH2	4:AD:114:ARG:HD3	2.28	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
6:AF:16:GLU:CB	4:CD:191:SER:HB2	2.40	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
7:AG:92:PRO:C	7:AG:93:VAL:HG22	2.38	0.49
7:AG:108:ARG:NH2	7:AG:118:ARG:HH22	2.11	0.49
8:AH:77:VAL:O	8:AH:78:SER:C	2.56	0.49
8:AH:91:LEU:HD23	8:AH:92:PRO:HD2	1.93	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
22:BA:60:G:HO2'	22:BA:61:C:P	2.35	0.49
22:BA:301:G:O2'	22:BA:302:C:O5'	2.31	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:1130:U:HO2'	22:BA:1131:G:H8	1.60	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
25:BD:94:GLN:O	25:BD:95:SER:HB2	2.12	0.49
25:BD:176:ASP:OD2	25:BD:176:ASP:N	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BW:28:GLU:O	44:BW:29:SER:C	2.55	0.49
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.75	0.49
47:BZ:52:PHE:CD2	47:BZ:52:PHE:C	2.89	0.49
49:B1:50:GLU:O	49:B1:51:ALA:HB2	2.13	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
53:CA:900:A:H2'	53:CA:901:A:C8	2.48	0.49
53:CA:1513:A:O2'	53:CA:1514:G:H5'	2.12	0.49
2:CB:90:PHE:HE1	2:CB:92:ASN:HD22	1.60	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: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
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:O2	57:DA:2092:U:O4'	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
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
40:DS:41:LYS:C	40:DS:43:ALA:N	2.69	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
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.38	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:577:G:C4'	1:AA:816:A:H2'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:999:C:H2'	1:AA:1000:A:H8	1.77	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
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
5:AE:149:PRO:C	5:AE:151:MET:H	2.19	0.49
5:AE:153:ALA:O	5:AE:154:ALA:C	2.56	0.49
9:AI:62:LEU:N	9:AI:62:LEU:HD23	2.28	0.49
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: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
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
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:44:TYR:HA	38:BQ:59:LEU:HD21	1.94	0.49
37:BP:52:ARG:O	37:BP:53:GLY:C	2.55	0.49
38:BQ:43:GLN:NE2	39:BR:77:PHE:CD1	2.80	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:653:U:P	8:CH:55:LYS:HZ2	2.36	0.49
53:CA:754:C:O2	53:CA:754:C:C2'	2.61	0.49
2:CB:19:THR:HG22	2:CB:37:VAL:CG2	2.40	0.49
2:CB:95:TRP:CZ2	2:CB:100:LEU:HD13	2.47	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
57:DA:116:C:H5''	57:DA:128:C:H41	1.78	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1845:G:C6	57:DA:1846:G:C5	3.01	0.49
57:DA:2147:A:H5''	57:DA:2147:A:N3	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:2879:A:HO2'	57:DA:2880:C:P	2.36	0.49
58:DB:55:U:H4'	59:DF:24:VAL:HG23	1.94	0.49
24:DC:226:PRO:O	24:DC:227:VAL:C	2.55	0.49
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.78	0.49
29:DH:24:GLY:O	29:DH:25:TYR:C	2.55	0.49
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.43	0.49
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.38	0.49
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.25	0.49
32:DK:76:VAL:HB	37:DP:72:VAL:CG2	2.42	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: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
35:DN:93:GLY:O	35:DN:116:VAL:HG21	2.13	0.49
37:DP:88:ARG:HH11	37:DP:112:ARG:CZ	2.25	0.49
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.13	0.49
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.45	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
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.13	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
4:AD:54:LEU:C	4:AD:54:LEU:CD2	2.86	0.49
4:AD:97:LEU:C	4:AD:97:LEU:HD23	2.37	0.49
8:AH:8:ASP:O	8:AH:11:THR:HG22	2.11	0.49
8:AH:44:PHE:HE2	8:AH:100:ILE:HG12	1.77	0.49
8:AH:75:GLN:O	8:AH:126:CYS:HB2	2.12	0.49
8:AH:104:SER:HB2	8:AH:125:ILE:HD11	1.95	0.49
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	2.11	0.49
22:BA:161:A:H3'	22:BA:162:U:H5''	1.94	0.49
22:BA:244:A:C2	22:BA:255:A:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:2825:G:H5''	22:BA:2826:A:OP2	2.12	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
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.78	0.49
38:BQ:88:GLU:OE1	38:BQ:88:GLU:C	2.54	0.49
41:BT:27:SER:O	41:BT:28:ASN:OD1	2.31	0.49
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: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
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:1190:G:OP1	3:CC:3:LYS:HA	2.13	0.49
53:CA:1239:A:N6	53:CA:1299:A:N6	2.60	0.49
53:CA:1422:G:C5'	32:DK:48:PRO:HB3	2.42	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:100:GLU:CD	5:CE:100:GLU:H	2.21	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:91:A:O2'	57:DA:92:U:C6	2.63	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:O5'	57:DA:598:U:H6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H8	57:DA:830:G:OP2	1.96	0.49
57:DA:1241:A:N3	57:DA:1241:A:H5'	2.27	0.49
57:DA:1273:U:H4'	57:DA:1275:A:P	2.53	0.49
57:DA:1416:G:HO2'	57:DA:1417:C:P	2.35	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:1820:U:OP1	24:DC:176:ARG:HB3	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
58:DB:62:C:H2'	58:DB:63:C:O4'	2.13	0.49
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.86	0.49
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
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:96:ASP:C	38:DQ:98:ALA:H	2.20	0.49
48:D0:16:ARG:O	48:D0:17:SER:C	2.56	0.49
1:AA:532:A:N7	3:AC:192:TYR:HB3	2.28	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:1006:G:H2'	1:AA:1007:U:O4'	2.13	0.49
1:AA:1108:G:H5''	3:AC:175:HIS:CE1	2.48	0.49
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.12	0.49
1:AA:1348:U:H4'	9:AI:121:ARG:CG	2.42	0.49
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.38	0.49
9:AI:49:GLN:C	9:AI:51:LEU:N	2.70	0.49
10:AJ:11:LYS:HB3	10:AJ:71:LEU:CD1	2.42	0.49
11:AK:34:THR:HG1	11:AK:39:ASN:H	1.60	0.49
12:AL:49:ARG:HH11	12:AL:49:ARG:CG	1.95	0.49
19:AS:42:ASN:ND2	19:AS:42:ASN:C	2.70	0.49
22:BA:534:U:H2'	22:BA:535:G:C8	2.48	0.49
22:BA:555:G:O2'	22:BA:556:A:OP2	2.29	0.49
22:BA:631:A:N3	22:BA:2415:G:O2'	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.13	0.49
24:BC:142:ASN:CG	24:BC:142:ASN:O	2.55	0.49
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.21	0.49
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.54	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:330:C:H5'	53:CA:330:C:H6	1.78	0.49
53:CA:833:G:O2'	53:CA:834:U:H5'	2.12	0.49
53:CA:922:G:O2'	53:CA:1398:A:N1	2.44	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
53:CA:1058:G:OP1	3:CC:198:LYS:HE2	2.13	0.49
53:CA:1125:U:C6	10:CJ:40:ILE:HG12	2.47	0.49
53:CA:1160:G:O6	53:CA:1181:G:O6	2.30	0.49
53:CA:1417:G:N2	53:CA:1484:C:C4	2.81	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
2:CB:103:TRP:HZ2	2:CB:155:GLY:HA2	1.77	0.49
3:CC:10:ARG:HH21	3:CC:181:ILE:HB	1.78	0.49
4:CD:21:LYS:HG2	4:CD:21:LYS:O	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
54:CG:116:ALA:C	54:CG:120:ALA:HB3	2.38	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:25:ALA:O	21:CU:26:GLY:C	2.55	0.49
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.75	0.49
57:DA:3:U:C4	57:DA:4:U:C5	3.01	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:465:G:H4'	50:D2:16:HIS:HD2	1.77	0.49
57:DA:858:G:C6	57:DA:2268:A:C6	3.01	0.49
57:DA:1080:A:H2'	57:DA:1081:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2352:A:C6	44:DW:30:VAL:HG11	2.47	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:HG22	33:DL:85:VAL:O	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
1:AA:74:A:C2	1:AA:75:G:C4	3.01	0.49
1:AA:113:G:H2'	1:AA:114:U:H6	1.78	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:667:G:H4'	15:AO:50:HIS:ND1	2.28	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
1:AA:1004:A:C2	1:AA:1005:A:H1'	2.47	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
3:AC:137:VAL:HG11	3:AC:169:GLU:HB3	1.95	0.49
4:AD:9:LYS:O	4:AD:12:ARG:HB2	2.12	0.49
4:AD:196:GLU:HA	4:AD:199:ILE:HG22	1.95	0.49
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
7:AG:143:MET:HA	7:AG:143:MET:HE3	1.94	0.49
12:AL:82:ARG:NH1	12:AL:82:ARG:CG	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
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
20:AT:3:ILE:O	20:AT:4:LYS:HB2	2.10	0.49
22:BA:186:G:O2'	22:BA:187:G:H5'	2.13	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
22:BA:1249:U:C6	22:BA:1249:U:H5'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:2842:G:H2'	22:BA:2843:G:H5'	1.95	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
26:BE:147:LEU:O	26:BE:148:ILE:C	2.54	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
44:BW:23:LYS:HZ1	44:BW:24:ARG:HG3	1.77	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:C5'	53:CA:239:U:C6	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
11:CK:103:GLY:O	11:CK:104:PHE:C	2.56	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:14:A:N6	57:DA:526:A:C4	2.80	0.49
57:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.12	0.49
57:DA:143:C:C2'	57:DA:144:A:C8	2.91	0.49
57:DA:279:A:C6	57:DA:280:U:N3	2.81	0.49
57:DA:295:G:N3	57:DA:295:G:H2'	2.27	0.49
57:DA:303:G:C6	57:DA:315:G:C6	3.01	0.49
57:DA:740:C:C4	57:DA:1981:A:C2	3.01	0.49
57:DA:1139:G:O2'	57:DA:1140:C:H5'	2.13	0.49
57:DA:1204:A:H4'	57:DA:1205:A:H5''	1.95	0.49
57:DA:1342:A:OP1	41:DT:59:ASN:HB3	2.12	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:OP2	57:DA:1901:A:H4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2013:A:OP1	40:DS:96:ILE:HA	2.13	0.49
57:DA:2150:C:H2'	57:DA:2151:U:C6	2.48	0.49
57:DA:2346:A:C3'	57:DA:2347:C:H5''	2.35	0.49
57:DA:2415:G:H4'	33:DL:65:GLY:O	2.13	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
58:DB:28:C:C2	58:DB:29:A:C8	3.01	0.49
31:DJ:43:GLU:C	31:DJ:45:THR:HG22	2.37	0.49
32:DK:87:LEU:HD23	32:DK:87:LEU:N	2.27	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
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.81	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: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:302:G:N3	1:AA:556:C:H4'	2.28	0.48
1:AA:486:U:H2'	1:AA:487:A:C8	2.48	0.48
1:AA:999:C:H2'	1:AA:1000:A:C8	2.48	0.48
1:AA:1151:A:H5''	10:AJ:44:THR:OG1	2.13	0.48
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
2:AB:22:TRP:CZ3	2:AB:24:PRO:HA	2.48	0.48
9:AI:119:LYS:O	9:AI:120:ALA:HB3	2.12	0.48
19:AS:30:LEU:O	19:AS:49:ALA:HB3	2.13	0.48
22:BA:823:C:C4	22:BA:824:U:C4	3.00	0.48
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.36	0.48
22:BA:1941:C:C6	22:BA:1941:C:C5'	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
24:BC:93:VAL:CG1	24:BC:94:LEU:N	2.75	0.48
24:BC:129:LEU:O	24:BC:134:ILE:HD11	2.13	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:40:HIS:C	31:BJ:41:LYS:HG2	2.38	0.48
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.48	0.48
38:BQ:94:LEU:C	38:BQ:96:ASP:N	2.70	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
50:B2:26:ASN:HD22	50:B2:26:ASN:N	2.11	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: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:1525:G:H5''	21:CU:37:TYR:CD1	2.48	0.48
4:CD:190:LEU:O	4:CD:190:LEU:HD23	2.12	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
21:CU:9:GLU:HB3	21:CU:10:PRO:CD	2.42	0.48
57:DA:155:A:C2	57:DA:172:A:C6	3.01	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:1188:U:C2'	57:DA:1189:A:H5'	2.43	0.48
57:DA:1223:G:O6	39:DR:71:LYS:NZ	2.46	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:1635:A:C2'	57:DA:1636:U:H5'	2.43	0.48
57:DA:2321:U:O2	57:DA:2321:U:O5'	2.30	0.48
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
58:DB:57:A:N7	59:DF:25:MET:SD	2.86	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
25:DD:112:THR:O	25:DD:113:SER:HB2	2.13	0.48
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	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: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
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
3:AC:138:GLN:C	3:AC:140:ALA:H	2.22	0.48
6:AF:90:MET:HE1	18:AR:22:TYR:CE2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:151:C:H5'	22:BA:1360:G:OP1	2.13	0.48
22:BA:263:G:H1'	22:BA:430:A:N3	2.27	0.48
22:BA:416:U:C4	22:BA:417:C:C4	3.02	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
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:1255:U:C5	26:BE:68:ALA:HA	2.48	0.48
22:BA:1340:U:C5	22:BA:1603:A:C8	3.01	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
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
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
38:BQ:97:ILE:HD11	38:BQ:104:ALA:C	2.38	0.48
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:53:LEU:O	2:CB:57:ASN:HB2	2.13	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
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:49:A:C8	57:DA:51:G:N2	2.81	0.48
57:DA:117:G:OP1	57:DA:124:G:O6	2.31	0.48
57:DA:167:A:C2	57:DA:168:G:H1'	2.48	0.48
57:DA:187:G:N2	57:DA:210:C:H1'	2.28	0.48
57:DA:273:G:H2'	57:DA:274:C:H6	1.78	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:480:A:H5'	42:DU:43:LYS:NZ	2.28	0.48
57:DA:607:U:H5	57:DA:619:G:C5	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:674:G:HO2'	26:DE:69:ARG:HG2	1.74	0.48
57:DA:822:G:O6	57:DA:943:A:C2	2.54	0.48
57:DA:1083:U:H1'	57:DA:1086:A:C2	2.49	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:1808:A:N6	45:DX:27:ARG:HD2	2.28	0.48
57:DA:1906:G:N2	57:DA:1907:G:C4	2.81	0.48
57:DA:2033:A:H8	57:DA:2033:A:OP2	1.96	0.48
57:DA:2095:A:H5'	57:DA:2096:C:OP2	2.13	0.48
57:DA:2216:G:O2'	57:DA:2217:G:O5'	2.32	0.48
57:DA:2351:G:N7	51:D3:42:HIS:CE1	2.81	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:2810:A:H2'	57:DA:2811:G:O4'	2.13	0.48
24:DC:51:ARG:O	24:DC:53:ILE:HG22	2.13	0.48
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.71	0.48
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.71	0.48
29:DH:80:ILE:HB	29:DH:101:ASP:CG	2.39	0.48
31:DJ:105:VAL:HG22	31:DJ:105:VAL:O	2.13	0.48
35:DN:20:MET:C	35:DN:22:ARG:H	2.21	0.48
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.70	0.48
43:DV:32:GLY:O	43:DV:33:GLY:C	2.55	0.48
1:AA:80:A:C2	1:AA:90:C:N3	2.80	0.48
1:AA:725:G:O2'	1:AA:726:C:H5'	2.13	0.48
1:AA:953:G:H2'	1:AA:954:G:O4'	2.14	0.48
1:AA:972:C:H4'	10:AJ:59:LYS:CG	2.43	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
1:AA:1160:G:O6	1:AA:1181:G:O6	2.31	0.48
2:AB:89:PHE:CE2	2:AB:153:MET:HB2	2.49	0.48
3:AC:18:ASN:HB3	3:AC:39:ARG:HH12	1.78	0.48
3:AC:39:ARG:CD	3:AC:54:ILE:HD11	2.43	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
19:AS:50:VAL:CG2	19:AS:70:LEU:HB3	2.43	0.48
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.66	0.48
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.13	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:1998:A:OP2	25:BD:141:ARG:NH2	2.46	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:2880:C:H1'	35:BN:92:GLY:H	1.78	0.48
22:BA:2886:A:H2'	22:BA:2887:A:O4'	2.13	0.48
25:BD:9:VAL:CG2	25:BD:10:GLY:N	2.76	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
34:BM:136:MET:HE2	43:BV:57:TYR:CD2	2.48	0.48
35:BN:93:GLY:C	35:BN:95:THR:H	2.21	0.48
50:B2:43:THR:C	50:B2:44:VAL:HG23	2.37	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
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:443:C:O5'	53:CA:443:C:H6	1.96	0.48
53:CA:998:C:C6	53:CA:999:C:H5	2.31	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
3:CC:29:ALA:CB	14:CN:64:ARG:HH12	2.26	0.48
54:CG:4:ARG:HG2	54:CG:4:ARG:NH1	2.28	0.48
9:CI:115:VAL:HG21	10:CJ:61:ALA:O	2.12	0.48
11:CK:74:LYS:HE3	11:CK:78:ILE:O	2.13	0.48
11:CK:84:MET:HG2	11:CK:110:THR:OG1	2.13	0.48
18:CR:39:VAL:CG1	18:CR:40:PRO:HD2	2.43	0.48
57:DA:481:G:HO2'	57:DA:507:A:H61	1.58	0.48
57:DA:492:A:N1	40:DS:49:LYS:CE	2.76	0.48
57:DA:538:A:O2'	31:DJ:8:PRO:CG	2.61	0.48
57:DA:563:A:C4	57:DA:2018:G:C2	3.01	0.48
57:DA:623:C:O2'	57:DA:624:C:O4'	2.21	0.48
57:DA:815:C:OP1	39:DR:85:LYS:HE2	2.14	0.48
57:DA:945:A:C8	57:DA:2448:A:C2	3.01	0.48
57:DA:1152:C:H5''	38:DQ:79:ILE:HD12	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1829:A:C8	57:DA:1830:C:C6	3.02	0.48
57:DA:2093:G:OP1	57:DA:2093:G:O4'	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:2305:U:O2'	59:DF:132:ARG:HA	2.14	0.48
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.95	0.48
26:DE:138:LEU:HD23	26:DE:141:MET:HE1	1.95	0.48
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.96	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
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.56	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
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
1:AA:1055:A:N6	1:AA:1206:G:C6	2.81	0.48
1:AA:1118:U:P	9:AI:105:ARG:HE	2.37	0.48
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.48	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
3:AC:116:ALA:HB1	3:AC:186:SER:HB2	1.94	0.48
4:AD:57:LYS:HZ2	4:AD:61:ARG:HD3	1.77	0.48
4:AD:196:GLU:C	4:AD:198:LEU:N	2.71	0.48
7:AG:83:THR:O	7:AG:84:TYR:C	2.55	0.48
22:BA:18:U:HO2'	22:BA:19:A:H5'	1.77	0.48
22:BA:632:A:H2'	22:BA:633:A:C8	2.48	0.48
22:BA:1204:A:C2	22:BA:1240:U:N3	2.81	0.48
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
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
31:BJ:1:MET:O	31:BJ:2:LYS:C	2.56	0.48
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.89	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
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.13	0.48
44:BW:8:SER:O	44:BW:9:THR:CB	2.61	0.48
44:BW:18:LYS:HE3	44:BW:19:ARG:HG2	1.95	0.48
46:BY:40:SER:O	46:BY:42:LEU:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B4:13:ASN:N	52:B4:13:ASN:ND2	2.62	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
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
3:CC:120:THR:O	3:CC:120:THR:CG2	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
8:CH:54:THR:C	8:CH:56:PRO:HD3	2.39	0.48
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.45	0.48
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	2.13	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
57:DA:200:U:O4	57:DA:248:G:C2	2.66	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:323:C:H2'	26:DE:163:ASN:CG	2.39	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:693:A:O2'	57:DA:1353:A:N3	2.40	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
57:DA:709:U:O2'	57:DA:710:U:H5'	2.13	0.48
57:DA:1278:C:O2'	35:DN:27:SER:HB3	2.13	0.48
57:DA:1773:A:N7	57:DA:1829:A:H1'	2.29	0.48
57:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.12	0.48
57:DA:2597:G:H2'	57:DA:2598:A:C8	2.48	0.48
57:DA:2868:A:O2'	57:DA:2869:G:O4'	2.31	0.48
57:DA:2898:U:H2'	57:DA:2899:A:C8	2.48	0.48
58:DB:30:C:H2'	58:DB:31:C:H5'	1.94	0.48
24:DC:35:LYS:NZ	24:DC:35:LYS:HB3	2.28	0.48
24:DC:62:ARG:CG	24:DC:62:ARG:NH2	2.76	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
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.14	0.48
26:DE:115:GLN:O	26:DE:117:ARG:N	2.46	0.48
26:DE:135:ALA:C	26:DE:137:LYS:H	2.20	0.48
26:DE:144:GLU:O	26:DE:145:ASP:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.93	0.48
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.57	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
39:DR:2:TYR:H	39:DR:42:ALA:CB	2.26	0.48
50:D2:10:LEU:O	50:D2:14:ARG:HB2	2.12	0.48
1:AA:57:G:C5	1:AA:58:C:C4	3.02	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: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
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.48	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:66:GLU:HG2	14:AN:98:ALA:HB2	1.95	0.48
10:AJ:91:ASP:O	10:AJ:92:LEU:O	2.31	0.48
19:AS:62:THR:O	19:AS:63:ASP:C	2.56	0.48
22:BA:571:U:C5	22:BA:575:A:C5	3.02	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
24:BC:250:GLN:NE2	24:BC:250:GLN:N	2.61	0.48
25:BD:149:ASN:C	25:BD:151:THR:N	2.70	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:N	30:BI:61:TYR:CD2	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:60:VAL:O	35:BN:61:ALA:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
38:BQ:94:LEU:C	38:BQ:94:LEU:HD13	2.38	0.48
39:BR:54:VAL:O	39:BR:55:ASP:C	2.56	0.48
44:BW:25:PHE:C	44:BW:27:GLY:H	2.22	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
48:B0:3:GLN:NE2	48:B0:7:PRO:HD3	2.29	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:O2	53:CA:381:C:H2'	2.13	0.48
53:CA:961:U:C4	53:CA:983:A:C6	3.02	0.48
53:CA:1370:G:H5''	9:CI:110:VAL:HG21	1.94	0.48
3:CC:155:ARG:NE	3:CC:159:ALA:O	2.45	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
15:CO:32:THR:O	15:CO:33:ALA:C	2.57	0.48
56:CP:1:MET:O	56:CP:1:MET:HG3	2.14	0.48
18:CR:32:ILE:O	18:CR:32:ILE:HD12	2.13	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:866:A:O2'	57:DA:867:C:C6	2.61	0.48
57:DA:1153:C:H2'	57:DA:1154:G:H8	1.76	0.48
57:DA:1354:A:OP1	24:DC:35:LYS:HE3	2.13	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
25:DD:35:THR:HG21	25:DD:67:HIS:CD2	2.49	0.48
25:DD:99:GLU:HG3	25:DD:100:LEU:H	1.79	0.48
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.13	0.48
28:DG:58:ALA:O	28:DG:59:ASP:C	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DT:21:SER:C	41:DT:25:GLU:HB3	2.38	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
49:D1:16:THR:HG21	49:D1:42:VAL:HG23	1.95	0.48
1:AA:246:A:C4	1:AA:282:A:N6	2.82	0.48
1:AA:1057:G:H4'	3:AC:196:GLY:H	1.79	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:60:GLN:C	5:AE:62:ALA:H	2.21	0.48
5:AE:155:LYS:CD	5:AE:155:LYS:H	2.27	0.48
8:AH:13:ILE:HG22	8:AH:14:ARG:N	2.28	0.48
8:AH:98:LEU:HD23	8:AH:98:LEU:N	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:NH1	12:AL:49:ARG:CG	2.61	0.48
18:AR:25:ILE:HG21	18:AR:66:LEU:HB3	1.95	0.48
22:BA:194:G:N7	63:BA:3759:HOH:O	2.35	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
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:2674:G:H2'	22:BA:2675:A:C8	2.48	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
29:BH:100:ALA:O	29:BH:101:ASP:C	2.57	0.48
36:BO:26:LEU:C	36:BO:26:LEU:HD12	2.39	0.48
37:BP:67:GLU:OE1	37:BP:67:GLU:HA	2.13	0.48
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CD1	2.31	0.48
38:BQ:84:LYS:O	38:BQ:85:ALA:C	2.56	0.48
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.20	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:972:C:H4'	10:CJ:59:LYS:HG2	1.95	0.48
53:CA:994:A:HO2'	53:CA:995:C:H6	1.55	0.48
53:CA:1431:A:C6	53:CA:1432:G:N1	2.82	0.48
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.62	0.48
2:CB:35:ASN:O	2:CB:37:VAL:HG12	2.14	0.48
2:CB:163:ILE:HA	2:CB:185:ILE:HG12	1.96	0.48
3:CC:153:SER:HB3	3:CC:164:THR:HB	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CE:95:MET:HB3	5:CE:124:ALA:CB	2.39	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
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
21:CU:14:ALA:O	21:CU:15:LEU:C	2.57	0.48
57:DA:251:A:H4'	33:DL:47:ARG:HH22	1.77	0.48
57:DA:260:G:C6	57:DA:261:G:N7	2.81	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:453:A:H4'	57:DA:472:A:H62	1.78	0.48
57:DA:457:A:C2	57:DA:459:U:O4	2.67	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
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:1669:A:O3'	57:DA:2549:G:H5'	2.13	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:2873:A:H5''	57:DA:2874:C:OP2	2.14	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:O	42:DU:94:PHE:HD2	1.95	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
1:AA:1371:G:C6	1:AA:1372:U:C4	3.02	0.48
2:AB:56:LEU:HB2	2:AB:183:PHE:CE1	2.48	0.48
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.94	0.48
2:AB:186:VAL:N	2:AB:199:ILE:O	2.46	0.48
3:AC:139:ASN:ND2	3:AC:139:ASN:C	2.71	0.48
4:AD:29:THR:HG22	4:AD:30:LYS:N	2.28	0.48
4:AD:145:ARG:HD2	4:AD:147:LYS:CE	2.41	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
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.43	0.48
17:AQ:7:LEU:HD22	17:AQ:72:TRP:CZ3	2.48	0.48
20:AT:47:GLN:HE21	20:AT:82:ILE:CD1	2.25	0.48
22:BA:792:A:C5'	22:BA:793:A:H5'	2.43	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:2354:C:O5'	44:BW:31:LEU:HD22	2.14	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
25:BD:34:VAL:CG2	25:BD:94:GLN:H	2.25	0.48
25:BD:106:LYS:HB2	25:BD:206:ALA:H	1.77	0.48
26:BE:5:LEU:HD23	26:BE:120:VAL:O	2.14	0.48
26:BE:6:LYS:HE2	26:BE:141:MET:HE2	1.95	0.48
26:BE:131:THR:HG22	26:BE:161:ALA:H	1.78	0.48
27:BF:39:VAL:C	27:BF:41:GLU:H	2.21	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
53:CA:702:A:OP1	53:CA:702:A:C8	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
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
3:CC:172:VAL:O	3:CC:174:LEU:N	2.47	0.48
5:CE:37:VAL:HG12	5:CE:38:VAL:H	1.78	0.48
5:CE:132:PRO:HA	5:CE:135:VAL:HB	1.96	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
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
57:DA:481:G:P	42:DU:43:LYS:HG3	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1380:G:H1'	57:DA:1569:A:H61	1.79	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
57:DA:1527:G:H1'	57:DA:1546:G:H22	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
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:1:ALA:HB2	59:DF:93:GLU:O	2.14	0.48
59:DF:76:PHE:CD2	59:DF:76:PHE:N	2.75	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
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: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
1:AA:944:G:N1	1:AA:1338:G:OP2	2.47	0.48
1:AA:972:C:H4'	10:AJ:59:LYS:HG2	1.96	0.48
1:AA:1160:G:HO2'	1:AA:1161:C:H6	1.56	0.48
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.95	0.48
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	1.94	0.48
2:AB:98:GLY:C	2:AB:100:LEU:H	2.21	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
11:AK:80:ASN:HB3	11:AK:105:ARG:HB3	1.96	0.48
17:AQ:30:HIS:N	17:AQ:35:LYS:O	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:956:G:O2'	34:BM:82:MET:HE1	2.13	0.48
22:BA:1106:G:C4	22:BA:1107:G:C8	3.02	0.48
22:BA:1248:G:O2'	38:BQ:2:ARG:HA	2.14	0.48
22:BA:1714:U:O2	22:BA:1714:U:C2'	2.62	0.48
22:BA:1833:C:H2'	22:BA:1834:U:H6	1.77	0.48
22:BA:2264:C:N4	44:BW:11:ASN:HD21	2.07	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
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.39	0.48
33:BL:95:LEU:CD1	33:BL:100:ILE:HD11	2.38	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
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.29	0.48
53:CA:70:U:H2'	53:CA:94:G:N7	2.29	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: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
2:CB:163:ILE:CG2	2:CB:203:ASP:HA	2.44	0.48
4:CD:190:LEU:HD23	4:CD:190:LEU:C	2.38	0.48
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.13	0.48
57:DA:321:U:O4'	26:DE:159:LEU:HG	2.14	0.48
57:DA:435:C:C5	57:DA:436:C:C5	3.01	0.48
57:DA:532:A:N1	57:DA:2020:A:H1'	2.29	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
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:1844:C:O3'	24:DC:255:LYS:NZ	2.43	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
58:DB:42:C:C5	59:DF:65:LEU:HD13	2.48	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
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
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
1:AA:109:A:H4'	1:AA:110:C:OP2	2.13	0.48
1:AA:683:G:N2	11:AK:39:ASN:HA	2.29	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:HD13	11:AK:106:ILE:O	2.13	0.48
22:BA:178:G:O2'	22:BA:179:C:H5'	2.13	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
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:1791:A:H61	22:BA:1828:G:HO2'	1.59	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H2'	53:CA:211:G:N3	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:H2'	53:CA:722:G:N3	2.28	0.48
53:CA:865:A:H2	53:CA:918:A:H4'	1.78	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
57:DA:85:G:HO2'	57:DA:86:G:H8	1.62	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: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
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
58:DB:26:C:H1'	58:DB:117:G:C1'	2.43	0.48
58:DB:75:G:H1'	43:DV:29:ILE:HG12	1.96	0.48
24:DC:69:ASN:O	24:DC:70:LYS:C	2.57	0.48
25:DD:61:THR:CB	25:DD:63:PRO:HD2	2.44	0.48
25:DD:107:VAL:HG11	25:DD:189:VAL:HG11	1.96	0.48
59:DF:8:LYS:HB2	59:DF:8:LYS:NZ	2.29	0.48
59:DF:11:VAL:O	59:DF:12:VAL:HB	2.14	0.48
30:DI:36:GLU:HB2	30:DI:40:ALA:HB3	1.94	0.48
38:DQ:43:GLN:O	38:DQ:44:TYR:C	2.57	0.48
41:DT:7:LEU:O	41:DT:10:VAL:HG13	2.13	0.48
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.96	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:59:PRO:O	3:AC:62:SER:HB3	2.14	0.48
3:AC:153:SER:CB	3:AC:164:THR:HG22	2.44	0.48
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.77	0.48
4:AD:103:ARG:NH1	4:AD:110:ARG:HH22	2.12	0.48
7:AG:128:GLU:O	7:AG:129:ASN:C	2.56	0.48
8:AH:8:ASP:O	8:AH:9:MET:C	2.57	0.48
8:AH:85:TYR:C	8:AH:86:LYS:HD2	2.39	0.48
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.28	0.48
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.39	0.48
12:AL:101:LEU:C	12:AL:103:CYS:H	2.22	0.48
14:AN:62:ARG:O	14:AN:63:CYS:C	2.55	0.48
17:AQ:50:ASN:OD1	17:AQ:50:ASN:N	2.47	0.48
20:AT:15:LYS:HD3	20:AT:15:LYS:C	2.38	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
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
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
32:BK:116:ILE:HD12	32:BK:116:ILE:C	2.39	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
39:BR:83:TYR:C	39:BR:83:TYR:CD1	2.91	0.48
41:BT:26:LYS:O	41:BT:27:SER:CB	2.60	0.48
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.82	0.48
45:BX:40:GLU:HG3	45:BX:43:LYS:NZ	2.28	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:O2	53:CA:739:C:H2'	2.14	0.48
53:CA:767:A:H2'	53:CA:768:A:C8	2.48	0.48
53:CA:888:G:H4'	53:CA:1488:G:O2'	2.14	0.48
53:CA:1008:U:C4	53:CA:1022:A:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1071:C:C5'	5:CE:53:ARG:HH11	2.27	0.48
53:CA:1130:A:N7	53:CA:1146:A:C6	2.82	0.48
53:CA:1278:G:H8	53:CA:1278:G:OP2	1.97	0.48
53:CA:1409:C:H2'	53:CA:1410:A:C8	2.48	0.48
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
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:28:A:C2	57:DA:29:U:H1'	2.49	0.48
57:DA:95:A:HO2'	46:DY:41:HIS:HD2	1.60	0.48
57:DA:135:U:H2'	57:DA:136:G:C8	2.49	0.48
57:DA:642:U:H4'	57:DA:2349:G:O2'	2.13	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: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:2351:G:N7	51:D3:42:HIS:NE2	2.62	0.48
57:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.14	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
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.14	0.48
25:DD:131:ASP:N	25:DD:131:ASP:OD2	2.46	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
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
42:DU:3:LYS:O	42:DU:4:ILE:C	2.56	0.48
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.44	0.48
1:AA:501:C:H1'	1:AA:549:C:H1'	1.96	0.47
1:AA:506:G:C6	1:AA:507:C:C4	3.02	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
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
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.56	0.47
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.13	0.47
22:BA:251:A:H8	22:BA:251:A:O5'	1.97	0.47
22:BA:563:A:C2	22:BA:564:C:C2	3.02	0.47
22:BA:1006:C:O2'	22:BA:1007:C:H5'	2.14	0.47
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:2531:A:H5'	28:BG:156:TYR:CZ	2.49	0.47
25:BD:56:LYS:O	25:BD:57:ALA:C	2.57	0.47
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.79	0.47
26:BE:79:ARG:O	26:BE:80:SER:C	2.56	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:31:GLU:O	28:BG:32:LEU:C	2.56	0.47
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.13	0.47
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.47
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.95	0.47
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.32	0.47
38:BQ:82:LEU:CD2	38:BQ:112:ALA:HB2	2.44	0.47
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.43	0.47
49:B1:49:LYS:O	49:B1:50:GLU:HB3	2.13	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
53:CA:1449:C:O2'	53:CA:1450:U:C5'	2.62	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
14:CN:80:ARG:HG2	14:CN:81:ILE:N	2.29	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
57:DA:181:A:H2	57:DA:434:U:C1'	2.25	0.47
57:DA:255:A:H2'	57:DA:256:A:O4'	2.14	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
57:DA:1416:G:C4	57:DA:1417:C:C5	3.02	0.47
57:DA:1497:U:C5	57:DA:1578:U:O5'	2.66	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1553:A:N7	57:DA:1555:G:C5	2.82	0.47
57:DA:1648:U:O2'	57:DA:1649:G:O4'	2.26	0.47
57:DA:2025:C:OP1	25:DD:154:LYS:HE2	2.13	0.47
57:DA:2473:U:P	57:DA:2473:U:H6	2.37	0.47
57:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.27	0.47
58:DB:57:A:C6	59:DF:25:MET:SD	3.07	0.47
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	1.96	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
42:DU:39:ASN:O	42:DU:40:LEU:C	2.57	0.47
43:DV:21:ARG:HE	43:DV:87:GLN:CB	2.27	0.47
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.14	0.47
46:DY:58:ASN:C	46:DY:60:LYS:N	2.69	0.47
46:DY:58:ASN:C	46:DY:60:LYS:H	2.22	0.47
51:D3:46:LYS:O	51:D3:46:LYS:HD3	2.14	0.47
1:AA:502:A:H2'	1:AA:503:C:C6	2.49	0.47
1:AA:1003:G:C6	1:AA:1036:A:N6	2.82	0.47
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.13	0.47
1:AA:1506:U:H3'	63:AA:1802:HOH:O	2.14	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
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
22:BA:45:G:H5''	22:BA:46:G:OP1	2.14	0.47
22:BA:269:C:H2'	22:BA:270:A:C5'	2.43	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
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.14	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:1806:C:O2	24:BC:43:ASN:OD1	2.32	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:2720:U:OP1	37:BP:52:ARG:NH2	2.47	0.47
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.15	0.47
24:BC:170:TYR:HD2	24:BC:184:GLU:HA	1.75	0.47
24:BC:252:LYS:HB2	24:BC:252:LYS:NZ	2.27	0.47
25:BD:39:ASP:CG	25:BD:40:LEU:HD12	2.38	0.47
26:BE:48:THR:HG23	26:BE:51:GLU:CD	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:172:PHE:O	27:BF:173:ASP:C	2.57	0.47
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.19	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
37:BP:32:VAL:O	37:BP:33:GLU:C	2.57	0.47
37:BP:56:SER:O	37:BP:75:THR:HG23	2.14	0.47
53:CA:295:C:C6	53:CA:296:U:C5	3.02	0.47
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.15	0.47
54:CG:21:LEU:O	54:CG:25:PHE:N	2.47	0.47
9:CI:59:LYS:HE3	9:CI:60:LEU:CG	2.44	0.47
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.13	0.47
55:CM:92:ARG:HD2	19:CS:79:TYR:OH	2.14	0.47
57:DA:85:G:O2'	57:DA:86:G:H8	1.97	0.47
57:DA:99:U:H5'	57:DA:100:U:OP1	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:948:C:H2'	57:DA:949:G:O4'	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
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:85:LYS:HG3	28:DG:163:TYR:HB2	1.96	0.47
28:DG:152:ARG:HD2	28:DG:153:PRO:HD2	1.96	0.47
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.29	0.47
37:DP:83:ILE:HD13	37:DP:83:ILE:O	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:22:TYR:CE2	13:AM:69:ARG:HG2	2.49	0.47
13:AM:36:ALA:HB3	13:AM:38:ILE:HG12	1.95	0.47
13:AM:92:ARG:CZ	13:AM:92:ARG:HB3	2.44	0.47
14:AN:42:ASN:O	14:AN:44:VAL:N	2.47	0.47
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:81:G:C6	22:BA:82:U:C2	3.02	0.47
22:BA:96:C:O2'	22:BA:97:C:H5'	2.13	0.47
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.14	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: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
24:BC:73:ILE:H	24:BC:73:ILE:HG12	1.47	0.47
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.96	0.47
25:BD:184:ARG:HH11	37:BP:6:GLN:CD	2.23	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:HB3	28:BG:159:LYS:HE2	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
43:BV:10:LYS:HZ2	43:BV:11:GLU:HG3	1.79	0.47
44:BW:50:VAL:C	44:BW:52:CYS:H	2.20	0.47
53:CA:106:C:C2'	53:CA:107:G:H5'	2.44	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
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
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
9:CI:51:LEU:C	9:CI:53:LEU:N	2.71	0.47
55:CM:11:HIS:N	55:CM:44:ILE:HD12	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:106:ARG:CZ	55:CM:112:ARG:HB3	2.44	0.47
14:CN:12:ARG:HB3	14:CN:59:GLN:HG2	1.95	0.47
17:CQ:17:GLU:O	17:CQ:18:LYS:HB2	2.13	0.47
18:CR:33:THR:C	18:CR:35:SER:H	2.23	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:481:G:OP2	42:DU:43:LYS:HG3	2.14	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
57:DA:784:G:OP1	57:DA:2588:G:H5''	2.14	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:1245:G:OP1	33:DL:8:PRO:HG3	2.14	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
57:DA:2385:C:O2'	57:DA:2386:A:C8	2.54	0.47
57:DA:2487:G:H2'	57:DA:2488:G:C8	2.49	0.47
57:DA:2667:C:H2'	57:DA:2668:G:H8	1.78	0.47
57:DA:2860:A:O5'	57:DA:2860:A:C8	2.63	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:8:PRO:HG2	31:DJ:9:GLU:N	2.29	0.47
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.63	0.47
32:DK:7:MET:CG	32:DK:17:ARG:HH12	2.27	0.47
33:DL:62:PRO:O	51:D3:12:ARG:HB3	2.15	0.47
35:DN:120:GLU:HA	35:DN:120:GLU:OE1	2.14	0.47
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.15	0.47
36:DO:69:ASP:O	36:DO:70:ALA:C	2.57	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:979:C:OP2	1:AA:980:C:H5	1.96	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
3:AC:81:GLU:O	3:AC:84:GLU:HB3	2.14	0.47
7:AG:14:ASP:C	7:AG:14:ASP:OD2	2.58	0.47
7:AG:144:ALA:C	7:AG:146:ALA:N	2.72	0.47
11:AK:100:ASN:HD22	11:AK:106:ILE:HG22	1.79	0.47
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.29	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:558:U:P	31:BJ:113:PRO:HB2	2.54	0.47
22:BA:754:U:H2'	22:BA:755:U:C6	2.50	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
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
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:62:LYS:N	25:BD:63:PRO:CD	2.76	0.47
25:BD:107:VAL:N	25:BD:206:ALA:H	1.98	0.47
25:BD:126:ASN:N	25:BD:126:ASN:ND2	2.63	0.47
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.15	0.47
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	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
29:BH:78:VAL:CG1	29:BH:145:ASN:HB3	2.42	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
33:BL:131:ALA:O	33:BL:132:ARG:C	2.55	0.47
34:BM:78:LEU:C	34:BM:80:VAL:H	2.22	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
46:BY:40:SER:C	46:BY:42:LEU:N	2.69	0.47
53:CA:89:U:O2'	53:CA:90:C:O4'	2.23	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
17:CQ:9:GLY:O	17:CQ:57:VAL:HG13	2.14	0.47
57:DA:118:A:H1'	57:DA:178:G:O4'	2.13	0.47
57:DA:165:A:H2'	57:DA:166:U:H6	1.80	0.47
57:DA:478:A:N6	57:DA:480:A:C6	2.83	0.47
57:DA:558:U:OP1	31:DJ:113:PRO:HD2	2.13	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
57:DA:1031:G:O2'	52:D4:7:VAL:HG12	2.14	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:1567:G:H5''	24:DC:84:PRO:HB3	1.96	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
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
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
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.95	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
39:DR:83:TYR:CD2	39:DR:83:TYR:C	2.92	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DS:59:GLU:CD	40:DS:66:ILE:HG23	2.40	0.47
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.97	0.47
51:D3:41:ARG:CG	51:D3:41:ARG:NH2	2.72	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
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
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
9:AI:121:ARG:O	9:AI:122:ARG:C	2.55	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
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
22:BA:570:G:OP1	22:BA:972:A:O2'	2.30	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
23:BB:77:U:C2'	23:BB:78:A:H5'	2.45	0.47
24:BC:259:ASN:O	24:BC:260:LYS:HB2	2.13	0.47
26:BE:124:PHE:C	26:BE:124:PHE:HD1	2.22	0.47
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.74	0.47
33:BL:73:ILE:C	33:BL:105:ILE:HD13	2.40	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
49:B1:22:THR:OG1	49:B1:23:THR:N	2.47	0.47
53:CA:37:U:O2	53:CA:548:G:C2	2.67	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: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:947:G:P	55:CM:106:ARG:HG3	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.46	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:1328:C:OP1	55:CM:27:THR:HG21	2.15	0.47
4:CD:71:PHE:O	4:CD:74:TYR:HB2	2.14	0.47
4:CD:187:ARG:NH1	4:CD:196:GLU:OE2	2.47	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
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:9:G:H1	57:DA:2629:U:H2'	1.80	0.47
57:DA:14:A:C5	57:DA:526:A:C2	3.02	0.47
57:DA:103:A:H2'	57:DA:104:A:C8	2.49	0.47
57:DA:187:G:H2'	57:DA:1365:A:C2	2.49	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: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
57:DA:1008:A:C5'	31:DJ:37:ARG:HH22	2.27	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:1343:G:O2'	57:DA:1344:U:C6	2.59	0.47
57:DA:1469:A:C2	57:DA:1470:A:C5	3.02	0.47
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: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:2622:U:O2'	57:DA:2825:G:N7	2.43	0.47
57:DA:2819:G:H5''	63:DA:3799:HOH:O	2.13	0.47
57:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.95	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
28:DG:1:SER:C	28:DG:3:VAL:N	2.72	0.47
30:DI:20:SER:N	30:DI:21:PRO:CD	2.77	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
41:DT:64:LYS:HD2	41:DT:64:LYS:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:4:ILE:HD11	43:DV:50:MET:CE	2.45	0.47
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.96	0.47
52:D4:9:LYS:HD3	52:D4:9:LYS:C	2.40	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
1:AA:1060:U:H4'	10:AJ:54:SER:HB2	1.96	0.47
2:AB:20:ARG:O	2:AB:22:TRP:HB3	2.15	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:68:LEU:HG	13:AM:72:ILE:CD1	2.45	0.47
13:AM:90:HIS:HA	13:AM:108:ARG:NH2	2.30	0.47
14:AN:20:PHE:C	14:AN:22:LYS:N	2.73	0.47
22:BA:519:U:O2'	40:BS:73:LYS:HE2	2.15	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
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
23:BB:66:A:H61	23:BB:107:G:H2'	1.80	0.47
24:BC:43:ASN:C	24:BC:45:ASN:N	2.70	0.47
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.14	0.47
24:BC:245:THR:C	24:BC:247:TRP:H	2.22	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
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.39	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
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
53:CA:1151:A:C4	53:CA:1152:A:N7	2.82	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
11:CK:51:PHE:O	11:CK:52:ARG:HD2	2.14	0.47
14:CN:1:ALA:HA	14:CN:67:GLY:C	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:30:ILE:C	14:CN:40:ARG:HA	2.39	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:784:G:C2	24:DC:227:VAL:CG2	2.97	0.47
57:DA:935:C:H2'	57:DA:936:A:H8	1.78	0.47
57:DA:992:C:C5'	39:DR:87:GLN:HE22	2.24	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:2356:U:C4'	44:DW:16:GLU:HG3	2.39	0.47
57:DA:2839:G:C2	57:DA:2880:C:C4	3.02	0.47
58:DB:58:A:O2'	58:DB:59:A:C5'	2.62	0.47
58:DB:110:C:H2'	58:DB:111:U:H6	1.79	0.47
24:DC:79:ARG:HG3	24:DC:92:LEU:HB2	1.97	0.47
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.95	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
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.39	0.47
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	1.97	0.47
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.30	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
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
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.82	0.47
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.97	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
1:AA:7:A:N6	5:AE:96:GLN:OE1	2.48	0.47
1:AA:68:G:C6	1:AA:69:G:H1'	2.49	0.47
1:AA:374:A:O2'	1:AA:375:U:H5'	2.13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:1014:A:H4'	19:AS:13:HIS:CD2	2.49	0.47
1:AA:1158:C:O2'	1:AA:1160:G:OP1	2.33	0.47
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.49	0.47
1:AA:1314:C:C6	19:AS:5:LYS:HD3	2.50	0.47
2:AB:9:LEU:HD23	2:AB:9:LEU:C	2.39	0.47
2:AB:95:TRP:HZ3	2:AB:98:GLY:H	1.61	0.47
4:AD:34:GLU:O	4:AD:36:ALA:N	2.46	0.47
4:AD:123:MET:HA	4:AD:128:VAL:HA	1.96	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
6:AF:46:GLN:HE22	6:AF:55:HIS:HB2	1.80	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
9:AI:3:ASN:ND2	9:AI:4:GLN:H	2.12	0.47
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.39	0.47
11:AK:124:LYS:O	21:AU:33:ARG:HG2	2.14	0.47
12:AL:52:CYS:O	12:AL:54:VAL:HG23	2.15	0.47
14:AN:42:ASN:HD21	14:AN:46:LYS:NZ	2.11	0.47
15:AO:34:GLN:O	15:AO:35:ILE:C	2.58	0.47
15:AO:50:HIS:O	15:AO:53:ARG:HB3	2.15	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
22:BA:118:A:C8	22:BA:119:A:C8	3.02	0.47
22:BA:163:C:OP1	22:BA:163:C:C6	2.61	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:1113:U:H2'	22:BA:1114:C:C6	2.46	0.47
22:BA:1268:A:C2	22:BA:2013:A:C4	3.03	0.47
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: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:2013:A:H2	40:BS:88:ARG:HH12	1.61	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: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)
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:15:VAL:HA	24:BC:203:VAL:CG1	2.45	0.47
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.15	0.47
25:BD:34:VAL:HG21	25:BD:91:THR:HA	1.97	0.47
25:BD:93:GLY:O	25:BD:94:GLN:C	2.57	0.47
25:BD:186:LEU:CD1	37:BP:3:ILE:HD11	2.37	0.47
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.29	0.47
26:BE:141:MET:HE2	26:BE:141:MET:HB3	1.74	0.47
27:BF:53:ALA:C	27:BF:55:ASP:N	2.73	0.47
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.73	0.47
28:BG:33:THR:CA	28:BG:34:ARG:HH11	2.27	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:30:THR:O	33:BL:31:GLY:C	2.58	0.47
33:BL:95:LEU:HB3	33:BL:100:ILE:CD1	2.44	0.47
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.96	0.47
35:BN:65:LEU:O	35:BN:65:LEU:HD12	2.14	0.47
37:BP:15:ASP:OD1	37:BP:15:ASP:C	2.57	0.47
37:BP:50:ARG:HD3	37:BP:51:ASN:H	1.76	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
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
39:BR:70:GLU:O	39:BR:71:LYS:C	2.58	0.47
42:BU:93:ARG:O	42:BU:94:PHE:HB3	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
49:B1:35:LEU:HD23	49:B1:35:LEU:C	2.40	0.47
51:B3:51:LYS:N	51:B3:51:LYS:HD2	2.30	0.47
53:CA:32:A:C2	53:CA:33:A:C5	3.03	0.47
53:CA:34:C:H2'	53:CA:35:G:C8	2.50	0.47
53:CA:55:A:OP2	53:CA:352:C:N4	2.47	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:184:G:N2	53:CA:185:U:C2	2.83	0.47
53:CA:386:C:C4	53:CA:387:U:C5	3.03	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
53:CA:981:U:O4	53:CA:1222:G:O6	2.33	0.47
53:CA:1050:G:O2'	53:CA:1051:C:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1052:U:O2'	53:CA:1055:A:OP2	2.30	0.47
53:CA:1090:U:C2	53:CA:1091:U:C5	3.03	0.47
53:CA:1146:A:H2'	53:CA:1147:C:C6	2.49	0.47
53:CA:1480:A:C5	53:CA:1481:U:C5	3.03	0.47
2:CB:116:LEU:HD13	2:CB:140:LEU:HB2	1.96	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:35:ASP:CG	3:CC:56:ILE:HD12	2.40	0.47
4:CD:20:LEU:O	4:CD:21:LYS:C	2.56	0.47
4:CD:25:ARG:O	4:CD:26:ALA:O	2.33	0.47
4:CD:196:GLU:O	4:CD:199:ILE:HG12	2.14	0.47
54:CG:9:ARG:C	54:CG:10:LYS:HG3	2.39	0.47
8:CH:91:LEU:HB3	8:CH:112:ASP:OD2	2.15	0.47
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.44	0.47
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.15	0.47
55:CM:16:ILE:HD12	55:CM:16:ILE:N	2.30	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:71:VAL:HA	56:CP:74:LEU:HB2	1.96	0.47
56:CP:78:VAL:HG12	56:CP:78:VAL:O	2.15	0.47
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.28	0.47
18:CR:25:ILE:O	18:CR:25:ILE:HG13	2.14	0.47
18:CR:27:THR:O	18:CR:30:ASN:HB3	2.15	0.47
57:DA:17:G:C6	57:DA:524:G:C6	3.03	0.47
57:DA:33:C:H2'	57:DA:446:G:N2	2.30	0.47
57:DA:64:A:H2'	57:DA:65:U:O4'	2.14	0.47
57:DA:72:U:O2	46:DY:51:ALA:HB1	2.15	0.47
57:DA:192:C:C4	57:DA:193:U:C2	3.03	0.47
57:DA:233:A:O2'	57:DA:234:U:C6	2.67	0.47
57:DA:240:C:H3'	57:DA:241:A:H5''	1.96	0.47
57:DA:298:G:OP1	42:DU:83:GLY:HA2	2.15	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:514:A:N3	57:DA:581:C:O2'	2.41	0.47
57:DA:812:C:O2'	57:DA:813:U:H5'	2.15	0.47
57:DA:858:G:C5	57:DA:2268:A:N1	2.83	0.47
57:DA:874:G:C2	57:DA:904:G:C2	3.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1663:G:N2	57:DA:1998:A:C8	2.83	0.47
57:DA:1754:A:N6	57:DA:1755:A:C6	2.83	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:2151:U:C2	57:DA:2152:G:C8	3.02	0.47
57:DA:2262:U:H1'	57:DA:2328:A:H1'	1.96	0.47
57:DA:2313:C:O2'	57:DA:2314:A:C5'	2.62	0.47
57:DA:2392:A:OP1	51:D3:30:HIS:ND1	2.46	0.47
57:DA:2508:G:H2'	57:DA:2509:G:O4'	2.15	0.47
57:DA:2623:G:C4'	57:DA:2825:G:H8	2.28	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:2854:G:C2	57:DA:2864:G:C2	3.03	0.47
58:DB:16:G:O6	58:DB:69:G:C5	2.68	0.47
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.30	0.47
24:DC:17:LYS:HD3	24:DC:18:VAL:N	2.29	0.47
24:DC:62:ARG:HB2	24:DC:83:ASP:OD2	2.15	0.47
24:DC:171:VAL:H	24:DC:185:ALA:HB2	1.80	0.47
25:DD:109:VAL:HG12	25:DD:109:VAL:O	2.13	0.47
59:DF:5:ASP:C	59:DF:7:TYR:N	2.72	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
29:DH:6:LEU:HD13	29:DH:36:ALA:CA	2.44	0.47
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.14	0.47
31:DJ:51:GLY:CA	31:DJ:121:LYS:HE3	2.45	0.47
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.23	0.47
32:DK:77:ILE:HG23	37:DP:71:ARG:HD2	1.96	0.47
33:DL:66:PHE:CG	33:DL:67:THR:N	2.83	0.47
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.30	0.47
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.15	0.47
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.30	0.47
37:DP:91:VAL:HG22	37:DP:109:ILE:HD13	1.96	0.47
40:DS:2:GLU:HA	40:DS:2:GLU:OE2	2.15	0.47
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.13	0.47
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.23	0.47
42:DU:85:ARG:HA	42:DU:85:ARG:HE	1.79	0.47
43:DV:26:PHE:HA	43:DV:27:PRO:HD2	1.75	0.47
47:DZ:29:ARG:O	47:DZ:30:ARG:O	2.33	0.47
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:967:C:C1'	9:AI:129:ARG:HH22	2.26	0.47
1:AA:1095:U:O2'	1:AA:1096:C:C5'	2.63	0.47
1:AA:1348:U:H4'	9:AI:121:ARG:HG2	1.96	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:1:SER:C	8:AH:3:GLN:H	2.22	0.47
8:AH:63:LYS:CB	8:AH:70:VAL:HG21	2.45	0.47
8:AH:112:ASP:O	8:AH:113:ARG:C	2.57	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
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
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:1954:G:O2'	22:BA:1956:U:O4	2.28	0.47
22:BA:2019:A:H2'	22:BA:2020:A:O5'	2.15	0.47
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.50	0.47
22:BA:2458:G:O2'	22:BA:2460:U:O4	2.26	0.47
22:BA:2630:G:H2'	22:BA:2631:G:H8	1.79	0.47
23:BB:77:U:H2'	23:BB:78:A:H5'	1.96	0.47
28:BG:174:LYS:HD2	28:BG:174:LYS:C	2.40	0.47
29:BH:100:ALA:O	29:BH:102:ALA:N	2.48	0.47
29:BH:101:ASP:C	29:BH:104:THR:HB	2.39	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
37:BP:9:GLN:C	37:BP:11:GLN:H	2.22	0.47
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.95	0.47
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.95	0.47
53:CA:14:U:H2'	53:CA:16:A:OP2	2.15	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
53:CA:598:U:H4'	8:CH:85:TYR:CG	2.49	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.27	0.47
53:CA:1513:A:C6	53:CA:1514:G:C6	3.03	0.47
3:CC:14:VAL:HG12	3:CC:14:VAL:O	2.15	0.47
4:CD:100:VAL:O	4:CD:101:VAL:C	2.57	0.47
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.29	0.47
9:CI:106:ASP:OD1	9:CI:106:ASP:N	2.48	0.47
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.45	0.47
57:DA:752:A:C6	57:DA:1781:U:H1'	2.50	0.47
57:DA:959:A:OP2	57:DA:959:A:H4'	2.14	0.47
57:DA:975:A:H2'	57:DA:976:G:H8	1.80	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
24:DC:44:ASN:C	24:DC:46:GLY:H	2.23	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
59:DF:141:ASP:C	59:DF:143:ASP:H	2.23	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
37:DP:112:ARG:HD2	37:DP:114:ASN:HD21	1.80	0.47
38:DQ:39:ILE:O	38:DQ:40:LYS:C	2.58	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
49:D1:29:LYS:HE2	49:D1:31:GLU:OE2	2.15	0.47
1:AA:252:U:H6	1:AA:252:U:H5''	1.79	0.47
1:AA:557:G:C6	1:AA:558:G:N1	2.82	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
3:AC:108:PRO:C	3:AC:110:LEU:H	2.23	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:3:ASN:O	9:AI:4:GLN:HG2	2.15	0.47
9:AI:25:GLY:N	9:AI:58:GLU:HA	2.30	0.47
9:AI:56:MET:CE	9:AI:57:VAL:H	2.28	0.47
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	2.18	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:11:VAL:HB	17:AQ:55:GLY:H	1.80	0.47
22:BA:579:G:H2'	22:BA:580:U:C6	2.50	0.47
22:BA:1321:A:H5''	22:BA:1321:A:H8	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
23:BB:49:C:O3'	36:BO:68:LYS:HE2	2.14	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
26:BE:48:THR:H	26:BE:51:GLU:CG	2.28	0.47
27:BF:84:ILE:HG23	27:BF:84:ILE:O	2.15	0.47
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.30	0.47
28:BG:86:LEU:HD12	28:BG:86:LEU:H	1.79	0.47
28:BG:136:ASP:O	28:BG:140:ILE:HG13	2.15	0.47
29:BH:14:SER:C	29:BH:16:GLY:H	2.23	0.47
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.44	0.47
37:BP:19:PHE:N	37:BP:19:PHE:CD2	2.82	0.47
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.30	0.47
38:BQ:82:LEU:O	38:BQ:85:ALA:HB3	2.14	0.47
42:BU:80:ASP:O	42:BU:81:ARG:HB2	2.14	0.47
47:BZ:35:VAL:HG21	47:BZ:37:ARG:CZ	2.45	0.47
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.14	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:309:A:O2'	53:CA:607:A:C2	2.68	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: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
53:CA:1190:G:H5'	3:CC:175:HIS:CE1	2.50	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
15:CO:10:ILE:HA	15:CO:13:GLU:HB2	1.97	0.47
56:CP:1:MET:HA	56:CP:1:MET:HE3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H8	57:DA:830:G:P	2.38	0.47
57:DA:1064:C:O2'	57:DA:1065:U:H5'	2.15	0.47
57:DA:1075:C:O2'	57:DA:1076:C:C6	2.67	0.47
57:DA:1075:C:HO2'	57:DA:1076:C:H6	1.57	0.47
57:DA:1186:G:H2'	57:DA:1187:G:O4'	2.15	0.47
57:DA:1312:U:O2	57:DA:1603:A:C2	2.67	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:1566:A:C2	24:DC:212:TRP:HB2	2.49	0.47
57:DA:1700:A:H2'	57:DA:1701:A:O4'	2.14	0.47
57:DA:2072:C:OP2	57:DA:2072:C:H6	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:2759:G:H21	28:DG:138:GLN:CD	2.23	0.47
57:DA:2837:A:N6	57:DA:2882:A:N6	2.63	0.47
57:DA:2857:G:N2	57:DA:2860:A:OP2	2.48	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
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
49:D1:24:LYS:HE2	49:D1:52:LYS:HZ2	1.80	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
1:AA:975:A:H8	1:AA:1357:A:HO2'	1.62	0.47
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.14	0.47
2:AB:57:ASN:C	2:AB:57:ASN:HD22	2.23	0.47
2:AB:130:LYS:NZ	2:AB:130:LYS:HA	2.29	0.47
5:AE:76:ASN:HB3	5:AE:81:GLN:HG3	1.97	0.47
5:AE:100:GLU:HB2	5:AE:103:GLY:CA	2.45	0.47
9:AI:3:ASN:CG	9:AI:4:GLN:H	2.23	0.47
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.62	0.47
22:BA:226:A:C6	22:BA:227:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:811:U:HO2'	22:BA:1250:G:H2'	1.78	0.47
22:BA:962:G:H2'	22:BA:963:U:C6	2.50	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:OP2	22:BA:1858:A:H8	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: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
63:BA:3796:HOH:O	33:BL:37:GLY:HA3	2.14	0.47
24:BC:20:ASN:O	24:BC:23:LEU:HB2	2.15	0.47
26:BE:136:GLN:O	26:BE:137:LYS:C	2.58	0.47
27:BF:53:ALA:O	27:BF:55:ASP:N	2.48	0.47
28:BG:59:ASP:O	28:BG:60:GLY:C	2.58	0.47
32:BK:113:MET:O	32:BK:114:LYS:C	2.58	0.47
33:BL:19:LEU:HB2	33:BL:27:LEU:HB2	1.97	0.47
33:BL:94:THR:CG2	33:BL:95:LEU:H	2.28	0.47
33:BL:101:ILE:HG22	33:BL:102:GLY:H	1.80	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
50:B2:25:LYS:HA	50:B2:28:ARG:NH2	2.30	0.47
53:CA:652:U:O2'	53:CA:653:U:H6	1.97	0.47
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
53:CA:1397:C:P	53:CA:1397:C:H6	2.38	0.47
5:CE:14:LEU:HD22	5:CE:59:ILE:CD1	2.43	0.47
54:CG:30:MET:HE1	54:CG:33:GLY:HA2	1.96	0.47
9:CI:83:THR:HG21	9:CI:102:PHE:HB3	1.96	0.47
9:CI:119:LYS:O	9:CI:119:LYS:HG3	2.14	0.47
11:CK:78:ILE:H	11:CK:78:ILE:HD13	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:173:A:H2'	57:DA:174:U:C6	2.42	0.47
57:DA:229:C:O2'	57:DA:230:G:O4'	2.29	0.47
57:DA:365:U:H2'	57:DA:366:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:574:A:H2	57:DA:2032:G:O2'	1.96	0.47
57:DA:587:C:N3	33:DL:33:ARG:NH2	2.62	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
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:1832:C:H2'	57:DA:1833:C:O4'	2.15	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
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
26:DE:118:LEU:HD21	26:DE:188:MET:HE1	1.97	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
34:DM:7:THR:C	34:DM:9:PHE:H	2.22	0.47
38:DQ:8:ILE:HG12	38:DQ:8:ILE:O	2.13	0.47
1:AA:11:G:H2'	1:AA:12:U:H6	1.80	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
1:AA:994:A:N7	1:AA:1216:A:H4'	2.30	0.46
1:AA:1226:C:N4	13:AM:102:LYS:HG3	2.29	0.46
1:AA:1373:G:C5'	7:AG:35:LYS:HB2	2.44	0.46
1:AA:1468:A:C3'	1:AA:1469:C:C5'	2.90	0.46
3:AC:107:LYS:NZ	3:AC:107:LYS:HB2	2.30	0.46
4:AD:34:GLU:C	4:AD:36:ALA:H	2.23	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:HD12	19:AS:4:LEU:N	2.28	0.46
21:AU:38:GLU:CD	21:AU:41:THR:HG21	2.40	0.46
22:BA:287:G:C2	22:BA:354:A:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:323:C:C4	22:BA:333:G:C8	3.04	0.46
22:BA:458:G:O2'	50:B2:39:ARG:HD2	2.15	0.46
22:BA:569:U:H1'	22:BA:947:A:O4'	2.15	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:974:G:C8	22:BA:989:G:C2	3.03	0.46
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.98	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
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
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
36:BO:78:VAL:O	36:BO:79:ALA:C	2.58	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
51:B3:14:LYS:O	51:B3:21:PHE:O	2.32	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
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:1279:G:H2'	10:CJ:45:ARG:HH21	1.79	0.46
2:CB:52:ALA:O	2:CB:56:LEU:HB2	2.14	0.46
3:CC:39:ARG:C	3:CC:41:TYR:H	2.23	0.46
54:CG:75:LYS:CE	54:CG:76:SER:H	2.29	0.46
12:CL:14:LYS:C	12:CL:14:LYS:HE3	2.40	0.46
19:CS:35:ARG:NH2	19:CS:53:GLY:H	2.12	0.46
20:CT:11:ILE:C	20:CT:13:SER:N	2.74	0.46
21:CU:13:VAL:HG22	21:CU:15:LEU:HD23	1.97	0.46
57:DA:95:A:O2'	46:DY:40:SER:N	2.48	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:189:G:P	45:DX:13:THR:HG21	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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:2311:A:H1'	59:DF:78:ILE:HD11	1.96	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
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	1.95	0.46
24:DC:173:LEU:HD11	24:DC:183:VAL:HB	1.97	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:1:MET:HE3	35:DN:3:HIS:CE1	2.50	0.46
40:DS:5:ALA:HB3	40:DS:54:ALA:HB2	1.97	0.46
41:DT:5:GLU:CD	46:DY:18:LEU:HD21	2.40	0.46
43:DV:61:LEU:HD23	43:DV:61:LEU:N	2.28	0.46
44:DW:25:PHE:O	44:DW:65:LYS:HA	2.15	0.46
48:D0:37:HIS:CB	48:D0:43:THR:HG22	2.45	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:O5'	1:AA:967:C:H6	1.98	0.46
1:AA:1071:C:H2'	1:AA:1072:G:H8	1.79	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.40	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
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.11	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: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
24:BC:257:ARG:HG3	24:BC:269:ARG:HH22	1.79	0.46
25:BD:98:VAL:C	25:BD:100:LEU:N	2.73	0.46
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.78	0.46
27:BF:107:VAL:HG13	27:BF:113:PHE:CZ	2.50	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.96	0.46
32:BK:58:LEU:HD23	32:BK:58:LEU:N	2.31	0.46
37:BP:29:VAL:HG12	37:BP:30:TRP:O	2.15	0.46
40:BS:48:LYS:HD3	40:BS:52:GLU:CD	2.41	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
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.40	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
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
2:CB:101:THR:O	2:CB:102:ASN:HB2	2.14	0.46
4:CD:203:TYR:C	4:CD:205:LYS:H	2.22	0.46
9:CI:76:GLY:O	9:CI:79:ARG:HB3	2.15	0.46
21:CU:31:VAL:O	21:CU:32:ARG:C	2.58	0.46
57:DA:92:U:C6	57:DA:93:G:C8	3.03	0.46
57:DA:116:C:O2'	57:DA:117:G:H5'	2.15	0.46
57:DA:312:G:C2	57:DA:313:G:C8	3.04	0.46
57:DA:372:G:P	45:DX:61:LYS:NZ	2.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2428:G:C2	33:DL:54:GLN:NE2	2.84	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:2729:G:H5''	25:DD:190:LYS:NZ	2.29	0.46
57:DA:2887:A:H1'	48:D0:39:ARG:NH2	2.30	0.46
57:DA:2894:G:HO2'	57:DA:2895:G:P	2.38	0.46
24:DC:30:ALA:C	24:DC:32:LEU:H	2.23	0.46
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.15	0.46
24:DC:175:LEU:HD12	24:DC:179:GLU:HB3	1.97	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
34:DM:42:THR:HB	34:DM:45:GLN:CD	2.40	0.46
41:DT:19:LYS:HD3	41:DT:19:LYS:HA	1.67	0.46
44:DW:11:ASN:OD1	44:DW:11:ASN:O	2.33	0.46
1:AA:258:G:H4'	20:AT:81:GLN:HE22	1.80	0.46
1:AA:335:C:O2'	1:AA:1433:A:N3	2.42	0.46
1:AA:585:G:N3	1:AA:879:C:H4'	2.30	0.46
2:AB:20:ARG:HA	2:AB:20:ARG:HH11	1.80	0.46
2:AB:32:GLY:HA3	2:AB:39:ILE:CG1	2.45	0.46
2:AB:132:GLU:O	2:AB:132:GLU:HG3	2.14	0.46
2:AB:185:ILE:CG1	2:AB:185:ILE:O	2.63	0.46
4:AD:19:PHE:N	4:AD:19:PHE:CD1	2.84	0.46
4:AD:145:ARG:C	4:AD:147:LYS:N	2.70	0.46
9:AI:52:GLU:HB3	9:AI:53:LEU:HD12	1.97	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
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
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
25:BD:33:ARG:NH2	25:BD:74:GLU:HB3	2.31	0.46
25:BD:152:PRO:O	25:BD:154:LYS:HG2	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BL:14:LYS:O	33:BL:15:ALA:O	2.33	0.46
40:BS:36:LEU:HD12	40:BS:36:LEU:HA	1.66	0.46
44:BW:47:GLY:C	44:BW:49:ASN:N	2.71	0.46
47:BZ:9:THR:CG2	47:BZ:10:ARG:N	2.69	0.46
53:CA:347:G:H2'	53:CA:348:G:H8	1.80	0.46
53:CA:686:U:O2'	53:CA:687:A:C8	2.65	0.46
53:CA:688:G:H5''	53:CA:688:G:C8	2.50	0.46
53:CA:986:U:C2'	53:CA:987:G:C8	2.78	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:1270:G:H2'	53:CA:1271:A:C8	2.50	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:HD12	20:CT:3:ILE:H	1.79	0.46
21:CU:36:PHE:CB	21:CU:40:PRO:HD3	2.40	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
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: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:1650:A:O2'	35:DN:108:ALA:HB1	2.16	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
57:DA:2889:C:C4	57:DA:2890:G:C5	3.03	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:98:VAL:HG23	25:DD:180:VAL:CG1	2.45	0.46
25:DD:208:LYS:O	25:DD:209:ALA:HB3	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:57:LYS:O	29:DH:57:LYS:HD2	2.15	0.46
29:DH:104:THR:O	29:DH:104:THR:HG23	2.15	0.46
34:DM:136:MET:HE2	43:DV:57:TYR:HD2	1.79	0.46
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.97	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
42:DU:59:GLU:C	42:DU:60:LYS:HD2	2.41	0.46
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.15	0.46
52:D4:2:LYS:HA	52:D4:2:LYS:NZ	2.30	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
1:AA:933:G:OP2	7:AG:2:ARG:HB3	2.14	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
2:AB:140:LEU:O	2:AB:141:GLU:C	2.59	0.46
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.15	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:HB3	18:AR:37:LYS:HE2	1.78	0.46
19:AS:50:VAL:HG22	19:AS:70:LEU:HD13	1.97	0.46
22:BA:64:A:O2'	41:BT:70:HIS:HE1	1.97	0.46
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.15	0.46
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
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.80	0.46
22:BA:1243:C:H1'	33:BL:4:ASN:O	2.15	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:2332:C:OP1	44:BW:44:PHE:HZ	1.98	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
23:BB:48:U:O2'	36:BO:100:HIS:HE1	1.97	0.46
23:BB:53:A:C2	23:BB:54:G:C8	3.03	0.46
23:BB:109:A:O2'	23:BB:110:C:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:115:ASP:OD1	30:BI:115:ASP:C	2.59	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
31:BJ:114:LEU:O	31:BJ:115:GLY:C	2.59	0.46
32:BK:118:LEU:N	32:BK:118:LEU:CD1	2.78	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
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
45:BX:68:ALA:C	45:BX:69:GLU:O	2.58	0.46
53:CA:6:G:H1	5:CE:102:THR:HG21	1.80	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:H2'	53:CA:632:U:O2	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
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
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
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
11:CK:111:ASP:HB3	21:CU:3:ILE:N	2.31	0.46
55:CM:85:TYR:HE2	55:CM:96:VAL:HG13	1.80	0.46
55:CM:86:ARG:HH11	55:CM:90:HIS:HD2	1.64	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
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: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:H8	57:DA:375:G:H5''	1.74	0.46
57:DA:410:G:C6	57:DA:2407:A:N6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:973:A:OP1	57:DA:973:A:C8	2.62	0.46
57:DA:1062:G:C4	57:DA:1063:G:N7	2.83	0.46
57:DA:1420:A:C4	57:DA:2211:A:N7	2.84	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: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:N3	57:DA:2459:A:H2'	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
58:DB:7:G:N2	36:DO:47:VAL:HG21	2.30	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
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.23	0.46
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.13	0.46
37:DP:28:LYS:HZ3	37:DP:82:SER:HB2	1.80	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
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.31	0.46
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
1:AA:157:U:O2'	1:AA:158:G:H5'	2.16	0.46
1:AA:275:G:C8	1:AA:275:G:H5''	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
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
2:AB:59:ILE:HD12	2:AB:60:ALA:N	2.30	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:589:U:H2'	22:BA:590:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:634:C:H6	22:BA:634:C:O5'	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
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: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
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
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:56:VAL:HG11	30:BI:68:PHE:HD2	1.79	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
34:BM:62:LYS:O	34:BM:105:MET:HA	2.16	0.46
36:BO:104:GLN:C	36:BO:105:ALA:O	2.57	0.46
37:BP:37:LYS:N	37:BP:37:LYS:HD3	2.30	0.46
38:BQ:111:LYS:HZ3	39:BR:48:LYS:HD3	1.81	0.46
41:BT:4:GLU:HG3	41:BT:6:ARG:HE	1.80	0.46
41:BT:50:LEU:H	41:BT:50:LEU:CD1	2.23	0.46
43:BV:66:ASP:O	43:BV:66:ASP:CG	2.58	0.46
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE2	1.96	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:254:G:OP1	17:CQ:69:THR:OG1	2.33	0.46
53:CA:535:A:H4'	53:CA:536:C:OP1	2.12	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
3:CC:67:ILE:H	3:CC:102:ILE:HA	1.81	0.46
5:CE:80:LEU:HB3	5:CE:97:PRO:HB3	1.98	0.46
5:CE:114:LEU:O	5:CE:119:VAL:HG23	2.16	0.46
54:CG:49:LEU:O	54:CG:49:LEU:HD13	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:68:LYS:HG2	17:CQ:69:THR:HG23	1.96	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:784:G:O6	24:DC:227:VAL:HG11	2.16	0.46
57:DA:800:A:C2	57:DA:802:A:C8	3.03	0.46
57:DA:1441:G:H2'	57:DA:1442:U:H6	1.78	0.46
57:DA:1441:G:C4	57:DA:1551:A:H2	2.34	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: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:N3	57:DA:2503:A:H5'	2.30	0.46
57:DA:2603:G:C6	57:DA:2604:U:C4	3.04	0.46
57:DA:2658:C:H5''	28:DG:157:LYS:CD	2.46	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
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
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:12:VAL:HG21	42:DU:38:ILE:HG12	1.97	0.46
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.45	0.46
46:DY:52:ARG:C	46:DY:54:LYS:N	2.73	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
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
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
3:AC:25:THR:HG23	14:AN:75:LYS:HD3	1.96	0.46
3:AC:120:THR:C	3:AC:122:GLN:H	2.23	0.46
3:AC:181:ILE:HD13	3:AC:202:PHE:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:166:LYS:HB3	4:AD:166:LYS:HZ2	1.80	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
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
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
23:BB:34:A:N6	23:BB:44:G:O2'	2.49	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
25:BD:100:LEU:HB3	25:BD:101:PHE:HD1	1.78	0.46
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.98	0.46
26:BE:97:ASN:N	26:BE:97:ASN:HD22	2.13	0.46
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.96	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
33:BL:56:PRO:O	33:BL:57:LEU:C	2.59	0.46
35:BN:15:SER:O	35:BN:16:HIS:C	2.58	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:H	43:BV:55:GLU:HG3	1.47	0.46
51:B3:41:ARG:HG3	51:B3:44:ARG:HH22	1.79	0.46
53:CA:198:G:O2'	53:CA:199:A:P	2.74	0.46
53:CA:879:C:H2'	53:CA:880:C:O5'	2.15	0.46
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
2:CB:100:LEU:C	2:CB:102:ASN:H	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:137:U:C4	57:DA:138:U:C2	3.03	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
57:DA:910:A:H62	34:DM:12:MET:C	2.24	0.46
57:DA:1129:A:C4	57:DA:2570:G:H1'	2.51	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: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:2497:A:HO2'	57:DA:2498:C:P	2.39	0.46
57:DA:2544:G:H5'	57:DA:2645:G:N7	2.30	0.46
57:DA:2798:U:H5''	57:DA:2799:A:OP1	2.16	0.46
26:DE:195:GLN:CD	26:DE:195:GLN:H	2.24	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:36:LEU:C	40:DS:38:TYR:N	2.71	0.46
40:DS:66:ILE:H	40:DS:66:ILE:CD1	2.27	0.46
44:DW:14:ASP:O	44:DW:15:SER:HB2	2.16	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
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
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
4:AD:54:LEU:C	4:AD:54:LEU:HD23	2.41	0.46
4:AD:84:ASN:O	4:AD:85:THR:C	2.59	0.46
5:AE:81:GLN:NE2	5:AE:81:GLN:H	2.14	0.46
5:AE:149:PRO:HA	5:AE:152:VAL:HG13	1.98	0.46
12:AL:3:VAL:HG23	12:AL:4:ASN:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:48:GLU:O	17:AQ:49:ASN:C	2.58	0.46
17:AQ:74:LEU:C	17:AQ:74:LEU:CD1	2.88	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
22:BA:14:A:H8	22:BA:14:A:O5'	1.99	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
22:BA:792:A:N3	22:BA:2072:C:O2'	2.47	0.46
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.97	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
25:BD:163:GLY:O	25:BD:164:GLN:C	2.58	0.46
26:BE:43:THR:O	26:BE:43:THR:OG1	2.33	0.46
26:BE:92:HIS:O	26:BE:93:SER:C	2.59	0.46
26:BE:97:ASN:N	26:BE:97:ASN:ND2	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
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.80	0.46
35:BN:54:LEU:HD11	35:BN:62:ASN:CG	2.40	0.46
38:BQ:14:LYS:O	38:BQ:15:LYS:C	2.59	0.46
40:BS:28:LYS:O	40:BS:29:VAL:C	2.59	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
48:B0:3:GLN:O	48:B0:3:GLN:HG3	2.15	0.46
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.15	0.46
53:CA:35:G:H21	12:CL:114:SER:CB	2.28	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:821:G:H4'	63:CA:1740:HOH:O	2.16	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
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)
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.46
11:CK:22:ILE:O	11:CK:22:ILE:HG22	2.15	0.46
14:CN:63:CYS:SG	14:CN:82:LYS:HG3	2.56	0.46
19:CS:20:LYS:C	19:CS:20:LYS:HD3	2.40	0.46
21:CU:35:GLU:OE2	21:CU:35:GLU:CA	2.64	0.46
57:DA:106:C:O2'	57:DA:294:A:O2'	2.30	0.46
57:DA:139:U:H3	41:DT:1:MET:HA	1.81	0.46
57:DA:533:G:C2	57:DA:534:U:C2	3.04	0.46
57:DA:990:A:H61	39:DR:78:ARG:NH1	2.14	0.46
57:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.49	0.46
57:DA:1036:G:N1	57:DA:1037:G:N7	2.64	0.46
57:DA:1300:G:H8	57:DA:1300:G:OP2	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
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
31:DJ:54:ILE:O	31:DJ:122:LEU:HD12	2.15	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:63:LYS:C	36:DO:63:LYS:HD3	2.41	0.46
37:DP:20:ARG:HG2	37:DP:112:ARG:NH1	2.03	0.46
41:DT:3:ARG:O	41:DT:4:GLU:C	2.59	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
49:D1:34:GLU:HG3	49:D1:49:LYS:CB	2.46	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
1:AA:829:G:C2	1:AA:830:G:C8	3.03	0.46
1:AA:920:U:O4'	1:AA:1080:A:C2	2.69	0.46
1:AA:986:U:H2'	1:AA:987:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:30:ILE:HD11	2:AB:38:HIS:CG	2.51	0.46
2:AB:53:LEU:HD21	2:AB:212:TYR:OH	2.15	0.46
4:AD:88:ASN:HA	4:AD:91:ALA:CB	2.46	0.46
4:AD:144:ILE:O	4:AD:145:ARG:C	2.59	0.46
6:AF:41:ASP:C	6:AF:43:GLY:H	2.24	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:25:U:C5	22:BA:26:G:C5	3.03	0.46
22:BA:892:A:H2'	22:BA:893:C:C6	2.51	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:2438:U:O2'	22:BA:2440:C:OP1	2.31	0.46
22:BA:2548:U:H2'	22:BA:2549:G:O5'	2.16	0.46
22:BA:2643:G:H2'	22:BA:2644:G:O4'	2.15	0.46
63:BA:3286:HOH:O	26:BE:98:LYS:HE2	2.15	0.46
23:BB:74:U:O2	43:BV:29:ILE:CD1	2.64	0.46
24:BC:43:ASN:C	24:BC:45:ASN:H	2.24	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:58:LYS:O	26:BE:59:PRO:C	2.57	0.46
26:BE:158:PHE:O	26:BE:160:ALA:O	2.33	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
39:BR:46:GLU:OE1	39:BR:46:GLU:C	2.59	0.46
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.31	0.46
53:CA:259:G:H2'	53:CA:260:G:H8	1.81	0.46
53:CA:274:A:O2'	53:CA:275:G:O5'	2.32	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1406:U:H1'	53:CA:1518:A:H4'	1.97	0.46
2:CB:81:ASP:CG	2:CB:82:ALA:N	2.73	0.46
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.16	0.46
15:CO:58:MET:HE2	15:CO:58:MET:HB3	1.84	0.46
57:DA:35:G:O4'	57:DA:454:A:H1'	2.16	0.46
57:DA:40:U:C4	57:DA:41:C:N4	2.84	0.46
57:DA:65:U:H5'	41:DT:75:GLY:HA3	1.96	0.46
57:DA:91:A:O2'	57:DA:92:U:C5'	2.57	0.46
57:DA:172:A:O2'	57:DA:173:A:H5'	2.16	0.46
57:DA:191:A:O2'	57:DA:192:C:H5'	2.15	0.46
57:DA:265:A:N7	57:DA:427:U:O2'	2.48	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:1034:G:H2'	57:DA:1035:U:C6	2.51	0.46
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:1341:G:C2	41:DT:84:TYR:HE2	2.34	0.46
57:DA:1341:G:HO2'	57:DA:1398:C:H5'	1.79	0.46
57:DA:1654:A:N3	57:DA:1655:A:C8	2.84	0.46
57:DA:1905:C:O4'	57:DA:1928:A:H2	1.95	0.46
57:DA:2006:C:O5'	57:DA:2006:C:H6	1.98	0.46
57:DA:2054:A:C2	57:DA:2616:C:N3	2.84	0.46
57:DA:2487:G:H2'	57:DA:2488:G:H8	1.81	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:2882:A:H5'	35:DN:96:ARG:HD3	1.97	0.46
57:DA:2896:C:O2'	57:DA:2897:U:C5'	2.62	0.46
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.64	0.46
59:DF:65:LEU:HG	59:DF:67:THR:HG23	1.98	0.46
59:DF:107:VAL:N	59:DF:108:PRO:HD2	2.31	0.46
28:DG:51:PHE:HE2	28:DG:68:ARG:HA	1.80	0.46
29:DH:103:VAL:C	29:DH:105:ALA:H	2.23	0.46
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.51	0.46
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.51	0.46
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.40	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:N	44:DW:65:LYS:HD2	2.31	0.46
44:DW:73:PRO:O	44:DW:74:LYS:C	2.58	0.46
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.73	0.46
51:D3:11:LYS:C	51:D3:12:ARG:HD3	2.41	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:27:G:H2'	1:AA:28:A:C8	2.50	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: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
1:AA:1407:C:O2'	22:BA:1912:A:N1	2.40	0.46
1:AA:1452:C:H5'	1:AA:1453:G:C5	2.51	0.46
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:O	19:AS:10:ILE:HG13	2.15	0.46
19:AS:55:GLN:CD	19:AS:56:HIS:H	2.24	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
22:BA:988:A:P	47:BZ:11:SER:CB	3.04	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
22:BA:2053:G:H5''	25:BD:150:GLN:HA	1.98	0.46
22:BA:2243:U:O2	22:BA:2434:A:C2	2.69	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:2880:C:O2'	22:BA:2881:U:H5'	2.16	0.46
23:BB:75:G:O2'	43:BV:88:HIS:HE1	1.99	0.46
24:BC:156:SER:O	24:BC:157:ALA:C	2.59	0.46
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.30	0.46
26:BE:23:PHE:CZ	26:BE:28:VAL:HG11	2.50	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
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.31	0.46
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	1.98	0.46
31:BJ:112:GLY:O	31:BJ:113:PRO:C	2.58	0.46
32:BK:74:GLY:HA3	37:BP:74:GLN:HE21	1.79	0.46
37:BP:28:LYS:HE3	37:BP:28:LYS:N	2.29	0.46
37:BP:95:LYS:HG2	37:BP:97:TYR:OH	2.15	0.46
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.93	0.46
40:BS:55:ILE:O	40:BS:58:ALA:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:B0:10:SER:O	48:B0:14:MET:HG3	2.15	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
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
5:CE:22:LYS:H	5:CE:29:ILE:HG22	1.80	0.46
8:CH:30:LYS:O	8:CH:33:VAL:N	2.49	0.46
8:CH:111:THR:HG22	8:CH:112:ASP:N	2.31	0.46
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.41	0.46
55:CM:106:ARG:HH21	55:CM:112:ARG:NE	2.13	0.46
57:DA:206:U:O2'	57:DA:207:A:H8	1.98	0.46
57:DA:247:G:C4	57:DA:249:C:H1'	2.50	0.46
57:DA:270:A:N1	57:DA:369:U:H1'	2.30	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: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
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: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
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
25:DD:174:SER:O	25:DD:175:LEU:C	2.57	0.46
28:DG:91:VAL:O	28:DG:93:TYR:N	2.48	0.46
29:DH:28:ASN:HD22	29:DH:28:ASN:HA	1.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:127:GLU:HA	29:DH:144:VAL:HG23	1.98	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:66:A:C2'	1:AA:67:C:H5'	2.47	0.46
1:AA:91:U:C2'	1:AA:92:U:O4'	2.64	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: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: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
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	2.16	0.46
3:AC:150:VAL:HG12	3:AC:199:VAL:HB	1.98	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
22:BA:28:A:C4	22:BA:513:A:N7	2.84	0.46
22:BA:221:A:H4'	22:BA:222:A:O5'	2.15	0.46
22:BA:548:G:H3'	22:BA:548:G:H8	1.81	0.46
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.03	0.46
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.81	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:2815:C:H1'	48:B0:39:ARG:HD3	1.98	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
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.17	0.46
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.15	0.46
31:BJ:84:ILE:O	31:BJ:84:ILE:HG13	2.16	0.46
31:BJ:120:ARG:O	31:BJ:123:LYS:HE2	2.16	0.46
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.63	0.46
40:BS:39:THR:HG22	40:BS:39:THR:O	2.16	0.46
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.29	0.46
41:BT:27:SER:C	41:BT:28:ASN:CG	2.84	0.46
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.59	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:50:VAL:C	44:BW:52:CYS:N	2.73	0.46
44:BW:70:VAL:O	44:BW:70:VAL:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:48:LEU:HD11	45:BX:67:LEU:CD2	2.45	0.46
47:BZ:36:GLU:C	47:BZ:37:ARG:HD2	2.41	0.46
53:CA:275:G:HO2'	53:CA:276:G:H8	1.62	0.46
53:CA:655:A:N6	53:CA:752:G:N2	2.63	0.46
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
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:1346:A:N6	54:CG:9:ARG:HH22	2.14	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
54:CG:17:PHE:HB2	54:CG:43:TYR:OH	2.16	0.46
15:CO:2:LEU:HD13	15:CO:34:GLN:HE21	1.81	0.46
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.96	0.46
57:DA:37:C:O2'	26:DE:45:ALA:CB	2.64	0.46
57:DA:103:A:O2'	57:DA:104:A:H5'	2.16	0.46
57:DA:201:C:C5	57:DA:202:U:C5	3.03	0.46
57:DA:329:G:H5'	57:DA:477:A:H4'	1.97	0.46
57:DA:492:A:N1	40:DS:49:LYS:HE2	2.31	0.46
57:DA:975:A:N3	57:DA:976:G:C8	2.84	0.46
57:DA:1179:G:H2'	57:DA:1180:U:C6	2.50	0.46
57:DA:1198:U:O4'	38:DQ:8:ILE:HD12	2.16	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:1808:A:C5	45:DX:27:ARG:NH1	2.82	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: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
24:DC:239:PHE:HD1	24:DC:241:LYS:H	1.64	0.46
24:DC:245:THR:C	24:DC:247:TRP:H	2.24	0.46
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.31	0.46
30:DI:105:LEU:HD23	30:DI:105:LEU:O	2.16	0.46
38:DQ:82:LEU:HB3	38:DQ:88:GLU:OE2	2.15	0.46
44:DW:54:ARG:C	44:DW:56:HIS:H	2.24	0.46

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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: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
2:AB:22:TRP:HA	2:AB:188:THR:O	2.16	0.45
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.98	0.45
3:AC:13:ILE:H	3:AC:13:ILE:HD13	1.81	0.45
5:AE:149:PRO:C	5:AE:151:MET:N	2.74	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
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.15	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:73:LEU:HD11	12:AL:79:ILE:CG2	2.44	0.45
14:AN:46:LYS:C	14:AN:48:GLN:H	2.24	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
22:BA:81:G:C2	22:BA:106:C:C2	3.05	0.45
22:BA:608:A:N1	22:BA:609:A:C2	2.84	0.45
22:BA:749:A:N7	22:BA:1618:A:C6	2.85	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
22:BA:1459:G:H8	22:BA:1459:G:H2'	1.58	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
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:7:PRO:C	24:BC:9:SER:H	2.24	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:HD12	26:BE:159:LEU:HA	1.56	0.45
29:BH:32:PRO:HB3	45:BX:38:TRP:CD1	2.51	0.45
31:BJ:38:GLY:C	31:BJ:40:HIS:N	2.74	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
51:B3:30:HIS:ND1	51:B3:31:ILE:HG22	2.32	0.45
53:CA:191:G:H2'	53:CA:192:A:C8	2.50	0.45
53:CA:328:C:O2	53:CA:328:C:C2'	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
53:CA:1244:G:O2'	53:CA:1245:C:O4'	2.24	0.45
53:CA:1278:G:H1'	53:CA:1279:G:C5	2.52	0.45
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.31	0.45
3:CC:22:PHE:CD2	10:CJ:97:ASP:HB2	2.51	0.45
4:CD:84:ASN:C	4:CD:84:ASN:ND2	2.74	0.45
5:CE:13:LYS:HA	5:CE:13:LYS:CE	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
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:86:G:N2	57:DA:87:U:C4	2.84	0.45
57:DA:155:A:H2'	57:DA:156:A:C8	2.52	0.45
57:DA:221:A:H5''	57:DA:222:A:OP1	2.16	0.45
57:DA:241:A:O2'	57:DA:242:G:O5'	2.34	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:673:C:H4'	26:DE:77:ILE:HG13	1.98	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: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
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:1750:G:C6	57:DA:1751:U:C4	3.04	0.45
57:DA:1776:G:C2	57:DA:1789:A:N3	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1783:A:C2	57:DA:2588:G:O4'	2.69	0.45
57:DA:1838:C:C4	57:DA:1899:A:C4	3.04	0.45
57:DA:2269:G:O2'	44:DW:18:LYS:HG2	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
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
59:DF:101:ARG:HH11	59:DF:138:PRO:CB	2.29	0.45
59:DF:102:LEU:C	59:DF:103:ILE:HD12	2.41	0.45
28:DG:116:LEU:HD13	28:DG:121:THR:HA	1.98	0.45
29:DH:65:ALA:O	29:DH:66:ASN:C	2.58	0.45
32:DK:121:GLU:HB3	32:DK:122:VAL:H	1.44	0.45
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.41	0.45
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.54	0.45
45:DX:1:SER:C	45:DX:3:VAL:N	2.74	0.45
45:DX:42:GLU:HG2	45:DX:44:ARG:HE	1.80	0.45
46:DY:52:ARG:C	46:DY:54:LYS:H	2.24	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
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.46	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:55:VAL:O	5:AE:59:ILE:HG23	2.16	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
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
14:AN:42:ASN:C	14:AN:44:VAL:N	2.73	0.45
15:AO:24:THR:CG2	15:AO:69:LEU:HD12	2.45	0.45
15:AO:45:HIS:C	15:AO:47:LYS:H	2.24	0.45
22:BA:117:G:C6	22:BA:119:A:C6	3.04	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:580:U:H4'	38:BQ:30:VAL:HG11	1.97	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1079:C:C4	22:BA:1088:A:C2	3.01	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:2046:G:OP1	48:B0:11:LYS:HE3	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
24:BC:63:ILE:O	24:BC:64:VAL:HB	2.15	0.45
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.47	0.45
25:BD:186:LEU:HD21	37:BP:3:ILE:HD11	1.99	0.45
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.45
38:BQ:90:ASP:O	38:BQ:91:ARG:O	2.33	0.45
43:BV:80:HIS:CE1	43:BV:81:PRO:HD2	2.51	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
46:BY:61:ALA:C	46:BY:63:ALA:H	2.23	0.45
50:B2:24:THR:O	50:B2:25:LYS:C	2.58	0.45
51:B3:30:HIS:O	51:B3:31:ILE:C	2.59	0.45
53:CA:21:G:H2'	53:CA:22:G:C8	2.52	0.45
53:CA:90:C:H2'	53:CA:91:U:C5	2.51	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:822:U:C2	53:CA:823:C:C5	3.05	0.45
53:CA:969:A:O2'	53:CA:970:C:C5'	2.62	0.45
2:CB:9:LEU:HD12	2:CB:12:GLY:N	2.31	0.45
2:CB:26:MET:HE2	2:CB:29:PHE:HD2	1.81	0.45
2:CB:27:LYS:O	2:CB:27:LYS:HD3	2.16	0.45
8:CH:109:VAL:C	8:CH:110:MET:HG3	2.41	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
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
57:DA:174:U:H2'	57:DA:174:U:O2	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:849:A:C6	57:DA:850:U:C4	3.04	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:1304:A:HO2'	57:DA:1305:C:C5'	2.29	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:1797:G:H4'	24:DC:254:LYS:O	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
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.22	0.45
25:DD:46:ARG:HB3	25:DD:84:LEU:HD12	1.99	0.45
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.15	0.45
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.16	0.45
26:DE:1:MET:HE2	26:DE:14:VAL:HG23	1.98	0.45
59:DF:35:LEU:O	59:DF:87:LYS:HA	2.15	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:52:ARG:HD3	37:DP:52:ARG:HA	1.77	0.45
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	2.14	0.45
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.16	0.45
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.16	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
1:AA:112:G:C6	1:AA:330:C:N4	2.85	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
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
3:AC:63:ILE:O	3:AC:98:ALA:HA	2.16	0.45
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:12:U:O2	22:BA:12:U:H2'	2.16	0.45
22:BA:142:A:C5	22:BA:143:C:C4	3.04	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:752:A:C5	22:BA:1781:U:O4'	2.69	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
22:BA:1816:C:C5	24:BC:61:TYR:CE1	3.05	0.45
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.49	0.45
22:BA:1989:G:H8	22:BA:1989:G:O5'	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
24:BC:259:ASN:C	24:BC:261:ARG:N	2.73	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:83:VAL:O	26:BE:83:VAL:HG12	2.16	0.45
26:BE:112:LEU:HD13	26:BE:186:VAL:CG1	2.40	0.45
34:BM:53:MET:HE3	34:BM:53:MET:HB2	1.67	0.45
35:BN:106:ASP:OD1	35:BN:106:ASP:C	2.59	0.45
36:BO:105:ALA:O	36:BO:107:ALA:N	2.49	0.45
46:BY:9:LYS:HA	46:BY:9:LYS:HZ1	1.80	0.45
49:B1:35:LEU:HD23	49:B1:35:LEU:O	2.17	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
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:577:G:C8	53:CA:816:A:N1	2.85	0.45
53:CA:604:G:C2	53:CA:635:A:C2	3.05	0.45
53:CA:954:G:H1	53:CA:1228:C:N4	2.13	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:1231:G:C5	53:CA:1232:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
54:CG:10:LYS:HE3	54:CG:10:LYS:N	2.31	0.45
54:CG:105:GLU:O	54:CG:109:LYS:HD3	2.17	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:24:G:C5	57:DA:25:U:C5	3.05	0.45
57:DA:28:A:H2'	57:DA:29:U:C6	2.51	0.45
57:DA:223:A:C4	57:DA:408:G:H1'	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:830:G:C2	57:DA:2448:A:N7	2.84	0.45
57:DA:974:G:H8	57:DA:975:A:N7	2.14	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:2020:A:H5'	48:D0:8:THR:CG2	2.46	0.45
57:DA:2858:C:H2'	57:DA:2859:G:O4'	2.15	0.45
58:DB:55:U:H5'	59:DF:24:VAL:HG21	1.98	0.45
59:DF:160:LYS:HD3	59:DF:161:SER:N	2.31	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
29:DH:102:ALA:C	29:DH:104:THR:N	2.75	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
1:AA:126:G:H2'	1:AA:127:G:O5'	2.17	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
1:AA:1157:A:H1'	1:AA:1181:G:N1	2.32	0.45
1:AA:1343:G:H4'	9:AI:123:ARG:HB3	1.98	0.45
4:AD:2:ARG:HB2	4:AD:4:LEU:CD1	2.47	0.45
13:AM:11:HIS:C	13:AM:12:LYS:HG3	2.40	0.45
14:AN:25:GLU:HG2	14:AN:26:LEU:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:60:GLN:HE21	20:AT:65:LEU:CD2	2.30	0.45
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
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:1753:G:H5''	37:BP:92:ARG:HE	1.80	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
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
24:BC:151:GLY:O	24:BC:152:GLN:HG3	2.16	0.45
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.49	0.45
26:BE:196:VAL:O	26:BE:197:GLU:C	2.57	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
38:BQ:40:LYS:HB2	38:BQ:40:LYS:NZ	2.31	0.45
39:BR:49:ILE:C	39:BR:51:VAL:O	2.59	0.45
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.31	0.45
45:BX:31:ASN:O	45:BX:51:SER:HA	2.17	0.45
49:B1:8:ILE:N	49:B1:22:THR:O	2.49	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
2:CB:88:GLN:C	2:CB:89:PHE:CG	2.95	0.45
4:CD:3:TYR:CZ	4:CD:5:GLY:HA3	2.52	0.45
4:CD:186:GLU:O	4:CD:187:ARG:CB	2.65	0.45
54:CG:19:SER:HB3	54:CG:22:LEU:HB3	1.99	0.45
55:CM:77:LYS:HD3	55:CM:77:LYS:C	2.42	0.45
57:DA:15:G:O2'	57:DA:16:C:H5'	2.16	0.45
57:DA:204:A:O2'	57:DA:205:G:O5'	2.34	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
57:DA:1187:G:OP2	57:DA:1187:G:C8	2.70	0.45
57:DA:1608:A:O2'	57:DA:1610:A:OP1	2.34	0.45
57:DA:1767:G:N2	57:DA:1986:C:C2	2.84	0.45
57:DA:1817:G:H3'	24:DC:155:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1982:U:O5'	57:DA:1982:U:C6	2.69	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
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
58:DB:48:U:O2'	36:DO:100:HIS:CE1	2.70	0.45
59:DF:71:LYS:HG3	59:DF:73:VAL:H	1.79	0.45
59:DF:135:ILE:O	59:DF:137:PHE:N	2.49	0.45
29:DH:1:MET:HE3	29:DH:23:ALA:CB	2.44	0.45
31:DJ:55:ILE:O	31:DJ:55:ILE:HG13	2.15	0.45
33:DL:94:THR:O	33:DL:98:ALA:N	2.48	0.45
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	1.97	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:CB	2.46	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
45:DX:52:ALA:C	45:DX:54:GLY:N	2.75	0.45
1:AA:74:A:C6	1:AA:97:G:C6	3.05	0.45
1:AA:162:A:C8	1:AA:163:C:H1'	2.51	0.45
1:AA:345:C:O2	32:BK:117:SER:HA	2.16	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:750:C:O2'	15:AO:20:ASP:OD1	2.34	0.45
1:AA:894:G:O2'	1:AA:895:G:H5'	2.17	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
10:AJ:53:ILE:HG13	14:AN:84:ARG:CZ	2.46	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
13:AM:112:ARG:C	13:AM:113:LYS:HG3	2.42	0.45
17:AQ:56:ASP:OD2	17:AQ:80:LYS:HA	2.17	0.45
22:BA:871:U:H2'	22:BA:872:U:C6	2.51	0.45
22:BA:1050:A:N1	22:BA:2751:G:C5	2.84	0.45
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:OP2	22:BA:1476:U:C6	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
23:BB:52:A:H4'	23:BB:53:A:OP1	2.16	0.45
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
28:BG:90:GLY:O	28:BG:91:VAL:C	2.60	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:65:THR:CG2	31:BJ:66:GLY:N	2.69	0.45
36:BO:85:LYS:HB3	36:BO:85:LYS:HE3	1.80	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
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.69	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
53:CA:1381:U:O2'	53:CA:1382:C:O5'	2.30	0.45
3:CC:63:ILE:O	3:CC:63:ILE:HG23	2.15	0.45
4:CD:80:ARG:HE	4:CD:80:ARG:HB2	1.43	0.45
5:CE:83:PRO:HB3	5:CE:96:GLN:HG2	1.98	0.45
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.52	0.45
54:CG:70:PRO:HD2	54:CG:95:ARG:O	2.17	0.45
54:CG:148:LYS:HD3	54:CG:148:LYS:O	2.17	0.45
10:CJ:48:ARG:CZ	10:CJ:48:ARG:HB2	2.46	0.45
12:CL:31:GLY:HA3	12:CL:54:VAL:HG12	1.98	0.45
15:CO:66:LEU:O	15:CO:67:ASP:C	2.59	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:69:C:H2'	57:DA:70:G:H8	1.80	0.45
57:DA:223:A:C6	57:DA:422:A:C5	3.04	0.45
57:DA:511:U:C4'	57:DA:1235:G:H4'	2.46	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: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
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: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: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
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
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
41:DT:69:ARG:HG3	41:DT:70:HIS:N	2.30	0.45
44:DW:9:THR:OG1	44:DW:10:ARG:N	2.49	0.45
44:DW:81:ILE:C	44:DW:81:ILE:HD12	2.41	0.45
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.97	0.45
49:D1:3:GLY:C	49:D1:5:ARG:H	2.24	0.45
1:AA:131:A:O2'	1:AA:132:C:O4'	2.33	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
1:AA:1138:G:N3	1:AA:1138:G:C2'	2.71	0.45
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.51	0.45
2:AB:58:LYS:HD3	2:AB:58:LYS:C	2.42	0.45
2:AB:110:ILE:HD11	2:AB:147:LEU:HD13	1.91	0.45
2:AB:132:GLU:O	2:AB:136:ARG:CB	2.65	0.45
6:AF:53:LYS:HG3	6:AF:54:LEU:N	2.32	0.45
11:AK:16:SER:C	11:AK:78:ILE:HG22	2.42	0.45
11:AK:124:LYS:HE2	21:AU:33:ARG:HH21	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.98	0.45
24:BC:255:LYS:C	24:BC:257:ARG:N	2.74	0.45
26:BE:131:THR:HG22	26:BE:164:LEU:HD13	1.98	0.45
28:BG:164:ALA:C	28:BG:166:GLU:H	2.25	0.45
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: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
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:1372:U:C5'	9:CI:71:ILE:HD11	2.47	0.45
53:CA:1394:A:N6	53:CA:1501:C:H5'	2.32	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
4:CD:141:VAL:HG12	4:CD:142:VAL:N	2.31	0.45
5:CE:132:PRO:C	5:CE:134:ASN:N	2.74	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:ND2	8:CH:20:ASN:O	2.49	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
57:DA:335:C:O2'	57:DA:336:C:O5'	2.35	0.45
57:DA:413:C:H4'	57:DA:1880:U:H4'	1.98	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1361:G:C5	57:DA:1362:C:C5	3.05	0.45
57:DA:1408:G:H22	57:DA:1595:C:H1'	1.82	0.45
57:DA:1417:C:H4'	57:DA:1587:G:N2	2.30	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: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
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
58:DB:90:C:H4'	34:DM:38:ARG:NH1	2.32	0.45
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.82	0.45
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.47	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
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.15	0.45
49:D1:46:VAL:HG22	49:D1:47:ILE:N	2.29	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
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
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
5:AE:79:THR:HB	5:AE:121:ASN:CG	2.41	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
35:BN:69:ARG:H	35:BN:69:ARG:HG2	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
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.81	0.45
53:CA:41:G:H2'	53:CA:42:G:C8	2.51	0.45
53:CA:76:G:N2	53:CA:95:C:C2	2.85	0.45
53:CA:274:A:O2'	53:CA:275:G:C8	2.59	0.45
53:CA:335:C:O2	53:CA:1433:A:H2	2.00	0.45
53:CA:386:C:C5	53:CA:387:U:C5	3.05	0.45
53:CA:449:G:N1	53:CA:450:G:C5	2.85	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:1319:A:H5''	19:CS:4:LEU:CD1	2.47	0.45
3:CC:149:LYS:CG	3:CC:168:ARG:HB2	2.46	0.45
54:CG:25:PHE:CZ	54:CG:61:PHE:HZ	2.34	0.45
54:CG:41:ILE:O	54:CG:45:ALA:HB3	2.17	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
14:CN:72:PHE:CD1	14:CN:72:PHE:C	2.94	0.45
17:CQ:49:ASN:HB3	17:CQ:51:GLU:HG2	1.99	0.45
57:DA:2:G:H2'	57:DA:3:U:O4'	2.17	0.45
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:133:U:H2'	57:DA:134:G:O4'	2.16	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:783:A:H2	57:DA:1778:U:H4'	1.82	0.45
57:DA:970:U:H1'	57:DA:985:C:OP1	2.16	0.45
57:DA:1080:A:HO2'	57:DA:1081:U:H6	1.62	0.45
57:DA:1536:C:OP2	57:DA:1536:C:C2	2.69	0.45
57:DA:1717:A:N6	57:DA:1744:A:C8	2.85	0.45
57:DA:1734:G:C2'	57:DA:1735:A:C8	2.96	0.45
57:DA:1774:C:H4'	57:DA:1979:U:O2	2.17	0.45
57:DA:1785:A:H2'	57:DA:1787:A:N7	2.31	0.45
57:DA:2093:G:OP1	57:DA:2093:G:C4'	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
58:DB:55:U:H5'	59:DF:24:VAL:CG2	2.47	0.45
24:DC:156:SER:HB3	24:DC:159:THR:CG2	2.47	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
29:DH:96:THR:O	29:DH:97:ARG:HG3	2.17	0.45
31:DJ:22:GLY:O	31:DJ:23:LYS:C	2.59	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
36:DO:31:THR:HG23	36:DO:34:HIS:O	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
41:DT:39:THR:C	41:DT:41:ALA:H	2.25	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
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
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:NH1	9:AI:129:ARG:HA	2.32	0.45
11:AK:113:THR:HB	21:AU:28:LEU:HD11	1.98	0.45
16:AP:67:ILE:HG23	16:AP:72:ALA:HB2	1.99	0.45
17:AQ:24:ILE:O	17:AQ:24:ILE:HG22	2.17	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: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
26:BE:42:GLY:C	26:BE:43:THR:HG23	2.42	0.45
26:BE:169:VAL:C	26:BE:170:ARG:HD2	2.42	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
31:BJ:128:ASN:O	31:BJ:128:ASN:ND2	2.50	0.45
33:BL:80:SER:HB3	33:BL:115:GLU:CD	2.41	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
35:BN:8:ARG:HB2	35:BN:43:GLU:CD	2.42	0.45
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.76	0.45
37:BP:112:ARG:O	37:BP:113:LEU:C	2.58	0.45
38:BQ:91:ARG:HD3	39:BR:11:GLN:CB	2.47	0.45
41:BT:4:GLU:CD	41:BT:5:GLU:H	2.25	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:293:G:C2	53:CA:305:G:N3	2.85	0.45
53:CA:374:A:C5'	53:CA:452:A:N1	2.75	0.45
53:CA:435:A:C5	53:CA:436:C:C5	3.05	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
53:CA:1484:C:H2'	53:CA:1485:U:H6	1.81	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
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:20:VAL:C	12:CL:22:ALA:H	2.25	0.45
12:CL:89:LEU:HA	12:CL:90:PRO:HD2	1.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:18:U:O2	57:DA:554:U:H5''	2.17	0.45
57:DA:45:G:N2	57:DA:434:U:C2	2.85	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: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
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:1984:G:C6	57:DA:1985:C:C4	3.04	0.45
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:2816:G:O3'	35:DN:99:LYS:HE3	2.16	0.45
24:DC:130:PRO:C	24:DC:132:ARG:N	2.74	0.45
25:DD:36:GLN:HE21	25:DD:38:LYS:NZ	2.14	0.45
25:DD:118:PHE:CE1	25:DD:119:ALA:O	2.70	0.45
26:DE:29:HIS:HA	26:DE:32:VAL:CG2	2.45	0.45
26:DE:154:ASP:C	26:DE:156:ASN:H	2.24	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
32:DK:107:LEU:C	32:DK:109:SER:N	2.75	0.45
33:DL:110:VAL:O	33:DL:111:ILE:HG12	2.17	0.45
40:DS:59:GLU:OE2	40:DS:66:ILE:HD12	2.17	0.45
40:DS:74:ILE:O	40:DS:74:ILE:HG12	2.17	0.45
43:DV:56:PHE:C	43:DV:56:PHE:CD1	2.95	0.45
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.47	0.45
1:AA:877:G:N3	8:AH:1:SER:N	2.62	0.45
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:21:LYS:O	4:AD:22:SER:C	2.59	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:97:LEU:HD22	4:AD:117:VAL:HG11	1.98	0.45
4:AD:98:ASP:HB3	4:AD:114:ARG:HG2	1.99	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
22:BA:568:U:O5'	22:BA:945:A:N6	2.50	0.45
22:BA:669:G:N3	22:BA:669:G:C2'	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
22:BA:1059:G:C6	22:BA:1080:A:C6	3.05	0.45
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:1791:A:HO2'	24:BC:205:GLY:HA2	1.80	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
23:BB:30:C:C5	23:BB:31:C:C6	3.05	0.45
24:BC:71:ASP:OD1	24:BC:188:ARG:NH1	2.47	0.45
24:BC:242:HIS:O	24:BC:244:VAL:HG13	2.16	0.45
29:BH:43:ASN:C	29:BH:45:GLU:H	2.25	0.45
29:BH:78:VAL:CG2	29:BH:145:ASN:HD22	2.29	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
40:BS:20:VAL:HG11	40:BS:44:ALA:HA	1.98	0.45
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.16	0.45
44:BW:49:ASN:C	44:BW:50:VAL:CG2	2.90	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
53:CA:46:G:O2'	53:CA:365:U:H1'	2.17	0.45
53:CA:397:A:H3'	53:CA:397:A:N3	2.32	0.45
53:CA:522:C:N4	12:CL:49:ARG:HH22	1.95	0.45
53:CA:913:A:OP1	12:CL:43:LYS:HE3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1346:A:N1	54:CG:9:ARG:NH2	2.65	0.45
53:CA:1434:A:H2'	53:CA:1435:G:O4'	2.17	0.45
4:CD:150:LYS:HA	4:CD:150:LYS:HD3	1.82	0.45
54:CG:61:PHE:O	54:CG:63:VAL:N	2.48	0.45
56:CP:44:SER:HB2	56:CP:46:LYS:CG	2.46	0.45
57:DA:21:A:H2'	57:DA:22:C:H6	1.82	0.45
57:DA:60:G:O2'	57:DA:61:C:P	2.75	0.45
57:DA:116:C:H2'	57:DA:117:G:O4'	2.17	0.45
57:DA:151:C:OP1	57:DA:1359:A:O2'	2.26	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:464:U:C1'	57:DA:686:U:C5	2.98	0.45
57:DA:600:G:N2	57:DA:605:G:O3'	2.49	0.45
57:DA:685:A:C2	57:DA:689:A:C6	3.05	0.45
57:DA:749:A:H2'	57:DA:750:A:H8	1.82	0.45
57:DA:1087:G:C4	57:DA:1089:A:C2	3.05	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
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: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:2432:A:N1	45:DX:20:ALA:HA	2.32	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:2885:G:N2	48:D0:31:LYS:HG2	2.31	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
28:DG:163:TYR:O	28:DG:164:ALA:C	2.60	0.45
31:DJ:42:ALA:C	31:DJ:44:TYR:H	2.25	0.45
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.75	0.45
33:DL:38:GLN:C	33:DL:40:SER:H	2.25	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.82	0.45
1:AA:69:G:H2'	1:AA:69:G:N3	2.30	0.45
1:AA:71:A:O2'	1:AA:72:A:O5'	2.28	0.45
1:AA:106:C:H2'	1:AA:107:G:O4'	2.17	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: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
3:AC:13:ILE:HD13	3:AC:13:ILE:N	2.32	0.45
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.47	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
14:AN:50:LEU:O	14:AN:51:PRO:C	2.60	0.45
16:AP:16:PHE:O	16:AP:16:PHE:CD1	2.70	0.45
22:BA:6:A:C2'	22:BA:7:G:H5'	2.47	0.45
22:BA:191:A:H2'	22:BA:192:C:C6	2.52	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:801:G:C8	26:BE:50:ALA:HB2	2.52	0.45
22:BA:1019:U:C4	22:BA:1020:A:N6	2.85	0.45
22:BA:1380:G:H2'	22:BA:1380:G:N3	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: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: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
24:BC:261:ARG:O	24:BC:261:ARG:HG2	2.17	0.45
25:BD:152:PRO:O	25:BD:154:LYS:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:103:ILE:H	27:BF:103:ILE:HG12	1.55	0.45
28:BG:9:VAL:HA	28:BG:47:ASN:O	2.17	0.45
28:BG:168:VAL:O	28:BG:170:THR:HG23	2.17	0.45
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.47	0.45
32:BK:18:ARG:HA	32:BK:18:ARG:HD2	1.72	0.45
34:BM:78:LEU:HD23	34:BM:78:LEU:C	2.42	0.45
35:BN:71:ARG:CG	35:BN:71:ARG:NH2	2.62	0.45
36:BO:23:ALA:C	36:BO:42:PRO:HG3	2.41	0.45
45:BX:73:ARG:HG2	45:BX:75:GLU:HG3	1.98	0.45
51:B3:56:LEU:HD22	51:B3:56:LEU:N	2.31	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: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: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
53:CA:1071:C:C5'	5:CE:53:ARG:NH1	2.80	0.45
53:CA:1215:G:N3	53:CA:1216:A:C8	2.85	0.45
53:CA:1319:A:OP2	19:CS:4:LEU:HD21	2.17	0.45
53:CA:1526:G:OP2	21:CU:38:GLU:HB2	2.17	0.45
2:CB:17:HIS:CG	2:CB:18:GLN:N	2.84	0.45
2:CB:116:LEU:HD23	2:CB:119:GLN:OE1	2.17	0.45
2:CB:119:GLN:HE22	2:CB:136:ARG:HH12	1.65	0.45
3:CC:183:TYR:HE1	3:CC:198:LYS:HB3	1.82	0.45
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.75	0.45
5:CE:74:ALA:O	5:CE:75:LEU:HB2	2.16	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
57:DA:145:C:O5'	57:DA:145:C:H6	2.00	0.45
57:DA:195:A:C5	57:DA:198:C:C5	3.05	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1817:G:H5''	24:DC:86:ARG:NH1	2.32	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:2052:A:OP1	25:DD:146:ILE:HG12	2.17	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:2353:G:H4'	44:DW:28:GLU:HG2	1.98	0.45
24:DC:83:ASP:HA	24:DC:84:PRO:HD2	1.79	0.45
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.47	0.45
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.95	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:HD13	34:DM:112:LEU:O	2.17	0.45
43:DV:61:LEU:H	43:DV:61:LEU:CD2	2.24	0.45
48:D0:4:GLN:HG2	48:D0:4:GLN:O	2.16	0.45
1:AA:62:U:OP1	1:AA:385:C:O2'	2.33	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
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
1:AA:1435:G:H2'	1:AA:1436:U:H6	1.82	0.44
5:AE:46:GLY:HA3	5:AE:70:MET:HA	1.98	0.44
5:AE:82:HIS:NE2	8:AH:95:MET:HE2	2.32	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
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	2.28	0.44
13:AM:86:ARG:NH2	13:AM:97:ARG:HA	2.32	0.44
15:AO:49:HIS:O	15:AO:50:HIS:C	2.60	0.44
18:AR:59:LYS:O	18:AR:60:ARG:C	2.60	0.44
19:AS:54:ARG:H	19:AS:54:ARG:HG3	1.62	0.44
20:AT:18:LYS:O	20:AT:19:HIS:C	2.59	0.44
20:AT:24:ARG:O	20:AT:27:MET:HB3	2.18	0.44
20:AT:32:LYS:O	20:AT:33:LYS:C	2.61	0.44
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.83	0.44
22:BA:188:G:H2'	22:BA:189:G:O4'	2.17	0.44
22:BA:273:G:O2'	22:BA:274:C:O5'	2.32	0.44
22:BA:453:A:H5''	63:BA:3242:HOH:O	2.17	0.44
22:BA:1062:G:C6	22:BA:1063:G:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1127:A:N1	22:BA:2463:C:O2'	2.46	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:1798:U:P	24:BC:255:LYS:HA	2.56	0.44
22:BA:1866:A:H2'	22:BA:1867:G:O4'	2.17	0.44
22:BA:1872:A:O2'	22:BA:1873:G:O4'	2.35	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:2522:U:O2'	22:BA:2647:U:OP1	2.28	0.44
22:BA:2778:A:H4'	22:BA:2779:U:OP2	2.14	0.44
24:BC:75:ALA:HB2	24:BC:95:TYR:CD2	2.52	0.44
24:BC:106:PRO:O	24:BC:109:LEU:HD13	2.17	0.44
24:BC:159:THR:OG1	24:BC:194:VAL:HG11	2.16	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: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
33:BL:82:LEU:C	33:BL:82:LEU:CD2	2.89	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
44:BW:50:VAL:HB	44:BW:61:LYS:HZ2	1.81	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:O5'	53:CA:659:U:H6	1.99	0.44
53:CA:892:A:H2'	53:CA:893:C:H6	1.82	0.44
53:CA:1106:G:O2'	3:CC:168:ARG:NH1	2.50	0.44
53:CA:1229:A:O2'	53:CA:1230:C:O4'	2.35	0.44
2:CB:103:TRP:HA	2:CB:106:VAL:CB	2.44	0.44
3:CC:11:LEU:HD23	3:CC:11:LEU:HA	1.72	0.44
54:CG:30:MET:HB3	54:CG:30:MET:HE2	1.71	0.44
54:CG:48:THR:O	54:CG:52:ARG:HD3	2.18	0.44
54:CG:116:ALA:O	54:CG:120:ALA:HB3	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:51:VAL:HG12	12:CL:52:CYS:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:72:ASN:HD21	12:CL:104:SER:H	1.65	0.44
12:CL:75:GLU:C	12:CL:77:SER:N	2.75	0.44
55:CM:11:HIS:HA	55:CM:44:ILE:HB	1.99	0.44
55:CM:18:LEU:HD12	55:CM:18:LEU:N	2.32	0.44
15:CO:38:LEU:HD12	15:CO:41:HIS:CB	2.47	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
21:CU:8:ASN:ND2	21:CU:9:GLU:H	2.15	0.44
57:DA:128:C:H2'	57:DA:129:C:C5	2.52	0.44
57:DA:374:A:C6	57:DA:401:A:N7	2.85	0.44
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:492:A:N6	40:DS:49:LYS:HD2	2.32	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
57:DA:960:A:H61	34:DM:82:MET:HE2	1.82	0.44
57:DA:1056:G:H1'	57:DA:1103:A:C6	2.52	0.44
57:DA:1099:G:H5''	57:DA:1100:C:OP2	2.16	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: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
58:DB:43:C:O2'	58:DB:45:A:N7	2.45	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
34:DM:86:LYS:O	34:DM:87:GLY:C	2.59	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
36:DO:108:ASP:C	36:DO:110:ALA:N	2.75	0.44
40:DS:7:HIS:CE1	40:DS:10:ALA:HA	2.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:5:LYS:HB2	47:DZ:5:LYS:HE3	1.73	0.44
1:AA:244:U:C6	1:AA:894:G:N2	2.85	0.44
1:AA:450:G:N7	1:AA:481:G:C6	2.85	0.44
1:AA:473:U:H2'	1:AA:474:G:C8	2.44	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: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
2:AB:209:VAL:O	2:AB:210:THR:C	2.59	0.44
4:AD:26:ALA:O	4:AD:27:ILE:C	2.60	0.44
4:AD:119:HIS:O	4:AD:120:LYS:C	2.59	0.44
7:AG:3:ARG:HG3	7:AG:4:ARG:N	2.31	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
16:AP:30:GLY:O	16:AP:31:ARG:C	2.60	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: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
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:2013:A:N3	40:BS:88:ARG:NH1	2.65	0.44
22:BA:2454:G:H1'	63:BA:3531:HOH:O	2.17	0.44
22:BA:2596:U:H6	22:BA:2596:U:O5'	1.99	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:72:SER:C	26:BE:74:LYS:H	2.25	0.44
26:BE:147:LEU:O	26:BE:147:LEU:HD13	2.17	0.44
29:BH:57:LYS:O	29:BH:61:VAL:HG23	2.17	0.44
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.85	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
34:BM:33:LEU:HD21	34:BM:128:THR:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BO:7:ARG:CG	36:BO:96:GLY:HA3	2.47	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
42:BU:91:LYS:O	42:BU:92:VAL:HB	2.18	0.44
44:BW:25:PHE:C	44:BW:27:GLY:N	2.74	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:647:C:H2'	53:CA:648:A:C8	2.53	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
2:CB:34:ARG:HD3	2:CB:35:ASN:N	2.32	0.44
5:CE:111:ARG:O	5:CE:112:ALA:C	2.60	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
57:DA:139:U:N3	41:DT:1:MET:HA	2.33	0.44
57:DA:188:G:C6	57:DA:189:G:C4	3.06	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:783:A:O3'	57:DA:2588:G:H4'	2.17	0.44
57:DA:873:C:C4'	34:DM:64:TRP:CD1	2.95	0.44
57:DA:960:A:O2'	57:DA:962:G:H5'	2.17	0.44
57:DA:1022:G:C6	57:DA:1140:C:C5	3.04	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:1967:C:H6	57:DA:1967:C:C5'	2.24	0.44
57:DA:2060:A:C2'	26:DE:63:LYS:NZ	2.67	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
57:DA:2345:G:C5	57:DA:2381:A:C2	3.05	0.44
57:DA:2658:C:H5''	28:DG:157:LYS:HD3	1.99	0.44
57:DA:2845:U:C2	57:DA:2846:G:C8	3.05	0.44
24:DC:250:GLN:H	24:DC:250:GLN:HG2	1.46	0.44
25:DD:98:VAL:O	25:DD:99:GLU:C	2.60	0.44
26:DE:61:ARG:O	26:DE:62:GLN:C	2.59	0.44
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:AA:137:U:H1'	1:AA:227:G:N2	2.31	0.44
1:AA:878:A:C5'	8:AH:80:PRO:HG2	2.47	0.44
1:AA:976:G:OP1	14:AN:70:HIS:ND1	2.48	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
2:AB:93:HIS:O	2:AB:94:ARG:C	2.60	0.44
8:AH:125:ILE:O	8:AH:126:CYS:HB3	2.16	0.44
11:AK:39:ASN:O	11:AK:40:ALA:CB	2.65	0.44
12:AL:23:LEU:C	12:AL:25:ALA:H	2.24	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:282:A:H2'	22:BA:283:G:C8	2.52	0.44
22:BA:395:U:O2'	22:BA:396:G:C8	2.70	0.44
22:BA:396:G:H8	22:BA:396:G:O5'	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
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
22:BA:2332:C:OP1	44:BW:44:PHE:CZ	2.70	0.44
22:BA:2390:U:OP2	51:B3:34:LYS:HE2	2.17	0.44
22:BA:2841:C:H2'	22:BA:2842:G:H8	1.82	0.44
24:BC:109:LEU:CD2	24:BC:110:LYS:N	2.80	0.44
24:BC:250:GLN:N	24:BC:250:GLN:HE21	2.15	0.44
25:BD:16:THR:O	25:BD:17:GLU:C	2.60	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:4:PHE:CD1	31:BJ:4:PHE:C	2.96	0.44
31:BJ:44:TYR:O	31:BJ:45:THR:CG2	2.63	0.44
32:BK:108:ARG:O	32:BK:108:ARG:HG3	2.18	0.44
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
39:BR:26:ASP:O	39:BR:27:ILE:C	2.60	0.44
41:BT:7:LEU:C	41:BT:9:LYS:H	2.25	0.44
44:BW:21:GLY:O	44:BW:22:VAL:HB	2.17	0.44
47:BZ:35:VAL:CG2	47:BZ:37:ARG:NH1	2.79	0.44
53:CA:39:G:C4	53:CA:404:G:N2	2.86	0.44
53:CA:179:A:H2'	53:CA:180:U:H6	1.81	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
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
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
10:CJ:49:PHE:CE2	14:CN:73:LEU:HD13	2.52	0.44
12:CL:80:LEU:HB3	12:CL:97:VAL:HG22	1.99	0.44
56:CP:6:LEU:HD13	56:CP:17:TYR:CD2	2.53	0.44
20:CT:76:ALA:C	20:CT:78:LEU:H	2.25	0.44
57:DA:3:U:C5	57:DA:4:U:C5	3.04	0.44
57:DA:372:G:N2	57:DA:400:G:H2'	2.32	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:636:G:O5'	33:DL:128:THR:HG23	2.16	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:OP1	57:DA:782:A:H8	1.99	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2473:U:H6	57:DA:2473:U:OP2	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
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:39:ASP:CG	25:DD:40:LEU:N	2.75	0.44
25:DD:106:LYS:CB	25:DD:206:ALA:HB3	2.43	0.44
25:DD:141:ARG:NH1	25:DD:141:ARG:HB3	2.33	0.44
29:DH:5:LEU:C	29:DH:6:LEU:HD12	2.43	0.44
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.33	0.44
32:DK:107:LEU:C	32:DK:107:LEU:HD23	2.42	0.44
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.82	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
47:DZ:19:HIS:O	47:DZ:20:LYS:C	2.60	0.44
48:D0:16:ARG:O	48:D0:19:ASP:N	2.48	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
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
2:AB:168:GLU:O	2:AB:169:HIS:C	2.60	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
5:AE:31:SER:O	5:AE:32:PHE:CD2	2.70	0.44
6:AF:72:ASP:O	6:AF:73:GLU:C	2.61	0.44
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
22:BA:141:G:C5'	22:BA:142:A:C8	3.01	0.44
22:BA:142:A:H5''	22:BA:142:A:H8	1.81	0.44
22:BA:163:C:O2'	22:BA:164:C:P	2.76	0.44
22:BA:575:A:OP2	22:BA:2055:C:C5	2.69	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
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:2102:G:H2'	22:BA:2103:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.51	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:O	28:BG:168:VAL:HG23	2.17	0.44
29:BH:9:VAL:O	29:BH:9:VAL:HG12	2.17	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.32	0.44
31:BJ:1:MET:HE3	31:BJ:1:MET:H2	1.80	0.44
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	2.40	0.44
33:BL:56:PRO:HB2	33:BL:58:TYR:CD2	2.52	0.44
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.42	0.44
40:BS:1:MET:HE2	40:BS:1:MET:HA	1.98	0.44
44:BW:30:VAL:HG23	44:BW:59:PHE:CD1	2.53	0.44
50:B2:21:ARG:C	50:B2:23:ALA:H	2.25	0.44
52:B4:13:ASN:HD22	52:B4:13:ASN:H	1.65	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:502:A:C4'	53:CA:550:G:H4'	2.47	0.44
53:CA:522:C:O4'	53:CA:536:C:H4'	2.17	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
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
2:CB:13:VAL:HG23	2:CB:211:LEU:HD22	2.00	0.44
2:CB:141:GLU:HG2	2:CB:145:ASN:HD21	1.82	0.44
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.52	0.44
4:CD:124:VAL:O	4:CD:125:ASN:C	2.59	0.44
5:CE:14:LEU:HD12	5:CE:15:ILE:H	1.82	0.44
6:CF:26:THR:C	6:CF:28:ALA:H	2.24	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
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: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:443:A:C4	26:DE:40:ARG:HD3	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1996:C:H5	32:DK:32:TYR:HH	1.62	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
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
59:DF:48:LEU:HG	59:DF:49:LEU:CD2	2.47	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
28:DG:122:ALA:O	28:DG:123:GLU:HB2	2.16	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
41:DT:44:LYS:C	41:DT:48:GLN:HG2	2.42	0.44
51:D3:41:ARG:CZ	51:D3:41:ARG:HB3	2.47	0.44
1:AA:4:U:O2	1:AA:4:U:H2'	2.16	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: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
1:AA:1180:A:H5''	1:AA:1181:G:OP2	2.17	0.44
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
22:BA:62:U:C4'	22:BA:63:A:OP1	2.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2276:G:OP2	22:BA:2276:G:H4'	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
23:BB:5:U:H2'	23:BB:6:G:H8	1.82	0.44
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.17	0.44
27:BF:21:TYR:HB3	27:BF:26:GLN:HB3	1.99	0.44
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.31	0.44
33:BL:93:ASN:HD22	33:BL:94:THR:HB	1.82	0.44
36:BO:42:PRO:C	36:BO:44:GLY:N	2.75	0.44
36:BO:57:ALA:C	36:BO:59:ALA:H	2.25	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
40:BS:31:GLN:O	40:BS:32:ALA:C	2.59	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: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:959:A:N6	53:CA:1222:G:H4'	2.32	0.44
53:CA:979:C:O2'	53:CA:980:C:H5'	2.16	0.44
2:CB:124:THR:C	2:CB:126:ASP:H	2.24	0.44
3:CC:52:SER:HB3	3:CC:53:ARG:H	1.64	0.44
3:CC:116:ALA:HB2	3:CC:199:VAL:CG2	2.46	0.44
3:CC:161:ILE:H	3:CC:161:ILE:CD1	2.27	0.44
4:CD:89:LEU:HD23	4:CD:199:ILE:HD11	2.00	0.44
4:CD:154:VAL:O	4:CD:158:LEU:HD12	2.18	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:HD12	55:CM:16:ILE:H	1.83	0.44
55:CM:108:ARG:C	55:CM:110:GLY:H	2.24	0.44
15:CO:65:LEU:O	15:CO:66:LEU:C	2.61	0.44
18:CR:19:GLU:CG	18:CR:20:ILE:N	2.80	0.44
57:DA:61:C:O2'	57:DA:62:U:C5'	2.54	0.44
57:DA:265:A:N6	57:DA:428:A:O4'	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1059:G:C6	57:DA:1080:A:N1	2.86	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:2199:A:C6	57:DA:2225:A:C4	3.06	0.44
57:DA:2209:G:C6	57:DA:2216:G:N1	2.86	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
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
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.52	0.44
28:DG:126:THR:HG22	28:DG:127:GLN:N	2.32	0.44
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	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
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
45:DX:77:TYR:CD1	45:DX:77:TYR:C	2.95	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
1:AA:1097:C:H2'	1:AA:1098:C:C6	2.51	0.44
2:AB:138:ARG:HB2	2:AB:138:ARG:HH11	1.83	0.44
4:AD:50:TYR:O	4:AD:53:GLN:HB3	2.18	0.44
4:AD:116:LEU:HB3	4:AD:122:ILE:CD1	2.47	0.44
8:AH:10:LEU:HD11	8:AH:126:CYS:HB2	1.98	0.44
8:AH:10:LEU:HD23	8:AH:10:LEU:HA	1.71	0.44
9:AI:60:LEU:HD23	9:AI:60:LEU:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:111:GLU:HG2	9:AI:120:ALA:HB1	1.99	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:N	21:AU:44:ARG:HD2	2.33	0.44
22:BA:38:A:N3	26:BE:43:THR:HB	2.33	0.44
22:BA:136:G:C6	22:BA:142:A:N6	2.85	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
22:BA:1059:G:H4'	30:BI:116:MET:HE1	1.98	0.44
22:BA:1136:G:N2	22:BA:1137:G:C4	2.86	0.44
22:BA:1190:G:P	33:BL:32:GLY:HA2	2.57	0.44
22:BA:1263:U:O2'	48:B0:7:PRO:HD2	2.17	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:O5'	22:BA:2691:C:H6	1.99	0.44
23:BB:65:U:H3'	23:BB:108:A:N6	2.33	0.44
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.97	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
32:BK:2:ILE:O	32:BK:3:GLN:HB3	2.18	0.44
32:BK:101:GLY:O	32:BK:120:PRO:HD2	2.17	0.44
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.81	0.44
35:BN:16:HIS:O	35:BN:17:ARG:C	2.57	0.44
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	2.00	0.44
41:BT:52:GLU:O	41:BT:52:GLU:HG3	2.17	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
53:CA:86:G:O2'	53:CA:87:C:P	2.76	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:889:A:O2'	53:CA:890:G:O5'	2.35	0.44
53:CA:977:A:H8	53:CA:1223:C:C4	2.36	0.44
53:CA:1160:G:O6	53:CA:1181:G:C6	2.70	0.44
53:CA:1226:C:H5	55:CM:102:LYS:HA	1.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:132:GLU:C	2:CB:134:LEU:H	2.25	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
8:CH:45:ILE:C	8:CH:63:LYS:HD2	2.42	0.44
12:CL:2:THR:HG22	12:CL:4:ASN:N	2.33	0.44
56:CP:44:SER:H	56:CP:46:LYS:HZ3	1.60	0.44
18:CR:39:VAL:HG12	18:CR:40:PRO:CD	2.47	0.44
18:CR:48:ALA:O	18:CR:49:LYS:C	2.61	0.44
19:CS:14:LEU:C	19:CS:14:LEU:HD12	2.42	0.44
57:DA:78:U:H2'	57:DA:79:C:C6	2.52	0.44
57:DA:227:A:H61	57:DA:410:G:H1'	1.81	0.44
57:DA:324:A:N6	57:DA:338:G:O2'	2.47	0.44
57:DA:325:G:H2'	57:DA:326:G:H8	1.82	0.44
57:DA:370:G:H8	57:DA:370:G:OP2	2.01	0.44
57:DA:460:A:OP2	50:D2:41:ARG:NH1	2.50	0.44
57:DA:529:A:C8	57:DA:2042:A:N1	2.86	0.44
57:DA:639:U:HO2'	57:DA:640:C:H6	1.65	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: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:2674:G:H4'	32:DK:30:ARG:HD2	1.99	0.44
57:DA:2800:A:N3	57:DA:2801:G:H1'	2.32	0.44
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.81	0.44
24:DC:44:ASN:C	24:DC:46:GLY:N	2.72	0.44
24:DC:106:PRO:CB	24:DC:141:HIS:HE1	2.26	0.44
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.64	0.44
25:DD:140:HIS:N	25:DD:140:HIS:CD2	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
32:DK:59:LYS:CG	32:DK:89:ASN:HA	2.47	0.44
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:DP:28:LYS:HZ2	37:DP:82:SER:HB2	1.81	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:129:A:O2'	1:AA:130:A:C5'	2.63	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: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
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: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
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:45:VAL:CG2	5:AE:117:ALA:HA	2.47	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CB	2.48	0.44
6:AF:3:HIS:CB	6:AF:92:THR:HG23	2.48	0.44
7:AG:128:GLU:CD	7:AG:130:LYS:HE2	2.42	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
14:AN:52:ARG:C	14:AN:54:SER:H	2.25	0.44
16:AP:10:GLY:HA3	16:AP:15:PRO:C	2.42	0.44
20:AT:27:MET:SD	20:AT:66:ILE:HD13	2.57	0.44
22:BA:65:U:O2'	22:BA:66:C:H5'	2.17	0.44
22:BA:1008:A:N6	22:BA:1136:G:C6	2.86	0.44
22:BA:1082:U:C2	22:BA:1083:U:O2	2.71	0.44
22:BA:1163:G:C2	22:BA:1164:C:C5	3.05	0.44
22:BA:2059:A:N6	22:BA:2503:A:H2'	2.33	0.44
22:BA:2140:G:H8	22:BA:2140:G:OP2	2.01	0.44
22:BA:2439:A:H4'	22:BA:2440:C:O5'	2.18	0.44
22:BA:2649:C:H2'	22:BA:2650:U:H6	1.83	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
27:BF:134:GLN:C	27:BF:136:ILE:N	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:41:LYS:O	29:BH:44:ILE:HG12	2.18	0.44
29:BH:110:VAL:O	29:BH:111:ALA:HB2	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
32:BK:116:ILE:O	32:BK:118:LEU:O	2.35	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
45:BX:55:MET:HE2	45:BX:55:MET:HB3	1.82	0.44
52:B4:33:HIS:O	52:B4:35:GLN:HG3	2.17	0.44
53:CA:71:A:N3	53:CA:72:A:C8	2.86	0.44
53:CA:356:A:H2'	53:CA:357:G:O4'	2.18	0.44
53:CA:1031:C:H5'	53:CA:1032:G:C5'	2.44	0.44
53:CA:1071:C:H5'	5:CE:53:ARG:NH1	2.33	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
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
54:CG:20:GLU:O	54:CG:23:ALA:HB3	2.18	0.44
9:CI:4:GLN:H	9:CI:4:GLN:HG2	1.54	0.44
9:CI:6:TYR:CE2	9:CI:17:ARG:HA	2.47	0.44
12:CL:9:LYS:HE2	12:CL:9:LYS:HB2	1.68	0.44
55:CM:12:LYS:HA	55:CM:12:LYS:CE	2.44	0.44
14:CN:8:ARG:NH1	14:CN:12:ARG:HH22	2.16	0.44
57:DA:192:C:OP1	57:DA:2243:U:OP1	2.35	0.44
57:DA:211:C:H2'	57:DA:212:G:O4'	2.18	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1867:G:H2'	57:DA:1868:C:C6	2.53	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:2847:U:OP1	37:DP:95:LYS:NZ	2.47	0.44
24:DC:224:MET:O	24:DC:232:GLY:HA2	2.17	0.44
24:DC:225:ASN:C	24:DC:232:GLY:HA3	2.42	0.44
26:DE:80:SER:O	26:DE:81:GLY:O	2.36	0.44
26:DE:153:LEU:HD12	26:DE:170:ARG:O	2.18	0.44
59:DF:169:LEU:HB3	59:DF:174:PHE:HB2	2.00	0.44
32:DK:13:ASN:HD22	32:DK:13:ASN:N	2.08	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
34:DM:96:ILE:CD1	34:DM:102:LEU:HD11	2.43	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
50:D2:30:VAL:C	50:D2:32:ALA:H	2.25	0.44
1:AA:45:G:H5''	1:AA:307:C:O2'	2.17	0.44
1:AA:125:U:C2'	1:AA:126:G:H5'	2.47	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: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
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:1261:A:C2	1:AA:1275:A:C6	3.05	0.44
2:AB:103:TRP:NE1	2:AB:150:ILE:HD11	2.32	0.44
5:AE:94:PHE:CZ	5:AE:96:GLN:CD	2.94	0.44
6:AF:10:VAL:CG1	6:AF:11:HIS:N	2.80	0.44
11:AK:76:TYR:N	11:AK:76:TYR:HD1	2.15	0.44
11:AK:124:LYS:HE3	21:AU:34:ARG:HG2	2.00	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
22:BA:55:G:H2'	22:BA:56:A:H8	1.83	0.44
22:BA:89:A:O2'	22:BA:90:U:H5'	2.17	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2728:U:HO2'	22:BA:2729:G:H8	1.62	0.44
22:BA:2870:C:C4	22:BA:2871:U:C4	3.06	0.44
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.96	0.44
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.53	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
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.00	0.44
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.46	0.44
32:BK:28:SER:C	32:BK:30:ARG:H	2.26	0.44
33:BL:95:LEU:HB3	33:BL:100:ILE:HG13	1.99	0.44
34:BM:97:GLN:CD	34:BM:97:GLN:N	2.75	0.44
36:BO:54:VAL:O	36:BO:54:VAL:HG22	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
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:71:LYS:HB3	44:BW:72:GLY:H	1.66	0.44
45:BX:10:ARG:HB3	45:BX:10:ARG:CZ	2.47	0.44
53:CA:110:C:H2'	53:CA:111:G:O4'	2.18	0.44
53:CA:327:A:C2	53:CA:329:A:C4	3.06	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
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
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
3:CC:99:GLN:O	3:CC:100:ILE:C	2.61	0.44
4:CD:198:LEU:HD23	4:CD:198:LEU:HA	1.68	0.44
5:CE:15:ILE:HD11	5:CE:37:VAL:CG2	2.48	0.44
5:CE:81:GLN:OE1	5:CE:149:PRO:HD3	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CM:14:ALA:HB1	55:CM:33:LEU:CD1	2.47	0.44
14:CN:78:LEU:HD12	14:CN:78:LEU:N	2.33	0.44
20:CT:64:GLY:O	20:CT:65:LEU:C	2.61	0.44
57:DA:3:U:H2'	57:DA:4:U:H6	1.82	0.44
57:DA:136:G:H8	57:DA:136:G:O5'	2.00	0.44
57:DA:136:G:N2	57:DA:144:A:C2	2.86	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:468:G:H5''	26:DE:55:SER:CB	2.48	0.44
57:DA:628:G:H2'	57:DA:629:G:H8	1.82	0.44
57:DA:810:U:O2'	57:DA:811:U:H5	1.99	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
57:DA:1361:G:O2'	57:DA:1362:C:H5'	2.18	0.44
57:DA:1820:U:O2	24:DC:199:HIS:HD2	2.01	0.44
57:DA:2135:A:OP2	57:DA:2135:A:C8	2.57	0.44
57:DA:2199:A:N6	57:DA:2225:A:C8	2.86	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: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
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
26:DE:88:ARG:O	26:DE:89:PRO:C	2.59	0.44
59:DF:12:VAL:HG12	59:DF:16:MET:HG3	2.00	0.44
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.74	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
41:DT:20:ALA:O	41:DT:31:VAL:HG13	2.18	0.44
44:DW:14:ASP:C	44:DW:16:GLU:H	2.26	0.44
1:AA:92:U:O2'	1:AA:93:U:C5'	2.65	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:247:G:C5	1:AA:278:G:N2	2.85	0.44
1:AA:258:G:C6	1:AA:259:G:C5	3.06	0.44
1:AA:486:U:H5''	1:AA:486:U:H6	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:981:U:C2	1:AA:982:U:C5	3.06	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
3:AC:39:ARG:NE	3:AC:54:ILE:HD11	2.33	0.44
3:AC:158:GLY:HA2	3:AC:192:TYR:CE1	2.53	0.44
4:AD:174:ALA:C	4:AD:177:MET:H	2.26	0.44
5:AE:100:GLU:HB3	5:AE:121:ASN:CA	2.46	0.44
6:AF:49:TYR:HB2	18:AR:73:HIS:CD2	2.52	0.44
7:AG:25:PHE:O	7:AG:28:ILE:HB	2.18	0.44
11:AK:124:LYS:HE2	11:AK:124:LYS:C	2.42	0.44
12:AL:2:THR:HB	12:AL:5:GLN:HG3	2.00	0.44
12:AL:78:VAL:O	12:AL:101:LEU:HB3	2.17	0.44
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	2.32	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
22:BA:966:G:C5	22:BA:967:U:C4	3.05	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:O5'	22:BA:2416:C:H6	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:BD:85:ALA:O	25:BD:86:GLU:CB	2.65	0.44
26:BE:8:ALA:O	26:BE:9:GLN:C	2.60	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
27:BF:98:PHE:CD2	27:BF:98:PHE:C	2.96	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:C	2.42	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
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.33	0.44
39:BR:49:ILE:O	39:BR:49:ILE:CG1	2.56	0.44
41:BT:69:ARG:NH2	41:BT:70:HIS:HA	2.33	0.44
44:BW:16:GLU:OE2	44:BW:16:GLU:HA	2.18	0.44
47:BZ:7:THR:OG1	47:BZ:34:THR:HG23	2.18	0.44
53:CA:136:C:H1'	56:CP:1:MET:HE1	2.00	0.44
53:CA:245:U:H5''	53:CA:245:U:C6	2.46	0.44
53:CA:596:A:N3	53:CA:596:A:H2'	2.32	0.44
53:CA:728:A:C8	15:CO:53:ARG:NH2	2.86	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
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
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
54:CG:22:LEU:HD23	54:CG:22:LEU:C	2.43	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:HD2	15:CO:47:LYS:N	2.27	0.44
56:CP:44:SER:O	56:CP:46:LYS:HG3	2.18	0.44
57:DA:76:C:H5''	46:DY:48:ARG:HB3	2.00	0.44
57:DA:229:C:O2'	57:DA:230:G:O5'	2.35	0.44
57:DA:250:G:H2'	57:DA:251:A:C8	2.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:995:C:O2'	38:DQ:93:ILE:HD12	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:OP2	57:DA:1494:A:H3'	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
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:2262:U:H5''	44:DW:38:ARG:NH2	2.33	0.44
57:DA:2345:G:H4'	57:DA:2346:A:O5'	2.18	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:2835:A:C6	57:DA:2879:A:C4	3.05	0.44
57:DA:2850:A:N7	57:DA:2868:A:O2'	2.51	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:21:SER:HB2	32:DK:73:ASP:O	2.18	0.44
29:DH:40:THR:C	29:DH:42:LYS:H	2.24	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
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
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
1:AA:57:G:C2	1:AA:356:A:C2	3.06	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:477:C:H2'	1:AA:478:A:C8	2.53	0.43
1:AA:1055:A:O5'	1:AA:1055:A:C8	2.71	0.43
1:AA:1080:A:OP1	5:AE:51:LYS:HD2	2.18	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
6:AF:5:GLU:O	6:AF:90:MET:HE3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:AN:46:LYS:C	14:AN:48:GLN:N	2.74	0.43
16:AP:10:GLY:HA2	16:AP:16:PHE:HB3	2.00	0.43
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.18	0.43
22:BA:164:C:H2'	22:BA:165:A:O4'	2.17	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
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:1279:G:H5'	35:BN:34:ILE:HG22	2.00	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: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
24:BC:68:ARG:NH2	24:BC:126:GLY:O	2.51	0.43
24:BC:104:LEU:HD12	24:BC:104:LEU:HA	1.69	0.43
25:BD:68:PHE:O	25:BD:69:ALA:C	2.60	0.43
26:BE:73:ILE:O	26:BE:73:ILE:CG1	2.63	0.43
27:BF:153:ILE:H	27:BF:153:ILE:HG13	1.68	0.43
29:BH:1:MET:HG2	29:BH:23:ALA:HA	2.00	0.43
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.16	0.43
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.48	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
50:B2:42:LEU:C	50:B2:43:THR:HG23	2.43	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
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
53:CA:1251:A:H2	53:CA:1369:C:O2	2.02	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
2:CB:151:LYS:HG3	2:CB:152:ASP:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.45	0.43
4:CD:176:LYS:O	4:CD:177:MET:HB2	2.18	0.43
5:CE:17:VAL:O	5:CE:17:VAL:HG22	2.17	0.43
5:CE:148:SER:H	5:CE:151:MET:HE3	1.81	0.43
6:CF:3:HIS:CG	6:CF:92:THR:HG23	2.53	0.43
6:CF:24:ARG:O	6:CF:28:ALA:HB2	2.17	0.43
54:CG:69:ARG:HH11	54:CG:95:ARG:NH1	2.16	0.43
54:CG:119:LEU:HD23	54:CG:120:ALA:N	2.33	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
11:CK:67:GLU:C	11:CK:69:CYS:H	2.26	0.43
14:CN:15:LEU:O	14:CN:54:SER:HB2	2.18	0.43
57:DA:228:C:C5'	57:DA:229:C:C5	3.01	0.43
57:DA:293:U:H5''	57:DA:294:A:OP2	2.18	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
57:DA:995:C:H5''	38:DQ:53:LYS:HG2	2.00	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:H8	57:DA:2184:A:O5'	2.00	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
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
29:DH:8:LYS:HD2	29:DH:9:VAL:O	2.19	0.43
31:DJ:43:GLU:O	31:DJ:43:GLU:CG	2.66	0.43
31:DJ:110:PRO:CG	31:DJ:111:LYS:HG2	2.46	0.43
33:DL:84:LYS:O	33:DL:85:VAL:HB	2.17	0.43
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.18	0.43
34:DM:136:MET:HE3	43:DV:75:GLN:O	2.18	0.43
35:DN:51:LEU:HA	35:DN:54:LEU:HD21	2.00	0.43
36:DO:7:ARG:O	36:DO:8:ILE:C	2.61	0.43
36:DO:20:GLU:HG3	44:DW:50:VAL:HG11	1.99	0.43
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
48:D0:38:LEU:H	48:D0:41:HIS:CE1	2.36	0.43
1:AA:32:A:C2	1:AA:33:A:C5	3.06	0.43
1:AA:77:A:N6	1:AA:90:C:C4	2.85	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:626:G:H2'	1:AA:627:G:O4'	2.19	0.43
1:AA:674:G:OP1	6:AF:51:ILE:HG13	2.19	0.43
1:AA:715:A:H8	1:AA:715:A:O5'	2.01	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
3:AC:190:THR:C	3:AC:192:TYR:H	2.26	0.43
4:AD:35:GLN:O	4:AD:36:ALA:HB2	2.18	0.43
5:AE:38:VAL:HG22	5:AE:66:ALA:HB1	2.00	0.43
5:AE:155:LYS:HD2	5:AE:155:LYS:N	2.33	0.43
6:AF:1:MET:HE3	6:AF:1:MET:HB2	1.90	0.43
6:AF:11:HIS:HA	6:AF:12:PRO:HD2	1.83	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:O	10:AJ:28:THR:HG22	2.18	0.43
14:AN:61:ASN:HD22	14:AN:61:ASN:HA	1.54	0.43
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	1.99	0.43
21:AU:33:ARG:HD3	21:AU:34:ARG:HG3	2.00	0.43
22:BA:25:U:C5	22:BA:26:G:C6	3.06	0.43
22:BA:354:A:C5	22:BA:355:U:C5	3.06	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: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
24:BC:35:LYS:HB3	24:BC:35:LYS:HE3	1.36	0.43
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.82	0.43
26:BE:174:GLY:O	26:BE:175:ILE:O	2.36	0.43
33:BL:101:ILE:HD12	33:BL:101:ILE:HA	1.69	0.43
34:BM:45:GLN:NE2	34:BM:125:PRO:HD3	2.33	0.43
35:BN:10:LEU:HD13	35:BN:10:LEU:HA	1.85	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:18:GLN:O	39:BR:97:LYS:O	2.36	0.43
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.33	0.43
40:BS:29:VAL:O	40:BS:30:SER:C	2.59	0.43
41:BT:87:LEU:O	41:BT:88:LYS:C	2.61	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
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:H2'	53:CA:1303:C:O2	2.18	0.43
53:CA:1366:C:O2'	53:CA:1367:C:H6	1.96	0.43
53:CA:1381:U:N3	54:CG:77:ARG:CZ	2.81	0.43
53:CA:1402:C:H2'	53:CA:1403:C:O4'	2.17	0.43
2:CB:116:LEU:HA	2:CB:119:GLN:HB3	2.00	0.43
4:CD:57:LYS:HE3	4:CD:61:ARG:CD	2.48	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
15:CO:24:THR:C	15:CO:26:VAL:N	2.76	0.43
18:CR:66:LEU:N	18:CR:66:LEU:HD23	2.33	0.43
21:CU:24:LYS:CE	21:CU:25:ALA:H	2.32	0.43
57:DA:183:C:O2'	57:DA:432:A:H1'	2.17	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:600:G:O4'	26:DE:100:MET:HE3	2.19	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:1723:G:H2'	57:DA:1724:G:C8	2.43	0.43
57:DA:1914:C:O2'	57:DA:1915:U:C5'	2.66	0.43
57:DA:2057:G:C6	57:DA:2612:C:N3	2.86	0.43
57:DA:2064:C:H2'	57:DA:2065:C:H6	1.81	0.43
57:DA:2179:C:H5'	57:DA:2179:C:H6	1.83	0.43
57:DA:2216:G:C2'	57:DA:2217:G:H8	2.22	0.43
57:DA:2683:C:OP1	37:DP:55:HIS:HB3	2.18	0.43
58:DB:89:U:H3'	58:DB:90:C:C6	2.53	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
24:DC:123:ILE:HD12	24:DC:123:ILE:HA	1.93	0.43
24:DC:161:VAL:HG22	24:DC:175:LEU:HA	2.00	0.43
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.39	0.43
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.38	0.43
32:DK:105:ARG:HB2	32:DK:108:ARG:HD2	2.00	0.43
37:DP:1:SER:C	37:DP:3:ILE:H	2.26	0.43
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.76	0.43
40:DS:36:LEU:HA	40:DS:39:THR:OG1	2.18	0.43
43:DV:8:VAL:HG13	43:DV:66:ASP:OD2	2.19	0.43
50:D2:11:LYS:NZ	63:D2:101:HOH:O	2.52	0.43
1:AA:81:A:O2'	1:AA:89:U:O2	2.31	0.43
1:AA:131:A:C2	1:AA:132:C:C4	3.07	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:923:A:OP1	5:AE:25:LYS:CG	2.66	0.43
1:AA:978:A:O2'	1:AA:979:C:H5'	2.18	0.43
1:AA:1233:G:H2'	1:AA:1234:C:H6	1.82	0.43
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.83	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
4:AD:99:ASN:C	4:AD:99:ASN:ND2	2.76	0.43
5:AE:81:GLN:NE2	5:AE:81:GLN:N	2.66	0.43
8:AH:17:GLN:O	8:AH:18:ALA:C	2.60	0.43
8:AH:31:LEU:O	8:AH:32:LYS:C	2.61	0.43
8:AH:78:SER:CB	8:AH:84:ILE:H	2.30	0.43
9:AI:57:VAL:C	9:AI:58:GLU:HG2	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:15:HIS:C	10:AJ:17:LEU:H	2.26	0.43
12:AL:87:LYS:O	12:AL:87:LYS:HG3	2.18	0.43
14:AN:50:LEU:O	14:AN:52:ARG:N	2.51	0.43
22:BA:61:C:O5'	22:BA:61:C:H6	2.00	0.43
22:BA:71:A:H3'	22:BA:71:A:OP2	2.17	0.43
22:BA:278:A:N3	22:BA:278:A:H2'	2.32	0.43
22:BA:636:G:H3'	33:BL:128:THR:CG2	2.47	0.43
22:BA:976:G:N3	22:BA:977:G:C8	2.85	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
24:BC:12:ARG:HA	24:BC:15:VAL:CG2	2.48	0.43
24:BC:103:ILE:HG23	24:BC:104:LEU:N	2.33	0.43
24:BC:247:TRP:C	24:BC:249:VAL:N	2.75	0.43
25:BD:90:PHE:CD1	25:BD:90:PHE:N	2.86	0.43
28:BG:27:GLY:O	28:BG:28:LYS:C	2.61	0.43
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.44	0.43
36:BO:42:PRO:C	36:BO:44:GLY:H	2.25	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
45:BX:19:HIS:C	45:BX:21:LEU:N	2.75	0.43
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.46	0.43
46:BY:46:VAL:O	46:BY:47:ARG:C	2.59	0.43
53:CA:82:G:H2'	53:CA:83:C:H4'	2.01	0.43
53:CA:119:A:H5'	53:CA:120:A:O5'	2.19	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:757:U:OP1	53:CA:822:U:O2'	2.24	0.43
53:CA:814:A:H5'	53:CA:1511:G:C4'	2.42	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
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
14:CN:94:GLY:O	14:CN:95:LEU:C	2.60	0.43
57:DA:27:G:H1'	57:DA:513:A:N6	2.34	0.43
57:DA:84:A:H2	57:DA:98:G:N3	2.16	0.43
57:DA:457:A:C4	57:DA:459:U:C4	3.06	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:H2'	57:DA:1493:C:O2	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:2868:A:C2	57:DA:2869:G:C4	3.06	0.43
58:DB:13:G:H5''	58:DB:13:G:C8	2.51	0.43
25:DD:32:ASN:HB2	25:DD:50:VAL:HB	2.00	0.43
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.83	0.43
28:DG:56:GLY:C	28:DG:57:TYR:HD2	2.26	0.43
28:DG:145:ALA:O	28:DG:149:ALA:HB2	2.18	0.43
28:DG:157:LYS:HE2	28:DG:157:LYS:HB2	1.87	0.43
30:DI:106:GLN:O	30:DI:106:GLN:HG3	2.18	0.43
32:DK:41:ILE:HG22	32:DK:58:LEU:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:9:GLN:C	37:DP:11:GLN:N	2.75	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
45:DX:1:SER:O	45:DX:2:ARG:C	2.61	0.43
45:DX:15:ASN:C	45:DX:26:ARG:HG2	2.43	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
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
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
13:AM:103:THR:O	13:AM:104:ASN:C	2.61	0.43
15:AO:39:GLN:OE1	22:BA:716:A:H1'	2.18	0.43
20:AT:27:MET:HE1	20:AT:57:VAL:CG2	2.32	0.43
22:BA:9:G:C6	22:BA:2629:U:C6	3.07	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
22:BA:1279:G:H4'	35:BN:31:HIS:CD2	2.53	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:1658:C:H5'	25:BD:138:LEU:CD2	2.49	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:2638:G:H2'	22:BA:2775:G:H22	1.83	0.43
24:BC:29:PHE:O	24:BC:30:ALA:C	2.61	0.43
24:BC:36:ASN:O	24:BC:37:SER:HB3	2.18	0.43
24:BC:220:ARG:O	24:BC:221:GLY:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.48	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
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
37:BP:33:GLU:C	37:BP:33:GLU:CD	2.85	0.43
41:BT:40:LYS:HA	41:BT:43:ILE:HG23	2.00	0.43
44:BW:23:LYS:O	44:BW:24:ARG:C	2.62	0.43
44:BW:72:GLY:C	44:BW:74:LYS:H	2.25	0.43
53:CA:65:A:C4	53:CA:200:G:O2'	2.72	0.43
53:CA:84:U:H3	53:CA:87:C:H1'	1.80	0.43
53:CA:112:G:N2	53:CA:113:G:H1'	2.33	0.43
53:CA:155:A:C6	53:CA:156:C:C4	3.06	0.43
53:CA:247:G:OP1	53:CA:247:G:H4'	2.18	0.43
53:CA:640:A:C2'	8:CH:106:SER:HB2	2.48	0.43
53:CA:705:G:H2'	53:CA:706:A:H8	1.82	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
53:CA:1026:G:N2	53:CA:1036:A:H61	2.16	0.43
53:CA:1145:A:O2'	53:CA:1146:A:C5'	2.66	0.43
2:CB:67:LEU:HD23	2:CB:67:LEU:HA	1.84	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
4:CD:2:ARG:NE	4:CD:114:ARG:HD2	2.34	0.43
4:CD:29:THR:C	4:CD:30:LYS:HZ2	2.23	0.43
4:CD:39:GLN:C	4:CD:41:GLY:N	2.76	0.43
6:CF:1:MET:HE1	6:CF:33:GLU:O	2.19	0.43
54:CG:63:VAL:HG11	54:CG:127:ALA:CB	2.48	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
57:DA:56:A:C2	57:DA:115:C:C2	3.07	0.43
57:DA:197:A:C5	57:DA:2430:A:C4	3.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:1360:G:C6	57:DA:1372:U:C2	3.07	0.43
57:DA:1373:A:C5'	57:DA:2212:A:H1'	2.49	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: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: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:N3	57:DA:2751:G:H2'	2.33	0.43
57:DA:2884:U:O2	48:D0:49:ARG:NE	2.51	0.43
24:DC:128:THR:HA	24:DC:190:THR:HA	2.01	0.43
24:DC:149:LYS:HE3	24:DC:152:GLN:CD	2.43	0.43
24:DC:259:ASN:C	24:DC:261:ARG:H	2.26	0.43
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.19	0.43
25:DD:94:GLN:O	25:DD:95:SER:C	2.61	0.43
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.19	0.43
59:DF:8:LYS:HG3	59:DF:12:VAL:HG21	1.99	0.43
59:DF:28:PRO:HB2	59:DF:168:LEU:HD11	2.01	0.43
59:DF:121:PHE:O	59:DF:122:ASP:CG	2.62	0.43
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.26	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:31:VAL:O	37:DP:32:VAL:C	2.61	0.43
37:DP:47:ILE:HD11	37:DP:70:GLU:HG2	1.98	0.43
37:DP:65:ASN:N	37:DP:65:ASN:ND2	2.66	0.43
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.52	0.43
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.19	0.43
41:DT:59:ASN:O	41:DT:84:TYR:HB2	2.17	0.43
44:DW:20:LEU:HD12	44:DW:20:LEU:N	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
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:523:A:H61	12:AL:88:ASP:CG	2.26	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
1:AA:1022:A:H2'	1:AA:1023:U:O4'	2.17	0.43
2:AB:22:TRP:HA	2:AB:189:ASN:HA	2.01	0.43
2:AB:88:GLN:HG3	2:AB:88:GLN:H	1.62	0.43
2:AB:185:ILE:HA	2:AB:199:ILE:O	2.19	0.43
2:AB:191:ASP:HA	2:AB:192:PRO:HD2	1.77	0.43
4:AD:48:SER:O	4:AD:52:VAL:HG13	2.18	0.43
4:AD:110:ARG:O	4:AD:113:ALA:HB3	2.17	0.43
5:AE:24:VAL:O	5:AE:25:LYS:C	2.61	0.43
8:AH:9:MET:HE1	8:AH:35:ILE:HD12	2.00	0.43
16:AP:46:LYS:HB2	16:AP:47:GLU:H	1.60	0.43
22:BA:41:C:H2'	22:BA:42:A:O4'	2.19	0.43
22:BA:64:A:H2'	22:BA:65:U:C6	2.53	0.43
22:BA:373:U:H2'	22:BA:374:A:C8	2.54	0.43
22:BA:434:U:C4'	22:BA:435:C:OP1	2.65	0.43
22:BA:983:A:N6	22:BA:984:A:N1	2.67	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: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
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:O	25:BD:114:LYS:CE	2.66	0.43
25:BD:149:ASN:C	25:BD:151:THR:H	2.26	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
50:B2:12:ARG:HG3	50:B2:13:ASN:ND2	2.34	0.43
53:CA:36:C:OP1	12:CL:119:LYS:HE3	2.19	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:428:G:H1'	53:CA:430:A:C8	2.53	0.43
53:CA:780:A:C2	53:CA:803:G:C6	3.07	0.43
53:CA:830:G:H5'	2:CB:22:TRP:HE1	1.84	0.43
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
2:CB:133:ALA:HA	2:CB:137:THR:CG2	2.48	0.43
5:CE:80:LEU:N	5:CE:121:ASN:HD21	2.16	0.43
5:CE:114:LEU:HD13	5:CE:122:VAL:HG11	2.00	0.43
54:CG:77:ARG:HA	54:CG:77:ARG:HD3	1.70	0.43
54:CG:124:SER:C	54:CG:126:ALA:N	2.77	0.43
8:CH:30:LYS:O	8:CH:31:LEU:C	2.61	0.43
55:CM:47:LEU:HD23	55:CM:48:SER:N	2.33	0.43
55:CM:95:PRO:HG3	55:CM:99:GLN:CD	2.43	0.43
20:CT:61:ALA:O	20:CT:67:HIS:HA	2.18	0.43
57:DA:2:G:C2	57:DA:3:U:C2	3.06	0.43
57:DA:91:A:H1'	57:DA:92:U:C6	2.53	0.43
57:DA:203:A:H3'	57:DA:204:A:C8	2.53	0.43
57:DA:250:G:O6	57:DA:386:G:N2	2.44	0.43
57:DA:301:G:C8	57:DA:334:C:C2	3.05	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:995:C:C2	31:DJ:3:THR:HG23	2.52	0.43
57:DA:1045:C:H4'	57:DA:1047:G:C4	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1312:U:C2	57:DA:1603:A:N1	2.86	0.43
57:DA:1649:G:N1	57:DA:2009:A:C6	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: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: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
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	2.19	0.43
24:DC:211:ARG:C	24:DC:213:ARG:H	2.25	0.43
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.60	0.43
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.48	0.43
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
40:DS:1:MET:HE2	40:DS:1:MET:N	2.32	0.43
43:DV:21:ARG:HD3	43:DV:87:GLN:HG2	2.01	0.43
48:D0:53:VAL:O	48:D0:54:ILE:O	2.37	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
1:AA:1123:U:H5''	1:AA:1124:G:OP2	2.19	0.43
1:AA:1371:G:OP2	9:AI:12:LYS:HD3	2.17	0.43
2:AB:67:LEU:HB3	2:AB:160:LEU:HD12	2.00	0.43
2:AB:84:LEU:O	2:AB:84:LEU:HG	2.18	0.43
8:AH:93:LYS:HE3	8:AH:116:ARG:NH1	2.32	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
22:BA:959:A:C6	22:BA:960:A:N1	2.87	0.43
22:BA:1055:G:H3'	22:BA:1056:G:H8	1.83	0.43
22:BA:1342:A:O2'	22:BA:1344:U:OP2	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2592:G:C5	22:BA:2593:U:C4	3.07	0.43
24:BC:67:LYS:O	24:BC:68:ARG:HB2	2.18	0.43
26:BE:85:PHE:O	26:BE:86:ALA:C	2.62	0.43
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.34	0.43
28:BG:45:ALA:O	28:BG:46:ASP:CB	2.66	0.43
28:BG:175:LYS:HA	28:BG:175:LYS:HD3	1.81	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.00	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:41:LYS:O	40:BS:42:LYS:C	2.61	0.43
40:BS:45:VAL:HG22	40:BS:46:LEU:N	2.33	0.43
42:BU:3:LYS:HZ3	42:BU:82:VAL:H	1.67	0.43
44:BW:23:LYS:HZ1	44:BW:24:ARG:CG	2.30	0.43
44:BW:28:GLU:HB3	44:BW:31:LEU:CG	2.48	0.43
44:BW:74:LYS:O	44:BW:75:ASN:C	2.62	0.43
48:B0:48:TYR:CD2	48:B0:49:ARG:HG3	2.52	0.43
53:CA:78:A:C6	53:CA:79:G:C6	3.07	0.43
53:CA:216:U:C5'	53:CA:464:U:H4'	2.48	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: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: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
53:CA:1308:U:OP1	55:CM:95:PRO:HB3	2.18	0.43
53:CA:1370:G:H2'	53:CA:1371:G:C8	2.53	0.43
4:CD:96:ARG:O	4:CD:100:VAL:HG23	2.18	0.43
5:CE:110:MET:HE1	5:CE:124:ALA:HB1	2.01	0.43
8:CH:29:SER:O	8:CH:30:LYS:C	2.60	0.43
9:CI:117:LEU:CD2	9:CI:123:ARG:HD3	2.49	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
57:DA:116:C:H5''	57:DA:128:C:N4	2.33	0.43
57:DA:297:G:H5''	42:DU:84:PHE:CB	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
57:DA:996:A:C5	57:DA:1160:G:C2	3.06	0.43
57:DA:1285:A:C6	57:DA:1329:U:C5	3.06	0.43
57:DA:1345:C:C5'	57:DA:1396:U:O4	2.66	0.43
57:DA:1363:C:H2'	57:DA:1364:G:O4'	2.19	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:2836:U:O2'	57:DA:2837:A:O5'	2.36	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
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:HE	34:DM:51:ARG:HB2	1.65	0.43
34:DM:53:MET:HE2	34:DM:117:PHE:CE1	2.54	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
39:DR:33:VAL:O	39:DR:61:ALA:HB3	2.18	0.43
40:DS:28:LYS:O	40:DS:29:VAL:HG23	2.19	0.43
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.99	0.43
40:DS:50:VAL:O	40:DS:53:SER:HB3	2.19	0.43
43:DV:79:ARG:HB3	43:DV:79:ARG:CZ	2.48	0.43
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:D2:1:MET:HG3	50:D2:2:LYS:N	2.34	0.43
50:D2:43:THR:O	50:D2:44:VAL:C	2.62	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
1:AA:1108:G:OP1	3:AC:175:HIS:HB2	2.18	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
13:AM:3:ILE:O	13:AM:5:GLY:N	2.52	0.43
16:AP:33:ILE:O	16:AP:34:GLU:HB3	2.19	0.43
22:BA:24:G:O2'	40:BS:77:ASP:HB3	2.19	0.43
22:BA:28:A:C4	22:BA:513:A:C5	3.06	0.43
22:BA:417:C:H2'	22:BA:418:C:C6	2.54	0.43
22:BA:666:A:H4'	33:BL:48:ARG:HD2	2.01	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
22:BA:735:A:H3'	22:BA:736:C:H6	1.83	0.43
22:BA:858:G:C4	22:BA:2268:A:C2	3.06	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:2823:A:H2'	22:BA:2824:C:H5'	2.01	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
24:BC:131:MET:O	24:BC:132:ARG:C	2.61	0.43
27:BF:3:LEU:HA	27:BF:3:LEU:HD13	1.53	0.43
27:BF:135:ILE:C	27:BF:137:PHE:N	2.71	0.43
28:BG:1:SER:HA	28:BG:5:LYS:HG3	2.00	0.43
29:BH:33:GLN:HB2	29:BH:33:GLN:HE21	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
35:BN:116:VAL:HG22	35:BN:116:VAL:O	2.17	0.43
36:BO:67:ASN:O	36:BO:67:ASN:CG	2.62	0.43
38:BQ:12:ARG:O	38:BQ:13:HIS:C	2.59	0.43
38:BQ:91:ARG:HD3	39:BR:11:GLN:HB2	2.00	0.43
41:BT:37:ASP:O	41:BT:38:ALA:C	2.60	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BZ:39:ASP:OD2	47:BZ:44:ARG:NH1	2.52	0.43
53:CA:80:A:H3'	53:CA:81:A:C4'	2.49	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:547:A:OP2	4:CD:1:ALA:HB3	2.19	0.43
53:CA:673:A:H1'	18:CR:63:TYR:HE2	1.82	0.43
53:CA:794:A:H5''	53:CA:794:A:C8	2.44	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:854:U:H3'	53:CA:871:U:H3	1.84	0.43
53:CA:861:G:C6	53:CA:862:C:C4	3.06	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
2:CB:11:ALA:C	2:CB:13:VAL:H	2.26	0.43
3:CC:113:LYS:HE3	3:CC:184:ASN:HD21	1.83	0.43
54:CG:85:GLN:HE21	54:CG:85:GLN:HB3	1.56	0.43
54:CG:113:LYS:HE2	54:CG:113:LYS:HB3	1.88	0.43
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.33	0.43
10:CJ:59:LYS:H	10:CJ:59:LYS:HG3	1.64	0.43
55:CM:41:ASP:O	55:CM:42:VAL:HB	2.18	0.43
57:DA:54:G:C6	57:DA:117:G:N2	2.87	0.43
57:DA:203:A:H3'	57:DA:204:A:H8	1.84	0.43
57:DA:228:C:H4'	57:DA:229:C:H6	1.83	0.43
57:DA:279:A:N6	57:DA:280:U:N3	2.67	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: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
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:1287:A:OP1	35:DN:103:ARG:HD2	2.17	0.43
57:DA:1338:G:H4'	41:DT:18:GLU:CG	2.48	0.43
57:DA:1409:U:O5'	57:DA:1409:U:H6	2.02	0.43
57:DA:1737:G:N7	57:DA:1738:G:O6	2.52	0.43
57:DA:2217:G:H2'	57:DA:2218:G:C8	2.47	0.43
57:DA:2638:G:H1'	57:DA:2778:A:H62	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2843:G:C2	57:DA:2875:C:N3	2.87	0.43
25:DD:74:GLU:O	25:DD:75:ALA:C	2.61	0.43
25:DD:119:ALA:HB2	25:DD:163:GLY:C	2.44	0.43
25:DD:172:VAL:O	25:DD:172:VAL:HG12	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
31:DJ:103:ILE:C	31:DJ:103:ILE:HD12	2.44	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
38:DQ:43:GLN:C	38:DQ:45:ALA:N	2.77	0.43
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.54	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
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.49	0.43
2:AB:68:PHE:CD2	2:AB:83:ALA:HB1	2.53	0.43
2:AB:141:GLU:O	2:AB:144:GLU:HB2	2.19	0.43
5:AE:148:SER:HA	5:AE:149:PRO:HD2	1.83	0.43
12:AL:43:LYS:CB	12:AL:44:PRO:CD	2.90	0.43
15:AO:74:VAL:O	15:AO:75:ALA:C	2.62	0.43
16:AP:17:TYR:CD1	16:AP:17:TYR:N	2.86	0.43
16:AP:77:GLU:C	16:AP:79:ASN:N	2.72	0.43
22:BA:544:C:O2	22:BA:544:C:H2'	2.17	0.43
22:BA:749:A:C5	22:BA:1618:A:N1	2.86	0.43
22:BA:750:A:C3'	22:BA:751:A:H5''	2.48	0.43
22:BA:783:A:H8	22:BA:783:A:H2'	1.35	0.43
22:BA:847:U:H2'	22:BA:848:C:H6	1.83	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: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
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
25:BD:104:VAL:O	25:BD:104:VAL:HG12	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:28:VAL:O	26:BE:32:VAL:HG13	2.19	0.43
29:BH:86:ASP:O	29:BH:87:GLU:C	2.62	0.43
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.30	0.43
32:BK:49:ARG:O	32:BK:50:GLY:O	2.36	0.43
33:BL:53:GLY:O	33:BL:54:GLN:C	2.61	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
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
53:CA:17:U:H4'	53:CA:1080:A:O4'	2.19	0.43
53:CA:64:G:N7	53:CA:99:C:C4	2.86	0.43
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
53:CA:166:U:OP2	53:CA:166:U:C6	2.70	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:1130:A:N7	53:CA:1146:A:N6	2.67	0.43
53:CA:1138:G:C2'	53:CA:1139:G:OP1	2.66	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
4:CD:149:LYS:HZ3	4:CD:176:LYS:HD2	1.84	0.43
54:CG:102:TRP:C	54:CG:104:VAL:N	2.77	0.43
54:CG:103:ILE:O	54:CG:103:ILE:HG22	2.19	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
8:CH:104:SER:HA	8:CH:109:VAL:HG13	2.00	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
55:CM:13:HIS:O	55:CM:14:ALA:C	2.61	0.43
14:CN:30:ILE:O	14:CN:45:LEU:HD11	2.18	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:156:A:H2'	57:DA:157:C:O4'	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:387:U:O2	57:DA:388:G:N7	2.51	0.43
57:DA:634:C:OP2	33:DL:70:LYS:HD3	2.19	0.43
57:DA:854:C:H2'	57:DA:855:G:C8	2.54	0.43
57:DA:1113:U:O2'	57:DA:1114:C:C6	2.66	0.43
57:DA:1156:A:C8	38:DQ:50:ARG:HG2	2.54	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: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: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:2884:U:P	48:D0:40:HIS:HE2	2.41	0.43
24:DC:212:TRP:C	24:DC:212:TRP:CD1	2.96	0.43
26:DE:133:LEU:HD23	26:DE:133:LEU:C	2.43	0.43
59:DF:16:MET:HE3	59:DF:16:MET:HB3	1.97	0.43
59:DF:102:LEU:HB3	59:DF:103:ILE:HD12	2.01	0.43
28:DG:48:THR:O	28:DG:49:LEU:CB	2.64	0.43
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.18	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
32:DK:40:LYS:HZ2	32:DK:89:ASN:HD21	1.67	0.43
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.18	0.43
34:DM:1:MET:O	34:DM:2:LEU:C	2.61	0.43
34:DM:36:VAL:O	34:DM:127:LYS:O	2.37	0.43
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	2.00	0.43
37:DP:24:THR:O	37:DP:25:VAL:C	2.62	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
40:DS:36:LEU:C	40:DS:38:TYR:H	2.27	0.43
45:DX:32:LEU:N	45:DX:32:LEU:HD22	2.33	0.43
47:DZ:23:LEU:C	47:DZ:25:GLY:N	2.76	0.43
49:D1:42:VAL:O	49:D1:42:VAL:HG12	2.18	0.43
1:AA:15:G:H2'	1:AA:16:A:C8	2.54	0.43
1:AA:103:U:O2	1:AA:103:U:H2'	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:AB:30:ILE:HD11	2:AB:38:HIS:CD2	2.53	0.43
3:AC:42:LEU:C	3:AC:44:LYS:H	2.27	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
5:AE:81:GLN:H	5:AE:81:GLN:CD	2.27	0.43
5:AE:81:GLN:N	5:AE:81:GLN:CD	2.77	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
11:AK:124:LYS:HE3	21:AU:34:ARG:NE	2.33	0.43
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.19	0.43
19:AS:64:GLU:CD	19:AS:64:GLU:H	2.27	0.43
21:AU:37:TYR:HB3	21:AU:38:GLU:H	1.63	0.43
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
22:BA:1042:G:O2'	22:BA:1043:C:H5'	2.19	0.43
22:BA:1332:G:N3	22:BA:1332:G:H2'	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:2393:U:H5''	33:BL:62:PRO:HB3	2.00	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:C3'	22:BA:2820:A:C8	3.01	0.43
24:BC:154:ALA:HB2	24:BC:161:VAL:HG23	2.01	0.43
28:BG:2:ARG:HH21	28:BG:2:ARG:HG3	1.83	0.43
28:BG:148:ARG:HA	28:BG:161:VAL:HG11	2.00	0.43
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.43
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.69	0.43
45:BX:12:VAL:HG22	45:BX:28:PHE:HB2	2.00	0.43
53:CA:259:G:O2'	53:CA:260:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:391:G:H5''	56:CP:8:ARG:NE	2.34	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
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
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
2:CB:114:LYS:C	2:CB:117:GLU:HG2	2.44	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
5:CE:148:SER:H	5:CE:151:MET:CE	2.32	0.43
6:CF:6:ILE:HD13	6:CF:62:MET:HG2	2.00	0.43
54:CG:137:ARG:HD2	54:CG:137:ARG:C	2.43	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
14:CN:46:LYS:CE	19:CS:10:ILE:HB	2.47	0.43
17:CQ:61:ARG:C	17:CQ:72:TRP:CE3	2.97	0.43
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.84	0.43
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:248:G:H5'	57:DA:250:G:N7	2.33	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
57:DA:1519:G:N3	57:DA:1519:G:H2'	2.33	0.43
57:DA:1571:A:C8	57:DA:1571:A:H3'	2.54	0.43
57:DA:1593:A:C6	57:DA:1594:U:C4	3.07	0.43
57:DA:1637:A:H5'	57:DA:1760:C:O2'	2.19	0.43
57:DA:1716:U:N3	57:DA:1745:A:N6	2.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2371:G:O3'	49:D1:44:GLN:NE2	2.51	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
24:DC:52:HIS:CD2	24:DC:217:PRO:O	2.68	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:96:LYS:HD2	30:DI:96:LYS:HA	1.95	0.43
30:DI:102:ARG:HD2	30:DI:105:LEU:HB3	2.01	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:HA	35:DN:51:LEU:HD23	1.88	0.43
35:DN:55:ALA:O	35:DN:80:PHE:HA	2.19	0.43
44:DW:49:ASN:CG	44:DW:81:ILE:HG23	2.44	0.43
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.19	0.43
49:D1:10:LEU:CD2	49:D1:20:TYR:HB3	2.47	0.43
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.65	0.43
52:D4:16:ILE:HA	52:D4:24:ARG:O	2.19	0.43
1:AA:263:A:P	20:AT:73:ARG:HH11	2.42	0.43
1:AA:431:A:N3	1:AA:431:A:H2'	2.34	0.43
1:AA:481:G:C8	1:AA:481:G:C3'	3.01	0.43
1:AA:601:G:O2'	1:AA:602:A:H5'	2.18	0.43
1:AA:620:C:N3	4:AD:131:ILE:HG21	2.33	0.43
1:AA:675:A:H2'	1:AA:676:A:O4'	2.19	0.43
1:AA:1111:A:N1	3:AC:176:THR:HG23	2.34	0.43
1:AA:1302:C:H6	1:AA:1302:C:H2'	1.29	0.43
2:AB:89:PHE:CE1	2:AB:153:MET:HG3	2.54	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
4:AD:60:VAL:C	4:AD:63:ILE:HG22	2.44	0.43
4:AD:114:ARG:C	4:AD:116:LEU:N	2.77	0.43
6:AF:67:PRO:C	6:AF:69:GLU:H	2.27	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:HA	16:AP:56:ARG:HD2	1.82	0.43
17:AQ:58:VAL:HG23	17:AQ:76:ARG:O	2.19	0.43
20:AT:2:ASN:OD1	20:AT:2:ASN:C	2.62	0.43
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:370:G:C6	22:BA:424:G:C8	3.07	0.43
22:BA:372:G:P	45:BX:61:LYS:NZ	2.91	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:O5'	22:BA:985:C:H6	2.01	0.43
22:BA:1206:G:H2'	22:BA:1207:C:C6	2.54	0.43
22:BA:1343:G:O2'	22:BA:1384:A:N1	2.52	0.43
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.46	0.43
22:BA:1599:U:H2'	22:BA:1600:C:C6	2.54	0.43
22:BA:1783:A:H5'	22:BA:2608:G:H4'	2.01	0.43
22:BA:1909:C:C2	22:BA:1922:G:C2	3.07	0.43
22:BA:2043:C:C4	22:BA:2777: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:2564:A:OP1	22:BA:2648:G:H4'	2.19	0.43
22:BA:2786:U:H2'	22:BA:2787:C:C6	2.52	0.43
22:BA:2822:G:P	25:BD:115:GLY:HA3	2.58	0.43
22:BA:2823:A:OP2	25:BD:118:PHE:HD1	2.01	0.43
23:BB:77:U:P	43:BV:21:ARG:HH22	2.42	0.43
25:BD:29:VAL:HB	25:BD:98:VAL:CG2	2.49	0.43
25:BD:186:LEU:HA	25:BD:186:LEU:HD12	1.74	0.43
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	2.01	0.43
26:BE:104:ALA:O	26:BE:105:LEU:C	2.60	0.43
29:BH:24:GLY:O	29:BH:28:ASN:HB2	2.19	0.43
30:BI:49:GLU:C	30:BI:50:LYS:HD3	2.44	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
39:BR:37:GLU:CD	39:BR:37:GLU:N	2.76	0.43
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.33	0.43
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.16	0.43
53:CA:71:A:C6	53:CA:100:G:C5	3.06	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:600:A:OP2	8:CH:87:ARG:HG2	2.19	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:922:G:O2'	53:CA:1398:A:C2	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:981:U:OP2	53:CA:982:U:H3'	2.18	0.43
53:CA:1105:A:H2'	53:CA:1106:G:C8	2.54	0.43
53:CA:1230:C:H6	53:CA:1230:C:H5''	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
2:CB:17:HIS:HB2	2:CB:37:VAL:HG21	2.01	0.43
4:CD:102:TYR:C	4:CD:104:MET:N	2.76	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
12:CL:66:ILE:HD13	12:CL:73:LEU:CD1	2.47	0.43
12:CL:113:ARG:O	12:CL:114:SER:C	2.60	0.43
55:CM:11:HIS:O	55:CM:12:LYS:HG2	2.19	0.43
55:CM:52:ILE:C	55:CM:54:THR:H	2.27	0.43
57:DA:82:U:C2	57:DA:83:A:C8	3.07	0.43
57:DA:143:C:O2'	57:DA:144:A:O4'	2.32	0.43
57:DA:224:U:C5	57:DA:420:C:H4'	2.50	0.43
57:DA:319:G:C6	57:DA:333:G:C6	3.07	0.43
57:DA:637:A:P	33:DL:128:THR:HG21	2.59	0.43
57:DA:705:A:H2'	57:DA:706:A:H8	1.82	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
57:DA:1060:U:H5''	57:DA:1061:U:OP1	2.19	0.43
57:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.18	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: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:2052:A:C8	25:DD:146:ILE:HD11	2.54	0.43
57:DA:2060:A:O4'	57:DA:2502:G:H1'	2.19	0.43
57:DA:2188:U:C4	57:DA:2189:U:C4	3.07	0.43
57:DA:2592:G:C5	57:DA:2593:U:C5	3.07	0.43
58:DB:23:G:N2	58:DB:61:G:C2	2.87	0.43
58:DB:69:G:C3'	58:DB:70:C:H6	2.14	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:9:SER:HA	24:DC:10:PRO:HD2	1.89	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: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
32:DK:40:LYS:HZ1	32:DK:89:ASN:HD21	1.67	0.43
34:DM:100:LYS:HD3	34:DM:100:LYS:HA	1.88	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:27:G:C5	1:AA:557:G:C2	3.07	0.42
1:AA:104:G:O2'	1:AA:105:G:H5'	2.19	0.42
1:AA:407:U:H2'	1:AA:408:A:H8	1.83	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
1:AA:1045:C:OP2	1:AA:1045:C:H6	2.01	0.42
1:AA:1055:A:N6	1:AA:1206:G:C5	2.87	0.42
2:AB:40:ILE:O	2:AB:41:ASN:HB2	2.18	0.42
2:AB:69:VAL:HG23	2:AB:160:LEU:HD11	2.02	0.42
2:AB:77:GLU:HA	2:AB:80:LYS:HB3	2.00	0.42
2:AB:103:TRP:HE1	2:AB:150:ILE:HD11	1.84	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:78:ARG:HA	7:AG:82:SER:O	2.18	0.42
8:AH:13:ILE:O	8:AH:14:ARG:C	2.61	0.42
8:AH:63:LYS:HB2	8:AH:70:VAL:HG21	2.01	0.42
8:AH:85:TYR:CE2	8:AH:123:GLU:HB2	2.53	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
12:AL:6:LEU:HB3	17:AQ:33:TYR:CZ	2.54	0.42
14:AN:40:ARG:NH1	14:AN:44:VAL:HG21	2.33	0.42
18:AR:53:GLN:O	18:AR:56:ARG:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:18:U:C2'	22:BA:19:A:H5'	2.48	0.42
22:BA:26:G:C6	22:BA:27:G:C6	3.07	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
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:H6	22:BA:1349:C:O5'	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: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
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:125:TRP:CG	25:BD:160:LYS:HB3	2.53	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
26:BE:79:ARG:O	26:BE:81:GLY:N	2.52	0.42
26:BE:119:ILE:HD13	26:BE:119:ILE:H	1.83	0.42
26:BE:180:LEU:HD23	26:BE:180:LEU:HA	1.73	0.42
29:BH:9:VAL:O	29:BH:10:ALA:C	2.61	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:N	32:BK:43:ILE:HD13	2.33	0.42
34:BM:43:ALA:HA	34:BM:46:ILE:HG12	2.00	0.42
35:BN:40:LYS:O	35:BN:41:ALA:C	2.60	0.42
36:BO:8:ILE:O	36:BO:12:THR:N	2.49	0.42
38:BQ:75:TYR:CD2	38:BQ:75:TYR:C	2.97	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
49:B1:3:GLY:C	49:B1:5:ARG:H	2.27	0.42
53:CA:77:A:H2'	53:CA:78:A:O4'	2.19	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:960:U:H4'	53:CA:961:U:O5'	2.18	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
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
2:CB:8:MET:HB2	2:CB:9:LEU:HD23	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CC:93:ILE:O	3:CC:93:ILE:HG13	2.19	0.42
4:CD:8:LEU:O	4:CD:12:ARG:HB2	2.19	0.42
4:CD:104:MET:HE3	4:CD:170:LEU:HD22	2.01	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
9:CI:102:PHE:C	9:CI:104:THR:H	2.27	0.42
14:CN:13:VAL:HG22	14:CN:59:GLN:CD	2.43	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
57:DA:48:G:H2'	57:DA:48:G:N3	2.33	0.42
57:DA:63:A:C8	57:DA:64:A:N7	2.87	0.42
57:DA:95:A:HO2'	46:DY:39:GLN:HA	1.83	0.42
57:DA:355:U:H2'	57:DA:356:G:H8	1.84	0.42
57:DA:621:A:C2'	57:DA:622:G:O5'	2.66	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
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:1783:A:C5'	57:DA:2608:G:H4'	2.49	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:2653:U:N3	57:DA:2654:A:N6	2.66	0.42
57:DA:2724:U:H5''	25:DD:123:LYS:NZ	2.34	0.42
57:DA:2835:A:N6	57:DA:2879:A:C4	2.87	0.42
24:DC:75:ALA:HB2	24:DC:95:TYR:CG	2.53	0.42
59:DF:177:ARG:CD	59:DF:178:LYS:H	2.30	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
30:DI:76:ALA:O	30:DI:135:MET:HE1	2.18	0.42
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.26	0.42
33:DL:93:ASN:C	33:DL:95:LEU:H	2.27	0.42
35:DN:14:SER:C	35:DN:16:HIS:H	2.27	0.42
35:DN:80:PHE:O	35:DN:85:PRO:HD3	2.19	0.42
37:DP:4:ILE:HG22	37:DP:4:ILE:O	2.19	0.42
37:DP:30:TRP:HD1	37:DP:39:LEU:HD12	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
51:D3:48:MET:HB3	51:D3:48:MET:HE3	1.75	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
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
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
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
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: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
22:BA:916:G:O2'	22:BA:917:A:O4'	2.36	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: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:2063:C:O2	22:BA:2451:A:C2	2.72	0.42
22:BA:2136:G:O6	22:BA:2156:G:C2	2.72	0.42
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.35	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
23:BB:40:U:O2'	23:BB:43:C:H5	2.01	0.42
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.98	0.42
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	2.00	0.42
27:BF:30:VAL:O	27:BF:30:VAL:HG13	2.18	0.42
27:BF:84:ILE:O	27:BF:84:ILE:HG13	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BR:43:ASN:HD22	39:BR:43:ASN:HA	1.57	0.42
40:BS:73:LYS:HE3	40:BS:73:LYS:CA	2.49	0.42
50:B2:34:ARG:NH1	50:B2:39:ARG:HG2	2.34	0.42
53:CA:77:A:C2	53:CA:93:U:C2	3.07	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:781:A:O2'	53:CA:1522:U:O2	2.35	0.42
53:CA:864:A:H5''	5:CE:89:THR:HB	2.01	0.42
53:CA:978:A:O2'	53:CA:979:C:H5'	2.19	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:1523:G:P	11:CK:124:LYS:NZ	2.92	0.42
3:CC:187:GLU:O	3:CC:188:ALA:HB2	2.20	0.42
4:CD:20:LEU:N	4:CD:20:LEU:HD23	2.33	0.42
4:CD:60:VAL:CG2	4:CD:194:ILE:CG2	2.97	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
11:CK:110:THR:HG22	21:CU:4:LYS:HA	2.02	0.42
14:CN:55:SER:C	14:CN:57:SER:N	2.77	0.42
15:CO:84:LEU:HD23	15:CO:84:LEU:HA	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
21:CU:28:LEU:C	21:CU:28:LEU:CD2	2.92	0.42
57:DA:46:G:N1	57:DA:47:C:C4	2.86	0.42
57:DA:64:A:OP1	41:DT:77:ARG:HA	2.18	0.42
57:DA:73:A:O5'	57:DA:73:A:C8	2.62	0.42
57:DA:197:A:C8	57:DA:2430:A:C5	3.07	0.42
57:DA:197:A:N7	57:DA:2430:A:C4	2.87	0.42
57:DA:404:A:N3	57:DA:406:G:C6	2.88	0.42
57:DA:628:G:HO2'	57:DA:629:G:H8	1.66	0.42
57:DA:629:G:H21	57:DA:640:C:P	2.42	0.42
57:DA:1130:U:HO2'	57:DA:1131:G:H8	1.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1805:A:O2'	24:DC:49:THR:HA	2.20	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: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
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
59:DF:11:VAL:C	59:DF:13:LYS:H	2.27	0.42
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.49	0.42
31:DJ:92:MET:CE	31:DJ:95:ARG:HD2	2.49	0.42
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.34	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
38:DQ:40:LYS:O	38:DQ:41:ALA:C	2.62	0.42
38:DQ:88:GLU:CD	38:DQ:88:GLU:C	2.87	0.42
39:DR:39:LEU:HA	39:DR:49:ILE:CG2	2.34	0.42
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:652:U:O4	1:AA:752:G:C2'	2.67	0.42
1:AA:723:U:O2	1:AA:855:U:O3'	2.37	0.42
1:AA:844:G:H5''	1:AA:845:A:OP1	2.20	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
2:AB:10:LYS:H	2:AB:10:LYS:HG3	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:35:ASN:O	2:AB:37:VAL:HG12	2.19	0.42
2:AB:87:ASP:OD2	2:AB:87:ASP:C	2.62	0.42
2:AB:123:GLY:O	2:AB:125:PHE:CD2	2.72	0.42
3:AC:10:ARG:O	3:AC:11:LEU:C	2.62	0.42
5:AE:37:VAL:CG1	5:AE:116:VAL:HG21	2.49	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:9:PRO:O	13:AM:10:ASP:HB2	2.20	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
14:AN:63:CYS:HB2	14:AN:79:SER:CB	2.49	0.42
15:AO:57:ARG:HH11	15:AO:57:ARG:HB3	1.85	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:648:G:O2'	22:BA:2351:G:OP1	2.34	0.42
22:BA:699:A:H4'	22:BA:1634:A:N7	2.33	0.42
22:BA:839:U:O2'	22:BA:1191:G:N3	2.50	0.42
22:BA:950:G:C5	22:BA:951:C:C4	3.07	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: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
24:BC:49:THR:HG22	24:BC:50:THR:N	2.31	0.42
24:BC:158:GLY:N	24:BC:194:VAL:HG13	2.32	0.42
24:BC:175:LEU:N	24:BC:175:LEU:HD13	2.34	0.42
25:BD:34:VAL:HG22	25:BD:94:GLN:N	2.27	0.42
25:BD:109:VAL:HG22	25:BD:203:VAL:HB	1.99	0.42
26:BE:172:ALA:O	26:BE:175:ILE:HG22	2.19	0.42
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.19	0.42
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.19	0.42
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG22	2.01	0.42
32:BK:89:ASN:HD22	32:BK:89:ASN:HA	1.57	0.42
33:BL:58:TYR:C	33:BL:59:ARG:HG2	2.44	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
44:BW:13:ARG:O	44:BW:14:ASP:C	2.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BX:77:TYR:CD1	45:BX:77:TYR:C	2.98	0.42
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.45	0.42
49:B1:15:GLY:O	49:B1:16:THR:C	2.62	0.42
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.42	0.42
53:CA:54:C:H2'	53:CA:352:C:H41	1.84	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:525:C:N4	53:CA:526:C:N4	2.68	0.42
53:CA:853:C:C4	53:CA:854:U:C5	3.08	0.42
53:CA:1006:G:N2	53:CA:1007:U:H1'	2.35	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:1162:C:C2	53:CA:1175:G:N2	2.88	0.42
53:CA:1367:C:O2'	53:CA:1368:A:O4'	2.29	0.42
2:CB:35:ASN:C	2:CB:36:LYS:HG3	2.43	0.42
4:CD:71:PHE:O	4:CD:72:ARG:C	2.61	0.42
4:CD:75:TYR:O	4:CD:76:LYS:C	2.62	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
9:CI:127:SER:C	9:CI:129:ARG:H	2.25	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
20:CT:59:ARG:C	20:CT:61:ALA:N	2.76	0.42
57:DA:3:U:C4	57:DA:4:U:C4	3.07	0.42
57:DA:104:A:O2'	57:DA:105:C:O4'	2.30	0.42
57:DA:206:U:H2'	57:DA:207:A:C8	2.55	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: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
57:DA:1091:G:H2'	57:DA:1092:C:C6	2.53	0.42
57:DA:1275:A:C8	35:DN:16:HIS:CD2	3.08	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:2030:A:C2	57:DA:2499:C:H5''	2.54	0.42
57:DA:2229:U:H2'	57:DA:2230:G:C8	2.54	0.42
57:DA:2353:G:H21	44:DW:30:VAL:CG2	2.32	0.42
57:DA:2414:G:C2'	57:DA:2415:G:H5'	2.49	0.42
57:DA:2740:A:N6	57:DA:2764:A:C8	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
28:DG:154:GLU:C	28:DG:156:TYR:N	2.77	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
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:O	43:DV:77:VAL:HG13	2.19	0.42
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.63	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
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
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
21:AU:3:ILE:HA	21:AU:19:LYS:HZ2	1.83	0.42
22:BA:246:C:H2'	22:BA:247:G:H5'	2.02	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
22:BA:1073:A:H2'	22:BA:1074:G:C5'	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1507:C:C2	22:BA:1508:A:C2	3.07	0.42
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:2334:U:O4'	36:BO:12:THR:HG22	2.19	0.42
22:BA:2440:C:H2'	22:BA:2441:U:C4'	2.49	0.42
22:BA:2791:G:H5''	22:BA:2791:G:H8	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
23:BB:49:C:OP1	36:BO:102:ARG:CG	2.67	0.42
24:BC:30:ALA:HA	24:BC:33:LEU:HD12	2.01	0.42
24:BC:212:TRP:CD1	24:BC:212:TRP:C	2.96	0.42
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.53	0.42
26:BE:168:ASP:OD1	26:BE:169:VAL:N	2.52	0.42
28:BG:167:VAL:O	28:BG:168:VAL:C	2.61	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
37:BP:27:VAL:HG22	37:BP:83:ILE:HG12	2.01	0.42
37:BP:105:LYS:HA	37:BP:105:LYS:HD3	1.79	0.42
38:BQ:8:ILE:C	38:BQ:8:ILE:CD1	2.79	0.42
40:BS:17:VAL:CG1	40:BS:76:VAL:HG11	2.41	0.42
49:B1:49:LYS:HG2	49:B1:50:GLU:N	2.24	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
53:CA:1118:U:H5'	9:CI:10:ARG:HH21	1.84	0.42
53:CA:1222:G:H5'	19:CS:77:ARG:HH21	1.83	0.42
53:CA:1227:A:O5'	55:CM:109:LYS:HE3	2.18	0.42
53:CA:1250:A:O3'	9:CI:68:GLY:HA2	2.19	0.42
53:CA:1308:U:H5	55:CM:97:ARG:CZ	2.32	0.42
2:CB:9:LEU:O	2:CB:10:LYS:HB3	2.20	0.42
2:CB:60:ALA:C	2:CB:62:ARG:N	2.77	0.42
4:CD:165:GLU:O	4:CD:166:LYS:HB3	2.19	0.42
54:CG:61:PHE:C	54:CG:63:VAL:H	2.28	0.42
9:CI:47:VAL:C	9:CI:50:PRO:HD2	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CI:112:ARG:O	9:CI:112:ARG:HG3	2.18	0.42
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	2.01	0.42
57:DA:121:G:N3	57:DA:131:A:N1	2.67	0.42
57:DA:197:A:N3	57:DA:197:A:H2'	2.33	0.42
57:DA:206:U:H2'	57:DA:207:A:H8	1.84	0.42
57:DA:302:C:O2'	57:DA:303:G:O5'	2.37	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:966:G:H5'	57:DA:2272:U:O2	2.19	0.42
57:DA:976:G:C2'	57:DA:977:G:H8	2.24	0.42
57:DA:994:C:OP2	38:DQ:49:ARG:CG	2.67	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: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:1619:G:O2'	57:DA:1620:G:H5'	2.20	0.42
57:DA:1620:G:C6	57:DA:1621:U:C4	3.07	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: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: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:2492:U:O5'	57:DA:2492:U:H6	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
24:DC:131:MET:CG	24:DC:134:ILE:HD11	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
28:DG:164:ALA:O	28:DG:165:ASP:CB	2.67	0.42
30:DI:112:LYS:NZ	30:DI:128:ILE:HD12	2.34	0.42
31:DJ:37:ARG:HG3	31:DJ:118:MET:CE	2.49	0.42
31:DJ:38:GLY:C	31:DJ:40:HIS:N	2.77	0.42
31:DJ:89:PHE:CZ	31:DJ:93:ILE:HD11	2.54	0.42
32:DK:14:SER:OG	32:DK:51:LYS:N	2.50	0.42
36:DO:62:LEU:C	36:DO:62:LEU:HD13	2.44	0.42
39:DR:41:ILE:HG22	39:DR:42:ALA:N	2.34	0.42
40:DS:65:ASP:C	40:DS:67:ASP:H	2.28	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
49:D1:16:THR:HG21	49:D1:41:VAL:HB	2.02	0.42
1:AA:77:A:H8	1:AA:77:A:OP2	2.02	0.42
1:AA:109:A:N6	1:AA:324:G:H1'	2.34	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: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
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:1160:G:O2'	1:AA:1161:C:H6	2.02	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
2:AB:119:GLN:O	2:AB:120:SER:C	2.62	0.42
2:AB:176:ASN:HD21	2:AB:194:GLY:CA	2.33	0.42
4:AD:69:ARG:HA	4:AD:69:ARG:NE	2.29	0.42
4:AD:190:LEU:C	4:AD:190:LEU:HD12	2.44	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
12:AL:108:ASP:O	12:AL:109:ARG:C	2.63	0.42
12:AL:113:ARG:CB	12:AL:118:VAL:HB	2.41	0.42
13:AM:44:ILE:HD12	13:AM:44:ILE:N	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	2.00	0.42
20:AT:8:LYS:CA	20:AT:11:ILE:HG23	2.45	0.42
22:BA:41:C:H2'	22:BA:42:A:O5'	2.19	0.42
22:BA:182:A:H2'	22:BA:183:C:C6	2.54	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
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: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
25:BD:34:VAL:HG21	25:BD:90:PHE:O	2.19	0.42
25:BD:86:GLU:HA	25:BD:86:GLU:OE1	2.18	0.42
25:BD:103:ASP:O	25:BD:104:VAL:C	2.62	0.42
29:BH:119:ASN:CG	29:BH:120:GLY:H	2.27	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
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:7:A:H5'	53:CA:298:A:O4'	2.20	0.42
53:CA:120:A:C8	53:CA:120:A:O5'	2.72	0.42
53:CA:376:G:O3'	56:CP:5:ARG:HD2	2.19	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:579:A:N1	53:CA:763:G:C5	2.87	0.42
53:CA:650:G:H2'	53:CA:650:G:N3	2.35	0.42
53:CA:987:G:H8	53:CA:987:G:O5'	2.02	0.42
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.34	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:1373:G:H5''	54:CG:35:LYS:HB3	2.01	0.42
53:CA:1524:C:OP2	11:CK:124:LYS:NZ	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:CF:88:MET:HE2	18:CR:64:LEU:HD21	2.01	0.42
54:CG:41:ILE:HD13	54:CG:115:MET:HB3	2.02	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
9:CI:129:ARG:CZ	9:CI:129:ARG:HA	2.50	0.42
12:CL:116:TYR:O	12:CL:117:GLY:C	2.61	0.42
15:CO:28:VAL:HG11	15:CO:66:LEU:HD21	2.00	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
57:DA:52:A:H2	57:DA:179:C:O4'	2.02	0.42
57:DA:193:U:O3'	57:DA:803:U:H4'	2.20	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
57:DA:1025:G:H1'	57:DA:1135:C:O4'	2.19	0.42
57:DA:1112:G:O2'	57:DA:1113:U:H5'	2.18	0.42
57:DA:1255:U:H6	26:DE:68:ALA:HB2	1.84	0.42
57:DA:1263:U:O4'	48:D0:6:LYS:HE3	2.20	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:1833:C:C4	57:DA:1834:U:C5	3.08	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:2506:U:H5	57:DA:2576:G:O6	2.02	0.42
57:DA:2520:C:O2'	57:DA:2521:C:C5'	2.67	0.42
57:DA:2706:A:N6	63:DA:3667:HOH:O	2.45	0.42
57:DA:2788:C:O2'	57:DA:2809:A:N3	2.43	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:56:LYS:C	25:DD:58:ASN:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HD13	28:DG:71:LEU:O	2.19	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
29:DH:125:THR:HB	29:DH:146:VAL:HG11	2.01	0.42
31:DJ:24:THR:O	31:DJ:25:LEU:HB3	2.19	0.42
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.44	0.42
33:DL:93:ASN:O	33:DL:95:LEU:N	2.42	0.42
34:DM:3:GLN:O	34:DM:4:PRO:C	2.63	0.42
35:DN:12:ARG:HG2	35:DN:16:HIS:CG	2.54	0.42
35:DN:34:ILE:HB	35:DN:113:ILE:HG23	2.01	0.42
35:DN:67:PHE:O	35:DN:68:ALA:C	2.62	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:NZ	41:DT:68:LYS:HB2	2.34	0.42
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.27	0.42
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	2.02	0.42
48:D0:21:LEU:HD23	48:D0:21:LEU:HA	1.89	0.42
1:AA:72:A:H2'	1:AA:73:C:H6	1.83	0.42
1:AA:160:A:O2'	1:AA:344:A:C6	2.71	0.42
1:AA:256:U:O5'	1:AA:256:U:H6	2.02	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:1057:G:H4'	3:AC:196:GLY:N	2.35	0.42
1:AA:1227:A:O2'	1:AA:1228:C:O5'	2.37	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
2:AB:27:LYS:C	2:AB:29:PHE:H	2.27	0.42
3:AC:27:GLU:O	3:AC:28:PHE:C	2.62	0.42
3:AC:42:LEU:HD12	3:AC:42:LEU:HA	1.79	0.42
3:AC:139:ASN:C	3:AC:139:ASN:HD22	2.27	0.42
4:AD:55:ARG:HH12	4:AD:58:GLN:CG	2.28	0.42
5:AE:64:GLU:CD	5:AE:64:GLU:C	2.87	0.42
5:AE:150:GLU:HG2	5:AE:150:GLU:H	1.70	0.42
6:AF:86:ARG:HD2	18:AR:63:TYR:O	2.20	0.42
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.19	0.42
15:AO:65:LEU:N	15:AO:65:LEU:CD2	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:AQ:60:ILE:CG2	17:AQ:61:ARG:N	2.81	0.42
19:AS:51:HIS:CD2	19:AS:53:GLY:N	2.83	0.42
20:AT:26:MET:O	20:AT:27:MET:C	2.63	0.42
22:BA:273:G:HO2'	22:BA:274:C:C5'	2.31	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
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
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:2197:U:O2'	22:BA:2198:A:C2'	2.68	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
23:BB:5:U:H2'	23:BB:6:G:C8	2.55	0.42
24:BC:90:ILE:HG21	24:BC:102:TYR:CD1	2.53	0.42
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.20	0.42
24:BC:269:ARG:HD3	24:BC:269:ARG:HA	1.70	0.42
25:BD:78:GLY:O	25:BD:80:TRP:CZ3	2.72	0.42
26:BE:103:GLY:O	26:BE:104:ALA:C	2.61	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:70:LEU:O	28:BG:74:MET:HG3	2.19	0.42
34:BM:1:MET:HE3	34:BM:2:LEU:N	2.31	0.42
41:BT:8:LEU:N	41:BT:8:LEU:CD2	2.83	0.42
41:BT:87:LEU:O	41:BT:89:GLU:N	2.53	0.42
44:BW:18:LYS:HG3	44:BW:19:ARG:HG3	2.02	0.42
51:B3:7:ARG:HD2	51:B3:7:ARG:HA	1.44	0.42
53:CA:72:A:H2'	53:CA:73:C:C6	2.54	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:765:G:O6	53:CA:811:C:N4	2.52	0.42
53:CA:785:G:N3	53:CA:785:G:H2'	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
53:CA:1226:C:C4	55:CM:102:LYS:HA	2.53	0.42
53:CA:1296:C:C5	53:CA:1297:G:N2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1446:A:H2'	53:CA:1447:A:H5''	2.01	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: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
9:CI:83:THR:C	9:CI:85:ALA:H	2.26	0.42
10:CJ:42:LEU:HB3	10:CJ:43:PRO:HD2	2.02	0.42
11:CK:92:ARG:NH2	21:CU:19:LYS:HD2	2.33	0.42
11:CK:123:PRO:O	21:CU:34:ARG:N	2.51	0.42
19:CS:52:ASN:C	19:CS:54:ARG:H	2.27	0.42
57:DA:137:U:O5'	57:DA:137:U:H6	2.03	0.42
57:DA:1070:A:H61	30:DI:8:VAL:CG1	2.33	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
57:DA:1255:U:H2'	57:DA:1255:U:H6	1.34	0.42
57:DA:1317:G:C5	57:DA:1318:U:C4	3.08	0.42
57:DA:1428:C:C5	57:DA:1569:A:H5'	2.54	0.42
57:DA:1480:C:H2'	57:DA:1481:U:O4'	2.18	0.42
57:DA:1734:G:HO2'	57:DA:1735:A:H8	1.67	0.42
57:DA:1801:A:C5	57:DA:2203:U:C5	3.07	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:2358:A:H8	57:DA:2358:A:OP1	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:113:SER:HB3	25:DD:168:GLU:H	1.85	0.42
25:DD:146:ILE:HD12	25:DD:155:VAL:HG21	2.02	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
29:DH:103:VAL:C	29:DH:105:ALA:N	2.77	0.42
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.88	0.42
33:DL:22:GLY:C	33:DL:23:ILE:HD12	2.44	0.42
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.50	0.42
34:DM:17:ASN:C	34:DM:18:ARG:HG2	2.43	0.42
35:DN:14:SER:C	35:DN:16:HIS:N	2.76	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:96:ARG:HH12	35:DN:116:VAL:HG13	1.83	0.42
35:DN:97:ILE:O	35:DN:98:LEU:C	2.62	0.42
37:DP:25:VAL:O	37:DP:25:VAL:HG23	2.19	0.42
46:DY:17:GLU:CD	46:DY:53:VAL:HB	2.45	0.42
46:DY:40:SER:C	46:DY:42:LEU:H	2.27	0.42
1:AA:92:U:C2'	1:AA:93:U:C6	2.88	0.42
1:AA:102:G:C4	1:AA:103:U:C5	3.08	0.42
1:AA:208:U:H3	1:AA:212:G:H21	1.67	0.42
1:AA:926:G:C6	1:AA:1505:G:C5	3.06	0.42
1:AA:1091:U:O2	1:AA:1093:A:C8	2.73	0.42
1:AA:1241:G:O2'	1:AA:1242:G:C8	2.56	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
2:AB:207:ARG:C	2:AB:209:VAL:N	2.77	0.42
3:AC:11:LEU:HD23	3:AC:11:LEU:HA	1.84	0.42
3:AC:156:LEU:C	3:AC:158:GLY:H	2.28	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:HD13	13:AM:32:ILE:HA	1.90	0.42
16:AP:20:VAL:HG22	16:AP:32:PHE:HB2	2.01	0.42
22:BA:445:C:O2'	22:BA:449:A:N3	2.52	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
22:BA:851:C:O2'	47:BZ:45:GLY:HA3	2.20	0.42
22:BA:1060:U:C5'	22:BA:1061:U:H5'	2.49	0.42
22:BA:1235:G:H8	22:BA:1235:G:O5'	2.03	0.42
22:BA:1475:G:HO2'	22:BA:1476:U:P	2.42	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
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.18	0.42
24:BC:47:ARG:O	24:BC:48:ILE:C	2.63	0.42
28:BG:84:LYS:N	28:BG:84:LYS:HE2	2.35	0.42
28:BG:124:CYS:HA	28:BG:125:PRO:HD2	1.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:24:THR:HG22	37:BP:86:LYS:HB2	2.01	0.42
37:BP:26:GLU:O	37:BP:26:GLU:HG2	2.17	0.42
40:BS:62:ASP:O	40:BS:63:GLY:C	2.62	0.42
45:BX:51:SER:O	45:BX:52:ALA:C	2.62	0.42
46:BY:57:LEU:HD12	46:BY:57:LEU:O	2.19	0.42
49:B1:9:LYS:N	49:B1:9:LYS:HD3	2.34	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:C8	53:CA:373:A:C5'	3.01	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:948:C:OP2	55:CM:104:ASN:HB3	2.20	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: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
9:CI:30:ASN:C	9:CI:32:ARG:H	2.27	0.42
15:CO:62:ARG:NH2	15:CO:88:ARG:HH21	2.18	0.42
20:CT:53:MET:HE3	20:CT:53:MET:C	2.45	0.42
20:CT:82:ILE:C	20:CT:84:LYS:N	2.78	0.42
57:DA:216:A:N6	57:DA:432:A:H1'	2.35	0.42
57:DA:223:A:N6	57:DA:408:G:H5'	2.35	0.42
57:DA:227:A:HO2'	57:DA:228:C:P	2.43	0.42
57:DA:323:C:C6	26:DE:165:HIS:NE2	2.88	0.42
57:DA:370:G:OP2	57:DA:370:G:C8	2.73	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:855:G:N3	44:DW:23:LYS:HG2	2.35	0.42
57:DA:957:C:N4	57:DA:2494:G:H21	2.18	0.42
57:DA:962:G:O2'	57:DA:963:U:H6	1.99	0.42
57:DA:1387:A:O2'	57:DA:1388:G:P	2.78	0.42
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1853:A:H1'	57:DA:2234:G:O4'	2.19	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: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
24:DC:193:GLU:CD	24:DC:193:GLU:H	2.28	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
59:DF:137:PHE:O	59:DF:138:PRO:C	2.63	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
37:DP:50:ARG:HG2	37:DP:57:ALA:C	2.44	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
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.34	0.42
1:AA:6:G:C6	5:AE:98:ALA:HB1	2.52	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
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
4:AD:29:THR:O	4:AD:30:LYS:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:97:THR:HG22	6:AF:98:GLU:N	2.34	0.42
14:AN:32:ASP:O	14:AN:33:VAL:C	2.62	0.42
16:AP:48:GLU:CG	16:AP:49:GLY:N	2.82	0.42
17:AQ:11:VAL:HG23	17:AQ:56:ASP:O	2.19	0.42
22:BA:6:A:O2'	22:BA:7:G:H5'	2.20	0.42
22:BA:64:A:O2'	41:BT:70:HIS:CE1	2.72	0.42
22:BA:184:C:O2'	22:BA:217:A:N3	2.50	0.42
22:BA:340:A:H2'	22:BA:341:C:O4'	2.19	0.42
22:BA:400:G:H3'	22:BA:400:G:C8	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: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:2269:G:C4'	44:BW:18:LYS:HE2	2.36	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
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
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
28:BG:93:TYR:O	28:BG:94:ARG:O	2.38	0.42
31:BJ:57:LEU:HD12	31:BJ:57:LEU:HA	1.88	0.42
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.83	0.42
33:BL:40:SER:O	33:BL:41:ARG:CB	2.66	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
45:BX:39:VAL:HG13	45:BX:46:VAL:HG22	2.02	0.42
48:B0:33:SER:OG	48:B0:35:GLU:CG	2.65	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1518:A:C2	53:CA:1519:A:C2	3.07	0.42
2:CB:69:VAL:HB	2:CB:162:VAL:HB	2.01	0.42
2:CB:119:GLN:HG2	2:CB:119:GLN:O	2.20	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:HE3	20:CT:4:LYS:HB3	1.72	0.42
57:DA:121:G:O2'	57:DA:122:G:H5'	2.20	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
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: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:1787:A:O5'	57:DA:1787:A:C8	2.72	0.42
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:H5'	57:DA:1940:U:O2	2.19	0.42
57:DA:2046:G:OP1	48:D0:11:LYS:HE3	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
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:42:GLY:HA3	26:DE:90:GLN:O	2.20	0.42
26:DE:165:HIS:O	26:DE:167:VAL:N	2.53	0.42
59:DF:12:VAL:O	59:DF:16:MET:HB2	2.20	0.42
59:DF:131:VAL:C	59:DF:133:GLU:N	2.77	0.42
28:DG:22:VAL:HG12	28:DG:23:ILE:N	2.34	0.42
29:DH:53:GLU:C	29:DH:55:GLU:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:64:ALA:C	29:DH:66:ASN:N	2.76	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
48:D0:28:SER:HB3	48:D0:39:ARG:CZ	2.49	0.42
1:AA:66:A:O5'	1:AA:66:A:C8	2.73	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: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
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
2:AB:218:ALA:HA	2:AB:221:ARG:NH2	2.29	0.42
3:AC:59:PRO:O	3:AC:60:ALA:O	2.37	0.42
3:AC:174:LEU:O	3:AC:174:LEU:HD12	2.20	0.42
4:AD:49:ASP:O	4:AD:50:TYR:C	2.63	0.42
4:AD:147:LYS:O	4:AD:148:ALA:C	2.63	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
11:AK:124:LYS:O	21:AU:33:ARG:NE	2.53	0.42
12:AL:82:ARG:CZ	12:AL:95:HIS:HB2	2.50	0.42
12:AL:94:TYR:CD2	12:AL:94:TYR:N	2.87	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
22:BA:244:A:OP2	51:B3:7:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:H8	22:BA:2134:A:OP1	2.03	0.42
22:BA:2572:A:HO2'	22:BA:2573:C:P	2.42	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
35:BN:28:LEU:O	35:BN:29:VAL:C	2.62	0.42
36:BO:92:PHE:HB2	36:BO:117:PHE:CD1	2.55	0.42
37:BP:104:GLY:O	37:BP:105:LYS:C	2.63	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:41:GLY:C	44:BW:43:LYS:N	2.76	0.42
46:BY:40:SER:C	46:BY:42:LEU:H	2.27	0.42
53:CA:206:C:O5'	53:CA:207:C:OP2	2.38	0.42
53:CA:330:C:OP2	53:CA:330:C:H4'	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
53:CA:994:A:N6	53:CA:1216:A:H5'	2.35	0.42
53:CA:1069:C:O2'	53:CA:1192:C:H1'	2.20	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:CG:37:THR:HA	54:CG:40:SER:CB	2.49	0.42
54:CG:102:TRP:C	54:CG:104:VAL:H	2.27	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
17:CQ:68:LYS:O	17:CQ:69:THR:OG1	2.37	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: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
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:H8	57:DA:1571:A:O5'	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:C6	57:DA:1825:U:H3'	2.55	0.42
57:DA:1926:U:H2'	57:DA:1928:A:N7	2.34	0.42
57:DA:2244:U:O5'	57:DA:2244:U:H6	2.03	0.42
57:DA:2408:U:O2'	57:DA:2409:G:P	2.78	0.42
57:DA:2409:G:O2'	57:DA:2410:G:O4'	2.34	0.42
57:DA:2415:G:C5	57:DA:2416:C:C4	3.08	0.42
57:DA:2448:A:O2'	57:DA:2449:U:C5	2.65	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
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:92:LEU:HD12	24:DC:92:LEU:HA	1.95	0.42
24:DC:145:MET:CE	24:DC:181:ARG:HH22	2.31	0.42
24:DC:196:ASN:O	24:DC:197:ALA:CB	2.67	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:HD22	30:DI:93:ASN:HA	1.66	0.42
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.49	0.42
32:DK:61:VAL:O	32:DK:61:VAL:HG23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
45:DX:64:ASP:HA	45:DX:67:LEU:HD12	2.02	0.42
46:DY:31:GLN:C	46:DY:33:ALA:N	2.73	0.42
51:D3:7:ARG:HD2	51:D3:7:ARG:HA	1.85	0.42
1:AA:42:G:C6	1:AA:43:C:C4	3.08	0.42
1:AA:123:U:H2'	1:AA:124:C:C6	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: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
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:1374:A:H2'	1:AA:1375:A:C8	2.55	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:HD23	5:AE:10:LEU:H	1.84	0.42
7:AG:108:ARG:HH21	7:AG:118:ARG:NH2	2.17	0.42
8:AH:79:ARG:HB2	8:AH:80:PRO:HD2	2.02	0.42
9:AI:3:ASN:CG	9:AI:4:GLN:N	2.78	0.42
9:AI:25:GLY:HA3	9:AI:57:VAL:O	2.20	0.42
9:AI:33:SER:OG	9:AI:35:GLU:HG2	2.20	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
21:AU:16:ARG:HG2	21:AU:19:LYS:HG2	2.02	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:675:A:H4'	26:BE:62:GLN:NE2	2.35	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
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:OP2	22:BA:1858:A:C8	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:BC:109:LEU:CD2	24:BC:110:LYS:H	2.28	0.42
27:BF:102:LEU:O	27:BF:107:VAL:HB	2.20	0.42
31:BJ:64:VAL:HG13	31:BJ:65:THR:N	2.34	0.42
31:BJ:92:MET:C	31:BJ:94:ALA:N	2.76	0.42
33:BL:28:GLY:C	33:BL:29:LYS:O	2.63	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
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
42:BU:73:ASN:C	42:BU:75:ALA:H	2.28	0.42
44:BW:72:GLY:C	44:BW:74:LYS:N	2.78	0.42
46:BY:1:MET:C	46:BY:2:LYS:HD2	2.45	0.42
53:CA:102:G:H2'	53:CA:103:U:H6	1.83	0.42
53:CA:496:A:O2'	53:CA:497:G:H8	1.98	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:1146:A:HO2'	53:CA:1147:C:H5'	1.81	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
2:CB:72:LYS:O	2:CB:74:ALA:N	2.53	0.42
3:CC:53:ARG:NH1	3:CC:53:ARG:HB2	2.35	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
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
57:DA:196:A:N6	57:DA:831:G:H21	2.17	0.42
57:DA:321:U:C1'	26:DE:159:LEU:HG	2.49	0.42
57:DA:469:G:OP2	26:DE:55:SER:HB3	2.20	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:861:A:O2'	57:DA:862:G:C5'	2.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1329:U:O2'	57:DA:1330:C:P	2.78	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:2298:A:H5'	57:DA:2322:A:HO2'	1.85	0.42
57:DA:2811:G:H2'	57:DA:2812:G:O4'	2.19	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
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:HD23	34:DM:78:LEU:HA	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:HD3	42:DU:16:LYS:HA	1.77	0.42
42:DU:94:PHE:O	42:DU:94:PHE:CD2	2.73	0.42
44:DW:17:ALA:CB	44:DW:36:ILE:HA	2.50	0.42
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:O5'	1:AA:503:C:H6	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:H2'	1:AA:945:G:N3	2.35	0.41
2:AB:116:LEU:HB3	2:AB:140:LEU:HG	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:AO:31:LEU:O	15:AO:32:THR:C	2.61	0.41
16:AP:70:ARG:O	16:AP:70:ARG:HG3	2.20	0.41
20:AT:66:ILE:O	20:AT:67:HIS:C	2.63	0.41
22:BA:229:C:H2'	22:BA:230:G:O4'	2.20	0.41
22:BA:377:G:H2'	22:BA:378:C:O4'	2.20	0.41
22:BA:458:G:O2'	22:BA:469:G:O6	2.35	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
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:N3	22:BA:2297:A:H2'	2.35	0.41
22:BA:2532:G:C5	22:BA:2533:U:C4	3.08	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
27:BF:100:GLU:C	27:BF:102:LEU:N	2.77	0.41
28:BG:139:VAL:HG12	28:BG:140:ILE:N	2.35	0.41
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.41
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.41
31:BJ: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
38:BQ:4:LYS:HZ3	38:BQ:7:VAL:HG13	1.85	0.41
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:26:PHE:CD1	46:BY:26:PHE:C	2.98	0.41
46:BY:56:LEU:HA	46:BY:59:GLU:CG	2.50	0.41
53:CA:45:G:O2'	53:CA:46:G:H5'	2.20	0.41
53:CA:264:C:H1'	17:CQ:65:PRO:HG2	2.01	0.41
53:CA:284:C:O5'	53:CA:284:C:H6	2.03	0.41
53:CA:428:G:C2	53:CA:430:A:N6	2.88	0.41
53:CA:566:G:C4'	53:CA:567:G:OP1	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1215:G:O2'	53:CA:1216:A:H5'	2.19	0.41
4:CD:61:ARG:HH21	4:CD:67:LEU:C	2.28	0.41
6:CF:11:HIS:HD2	6:CF:54:LEU:HD21	1.79	0.41
54:CG:10:LYS:HE3	54:CG:10:LYS:H	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
12:CL:14:LYS:HE3	12:CL:15:VAL:C	2.44	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
19:CS:9:PHE:C	19:CS:10:ILE:HG13	2.45	0.41
19:CS:45:GLY:N	19:CS:61:VAL:HB	2.32	0.41
20:CT:53:MET:HE3	20:CT:54:GLN:CA	2.45	0.41
21:CU:13:VAL:CG2	21:CU:15:LEU:HD23	2.49	0.41
57:DA:33:C:H4'	57:DA:34:U:OP1	2.16	0.41
57:DA:294:A:H2'	57:DA:295:G:O5'	2.20	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:729:G:O6	24:DC:206:LYS:HB2	2.20	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
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
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
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
25:DD:22:ILE:HA	25:DD:23:PRO:HD2	1.91	0.41
25:DD:148:GLN:HG2	25:DD:152:PRO:CG	2.50	0.41
59:DF:69:ALA:HB2	59:DF:82:TYR:O	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.19	0.41
43:DV:41:GLU:C	43:DV:42:LEU:HG	2.45	0.41
52:D4:19:ARG:HH12	52:D4:26:ILE:CG1	2.34	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
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
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
5:AE:43:GLY:O	5:AE:44:ARG:C	2.63	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: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
11:AK:113:THR:HA	11:AK:114:PRO:HD3	1.82	0.41
17:AQ:32:ILE:HD12	17:AQ:32:ILE:N	2.35	0.41
22:BA:86:G:C2	22:BA:97:C:C2	3.08	0.41
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.55	0.41
22:BA:263:G:H2'	22:BA:264:C:O5'	2.20	0.41
22:BA:686:U:O4	50:B2:12:ARG:CB	2.68	0.41
22:BA:866:A:O2'	22:BA:867:C:H5'	2.20	0.41
22:BA:1049:C:H2'	22:BA:1050:A:H5'	2.02	0.41
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.55	0.41
22:BA:1770:G:C4'	63:BA:3730:HOH:O	2.68	0.41
22:BA:2593:U:H2'	22:BA:2594:C:H6	1.85	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
23:BB:89:U:OP2	23:BB:89:U:C4'	2.67	0.41
24:BC:115:ILE:HD12	24:BC:115:ILE:HA	1.78	0.41
25:BD:191:GLY:O	25:BD:192:ALA:CB	2.68	0.41
26:BE:24:ASN:C	26:BE:24:ASN:HD22	2.28	0.41
26:BE:95:LYS:O	26:BE:96:VAL:CB	2.67	0.41
26:BE:129:PRO:HG3	26:BE:156:ASN:OD1	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:93:ILE:O	31:BJ:97:PRO:HG3	2.19	0.41
31:BJ:101:ILE:O	31:BJ:105:VAL:CG1	2.69	0.41
32:BK:107:LEU:HD12	32:BK:107:LEU:HA	1.79	0.41
35:BN:33:ILE:HD12	35:BN:33:ILE:N	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
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
39:BR:102:SER:O	39:BR:103:ALA:O	2.38	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
46:BY:6:LEU:O	46:BY:7:ARG:HB3	2.19	0.41
46:BY:47:ARG:CG	46:BY:47:ARG:NH2	2.72	0.41
53:CA:62:U:O2'	53:CA:379:C:O2	2.31	0.41
53:CA:116:A:H2'	53:CA:117:G:C8	2.54	0.41
53:CA:203:G:H8	53:CA:203:G:O5'	2.03	0.41
53:CA:254:G:O2'	17:CQ:17:GLU:O	2.36	0.41
53:CA:321:A:O3'	53:CA:1436:U:H5'	2.20	0.41
53:CA:674:G:H5''	6:CF:49:TYR:CE2	2.55	0.41
53:CA:1082:A:OP1	5:CE:22:LYS:HE3	2.21	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
2:CB:74:ALA:C	2:CB:206:ILE:HD11	2.46	0.41
4:CD:33:ILE:HD12	4:CD:33:ILE:HA	1.84	0.41
4:CD:117:VAL:O	4:CD:130:ASN:HA	2.20	0.41
5:CE:56:PRO:O	5:CE:57:ALA:C	2.63	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
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
20:CT:69:ASN:C	20:CT:69:ASN:HD22	2.28	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
57:DA:1000:A:N1	57:DA:1001:A:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1298:C:H2'	57:DA:1299:G:O4'	2.20	0.41
57:DA:1388:G:C2	57:DA:1389:G:C8	3.08	0.41
57:DA:1455:G:N7	35:DN:64:ARG:NH1	2.68	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:2529:G:C4'	28:DG:174:LYS:HD3	2.46	0.41
57:DA:2635:A:H5''	25:DD:79:LEU:O	2.20	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
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
31:DJ:51:GLY:HA3	31:DJ:121:LYS:HE3	2.01	0.41
31:DJ:106:LYS:HD2	31:DJ:119:PHE:HD2	1.84	0.41
34:DM:1:MET:HB3	34:DM:2:LEU:H	1.67	0.41
37:DP:72:VAL:O	37:DP:72:VAL:HG23	2.20	0.41
37:DP:110:LYS:C	37:DP:111:GLU:CD	2.88	0.41
41:DT:28:ASN:C	41:DT:29:THR:HG22	2.45	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:7:A:H3'	5:AE:105:ILE:HD12	2.02	0.41
1:AA:55:A:C5	1:AA:56:U:C5	3.08	0.41
1:AA:158:G:C2'	1:AA:159:G:H5''	2.49	0.41
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: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:N3	1:AA:977:A:C2'	2.73	0.41
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.68	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
2:AB:67:LEU:O	2:AB:160:LEU:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:NH1	7:AG:110:ARG:HB2	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
20:AT:53:MET:HE3	20:AT:57:VAL:CG2	2.51	0.41
20:AT:57:VAL:O	20:AT:58:ASP:C	2.63	0.41
21:AU:13:VAL:HG13	21:AU:15:LEU:CG	2.41	0.41
22:BA:64:A:C5	22:BA:65:U:C4	3.08	0.41
22:BA:253:C:O2	22:BA:253:C:H2'	2.20	0.41
22:BA:272:A:O2'	22:BA:273:G:P	2.78	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:470:A:H61	41:BT:72:GLN:HE22	1.68	0.41
22:BA:763:G:O2'	22:BA:764:A:H5''	2.20	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:1655:A:H61	22:BA:2005:A:H1'	1.85	0.41
22:BA:1855:U:H6	22:BA:1855:U:O5'	2.03	0.41
22:BA:2062:A:HO2'	22:BA:2063:C:C5'	2.31	0.41
22:BA:2075:U:H2'	22:BA:2238:G:N2	2.35	0.41
22:BA:2145:C:OP1	22:BA:2148:G:C5	2.73	0.41
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.68	0.41
22:BA:2840:C:H2'	22:BA:2841:C:C6	2.55	0.41
25:BD:133:THR:O	25:BD:134:HIS:HB2	2.20	0.41
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:3:LYS:HG3	36:BO:4:LYS:H	1.85	0.41
37:BP:12:MET:HE3	37:BP:76:HIS:NE2	2.35	0.41
37:BP:24:THR:O	37:BP:44:GLY:O	2.38	0.41
38:BQ:60:TRP:O	38:BQ:61:ILE:C	2.62	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:51:PHE:C	41:BT:52:GLU:HG2	2.45	0.41
41:BT:69:ARG:NE	41:BT:70:HIS:H	2.19	0.41
42:BU:5:ARG:O	42:BU:6:ARG:C	2.63	0.41
43:BV:5:ASN:ND2	43:BV:5:ASN:N	2.64	0.41
43:BV:66:ASP:OD1	43:BV:66:ASP:C	2.62	0.41
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.67	0.41
53:CA:79:G:N2	53:CA:91:U:C2	2.88	0.41
53:CA:83:C:C4	53:CA:85:U:N3	2.88	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:553:A:O4'	12:CL:27:PRO:HA	2.21	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: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
2:CB:130:LYS:HA	2:CB:130:LYS:HD3	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
8:CH:85:TYR:CE1	17:CQ:36:PHE:HE2	2.38	0.41
9:CI:83:THR:C	9:CI:85:ALA:N	2.78	0.41
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.69	0.41
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	2.51	0.41
19:CS:32:THR:O	19:CS:32:THR:HG23	2.19	0.41
57:DA:301:G:O5'	42:DU:81:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
58:DB:109:A:O2'	58:DB:110:C:C6	2.72	0.41
24:DC:198:GLU:HG3	24:DC:198:GLU:O	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:5:VAL:HG21	25:DD:80:TRP:CG	2.55	0.41
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.48	0.41
28:DG:100:ASN:O	28:DG:115:GLN:HB2	2.19	0.41
30:DI:79:LEU:C	30:DI:81:LYS:H	2.28	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
38:DQ:25:GLY:C	38:DQ:27:ARG:N	2.79	0.41
38:DQ:86:SER:O	38:DQ:87:VAL:C	2.64	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
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.19	0.41
44:DW:18:LYS:HZ3	44:DW:18:LYS:HB2	1.86	0.41
44:DW:37:VAL:HA	44:DW:55:ASP:O	2.20	0.41
52:D4:7:VAL:O	52:D4:8:LYS:O	2.38	0.41
1:AA:330:C:H5''	1:AA:330:C:C6	2.53	0.41
1:AA:511:C:O2'	1:AA:512:U:P	2.79	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:HI'	1.85	0.41
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
2:AB:121:GLN:CD	2:AB:121:GLN:H	2.28	0.41
4:AD:147:LYS:N	4:AD:147:LYS:CD	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:46:GLY:CA	5:AE:70:MET:HA	2.50	0.41
5:AE:108:GLY:O	5:AE:109:ALA:CB	2.69	0.41
5:AE:152:VAL:C	5:AE:154:ALA:N	2.78	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:72:ILE:C	13:AM:74:MET:N	2.77	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
22:BA:155:A:H2'	22:BA:156:A:C8	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
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: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
26:BE:160:ALA:C	26:BE:162:ARG:H	2.28	0.41
27:BF:30:VAL:HG12	27:BF:96:TRP:CH2	2.56	0.41
28:BG:82:PHE:HB2	28:BG:134:GLY:O	2.21	0.41
28:BG:109:SER:O	28:BG:110:HIS:HB3	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
39:BR:48:LYS:HD2	39:BR:48:LYS:O	2.20	0.41
42:BU:96:LYS:O	42:BU:97:SER:C	2.61	0.41
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.85	0.41
48:B0:9:ARG:CZ	48:B0:9:ARG:HB3	2.51	0.41
49:B1:38:PHE:CZ	49:B1:43:ARG:HA	2.56	0.41
52:B4:9:LYS:HE2	52:B4:9:LYS:HB2	1.83	0.41
53:CA:66:A:C6	53:CA:67:C:N4	2.88	0.41
53:CA:273:U:C2'	53:CA:274:A:H5'	2.50	0.41
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:926:G:H5'	53:CA:927:G:O5'	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
4:CD:107:GLY:N	4:CD:157:ALA:CB	2.83	0.41
6:CF:26:THR:C	6:CF:28:ALA:N	2.77	0.41
6:CF:88:MET:HE2	18:CR:64:LEU:HD11	2.02	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
12:CL:101:LEU:C	12:CL:103:CYS:N	2.77	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
57:DA:121:G:N2	57:DA:131:A:C4	2.88	0.41
57:DA:122:G:O2'	57:DA:123:G:C5'	2.68	0.41
57:DA:338:G:C2'	57:DA:339:U:H5'	2.50	0.41
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:O2	57:DA:653:U:H2'	2.20	0.41
57:DA:802:A:O2'	57:DA:803:U:H5'	2.21	0.41
57:DA:996:A:OP1	39:DR:10:LYS:HG2	2.20	0.41
57:DA:999:U:C2'	57:DA:1000:A:H5'	2.50	0.41
57:DA:1010:A:H4'	38:DQ:75:TYR:CD2	2.56	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:1245:G:H4'	26:DE:33:VAL:CG1	2.41	0.41
57:DA:1329:U:O2'	57:DA:1330:C:OP1	2.37	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:1462:C:C1'	57:DA:2702:G:H21	2.33	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:1568:G:N2	24:DC:57:HIS:CE1	2.89	0.41
57:DA:1585:C:H3'	57:DA:1586:A:C8	2.56	0.41
57:DA:1666:G:C4'	32:DK:6:THR:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1710:G:H4'	57:DA:2858:C:O2	2.20	0.41
57:DA:1716:U:HO2'	57:DA:1717:A:H8	0.65	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:2770:G:H8	57:DA:2770:G:O5'	2.02	0.41
58:DB:66:A:OP2	58:DB:108:A:N6	2.54	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:77:ILE:H	26:DE:77:ILE:HG12	1.51	0.41
26:DE:105:LEU:O	26:DE:105:LEU:HD13	2.19	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
33:DL:54:GLN:O	33:DL:55:MET:C	2.63	0.41
33:DL:128:THR:HG22	33:DL:129:LYS:N	2.36	0.41
34:DM:73:ILE:HD13	34:DM:73:ILE:HA	1.71	0.41
38:DQ:31:TYR:O	38:DQ:33:VAL:N	2.54	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
44:DW:19:ARG:C	44:DW:20:LEU:HG	2.45	0.41
45:DX:76:LYS:HB2	45:DX:76:LYS:HE3	1.85	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
52:D4:15:LYS:O	52:D4:16:ILE:HB	2.19	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:393:A:H5'	1:AA:483:C:O2'	2.21	0.41
1:AA:439:U:H1'	4:AD:118:SER:O	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
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
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.55	0.41
5:AE:37:VAL:HG12	5:AE:116:VAL:HG21	2.02	0.41
5:AE:109:ALA:O	5:AE:110:MET:CG	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:132:PRO:HA	5:AE:135:VAL:CG1	2.49	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
13:AM:84:CYS:HA	19:AS:73:PHE:CD2	2.55	0.41
15:AO:87:ARG:O	15:AO:88:ARG:C	2.62	0.41
18:AR:33:THR:OG1	18:AR:34:GLU:N	2.53	0.41
22:BA:96:C:H4'	46:BY:41:HIS:CE1	2.55	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
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:O5'	22:BA:2504:U:H6	2.03	0.41
22:BA:2748:A:H1'	28:BG:66:THR:HG23	2.02	0.41
24:BC:32:LEU:HA	24:BC:32:LEU:HD23	1.64	0.41
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.44	0.41
25:BD:144:GLY:O	25:BD:145:SER:HB3	2.19	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:HA	28:BG:36:LEU:HD13	1.73	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
30:BI:135:MET:HE3	30:BI:135:MET:HB3	1.91	0.41
31:BJ:18:VAL:HG11	31:BJ:28:LEU:HD11	2.02	0.41
35:BN:52:ILE:O	35:BN:54:LEU:N	2.54	0.41
35:BN:98:LEU:HB3	48:B0:42:ILE:HG12	2.01	0.41
38:BQ:40:LYS:HA	38:BQ:43:GLN:HB2	2.03	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:934:C:N3	53:CA:1345:U:C5	2.88	0.41
53:CA:1412:C:H2'	53:CA:1413:A:C8	2.55	0.41
53:CA:1453:G:N3	53:CA:1453:G:C2'	2.82	0.41
2:CB:213:LEU:HD12	2:CB:213:LEU:HA	1.87	0.41
3:CC:11:LEU:C	3:CC:13:ILE:N	2.77	0.41
4:CD:29:THR:HG22	4:CD:30:LYS:CD	2.50	0.41
4:CD:195:ASN:O	4:CD:196:GLU:C	2.64	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:HD12	56:CP:6:LEU:O	2.21	0.41
19:CS:10:ILE:HD12	19:CS:10:ILE:N	2.36	0.41
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.85	0.41
20:CT:25:SER:O	20:CT:26:MET:C	2.63	0.41
57:DA:35:G:C5	57:DA:454:A:C2	3.08	0.41
57:DA:37:C:H1'	26:DE:45:ALA:HB2	2.02	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
57:DA:988:A:C2	57:DA:989:G:C2	3.08	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:2307:G:N1	59:DF:38:GLY:HA3	2.36	0.41
57:DA:2312:U:O2	57:DA:2312:U:C2'	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:O2	57:DA:2474:U:O4'	2.38	0.41
57:DA:2478:A:C8	57:DA:2529:G:C5	3.08	0.41
57:DA:2520:C:O2'	57:DA:2521:C:O4'	2.37	0.41
57:DA:2639:A:C2	57:DA:2778:A:O4'	2.74	0.41
26:DE:148:ILE:CD1	26:DE:187:VAL:HG21	2.42	0.41
30:DI:78:LEU:O	30:DI:81:LYS:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:140:GLU:O	30:DI:141:ASP:C	2.63	0.41
33:DL:88:GLY:O	33:DL:89:VAL:O	2.38	0.41
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	2.03	0.41
34:DM:81:ARG:HH21	34:DM:84:LYS:HZ3	1.67	0.41
35:DN:9:GLN:O	35:DN:17:ARG:CD	2.68	0.41
35:DN:28:LEU:HD23	35:DN:28:LEU:C	2.46	0.41
35:DN:92:GLY:N	35:DN:94:TYR:HE1	2.11	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
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:HA	42:DU:85:ARG:NE	2.36	0.41
42:DU:100:GLU:O	42:DU:101:THR:C	2.64	0.41
43:DV:56:PHE:C	43:DV:58:SER:N	2.76	0.41
44:DW:45:HIS:O	44:DW:46:ALA:HB2	2.20	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
1:AA:409:U:H2'	1:AA:410:G:C8	2.56	0.41
1:AA:927:G:N1	1:AA:1391:U:C2	2.89	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
2:AB:9:LEU:HD21	2:AB:11:ALA:O	2.20	0.41
2:AB:68:PHE:HE2	2:AB:88:GLN:HB2	1.84	0.41
2:AB:128:LEU:HB3	2:AB:129:THR:H	1.79	0.41
2:AB:153:MET:CE	2:AB:157:PRO:HG3	2.46	0.41
2:AB:170:ILE:H	2:AB:170:ILE:HG12	1.45	0.41
3:AC:28:PHE:HE2	3:AC:32:LEU:HD22	1.84	0.41
4:AD:104:MET:HG2	4:AD:170:LEU:HD22	2.03	0.41
4:AD:147:LYS:HE2	4:AD:147:LYS:H	1.86	0.41
5:AE:152:VAL:CA	5:AE:155:LYS:NZ	2.84	0.41
7:AG:68:VAL:HG21	7:AG:103:ILE:HD11	2.01	0.41
7:AG:107:ALA:HB2	7:AG:122:GLU:HG3	2.02	0.41
15:AO:10:ILE:HG23	15:AO:14:PHE:CE1	2.56	0.41
22:BA:71:A:C5'	22:BA:71:A:N3	2.84	0.41
22:BA:96:C:H4'	46:BY:41:HIS:CG	2.56	0.41
22:BA:231:A:C6	22:BA:232:G:C2	3.08	0.41
22:BA:237:C:N4	22:BA:261:G:C6	2.88	0.41
22:BA:246:C:C2'	22:BA:247:G:H5'	2.50	0.41
22:BA:638:G:H2'	22:BA:639:U:H6	1.84	0.41
22:BA:1083:U:C5	22:BA:1085:A:OP2	2.74	0.41
22:BA:1578:U:H6	22:BA:1578:U:OP2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:BA:2394:C:OP1	51:B3:29:ARG:NH2	2.53	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
23:BB:28:C:OP1	36:BO:36:TYR:OH	2.33	0.41
24:BC:108:GLY:O	24:BC:109:LEU:C	2.63	0.41
24:BC:225:ASN:O	24:BC:226:PRO:C	2.63	0.41
27:BF:90:LEU:HD12	27:BF:90:LEU:HA	1.76	0.41
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	2.01	0.41
29:BH:27:ARG:NH1	45:BX:59:ASP:O	2.53	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.88	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
34:BM:117:PHE:C	34:BM:119:LEU:N	2.79	0.41
35:BN:52:ILE:C	35:BN:54:LEU:N	2.76	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:10:LYS:HZ1	43:BV:11:GLU:HG3	1.83	0.41
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	2.02	0.41
44:BW:23:LYS:C	44:BW:24:ARG:O	2.61	0.41
52:B4:9:LYS:HB3	52:B4:14:CYS:CB	2.51	0.41
53:CA:83:C:N4	53:CA:85:U:C4	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:923:A:C6	53:CA:924:C:C4	3.09	0.41
53:CA:978:A:C8	53:CA:1319:A:C2	3.08	0.41
53:CA:1049:U:O2	53:CA:1049:U:H2'	2.21	0.41
53:CA:1124:G:O2'	53:CA:1127:G:O6	2.39	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
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:OE1	8:CH:75:GLN:HA	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
55:CM:47:LEU:HD23	55:CM:48:SER:C	2.46	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
57:DA:35:G:O2'	57:DA:36:G:O5'	2.35	0.41
57:DA:136:G:H2'	57:DA:137:U:C6	2.54	0.41
57:DA:139:U:O2	57:DA:139:U:H2'	2.19	0.41
57:DA:166:U:O2	57:DA:166:U:H2'	2.20	0.41
57:DA:189:G:C2'	57:DA:190:A:O5'	2.67	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:O2	57:DA:323:C:O4'	2.38	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:533:G:OP1	38:DQ:23:TYR:HB3	2.20	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:856:G:N2	57:DA:922:C:C2	2.89	0.41
57:DA:918:A:H5''	58:DB:97:C:O2'	2.21	0.41
57:DA:958:U:H6	57:DA:958:U:H2'	1.49	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:1515:A:H2'	57:DA:1516:G:O4'	2.20	0.41
57:DA:1551:A:H2'	57:DA:1552:A:O4'	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: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:2298:A:O2'	57:DA:2299:U:O4'	2.34	0.41
57:DA:2324:U:O2	57:DA:2385:C:N4	2.54	0.41
57:DA:2360:G:H1'	33:DL:60:ARG:NH2	2.32	0.41
57:DA:2392:A:C2	33:DL:55:MET:HE3	2.56	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
24:DC:35:LYS:O	24:DC:36:ASN:HB3	2.21	0.41
24:DC:211:ARG:CD	24:DC:217:PRO:HD3	2.50	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)
25:DD:177:VAL:CG1	25:DD:187:LEU:HD11	2.51	0.41
26:DE:157:LEU:C	26:DE:157:LEU:HD12	2.45	0.41
59:DF:37:MET:N	59:DF:151:LEU:HB3	2.35	0.41
29:DH:29:PHE:C	29:DH:32:PRO:HD2	2.45	0.41
29:DH:73:ASN:C	29:DH:75:LEU:H	2.27	0.41
33:DL:63:LYS:HB3	51:D3:12:ARG:CD	2.48	0.41
33:DL:131:ALA:O	33:DL:135:ILE:HG22	2.20	0.41
35:DN:29:VAL:O	35:DN:30:ARG:HB2	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
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.46	0.41
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	2.21	0.41
51:D3:21:PHE:O	51:D3:22:LYS:C	2.63	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:587:G:C2	1:AA:755:G:C5	3.09	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:675:A:H1'	11:AK:117:HIS:CD2	2.56	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
3:AC:10:ARG:HH12	3:AC:174:LEU:HD12	1.85	0.41
5:AE:80:LEU:HB3	5:AE:146:MET:HE1	2.01	0.41
5:AE:114:LEU:HG	5:AE:119:VAL:CG2	2.50	0.41
8:AH:63:LYS:C	8:AH:70:VAL:HG23	2.46	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
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
17:AQ:12:VAL:CG1	17:AQ:16:MET:HE1	2.49	0.41
19:AS:41:PRO:C	19:AS:43:MET:H	2.29	0.41
20:AT:77:ASN:HD22	20:AT:77:ASN:C	2.28	0.41
22:BA:115:C:C2'	22:BA:116:C:H5'	2.51	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:H6	22:BA:650:C:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:1665:A:H5''	32:BK:66:LYS:HG3	2.02	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
22:BA:1850:G:C6	22:BA:1851:U:C4	3.09	0.41
22:BA:2198:A:P	22:BA:2198:A:C2'	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
23:BB:42:C:OP1	27:BF:63:LYS:HE2	2.20	0.41
25:BD:119:ALA:HB2	25:BD:165:MET:HB2	2.03	0.41
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.68	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.51	0.41
34:BM:45:GLN:C	34:BM:47:GLU:N	2.79	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
41:BT:37:ASP:C	41:BT:38:ALA:O	2.64	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:O	46:BY:7:ARG:HG3	2.20	0.41
53:CA:79:G:N1	53:CA:80:A:N6	2.68	0.41
53:CA:200:G:N1	53:CA:201:G:C5	2.88	0.41
53:CA:374:A:OP1	53:CA:452:A:N1	2.53	0.41
53:CA:444:G:C2'	53:CA:445:G:H5'	2.51	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:O2	53:CA:754:C:H5''	2.20	0.41
53:CA:852:G:H2'	53:CA:853:C:O4'	2.21	0.41
53:CA:885:G:H8	53:CA:885:G:OP2	2.03	0.41
53:CA:1151:A:C2'	53:CA:1152:A:O5'	2.69	0.41
53:CA:1505:G:H8	53:CA:1505:G:H2'	1.66	0.41
2:CB:91:VAL:HG11	2:CB:95:TRP:HD1	1.85	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
4:CD:87:GLU:O	4:CD:88:ASN:C	2.64	0.41
4:CD:160:LEU:HD13	4:CD:160:LEU:HA	1.78	0.41
5:CE:48:GLY:CA	5:CE:66:ALA:HB2	2.47	0.41
8:CH:41:GLU:C	8:CH:43:GLY:N	2.77	0.41
9:CI:70:GLY:O	9:CI:71:ILE:C	2.63	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
57:DA:24:G:O2'	40:DS:77:ASP:HB3	2.21	0.41
57:DA:33:C:O2'	57:DA:34:U:C5'	2.47	0.41
57:DA:49:A:N6	57:DA:177:G:C5	2.88	0.41
57:DA:279:A:C6	57:DA:361:G:O2'	2.74	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
57:DA:980:A:H2	57:DA:2038:G:O4'	2.03	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: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: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:2043:C:H2'	57:DA:2044:C:H6	1.85	0.41
57:DA:2192:U:O2	57:DA:2192:U:H2'	2.20	0.41
57:DA:2259:U:C5	57:DA:2427:C:N4	2.89	0.41
57:DA:2423:U:H5''	57:DA:2424:C:OP1	2.20	0.41
57:DA:2484:G:OP1	34:DM:44:ARG:HD3	2.20	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:2624:G:H1'	48:D0:18:HIS:CE1	2.56	0.41
57:DA:2627:G:O2'	57:DA:2781:A:N1	2.46	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
25:DD:119:ALA:HB3	25:DD:163:GLY:C	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:102:ARG:C	26:DE:104:ALA:N	2.79	0.41
59:DF:177:ARG:CZ	59:DF:178:LYS:HB3	2.51	0.41
28:DG:24:THR:C	28:DG:25:ILE:HD12	2.45	0.41
28:DG:88:LEU:N	28:DG:128:THR:O	2.53	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
33:DL:110:VAL:C	33:DL:111:ILE:HD13	2.46	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
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:O	43:DV:63:ILE:HG22	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
48:D0:11:LYS:HD2	48:D0:14:MET:HB2	2.02	0.41
1:AA:512:U:O5'	4:AD:40:HIS:CE1	2.74	0.41
1:AA:523:A:H61	12:AL:88:ASP:CB	2.34	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
1:AA:995:C:H4'	14:AN:7:ALA:HB2	2.03	0.41
1:AA:1154:G:N3	1:AA:1155:A:C8	2.89	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
4:AD:27:ILE:O	4:AD:28:ASP:C	2.63	0.41
4:AD:116:LEU:HD23	4:AD:116:LEU:HA	1.91	0.41
4:AD:159:GLU:C	4:AD:161:ALA:N	2.77	0.41
5:AE:45:VAL:C	5:AE:70:MET:HG2	2.46	0.41
5:AE:120:HIS:C	5:AE:121:ASN:ND2	2.78	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:96:ILE:O	11:AK:97:ARG:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:AK:125:LYS:C	21:AU:33:ARG:NH2	2.79	0.41
12:AL:2:THR:HB	12:AL:5:GLN:H	1.85	0.41
12:AL:101:LEU:HB3	12:AL:102:ASP:H	1.69	0.41
15:AO:15:GLY:C	15:AO:17:ASP:N	2.75	0.41
20:AT:33:LYS:HE2	20:AT:33:LYS:H	1.85	0.41
22:BA:274:C:H2'	22:BA:275:C:O4'	2.21	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
22:BA:928:A:C2	47:BZ:46:MET:HE1	2.55	0.41
22:BA:980:A:N3	22:BA:2037:A:O2'	2.46	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
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:1537:G:HO2'	22:BA:1538:G:P	2.44	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:2766:A:N3	22:BA:2766:A:H2'	2.35	0.41
24:BC:75:ALA:HB1	24:BC:93:VAL:HG13	2.02	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:263:ASP:O	24:BC:264:LYS:C	2.64	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
38:BQ:10:ARG:HB2	38:BQ:10:ARG:HH11	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
53:CA:204:G:C6	53:CA:465:A:C2	3.08	0.41
53:CA:415:A:N1	53:CA:428:G:O6	2.54	0.41
53:CA:542:G:H2'	53:CA:543:U:C6	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H8	53:CA:933:G:O5'	2.04	0.41
53:CA:976:G:C2	53:CA:1363:A:C2	3.08	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
2:CB:161:PHE:CZ	2:CB:216:VAL:HG21	2.55	0.41
3:CC:88:LYS:HA	3:CC:91:ALA:HB3	2.02	0.41
4:CD:72:ARG:O	4:CD:75:TYR:HB3	2.21	0.41
4:CD:107:GLY:N	4:CD:157:ALA:HB1	2.36	0.41
8:CH:93:LYS:HD3	8:CH:93:LYS:H	1.83	0.41
55:CM:13:HIS:HB3	55:CM:16:ILE:CB	2.45	0.41
55:CM:96:VAL:O	55:CM:96:VAL:HG12	2.20	0.41
17:CQ:77:VAL:HG12	17:CQ:78:VAL:N	2.35	0.41
18:CR:56:ARG:O	18:CR:57:ALA:C	2.64	0.41
19:CS:12:LEU:HD13	19:CS:12:LEU:C	2.46	0.41
57:DA:13:A:C2	57:DA:525:U:C2	3.08	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:455:C:N4	57:DA:473:G:OP2	2.52	0.41
57:DA:460:A:H5'	41:DT:72:GLN:O	2.21	0.41
57:DA:509:C:H6	57:DA:509:C:H2'	1.59	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
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:2289:G:O2'	57:DA:2290:G:H5'	2.20	0.41
57:DA:2290:G:C6	57:DA:2291:U:C4	3.09	0.41
24:DC:62:ARG:HD3	24:DC:83:ASP:OD1	2.21	0.41
24:DC:140:VAL:HG22	24:DC:161:VAL:O	2.20	0.41
24:DC:159:THR:N	24:DC:194:VAL:HG13	2.35	0.41
26:DE:146:VAL:HG13	26:DE:187:VAL:HG23	2.03	0.41
59:DF:100:GLU:HG2	59:DF:100:GLU:O	2.20	0.41
28:DG:70:LEU:HD12	28:DG:71:LEU:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
42:DU:30:SER:C	42:DU:32:LYS:H	2.27	0.41
49:D1:41:VAL:O	49:D1:41:VAL:HG12	2.21	0.41
1:AA:15:G:C4	1:AA:16:A:C8	3.09	0.41
1:AA:162:A:N7	1:AA:163:C:H1'	2.36	0.41
1:AA:198:G:O6	1:AA:220:G:C6	2.73	0.41
1:AA:248:C:H4'	1:AA:283:U:O2'	2.21	0.41
1:AA:335:C:H2'	1:AA:336:A:H8	1.86	0.41
1:AA:481:G:HO2'	1:AA:482:A:H8	1.65	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
1:AA:1004:A:C6	1:AA:1005:A:C4	3.09	0.41
1:AA:1125:U:OP2	1:AA:1145:A:N6	2.54	0.41
1:AA:1125:U:HO2'	1:AA:1126:U:H2'	1.86	0.41
1:AA:1127:G:O2'	1:AA:1128:C:C5'	2.65	0.41
1:AA:1167:A:N7	1:AA:1169:A:C6	2.88	0.41
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
2:AB:20:ARG:HA	2:AB:20:ARG:CZ	2.50	0.41
2:AB:95:TRP:CZ2	2:AB:100:LEU:HD23	2.45	0.41
3:AC:10:ARG:O	3:AC:13:ILE:N	2.54	0.41
3:AC:88:LYS:O	3:AC:89:VAL:C	2.64	0.41
4:AD:18:LEU:C	4:AD:19:PHE:HD1	2.29	0.41
4:AD:103:ARG:HH12	4:AD:110:ARG:HH22	1.68	0.41
5:AE:94:PHE:CZ	5:AE:96:GLN:HG2	2.56	0.41
5:AE:156:ARG:HH12	8:AH:113:ARG:HH12	1.68	0.41
6:AF:11:HIS:CD2	6:AF:13:ASP:H	2.39	0.41
7:AG:108:ARG:HH21	7:AG:118:ARG:NH1	2.18	0.41
7:AG:134:VAL:O	7:AG:137:ARG:HB3	2.21	0.41
9:AI:35:GLU:HG2	9:AI:35:GLU:H	1.62	0.41
9:AI:52:GLU:C	9:AI:54:VAL:H	2.28	0.41
11:AK:15:VAL:CG1	11:AK:78:ILE:HG23	2.44	0.41
11:AK:110:THR:HA	21:AU:4:LYS:HA	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:82:ARG:HB2	12:AL:97:VAL:CG2	2.51	0.41
12:AL:82:ARG:O	12:AL:82:ARG:HG3	2.20	0.41
14:AN:20:PHE:HA	14:AN:24:ALA:CB	2.50	0.41
14:AN:48:GLN:HA	14:AN:48:GLN:HE21	1.86	0.41
17:AQ:16:MET:SD	17:AQ:20:ILE:HD12	2.61	0.41
19:AS:79:TYR:CE1	19:AS:80:ARG:HB2	2.55	0.41
21:AU:8:ASN:N	21:AU:8:ASN:ND2	2.67	0.41
21:AU:19:LYS:C	21:AU:21:SER:H	2.28	0.41
22:BA:137:U:C5	22:BA:137:U:OP2	2.74	0.41
22:BA:221:A:C8	22:BA:266:G:C6	3.09	0.41
22:BA:273:G:N2	22:BA:365:U:C2	2.89	0.41
22:BA:291:G:H1'	22:BA:350:G:N2	2.35	0.41
22:BA:329:G:O4'	22:BA:477:A:H1'	2.20	0.41
22:BA:533:G:O3'	38:BQ:23:TYR:HE2	2.04	0.41
22:BA:571:U:O3'	39:BR:80:ARG:NH2	2.54	0.41
22:BA:806:C:C2	22:BA:807:U:C5	3.09	0.41
22:BA:963:U:H2'	22:BA:964:C:H6	1.84	0.41
22:BA:1011:G:H5''	38:BQ:76:SER:HG	1.82	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:1252:G:C2	38:BQ:32:ARG:HG2	2.56	0.41
22:BA:1260:A:C5	22:BA:1261:C:C5	3.09	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: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: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: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: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:2508:G:C2	22:BA:2582:G:C6	3.09	0.41
22:BA:2680:U:H5'	25:BD:194:PRO:HA	2.03	0.41
22:BA:2784:U:H2'	22:BA:2785:C:C6	2.56	0.41
22:BA:2897:U:H2'	22:BA:2898:U: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
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.20	0.41
25:BD:113:SER:C	25:BD:114:LYS:HE3	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:167:ALA:O	27:BF:168:LEU:C	2.63	0.41
28:BG:25:ILE:HD11	28:BG:71:LEU:HD12	2.01	0.41
28:BG:27:GLY:O	28:BG:29:ASN:O	2.39	0.41
28:BG:54:ARG:HG3	28:BG:57:TYR:HD1	1.85	0.41
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.69	0.41
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.85	0.41
29:BH:124:THR:O	29:BH:125:THR:C	2.63	0.41
30:BI:90:GLY:C	30:BI:92:PRO:HD3	2.46	0.41
30:BI:124:MET:O	30:BI:124:MET:HE2	2.21	0.41
31:BJ:16:TYR:N	31:BJ:16:TYR:CD1	2.89	0.41
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.63	0.41
33:BL:61:LEU:HG	51:B3:23:HIS:ND1	2.36	0.41
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	2.03	0.41
34:BM:117:PHE:O	34:BM:118:LYS:C	2.63	0.41
35:BN:48:VAL:O	35:BN:51:LEU:HB2	2.20	0.41
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
36:BO:80:GLU:O	36:BO:81:ARG:C	2.64	0.41
37:BP:42:PHE:C	37:BP:42:PHE:CD1	2.99	0.41
37:BP:50:ARG:H	37:BP:50:ARG:HG3	1.50	0.41
37:BP:90:ALA:HB3	37:BP:110:LYS:HB2	2.03	0.41
37:BP:105:LYS:C	37:BP:107:ALA:H	2.28	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:5:ASN:N	43:BV:5:ASN:HD22	2.18	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:47:VAL:O	43:BV:48:MET:C	2.62	0.41
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.84	0.41
45:BX:33:HIS:O	45:BX:34:SER:O	2.39	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
52:B4:13:ASN:N	52:B4:13:ASN:HD22	2.19	0.41
53:CA:98:A:H2'	53:CA:99:C:C6	2.56	0.41
53:CA:115:G:C2	53:CA:289:G:C5	3.09	0.41
53:CA:168:G:C6	53:CA:169:C:C4	3.09	0.41
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:319:G:H5'	53:CA:1468:A:H4'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:821:G:O2'	53:CA:822:U:C5'	2.68	0.41
53:CA:872:A:C4	53:CA:874:G:N7	2.89	0.41
53:CA:978:A:C6	53:CA:1319:A:C5	3.08	0.41
53:CA:990:C:C2'	53:CA:991:U:O4'	2.59	0.41
53:CA:1075:U:H4'	53:CA:1101:A:N6	2.36	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:1189:U:O2'	3:CC:175:HIS:HD2	2.04	0.41
53:CA:1200:C:HO2'	53:CA:1201:A:P	2.42	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: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
2:CB:42:LEU:H	2:CB:42:LEU:HG	1.44	0.41
2:CB:57:ASN:OD1	2:CB:219:THR:O	2.39	0.41
2:CB:84:LEU:HG	2:CB:84:LEU:O	2.21	0.41
3:CC:104:GLU:HG2	3:CC:105:VAL:N	2.36	0.41
4:CD:11:SER:HB3	4:CD:16:THR:O	2.21	0.41
4:CD:29:THR:HB	4:CD:30:LYS:HE3	2.03	0.41
4:CD:183:ARG:HE	4:CD:183:ARG:HB2	1.48	0.41
4:CD:187:ARG:CZ	4:CD:191:SER:OG	2.69	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
54:CG:29:LEU:O	54:CG:30:MET:O	2.39	0.41
8:CH:83:ARG:C	8:CH:84:ILE:HD13	2.46	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
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:25:ARG:O	56:CP:26:ASN:ND2	2.54	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
21:CU:34:ARG:C	21:CU:35:GLU:O	2.63	0.41
57:DA:30:G:C5	57:DA:31:C:N3	2.89	0.41
57:DA:119:A:C5'	57:DA:120:U:OP1	2.69	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: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:164:C:H2'	57:DA:165:A:O4'	2.20	0.41
57:DA:176:A:H8	57:DA:176:A:O5'	2.04	0.41
57:DA:249:C:O2	57:DA:249:C:C2'	2.64	0.41
57:DA:272:A:N3	57:DA:273:G:N7	2.69	0.41
57:DA:309:A:C2	57:DA:329:G:O2'	2.67	0.41
57:DA:332:A:C4	57:DA:335:C:N4	2.89	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:983:A:N6	57:DA:984:A:C2	2.89	0.41
57:DA:996:A:C2	57:DA:997:G:C8	3.09	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: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:1206:G:C5	57:DA:1207:C:C4	3.09	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:1670:C:H1'	57:DA:1993:U:O2	2.20	0.41
57:DA:1760:C:H2'	57:DA:1761:C:H5'	2.03	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:1847:A:O2'	57:DA:1848:A:O5'	2.39	0.41
57:DA:1914:C:O2	57:DA:1914:C:O4'	2.39	0.41
57:DA:1952:A:H5'	32:DK:42:THR:HG23	2.02	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:OP1	57:DA:2358:A:C8	2.74	0.41
57:DA:2420:C:N4	51:D3:29:ARG:O	2.52	0.41
57:DA:2466:C:OP1	52:D4:4:ARG:HD2	2.21	0.41
57:DA:2489:U:C4	57:DA:2490:G:N1	2.88	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:2843:G:N2	57:DA:2875:C:C2	2.89	0.41
58:DB:81:G:C5	58:DB:82:U:C4	3.09	0.41
24:DC:159:THR:N	24:DC:194:VAL:CG1	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:66:GLY:C	25:DD:68:PHE:N	2.79	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
25:DD:181:ASP:C	25:DD:183:GLU:N	2.77	0.41
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.03	0.41
26:DE:109:LEU:HD12	26:DE:109:LEU:HA	1.74	0.41
59:DF:42:ALA:HB2	59:DF:48:LEU:HD11	2.03	0.41
59:DF:49:LEU:HD22	59:DF:49:LEU:N	2.23	0.41
59:DF:49:LEU:HD13	59:DF:49:LEU:N	2.35	0.41
28:DG:38:ASP:O	28:DG:39:ALA:HB2	2.20	0.41
28:DG:44:HIS:HE1	28:DG:46:ASP:O	2.04	0.41
28:DG:71:LEU:HD13	28:DG:71:LEU:C	2.46	0.41
28:DG:152:ARG:CD	28:DG:153:PRO:HD2	2.50	0.41
29:DH:45:GLU:C	29:DH:47:PHE:H	2.29	0.41
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.21	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
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.69	0.41
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.56	0.41
36:DO:17:LYS:HE3	36:DO:17:LYS:C	2.45	0.41
37:DP:95:LYS:HB3	37:DP:97:TYR:CE1	2.55	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
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.99	0.41
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.21	0.41
46:DY:59:GLU:C	46:DY:61:ALA:H	2.28	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
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
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
5:AE:155:LYS:HB3	8:AH:70:VAL:HG13	2.03	0.41
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.35	0.41
7:AG:31:VAL:C	7:AG:33:GLY:N	2.77	0.41
20:AT:33:LYS:HD3	20:AT:33:LYS:HA	1.81	0.41
22:BA:84:A:N1	22:BA:98:G:O2'	2.51	0.41
22:BA:161:A:P	22:BA:162:U:H3'	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:786:C:H5''	22:BA:1780:A:C8	2.56	0.41
22:BA:919:U:C6	22:BA:919:U:C4'	3.03	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: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:2308:G:C5	27:BF:76:PHE:HE2	2.39	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
26:BE:35:TYR:O	26:BE:37:ALA:O	2.39	0.41
27:BF:131:VAL:O	27:BF:132:ARG:C	2.64	0.41
27:BF:137:PHE:HA	27:BF:138:PRO:HD3	1.93	0.41
28:BG:32:LEU:O	28:BG:33:THR:HG23	2.20	0.41
33:BL:55:MET:HA	33:BL:55:MET:HE3	2.03	0.41
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.64	0.41
38:BQ:85:ALA:O	38:BQ:87:VAL:C	2.64	0.41
43:BV:10:LYS:HZ3	43:BV:10:LYS:CB	2.28	0.41
44:BW:58:LEU:N	44:BW:58:LEU:CD1	2.84	0.41
52:B4:3:VAL:O	52:B4:37:GLN:HB3	2.21	0.41
53:CA:9:G:H4'	5:CE:108:GLY:H	1.86	0.41
53:CA:66:A:C6	53:CA:67:C:C5	3.09	0.41
53:CA:95:C:O2'	53:CA:96:U:H5'	2.20	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:372:C:HO2'	53:CA:373:A:P	2.43	0.41
53:CA:669:G:N1	53:CA:670:G:C5	2.89	0.41
53:CA:750:C:O2'	15:CO:20:ASP:HB2	2.21	0.41
53:CA:757:U:O2'	53:CA:879:C:H1'	2.21	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:886:G:H2'	53:CA:887:G:O4'	2.21	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:1238:A:N6	53:CA:1302:C:N4	2.69	0.41
53:CA:1270:G:H2'	53:CA:1271:A:H8	1.86	0.41
53:CA:1366:C:O2'	53:CA:1367:C:H5'	2.20	0.41
53:CA:1432:G:H1'	53:CA:1468:A:N6	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.21	0.41
4:CD:115:GLN:HE21	4:CD:153:ARG:HH22	1.66	0.41
5:CE:17:VAL:HA	5:CE:33:THR:O	2.20	0.41
5:CE:113:VAL:HG12	5:CE:114:LEU:N	2.35	0.41
9:CI:128:LYS:O	9:CI:128:LYS:HG3	2.21	0.41
10:CJ:92:LEU:O	10:CJ:94:ALA:N	2.54	0.41
11:CK:51:PHE:C	11:CK:52:ARG:HD2	2.45	0.41
11:CK:125:LYS:HB3	11:CK:126:ARG:H	1.48	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
56:CP:77:GLU:C	56:CP:79:ASN:N	2.75	0.41
17:CQ:19:SER:C	17:CQ:20:ILE:CG2	2.93	0.41
17:CQ:37:ILE:HD11	17:CQ:39:ARG:CZ	2.51	0.41
17:CQ:68:LYS:C	17:CQ:69:THR:HG23	2.45	0.41
57:DA:47:C:H6	57:DA:47:C:O5'	2.04	0.41
57:DA:102:U:H3	46:DY:2:LYS:HG2	1.86	0.41
57:DA:186:G:N2	57:DA:211:C:C2	2.89	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: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:600:G:H1'	26:DE:100:MET:HG2	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
57:DA:782:A:O2'	24:DC:223:ALA:O	2.38	0.41
57:DA:1112:G:H2'	57:DA:1113:U:C6	2.55	0.41
57:DA:1277:G:H5'	35:DN:20:MET:CE	2.49	0.41
57:DA:1358:G:H8	57:DA:1358:G:O5'	2.03	0.41
57:DA:1386:C:O2'	57:DA:1387:A:O5'	2.39	0.41
57:DA:1478:G:C6	57:DA:1514:G:C2	3.09	0.41
57:DA:1500:G:C6	57:DA:1501:G:N7	2.89	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:H2'	57:DA:1884:G:N3	2.36	0.41
57:DA:2093:G:N3	57:DA:2093:G:H2'	2.35	0.41
57:DA:2494:G:O2'	34:DM:79:ALA:HA	2.21	0.41
57:DA:2506:U:C5	57:DA:2576:G:O6	2.74	0.41
57:DA:2683:C:OP1	37:DP:55:HIS:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:2748:A:C6	57:DA:2749:A:C5	3.08	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
26:DE:63:LYS:HA	26:DE:63:LYS:HE2	2.03	0.41
26:DE:72:SER:C	26:DE:74:LYS:N	2.78	0.41
59:DF:149:ARG:HD3	59:DF:149:ARG:HA	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:22:PRO:HB2	30:DI:23:VAL:H	1.56	0.41
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.50	0.41
31:DJ:18:VAL:CG1	31:DJ:54:ILE:HD11	2.51	0.41
31:DJ:38:GLY:O	31:DJ:43:GLU:HB2	2.21	0.41
31:DJ:70:THR:HG22	31:DJ:90:GLU:CD	2.46	0.41
31:DJ:98:GLU:H	31:DJ:98:GLU:HG2	1.64	0.41
32:DK:73:ASP:OD1	32:DK:73:ASP:N	2.36	0.41
32:DK:92:GLU:O	32:DK:93:GLN:C	2.62	0.41
35:DN:10:LEU:HD13	35:DN:10:LEU:HA	1.81	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
47:DZ:40:THR:C	47:DZ:42:ALA:H	2.29	0.41
47:DZ:51:SER:HA	47:DZ:54:VAL:HG22	2.01	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
1:AA:27:G:H2'	1:AA:28:A:H8	1.85	0.40
1:AA:57:G:H2'	1:AA:58:C:O4'	2.21	0.40
1:AA:75:G:N3	1:AA:76:G:H1'	2.37	0.40
1:AA:76:G:N1	1:AA:95:C:N4	2.68	0.40
1:AA:155:A:H2'	1:AA:156:C:C6	2.56	0.40
1:AA:181:A:N6	1:AA:195:A:C8	2.89	0.40
1:AA:184:G:H2'	1:AA:185:U:H5	1.83	0.40
1:AA:210:C:C4'	1:AA:211:G:N2	2.82	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:625:U:H4'	16:AP:16:PHE:CZ	2.56	0.40
1:AA:698:G:H1'	1:AA:798:U:O2'	2.21	0.40
1:AA:792:A:N3	1:AA:794:A:C6	2.88	0.40
1:AA:858:G:O2'	1:AA:859:G:H5'	2.21	0.40
1:AA:979:C:H1'	1:AA:1317:C:N4	2.36	0.40
1:AA:1130:A:C5	1:AA:1146:A:C6	3.09	0.40
2:AB:148:GLY:C	2:AB:150:ILE:N	2.73	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:108:PRO:C	3:AC:110:LEU:N	2.79	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
22:BA:35:G:N2	22:BA:36:G:H1'	2.36	0.40
22:BA:182:A:C6	22:BA:183:C:C4	3.09	0.40
22:BA:289:G:H2'	22:BA:290:U:C6	2.56	0.40
22:BA:465:G:H2'	22:BA:466:A:C8	2.56	0.40
22:BA:565:C:P	39:BR:80:ARG:H	2.44	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
22:BA:1071:G:C5	22:BA:1089:A:C6	3.08	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:1728:C:HO2'	22:BA:1729:U:H6	1.68	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:2330:G:O2'	44:BW:38:ARG:O	2.35	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
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
24:BC:89:ASN:O	24:BC:90:ILE:HD13	2.21	0.40
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:186:ASP:OD1	4:CD:173:ASP:OD2	2.39	0.40
25:BD:90:PHE:C	25:BD:92:VAL:H	2.28	0.40
26:BE:123:LYS:HE3	26:BE:123:LYS:HB2	1.87	0.40
28:BG:83:THR:C	28:BG:84:LYS:CD	2.94	0.40
32:BK:80:ASP:OD2	37:BP:61:ARG:NH1	2.53	0.40
33:BL:134:ALA:O	33:BL:135:ILE:C	2.62	0.40
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.26	0.40
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	2.03	0.40
36:BO:3:LYS:CG	36:BO:4:LYS:N	2.84	0.40
37:BP:24:THR:HG21	37:BP:87:ARG:HB3	2.03	0.40
37:BP:33:GLU:HG2	37:BP:36:LYS:HD2	2.02	0.40
37:BP:91:VAL:O	37:BP:92:ARG:C	2.63	0.40
37:BP:102:ARG:C	37:BP:103:THR:HG22	2.46	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
40:BS:83:LYS:C	40:BS:84:ARG:HD3	2.46	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
48:B0:33:SER:O	48:B0:34:GLY:C	2.64	0.40
49:B1:46:VAL:HG12	49:B1:47:ILE:H	1.86	0.40
53:CA:65:A:N1	53:CA:381:C:C5	2.90	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: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:687:A:C2	53:CA:704:A:C6	3.09	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
53:CA:1035:A:H2'	53:CA:1036:A:C8	2.56	0.40
53:CA:1146:A:HO2'	53:CA:1147:C:C5'	2.34	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:1252:A:H4'	53:CA:1369:C:H4'	2.03	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
2:CB:21:TYR:N	2:CB:21:TYR:CD1	2.89	0.40
3:CC:65:VAL:HG12	3:CC:67:ILE:HD11	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:26:ALA:O	4:CD:27:ILE:C	2.64	0.40
5:CE:37:VAL:HA	5:CE:47:PHE:HA	2.02	0.40
56:CP:26:ASN:HD22	56:CP:26:ASN:HA	1.63	0.40
57:DA:14:A:N7	57:DA:526:A:C6	2.89	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:262:A:H2	57:DA:430:A:H1'	1.85	0.40
57:DA:280:U:H2'	57:DA:281:C:C6	2.55	0.40
57:DA:313:G:H2'	57:DA:314:C:C6	2.56	0.40
57:DA:603:A:H4'	57:DA:604:G:O5'	2.21	0.40
57:DA:673:C:H5''	26:DE:75:SER:HB2	2.03	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
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: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:2811:G:OP1	25:DD:61:THR:HB	2.21	0.40
57:DA:2819:G:N3	57:DA:2828:G:C2	2.89	0.40
57:DA:2823:A:C6	57:DA:2824:C:C4	3.09	0.40
57:DA:2831:G:H1'	57:DA:2883:A:C2	2.56	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:79:ARG:HG2	26:DE:80:SER:H	1.86	0.40
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.51	0.40
26:DE:162:ARG:C	26:DE:164:LEU:H	2.29	0.40
59:DF:113:PHE:CZ	59:DF:116:LEU:HD22	2.56	0.40
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.03	0.40
30:DI:64:ARG:CZ	30:DI:64:ARG:HB2	2.51	0.40
33:DL:93:ASN:C	33:DL:95:LEU:N	2.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:60:LYS:O	45:DX:61:LYS:C	2.63	0.40
45:DX:66:VAL:O	45:DX:66:VAL:HG12	2.20	0.40
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	2.03	0.40
47:DZ:8:GLN:O	47:DZ:9:THR:OG1	2.35	0.40
50:D2:1:MET:CG	50:D2:2:LYS:N	2.85	0.40
1:AA:49:U:C5	1:AA:364:A:C6	3.09	0.40
1:AA:198:G:O2'	1:AA:199:A:H5'	2.22	0.40
1:AA:199:A:C2	1:AA:200:G:C8	3.09	0.40
1:AA:716:A:N3	11:AK:119:GLY:HA2	2.36	0.40
1:AA:723:U:OP1	21:AU:48:LYS:HD3	2.21	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
4:AD:85:THR:O	4:AD:86:GLY:C	2.64	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:55:ARG:HA	11:AK:55:ARG:HE	1.87	0.40
11:AK:61:ALA:O	11:AK:64:VAL:HG13	2.20	0.40
11:AK:111:ASP:CB	21:AU:19:LYS:HD2	2.51	0.40
13:AM:5:GLY:C	13:AM:7:ASN:H	2.30	0.40
15:AO:74:VAL:O	15:AO:77:TYR:N	2.54	0.40
22:BA:64:A:C6	22:BA:65:U:C4	3.10	0.40
22:BA:116:C:H2'	22:BA:117:G:O4'	2.22	0.40
22:BA:163:C:O2'	22:BA:164:C:C5'	2.68	0.40
22:BA:1076:C:C2	22:BA:1077:A:C8	3.09	0.40
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	2.21	0.40
22:BA:1138:G:N3	31:BJ:108:MET:HE2	2.36	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:2043:C:N3	22:BA:2777:G:C2	2.89	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
23:BB:94:A:H2'	23:BB:95:U:H6	1.85	0.40
24:BC:103:ILE:O	24:BC:104:LEU:O	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.49	0.40
27:BF:72:SER:CB	27:BF:80:GLN:HB2	2.50	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
31:BJ:37:ARG:HG3	31:BJ:118:MET:HE1	2.03	0.40
32:BK:58:LEU:HB2	32:BK:59:LYS:H	1.46	0.40
38:BQ:114:ALA:C	38:BQ:116:LEU:H	2.30	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:87:C:O2'	53:CA:88:U:C4'	2.67	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:985:C:H2'	53:CA:986:U:C5	2.56	0.40
53:CA:1111:A:C8	53:CA:1111:A:H3'	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
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:66:VAL:CG1	4:CD:70:GLN:HB3	2.51	0.40
4:CD:73:ASN:O	4:CD:74:TYR:C	2.64	0.40
4:CD:90:LEU:HD13	4:CD:90:LEU:HA	1.82	0.40
4:CD:195:ASN:O	4:CD:197:HIS:N	2.55	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
10:CJ:64:GLN:CB	14:CN:98:ALA:HB3	2.42	0.40
12:CL:23:LEU:O	12:CL:24:GLU:C	2.64	0.40
55:CM:8:ILE:N	55:CM:9:PRO:CD	2.84	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: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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:DA:1395:A:C4	57:DA:1398:C:C5	3.08	0.40
57:DA:1653:G:OP2	57:DA:1653:G:H8	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: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
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
25:DD:119:ALA:C	25:DD:120:GLY:O	2.64	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:162:ARG:C	26:DE:164:LEU:N	2.79	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
29:DH:1:MET:HE2	29:DH:1:MET:HB2	1.91	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
38:DQ:26:ALA:HA	38:DQ:29:ARG:CG	2.51	0.40
39:DR:33:VAL:HG23	39:DR:33:VAL:O	2.21	0.40
41:DT:73:ARG:HD3	41:DT:73:ARG:HA	1.96	0.40
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	2.02	0.40
43:DV:40:ILE:HD13	43:DV:40:ILE:N	2.36	0.40
44:DW:8:SER:O	44:DW:9:THR:CB	2.68	0.40
44:DW:31:LEU:C	44:DW:33:GLY:N	2.78	0.40
44:DW:44:PHE:HB2	44:DW:78:PHE:H	1.85	0.40
46:DY:23:ARG:H	46:DY:23:ARG:HG2	1.70	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
1:AA:21:G:N2	1:AA:22:G:C6	2.89	0.40
1:AA:112:G:C2	1:AA:113:G:C8	3.10	0.40
1:AA:257:G:C2	1:AA:258:G:N7	2.90	0.40
1:AA:429:U:O3'	4:AD:8:LEU:HD23	2.20	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
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
3:AC:113:LYS:HD2	3:AC:113:LYS:HA	1.83	0.40
4:AD:43:ARG:C	4:AD:45:PRO:HD3	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:115:GLN:HA	4:AD:115:GLN:HE21	1.85	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:CA	10:AJ:35:GLN:HE21	2.34	0.40
12:AL:62:VAL:CG2	12:AL:94:TYR:CE2	2.93	0.40
12:AL:101:LEU:C	12:AL:103:CYS:N	2.79	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
19:AS:64:GLU:CD	19:AS:64:GLU:N	2.79	0.40
22:BA:1:G:N3	22:BA:1:G:C2'	2.81	0.40
22:BA:276:U:O2	22:BA:276:U:H2'	2.20	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
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:1252:G:N2	38:BQ:36:GLN:OE1	2.54	0.40
22:BA:1410:G:C2	22:BA:1593:A:C2	3.09	0.40
22:BA:1429:G:N3	22:BA:1568:G:C2	2.90	0.40
22:BA:1789:A:P	24:BC:220:ARG:HD3	2.61	0.40
22:BA:1813:G:H1'	24:BC:49:THR:HG21	2.02	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:2353:G:O2'	44:BW:31:LEU:HD23	2.21	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:N3	22:BA:2765:A:C2'	2.85	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
23:BB:40:U:HO2'	23:BB:43:C:H5	1.61	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:146:LYS:O	24:BC:147:PRO:C	2.63	0.40
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.22	0.40
25:BD:34:VAL:HA	25:BD:50:VAL:HG12	2.02	0.40
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.46	0.40
25:BD:197:THR:HG22	25:BD:198:GLY:N	2.36	0.40
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.22	0.40
28:BG:25:ILE:HD11	28:BG:71:LEU:CD1	2.51	0.40
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.37	0.40
28:BG:169:ARG:C	28:BG:170:THR:HG23	2.46	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
30:BI:126:ARG:HD3	30:BI:126:ARG:H	1.86	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
34:BM:3:GLN:O	34:BM:4:PRO:C	2.63	0.40
35:BN:54:LEU:C	35:BN:56:LYS:N	2.79	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
38:BQ:81:GLY:O	38:BQ:82:LEU:C	2.64	0.40
39:BR:62:GLU:O	39:BR:62:GLU:HG3	2.20	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
49:B1:32:LYS:HG2	49:B1:52:LYS:OXT	2.22	0.40
49:B1:42:VAL:O	49:B1:42:VAL:CG1	2.69	0.40
53:CA:76:G:N2	53:CA:95:C:N3	2.69	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: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:O2	53:CA:1158:C:H2'	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:H8	53:CA:1487:G:O5'	2.04	0.40
4:CD:61:ARG:HE	4:CD:67:LEU:C	2.30	0.40
5:CE:125:LYS:HE3	5:CE:125:LYS:HB2	1.63	0.40
6:CF:81:ASN:O	6:CF:84:VAL:HG12	2.22	0.40
10:CJ:51:VAL:CB	14:CN:80:ARG:HB2	2.48	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:CS:52:ASN:C	19:CS:52:ASN:ND2	2.79	0.40
57:DA:104:A:O2'	57:DA:105:C:H5'	2.21	0.40
57:DA:155:A:H2'	57:DA:156:A:H8	1.87	0.40
57:DA:163:C:H2'	57:DA:164:C:C6	2.56	0.40
57:DA:243:U:O2'	57:DA:244:A:H5'	2.22	0.40
57:DA:243:U:H3'	51:D3:7:ARG:HH22	1.87	0.40
57:DA:271:G:O2'	57:DA:272:A:O4'	2.38	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
57:DA:1117:C:H2'	57:DA:1118:C:H6	1.83	0.40
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:O2	57:DA:1379:U:C2'	2.68	0.40
57:DA:1456:G:O2'	57:DA:1457:U:H5'	2.21	0.40
57:DA:1569:A:N1	57:DA:1570:A:C2	2.89	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:H3'	57:DA:1925:C:C6	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:2515:C:H2'	57:DA:2516:A:C8	2.56	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
24:DC:29:PHE:O	24:DC:30:ALA:C	2.65	0.40
26:DE:34:ALA:O	26:DE:37:ALA:HB3	2.22	0.40
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	2.03	0.40
59:DF:43:ILE:HG12	59:DF:77:LYS:CD	2.46	0.40
59:DF:63:LYS:C	59:DF:63:LYS:HD3	2.47	0.40
59:DF:147:ARG:HG2	59:DF:149:ARG:NH1	2.34	0.40
28:DG:157:LYS:C	28:DG:159:LYS:N	2.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	2.02	0.40
31:DJ:66:GLY:C	31:DJ:68:LYS:H	2.28	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
44:DW:67:LYS:CB	44:DW:80:SER:HB2	2.50	0.40
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.36	0.40
1:AA:233:C:C2	1:AA:234:C:C5	3.10	0.40
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
1:AA:1121:U:O2'	1:AA:1122:U:H5'	2.20	0.40
3:AC:120:THR:C	3:AC:122:GLN:N	2.79	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:88:HIS:ND1	5:AE:88:HIS:C	2.79	0.40
5:AE:148:SER:O	5:AE:152:VAL:HG13	2.21	0.40
5:AE:155:LYS:C	5:AE:156:ARG:O	2.65	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:52:ARG:C	14:AN:54:SER:N	2.80	0.40
22:BA:49:A:N6	22:BA:177:G:N9	2.70	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
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.57	0.40
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.20	0.40
22:BA:1426:G:H8	22:BA:1426:G:O5'	2.05	0.40
22:BA:1460:U:H6	22:BA:1460:U:H2'	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2671:G:C6	22:BA:2672:U:C4	3.09	0.40
24:BC:145:MET:SD	24:BC:153:LEU:HD21	2.62	0.40
24:BC:219:VAL:HG12	24:BC:224:MET:HE2	2.03	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:29:PHE:O	29:BH:30:LEU:C	2.64	0.40
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.51	0.40
29:BH:119:ASN:CG	29:BH:120:GLY:N	2.80	0.40
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	2.04	0.40
35:BN:20:MET:HB2	35:BN:20:MET:HE3	1.64	0.40
36:BO:59:ALA:C	36:BO:61:GLN:N	2.78	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
51:B3:21:PHE:CB	51:B3:49:VAL:CG1	2.94	0.40
53:CA:91:U:O2'	53:CA:92:U:C5'	2.69	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:1060:U:C5'	10:CJ:53:ILE:HG12	2.51	0.40
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
2:CB:20:ARG:C	2:CB:21:TYR:CD1	2.99	0.40
2:CB:122:ASP:OD1	2:CB:124:THR:HG22	2.22	0.40
3:CC:37:LYS:HD3	3:CC:37:LYS:HA	1.97	0.40
3:CC:148:ILE:CD1	3:CC:201:ILE:HG12	2.49	0.40
5:CE:110:MET:HE2	5:CE:126:ALA:HB2	2.03	0.40
6:CF:68:GLN:O	6:CF:69:GLU:C	2.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CL:47:ALA:C	12:CL:48:LEU:HD23	2.47	0.40
15:CO:70:LYS:HG3	15:CO:77:TYR:CD2	2.57	0.40
15:CO:72:LYS:HD3	15:CO:72:LYS:HA	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: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:117:G:H4'	57:DA:126:A:H2	1.86	0.40
57:DA:206:U:C2'	57:DA:207:A:H8	2.35	0.40
57:DA:216:A:N6	57:DA:432:A:C1'	2.84	0.40
57:DA:381:G:H5''	45:DX:15:ASN:ND2	2.36	0.40
57:DA:487:C:C2'	57:DA:488:G:H5'	2.51	0.40
57:DA:545:U:H3'	57:DA:545:U:H6	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
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:1255:U:O2'	57:DA:1256:G:P	2.78	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: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
57:DA:2717:C:H2'	57:DA:2718:G:O4'	2.21	0.40
58:DB:31:C:C5'	59:DF:29:ARG:HH12	2.32	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:159:LEU:HA	26:DE:159:LEU:HD12	1.84	0.40
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.20	0.40
59:DF:97:GLU:O	59:DF:97:GLU:HG2	2.20	0.40
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	2.03	0.40
28:DG:145:ALA:HA	28:DG:148:ARG:HG2	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DG:152:ARG:HD2	28:DG:152:ARG:HA	1.95	0.40
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.52	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: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
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
40:DS:27:LYS:O	40:DS:28:LYS:C	2.64	0.40
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.03	0.40
48:D0:53:VAL:O	48:D0:54:ILE:C	2.64	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
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
1:AA:1114:C:C4	1:AA:1115:U:C5	3.09	0.40
2:AB:20:ARG:HA	2:AB:20:ARG:HD3	1.84	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
5:AE:152:VAL:C	5:AE:156:ARG:HB2	2.47	0.40
7:AG:3:ARG:HH11	7:AG:3:ARG:HB2	1.86	0.40
7:AG:69:ARG:CG	7:AG:95:ARG:HG2	2.48	0.40
8:AH:82:LEU:HD22	8:AH:82:LEU:C	2.46	0.40
9:AI:41:GLU:C	9:AI:43:ALA:H	2.30	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
17:AQ:74:LEU:C	17:AQ:74:LEU:HD13	2.46	0.40
22:BA:18:U:P	38:BQ:29:ARG:HH22	2.43	0.40
22:BA:77:G:C2	22:BA:110:G:N3	2.90	0.40
22:BA:141:G:H5'	22:BA:142:A:N7	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:235:U:H2'	22:BA:236:C:H6	1.87	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:598:U:H2'	22:BA:599:A:C8	2.56	0.40
22:BA:851:C:O2'	47:BZ:42:ALA:O	2.37	0.40
22:BA:960:A:O4'	22:BA:2457:U:H4'	2.21	0.40
22:BA:1210:G:OP1	22:BA:1212:G:H5'	2.21	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: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:H2'	22:BA:2665:A:N3	2.36	0.40
22:BA:2802:G:H2'	22:BA:2803:G:O4'	2.21	0.40
24:BC:119:VAL:HG12	24:BC:130:PRO:HG2	2.02	0.40
27:BF:62:GLN:HB3	27:BF:63:LYS:H	1.56	0.40
27:BF:82:TYR:CD2	27:BF:83:PRO:HD2	2.54	0.40
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.38	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
34:BM:126:ILE:O	34:BM:128:THR:HG23	2.22	0.40
37:BP:64:SER:HB3	37:BP:69:VAL:CG1	2.52	0.40
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.56	0.40
38:BQ:61:ILE:O	38:BQ:62:ALA:C	2.65	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
44:BW:18:LYS:O	44:BW:20:LEU:HG	2.21	0.40
45:BX:21:LEU:HA	45:BX:21:LEU:HD23	1.84	0.40
52:B4:1:MET:HE2	52:B4:34:LYS:HG2	2.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:960:U:C4	53:CA:1225:A:H1'	2.56	0.40
53:CA:992:U:H1'	53:CA:993:G:C2	2.56	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:1271:A:O2'	14:CN:33:VAL:HG21	2.22	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
2:CB:59:ILE:HD12	2:CB:59:ILE:C	2.45	0.40
3:CC:15:LYS:NZ	3:CC:182:ASP:CG	2.80	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
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
15:CO:31:LEU:O	15:CO:32:THR:C	2.64	0.40
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
57:DA:9:G:C6	57:DA:2629:U:C5	3.10	0.40
57:DA:88:G:C2	57:DA:89:A:C8	3.09	0.40
57:DA:137:U:H2'	57:DA:138:U:O4'	2.22	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:538:A:O2'	31:DJ:8:PRO:CD	2.69	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:996:A:C4'	38:DQ:91:ARG:HD2	2.47	0.40
57:DA:1020:A:C2	57:DA:1141:U:H2'	2.56	0.40
57:DA:1133:A:C8	57:DA:2026:U:H4'	2.57	0.40
57:DA:1293:C:H2'	57:DA:1294:U:O4'	2.21	0.40
57:DA:1346:G:O2'	57:DA:1347:A:P	2.80	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:1782:U:O2	57:DA:2608:G:O2'	2.25	0.40
57:DA:2102:G:H2'	57:DA:2103:C:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
26:DE:178:VAL:HG13	26:DE:179:SER:H	1.86	0.40
59:DF:31:GLU:O	59:DF:95:MET:HE2	2.21	0.40
28:DG:137:LYS:C	28:DG:139:VAL:H	2.30	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
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
42:DU:64:ILE:O	42:DU:64:ILE:HG23	2.21	0.40
43:DV:40:ILE:HD13	43:DV:40:ILE:H	1.87	0.40
45:DX:2:ARG:HD3	45:DX:32:LEU:HD23	2.02	0.40
45:DX:40:GLU:O	45:DX:41:SER:C	2.64	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

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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%)	0	4
3	AC	204/206 (99%)	153 (75%)	34 (17%)	17 (8%)	0	4
3	CC	204/206 (99%)	145 (71%)	39 (19%)	20 (10%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	1
5	CE	148/150 (99%)	106 (72%)	24 (16%)	18 (12%)	0	1
6	AF	98/100 (98%)	71 (72%)	20 (20%)	7 (7%)	1	6
6	CF	98/100 (98%)	68 (69%)	19 (19%)	11 (11%)	0	2
7	AG	149/151 (99%)	108 (72%)	35 (24%)	6 (4%)	2	17
8	AH	127/129 (98%)	94 (74%)	27 (21%)	6 (5%)	2	14
8	CH	127/129 (98%)	89 (70%)	29 (23%)	9 (7%)	1	6
9	AI	125/127 (98%)	84 (67%)	30 (24%)	11 (9%)	0	3
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	2
10	CJ	96/98 (98%)	55 (57%)	26 (27%)	15 (16%)	0	0
11	AK	115/117 (98%)	86 (75%)	20 (17%)	9 (8%)	1	5
11	CK	115/117 (98%)	86 (75%)	20 (17%)	9 (8%)	1	5
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	7
13	AM	112/114 (98%)	84 (75%)	19 (17%)	9 (8%)	1	4
14	AN	92/100 (92%)	58 (63%)	22 (24%)	12 (13%)	0	1
14	CN	91/100 (91%)	60 (66%)	26 (29%)	5 (6%)	1	11
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	20
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	0
17	CQ	78/80 (98%)	61 (78%)	8 (10%)	9 (12%)	0	1
18	AR	53/55 (96%)	41 (77%)	10 (19%)	2 (4%)	2	18
18	CR	53/55 (96%)	42 (79%)	10 (19%)	1 (2%)	6	33
19	AS	77/79 (98%)	59 (77%)	12 (16%)	6 (8%)	1	5
19	CS	77/79 (98%)	46 (60%)	24 (31%)	7 (9%)	0	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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	2
24	DC	269/271 (99%)	164 (61%)	72 (27%)	33 (12%)	0	1
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	0
26	BE	199/201 (99%)	148 (74%)	31 (16%)	20 (10%)	0	2
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
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	2
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	2
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	2
34	DM	134/136 (98%)	94 (70%)	25 (19%)	15 (11%)	0	2
35	BN	118/120 (98%)	88 (75%)	20 (17%)	10 (8%)	0	3
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	5
36	DO	114/116 (98%)	79 (69%)	27 (24%)	8 (7%)	1	6
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	9
38	DQ	115/117 (98%)	78 (68%)	24 (21%)	13 (11%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
39	BR	101/103 (98%)	82 (81%)	11 (11%)	8 (8%)	1	5
39	DR	101/103 (98%)	70 (69%)	21 (21%)	10 (10%)	0	2
40	BS	108/110 (98%)	83 (77%)	16 (15%)	9 (8%)	0	4
40	DS	108/110 (98%)	76 (70%)	24 (22%)	8 (7%)	1	6
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%)	11	43
43	DV	92/94 (98%)	65 (71%)	22 (24%)	5 (5%)	1	12
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%)	1	12
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%)	0	4
47	BZ	56/58 (97%)	43 (77%)	10 (18%)	3 (5%)	1	12
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	8
49	D1	48/50 (96%)	37 (77%)	6 (12%)	5 (10%)	0	2
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	5	29
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	14
51	D3	62/64 (97%)	40 (64%)	17 (27%)	5 (8%)	1	4
52	B4	36/38 (95%)	27 (75%)	6 (17%)	3 (8%)	0	4
52	D4	36/38 (95%)	22 (61%)	9 (25%)	5 (14%)	0	1
54	CG	148/150 (99%)	98 (66%)	42 (28%)	8 (5%)	1	12
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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%)	144 (80%)	36 (20%)	1	7
2	CB	180/180 (100%)	158 (88%)	22 (12%)	5	22
3	AC	170/170 (100%)	140 (82%)	30 (18%)	2	10
3	CC	170/170 (100%)	154 (91%)	16 (9%)	8	33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
4	AD	172/172 (100%)	143 (83%)	29 (17%)	2	11
4	CD	172/172 (100%)	134 (78%)	38 (22%)	1	5
5	AE	113/113 (100%)	84 (74%)	29 (26%)	0	3
5	CE	113/113 (100%)	87 (77%)	26 (23%)	1	5
6	AF	87/87 (100%)	75 (86%)	12 (14%)	3	18
6	CF	87/87 (100%)	75 (86%)	12 (14%)	3	18
7	AG	124/124 (100%)	107 (86%)	17 (14%)	3	18
8	AH	104/104 (100%)	84 (81%)	20 (19%)	1	8
8	CH	104/104 (100%)	88 (85%)	16 (15%)	2	14
9	AI	105/105 (100%)	86 (82%)	19 (18%)	2	9
9	CI	105/105 (100%)	89 (85%)	16 (15%)	3	14
10	AJ	86/86 (100%)	72 (84%)	14 (16%)	2	12
10	CJ	86/86 (100%)	75 (87%)	11 (13%)	4	20
11	AK	90/90 (100%)	76 (84%)	14 (16%)	2	13
11	CK	90/90 (100%)	75 (83%)	15 (17%)	2	11
12	AL	103/103 (100%)	74 (72%)	29 (28%)	0	2
12	CL	103/103 (100%)	83 (81%)	20 (19%)	1	8
13	AM	92/92 (100%)	84 (91%)	8 (9%)	9	36
14	AN	79/83 (95%)	72 (91%)	7 (9%)	9	34
14	CN	79/83 (95%)	70 (89%)	9 (11%)	5	24
15	AO	76/76 (100%)	67 (88%)	9 (12%)	5	23
15	CO	76/76 (100%)	67 (88%)	9 (12%)	5	23
16	AP	65/65 (100%)	53 (82%)	12 (18%)	1	9
17	AQ	74/74 (100%)	57 (77%)	17 (23%)	1	5
17	CQ	74/74 (100%)	60 (81%)	14 (19%)	1	9
18	AR	48/48 (100%)	44 (92%)	4 (8%)	10	38
18	CR	48/48 (100%)	42 (88%)	6 (12%)	4	21
19	AS	70/70 (100%)	60 (86%)	10 (14%)	3	16
19	CS	70/70 (100%)	65 (93%)	5 (7%)	13	44
20	AT	65/65 (100%)	49 (75%)	16 (25%)	1	3
20	CT	65/65 (100%)	54 (83%)	11 (17%)	2	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
21	AU	44/44 (100%)	33 (75%)	11 (25%)	0	3
21	CU	44/44 (100%)	34 (77%)	10 (23%)	1	5
24	BC	216/216 (100%)	168 (78%)	48 (22%)	1	5
24	DC	216/216 (100%)	182 (84%)	34 (16%)	2	13
25	BD	164/164 (100%)	127 (77%)	37 (23%)	1	5
25	DD	164/164 (100%)	132 (80%)	32 (20%)	1	8
26	BE	165/165 (100%)	118 (72%)	47 (28%)	0	2
26	DE	165/165 (100%)	147 (89%)	18 (11%)	6	26
27	BF	148/148 (100%)	118 (80%)	30 (20%)	1	7
28	BG	137/137 (100%)	104 (76%)	33 (24%)	1	4
28	DG	137/137 (100%)	118 (86%)	19 (14%)	3	17
29	BH	114/114 (100%)	93 (82%)	21 (18%)	1	9
29	DH	114/114 (100%)	98 (86%)	16 (14%)	3	17
30	BI	109/109 (100%)	95 (87%)	14 (13%)	4	20
30	DI	109/109 (100%)	102 (94%)	7 (6%)	16	48
31	BJ	116/116 (100%)	86 (74%)	30 (26%)	0	3
31	DJ	116/116 (100%)	95 (82%)	21 (18%)	2	9
32	BK	103/103 (100%)	79 (77%)	24 (23%)	1	5
32	DK	103/103 (100%)	77 (75%)	26 (25%)	0	3
33	BL	102/102 (100%)	70 (69%)	32 (31%)	0	1
33	DL	102/102 (100%)	85 (83%)	17 (17%)	2	11
34	BM	109/109 (100%)	82 (75%)	27 (25%)	1	3
34	DM	109/109 (100%)	88 (81%)	21 (19%)	1	8
35	BN	100/100 (100%)	77 (77%)	23 (23%)	1	5
35	DN	100/100 (100%)	82 (82%)	18 (18%)	2	9
36	BO	86/86 (100%)	66 (77%)	20 (23%)	1	5
36	DO	86/86 (100%)	78 (91%)	8 (9%)	8	33
37	BP	99/99 (100%)	66 (67%)	33 (33%)	0	1
37	DP	99/99 (100%)	90 (91%)	9 (9%)	9	34
38	BQ	89/89 (100%)	71 (80%)	18 (20%)	1	7
38	DQ	89/89 (100%)	71 (80%)	18 (20%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	BR	84/84 (100%)	65 (77%)	19 (23%)	1	5
39	DR	84/84 (100%)	71 (84%)	13 (16%)	2	14
40	BS	93/93 (100%)	69 (74%)	24 (26%)	0	3
40	DS	93/93 (100%)	73 (78%)	20 (22%)	1	6
41	BT	80/80 (100%)	58 (72%)	22 (28%)	0	2
41	DT	80/80 (100%)	73 (91%)	7 (9%)	9	35
42	BU	83/83 (100%)	63 (76%)	20 (24%)	1	4
42	DU	83/83 (100%)	69 (83%)	14 (17%)	2	11
43	BV	78/78 (100%)	59 (76%)	19 (24%)	1	4
43	DV	78/78 (100%)	69 (88%)	9 (12%)	5	24
44	BW	59/59 (100%)	40 (68%)	19 (32%)	0	1
44	DW	59/59 (100%)	46 (78%)	13 (22%)	1	6
45	BX	67/67 (100%)	51 (76%)	16 (24%)	1	4
45	DX	67/67 (100%)	59 (88%)	8 (12%)	5	23
46	BY	55/55 (100%)	41 (74%)	14 (26%)	0	3
46	DY	55/55 (100%)	52 (94%)	3 (6%)	19	52
47	BZ	48/48 (100%)	33 (69%)	15 (31%)	0	1
47	DZ	48/48 (100%)	40 (83%)	8 (17%)	2	11
48	B0	47/47 (100%)	36 (77%)	11 (23%)	1	4
48	D0	47/47 (100%)	40 (85%)	7 (15%)	3	15
49	B1	45/45 (100%)	35 (78%)	10 (22%)	1	5
49	D1	45/45 (100%)	41 (91%)	4 (9%)	9	34
50	B2	38/38 (100%)	30 (79%)	8 (21%)	1	6
50	D2	38/38 (100%)	35 (92%)	3 (8%)	11	40
51	B3	51/51 (100%)	42 (82%)	9 (18%)	2	10
51	D3	51/51 (100%)	40 (78%)	11 (22%)	1	6
52	B4	34/34 (100%)	27 (79%)	7 (21%)	1	7
52	D4	34/34 (100%)	29 (85%)	5 (15%)	3	16
54	CG	123/123 (100%)	99 (80%)	24 (20%)	1	8
55	CM	91/91 (100%)	81 (89%)	10 (11%)	6	26
56	CP	65/65 (100%)	53 (82%)	12 (18%)	1	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	DF	149/149 (100%)	121 (81%)	28 (19%)	1	9
All	All	9331/9339 (100%)	7619 (82%)	1712 (18%)	2	9

All (1712) 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	26	MET
2	AB	30	ILE
2	AB	36	LYS
2	AB	38	HIS
2	AB	40	ILE
2	AB	42	LEU
2	AB	56	LEU
2	AB	67	LEU
2	AB	86	CYS
2	AB	87	ASP
2	AB	88	GLN
2	AB	90	PHE
2	AB	100	LEU
2	AB	108	GLN
2	AB	115	ASP
2	AB	116	LEU
2	AB	119	GLN
2	AB	124	THR
2	AB	125	PHE
2	AB	128	LEU
2	AB	130	LYS
2	AB	141	GLU
2	AB	142	LYS
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	211	LEU
2	AB	219	THR

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Mol	Chain	Res	Type
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	32	LEU
3	AC	35	ASP
3	AC	36	PHE
3	AC	42	LEU
3	AC	50	SER
3	AC	54	ILE
3	AC	57	GLU
3	AC	69	THR
3	AC	79	LYS
3	AC	89	VAL
3	AC	102	ILE
3	AC	119	ILE
3	AC	120	THR
3	AC	127	VAL
3	AC	128	MET
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	25	ARG
4	AD	30	LYS
4	AD	32	LYS
4	AD	39	GLN
4	AD	52	VAL
4	AD	54	LEU
4	AD	55	ARG
4	AD	58	GLN
4	AD	68	GLU
4	AD	69	ARG
4	AD	82	LYS

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Mol	Chain	Res	Type
4	AD	88	ASN
4	AD	92	LEU
4	AD	99	ASN
4	AD	115	GLN
4	AD	117	VAL
4	AD	122	ILE
4	AD	128	VAL
4	AD	131	ILE
4	AD	142	VAL
4	AD	155	LYS
4	AD	160	LEU
4	AD	166	LYS
4	AD	170	LEU
4	AD	178	GLU
4	AD	196	GLU
4	AD	199	ILE
4	AD	205	LYS
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	25	LYS
5	AE	28	ARG
5	AE	29	ILE
5	AE	31	SER
5	AE	37	VAL
5	AE	45	VAL
5	AE	59	ILE
5	AE	68	ARG
5	AE	75	LEU
5	AE	79	THR
5	AE	81	GLN
5	AE	93	VAL
5	AE	95	MET
5	AE	96	GLN
5	AE	100	GLU
5	AE	113	VAL
5	AE	115	GLU
5	AE	116	VAL
5	AE	119	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	135	VAL

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Mol	Chain	Res	Type
5	AE	136	VAL
5	AE	141	ASP
5	AE	155	LYS
5	AE	156	ARG
6	AF	7	VAL
6	AF	14	GLN
6	AF	24	ARG
6	AF	29	ILE
6	AF	46	GLN
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	84	VAL
6	AF	86	ARG
7	AG	3	ARG
7	AG	6	ILE
7	AG	8	GLN
7	AG	12	LEU
7	AG	20	GLU
7	AG	21	LEU
7	AG	22	LEU
7	AG	37	THR
7	AG	47	GLU
7	AG	62	GLU
7	AG	68	VAL
7	AG	83	THR
7	AG	93	VAL
7	AG	105	GLU
7	AG	117	LEU
7	AG	123	LEU
7	AG	143	MET
8	AH	10	LEU
8	AH	21	LYS
8	AH	30	LYS
8	AH	33	VAL
8	AH	55	LYS
8	AH	58	LEU
8	AH	64	TYR
8	AH	65	PHE
8	AH	72	GLU

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Mol	Chain	Res	Type
8	AH	76	ARG
8	AH	79	ARG
8	AH	82	LEU
8	AH	89	ASP
8	AH	98	LEU
8	AH	100	ILE
8	AH	110	MET
8	AH	111	THR
8	AH	124	ILE
8	AH	125	ILE
8	AH	128	VAL
9	AI	4	GLN
9	AI	28	VAL
9	AI	29	ILE
9	AI	35	GLU
9	AI	42	THR
9	AI	44	ARG
9	AI	47	VAL
9	AI	54	VAL
9	AI	56	MET
9	AI	62	LEU
9	AI	64	ILE
9	AI	67	LYS
9	AI	86	LEU
9	AI	87	MET
9	AI	88	GLU
9	AI	98	ARG
9	AI	125	GLN
9	AI	126	PHE
9	AI	128	LYS
10	AJ	6	ILE
10	AJ	17	LEU
10	AJ	18	ILE
10	AJ	22	THR
10	AJ	32	THR
10	AJ	35	GLN
10	AJ	48	ARG
10	AJ	50	THR
10	AJ	59	LYS
10	AJ	70	HIS
10	AJ	73	LEU
10	AJ	87	LEU

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Mol	Chain	Res	Type
10	AJ	89	ARG
10	AJ	96	VAL
11	AK	17	ASP
11	AK	30	ILE
11	AK	51	PHE
11	AK	64	VAL
11	AK	76	TYR
11	AK	78	ILE
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	118	ASN
11	AK	124	LYS
11	AK	125	LYS
11	AK	128	VAL
12	AL	3	VAL
12	AL	9	LYS
12	AL	15	VAL
12	AL	18	SER
12	AL	20	VAL
12	AL	26	CYS
12	AL	32	VAL
12	AL	34	THR
12	AL	35	ARG
12	AL	38	THR
12	AL	43	LYS
12	AL	48	LEU
12	AL	49	ARG
12	AL	51	VAL
12	AL	57	THR
12	AL	63	THR
12	AL	64	SER
12	AL	73	LEU
12	AL	74	GLN
12	AL	79	ILE
12	AL	81	ILE
12	AL	82	ARG
12	AL	87	LYS
12	AL	88	ASP
12	AL	94	TYR
12	AL	96	THR

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Mol	Chain	Res	Type
12	AL	101	LEU
12	AL	104	SER
12	AL	109	ARG
13	AM	3	ILE
13	AM	6	ILE
13	AM	18	LEU
13	AM	42	VAL
13	AM	58	GLU
13	AM	70	ARG
13	AM	71	GLU
13	AM	106	ARG
14	AN	11	LYS
14	AN	13	VAL
14	AN	27	LYS
14	AN	59	GLN
14	AN	61	ASN
14	AN	73	LEU
14	AN	99	SER
15	AO	34	GLN
15	AO	38	LEU
15	AO	57	ARG
15	AO	65	LEU
15	AO	67	ASP
15	AO	80	LEU
15	AO	82	GLU
15	AO	84	LEU
15	AO	86	LEU
16	AP	1	MET
16	AP	6	LEU
16	AP	12	LYS
16	AP	19	VAL
16	AP	29	ASN
16	AP	33	ILE
16	AP	46	LYS
16	AP	55	ASP
16	AP	67	ILE
16	AP	68	SER
16	AP	71	VAL
16	AP	80	LYS
17	AQ	3	LYS
17	AQ	16	MET
17	AQ	20	ILE

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Mol	Chain	Res	Type
17	AQ	21	VAL
17	AQ	28	VAL
17	AQ	29	LYS
17	AQ	37	ILE
17	AQ	42	LYS
17	AQ	47	ASP
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	51	GLU
17	AQ	54	ILE
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	78	VAL
17	AQ	80	LYS
18	AR	20	ILE
18	AR	35	SER
18	AR	54	LEU
18	AR	67	LEU
19	AS	20	LYS
19	AS	42	ASN
19	AS	48	ILE
19	AS	54	ARG
19	AS	55	GLN
19	AS	57	VAL
19	AS	59	VAL
19	AS	61	VAL
19	AS	64	GLU
19	AS	79	TYR
20	AT	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	67	HIS
20	AT	68	LYS
20	AT	75	LYS

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Mol	Chain	Res	Type
20	AT	77	ASN
20	AT	84	LYS
21	AU	8	ASN
21	AU	9	GLU
21	AU	15	LEU
21	AU	19	LYS
21	AU	27	VAL
21	AU	33	ARG
21	AU	37	TYR
21	AU	38	GLU
21	AU	39	LYS
21	AU	42	THR
21	AU	45	LYS
24	BC	2	VAL
24	BC	12	ARG
24	BC	18	VAL
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
24	BC	164	VAL
24	BC	166	ARG

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Mol	Chain	Res	Type
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	183	VAL
24	BC	200	MET
24	BC	201	LEU
24	BC	202	ARG
24	BC	203	VAL
24	BC	215	VAL
24	BC	216	ARG
24	BC	227	VAL
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	258	SER
24	BC	268	ARG
25	BD	4	LEU
25	BD	9	VAL
25	BD	14	ILE
25	BD	16	THR
25	BD	17	GLU
25	BD	25	THR
25	BD	33	ARG
25	BD	40	LEU
25	BD	43	ASP
25	BD	45	TYR
25	BD	70	LYS
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	140	HIS
25	BD	146	ILE
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	201	LEU
25	BD	203	VAL
25	BD	207	VAL
26	BE	12	LEU
26	BE	18	THR
26	BE	21	ARG
26	BE	28	VAL
26	BE	40	ARG
26	BE	43	THR
26	BE	44	ARG
26	BE	48	THR
26	BE	61	ARG
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	80	SER
26	BE	90	GLN
26	BE	97	ASN
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	120	VAL
26	BE	121	VAL
26	BE	122	GLU
26	BE	123	LYS
26	BE	124	PHE
26	BE	127	GLU
26	BE	131	THR

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Mol	Chain	Res	Type
26	BE	132	LYS
26	BE	136	GLN
26	BE	141	MET
26	BE	144	GLU
26	BE	146	VAL
26	BE	147	LEU
26	BE	148	ILE
26	BE	149	ILE
26	BE	153	LEU
26	BE	159	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	171	ASP
26	BE	173	THR
26	BE	175	ILE
26	BE	178	VAL
26	BE	186	VAL
26	BE	189	THR
26	BE	196	VAL
27	BF	3	LEU
27	BF	8	LYS
27	BF	9	ASP
27	BF	10	GLU
27	BF	12	VAL
27	BF	14	LYS
27	BF	17	THR
27	BF	18	GLU
27	BF	24	VAL
27	BF	34	THR
27	BF	36	ASN
27	BF	46	LYS
27	BF	47	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	88	VAL
27	BF	90	LEU
27	BF	103	ILE
27	BF	107	VAL
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG

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Mol	Chain	Res	Type
27	BF	134	GLN
27	BF	153	ILE
27	BF	154	THR
27	BF	157	THR
27	BF	163	GLU
27	BF	166	ARG
27	BF	169	LEU
28	BG	2	ARG
28	BG	3	VAL
28	BG	8	VAL
28	BG	18	ILE
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
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	139	VAL
28	BG	140	ILE
28	BG	148	ARG
28	BG	165	ASP
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU

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Mol	Chain	Res	Type
29	BH	9	VAL
29	BH	12	LEU
29	BH	14	SER
29	BH	15	LEU
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
29	BH	32	PRO
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	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL
30	BI	30	GLN
30	BI	39	LYS
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	85	ILE
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
31	BJ	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	41	LYS
31	BJ	44	TYR

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Mol	Chain	Res	Type
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	67	ASN
31	BJ	72	LYS
31	BJ	84	ILE
31	BJ	86	GLN
31	BJ	88	THR
31	BJ	101	ILE
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	139	VAL
31	BJ	140	LEU
32	BK	6	THR
32	BK	8	LEU
32	BK	18	ARG
32	BK	23	LYS
32	BK	30	ARG
32	BK	39	ILE
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	69	VAL
32	BK	70	ARG
32	BK	73	ASP
32	BK	89	ASN
32	BK	92	GLU
32	BK	95	ILE
32	BK	99	ILE
32	BK	111	LYS

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Mol	Chain	Res	Type
32	BK	114	LYS
32	BK	115	ILE
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	13	LYS
33	BL	14	LYS
33	BL	19	LEU
33	BL	21	ARG
33	BL	23	ILE
33	BL	27	LEU
33	BL	30	THR
33	BL	35	HIS
33	BL	39	LYS
33	BL	47	ARG
33	BL	48	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	103	ILE
33	BL	111	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	120	VAL
33	BL	122	VAL
33	BL	127	VAL
33	BL	135	ILE
34	BM	2	LEU
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	14	LYS
34	BM	24	THR
34	BM	25	ASP

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Mol	Chain	Res	Type
34	BM	27	SER
34	BM	33	LEU
34	BM	36	VAL
34	BM	69	PRO
34	BM	70	ASP
34	BM	73	ILE
34	BM	75	GLU
34	BM	80	VAL
34	BM	81	ARG
34	BM	90	GLU
34	BM	95	LEU
34	BM	96	ILE
34	BM	97	GLN
34	BM	102	LEU
34	BM	105	MET
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	8	ARG
35	BN	10	LEU
35	BN	11	ASN
35	BN	14	SER
35	BN	15	SER
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	65	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	75	ILE
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	113	ILE

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Mol	Chain	Res	Type
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	39	VAL
36	BO	65	THR
36	BO	80	GLU
36	BO	83	LEU
36	BO	84	GLU
36	BO	94	ARG
36	BO	98	GLN
36	BO	100	HIS
36	BO	103	VAL
36	BO	106	LEU
36	BO	111	ARG
36	BO	112	GLU
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	25	VAL
37	BP	28	LYS
37	BP	35	SER
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	49	ILE
37	BP	56	SER
37	BP	61	ARG
37	BP	64	SER
37	BP	69	VAL
37	BP	72	VAL

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Mol	Chain	Res	Type
37	BP	75	THR
37	BP	79	VAL
37	BP	80	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	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	7	VAL
38	BQ	8	ILE
38	BQ	10	ARG
38	BQ	17	LEU
38	BQ	30	VAL
38	BQ	40	LYS
38	BQ	50	ARG
38	BQ	51	GLN
38	BQ	59	LEU
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	4	VAL
39	BR	10	LYS
39	BR	14	VAL
39	BR	25	LEU
39	BR	29	THR
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

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Mol	Chain	Res	Type
39	BR	54	VAL
39	BR	55	ASP
39	BR	63	VAL
39	BR	74	ILE
39	BR	85	LYS
39	BR	86	GLN
39	BR	97	LYS
40	BS	1	MET
40	BS	3	THR
40	BS	4	ILE
40	BS	24	ILE
40	BS	29	VAL
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	50	VAL
40	BS	66	ILE
40	BS	68	ASP
40	BS	71	VAL
40	BS	73	LYS
40	BS	74	ILE
40	BS	76	VAL
40	BS	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

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Mol	Chain	Res	Type
41	BT	37	ASP
41	BT	43	ILE
41	BT	47	VAL
41	BT	48	GLN
41	BT	58	VAL
41	BT	61	LEU
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	74	ILE
41	BT	81	LYS
42	BU	4	ILE
42	BU	6	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	18	LYS
42	BU	20	LYS
42	BU	23	LYS
42	BU	26	ASN
42	BU	29	SER
42	BU	34	ILE
42	BU	42	LYS
42	BU	43	LYS
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	86	PHE
42	BU	87	GLU
42	BU	92	VAL
42	BU	99	SER
42	BU	102	ILE
43	BV	3	THR
43	BV	5	ASN
43	BV	8	VAL
43	BV	10	LYS
43	BV	14	LYS
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	43	ASP

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Mol	Chain	Res	Type
43	BV	46	LYS
43	BV	47	VAL
43	BV	51	GLN
43	BV	55	GLU
43	BV	60	VAL
43	BV	61	LEU
43	BV	65	VAL
43	BV	66	ASP
44	BW	14	ASP
44	BW	15	SER
44	BW	24	ARG
44	BW	30	VAL
44	BW	31	LEU
44	BW	38	ARG
44	BW	40	ARG
44	BW	42	THR
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	57	THR
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	9	LYS
45	BX	10	ARG
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	41	SER
45	BX	47	THR
45	BX	53	LYS
45	BX	60	LYS
45	BX	63	ILE
45	BX	65	THR
45	BX	70	LEU

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Mol	Chain	Res	Type
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	44	LYS
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
47	BZ	5	LYS
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	22	THR
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	4	GLN
48	B0	5	ASN
48	B0	9	ARG
48	B0	17	SER
48	B0	21	LEU
48	B0	22	THR
48	B0	24	VAL
48	B0	26	SER
48	B0	27	LEU
48	B0	39	ARG
48	B0	42	ILE
49	B1	4	ILE

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Mol	Chain	Res	Type
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
49	B1	46	VAL
50	B2	1	MET
50	B2	3	ARG
50	B2	4	THR
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	29	ARG
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS
51	B3	56	LEU
51	B3	58	ILE
52	B4	1	MET
52	B4	4	ARG
52	B4	9	LYS
52	B4	13	ASN
52	B4	16	ILE
52	B4	25	VAL
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	26	MET
2	CB	36	LYS
2	CB	39	ILE
2	CB	42	LEU

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Mol	Chain	Res	Type
2	CB	46	VAL
2	CB	69	VAL
2	CB	84	LEU
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	162	VAL
2	CB	182	VAL
2	CB	196	ASP
2	CB	199	ILE
3	CC	13	ILE
3	CC	26	LYS
3	CC	35	ASP
3	CC	41	TYR
3	CC	90	VAL
3	CC	123	LEU
3	CC	134	LYS
3	CC	139	ASN
3	CC	152	VAL
3	CC	153	SER
3	CC	161	ILE
3	CC	164	THR
3	CC	166	TRP
3	CC	183	TYR
3	CC	185	THR
3	CC	194	VAL
4	CD	2	ARG
4	CD	8	LEU
4	CD	10	LEU
4	CD	16	THR
4	CD	24	VAL
4	CD	25	ARG
4	CD	29	THR
4	CD	30	LYS
4	CD	33	ILE
4	CD	34	GLU
4	CD	52	VAL
4	CD	55	ARG
4	CD	57	LYS

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Mol	Chain	Res	Type
4	CD	58	GLN
4	CD	80	ARG
4	CD	84	ASN
4	CD	85	THR
4	CD	106	PHE
4	CD	124	VAL
4	CD	128	VAL
4	CD	137	SER
4	CD	140	ASP
4	CD	142	VAL
4	CD	143	SER
4	CD	146	GLU
4	CD	147	LYS
4	CD	151	GLN
4	CD	153	ARG
4	CD	155	LYS
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	17	VAL
5	CE	18	ASN
5	CE	20	VAL
5	CE	24	VAL
5	CE	25	LYS
5	CE	29	ILE
5	CE	35	LEU
5	CE	51	LYS
5	CE	55	VAL
5	CE	59	ILE
5	CE	75	LEU
5	CE	80	LEU
5	CE	81	GLN
5	CE	87	VAL
5	CE	92	ARG

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Mol	Chain	Res	Type
5	CE	95	MET
5	CE	99	SER
5	CE	110	MET
5	CE	113	VAL
5	CE	119	VAL
5	CE	133	ILE
5	CE	136	VAL
5	CE	140	ILE
5	CE	144	GLU
6	CF	7	VAL
6	CF	10	VAL
6	CF	33	GLU
6	CF	44	ARG
6	CF	52	ASN
6	CF	54	LEU
6	CF	56	LYS
6	CF	61	LEU
6	CF	85	ILE
6	CF	86	ARG
6	CF	89	VAL
6	CF	90	MET
54	CG	3	ARG
54	CG	5	VAL
54	CG	6	ILE
54	CG	10	LYS
54	CG	12	LEU
54	CG	16	LYS
54	CG	34	LYS
54	CG	35	LYS
54	CG	48	THR
54	CG	49	LEU
54	CG	55	LYS
54	CG	58	LEU
54	CG	66	GLU
54	CG	75	LYS
54	CG	77	ARG
54	CG	78	ARG
54	CG	85	GLN
54	CG	86	VAL
54	CG	90	VAL
54	CG	100	MET
54	CG	102	TRP

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Mol	Chain	Res	Type
54	CG	119	LEU
54	CG	123	LEU
54	CG	148	LYS
8	CH	11	THR
8	CH	42	GLU
8	CH	50	VAL
8	CH	54	THR
8	CH	59	GLU
8	CH	70	VAL
8	CH	71	VAL
8	CH	73	SER
8	CH	75	GLN
8	CH	76	ARG
8	CH	79	ARG
8	CH	82	LEU
8	CH	89	ASP
8	CH	93	LYS
8	CH	102	VAL
8	CH	110	MET
9	CI	3	ASN
9	CI	4	GLN
9	CI	5	TYR
9	CI	20	ILE
9	CI	36	GLN
9	CI	37	TYR
9	CI	53	LEU
9	CI	54	VAL
9	CI	60	LEU
9	CI	62	LEU
9	CI	71	ILE
9	CI	83	THR
9	CI	87	MET
9	CI	93	LEU
9	CI	115	VAL
9	CI	125	GLN
10	CJ	5	ARG
10	CJ	15	HIS
10	CJ	40	ILE
10	CJ	44	THR
10	CJ	48	ARG
10	CJ	64	GLN
10	CJ	67	ILE

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Mol	Chain	Res	Type
10	CJ	69	THR
10	CJ	82	LYS
10	CJ	87	LEU
10	CJ	92	LEU
11	CK	19	VAL
11	CK	22	ILE
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	83	VAL
11	CK	94	SER
11	CK	95	THR
11	CK	106	ILE
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	14	LYS
12	CL	19	ASN
12	CL	28	GLN
12	CL	39	THR
12	CL	48	LEU
12	CL	54	VAL
12	CL	57	THR
12	CL	62	VAL
12	CL	66	ILE
12	CL	72	ASN
12	CL	79	ILE
12	CL	81	ILE
12	CL	88	ASP
12	CL	96	THR
12	CL	107	LYS
12	CL	120	ARG
55	CM	12	LYS
55	CM	24	VAL
55	CM	28	ARG

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Mol	Chain	Res	Type
55	CM	32	ILE
55	CM	46	GLU
55	CM	53	ASP
55	CM	72	ILE
55	CM	77	LYS
55	CM	92	ARG
55	CM	113	LYS
14	CN	3	GLN
14	CN	6	LYS
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	61	ASN
14	CN	72	PHE
14	CN	81	ILE
15	CO	13	GLU
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	69	LEU
15	CO	80	LEU
56	CP	1	MET
56	CP	2	VAL
56	CP	3	THR
56	CP	19	VAL
56	CP	29	ASN
56	CP	32	PHE
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	6	THR
17	CQ	7	LEU
17	CQ	20	ILE
17	CQ	28	VAL
17	CQ	32	ILE

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Mol	Chain	Res	Type
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	51	GLU
17	CQ	54	ILE
17	CQ	58	VAL
17	CQ	60	ILE
17	CQ	75	VAL
17	CQ	78	VAL
17	CQ	80	LYS
18	CR	25	ILE
18	CR	44	THR
18	CR	49	LYS
18	CR	65	SER
18	CR	66	LEU
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	52	ASN
19	CS	54	ARG
19	CS	55	GLN
20	CT	11	ILE
20	CT	23	ARG
20	CT	26	MET
20	CT	30	PHE
20	CT	47	GLN
20	CT	53	MET
20	CT	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	18	PHE
21	CU	19	LYS
21	CU	27	VAL
21	CU	32	ARG
21	CU	36	PHE
21	CU	39	LYS
21	CU	53	LYS
24	DC	2	VAL

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Mol	Chain	Res	Type
24	DC	8	THR
24	DC	17	LYS
24	DC	18	VAL
24	DC	23	LEU
24	DC	35	LYS
24	DC	42	ARG
24	DC	43	ASN
24	DC	53	ILE
24	DC	62	ARG
24	DC	87	SER
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	190	THR
24	DC	193	GLU
24	DC	194	VAL
24	DC	203	VAL
24	DC	212	TRP
24	DC	213	ARG
24	DC	218	THR
24	DC	220	ARG
24	DC	227	VAL
24	DC	228	ASP
24	DC	235	GLU
24	DC	250	GLN
24	DC	251	THR
24	DC	260	LYS
24	DC	267	VAL
25	DD	9	VAL
25	DD	24	VAL
25	DD	28	GLU
25	DD	29	VAL
25	DD	32	ASN
25	DD	33	ARG
25	DD	34	VAL
25	DD	38	LYS
25	DD	48	ILE

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Mol	Chain	Res	Type
25	DD	50	VAL
25	DD	55	LYS
25	DD	56	LYS
25	DD	58	ASN
25	DD	62	LYS
25	DD	70	LYS
25	DD	79	LEU
25	DD	84	LEU
25	DD	98	VAL
25	DD	100	LEU
25	DD	106	LYS
25	DD	121	THR
25	DD	128	ARG
25	DD	129	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	148	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	186	LEU
25	DD	189	VAL
25	DD	193	VAL
25	DD	203	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	105	LEU
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
26	DE	170	ARG
59	DF	8	LYS

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Mol	Chain	Res	Type
59	DF	13	LYS
59	DF	14	LYS
59	DF	32	LYS
59	DF	48	LEU
59	DF	49	LEU
59	DF	76	PHE
59	DF	77	LYS
59	DF	91	ARG
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
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	169	LEU
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	83	THR
28	DG	84	LYS
28	DG	93	TYR
28	DG	120	ILE
28	DG	132	LEU

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Mol	Chain	Res	Type
28	DG	143	VAL
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	22	LYS
29	DH	27	ARG
29	DH	28	ASN
29	DH	42	LYS
29	DH	44	ILE
29	DH	50	ARG
29	DH	71	LYS
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	94	ILE
29	DH	103	VAL
29	DH	104	THR
29	DH	109	GLU
29	DH	119	ASN
29	DH	144	VAL
30	DI	16	MET
30	DI	30	GLN
30	DI	45	THR
30	DI	57	VAL
30	DI	58	ILE
30	DI	72	THR
30	DI	93	ASN
31	DJ	1	MET
31	DJ	2	LYS
31	DJ	3	THR
31	DJ	18	VAL
31	DJ	25	LEU
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	52	ASP
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	62	VAL
31	DJ	72	LYS
31	DJ	81	ILE
31	DJ	92	MET

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Mol	Chain	Res	Type
31	DJ	95	ARG
31	DJ	101	ILE
31	DJ	103	ILE
31	DJ	106	LYS
31	DJ	129	GLU
31	DJ	139	VAL
32	DK	3	GLN
32	DK	7	MET
32	DK	10	VAL
32	DK	13	ASN
32	DK	24	VAL
32	DK	25	LEU
32	DK	28	SER
32	DK	39	ILE
32	DK	41	ILE
32	DK	47	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	63	VAL
32	DK	65	THR
32	DK	70	ARG
32	DK	73	ASP
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	107	LEU
32	DK	111	LYS
32	DK	114	LYS
32	DK	122	VAL
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	14	LYS
33	DL	40	SER
33	DL	47	ARG
33	DL	48	ARG
33	DL	79	LEU
33	DL	82	LEU
33	DL	92	LEU

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Mol	Chain	Res	Type
33	DL	99	ASN
33	DL	103	ILE
33	DL	111	ILE
33	DL	112	LEU
33	DL	116	VAL
33	DL	118	THR
33	DL	143	GLU
34	DM	8	LYS
34	DM	26	VAL
34	DM	30	SER
34	DM	33	LEU
34	DM	38	ARG
34	DM	42	THR
34	DM	63	ILE
34	DM	73	ILE
34	DM	78	LEU
34	DM	89	VAL
34	DM	95	LEU
34	DM	96	ILE
34	DM	97	GLN
34	DM	101	VAL
34	DM	102	LEU
34	DM	105	MET
34	DM	115	GLU
34	DM	119	LEU
34	DM	126	ILE
34	DM	129	THR
34	DM	133	LYS
35	DN	10	LEU
35	DN	14	SER
35	DN	18	GLN
35	DN	29	VAL
35	DN	33	ILE
35	DN	34	ILE
35	DN	53	THR
35	DN	62	ASN
35	DN	69	ARG
35	DN	71	ARG
35	DN	75	ILE
35	DN	76	VAL
35	DN	94	TYR
35	DN	95	THR

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Mol	Chain	Res	Type
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	49	VAL
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	115	LEU
36	DO	116	GLN
37	DP	7	LEU
37	DP	13	LYS
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	8	ILE
38	DQ	12	ARG
38	DQ	13	HIS
38	DQ	15	LYS
38	DQ	18	LYS
38	DQ	21	LYS
38	DQ	46	TYR
38	DQ	54	ARG
38	DQ	57	ARG
38	DQ	59	LEU
38	DQ	63	ARG
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	87	VAL
38	DQ	93	ILE
38	DQ	96	ASP
38	DQ	106	THR
39	DR	6	GLN
39	DR	10	LYS
39	DR	13	ARG

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Mol	Chain	Res	Type
39	DR	37	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	63	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	86	GLN
39	DR	90	ARG
39	DR	93	PHE
40	DS	4	ILE
40	DS	6	LYS
40	DS	23	LEU
40	DS	31	GLN
40	DS	36	LEU
40	DS	45	VAL
40	DS	46	LEU
40	DS	47	VAL
40	DS	49	LYS
40	DS	66	ILE
40	DS	68	ASP
40	DS	70	LYS
40	DS	74	ILE
40	DS	76	VAL
40	DS	81	SER
40	DS	84	ARG
40	DS	85	ILE
40	DS	86	MET
40	DS	88	ARG
40	DS	107	VAL
41	DT	9	LYS
41	DT	18	GLU
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
41	DT	68	LYS
41	DT	72	GLN
42	DU	13	LEU
42	DU	14	THR
42	DU	16	LYS
42	DU	20	LYS
42	DU	21	ARG

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Mol	Chain	Res	Type
42	DU	35	VAL
42	DU	40	LEU
42	DU	42	LYS
42	DU	45	GLN
42	DU	61	GLU
42	DU	71	ILE
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	51	GLN
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	30	VAL
44	DW	31	LEU
44	DW	37	VAL
44	DW	40	ARG
44	DW	58	LEU
44	DW	67	LYS
44	DW	68	PHE
44	DW	77	LYS
44	DW	80	SER
45	DX	5	GLN
45	DX	6	VAL
45	DX	26	ARG
45	DX	29	LEU
45	DX	31	ASN
45	DX	46	VAL
45	DX	47	THR
45	DX	63	ILE
46	DY	1	MET
46	DY	4	LYS
46	DY	28	LEU

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Mol	Chain	Res	Type
47	DZ	16	LEU
47	DZ	23	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	50	VAL
47	DZ	53	MET
47	DZ	55	LYS
48	D0	3	GLN
48	D0	5	ASN
48	D0	22	THR
48	D0	27	LEU
48	D0	41	HIS
48	D0	42	ILE
48	D0	53	VAL
49	D1	10	LEU
49	D1	20	TYR
49	D1	33	LEU
49	D1	44	GLN
50	D2	9	VAL
50	D2	26	ASN
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	43	LEU
51	D3	46	LYS
51	D3	48	MET
51	D3	49	VAL
51	D3	51	LYS
51	D3	61	LEU
52	D4	2	LYS
52	D4	3	VAL
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (356) 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
3	AC	175	HIS
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	115	GLN
4	AD	119	HIS
4	AD	151	GLN
4	AD	163	GLN
4	AD	195	ASN
4	AD	197	HIS
5	AE	11	GLN
5	AE	42	ASN
5	AE	72	ASN
5	AE	77	ASN
5	AE	81	GLN
5	AE	121	ASN
5	AE	145	ASN
6	AF	11	HIS
6	AF	46	GLN
6	AF	68	GLN
7	AG	85	GLN
7	AG	121	ASN
7	AG	147	ASN
8	AH	17	GLN
8	AH	20	ASN
8	AH	117	GLN
9	AI	3	ASN

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Mol	Chain	Res	Type
9	AI	4	GLN
9	AI	74	GLN
9	AI	80	HIS
9	AI	125	GLN
10	AJ	15	HIS
10	AJ	20	GLN
10	AJ	35	GLN
10	AJ	58	ASN
10	AJ	64	GLN
11	AK	21	HIS
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	49	HIS
15	AO	61	GLN
16	AP	26	ASN
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
20	AT	81	GLN

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Mol	Chain	Res	Type
21	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	59	GLN
24	BC	69	ASN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	152	GLN
24	BC	242	HIS
24	BC	250	GLN
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	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	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	5	GLN

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Mol	Chain	Res	Type
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	104	GLN
34	BM	88	ASN
35	BN	9	GLN
35	BN	11	ASN
35	BN	23	ASN
35	BN	62	ASN
35	BN	73	ASN
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
36	BO	100	HIS
37	BP	9	GLN
37	BP	74	GLN
38	BQ	13	HIS
38	BQ	43	GLN
38	BQ	51	GLN
38	BQ	65	ASN
39	BR	18	GLN
39	BR	43	ASN
39	BR	66	HIS
39	BR	82	HIS
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	53	GLN
42	BU	65	GLN
42	BU	73	ASN
43	BV	5	ASN
43	BV	44	HIS
43	BV	51	GLN
43	BV	80	HIS

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Mol	Chain	Res	Type
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	20	ASN
46	BY	27	ASN
46	BY	41	HIS
47	BZ	33	HIS
48	B0	3	GLN
48	B0	41	HIS
50	B2	6	GLN
50	B2	13	ASN
50	B2	16	HIS
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	125	ASN
4	CD	163	GLN
5	CE	11	GLN
5	CE	76	ASN

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Mol	Chain	Res	Type
5	CE	121	ASN
5	CE	131	ASN
6	CF	52	ASN
6	CF	58	HIS
6	CF	63	ASN
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
9	CI	74	GLN
9	CI	109	GLN
9	CI	125	GLN
10	CJ	70	HIS
11	CK	27	ASN
11	CK	117	HIS
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	11	HIS
55	CM	90	HIS
14	CN	59	GLN
14	CN	65	GLN
15	CO	27	GLN
15	CO	34	GLN
15	CO	36	ASN
15	CO	39	GLN
15	CO	45	HIS
56	CP	9	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

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Mol	Chain	Res	Type
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	116	GLN
24	DC	133	ASN
24	DC	196	ASN
24	DC	225	ASN
25	DD	36	GLN
25	DD	49	GLN
25	DD	58	ASN
25	DD	126	ASN
25	DD	140	HIS
25	DD	150	GLN
25	DD	185	ASN
26	DE	29	HIS
59	DF	4	HIS
59	DF	126	ASN
28	DG	19	ASN
28	DG	37	ASN
28	DG	44	HIS
28	DG	103	ASN
28	DG	138	GLN
29	DH	2	GLN
29	DH	28	ASN
29	DH	43	ASN
29	DH	66	ASN
29	DH	119	ASN
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	47	HIS
31	DJ	76	HIS
31	DJ	77	HIS
31	DJ	138	GLN
32	DK	3	GLN
32	DK	5	GLN
32	DK	9	ASN

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Mol	Chain	Res	Type
32	DK	13	ASN
32	DK	89	ASN
33	DL	4	ASN
33	DL	38	GLN
33	DL	54	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	16	HIS
35	DN	23	ASN
35	DN	31	HIS
35	DN	107	ASN
36	DO	29	HIS
36	DO	38	GLN
37	DP	2	ASN
37	DP	6	GLN
37	DP	40	GLN
37	DP	51	ASN
37	DP	65	ASN
37	DP	114	ASN
38	DQ	19	GLN
38	DQ	43	GLN
38	DQ	71	ASN
38	DQ	80	ASN
39	DR	6	GLN
39	DR	66	HIS
39	DR	82	HIS
39	DR	86	GLN
39	DR	87	GLN
40	DS	7	HIS
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	53	GLN
43	DV	24	ASN
43	DV	51	GLN
43	DV	78	GLN
43	DV	80	HIS
43	DV	87	GLN

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Mol	Chain	Res	Type
43	DV	88	HIS
44	DW	11	ASN
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
46	DY	45	GLN
47	DZ	19	HIS
47	DZ	33	HIS
48	D0	41	HIS
50	D2	6	GLN
50	D2	16	HIS
50	D2	26	ASN
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%)	511 (33%)	237 (15%)
22	BA	2850/2903 (98%)	908 (31%)	411 (14%)
23	BB	117/118 (99%)	35 (29%)	17 (14%)
53	CA	1529/1530 (99%)	559 (36%)	242 (15%)
57	DA	2838/2904 (97%)	1090 (38%)	504 (17%)
58	DB	116/117 (99%)	39 (33%)	17 (14%)
All	All	8982/9105 (98%)	3142 (34%)	1428 (15%)

All (3142) 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

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Mol	Chain	Res	Type
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	53	A
1	AA	61	G
1	AA	62	U
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
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

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Mol	Chain	Res	Type
1	AA	116	A
1	AA	117	G
1	AA	119	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	129	A
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
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

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Mol	Chain	Res	Type
1	AA	245	U
1	AA	246	A
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	280	C
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
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

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Mol	Chain	Res	Type
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	440	C
1	AA	448	A
1	AA	451	A
1	AA	452	A
1	AA	453	G
1	AA	458	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	481	G
1	AA	482	A
1	AA	484	G

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Mol	Chain	Res	Type
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	510	A
1	AA	511	C
1	AA	512	U
1	AA	513	C
1	AA	517	G
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
1	AA	560	A
1	AA	562	U
1	AA	563	A
1	AA	564	C
1	AA	565	U
1	AA	566	G
1	AA	567	G
1	AA	572	A

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Mol	Chain	Res	Type
1	AA	573	A
1	AA	575	G
1	AA	576	C
1	AA	577	G
1	AA	578	C
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	689	C
1	AA	700	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	704	A
1	AA	705	G
1	AA	717	U
1	AA	718	A
1	AA	719	C
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	724	G
1	AA	725	G
1	AA	731	G
1	AA	733	G
1	AA	748	G
1	AA	752	G
1	AA	753	A
1	AA	754	C

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Mol	Chain	Res	Type
1	AA	755	G
1	AA	756	C
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	962	C
1	AA	965	U
1	AA	966	G
1	AA	968	A
1	AA	969	A
1	AA	970	C
1	AA	971	G
1	AA	972	C
1	AA	973	G
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	994	A
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

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Mol	Chain	Res	Type
1	AA	1056	U
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1069	C
1	AA	1085	U
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

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Mol	Chain	Res	Type
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
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	1185	G
1	AA	1190	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	1215	G
1	AA	1216	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	1230	C
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

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Mol	Chain	Res	Type
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
1	AA	1297	G
1	AA	1298	U
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	1339	A
1	AA	1345	U
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

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Mol	Chain	Res	Type
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
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	1528	U
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
1	AA	1532	U

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Mol	Chain	Res	Type
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	33	C
22	BA	34	U
22	BA	35	G
22	BA	36	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
22	BA	61	C
22	BA	63	A
22	BA	64	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

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Mol	Chain	Res	Type
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	177	G
22	BA	178	G
22	BA	196	A
22	BA	197	A
22	BA	199	A
22	BA	204	A
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	229	C
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

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Mol	Chain	Res	Type
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	321	U
22	BA	322	A
22	BA	329	G
22	BA	330	A
22	BA	333	G
22	BA	334	C
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	373	U
22	BA	374	A
22	BA	386	G
22	BA	387	U
22	BA	388	G
22	BA	389	G
22	BA	390	U
22	BA	391	A

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Mol	Chain	Res	Type
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	434	U
22	BA	435	C
22	BA	436	C
22	BA	443	A
22	BA	446	G
22	BA	447	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
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	492	A
22	BA	504	A
22	BA	505	A
22	BA	507	A
22	BA	508	A

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Mol	Chain	Res	Type
22	BA	509	C
22	BA	510	C
22	BA	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	534	U
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	589	U
22	BA	603	A
22	BA	604	G
22	BA	605	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	616	A
22	BA	617	G
22	BA	618	G
22	BA	621	A
22	BA	622	G

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Mol	Chain	Res	Type
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	638	G
22	BA	639	U
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	766	U
22	BA	774	G
22	BA	775	G
22	BA	776	G
22	BA	777	G
22	BA	782	A

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Mol	Chain	Res	Type
22	BA	783	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A
22	BA	800	A
22	BA	801	G
22	BA	802	A
22	BA	803	U
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	861	A
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	945	A

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Mol	Chain	Res	Type
22	BA	946	C
22	BA	947	A
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	997	G
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	1028	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

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Mol	Chain	Res	Type
22	BA	1062	G
22	BA	1063	G
22	BA	1064	C
22	BA	1065	U
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1075	C
22	BA	1078	U
22	BA	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	1113	U
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	1145	C
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

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Mol	Chain	Res	Type
22	BA	1180	U
22	BA	1181	U
22	BA	1182	G
22	BA	1185	G
22	BA	1186	G
22	BA	1204	A
22	BA	1205	A
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	1267	U
22	BA	1268	A
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1275	A
22	BA	1276	A
22	BA	1277	G
22	BA	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	1320	C
22	BA	1321	A

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Mol	Chain	Res	Type
22	BA	1322	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
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	1418	G
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
22	BA	1558	C
22	BA	1559	U
22	BA	1565	C
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	1602	U
22	BA	1603	A
22	BA	1607	C
22	BA	1608	A
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	1682	G
22	BA	1683	U
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

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Mol	Chain	Res	Type
22	BA	1707	G
22	BA	1708	C
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
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	1781	U
22	BA	1782	U
22	BA	1785	A
22	BA	1786	A
22	BA	1787	A
22	BA	1788	C
22	BA	1791	A
22	BA	1799	G
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1809	A
22	BA	1815	A
22	BA	1816	C
22	BA	1817	G
22	BA	1819	A
22	BA	1821	A

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Mol	Chain	Res	Type
22	BA	1822	C
22	BA	1827	U
22	BA	1829	A
22	BA	1848	A
22	BA	1849	G
22	BA	1857	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
22	BA	1913	A
22	BA	1914	C
22	BA	1918	A
22	BA	1919	A
22	BA	1920	C
22	BA	1926	U
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1943	U
22	BA	1944	U
22	BA	1945	G
22	BA	1946	U
22	BA	1954	G

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Mol	Chain	Res	Type
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	2024	G
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2036	C
22	BA	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
22	BA	2248	C
22	BA	2249	U
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	2282	G
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
22	BA	2322	A
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2328	A
22	BA	2333	A
22	BA	2334	U
22	BA	2335	A
22	BA	2336	A
22	BA	2337	G
22	BA	2338	C
22	BA	2344	U
22	BA	2345	G
22	BA	2347	C

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Mol	Chain	Res	Type
22	BA	2348	U
22	BA	2358	A
22	BA	2361	G
22	BA	2382	G
22	BA	2383	G
22	BA	2384	U
22	BA	2385	C
22	BA	2386	A
22	BA	2391	G
22	BA	2392	A
22	BA	2393	U
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2407	A
22	BA	2408	U
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2427	C
22	BA	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	2492	U
22	BA	2493	U
22	BA	2497	A
22	BA	2500	U
22	BA	2501	C
22	BA	2502	G
22	BA	2503	A

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Mol	Chain	Res	Type
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2507	C
22	BA	2515	C
22	BA	2517	C
22	BA	2518	A
22	BA	2525	G
22	BA	2529	G
22	BA	2542	A
22	BA	2543	G
22	BA	2547	A
22	BA	2554	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2576	G
22	BA	2579	C
22	BA	2581	G
22	BA	2582	G
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	2616	C
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

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Mol	Chain	Res	Type
22	BA	2661	G
22	BA	2663	G
22	BA	2672	U
22	BA	2673	G
22	BA	2674	G
22	BA	2681	C
22	BA	2682	A
22	BA	2690	U
22	BA	2712	C
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	2730	C
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	2777	G
22	BA	2778	A
22	BA	2779	U
22	BA	2790	U
22	BA	2791	G
22	BA	2797	U
22	BA	2798	U
22	BA	2800	A
22	BA	2801	G
22	BA	2802	G
22	BA	2808	G
22	BA	2809	A
22	BA	2812	G

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Mol	Chain	Res	Type
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	2832	U
22	BA	2833	U
22	BA	2835	A
22	BA	2836	U
22	BA	2848	G
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	2893	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	26	C
23	BB	30	C
23	BB	35	C
23	BB	37	C
23	BB	40	U
23	BB	41	G
23	BB	42	C
23	BB	43	C
23	BB	44	G

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Mol	Chain	Res	Type
23	BB	45	A
23	BB	46	A
23	BB	52	A
23	BB	53	A
23	BB	56	G
23	BB	57	A
23	BB	58	A
23	BB	66	A
23	BB	67	G
23	BB	68	C
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	99	A
23	BB	108	A
23	BB	109	A
23	BB	110	C
53	CA	6	G
53	CA	7	A
53	CA	8	A
53	CA	9	G
53	CA	10	A
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	16	A
53	CA	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

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Mol	Chain	Res	Type
53	CA	65	A
53	CA	66	A
53	CA	67	C
53	CA	68	G
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	74	A
53	CA	76	G
53	CA	77	A
53	CA	80	A
53	CA	81	A
53	CA	82	G
53	CA	83	C
53	CA	85	U
53	CA	86	G
53	CA	87	C
53	CA	88	U
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	92	U
53	CA	93	U
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	97	G
53	CA	98	A
53	CA	101	A
53	CA	110	C
53	CA	115	G
53	CA	116	A
53	CA	117	G
53	CA	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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
53	CA	267	C
53	CA	268	U
53	CA	275	G
53	CA	276	G
53	CA	277	C
53	CA	280	C
53	CA	282	A
53	CA	283	U
53	CA	289	G
53	CA	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
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	370	C
53	CA	372	C
53	CA	373	A
53	CA	374	A
53	CA	376	G

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Mol	Chain	Res	Type
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
53	CA	430	A
53	CA	431	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

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Mol	Chain	Res	Type
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	487	A
53	CA	493	A
53	CA	496	A
53	CA	497	G
53	CA	498	A
53	CA	499	A
53	CA	500	G
53	CA	501	C
53	CA	508	U
53	CA	509	A
53	CA	510	A
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	514	C
53	CA	516	U
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	549	C
53	CA	559	A
53	CA	560	A

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	822	U
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

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Mol	Chain	Res	Type
53	CA	871	U
53	CA	874	G
53	CA	880	C
53	CA	885	G
53	CA	886	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
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

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Mol	Chain	Res	Type
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
53	CA	1065	U
53	CA	1066	C
53	CA	1067	A
53	CA	1068	G
53	CA	1069	C
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1218	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	1245	C
53	CA	1250	A
53	CA	1251	A
53	CA	1256	A
53	CA	1257	A
53	CA	1260	G
53	CA	1266	G
53	CA	1278	G
53	CA	1279	G
53	CA	1280	A
53	CA	1281	C
53	CA	1282	C
53	CA	1283	U
53	CA	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

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Mol	Chain	Res	Type
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	1366	C
53	CA	1367	C
53	CA	1368	A
53	CA	1370	G
53	CA	1379	G
53	CA	1381	U
53	CA	1382	C
53	CA	1394	A
53	CA	1395	C
53	CA	1396	A
53	CA	1397	C
53	CA	1398	A
53	CA	1399	C
53	CA	1400	C
53	CA	1411	C
53	CA	1422	G
53	CA	1429	A

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Mol	Chain	Res	Type
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	1500	A
53	CA	1502	A
53	CA	1503	A
53	CA	1505	G
53	CA	1506	U
53	CA	1507	A
53	CA	1508	A
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1529	G
53	CA	1530	G
53	CA	1531	A
53	CA	1534	A
57	DA	12	U
57	DA	13	A
57	DA	14	A
57	DA	15	G
57	DA	27	G
57	DA	28	A
57	DA	29	U
57	DA	34	U
57	DA	35	G
57	DA	36	G

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Mol	Chain	Res	Type
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	54	G
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	105	C
57	DA	118	A
57	DA	119	A
57	DA	120	U
57	DA	121	G
57	DA	122	G
57	DA	123	G

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Mol	Chain	Res	Type
57	DA	126	A
57	DA	128	C
57	DA	129	C
57	DA	130	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	198	C
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	218	A
57	DA	221	A
57	DA	222	A
57	DA	223	A
57	DA	224	U
57	DA	225	C
57	DA	227	A

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Mol	Chain	Res	Type
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
57	DA	315	G

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Mol	Chain	Res	Type
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
57	DA	413	C

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Mol	Chain	Res	Type
57	DA	423	A
57	DA	424	G
57	DA	425	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	493	G
57	DA	498	G
57	DA	502	A
57	DA	504	A
57	DA	505	A
57	DA	506	G
57	DA	507	A
57	DA	510	C
57	DA	511	U

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Mol	Chain	Res	Type
57	DA	512	G
57	DA	527	C
57	DA	528	A
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

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Mol	Chain	Res	Type
57	DA	629	G
57	DA	637	A
57	DA	638	G
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	731	C
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

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Mol	Chain	Res	Type
57	DA	763	G
57	DA	764	A
57	DA	765	C
57	DA	766	U
57	DA	775	G
57	DA	776	G
57	DA	777	G
57	DA	778	G
57	DA	782	A
57	DA	783	A
57	DA	784	G
57	DA	785	G
57	DA	788	A
57	DA	789	A
57	DA	790	U
57	DA	792	A
57	DA	794	A
57	DA	795	C
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

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Mol	Chain	Res	Type
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
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	948	C
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

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Mol	Chain	Res	Type
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
57	DA	1024	G
57	DA	1025	G
57	DA	1026	G
57	DA	1027	A
57	DA	1028	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	1051	G
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

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Mol	Chain	Res	Type
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
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	1137	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

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Mol	Chain	Res	Type
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	1213	A
57	DA	1214	A
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
57	DA	1584	U
57	DA	1585	C
57	DA	1586	A
57	DA	1600	C
57	DA	1603	A
57	DA	1604	C
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	1614	A
57	DA	1615	C
57	DA	1616	A
57	DA	1618	A
57	DA	1626	A
57	DA	1635	A
57	DA	1636	U
57	DA	1637	A
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	1667	G
57	DA	1668	A
57	DA	1669	A
57	DA	1670	C
57	DA	1674	G
57	DA	1675	C
57	DA	1676	A
57	DA	1681	G
57	DA	1682	G
57	DA	1683	U
57	DA	1694	C
57	DA	1695	G

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Mol	Chain	Res	Type
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	1736	U
57	DA	1739	A
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	1962	C
57	DA	1963	U
57	DA	1964	G
57	DA	1965	C
57	DA	1966	A
57	DA	1967	C
57	DA	1968	G
57	DA	1970	A
57	DA	1971	U
57	DA	1972	G
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	1994	C
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

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Mol	Chain	Res	Type
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	2064	C
57	DA	2068	U
57	DA	2069	G
57	DA	2070	A
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
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

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Mol	Chain	Res	Type
57	DA	2149	U
57	DA	2150	C
57	DA	2151	U
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	2200	C
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
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

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Mol	Chain	Res	Type
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	2290	G
57	DA	2296	U
57	DA	2297	A
57	DA	2298	A
57	DA	2299	U
57	DA	2300	C
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	2315	G
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	2340	A
57	DA	2345	G
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

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Mol	Chain	Res	Type
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	2450	A
57	DA	2451	A
57	DA	2459	A
57	DA	2460	U
57	DA	2475	C
57	DA	2476	A
57	DA	2490	G
57	DA	2491	U
57	DA	2492	U
57	DA	2493	U
57	DA	2494	G
57	DA	2498	C

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Mol	Chain	Res	Type
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	2568	U
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
57	DA	2654	A
57	DA	2655	G
57	DA	2656	U
57	DA	2657	A
57	DA	2658	C

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Mol	Chain	Res	Type
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	2692	G
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	2781	A
57	DA	2782	G
57	DA	2791	G
57	DA	2799	A
57	DA	2801	G
57	DA	2808	G
57	DA	2820	A
57	DA	2822	G

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Mol	Chain	Res	Type
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	14	U
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
58	DB	36	C

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Mol	Chain	Res	Type
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
58	DB	112	G

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 oligosaccharides 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	-	20,20,20	2.51	4 (20%)	23,27,27	2.10	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	-	-	3/20/22/22	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	7.58	1.35	1.22
61	BA	3136	CLM	C11-C6	5.51	1.47	1.39
61	BA	3136	CLM	C2-N2	4.16	1.42	1.34
61	BA	3136	CLM	C8-C9	2.61	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	-5.26	114.11	123.25
61	BA	3136	CLM	C6-C5-C3	4.44	119.68	111.72
61	BA	3136	CLM	C4-C3-N2	3.06	114.10	109.28
61	BA	3136	CLM	O4-C4-C3	3.00	118.37	111.10
61	BA	3136	CLM	O5-C5-C3	2.69	115.05	107.90
61	BA	3136	CLM	C5-C3-N2	2.64	114.80	110.03
61	BA	3136	CLM	O9B-N9-C9	2.37	122.08	118.82

There are no chirality outliers.

All (3) torsion outliers are listed below:

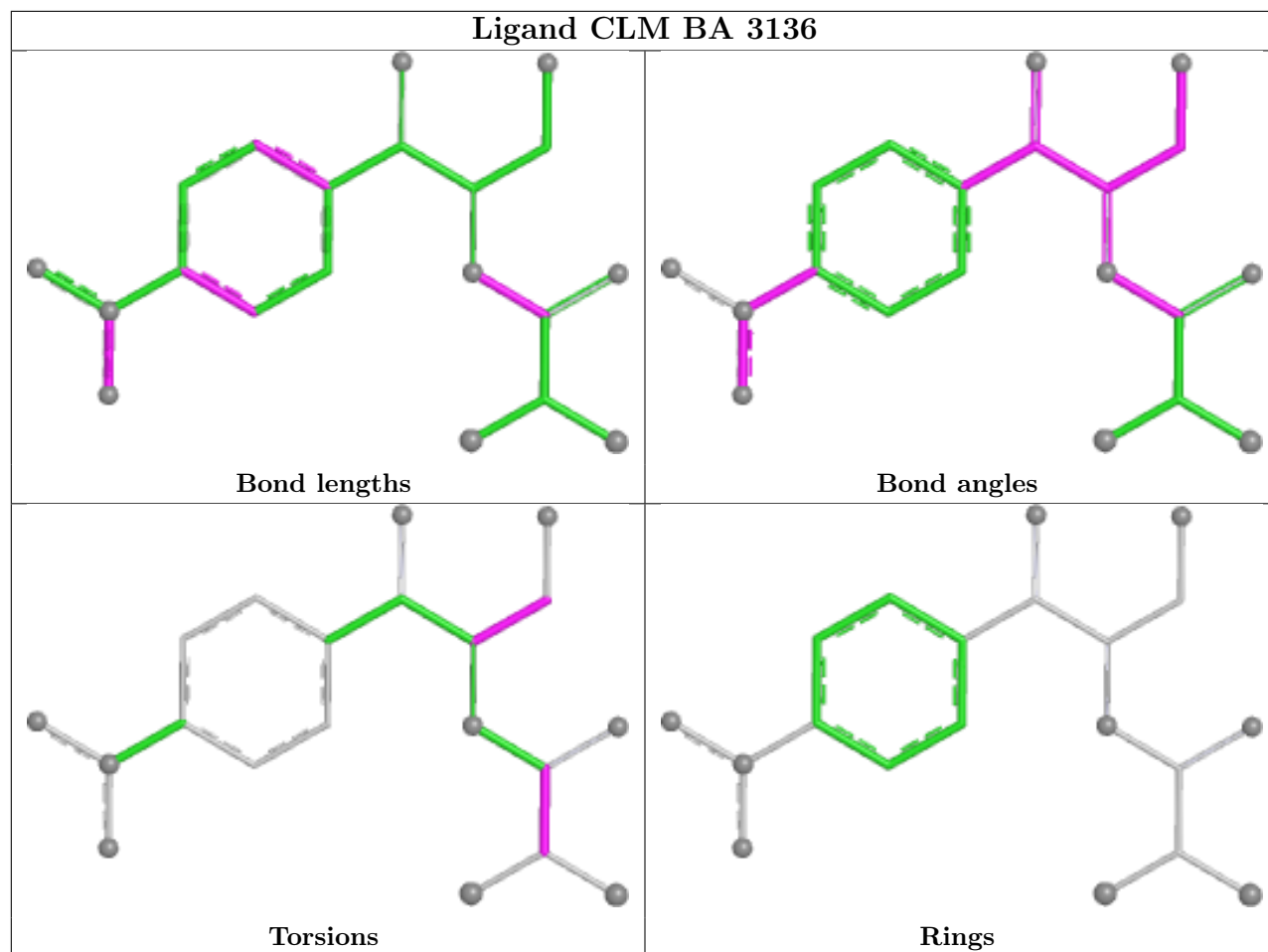
Mol	Chain	Res	Type	Atoms
61	BA	3136	CLM	N2-C3-C4-O4
61	BA	3136	CLM	CL2-C1-C2-N2
61	BA	3136	CLM	CL2-C1-C2-O2

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%)	-0.41	20 (1%) 75 55	28, 82, 201, 415	0
2	AB	218/218 (100%)	0.63	15 (6%) 23 14	117, 160, 233, 278	0
2	CB	218/218 (100%)	0.95	31 (14%) 6 5	121, 173, 237, 292	0
3	AC	206/206 (100%)	0.16	6 (2%) 53 35	64, 107, 164, 196	0
3	CC	206/206 (100%)	0.73	20 (9%) 13 9	79, 158, 229, 303	0
4	AD	205/205 (100%)	0.32	14 (6%) 23 15	45, 89, 164, 275	0
4	CD	205/205 (100%)	0.35	8 (3%) 43 27	39, 61, 122, 254	0
5	AE	150/150 (100%)	0.32	5 (3%) 49 30	57, 81, 142, 210	0
5	CE	150/150 (100%)	0.89	18 (12%) 9 6	67, 99, 157, 252	0
6	AF	100/100 (100%)	0.42	8 (8%) 18 12	55, 103, 161, 189	0
6	CF	100/100 (100%)	0.61	9 (9%) 15 10	72, 116, 176, 217	0
7	AG	151/151 (100%)	0.58	8 (5%) 32 20	88, 150, 218, 247	0
8	AH	129/129 (100%)	0.05	4 (3%) 51 32	44, 82, 127, 184	0
8	CH	129/129 (100%)	0.74	9 (6%) 22 14	68, 113, 170, 246	0
9	AI	127/127 (100%)	1.34	31 (24%) 2 2	72, 154, 248, 287	0
9	CI	127/127 (100%)	1.63	38 (29%) 1 1	116, 201, 289, 319	0
10	AJ	98/98 (100%)	0.77	14 (14%) 6 5	78, 127, 203, 244	0
10	CJ	98/98 (100%)	1.66	31 (31%) 1 1	114, 204, 278, 301	0
11	AK	117/117 (100%)	0.44	5 (4%) 40 24	47, 117, 196, 238	0
11	CK	117/117 (100%)	0.47	7 (5%) 27 17	68, 117, 175, 239	0
12	AL	123/123 (100%)	0.10	8 (6%) 25 16	24, 57, 121, 180	0
12	CL	123/123 (100%)	0.85	20 (16%) 4 3	44, 89, 144, 226	0
13	AM	114/114 (100%)	0.80	11 (9%) 13 9	90, 158, 240, 281	0
14	AN	96/100 (96%)	1.13	21 (21%) 2 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%)	1.57	33 (34%)	1 1	123, 239, 369, 399	0
15	AO	88/88 (100%)	0.09	2 (2%)	61 41	40, 81, 123, 187	0
15	CO	88/88 (100%)	0.96	9 (10%)	12 8	76, 122, 190, 265	0
16	AP	82/82 (100%)	0.30	4 (4%)	35 22	46, 79, 155, 228	0
17	AQ	80/80 (100%)	0.44	7 (8%)	15 10	36, 79, 146, 244	0
17	CQ	80/80 (100%)	0.87	10 (12%)	8 6	61, 112, 163, 194	0
18	AR	55/55 (100%)	0.42	3 (5%)	30 19	60, 92, 174, 242	0
18	CR	55/55 (100%)	0.54	6 (10%)	10 7	48, 91, 159, 236	0
19	AS	79/79 (100%)	0.83	11 (13%)	6 5	95, 156, 236, 256	0
19	CS	79/79 (100%)	2.06	33 (41%)	0 1	206, 416, 490, 515	0
20	AT	85/85 (100%)	0.29	7 (8%)	17 11	46, 83, 124, 174	0
20	CT	85/85 (100%)	1.54	25 (29%)	1 1	76, 142, 200, 234	0
21	AU	51/51 (100%)	1.39	13 (25%)	1 2	91, 152, 216, 243	0
21	CU	51/51 (100%)	1.26	14 (27%)	1 1	82, 115, 208, 290	0
22	BA	2854/2903 (98%)	-0.79	47 (1%)	70 51	7, 31, 162, 401	0
23	BB	118/118 (100%)	-0.77	0	100 100	20, 45, 78, 115	0
24	BC	271/271 (100%)	-0.16	5 (1%)	67 48	13, 41, 96, 201	0
24	DC	271/271 (100%)	1.42	66 (24%)	2 2	45, 101, 160, 200	0
25	BD	209/209 (100%)	-0.40	3 (1%)	73 54	7, 29, 80, 144	0
25	DD	209/209 (100%)	1.50	57 (27%)	1 1	60, 123, 193, 270	0
26	BE	201/201 (100%)	-0.25	0	100 100	7, 42, 105, 189	0
26	DE	201/201 (100%)	2.23	101 (50%)	0 1	68, 254, 429, 475	0
27	BF	177/177 (100%)	0.06	4 (2%)	61 41	33, 78, 142, 205	0
28	BG	176/176 (100%)	-0.10	5 (2%)	55 35	23, 62, 124, 215	0
28	DG	176/176 (100%)	1.10	32 (18%)	3 3	79, 207, 297, 363	0
29	BH	149/149 (100%)	1.01	23 (15%)	5 4	41, 178, 274, 301	0
29	DH	149/149 (100%)	1.56	48 (32%)	1 1	93, 182, 270, 305	0
30	BI	141/141 (100%)	1.55	42 (29%)	1 1	171, 257, 316, 355	0
30	DI	141/141 (100%)	1.48	36 (25%)	1 2	227, 344, 382, 400	0
31	BJ	142/142 (100%)	-0.30	3 (2%)	63 43	9, 23, 68, 127	0
31	DJ	142/142 (100%)	1.17	29 (20%)	3 2	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%)	-0.43	1 (0%) 82 67	14, 31, 84, 254	0
32	DK	122/122 (100%)	0.84	10 (8%) 17 11	57, 106, 172, 204	0
33	BL	143/143 (100%)	-0.20	1 (0%) 84 69	9, 37, 80, 126	0
33	DL	143/143 (100%)	2.26	72 (50%) 0 1	68, 176, 296, 329	0
34	BM	136/136 (100%)	-0.52	1 (0%) 84 69	9, 29, 71, 133	0
34	DM	136/136 (100%)	1.00	22 (16%) 4 3	47, 126, 187, 223	0
35	BN	120/120 (100%)	-0.49	0 100 100	10, 25, 48, 123	0
35	DN	120/120 (100%)	2.15	56 (46%) 0 1	90, 149, 231, 305	0
36	BO	116/116 (100%)	-0.09	2 (1%) 69 49	28, 49, 93, 126	0
36	DO	116/116 (100%)	0.97	14 (12%) 8 6	132, 176, 238, 280	0
37	BP	114/114 (100%)	-0.36	3 (2%) 57 37	17, 39, 95, 184	0
37	DP	114/114 (100%)	1.13	18 (15%) 5 4	63, 122, 187, 204	0
38	BQ	117/117 (100%)	-0.46	0 100 100	7, 20, 46, 100	0
38	DQ	117/117 (100%)	1.99	53 (45%) 0 1	78, 127, 221, 298	0
39	BR	103/103 (100%)	-0.33	1 (0%) 79 63	7, 34, 78, 139	0
39	DR	103/103 (100%)	1.95	39 (37%) 1 1	80, 157, 275, 306	0
40	BS	110/110 (100%)	-0.54	0 100 100	8, 23, 56, 172	0
40	DS	110/110 (100%)	2.10	49 (44%) 0 1	69, 142, 254, 323	0
41	BT	93/93 (100%)	0.43	6 (6%) 25 16	22, 53, 135, 194	0
41	DT	93/93 (100%)	3.22	71 (76%) 0 0	125, 241, 359, 398	0
42	BU	102/102 (100%)	0.08	2 (1%) 65 45	22, 54, 111, 237	0
42	DU	102/102 (100%)	3.04	71 (69%) 0 0	135, 334, 460, 561	0
43	BV	94/94 (100%)	-0.27	0 100 100	18, 47, 89, 149	0
43	DV	94/94 (100%)	0.71	6 (6%) 25 16	109, 156, 208, 233	0
44	BW	79/79 (100%)	0.29	7 (8%) 15 10	13, 36, 90, 194	0
44	DW	79/79 (100%)	2.30	42 (53%) 0 1	99, 166, 250, 315	0
45	BX	77/77 (100%)	-0.26	0 100 100	17, 42, 87, 113	0
45	DX	77/77 (100%)	2.10	34 (44%) 0 1	72, 122, 190, 222	0
46	BY	63/63 (100%)	0.48	4 (6%) 26 17	34, 73, 121, 155	0
46	DY	63/63 (100%)	3.05	45 (71%) 0 0	159, 374, 464, 494	0
47	BZ	58/58 (100%)	-0.44	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%)	1.27	13 (22%) 2 2	80, 142, 228, 257	0
48	B0	56/56 (100%)	-0.49	0 100 100	6, 26, 80, 127	0
48	D0	56/56 (100%)	1.80	20 (35%) 1 1	75, 148, 244, 284	0
49	B1	50/50 (100%)	0.01	0 100 100	42, 66, 121, 173	0
49	D1	50/50 (100%)	1.54	14 (28%) 1 1	114, 179, 216, 264	0
50	B2	46/46 (100%)	-0.33	1 (2%) 62 42	11, 27, 56, 164	0
50	D2	46/46 (100%)	2.45	27 (58%) 0 0	79, 130, 179, 205	0
51	B3	64/64 (100%)	-0.44	0 100 100	11, 29, 53, 81	0
51	D3	64/64 (100%)	3.29	46 (71%) 0 0	85, 145, 232, 281	0
52	B4	38/38 (100%)	0.12	0 100 100	29, 53, 95, 103	0
52	D4	38/38 (100%)	3.29	31 (81%) 0 0	87, 165, 229, 248	0
53	CA	1530/1530 (100%)	0.53	89 (5%) 29 18	43, 110, 301, 420	0
54	CG	150/150 (100%)	1.41	28 (18%) 3 2	101, 233, 303, 344	0
55	CM	113/113 (100%)	2.67	69 (61%) 0 0	226, 447, 522, 562	0
56	CP	80/80 (100%)	0.90	9 (11%) 10 7	49, 105, 165, 226	0
57	DA	2841/2904 (97%)	1.09	474 (16%) 4 3	51, 132, 279, 491	0
58	DB	117/117 (100%)	0.63	6 (5%) 33 21	107, 180, 240, 264	0
59	DF	178/178 (100%)	0.81	13 (7%) 21 13	175, 239, 286, 345	0
All	All	20431/20552 (99%)	0.50	2509 (12%) 8 6	6, 103, 285, 562	0

All (2509) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
55	CM	97	ARG	13.3
42	DU	30	SER	12.7
51	D3	50	SER	10.1
55	CM	98	GLY	10.0
37	DP	109	ILE	9.2
46	DY	14	LEU	8.8
38	DQ	7	VAL	8.7
39	DR	50	GLY	8.6
9	CI	65	THR	8.5
44	DW	52	CYS	8.2
51	D3	14	LYS	7.8
26	DE	175	ILE	7.8
40	DS	40	ASN	7.7

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Mol	Chain	Res	Type	RSRZ
42	DU	79	ALA	7.6
9	CI	66	VAL	7.6
52	D4	31	PRO	7.6
38	DQ	36	GLN	7.5
14	AN	20	PHE	7.5
2	CB	109	SER	7.5
31	DJ	1	MET	7.4
19	CS	36	ARG	7.4
50	D2	33	ARG	7.4
41	DT	79	ASP	7.3
51	D3	55	GLY	7.3
45	DX	49	ARG	7.2
45	DX	19	HIS	7.2
14	CN	32	ASP	7.0
42	DU	78	LYS	7.0
9	AI	129	ARG	7.0
46	DY	45	GLN	6.9
42	DU	80	ASP	6.9
51	D3	51	LYS	6.8
25	DD	144	GLY	6.8
52	D4	26	ILE	6.7
41	DT	43	ILE	6.6
50	D2	26	ASN	6.6
42	DU	4	ILE	6.6
33	DL	27	LEU	6.5
51	D3	22	LYS	6.5
38	DQ	4	LYS	6.4
41	DT	35	ALA	6.4
9	CI	67	LYS	6.4
26	DE	164	LEU	6.4
53	CA	1224	U	6.4
21	AU	31	VAL	6.4
46	DY	44	LYS	6.3
55	CM	18	LEU	6.3
44	DW	37	VAL	6.3
24	DC	63	ILE	6.2
33	DL	26	GLY	6.2
42	DU	2	ALA	6.2
41	DT	56	GLU	6.2
38	DQ	6	GLY	6.2
26	DE	87	ALA	6.2
42	DU	41	VAL	6.1

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Mol	Chain	Res	Type	RSRZ
1	AA	1362	A	6.1
35	DN	38	LEU	6.1
41	DT	55	VAL	6.1
24	DC	241	LYS	6.1
10	CJ	61	ALA	6.1
44	DW	35	ILE	6.1
44	DW	73	PRO	6.0
35	DN	75	ILE	6.0
46	DY	10	SER	6.0
41	DT	83	ALA	6.0
57	DA	389	G	5.9
51	D3	46	LYS	5.8
55	CM	96	VAL	5.8
41	DT	36	LYS	5.8
24	DC	240	GLY	5.8
46	DY	32	ALA	5.8
9	AI	127	SER	5.8
31	DJ	73	VAL	5.8
39	DR	86	GLN	5.7
45	DX	21	LEU	5.7
20	AT	3	ILE	5.7
50	D2	29	GLN	5.7
55	CM	94	LEU	5.7
1	AA	121	U	5.7
41	DT	30	ILE	5.7
57	DA	795	C	5.7
33	DL	28	GLY	5.7
9	CI	123	ARG	5.7
35	DN	29	VAL	5.6
57	DA	2406	A	5.6
7	AG	4	ARG	5.6
41	DT	42	GLU	5.6
9	CI	15	ALA	5.6
19	CS	37	SER	5.6
28	DG	167	VAL	5.6
37	DP	111	GLU	5.6
9	CI	116	GLY	5.6
41	DT	65	GLY	5.6
26	DE	90	GLN	5.5
51	D3	19	GLY	5.5
10	CJ	60	ASP	5.5
51	D3	49	VAL	5.5

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Mol	Chain	Res	Type	RSRZ
46	DY	24	GLU	5.5
57	DA	1420	A	5.5
31	DJ	44	TYR	5.5
40	DS	96	ILE	5.5
45	DX	17	ARG	5.5
25	DD	10	GLY	5.5
10	CJ	74	VAL	5.4
41	DT	57	VAL	5.4
35	DN	20	MET	5.4
42	DU	13	LEU	5.4
41	DT	67	VAL	5.4
41	DT	58	VAL	5.4
24	DC	238	ASN	5.4
49	D1	23	THR	5.4
42	DU	55	GLY	5.4
29	DH	110	VAL	5.4
25	DD	167	ASN	5.4
9	CI	19	PHE	5.4
26	DE	88	ARG	5.4
44	BW	40	ARG	5.4
39	DR	96	VAL	5.4
24	DC	253	GLY	5.4
49	D1	35	LEU	5.3
8	AH	1	SER	5.3
33	DL	15	ALA	5.3
35	DN	62	ASN	5.2
41	DT	32	LEU	5.2
51	D3	20	GLY	5.2
24	DC	271	SER	5.2
55	CM	110	GLY	5.2
54	CG	102	TRP	5.2
39	BR	50	GLY	5.2
57	DA	2320	U	5.2
45	DX	2	ARG	5.1
55	CM	15	VAL	5.1
33	DL	68	SER	5.1
26	DE	177	PRO	5.1
45	DX	20	ALA	5.1
29	DH	91	PHE	5.1
41	DT	47	VAL	5.1
33	DL	82	LEU	5.1
42	DU	102	ILE	5.1

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Mol	Chain	Res	Type	RSRZ
57	DA	2133	G	5.1
54	CG	61	PHE	5.1
24	DC	234	GLY	5.1
19	CS	67	GLY	5.0
19	AS	2	ARG	5.0
22	BA	1072	C	5.0
22	BA	2154	A	5.0
55	CM	103	THR	5.0
41	DT	62	VAL	5.0
26	DE	38	GLY	5.0
29	DH	93	SER	5.0
56	CP	52	LEU	5.0
48	D0	23	ALA	5.0
51	D3	21	PHE	5.0
38	DQ	21	LYS	5.0
42	DU	5	ARG	4.9
33	DL	106	GLU	4.9
57	DA	2585	U	4.9
33	DL	72	ALA	4.9
24	DC	58	LYS	4.9
35	DN	37	THR	4.9
38	DQ	81	GLY	4.9
55	CM	26	LYS	4.9
52	D4	33	HIS	4.9
2	CB	144	GLU	4.9
53	CA	222	C	4.9
20	CT	8	LYS	4.9
42	DU	70	ALA	4.9
21	AU	37	TYR	4.9
57	DA	589	U	4.9
50	D2	1	MET	4.9
46	DY	13	GLU	4.9
33	DL	23	ILE	4.9
51	D3	31	ILE	4.9
51	D3	58	ILE	4.9
46	DY	20	ASN	4.9
34	DM	72	PRO	4.9
42	DU	34	ILE	4.8
42	DU	42	LYS	4.8
3	CC	166	TRP	4.8
50	D2	36	ALA	4.8
9	AI	128	LYS	4.8

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Mol	Chain	Res	Type	RSRZ
18	CR	20	ILE	4.8
24	DC	237	ARG	4.8
26	DE	94	GLN	4.8
26	DE	178	VAL	4.8
44	DW	58	LEU	4.8
52	D4	21	GLY	4.8
46	DY	49	ASP	4.8
33	DL	19	LEU	4.8
24	DC	236	GLY	4.8
38	DQ	3	VAL	4.8
57	DA	355	U	4.7
11	AK	125	LYS	4.7
39	DR	72	VAL	4.7
40	DS	20	VAL	4.7
44	DW	45	HIS	4.7
40	DS	43	ALA	4.7
38	DQ	12	ARG	4.7
39	DR	51	VAL	4.7
42	DU	82	VAL	4.7
21	CU	37	TYR	4.7
26	DE	147	LEU	4.7
57	DA	333	G	4.7
30	BI	46	ASP	4.7
9	AI	67	LYS	4.7
41	DT	76	ARG	4.7
41	DT	72	GLN	4.7
49	D1	21	THR	4.7
42	DU	1	ALA	4.7
57	DA	2000	C	4.7
30	DI	1	ALA	4.6
39	DR	20	VAL	4.6
51	D3	26	ALA	4.6
46	DY	43	LEU	4.6
30	DI	51	GLY	4.6
48	D0	20	ALA	4.6
10	CJ	8	ILE	4.6
28	DG	7	PRO	4.6
30	BI	52	LEU	4.6
46	DY	37	LEU	4.6
24	DC	232	GLY	4.6
55	CM	59	VAL	4.6
26	DE	93	SER	4.6

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Mol	Chain	Res	Type	RSRZ
14	CN	33	VAL	4.6
52	D4	23	ILE	4.5
3	CC	123	LEU	4.5
38	DQ	82	LEU	4.5
38	DQ	94	LEU	4.5
46	DY	21	LEU	4.5
29	DH	115	VAL	4.5
53	CA	108	G	4.5
33	DL	42	SER	4.5
14	CN	6	LYS	4.5
38	DQ	1	ALA	4.5
39	DR	73	LYS	4.5
41	DT	46	ALA	4.5
51	D3	24	LYS	4.5
46	DY	29	ARG	4.5
55	CM	95	PRO	4.5
19	CS	11	ASP	4.5
57	DA	1217	U	4.5
8	CH	129	ALA	4.5
41	DT	3	ARG	4.5
54	CG	136	LYS	4.5
42	DU	69	VAL	4.5
40	DS	32	ALA	4.5
57	DA	34	U	4.5
20	CT	67	HIS	4.5
24	DC	258	SER	4.4
44	DW	15	SER	4.4
51	D3	30	HIS	4.4
33	DL	57	LEU	4.4
22	BA	2885	G	4.4
53	CA	1305	G	4.4
41	DT	85	VAL	4.4
11	CK	125	LYS	4.4
28	DG	155	PRO	4.4
41	DT	34	VAL	4.4
52	D4	2	LYS	4.4
52	D4	8	LYS	4.4
4	AD	24	VAL	4.4
57	DA	1606	C	4.4
52	D4	10	LEU	4.4
20	AT	67	HIS	4.4
24	DC	47	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
40	DS	11	ARG	4.4
57	DA	387	U	4.4
2	CB	106	VAL	4.4
38	DQ	24	TYR	4.4
28	DG	39	ALA	4.3
42	DU	62	ALA	4.3
57	DA	1216	G	4.3
9	AI	42	THR	4.3
57	DA	1164	C	4.3
30	DI	4	VAL	4.3
41	DT	33	LYS	4.3
7	AG	22	LEU	4.3
12	CL	123	ALA	4.3
22	BA	2402	U	4.3
58	DB	87	U	4.3
10	CJ	39	PRO	4.3
25	DD	121	THR	4.3
35	DN	25	ALA	4.3
46	DY	18	LEU	4.3
44	DW	19	ARG	4.3
55	CM	16	ILE	4.3
57	DA	60	G	4.3
25	DD	170	VAL	4.3
30	BI	12	VAL	4.3
47	DZ	24	LEU	4.3
51	D3	56	LEU	4.3
26	DE	24	ASN	4.3
44	DW	50	VAL	4.3
57	DA	75	G	4.2
57	DA	101	A	4.2
57	DA	931	U	4.2
9	CI	124	PRO	4.2
46	DY	19	LEU	4.2
32	DK	119	ALA	4.2
48	D0	25	THR	4.2
41	DT	25	GLU	4.2
42	DU	73	ASN	4.2
45	DX	16	ASN	4.2
24	DC	250	GLN	4.2
38	DQ	27	ARG	4.2
33	DL	16	GLY	4.2
54	CG	111	GLY	4.2

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Mol	Chain	Res	Type	RSRZ
57	DA	76	C	4.2
24	DC	99	GLU	4.2
55	CM	111	PRO	4.2
33	DL	58	TYR	4.2
10	AJ	63	ASP	4.2
10	AJ	75	ASP	4.2
57	DA	2093	G	4.2
42	DU	74	ALA	4.2
52	D4	29	ALA	4.2
17	AQ	69	THR	4.2
26	DE	102	ARG	4.2
26	DE	200	LEU	4.2
55	CM	99	GLN	4.2
10	AJ	34	ALA	4.2
57	DA	94	A	4.2
31	DJ	112	GLY	4.2
21	CU	42	THR	4.2
46	DY	16	THR	4.2
50	D2	44	VAL	4.1
14	CN	25	GLU	4.1
59	DF	129	MET	4.1
46	DY	31	GLN	4.1
25	DD	43	ASP	4.1
4	AD	36	ALA	4.1
55	CM	30	LYS	4.1
57	DA	1289	C	4.1
33	DL	107	PHE	4.1
38	DQ	97	ILE	4.1
57	DA	1622	G	4.1
30	DI	119	ALA	4.1
50	D2	32	ALA	4.1
52	D4	15	LYS	4.1
28	DG	165	ASP	4.1
51	D3	60	CYS	4.1
1	AA	1030	U	4.1
44	DW	42	THR	4.1
3	CC	160	GLU	4.1
48	D0	1	ALA	4.1
52	D4	35	GLN	4.1
57	DA	2153	C	4.1
40	DS	80	PRO	4.1
26	DE	179	SER	4.1

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Mol	Chain	Res	Type	RSRZ
29	BH	113	SER	4.1
55	CM	28	ARG	4.1
18	CR	63	TYR	4.1
45	DX	13	THR	4.1
41	DT	24	MET	4.1
4	CD	27	ILE	4.1
51	D3	59	ALA	4.1
51	D3	45	PRO	4.1
25	DD	166	GLY	4.1
29	DH	98	ASP	4.1
52	D4	28	SER	4.1
17	CQ	7	LEU	4.1
25	DD	186	LEU	4.1
33	DL	30	THR	4.1
19	CS	40	PHE	4.1
51	D3	13	PHE	4.1
54	CG	73	GLU	4.1
33	DL	21	ARG	4.1
39	DR	52	PRO	4.1
26	DE	81	GLY	4.1
39	DR	92	TRP	4.1
45	DX	48	LEU	4.0
26	DE	176	ASP	4.0
22	BA	654	A	4.0
29	DH	124	THR	4.0
26	DE	50	ALA	4.0
57	DA	325	G	4.0
57	DA	356	G	4.0
4	AD	28	ASP	4.0
30	DI	108	ILE	4.0
46	DY	17	GLU	4.0
14	AN	48	GLN	4.0
33	DL	125	LEU	4.0
55	CM	23	GLY	4.0
2	CB	110	ILE	4.0
22	BA	2180	U	4.0
33	DL	81	ASP	4.0
40	DS	99	ARG	4.0
57	DA	2402	U	4.0
55	CM	107	THR	4.0
30	BI	78	LEU	4.0
19	CS	66	VAL	4.0

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Mol	Chain	Res	Type	RSRZ
26	DE	98	LYS	4.0
40	DS	16	LYS	4.0
40	DS	85	ILE	4.0
33	DL	80	SER	4.0
42	DU	28	LEU	4.0
51	D3	1	PRO	4.0
39	DR	88	GLY	4.0
57	DA	630	G	4.0
57	DA	1430	G	4.0
38	DQ	89	ILE	4.0
57	DA	1205	A	4.0
35	DN	70	THR	4.0
42	DU	9	GLU	4.0
40	DS	19	LEU	4.0
26	DE	76	PRO	3.9
35	DN	109	PRO	3.9
42	DU	19	GLY	3.9
10	CJ	72	ARG	3.9
12	CL	13	ARG	3.9
29	DH	123	ARG	3.9
41	DT	15	HIS	3.9
6	AF	51	ILE	3.9
31	DJ	119	PHE	3.9
29	DH	112	LYS	3.9
41	DT	59	ASN	3.9
29	DH	86	ASP	3.9
41	DT	37	ASP	3.9
33	DL	69	ARG	3.9
42	DU	89	GLY	3.9
9	CI	16	ALA	3.9
35	DN	61	ALA	3.9
51	D3	9	ALA	3.9
24	DC	109	LEU	3.9
41	DT	11	LEU	3.9
55	CM	85	TYR	3.9
39	DR	23	GLU	3.9
41	DT	66	LYS	3.9
2	CB	147	LEU	3.9
26	DE	180	LEU	3.9
30	BI	13	ALA	3.9
34	DM	20	LEU	3.9
40	DS	44	ALA	3.9

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Mol	Chain	Res	Type	RSRZ
55	CM	31	ALA	3.9
57	DA	390	U	3.9
18	CR	19	GLU	3.9
26	DE	32	VAL	3.9
41	BT	16	VAL	3.9
49	D1	20	TYR	3.9
52	D4	20	ASP	3.9
29	DH	111	ALA	3.9
32	DK	18	ARG	3.9
57	DA	1276	A	3.9
45	DX	12	VAL	3.9
57	DA	93	G	3.9
53	CA	632	U	3.9
26	DE	56	GLY	3.9
9	CI	13	SER	3.9
26	DE	57	LYS	3.9
38	DQ	100	PHE	3.9
33	DL	61	LEU	3.9
35	DN	24	MET	3.8
24	DC	20	ASN	3.8
57	DA	2008	C	3.8
42	DU	29	SER	3.8
55	CM	20	SER	3.8
57	DA	411	G	3.8
9	CI	10	ARG	3.8
33	DL	18	ARG	3.8
30	BI	4	VAL	3.8
59	DF	73	VAL	3.8
52	D4	30	GLU	3.8
24	DC	46	GLY	3.8
53	CA	532	A	3.8
3	CC	189	HIS	3.8
51	D3	25	HIS	3.8
57	DA	517	C	3.8
57	DA	587	C	3.8
28	DG	154	GLU	3.8
33	DL	56	PRO	3.8
38	DQ	8	ILE	3.8
55	CM	19	THR	3.8
19	CS	2	ARG	3.8
40	DS	92	ARG	3.8
51	D3	27	ASN	3.8

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Mol	Chain	Res	Type	RSRZ
8	CH	1	SER	3.8
14	AN	54	SER	3.8
43	DV	45	ASP	3.8
17	AQ	82	VAL	3.8
53	CA	1322	C	3.8
24	DC	235	GLU	3.8
31	DJ	107	GLY	3.8
2	AB	96	LEU	3.8
26	DE	170	ARG	3.8
53	CA	1361	G	3.8
55	CM	14	ALA	3.8
49	D1	18	HIS	3.8
3	CC	161	ILE	3.8
21	AU	38	GLU	3.8
26	DE	48	THR	3.8
57	DA	1075	C	3.7
38	DQ	14	LYS	3.7
50	D2	37	LYS	3.7
40	DS	4	ILE	3.7
42	DU	71	ILE	3.7
55	CM	21	ILE	3.7
55	CM	108	ARG	3.7
29	DH	15	LEU	3.7
41	DT	7	LEU	3.7
42	DU	56	GLY	3.7
12	AL	24	GLU	3.7
19	CS	8	PRO	3.7
19	CS	41	PRO	3.7
25	DD	156	PHE	3.7
37	DP	42	PHE	3.7
46	DY	5	GLU	3.7
22	BA	139	U	3.7
26	DE	187	VAL	3.7
57	DA	1468	U	3.7
57	DA	947	A	3.7
57	DA	33	C	3.7
57	DA	2021	C	3.7
2	AB	150	ILE	3.7
20	CT	3	ILE	3.7
26	DE	108	ILE	3.7
35	DN	46	ARG	3.7
37	DP	1	SER	3.7

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Mol	Chain	Res	Type	RSRZ
42	DU	11	ILE	3.7
33	DL	51	GLU	3.7
26	DE	186	VAL	3.7
19	CS	68	HIS	3.7
51	D3	42	HIS	3.7
26	DE	148	ILE	3.7
57	DA	62	U	3.7
1	AA	1492	A	3.7
33	DL	92	LEU	3.7
9	CI	128	LYS	3.7
57	DA	1278	C	3.7
17	AQ	6	THR	3.7
31	DJ	117	ALA	3.7
48	D0	22	THR	3.7
35	DN	60	VAL	3.7
6	CF	91	ARG	3.7
57	DA	774	G	3.7
10	CJ	41	PRO	3.7
18	AR	19	GLU	3.7
39	DR	103	ALA	3.7
51	D3	47	ALA	3.7
26	DE	79	ARG	3.7
57	DA	680	C	3.7
40	DS	86	MET	3.7
25	DD	202	ILE	3.7
39	DR	27	ILE	3.7
46	DY	15	ASN	3.7
33	DL	64	PHE	3.7
14	AN	56	PRO	3.6
14	CN	53	ASP	3.6
20	CT	35	TYR	3.6
44	DW	14	ASP	3.6
57	DA	30	G	3.6
9	AI	84	ARG	3.6
26	DE	49	ARG	3.6
57	DA	102	U	3.6
49	D1	22	THR	3.6
57	DA	2062	A	3.6
57	DA	228	C	3.6
8	CH	20	ASN	3.6
9	CI	111	GLU	3.6
26	DE	104	ALA	3.6

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Mol	Chain	Res	Type	RSRZ
35	DN	63	ARG	3.6
42	DU	8	ASP	3.6
10	AJ	50	THR	3.6
44	DW	74	LYS	3.6
34	DM	15	GLY	3.6
52	D4	19	ARG	3.6
26	DE	146	VAL	3.6
25	DD	139	SER	3.6
26	DE	70	SER	3.6
12	CL	9	LYS	3.6
13	AM	26	LYS	3.6
25	DD	151	THR	3.6
41	DT	60	THR	3.6
44	DW	31	LEU	3.6
24	DC	242	HIS	3.6
38	DQ	10	ARG	3.6
12	CL	15	VAL	3.6
1	AA	844	G	3.6
42	DU	100	GLU	3.6
31	DJ	118	MET	3.6
6	AF	54	LEU	3.6
51	D3	38	LYS	3.6
57	DA	800	A	3.6
57	DA	1808	A	3.6
10	CJ	75	ASP	3.6
40	DS	94	ASP	3.6
31	DJ	116	ARG	3.6
2	CB	165	ALA	3.6
52	D4	22	VAL	3.6
55	CM	17	ALA	3.6
33	DL	101	ILE	3.6
55	CM	22	TYR	3.6
35	DN	36	THR	3.6
9	CI	126	PHE	3.5
24	DC	100	ARG	3.5
40	DS	15	GLN	3.5
24	DC	233	GLY	3.5
24	DC	244	VAL	3.5
33	DL	122	VAL	3.5
12	CL	1	ALA	3.5
26	DE	34	ALA	3.5
26	DE	190	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
10	CJ	40	ILE	3.5
24	DC	34	GLU	3.5
33	DL	76	GLU	3.5
54	CG	142	ARG	3.5
26	DE	85	PHE	3.5
35	DN	9	GLN	3.5
44	DW	21	GLY	3.5
45	DX	33	HIS	3.5
51	D3	23	HIS	3.5
2	CB	131	LYS	3.5
26	DE	47	LYS	3.5
54	CG	70	PRO	3.5
10	CJ	71	LEU	3.5
21	AU	28	LEU	3.5
22	BA	2146	C	3.5
13	AM	86	ARG	3.5
53	CA	209	U	3.5
57	DA	810	U	3.5
10	CJ	46	LYS	3.5
24	DC	40	GLY	3.5
38	DQ	90	ASP	3.5
42	DU	58	VAL	3.5
26	DE	39	ALA	3.5
9	CI	86	LEU	3.5
8	AH	2	MET	3.5
2	CB	150	ILE	3.5
4	CD	146	GLU	3.5
49	D1	34	GLU	3.5
55	CM	112	ARG	3.5
53	CA	1441	A	3.5
57	DA	2601	C	3.5
45	DX	76	LYS	3.5
50	D2	43	THR	3.5
9	AI	72	SER	3.5
24	DC	56	GLY	3.5
44	DW	51	GLY	3.5
54	CG	5	VAL	3.5
28	DG	6	ALA	3.5
8	CH	31	LEU	3.5
24	DC	243	PRO	3.5
52	D4	1	MET	3.5
47	DZ	30	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
56	CP	25	ARG	3.5
42	DU	59	GLU	3.5
14	AN	19	TYR	3.5
19	AS	38	THR	3.5
25	DD	87	GLY	3.5
38	DQ	38	VAL	3.5
42	DU	77	GLY	3.5
38	DQ	26	ALA	3.5
38	DQ	34	ALA	3.5
41	DT	41	ALA	3.5
26	DE	188	MET	3.5
57	DA	334	C	3.5
57	DA	509	C	3.5
33	DL	77	ILE	3.5
35	DN	72	ASP	3.5
26	DE	35	TYR	3.4
26	DE	84	THR	3.4
41	DT	39	THR	3.4
33	DL	71	ALA	3.4
44	DW	56	HIS	3.4
41	DT	14	PRO	3.4
42	DU	67	SER	3.4
57	DA	32	C	3.4
53	CA	1315	U	3.4
57	DA	39	G	3.4
44	DW	41	GLY	3.4
54	CG	7	GLY	3.4
51	D3	64	ALA	3.4
21	CU	34	ARG	3.4
44	DW	38	ARG	3.4
19	CS	34	SER	3.4
55	CM	109	LYS	3.4
36	BO	2	ASP	3.4
25	DD	118	PHE	3.4
9	CI	63	TYR	3.4
57	DA	2327	A	3.4
37	DP	91	VAL	3.4
46	DY	46	VAL	3.4
12	AL	123	ALA	3.4
38	DQ	29	ARG	3.4
38	DQ	32	ARG	3.4
39	DR	79	ARG	3.4

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Mol	Chain	Res	Type	RSRZ
53	CA	1217	C	3.4
46	DY	1	MET	3.4
35	DN	78	LYS	3.4
53	CA	212	G	3.4
44	DW	34	SER	3.4
12	CL	37	TYR	3.4
26	DE	138	LEU	3.4
35	DN	65	LEU	3.4
39	DR	63	VAL	3.4
9	AI	120	ALA	3.4
29	DH	81	ALA	3.4
29	DH	88	GLY	3.4
44	BW	51	GLY	3.4
57	DA	528	A	3.4
6	CF	53	LYS	3.4
9	CI	4	GLN	3.4
35	DN	39	PRO	3.4
6	AF	100	SER	3.4
44	DW	78	PHE	3.4
5	CE	111	ARG	3.4
40	DS	45	VAL	3.4
42	DU	40	LEU	3.4
55	CM	86	ARG	3.4
57	DA	669	G	3.4
57	DA	2046	G	3.4
35	DN	104	ALA	3.4
59	DF	81	GLY	3.4
51	D3	3	ILE	3.4
42	DU	14	THR	3.4
38	DQ	35	PHE	3.3
15	AO	16	ARG	3.3
19	CS	3	SER	3.3
24	BC	132	ARG	3.3
26	DE	55	SER	3.3
46	DY	22	LEU	3.3
52	D4	14	CYS	3.3
41	DT	64	LYS	3.3
52	D4	32	LYS	3.3
16	AP	4	ILE	3.3
52	D4	16	ILE	3.3
19	CS	38	THR	3.3
57	DA	1215	G	3.3

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Mol	Chain	Res	Type	RSRZ
41	DT	77	ARG	3.3
5	CE	55	VAL	3.3
24	DC	64	VAL	3.3
27	BF	116	LEU	3.3
30	BI	3	LYS	3.3
44	DW	71	LYS	3.3
2	AB	26	MET	3.3
5	CE	110	MET	3.3
26	DE	161	ALA	3.3
28	DG	58	ALA	3.3
33	DL	20	GLY	3.3
39	DR	8	GLY	3.3
41	DT	20	ALA	3.3
46	DY	63	ALA	3.3
55	CM	5	GLY	3.3
22	BA	2153	C	3.3
45	DX	24	THR	3.3
24	DC	45	ASN	3.3
55	CM	33	LEU	3.3
5	CE	113	VAL	3.3
50	B2	46	LYS	3.3
22	BA	277	G	3.3
30	BI	132	ALA	3.3
38	DQ	98	ALA	3.3
53	CA	202	G	3.3
53	CA	1272	G	3.3
57	DA	914	G	3.3
57	DA	1024	G	3.3
38	DQ	28	SER	3.3
45	DX	1	SER	3.3
46	DY	40	SER	3.3
53	CA	1271	A	3.3
57	DA	1654	A	3.3
57	DA	2860	A	3.3
19	CS	76	THR	3.3
40	DS	100	THR	3.3
47	DZ	33	HIS	3.3
53	CA	950	U	3.3
53	CA	1308	U	3.3
30	DI	10	LEU	3.3
53	CA	1320	C	3.3
57	DA	336	C	3.3

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Mol	Chain	Res	Type	RSRZ
44	DW	77	LYS	3.3
52	D4	18	LYS	3.3
26	DE	73	ILE	3.3
30	BI	85	ILE	3.3
38	DQ	86	SER	3.3
19	CS	75	PRO	3.3
3	CC	191	THR	3.3
39	DR	87	GLN	3.3
57	DA	317	G	3.3
26	DE	167	VAL	3.3
53	CA	1362	A	3.3
57	DA	878	A	3.3
57	DA	1090	A	3.3
57	DA	1237	A	3.3
57	DA	1406	U	3.3
57	DA	2600	A	3.3
57	DA	2799	A	3.3
14	AN	9	GLU	3.3
14	AN	25	GLU	3.3
29	DH	114	GLU	3.3
53	CA	1302	C	3.3
32	DK	68	GLY	3.3
35	DN	105	GLY	3.3
31	DJ	74	TYR	3.2
39	DR	80	ARG	3.2
5	CE	35	LEU	3.2
14	CN	11	LYS	3.2
24	DC	252	LYS	3.2
5	AE	136	VAL	3.2
24	DC	48	ILE	3.2
34	BM	1	MET	3.2
29	DH	105	ALA	3.2
57	DA	1407	G	3.2
22	BA	2179	C	3.2
42	DU	97	SER	3.2
57	DA	184	C	3.2
41	DT	31	VAL	3.2
42	DU	12	VAL	3.2
9	CI	64	ILE	3.2
21	AU	49	ALA	3.2
21	AU	35	GLU	3.2
36	DO	20	GLU	3.2

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Mol	Chain	Res	Type	RSRZ
44	DW	75	ASN	3.2
47	DZ	14	GLY	3.2
9	AI	89	TYR	3.2
45	DX	18	SER	3.2
53	CA	977	A	3.2
57	DA	631	A	3.2
32	DK	42	THR	3.2
53	CA	210	C	3.2
35	DN	97	ILE	3.2
14	CN	62	ARG	3.2
18	CR	56	ARG	3.2
20	CT	36	ALA	3.2
26	DE	172	ALA	3.2
33	DL	108	ALA	3.2
33	DL	22	GLY	3.2
33	DL	65	GLY	3.2
38	DQ	22	GLY	3.2
4	AD	21	LYS	3.2
33	DL	84	LYS	3.2
30	DI	78	LEU	3.2
29	BH	110	VAL	3.2
25	DD	140	HIS	3.2
57	DA	100	U	3.2
30	BI	54	ILE	3.2
52	D4	36	ARG	3.2
1	AA	80	A	3.2
53	CA	1492	A	3.2
57	DA	219	A	3.2
20	CT	68	LYS	3.2
22	BA	2138	G	3.2
57	DA	952	G	3.2
57	DA	1250	G	3.2
40	DS	97	LEU	3.2
41	DT	5	GLU	3.2
57	DA	57	C	3.2
57	DA	961	C	3.2
10	CJ	73	LEU	3.2
9	AI	46	VAL	3.2
24	DC	239	PHE	3.2
45	DX	66	VAL	3.2
14	CN	52	ARG	3.2
29	DH	99	ILE	3.2

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Mol	Chain	Res	Type	RSRZ
2	CB	33	ALA	3.2
5	CE	62	ALA	3.2
55	CM	105	ALA	3.2
29	DH	85	GLY	3.1
6	CF	42	TRP	3.1
57	DA	2602	A	3.1
26	DE	193	VAL	3.1
22	BA	885	C	3.1
22	BA	2152	G	3.1
53	CA	207	C	3.1
34	DM	16	ARG	3.1
54	CG	103	ILE	3.1
14	CN	7	ALA	3.1
30	DI	3	LYS	3.1
36	DO	24	THR	3.1
40	DS	37	THR	3.1
29	BH	90	LEU	3.1
46	BY	6	LEU	3.1
35	DN	74	GLU	3.1
55	CM	65	GLU	3.1
57	DA	1325	U	3.1
57	DA	2797	U	3.1
33	DL	50	PHE	3.1
40	DS	75	PHE	3.1
12	AL	37	TYR	3.1
31	DJ	53	TYR	3.1
28	DG	18	ILE	3.1
26	DE	37	ALA	3.1
48	D0	4	GLN	3.1
9	CI	8	THR	3.1
57	DA	490	C	3.1
57	DA	1295	C	3.1
22	BA	1179	G	3.1
57	DA	2152	G	3.1
44	DW	25	PHE	3.1
48	D0	2	VAL	3.1
52	D4	25	VAL	3.1
54	CG	104	VAL	3.1
9	AI	121	ARG	3.1
29	DH	97	ARG	3.1
26	DE	101	TYR	3.1
9	CI	107	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
2	CB	97	GLY	3.1
57	DA	125	A	3.1
57	DA	1640	A	3.1
33	DL	60	ARG	3.1
51	D3	53	ASP	3.1
52	D4	17	VAL	3.1
53	CA	206	C	3.1
53	CA	1243	C	3.1
55	CM	40	GLU	3.1
55	CM	67	ASP	3.1
57	DA	364	C	3.1
57	DA	946	C	3.1
57	DA	2628	C	3.1
38	DQ	111	LYS	3.1
40	DS	6	LYS	3.1
41	DT	84	TYR	3.1
55	CM	38	ILE	3.1
57	DA	1770	G	3.1
29	BH	111	ALA	3.1
5	AE	10	LEU	3.1
9	CI	109	GLN	3.1
15	CO	55	LEU	3.1
51	D3	28	LEU	3.1
57	DA	29	U	3.1
38	DQ	25	GLY	3.1
51	D3	5	THR	3.1
29	DH	113	SER	3.1
55	CM	75	SER	3.1
21	CU	53	LYS	3.1
24	DC	81	GLU	3.1
22	BA	752	A	3.1
22	BA	2147	A	3.1
57	DA	1745	A	3.1
57	DA	2297	A	3.1
3	AC	63	ILE	3.1
34	DM	12	MET	3.1
41	DT	2	ILE	3.1
59	DF	155	ILE	3.1
2	AB	156	LEU	3.0
2	CB	128	LEU	3.0
44	DW	54	ARG	3.0
57	DA	498	G	3.0

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Mol	Chain	Res	Type	RSRZ
57	DA	512	G	3.0
29	DH	130	VAL	3.0
40	DS	17	VAL	3.0
25	DD	157	LYS	3.0
39	DR	102	SER	3.0
20	CT	66	ILE	3.0
51	D3	48	MET	3.0
35	DN	19	ALA	3.0
57	DA	1301	A	3.0
25	DD	126	ASN	3.0
31	DJ	35	ARG	3.0
35	DN	12	ARG	3.0
39	DR	43	ASN	3.0
38	DQ	58	GLN	3.0
45	DX	10	ARG	3.0
57	DA	209	C	3.0
57	DA	867	C	3.0
25	DD	26	VAL	3.0
37	DP	110	LYS	3.0
41	DT	10	VAL	3.0
37	DP	30	TRP	3.0
19	CS	10	ILE	3.0
22	BA	138	U	3.0
22	BA	1093	G	3.0
53	CA	1220	G	3.0
58	DB	18	G	3.0
19	CS	74	ALA	3.0
19	CS	79	TYR	3.0
26	DE	54	GLY	3.0
30	BI	51	GLY	3.0
44	BW	74	LYS	3.0
47	DZ	20	LYS	3.0
52	D4	9	LYS	3.0
30	BI	69	VAL	3.0
33	DL	90	VAL	3.0
57	DA	1050	A	3.0
59	DF	131	VAL	3.0
29	DH	96	THR	3.0
35	DN	57	THR	3.0
3	CC	195	ILE	3.0
10	CJ	47	GLU	3.0
36	DO	5	SER	3.0

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Mol	Chain	Res	Type	RSRZ
39	DR	22	LEU	3.0
18	CR	50	TYR	3.0
39	DR	2	TYR	3.0
40	DS	8	ARG	3.0
20	CT	15	LYS	3.0
31	DJ	76	HIS	3.0
32	DK	67	LYS	3.0
35	DN	100	CYS	3.0
53	CA	1242	G	3.0
57	DA	187	G	3.0
57	DA	474	G	3.0
57	DA	859	G	3.0
57	DA	1475	G	3.0
24	DC	85	ASN	3.0
31	DJ	78	THR	3.0
44	BW	42	THR	3.0
20	CT	65	LEU	3.0
22	BA	1057	A	3.0
57	DA	794	A	3.0
57	DA	1365	A	3.0
28	DG	169	ARG	3.0
21	CU	51	ALA	3.0
55	CM	60	ALA	3.0
25	DD	159	LYS	3.0
57	DA	1870	C	3.0
29	DH	95	GLY	3.0
45	DX	35	HIS	3.0
10	AJ	35	GLN	3.0
20	CT	56	ILE	3.0
3	CC	42	LEU	2.9
55	CM	100	ARG	2.9
22	BA	2136	G	2.9
53	CA	1309	G	2.9
14	AN	18	LYS	2.9
14	CN	98	ALA	2.9
30	BI	2	LYS	2.9
30	DI	75	ALA	2.9
33	DL	70	LYS	2.9
42	DU	50	ALA	2.9
54	CG	45	ALA	2.9
55	CM	29	SER	2.9
57	DA	347	A	2.9

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Mol	Chain	Res	Type	RSRZ
3	CC	157	GLY	2.9
14	CN	10	VAL	2.9
28	DG	168	VAL	2.9
28	DG	38	ASP	2.9
29	BH	98	ASP	2.9
29	DH	92	GLY	2.9
42	DU	35	VAL	2.9
19	CS	73	PHE	2.9
22	BA	2150	C	2.9
57	DA	1607	C	2.9
34	DM	73	ILE	2.9
28	DG	19	ASN	2.9
9	AI	122	ARG	2.9
30	DI	79	LEU	2.9
42	DU	81	ARG	2.9
37	DP	62	LYS	2.9
42	DU	16	LYS	2.9
42	DU	91	LYS	2.9
45	DX	53	LYS	2.9
24	DC	60	ALA	2.9
41	DT	45	ALA	2.9
55	CM	24	VAL	2.9
52	D4	38	GLY	2.9
42	DU	95	PHE	2.9
57	DA	1202	G	2.9
57	DA	2157	G	2.9
2	CB	135	MET	2.9
29	DH	80	ILE	2.9
20	CT	78	LEU	2.9
41	DT	6	ARG	2.9
54	CG	3	ARG	2.9
33	DL	29	LYS	2.9
42	DU	26	ASN	2.9
26	DE	135	ALA	2.9
53	CA	1314	C	2.9
57	DA	1348	C	2.9
53	CA	121	U	2.9
53	CA	1321	U	2.9
29	BH	115	VAL	2.9
8	AH	81	GLY	2.9
33	DL	24	GLY	2.9
33	DL	31	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
40	DS	101	SER	2.9
50	D2	27	GLY	2.9
9	AI	97	LEU	2.9
32	BK	71	ARG	2.9
35	DN	113	ILE	2.9
41	DT	87	LEU	2.9
39	DR	24	LYS	2.9
6	AF	52	ASN	2.9
35	DN	11	ASN	2.9
35	DN	23	ASN	2.9
25	DD	168	GLU	2.9
29	BH	32	PRO	2.9
29	BH	73	ASN	2.9
53	CA	1323	G	2.9
57	DA	110	G	2.9
57	DA	476	G	2.9
57	DA	2725	A	2.9
22	BA	1781	U	2.9
22	BA	2155	U	2.9
22	BA	2585	U	2.9
25	DD	153	GLY	2.9
26	DE	103	GLY	2.9
33	DL	102	GLY	2.9
51	D3	63	TYR	2.9
57	DA	1708	C	2.9
57	DA	137	U	2.9
29	DH	27	ARG	2.9
40	DS	95	ARG	2.9
2	CB	113	LEU	2.9
14	CN	45	LEU	2.9
17	AQ	19	SER	2.9
39	DR	7	SER	2.9
42	DU	57	ILE	2.9
29	BH	112	LYS	2.9
3	AC	164	THR	2.9
14	CN	56	PRO	2.9
5	CE	59	ILE	2.9
22	BA	892	A	2.9
26	DE	95	LYS	2.9
39	DR	25	LEU	2.9
44	DW	67	LYS	2.9
57	DA	508	A	2.9

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Mol	Chain	Res	Type	RSRZ
57	DA	628	G	2.9
57	DA	1311	G	2.9
57	DA	1321	A	2.9
57	DA	1383	A	2.9
38	DQ	59	LEU	2.9
57	DA	1653	G	2.9
45	DX	34	SER	2.8
57	DA	61	C	2.8
57	DA	2151	U	2.8
57	DA	2321	U	2.8
20	CT	62	ALA	2.8
28	BG	55	ASP	2.8
30	DI	123	ALA	2.8
39	DR	28	ALA	2.8
41	DT	13	ALA	2.8
59	DF	83	PRO	2.8
3	CC	194	VAL	2.8
9	CI	30	ASN	2.8
11	CK	128	VAL	2.8
41	DT	63	VAL	2.8
36	DO	9	ARG	2.8
41	DT	12	ARG	2.8
41	DT	9	LYS	2.8
45	DX	9	LYS	2.8
9	CI	20	ILE	2.8
14	CN	47	LEU	2.8
30	DI	7	TYR	2.8
9	CI	127	SER	2.8
14	AN	31	SER	2.8
46	DY	25	GLN	2.8
30	BI	1	ALA	2.8
51	D3	36	ALA	2.8
57	DA	276	U	2.8
57	DA	549	G	2.8
57	DA	1538	G	2.8
15	CO	67	ASP	2.8
30	BI	111	THR	2.8
53	CA	330	C	2.8
12	CL	87	LYS	2.8
14	CN	42	ASN	2.8
25	DD	8	LYS	2.8
41	DT	40	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
42	DU	90	LYS	2.8
55	CM	104	ASN	2.8
24	DC	201	LEU	2.8
43	DV	42	LEU	2.8
59	DF	80	GLN	2.8
37	DP	71	ARG	2.8
55	CM	89	ARG	2.8
2	CB	27	LYS	2.8
12	AL	43	LYS	2.8
19	CS	78	THR	2.8
25	DD	131	ASP	2.8
25	DD	200	ASP	2.8
28	DG	50	THR	2.8
29	DH	7	ASP	2.8
38	DQ	96	ASP	2.8
42	DU	76	THR	2.8
53	CA	223	A	2.8
54	CG	139	ASP	2.8
57	DA	1272	A	2.8
1	AA	1286	U	2.8
13	AM	18	LEU	2.8
24	DC	104	LEU	2.8
37	DP	113	LEU	2.8
54	CG	119	LEU	2.8
57	DA	1078	U	2.8
57	DA	109	C	2.8
57	DA	326	G	2.8
57	DA	1332	G	2.8
57	DA	2150	C	2.8
29	DH	65	ALA	2.8
29	BH	97	ARG	2.8
19	AS	8	PRO	2.8
40	DS	12	SER	2.8
51	D3	18	LYS	2.8
51	D3	35	LYS	2.8
5	AE	114	LEU	2.8
21	CU	7	GLU	2.8
24	DC	251	THR	2.8
50	D2	10	LEU	2.8
26	DE	181	ILE	2.8
29	BH	86	ASP	2.8
52	D4	27	CYS	2.8

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Mol	Chain	Res	Type	RSRZ
25	DD	75	ALA	2.8
31	BJ	20	ALA	2.8
41	DT	38	ALA	2.8
50	D2	21	ARG	2.8
40	DS	48	LYS	2.8
45	DX	61	LYS	2.8
57	DA	105	C	2.8
57	DA	564	C	2.8
7	AG	1	PRO	2.8
49	D1	40	PRO	2.8
57	DA	329	G	2.8
14	CN	50	LEU	2.8
26	DE	197	GLU	2.8
26	DE	183	PHE	2.7
29	BH	47	PHE	2.7
35	DN	102	PHE	2.7
35	DN	1	MET	2.7
9	AI	106	ASP	2.7
30	DI	15	GLY	2.7
33	DL	34	GLY	2.7
55	CM	81	ASP	2.7
42	DU	68	ASN	2.7
3	CC	155	ARG	2.7
19	AS	36	ARG	2.7
44	BW	45	HIS	2.7
14	AN	22	LYS	2.7
21	CU	48	LYS	2.7
26	DE	201	ALA	2.7
24	BC	250	GLN	2.7
34	DM	135	VAL	2.7
53	CA	261	U	2.7
53	CA	456	A	2.7
55	CM	63	VAL	2.7
57	DA	502	A	2.7
57	DA	503	A	2.7
57	DA	1467	U	2.7
3	CC	36	PHE	2.7
10	CJ	66	GLU	2.7
35	DN	43	GLU	2.7
48	D0	17	SER	2.7
57	DA	281	C	2.7
57	DA	302	C	2.7

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Mol	Chain	Res	Type	RSRZ
8	CH	81	GLY	2.7
48	D0	34	GLY	2.7
22	BA	2148	G	2.7
57	DA	682	G	2.7
35	DN	30	ARG	2.7
30	BI	9	LYS	2.7
46	DY	27	ASN	2.7
46	DY	3	ALA	2.7
42	DU	10	VAL	2.7
45	DX	5	GLN	2.7
45	DX	50	VAL	2.7
8	CH	60	LEU	2.7
9	CI	117	LEU	2.7
11	CK	123	PRO	2.7
6	CF	8	PHE	2.7
10	CJ	76	ILE	2.7
57	DA	92	U	2.7
57	DA	448	U	2.7
57	DA	1559	U	2.7
57	DA	2491	U	2.7
21	CU	23	GLU	2.7
37	DP	101	GLU	2.7
41	DT	54	GLU	2.7
25	DD	110	THR	2.7
33	DL	43	GLY	2.7
57	DA	74	A	2.7
57	DA	443	A	2.7
57	DA	1302	A	2.7
57	DA	1583	A	2.7
44	DW	40	ARG	2.7
46	DY	48	ARG	2.7
50	D2	34	ARG	2.7
16	AP	80	LYS	2.7
19	CS	5	LYS	2.7
53	CA	95	C	2.7
57	DA	16	C	2.7
57	DA	2295	C	2.7
16	AP	81	ALA	2.7
41	DT	28	ASN	2.7
50	D2	20	ALA	2.7
14	AN	13	VAL	2.7
21	CU	52	VAL	2.7

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Mol	Chain	Res	Type	RSRZ
35	DN	48	VAL	2.7
49	D1	46	VAL	2.7
19	CS	70	LEU	2.7
35	DN	83	LEU	2.7
14	CN	3	GLN	2.7
39	DR	18	GLN	2.7
53	CA	953	G	2.7
57	DA	801	G	2.7
57	DA	2780	G	2.7
10	CJ	49	PHE	2.7
26	DE	77	ILE	2.7
34	DM	9	PHE	2.7
46	DY	26	PHE	2.7
49	D1	47	ILE	2.7
33	DL	67	THR	2.7
15	CO	3	SER	2.7
15	CO	47	LYS	2.7
55	CM	101	THR	2.7
28	BG	1	SER	2.7
33	DL	12	SER	2.7
57	DA	1077	A	2.7
9	AI	43	ALA	2.7
30	DI	13	ALA	2.7
3	CC	90	VAL	2.7
40	DS	46	LEU	2.7
41	BT	70	HIS	2.7
18	AR	20	ILE	2.7
26	DE	41	GLN	2.7
33	DL	103	ILE	2.7
36	DO	61	GLN	2.7
57	DA	318	C	2.7
57	DA	1052	C	2.7
57	DA	1161	C	2.7
2	AB	29	PHE	2.7
19	CS	9	PHE	2.7
10	CJ	48	ARG	2.7
35	DN	17	ARG	2.7
20	CT	70	LYS	2.7
29	BH	114	GLU	2.7
32	DK	81	GLY	2.7
24	DC	222	THR	2.7
53	CA	220	G	2.7

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Mol	Chain	Res	Type	RSRZ
57	DA	245	G	2.7
57	DA	619	G	2.7
7	AG	149	ALA	2.7
14	AN	16	ALA	2.7
25	DD	196	ALA	2.7
14	CN	73	LEU	2.7
41	DT	53	VAL	2.7
53	CA	208	U	2.7
53	CA	1148	U	2.7
55	CM	88	LEU	2.7
57	DA	12	U	2.7
57	DA	1224	U	2.7
57	DA	2629	U	2.7
13	AM	11	HIS	2.7
44	DW	55	ASP	2.7
20	CT	69	ASN	2.7
26	DE	97	ASN	2.7
30	BI	18	ASN	2.7
17	AQ	4	ILE	2.6
8	CH	2	MET	2.6
9	AI	126	PHE	2.6
53	CA	197	A	2.6
57	DA	391	A	2.6
57	DA	861	A	2.6
21	AU	34	ARG	2.6
38	DQ	50	ARG	2.6
31	DJ	2	LYS	2.6
57	DA	584	C	2.6
57	DA	1118	C	2.6
57	DA	1615	C	2.6
57	DA	1644	C	2.6
57	DA	2146	C	2.6
4	AD	4	LEU	2.6
9	CI	62	LEU	2.6
14	AN	50	LEU	2.6
24	DC	30	ALA	2.6
24	DC	37	SER	2.6
25	DD	24	VAL	2.6
25	DD	142	VAL	2.6
28	DG	8	VAL	2.6
29	DH	142	VAL	2.6
34	DM	56	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
40	DS	93	ALA	2.6
2	CB	185	ILE	2.6
26	DE	91	ASP	2.6
29	BH	99	ILE	2.6
42	DU	64	ILE	2.6
6	AF	62	MET	2.6
14	AN	51	PRO	2.6
53	CA	1270	G	2.6
57	DA	285	G	2.6
57	DA	287	G	2.6
57	DA	291	G	2.6
57	DA	327	G	2.6
57	DA	775	G	2.6
57	DA	1051	G	2.6
57	DA	2341	G	2.6
3	CC	40	GLN	2.6
20	CT	32	LYS	2.6
20	CT	60	GLN	2.6
30	DI	2	LYS	2.6
39	DR	77	PHE	2.6
42	DU	23	LYS	2.6
52	D4	13	ASN	2.6
57	DA	803	U	2.6
4	AD	23	GLY	2.6
51	D3	8	GLY	2.6
53	CA	468	A	2.6
57	DA	1156	A	2.6
57	DA	1548	A	2.6
57	DA	1614	A	2.6
8	CH	54	THR	2.6
21	AU	27	VAL	2.6
24	DC	175	LEU	2.6
29	DH	100	ALA	2.6
30	DI	52	LEU	2.6
53	CA	225	C	2.6
57	DA	357	C	2.6
57	DA	671	C	2.6
57	DA	1030	C	2.6
57	DA	2047	C	2.6
57	DA	2507	C	2.6
58	DB	110	C	2.6
9	CI	17	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
25	DD	59	ARG	2.6
40	DS	60	HIS	2.6
26	DE	129	PRO	2.6
39	DR	26	ASP	2.6
12	CL	4	ASN	2.6
25	DD	185	ASN	2.6
50	D2	13	ASN	2.6
24	BC	234	GLY	2.6
41	DT	75	GLY	2.6
1	AA	88	U	2.6
22	BA	2139	U	2.6
53	CA	219	U	2.6
57	DA	2401	U	2.6
53	CA	1241	G	2.6
57	DA	830	G	2.6
57	DA	974	G	2.6
57	DA	1300	G	2.6
57	DA	2599	G	2.6
25	DD	4	LEU	2.6
2	CB	186	VAL	2.6
4	CD	36	ALA	2.6
5	CE	117	ALA	2.6
28	DG	173	ALA	2.6
35	DN	47	VAL	2.6
39	DR	47	VAL	2.6
19	CS	69	LYS	2.6
47	DZ	29	ARG	2.6
53	CA	101	A	2.6
26	DE	75	SER	2.6
30	BI	116	MET	2.6
30	BI	73	PRO	2.6
50	D2	18	PHE	2.6
57	DA	11	C	2.6
57	DA	268	C	2.6
57	DA	1330	C	2.6
57	DA	2676	C	2.6
37	DP	65	ASN	2.6
5	CE	115	GLU	2.6
9	AI	62	LEU	2.6
11	CK	99	LEU	2.6
33	BL	115	GLU	2.6
34	DM	119	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
43	DV	69	GLU	2.6
46	DY	8	GLU	2.6
10	CJ	51	VAL	2.6
40	DS	83	LYS	2.6
10	CJ	6	ILE	2.6
14	CN	19	TYR	2.6
20	CT	30	PHE	2.6
22	BA	1087	G	2.6
41	DT	51	PHE	2.6
53	CA	134	G	2.6
57	DA	1449	G	2.6
21	CU	40	PRO	2.6
57	DA	294	A	2.6
57	DA	477	A	2.6
57	DA	975	A	2.6
26	DE	42	GLY	2.6
42	DU	31	GLY	2.6
29	DH	90	LEU	2.6
41	DT	93	LEU	2.6
9	AI	18	VAL	2.6
9	CI	121	ARG	2.6
26	DE	69	ARG	2.6
29	BH	134	VAL	2.6
40	DS	47	VAL	2.6
57	DA	210	C	2.6
57	DA	2313	C	2.6
29	DH	106	ALA	2.6
36	DO	3	LYS	2.6
55	CM	102	LYS	2.6
2	CB	103	TRP	2.5
10	CJ	25	ILE	2.5
55	CM	52	ILE	2.5
19	AS	60	PHE	2.5
24	DC	29	PHE	2.5
35	DN	112	TYR	2.5
57	DA	2622	U	2.5
36	BO	98	GLN	2.5
44	DW	72	GLY	2.5
45	DX	32	LEU	2.5
50	D2	42	LEU	2.5
54	CG	123	LEU	2.5
3	CC	172	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
9	CI	129	ARG	2.5
17	CQ	28	VAL	2.5
19	CS	80	ARG	2.5
26	DE	168	ASP	2.5
2	AB	11	ALA	2.5
26	DE	144	GLU	2.5
30	BI	77	VAL	2.5
41	BT	54	GLU	2.5
54	CG	72	VAL	2.5
57	DA	438	G	2.5
35	DN	77	ALA	2.5
38	DQ	85	ALA	2.5
55	CM	34	ALA	2.5
57	DA	63	A	2.5
57	DA	2154	A	2.5
57	DA	2211	A	2.5
33	DL	74	THR	2.5
49	D1	4	ILE	2.5
46	DY	30	MET	2.5
57	DA	1771	C	2.5
58	DB	88	C	2.5
2	CB	21	TYR	2.5
18	CR	73	HIS	2.5
30	BI	55	PRO	2.5
43	DV	84	PRO	2.5
4	AD	35	GLN	2.5
6	AF	68	GLN	2.5
22	BA	1094	U	2.5
26	DE	46	GLN	2.5
35	DN	26	GLY	2.5
57	DA	1460	U	2.5
21	CU	46	ARG	2.5
26	DE	40	ARG	2.5
46	DY	54	LYS	2.5
50	D2	14	ARG	2.5
51	D3	57	VAL	2.5
7	AG	96	ASN	2.5
30	BI	109	ALA	2.5
35	DN	73	ASN	2.5
31	BJ	142	ILE	2.5
21	AU	42	THR	2.5
25	DD	25	THR	2.5

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Mol	Chain	Res	Type	RSRZ
29	DH	104	THR	2.5
9	AI	38	PHE	2.5
35	DN	21	PHE	2.5
56	CP	39	PHE	2.5
57	DA	428	A	2.5
57	DA	2298	A	2.5
1	AA	86	G	2.5
53	CA	94	G	2.5
57	DA	107	G	2.5
57	DA	376	G	2.5
57	DA	467	G	2.5
57	DA	1248	G	2.5
57	DA	1271	G	2.5
57	DA	1731	G	2.5
24	DC	226	PRO	2.5
25	DD	143	PRO	2.5
14	CN	15	LEU	2.5
25	DD	128	ARG	2.5
29	BH	62	LEU	2.5
30	DI	9	LYS	2.5
30	DI	105	LEU	2.5
38	DQ	18	LYS	2.5
39	DR	48	LYS	2.5
42	DU	43	LYS	2.5
57	DA	426	C	2.5
57	DA	796	C	2.5
57	DA	1049	C	2.5
57	DA	1167	C	2.5
57	DA	2827	C	2.5
19	AS	55	GLN	2.5
46	DY	36	GLN	2.5
42	DU	92	VAL	2.5
44	DW	70	VAL	2.5
37	DP	8	GLU	2.5
57	DA	431	U	2.5
42	DU	98	ASN	2.5
55	CM	32	ILE	2.5
24	DC	180	MET	2.5
45	DX	55	MET	2.5
2	CB	101	THR	2.5
24	DC	247	TRP	2.5
26	DE	78	TRP	2.5

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Mol	Chain	Res	Type	RSRZ
26	DE	173	THR	2.5
29	DH	38	PRO	2.5
33	DL	62	PRO	2.5
25	DD	187	LEU	2.5
30	BI	79	LEU	2.5
30	BI	81	LYS	2.5
46	DY	56	LEU	2.5
50	D2	46	LYS	2.5
55	CM	61	LYS	2.5
10	AJ	33	GLY	2.5
19	CS	7	GLY	2.5
31	DJ	115	GLY	2.5
57	DA	218	A	2.5
57	DA	504	A	2.5
57	DA	911	A	2.5
57	DA	972	A	2.5
57	DA	1214	A	2.5
57	DA	1597	A	2.5
57	DA	2147	A	2.5
12	AL	15	VAL	2.5
14	AN	10	VAL	2.5
25	BD	92	VAL	2.5
42	DU	66	VAL	2.5
46	DY	53	VAL	2.5
2	CB	146	SER	2.5
20	AT	6	ALA	2.5
30	BI	119	ALA	2.5
35	DN	111	ALA	2.5
40	DS	81	SER	2.5
42	DU	75	ALA	2.5
57	DA	277	G	2.5
57	DA	784	G	2.5
57	DA	1022	G	2.5
57	DA	1185	G	2.5
57	DA	2382	G	2.5
9	AI	71	ILE	2.5
17	CQ	79	GLU	2.5
46	BY	1	MET	2.5
57	DA	183	C	2.5
57	DA	1305	C	2.5
6	CF	52	ASN	2.5
14	CN	34	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
28	DG	72	ASN	2.5
30	BI	66	PHE	2.5
37	DP	114	ASN	2.5
40	DS	62	ASP	2.5
2	CB	19	THR	2.5
41	DT	80	TRP	2.5
57	DA	392	U	2.5
57	DA	511	U	2.5
57	DA	913	U	2.5
57	DA	1018	U	2.5
57	DA	1440	U	2.5
4	AD	205	LYS	2.5
39	DR	13	ARG	2.5
49	D1	9	LYS	2.5
12	CL	80	LEU	2.5
26	DE	157	LEU	2.5
49	D1	33	LEU	2.5
51	D3	54	LEU	2.5
54	CG	4	ARG	2.5
5	CE	90	GLY	2.5
12	CL	67	GLY	2.5
29	BH	85	GLY	2.5
45	DX	8	GLY	2.5
28	DG	42	VAL	2.5
33	DL	116	VAL	2.5
9	CI	43	ALA	2.4
41	BT	2	ILE	2.4
2	CB	117	GLU	2.4
26	DE	155	GLU	2.4
39	DR	70	GLU	2.4
57	DA	278	A	2.4
57	DA	354	A	2.4
57	DA	1528	A	2.4
57	DA	1655	A	2.4
57	DA	1938	A	2.4
57	DA	2679	A	2.4
2	AB	193	ASP	2.4
10	CJ	7	ARG	2.4
20	AT	15	LYS	2.4
35	DN	13	ASN	2.4
42	DU	3	LYS	2.4
2	AB	67	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
12	CL	6	LEU	2.4
22	BA	2144	G	2.4
30	BI	70	THR	2.4
41	DT	29	THR	2.4
53	CA	984	C	2.4
54	CG	29	LEU	2.4
57	DA	295	G	2.4
57	DA	316	C	2.4
57	DA	388	G	2.4
57	DA	770	G	2.4
57	DA	1124	G	2.4
57	DA	1238	G	2.4
57	DA	1288	G	2.4
57	DA	1381	G	2.4
57	DA	1623	G	2.4
57	DA	441	U	2.4
57	DA	1273	U	2.4
57	DA	2149	U	2.4
2	CB	32	GLY	2.4
4	CD	124	VAL	2.4
29	DH	37	VAL	2.4
42	DU	37	GLY	2.4
39	DR	3	ALA	2.4
47	DZ	12	ALA	2.4
40	DS	82	MET	2.4
9	AI	111	GLU	2.4
26	DE	10	SER	2.4
36	DO	52	SER	2.4
41	DT	4	GLU	2.4
26	DE	23	PHE	2.4
28	DG	51	PHE	2.4
4	AD	62	ARG	2.4
12	AL	14	LYS	2.4
24	DC	269	ARG	2.4
30	DI	50	LYS	2.4
33	DL	13	LYS	2.4
54	CG	113	LYS	2.4
10	CJ	44	THR	2.4
11	CK	118	ASN	2.4
30	DI	22	PRO	2.4
30	DI	74	PRO	2.4
57	DA	1287	A	2.4

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Mol	Chain	Res	Type	RSRZ
57	DA	2060	A	2.4
24	DC	219	VAL	2.4
26	DE	33	VAL	2.4
26	DE	169	VAL	2.4
30	DI	8	VAL	2.4
55	CM	93	GLY	2.4
30	BI	82	ALA	2.4
40	DS	54	ALA	2.4
57	DA	1600	C	2.4
57	DA	2001	C	2.4
1	AA	209	U	2.4
22	BA	1071	G	2.4
53	CA	260	G	2.4
53	CA	954	G	2.4
57	DA	437	U	2.4
57	DA	518	G	2.4
57	DA	559	G	2.4
57	DA	566	U	2.4
57	DA	1116	G	2.4
57	DA	1266	G	2.4
25	DD	38	LYS	2.4
25	DD	154	LYS	2.4
33	DL	36	LYS	2.4
35	DN	40	LYS	2.4
41	DT	44	LYS	2.4
48	D0	36	LYS	2.4
31	DJ	9	GLU	2.4
37	DP	73	PHE	2.4
55	CM	69	ARG	2.4
3	CC	108	PRO	2.4
28	BG	83	THR	2.4
28	DG	83	THR	2.4
29	DH	125	THR	2.4
19	CS	63	ASP	2.4
55	CM	41	ASP	2.4
59	DF	30	VAL	2.4
5	CE	118	GLY	2.4
18	AR	50	TYR	2.4
25	DD	135	GLY	2.4
29	DH	128	HIS	2.4
33	DL	11	GLY	2.4
40	DS	9	HIS	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	1534	A	2.4
13	AM	16	ILE	2.4
20	CT	40	ALA	2.4
25	DD	146	ILE	2.4
38	DQ	39	ILE	2.4
46	BY	3	ALA	2.4
54	CG	38	ALA	2.4
53	CA	263	A	2.4
57	DA	265	A	2.4
57	DA	483	A	2.4
57	DA	1274	A	2.4
5	CE	85	LYS	2.4
17	AQ	5	ARG	2.4
44	DW	13	ARG	2.4
24	DC	265	PHE	2.4
10	AJ	87	LEU	2.4
29	BH	87	GLU	2.4
57	DA	385	C	2.4
57	DA	510	C	2.4
57	DA	932	U	2.4
57	DA	1033	U	2.4
57	DA	1967	C	2.4
57	DA	2678	C	2.4
57	DA	2238	G	2.4
57	DA	2319	G	2.4
57	DA	2677	G	2.4
26	DE	96	VAL	2.4
29	DH	40	THR	2.4
30	DI	77	VAL	2.4
42	DU	101	THR	2.4
50	D2	9	VAL	2.4
3	AC	1	GLY	2.4
34	DM	83	GLY	2.4
3	CC	192	TYR	2.4
19	CS	48	ILE	2.4
28	DG	57	TYR	2.4
43	DV	22	ALA	2.4
44	DW	48	ALA	2.4
47	DZ	13	ILE	2.4
54	CG	6	ILE	2.4
29	DH	89	LYS	2.4
41	DT	82	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
15	CO	57	ARG	2.4
50	D2	22	MET	2.4
10	AJ	49	PHE	2.4
44	DW	44	PHE	2.4
26	DE	143	LEU	2.4
41	BT	93	LEU	2.4
57	DA	532	A	2.4
57	DA	933	A	2.4
41	DT	21	SER	2.4
11	AK	128	VAL	2.4
22	BA	1180	U	2.4
22	BA	2149	U	2.4
29	DH	21	VAL	2.4
53	CA	1086	U	2.4
24	DC	11	GLY	2.3
26	DE	17	THR	2.3
57	DA	2606	C	2.3
9	AI	27	ILE	2.3
9	CI	120	ALA	2.3
17	CQ	4	ILE	2.3
21	CU	45	LYS	2.3
25	DD	31	ALA	2.3
25	DD	123	LYS	2.3
26	DE	45	ALA	2.3
33	DL	113	ALA	2.3
33	DL	138	ALA	2.3
38	DQ	93	ILE	2.3
45	DX	25	LYS	2.3
55	CM	13	HIS	2.3
39	DR	55	ASP	2.3
40	DS	34	ASP	2.3
55	CM	57	ASP	2.3
57	DA	953	G	2.3
57	DA	1277	G	2.3
57	DA	1627	G	2.3
57	DA	2250	G	2.3
57	DA	2621	G	2.3
57	DA	2697	G	2.3
9	AI	49	GLN	2.3
25	DD	130	GLN	2.3
33	DL	66	PHE	2.3
38	DQ	43	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
55	CM	62	PHE	2.3
7	AG	145	GLU	2.3
25	BD	73	VAL	2.3
29	DH	9	VAL	2.3
49	D1	41	VAL	2.3
14	CN	99	SER	2.3
2	CB	173	LYS	2.3
14	CN	100	TRP	2.3
41	DT	78	SER	2.3
42	DU	99	SER	2.3
24	DC	264	LYS	2.3
30	BI	117	THR	2.3
33	DL	63	LYS	2.3
57	DA	654	A	2.3
57	DA	945	A	2.3
57	DA	1247	A	2.3
57	DA	1307	A	2.3
57	DA	1353	A	2.3
57	DA	1525	A	2.3
57	DA	1744	A	2.3
4	AD	26	ALA	2.3
9	AI	20	ILE	2.3
9	AI	123	ARG	2.3
10	CJ	100	ILE	2.3
25	DD	209	ALA	2.3
26	DE	36	ALA	2.3
30	DI	58	ILE	2.3
34	DM	81	ARG	2.3
26	DE	165	HIS	2.3
38	DQ	41	ALA	2.3
44	BW	36	ILE	2.3
50	D2	23	ALA	2.3
55	CM	6	ILE	2.3
35	DN	107	ASN	2.3
41	BT	24	MET	2.3
57	DA	267	C	2.3
57	DA	531	C	2.3
57	DA	2573	C	2.3
30	BI	11	GLN	2.3
30	DI	11	GLN	2.3
24	DC	179	GLU	2.3
9	CI	18	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
22	BA	2133	G	2.3
50	D2	30	VAL	2.3
53	CA	111	G	2.3
53	CA	942	G	2.3
57	DA	776	G	2.3
57	DA	1236	G	2.3
57	DA	2597	G	2.3
2	CB	94	ARG	2.3
10	CJ	9	ARG	2.3
10	CJ	62	ARG	2.3
14	CN	69	PRO	2.3
30	DI	53	PRO	2.3
34	DM	77	PRO	2.3
52	D4	4	ARG	2.3
14	AN	29	ILE	2.3
33	DL	49	GLY	2.3
11	AK	72	ALA	2.3
14	CN	54	SER	2.3
15	CO	1	SER	2.3
19	CS	71	GLY	2.3
24	DC	103	ILE	2.3
26	DE	182	ALA	2.3
30	BI	20	SER	2.3
33	DL	134	ALA	2.3
42	DU	63	ALA	2.3
47	DZ	11	SER	2.3
48	D0	8	THR	2.3
50	D2	45	SER	2.3
30	BI	16	MET	2.3
35	DN	98	LEU	2.3
46	DY	28	LEU	2.3
57	DA	529	A	2.3
57	DA	1254	A	2.3
57	DA	1522	A	2.3
57	DA	1772	A	2.3
1	AA	842	U	2.3
48	D0	3	GLN	2.3
57	DA	1409	U	2.3
4	CD	34	GLU	2.3
46	BY	24	GLU	2.3
46	DY	12	GLU	2.3
45	DX	6	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
53	CA	136	C	2.3
53	CA	848	C	2.3
57	DA	130	C	2.3
57	DA	440	C	2.3
57	DA	673	C	2.3
57	DA	786	C	2.3
57	DA	995	C	2.3
57	DA	2300	C	2.3
57	DA	2347	C	2.3
57	DA	2498	C	2.3
32	DK	49	ARG	2.3
34	DM	38	ARG	2.3
2	CB	30	ILE	2.3
3	CC	154	GLY	2.3
11	AK	103	GLY	2.3
28	DG	140	ILE	2.3
24	DC	223	ALA	2.3
30	BI	26	ALA	2.3
34	DM	121	ALA	2.3
36	DO	23	ALA	2.3
40	DS	5	ALA	2.3
44	DW	8	SER	2.3
33	DL	79	LEU	2.3
35	DN	28	LEU	2.3
2	AB	21	TYR	2.3
57	DA	1225	G	2.3
57	DA	1529	G	2.3
57	DA	2444	G	2.3
57	DA	2618	G	2.3
57	DA	2828	G	2.3
57	DA	2885	G	2.3
59	DF	19	PHE	2.3
19	AS	63	ASP	2.3
20	AT	12	GLN	2.3
30	DI	5	GLN	2.3
17	CQ	38	LYS	2.3
24	DC	17	LYS	2.3
33	DL	14	LYS	2.3
51	D3	11	LYS	2.3
10	CJ	45	ARG	2.3
14	CN	60	ARG	2.3
25	DD	5	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
28	DG	68	ARG	2.3
29	DH	87	GLU	2.3
37	DP	67	GLU	2.3
53	CA	958	A	2.3
53	CA	1219	A	2.3
57	DA	466	A	2.3
57	DA	78	U	2.3
10	AJ	8	ILE	2.3
29	BH	72	ILE	2.3
2	AB	149	GLY	2.3
12	CL	12	ALA	2.3
14	CN	16	ALA	2.3
24	DC	54	GLY	2.3
24	DC	208	GLY	2.3
29	BH	74	ALA	2.3
57	DA	341	C	2.3
57	DA	1582	C	2.3
41	DT	61	LEU	2.3
2	CB	167	HIS	2.3
42	DU	44	HIS	2.3
17	AQ	13	SER	2.3
54	CG	44	SER	2.3
16	AP	17	TYR	2.3
9	CI	119	LYS	2.3
32	DK	82	ASN	2.3
44	BW	75	ASN	2.3
40	DS	84	ARG	2.3
42	DU	93	ARG	2.3
26	DE	196	VAL	2.3
29	BH	108	VAL	2.3
31	DJ	17	VAL	2.3
37	BP	111	GLU	2.2
53	CA	204	G	2.2
53	CA	1310	G	2.2
57	DA	68	G	2.2
57	DA	1450	G	2.2
57	DA	2360	G	2.2
6	CF	22	ILE	2.2
9	CI	27	ILE	2.2
37	DP	4	ILE	2.2
59	DF	153	ILE	2.2
14	AN	28	ALA	2.2

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Mol	Chain	Res	Type	RSRZ
19	AS	7	GLY	2.2
40	DS	26	GLY	2.2
48	D0	7	PRO	2.2
26	DE	199	MET	2.2
27	BF	129	MET	2.2
1	AA	81	A	2.2
1	AA	412	A	2.2
10	CJ	42	LEU	2.2
45	DX	29	LEU	2.2
28	DG	61	TRP	2.2
53	CA	1036	A	2.2
57	DA	104	A	2.2
57	DA	221	A	2.2
5	AE	49	TYR	2.2
34	DM	8	LYS	2.2
34	DM	84	LYS	2.2
12	AL	8	ARG	2.2
57	DA	246	C	2.2
57	DA	484	C	2.2
57	DA	679	C	2.2
10	CJ	58	ASN	2.2
12	CL	7	VAL	2.2
13	AM	104	ASN	2.2
24	DC	196	ASN	2.2
38	DQ	51	GLN	2.2
14	AN	53	ASP	2.2
26	DE	51	GLU	2.2
28	DG	172	GLU	2.2
4	AD	27	ILE	2.2
29	DH	94	ILE	2.2
30	BI	108	ILE	2.2
2	AB	84	LEU	2.2
2	CB	99	MET	2.2
4	AD	192	ALA	2.2
6	CF	74	LEU	2.2
9	CI	68	GLY	2.2
25	DD	158	GLY	2.2
29	DH	39	ALA	2.2
34	DM	52	ALA	2.2
36	DO	32	PRO	2.2
38	DQ	37	ALA	2.2
41	DT	71	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
51	D3	52	GLY	2.2
26	DE	158	PHE	2.2
30	DI	66	PHE	2.2
39	DR	82	HIS	2.2
41	DT	49	LYS	2.2
42	BU	86	PHE	2.2
1	AA	1305	G	2.2
9	CI	83	THR	2.2
22	BA	549	G	2.2
22	BA	2140	G	2.2
30	BI	67	THR	2.2
33	DL	5	THR	2.2
53	CA	230	G	2.2
56	CP	66	THR	2.2
57	DA	88	G	2.2
57	DA	338	G	2.2
57	DA	380	G	2.2
57	DA	561	G	2.2
57	DA	583	G	2.2
57	DA	2032	G	2.2
33	DL	78	ARG	2.2
38	DQ	2	ARG	2.2
45	DX	36	ARG	2.2
51	D3	29	ARG	2.2
57	DA	1258	U	2.2
57	DA	2296	U	2.2
12	CL	18	SER	2.2
30	BI	127	SER	2.2
33	DL	25	SER	2.2
57	DA	2448	A	2.2
21	CU	31	VAL	2.2
33	DL	127	VAL	2.2
46	DY	11	VAL	2.2
3	AC	99	GLN	2.2
29	DH	133	GLN	2.2
12	CL	19	ASN	2.2
31	DJ	31	GLU	2.2
38	DQ	16	ILE	2.2
47	DZ	47	ILE	2.2
14	AN	17	ASP	2.2
12	CL	68	GLY	2.2
25	DD	175	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
30	BI	105	LEU	2.2
36	DO	2	ASP	2.2
53	CA	183	C	2.2
57	DA	41	C	2.2
57	DA	2179	C	2.2
41	DT	90	GLY	2.2
41	DT	81	LYS	2.2
19	CS	77	ARG	2.2
38	DQ	54	ARG	2.2
46	DY	47	ARG	2.2
19	AS	32	THR	2.2
19	CS	13	HIS	2.2
5	CE	17	VAL	2.2
20	CT	5	SER	2.2
50	D2	15	SER	2.2
40	DS	24	ILE	2.2
55	CM	3	ILE	2.2
56	CP	33	ILE	2.2
26	DE	163	ASN	2.2
53	CA	79	G	2.2
53	CA	201	G	2.2
53	CA	211	G	2.2
53	CA	1276	G	2.2
54	CG	105	GLU	2.2
57	DA	675	A	2.2
57	DA	1245	G	2.2
57	DA	1252	G	2.2
57	DA	1292	G	2.2
57	DA	1299	G	2.2
57	DA	1642	G	2.2
57	DA	1935	G	2.2
57	DA	2107	G	2.2
57	DA	2140	G	2.2
57	DA	2267	A	2.2
57	DA	2711	A	2.2
57	DA	2775	G	2.2
28	DG	104	LEU	2.2
57	DA	2820	A	2.2
5	CE	107	GLY	2.2
17	CQ	9	GLY	2.2
20	CT	86	ALA	2.2
24	DC	221	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
30	DI	76	ALA	2.2
54	CG	54	GLY	2.2
20	AT	42	ASP	2.2
35	DN	56	LYS	2.2
35	DN	99	LYS	2.2
42	DU	7	ASP	2.2
42	DU	17	ASP	2.2
59	DF	68	LYS	2.2
2	AB	94	ARG	2.2
9	CI	118	ARG	2.2
11	CK	126	ARG	2.2
46	DY	23	ARG	2.2
53	CA	135	C	2.2
57	DA	378	C	2.2
57	DA	1625	C	2.2
31	DJ	40	HIS	2.2
3	CC	41	TYR	2.2
52	D4	3	VAL	2.2
24	DC	59	GLN	2.2
28	DG	1	SER	2.2
31	DJ	136	GLN	2.2
35	DN	15	SER	2.2
48	D0	28	SER	2.2
19	AS	12	LEU	2.2
2	CB	25	LYS	2.2
4	CD	82	LYS	2.2
5	CE	145	ASN	2.2
13	AM	17	ALA	2.2
26	DE	160	ALA	2.2
30	BI	107	GLU	2.2
31	BJ	9	GLU	2.2
33	DL	97	ALA	2.2
9	AI	70	GLY	2.2
14	AN	11	LYS	2.2
38	DQ	114	ALA	2.2
44	DW	46	ALA	2.2
22	BA	2137	U	2.2
30	BI	22	PRO	2.2
44	DW	53	GLY	2.2
46	DY	60	LYS	2.2
53	CA	610	U	2.2
57	DA	290	U	2.2

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Mol	Chain	Res	Type	RSRZ
57	DA	919	U	2.2
58	DB	89	U	2.2
12	CL	8	ARG	2.2
9	AI	61	ASP	2.2
15	CO	42	PHE	2.2
57	DA	613	A	2.2
57	DA	670	A	2.2
57	DA	877	A	2.2
57	DA	910	A	2.2
57	DA	1089	A	2.2
57	DA	1213	A	2.2
57	DA	2005	A	2.2
1	AA	1032	G	2.2
57	DA	1	G	2.2
57	DA	15	G	2.2
57	DA	81	G	2.2
57	DA	186	G	2.2
57	DA	315	G	2.2
57	DA	638	G	2.2
57	DA	1660	G	2.2
57	DA	2409	G	2.2
24	DC	231	HIS	2.2
46	DY	41	HIS	2.2
6	CF	89	VAL	2.1
24	DC	227	VAL	2.1
25	DD	91	THR	2.1
34	DM	36	VAL	2.1
36	DO	103	VAL	2.1
44	DW	57	THR	2.1
48	D0	32	THR	2.1
24	DC	102	TYR	2.1
10	AJ	76	ILE	2.1
25	DD	2	ILE	2.1
30	DI	128	ILE	2.1
31	DJ	142	ILE	2.1
53	CA	316	C	2.1
57	DA	455	C	2.1
57	DA	1706	C	2.1
57	DA	2723	C	2.1
58	DB	19	C	2.1
28	BG	116	LEU	2.1
36	DO	26	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
20	AT	7	LYS	2.1
25	DD	97	SER	2.1
31	DJ	12	LYS	2.1
54	CG	109	LYS	2.1
30	DI	107	GLU	2.1
32	DK	4	GLU	2.1
10	CJ	43	PRO	2.1
21	CU	6	ARG	2.1
42	DU	21	ARG	2.1
50	D2	19	ARG	2.1
59	DF	29	ARG	2.1
50	D2	5	PHE	2.1
22	BA	790	U	2.1
22	BA	884	U	2.1
53	CA	1212	U	2.1
57	DA	50	U	2.1
57	DA	615	U	2.1
57	DA	2393	U	2.1
2	AB	220	VAL	2.1
25	DD	125	TRP	2.1
31	DJ	11	VAL	2.1
31	DJ	10	THR	2.1
1	AA	1441	A	2.1
4	CD	122	ILE	2.1
22	BA	2602	A	2.1
27	BF	155	ILE	2.1
41	DT	74	ILE	2.1
57	DA	28	A	2.1
57	DA	332	A	2.1
57	DA	941	A	2.1
57	DA	1570	A	2.1
57	DA	1634	A	2.1
57	DA	2134	A	2.1
10	AJ	59	LYS	2.1
26	DE	12	LEU	2.1
36	DO	4	LYS	2.1
22	BA	2110	G	2.1
26	DE	9	GLN	2.1
3	AC	159	ALA	2.1
6	AF	91	ARG	2.1
10	AJ	37	ARG	2.1
12	AL	82	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
12	CL	11	ARG	2.1
57	DA	379	G	2.1
57	DA	396	G	2.1
57	DA	674	G	2.1
57	DA	1573	G	2.1
57	DA	1753	G	2.1
57	DA	2742	G	2.1
13	AM	1	ALA	2.1
14	CN	14	ALA	2.1
24	DC	105	ALA	2.1
34	DM	122	ALA	2.1
10	CJ	101	SER	2.1
22	BA	2145	C	2.1
26	DE	89	PRO	2.1
26	DE	198	GLU	2.1
39	DR	45	GLU	2.1
40	DS	59	GLU	2.1
53	CA	1317	C	2.1
57	DA	128	C	2.1
57	DA	565	C	2.1
57	DA	816	C	2.1
57	DA	2512	C	2.1
20	CT	2	ASN	2.1
17	CQ	72	TRP	2.1
42	DU	27	VAL	2.1
42	DU	48	VAL	2.1
45	DX	4	CYS	2.1
55	CM	84	CYS	2.1
24	DC	57	HIS	2.1
3	CC	43	THR	2.1
8	CH	45	ILE	2.1
13	AM	32	ILE	2.1
14	CN	29	ILE	2.1
27	BF	71	LYS	2.1
30	BI	7	TYR	2.1
38	DQ	53	LYS	2.1
42	BU	78	LYS	2.1
55	CM	72	ILE	2.1
57	DA	288	U	2.1
57	DA	2299	U	2.1
57	DA	2713	U	2.1
10	AJ	62	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
12	CL	22	ALA	2.1
20	CT	44	ALA	2.1
25	BD	209	ALA	2.1
25	DD	65	ALA	2.1
38	DQ	19	GLN	2.1
44	DW	39	GLN	2.1
56	CP	65	ALA	2.1
4	AD	87	GLU	2.1
15	CO	40	GLY	2.1
25	DD	194	PRO	2.1
29	DH	149	GLU	2.1
53	CA	983	A	2.1
56	CP	64	GLY	2.1
57	DA	95	A	2.1
57	DA	213	A	2.1
57	DA	1269	A	2.1
57	DA	1569	A	2.1
57	DA	1626	A	2.1
57	DA	2392	A	2.1
59	DF	130	GLY	2.1
37	BP	1	SER	2.1
15	AO	19	ASN	2.1
57	DA	51	G	2.1
57	DA	424	G	2.1
57	DA	1355	G	2.1
57	DA	1492	G	2.1
57	DA	2083	G	2.1
57	DA	2110	G	2.1
57	DA	2383	G	2.1
22	BA	1092	C	2.1
53	CA	381	C	2.1
53	CA	1223	C	2.1
57	DA	275	C	2.1
57	DA	337	C	2.1
2	CB	115	ASP	2.1
11	AK	124	LYS	2.1
3	AC	161	ILE	2.1
9	AI	53	LEU	2.1
10	CJ	90	LEU	2.1
19	CS	12	LEU	2.1
26	DE	171	ASP	2.1
30	DI	120	ASP	2.1

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Mol	Chain	Res	Type	RSRZ
31	DJ	47	HIS	2.1
33	DL	39	LYS	2.1
34	DM	70	ASP	2.1
40	DS	42	LYS	2.1
48	D0	11	LYS	2.1
44	DW	36	ILE	2.1
46	DY	42	LEU	2.1
48	D0	54	ILE	2.1
55	CM	90	HIS	2.1
9	AI	44	ARG	2.1
25	DD	112	THR	2.1
46	DY	52	ARG	2.1
32	DK	1	MET	2.1
38	DQ	31	TYR	2.1
30	BI	83	ALA	2.1
43	DV	23	ALA	2.1
51	D3	10	ALA	2.1
22	BA	546	U	2.1
28	BG	115	GLN	2.1
53	CA	1240	U	2.1
57	DA	328	U	2.1
57	DA	1023	U	2.1
57	DA	1340	U	2.1
57	DA	1939	U	2.1
57	DA	2007	U	2.1
57	DA	2092	U	2.1
57	DA	2137	U	2.1
57	DA	2743	U	2.1
2	AB	97	GLY	2.1
14	CN	51	PRO	2.1
19	CS	29	PRO	2.1
21	AU	23	GLU	2.1
30	DI	73	PRO	2.1
39	DR	46	GLU	2.1
26	DE	80	SER	2.1
29	DH	82	SER	2.1
9	CI	46	VAL	2.1
13	AM	42	VAL	2.1
30	DI	60	VAL	2.1
31	DJ	48	VAL	2.1
20	CT	83	ASN	2.1
22	BA	1808	A	2.1

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Mol	Chain	Res	Type	RSRZ
25	DD	32	ASN	2.1
29	DH	8	LYS	2.1
29	DH	28	ASN	2.1
33	DL	17	LYS	2.1
37	BP	65	ASN	2.1
48	D0	56	LYS	2.1
53	CA	1433	A	2.1
57	DA	563	A	2.1
57	DA	2781	A	2.1
4	AD	72	ARG	2.1
7	AG	12	LEU	2.1
30	DI	121	ILE	2.1
31	DJ	96	ARG	2.1
35	DN	64	ARG	2.1
55	CM	68	LEU	2.1
9	AI	65	THR	2.1
13	AM	84	CYS	2.1
21	AU	22	CYS	2.1
48	D0	14	MET	2.1
55	CM	27	THR	2.1
5	CE	34	ALA	2.1
37	DP	94	ALA	2.1
53	CA	1230	C	2.1
53	CA	1237	C	2.1
53	CA	1520	C	2.1
56	CP	27	ALA	2.1
57	DA	791	C	2.1
57	DA	1351	C	2.1
57	DA	230	G	2.1
57	DA	363	G	2.1
57	DA	2012	G	2.1
57	DA	2141	G	2.1
57	DA	2627	G	2.1
17	CQ	8	GLN	2.1
19	AS	45	GLY	2.1
25	DD	173	GLN	2.1
44	DW	12	GLY	2.1
14	CN	20	PHE	2.1
21	AU	30	GLU	2.1
45	DX	45	PHE	2.1
4	CD	76	LYS	2.0
22	BA	2105	U	2.0

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Mol	Chain	Res	Type	RSRZ
54	CG	74	VAL	2.0
55	CM	64	VAL	2.0
57	DA	40	U	2.0
57	DA	1181	U	2.0
57	DA	1379	U	2.0
57	DA	1602	U	2.0
57	DA	1624	U	2.0
57	DA	2449	U	2.0
15	CO	56	LEU	2.0
21	AU	16	ARG	2.0
24	BC	238	ASN	2.0
31	DJ	103	ILE	2.0
34	DM	41	LEU	2.0
36	DO	62	LEU	2.0
38	DQ	17	LEU	2.0
48	D0	27	LEU	2.0
52	D4	24	ARG	2.0
56	CP	35	ARG	2.0
1	AA	78	A	2.0
1	AA	1493	A	2.0
29	BH	59	ALA	2.0
29	BH	69	ALA	2.0
40	DS	14	ALA	2.0
40	DS	38	TYR	2.0
57	DA	111	A	2.0
57	DA	412	A	2.0
57	DA	1286	A	2.0
57	DA	1608	A	2.0
57	DA	2266	A	2.0
57	DA	2851	A	2.0
6	AF	8	PHE	2.0
28	DG	60	GLY	2.0
44	DW	47	GLY	2.0
45	DX	28	PHE	2.0
1	AA	1302	C	2.0
14	CN	18	LYS	2.0
24	BC	241	LYS	2.0
24	DC	27	LYS	2.0
38	DQ	88	GLU	2.0
11	CK	83	VAL	2.0
53	CA	1054	C	2.0
57	DA	79	C	2.0

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Mol	Chain	Res	Type	RSRZ
57	DA	394	C	2.0
57	DA	1044	C	2.0
57	DA	1934	C	2.0
57	DA	2755	C	2.0
2	CB	20	ARG	2.0
10	AJ	102	LEU	2.0
35	DN	79	LEU	2.0
35	DN	96	ARG	2.0
53	CA	966	G	2.0
54	CG	22	LEU	2.0
57	DA	242	G	2.0
57	DA	805	G	2.0
57	DA	2061	G	2.0
57	DA	2811	G	2.0
2	AB	146	SER	2.0
6	CF	51	ILE	2.0
7	AG	36	SER	2.0
8	AH	125	ILE	2.0
17	CQ	37	ILE	2.0
40	DS	35	ILE	2.0
47	DZ	31	ILE	2.0
28	DG	37	ASN	2.0
57	DA	2724	U	2.0
20	CT	74	HIS	2.0
5	AE	130	THR	2.0
20	CT	71	ALA	2.0
28	DG	118	ALA	2.0
28	DG	170	THR	2.0
33	DL	75	ALA	2.0
47	DZ	9	THR	2.0
55	CM	4	ALA	2.0
25	DD	176	ASP	2.0
30	DI	141	ASP	2.0
14	CN	76	PHE	2.0
26	DE	82	GLY	2.0
30	BI	84	GLY	2.0
39	DR	53	PHE	2.0
42	DU	83	GLY	2.0
5	CE	125	LYS	2.0
14	AN	46	LYS	2.0
51	D3	15	LYS	2.0
55	CM	77	LYS	2.0

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Mol	Chain	Res	Type	RSRZ
9	AI	118	ARG	2.0
12	CL	85	ARG	2.0
28	DG	3	VAL	2.0
44	DW	69	GLU	2.0
47	DZ	56	VAL	2.0
53	CA	1324	A	2.0
57	DA	423	A	2.0
57	DA	439	A	2.0
57	DA	505	A	2.0
57	DA	1387	A	2.0
57	DA	1847	A	2.0
5	CE	10	LEU	2.0
26	DE	105	LEU	2.0
17	CQ	60	ILE	2.0
53	CA	1462	C	2.0
57	DA	436	C	2.0
57	DA	1297	C	2.0
57	DA	1612	C	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

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

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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($\text{\AA}^2$)	Q<0.9
60	MG	DA	3057	1/1	0.05	0.26	257,257,257,257	0
60	MG	DA	3019	1/1	0.35	0.27	252,252,252,252	0
60	MG	CA	1615	1/1	0.40	0.14	243,243,243,243	0
60	MG	DA	3003	1/1	0.49	0.30	253,253,253,253	0
60	MG	CA	1616	1/1	0.53	0.17	279,279,279,279	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	DA	3124	1/1	0.53	0.47	211,211,211,211	0
60	MG	AA	1629	1/1	0.60	0.12	227,227,227,227	0
60	MG	DA	3002	1/1	0.60	0.28	229,229,229,229	0
60	MG	DA	3041	1/1	0.62	0.16	133,133,133,133	0
60	MG	DJ	201	1/1	0.63	0.30	331,331,331,331	0
60	MG	DA	3017	1/1	0.64	0.18	147,147,147,147	0
60	MG	DA	3130	1/1	0.65	0.23	305,305,305,305	0
60	MG	BA	3068	1/1	0.67	0.13	174,174,174,174	0
60	MG	DA	3015	1/1	0.68	0.17	277,277,277,277	0
60	MG	DA	3013	1/1	0.68	0.23	209,209,209,209	0
60	MG	DA	3040	1/1	0.69	0.11	120,120,120,120	0
60	MG	DA	3061	1/1	0.70	0.29	210,210,210,210	0
60	MG	BA	3111	1/1	0.72	0.17	93,93,93,93	0
60	MG	CA	1634	1/1	0.72	0.11	200,200,200,200	0
60	MG	DA	3073	1/1	0.72	0.46	276,276,276,276	0
60	MG	DA	3027	1/1	0.73	0.29	277,277,277,277	0
60	MG	CA	1618	1/1	0.73	0.15	141,141,141,141	0
60	MG	DE	301	1/1	0.73	0.24	191,191,191,191	0
60	MG	CA	1602	1/1	0.73	0.18	131,131,131,131	0
60	MG	CA	1627	1/1	0.74	0.17	220,220,220,220	0
60	MG	CA	1612	1/1	0.74	0.22	133,133,133,133	0
60	MG	BA	3024	1/1	0.74	0.28	206,206,206,206	0
60	MG	DA	3024	1/1	0.75	0.18	147,147,147,147	0
60	MG	DA	3032	1/1	0.76	0.21	193,193,193,193	0
60	MG	DA	3007	1/1	0.77	0.16	188,188,188,188	0
60	MG	DC	301	1/1	0.77	0.21	134,134,134,134	0
60	MG	DA	3018	1/1	0.78	0.15	225,225,225,225	0
60	MG	DA	3062	1/1	0.78	0.65	262,262,262,262	0
60	MG	DA	3048	1/1	0.78	0.09	243,243,243,243	0
60	MG	DA	3005	1/1	0.78	0.17	280,280,280,280	0
60	MG	DA	3108	1/1	0.79	0.16	123,123,123,123	0
60	MG	DA	3044	1/1	0.80	0.14	230,230,230,230	0
60	MG	CA	1629	1/1	0.80	0.11	214,214,214,214	0
60	MG	DA	3042	1/1	0.81	0.12	166,166,166,166	0
60	MG	DA	3052	1/1	0.81	0.13	105,105,105,105	0
60	MG	CA	1622	1/1	0.82	0.11	196,196,196,196	0
60	MG	BA	3130	1/1	0.82	0.34	257,257,257,257	0
60	MG	DA	3133	1/1	0.82	0.14	241,241,241,241	0
60	MG	CA	1628	1/1	0.82	0.14	259,259,259,259	0
60	MG	AN	201	1/1	0.82	0.19	219,219,219,219	0
60	MG	DA	3109	1/1	0.82	0.11	169,169,169,169	0
60	MG	DA	3110	1/1	0.83	0.10	174,174,174,174	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	DA	3112	1/1	0.83	0.11	114,114,114,114	0
60	MG	DA	3063	1/1	0.83	0.24	305,305,305,305	0
60	MG	DA	3077	1/1	0.83	0.21	259,259,259,259	0
60	MG	AA	1610	1/1	0.84	0.11	200,200,200,200	0
60	MG	DA	3083	1/1	0.84	0.11	176,176,176,176	0
60	MG	DA	3085	1/1	0.84	0.16	127,127,127,127	0
60	MG	DA	3090	1/1	0.84	0.35	209,209,209,209	0
60	MG	DA	3105	1/1	0.84	0.29	305,305,305,305	0
60	MG	DA	3107	1/1	0.84	0.23	201,201,201,201	0
60	MG	DA	3025	1/1	0.84	0.38	253,253,253,253	0
60	MG	CA	1611	1/1	0.84	0.11	116,116,116,116	0
60	MG	DA	3011	1/1	0.85	0.18	215,215,215,215	0
60	MG	DA	3093	1/1	0.85	0.24	166,166,166,166	0
60	MG	DA	3037	1/1	0.85	0.13	203,203,203,203	0
60	MG	DA	3079	1/1	0.85	0.13	149,149,149,149	0
60	MG	DA	3082	1/1	0.85	0.12	214,214,214,214	0
60	MG	DA	3030	1/1	0.85	0.10	66,66,66,66	0
60	MG	DA	3068	1/1	0.85	0.21	225,225,225,225	0
60	MG	DA	3021	1/1	0.86	0.13	169,169,169,169	0
60	MG	CA	1617	1/1	0.86	0.12	205,205,205,205	0
60	MG	CA	1640	1/1	0.86	0.22	171,171,171,171	0
60	MG	DA	3074	1/1	0.86	0.24	239,239,239,239	0
60	MG	DA	3075	1/1	0.86	0.29	229,229,229,229	0
60	MG	AA	1614	1/1	0.86	0.33	201,201,201,201	0
60	MG	DA	3114	1/1	0.87	0.20	166,166,166,166	0
60	MG	DA	3117	1/1	0.87	0.10	99,99,99,99	0
60	MG	CA	1632	1/1	0.87	0.10	143,143,143,143	0
60	MG	CA	1614	1/1	0.87	0.28	271,271,271,271	0
60	MG	DA	3132	1/1	0.87	0.20	225,225,225,225	0
60	MG	DA	3038	1/1	0.87	0.12	163,163,163,163	0
60	MG	DA	3091	1/1	0.87	0.17	167,167,167,167	0
60	MG	CA	1619	1/1	0.87	0.11	243,243,243,243	0
60	MG	DA	3094	1/1	0.87	0.11	98,98,98,98	0
60	MG	DA	3087	1/1	0.88	0.09	178,178,178,178	0
60	MG	CA	1639	1/1	0.88	0.07	148,148,148,148	0
60	MG	AA	1618	1/1	0.88	0.23	217,217,217,217	0
60	MG	DA	3122	1/1	0.88	0.13	155,155,155,155	0
60	MG	CA	1603	1/1	0.88	0.13	140,140,140,140	0
60	MG	DA	3127	1/1	0.88	0.53	274,274,274,274	0
60	MG	CA	1630	1/1	0.88	0.12	176,176,176,176	0
60	MG	BA	3110	1/1	0.88	0.09	65,65,65,65	0
60	MG	DA	3081	1/1	0.88	0.17	143,143,143,143	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	BB	201	1/1	0.88	0.13	246,246,246,246	0
60	MG	DA	3046	1/1	0.88	0.13	152,152,152,152	0
60	MG	DA	3071	1/1	0.88	0.10	136,136,136,136	0
60	MG	CA	1636	1/1	0.89	0.13	130,130,130,130	0
60	MG	DA	3049	1/1	0.89	0.12	150,150,150,150	0
60	MG	DA	3008	1/1	0.89	0.14	153,153,153,153	0
60	MG	DA	3072	1/1	0.89	0.05	193,193,193,193	0
60	MG	DB	201	1/1	0.89	0.12	109,109,109,109	0
60	MG	DA	3035	1/1	0.89	0.17	228,228,228,228	0
60	MG	CA	1610	1/1	0.89	0.13	220,220,220,220	0
60	MG	BA	3123	1/1	0.89	0.32	112,112,112,112	0
60	MG	BA	3134	1/1	0.90	0.27	145,145,145,145	0
60	MG	BA	3035	1/1	0.90	0.25	241,241,241,241	0
60	MG	DA	3128	1/1	0.90	0.20	138,138,138,138	0
60	MG	DA	3092	1/1	0.90	0.11	209,209,209,209	0
60	MG	CA	1601	1/1	0.90	0.11	123,123,123,123	0
60	MG	BA	3109	1/1	0.90	0.12	105,105,105,105	0
60	MG	DA	3096	1/1	0.90	0.19	180,180,180,180	0
60	MG	DA	3100	1/1	0.90	0.21	149,149,149,149	0
60	MG	DA	3121	1/1	0.90	0.10	114,114,114,114	0
60	MG	DA	3001	1/1	0.90	0.15	149,149,149,149	0
60	MG	AA	1630	1/1	0.91	0.13	209,209,209,209	0
60	MG	DA	3006	1/1	0.91	0.11	149,149,149,149	0
60	MG	CA	1620	1/1	0.91	0.15	209,209,209,209	0
60	MG	AA	1638	1/1	0.91	0.09	139,139,139,139	0
60	MG	DA	3010	1/1	0.91	0.29	261,261,261,261	0
60	MG	DA	3099	1/1	0.91	0.14	96,96,96,96	0
60	MG	AA	1627	1/1	0.91	0.19	165,165,165,165	0
60	MG	AA	1626	1/1	0.91	0.13	185,185,185,185	0
60	MG	DA	3026	1/1	0.91	0.12	139,139,139,139	0
60	MG	DA	3067	1/1	0.92	0.09	95,95,95,95	0
60	MG	CA	1625	1/1	0.92	0.11	160,160,160,160	0
60	MG	AA	1604	1/1	0.92	0.10	112,112,112,112	0
60	MG	DA	3034	1/1	0.92	0.21	156,156,156,156	0
60	MG	BA	3132	1/1	0.92	0.19	145,145,145,145	0
60	MG	AA	1617	1/1	0.92	0.08	111,111,111,111	0
60	MG	BA	3086	1/1	0.92	0.16	144,144,144,144	0
60	MG	BA	3114	1/1	0.92	0.10	148,148,148,148	0
60	MG	BA	3091	1/1	0.92	0.18	131,131,131,131	0
60	MG	DA	3016	1/1	0.92	0.09	75,75,75,75	0
60	MG	DA	3098	1/1	0.92	0.09	218,218,218,218	0
60	MG	BA	3060	1/1	0.93	0.20	257,257,257,257	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	DA	3023	1/1	0.93	0.08	90,90,90,90	0
60	MG	DA	3126	1/1	0.93	0.10	129,129,129,129	0
60	MG	DA	3106	1/1	0.93	0.07	55,55,55,55	0
60	MG	DA	3014	1/1	0.93	0.21	177,177,177,177	0
60	MG	DA	3056	1/1	0.93	0.39	243,243,243,243	0
60	MG	CA	1607	1/1	0.93	0.09	222,222,222,222	0
60	MG	BA	3027	1/1	0.93	0.06	34,34,34,34	0
60	MG	CA	1631	1/1	0.93	0.10	111,111,111,111	0
60	MG	DA	3029	1/1	0.93	0.16	135,135,135,135	0
60	MG	BA	3082	1/1	0.93	0.10	98,98,98,98	0
60	MG	AA	1622	1/1	0.93	0.06	185,185,185,185	0
60	MG	CA	1637	1/1	0.94	0.15	140,140,140,140	0
60	MG	BA	3059	1/1	0.94	0.17	147,147,147,147	0
60	MG	CA	1608	1/1	0.94	0.17	82,82,82,82	0
60	MG	BA	3004	1/1	0.94	0.10	150,150,150,150	0
60	MG	DA	3097	1/1	0.94	0.14	143,143,143,143	0
60	MG	DA	3125	1/1	0.94	0.08	132,132,132,132	0
60	MG	AA	1635	1/1	0.94	0.10	198,198,198,198	0
60	MG	BA	3069	1/1	0.94	0.13	223,223,223,223	0
60	MG	DA	3059	1/1	0.94	0.30	241,241,241,241	0
60	MG	BA	3075	1/1	0.94	0.09	74,74,74,74	0
60	MG	DA	3131	1/1	0.94	0.09	104,104,104,104	0
60	MG	AA	1619	1/1	0.94	0.06	165,165,165,165	0
60	MG	BA	3033	1/1	0.94	0.15	89,89,89,89	0
60	MG	DA	3086	1/1	0.94	0.09	185,185,185,185	0
60	MG	AA	1612	1/1	0.94	0.08	103,103,103,103	0
60	MG	BA	3046	1/1	0.94	0.09	142,142,142,142	0
60	MG	BA	3058	1/1	0.94	0.13	106,106,106,106	0
60	MG	CA	1633	1/1	0.95	0.06	82,82,82,82	0
60	MG	DA	3028	1/1	0.95	0.36	195,195,195,195	0
60	MG	DA	3070	1/1	0.95	0.10	61,61,61,61	0
60	MG	DA	3119	1/1	0.95	0.12	84,84,84,84	0
60	MG	BA	3044	1/1	0.95	0.09	56,56,56,56	0
60	MG	DA	3047	1/1	0.95	0.08	82,82,82,82	0
60	MG	AA	1623	1/1	0.95	0.07	104,104,104,104	0
60	MG	BA	3087	1/1	0.95	0.10	182,182,182,182	0
60	MG	BA	3090	1/1	0.95	0.10	93,93,93,93	0
60	MG	DA	3076	1/1	0.95	0.06	110,110,110,110	0
60	MG	DA	3055	1/1	0.95	0.10	121,121,121,121	0
60	MG	DA	3129	1/1	0.95	0.27	271,271,271,271	0
60	MG	AA	1636	1/1	0.95	0.10	149,149,149,149	0
60	MG	DA	3102	1/1	0.95	0.13	105,105,105,105	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	DA	3080	1/1	0.95	0.12	70,70,70,70	0
60	MG	DA	3036	1/1	0.95	0.11	111,111,111,111	0
60	MG	CA	1641	1/1	0.95	0.10	73,73,73,73	0
60	MG	DA	3012	1/1	0.95	0.06	57,57,57,57	0
60	MG	BA	3026	1/1	0.95	0.12	122,122,122,122	0
60	MG	CA	1623	1/1	0.95	0.09	79,79,79,79	0
62	ZN	B4	101	1/1	0.95	0.08	81,81,81,81	0
60	MG	DA	3050	1/1	0.96	0.07	89,89,89,89	0
60	MG	DA	3095	1/1	0.96	0.14	110,110,110,110	0
60	MG	AA	1632	1/1	0.96	0.07	53,53,53,53	0
60	MG	BA	3003	1/1	0.96	0.06	44,44,44,44	0
60	MG	AA	1608	1/1	0.96	0.07	38,38,38,38	0
60	MG	BA	3089	1/1	0.96	0.04	39,39,39,39	0
60	MG	CA	1606	1/1	0.96	0.07	77,77,77,77	0
60	MG	DA	3101	1/1	0.96	0.07	73,73,73,73	0
60	MG	DA	3060	1/1	0.96	0.10	144,144,144,144	0
60	MG	DA	3103	1/1	0.96	0.07	36,36,36,36	0
60	MG	DA	3022	1/1	0.96	0.08	118,118,118,118	0
60	MG	BA	3047	1/1	0.96	0.11	112,112,112,112	0
60	MG	CA	1635	1/1	0.96	0.06	85,85,85,85	0
60	MG	DA	3064	1/1	0.96	0.06	65,65,65,65	0
60	MG	BA	3054	1/1	0.96	0.14	214,214,214,214	0
60	MG	BA	3097	1/1	0.96	0.17	182,182,182,182	0
60	MG	BA	3098	1/1	0.96	0.08	46,46,46,46	0
60	MG	BA	3104	1/1	0.96	0.09	27,27,27,27	0
60	MG	CA	1613	1/1	0.96	0.06	116,116,116,116	0
60	MG	CA	1642	1/1	0.96	0.07	121,121,121,121	0
60	MG	BA	3055	1/1	0.96	0.21	240,240,240,240	0
60	MG	BA	3056	1/1	0.96	0.11	86,86,86,86	0
60	MG	BA	3010	1/1	0.96	0.06	48,48,48,48	0
60	MG	BA	3022	1/1	0.96	0.07	20,20,20,20	0
60	MG	BA	3115	1/1	0.96	0.10	8,8,8,8	0
60	MG	BA	3117	1/1	0.96	0.07	79,79,79,79	0
60	MG	DA	3039	1/1	0.96	0.05	59,59,59,59	0
60	MG	AA	1607	1/1	0.96	0.07	98,98,98,98	0
60	MG	DA	3009	1/1	0.96	0.07	75,75,75,75	0
60	MG	DA	3084	1/1	0.96	0.10	157,157,157,157	0
60	MG	AA	1616	1/1	0.96	0.10	123,123,123,123	0
60	MG	BA	3131	1/1	0.96	0.09	96,96,96,96	0
60	MG	DA	3045	1/1	0.96	0.07	76,76,76,76	0
60	MG	CA	1624	1/1	0.96	0.09	123,123,123,123	0
60	MG	AA	1639	1/1	0.96	0.06	92,92,92,92	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	AA	1640	1/1	0.96	0.12	189,189,189,189	0
60	MG	BA	3135	1/1	0.96	0.26	204,204,204,204	0
62	ZN	D4	101	1/1	0.96	0.07	197,197,197,197	0
60	MG	AA	1603	1/1	0.97	0.07	131,131,131,131	0
60	MG	DA	3058	1/1	0.97	0.17	204,204,204,204	0
60	MG	DA	3111	1/1	0.97	0.09	89,89,89,89	0
60	MG	CA	1638	1/1	0.97	0.06	106,106,106,106	0
60	MG	DA	3113	1/1	0.97	0.08	123,123,123,123	0
60	MG	BA	3011	1/1	0.97	0.12	149,149,149,149	0
60	MG	DA	3115	1/1	0.97	0.12	69,69,69,69	0
60	MG	DA	3116	1/1	0.97	0.05	59,59,59,59	0
60	MG	BA	3014	1/1	0.97	0.08	75,75,75,75	0
60	MG	CA	1604	1/1	0.97	0.05	65,65,65,65	0
60	MG	DA	3120	1/1	0.97	0.10	84,84,84,84	0
60	MG	AA	1601	1/1	0.97	0.07	93,93,93,93	0
60	MG	AA	1620	1/1	0.97	0.07	120,120,120,120	0
60	MG	BA	3002	1/1	0.97	0.07	60,60,60,60	0
60	MG	BA	3118	1/1	0.97	0.15	136,136,136,136	0
60	MG	DA	3069	1/1	0.97	0.06	93,93,93,93	0
60	MG	DA	3043	1/1	0.97	0.15	112,112,112,112	0
60	MG	DA	3004	1/1	0.97	0.11	86,86,86,86	0
60	MG	AA	1628	1/1	0.97	0.04	70,70,70,70	0
60	MG	BA	3124	1/1	0.97	0.07	22,22,22,22	0
60	MG	BA	3092	1/1	0.97	0.05	30,30,30,30	0
60	MG	BA	3094	1/1	0.97	0.07	42,42,42,42	0
60	MG	BA	3096	1/1	0.97	0.08	59,59,59,59	0
60	MG	AA	1602	1/1	0.97	0.05	117,117,117,117	0
60	MG	DA	3104	1/1	0.97	0.07	48,48,48,48	0
60	MG	BA	3005	1/1	0.97	0.05	60,60,60,60	0
60	MG	DA	3054	1/1	0.97	0.09	125,125,125,125	0
61	CLM	BA	3136	20/20	0.97	0.09	2,26,77,92	0
60	MG	DA	3031	1/1	0.97	0.07	121,121,121,121	0
60	MG	BA	3008	1/1	0.97	0.09	29,29,29,29	0
60	MG	AA	1637	1/1	0.98	0.05	34,34,34,34	0
60	MG	AA	1631	1/1	0.98	0.07	95,95,95,95	0
60	MG	BA	3100	1/1	0.98	0.06	26,26,26,26	0
60	MG	CA	1605	1/1	0.98	0.09	47,47,47,47	0
60	MG	BA	3073	1/1	0.98	0.08	116,116,116,116	0
60	MG	DA	3078	1/1	0.98	0.05	95,95,95,95	0
60	MG	BA	3107	1/1	0.98	0.08	8,8,8,8	0
60	MG	BA	3045	1/1	0.98	0.05	13,13,13,13	0
60	MG	BA	3077	1/1	0.98	0.07	151,151,151,151	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	BA	3078	1/1	0.98	0.05	49,49,49,49	0
60	MG	DA	3051	1/1	0.98	0.04	49,49,49,49	0
60	MG	BA	3079	1/1	0.98	0.04	20,20,20,20	0
60	MG	DA	3118	1/1	0.98	0.07	75,75,75,75	0
60	MG	DA	3053	1/1	0.98	0.04	78,78,78,78	0
60	MG	BA	3081	1/1	0.98	0.08	41,41,41,41	0
60	MG	BA	3015	1/1	0.98	0.14	30,30,30,30	0
60	MG	DA	3088	1/1	0.98	0.08	102,102,102,102	0
60	MG	DA	3123	1/1	0.98	0.07	65,65,65,65	0
60	MG	DA	3089	1/1	0.98	0.05	81,81,81,81	0
60	MG	BA	3083	1/1	0.98	0.06	52,52,52,52	0
60	MG	BA	3122	1/1	0.98	0.07	25,25,25,25	0
60	MG	AA	1624	1/1	0.98	0.09	139,139,139,139	0
60	MG	BA	3049	1/1	0.98	0.05	72,72,72,72	0
60	MG	BA	3125	1/1	0.98	0.04	26,26,26,26	0
60	MG	AA	1606	1/1	0.98	0.05	58,58,58,58	0
60	MG	DA	3033	1/1	0.98	0.11	91,91,91,91	0
60	MG	CA	1621	1/1	0.98	0.15	60,60,60,60	0
60	MG	BA	3025	1/1	0.98	0.11	38,38,38,38	0
60	MG	DA	3065	1/1	0.98	0.04	40,40,40,40	0
60	MG	BA	3007	1/1	0.98	0.07	84,84,84,84	0
60	MG	AA	1609	1/1	0.98	0.04	47,47,47,47	0
60	MG	BA	3028	1/1	0.98	0.11	45,45,45,45	0
60	MG	BA	3095	1/1	0.98	0.01	13,13,13,13	0
60	MG	BB	202	1/1	0.98	0.05	54,54,54,54	0
60	MG	BA	3001	1/1	0.98	0.06	84,84,84,84	0
60	MG	BA	3127	1/1	0.99	0.04	21,21,21,21	0
60	MG	BA	3080	1/1	0.99	0.04	25,25,25,25	0
60	MG	BA	3042	1/1	0.99	0.05	34,34,34,34	0
60	MG	AA	1633	1/1	0.99	0.04	52,52,52,52	0
60	MG	AA	1634	1/1	0.99	0.03	58,58,58,58	0
60	MG	BA	3085	1/1	0.99	0.04	24,24,24,24	0
60	MG	AA	1621	1/1	0.99	0.10	35,35,35,35	0
60	MG	BA	3017	1/1	0.99	0.02	27,27,27,27	0
60	MG	BB	203	1/1	0.99	0.04	16,16,16,16	0
60	MG	BB	204	1/1	0.99	0.04	30,30,30,30	0
60	MG	BL	201	1/1	0.99	0.04	34,34,34,34	0
60	MG	BA	3088	1/1	0.99	0.04	22,22,22,22	0
60	MG	AA	1613	1/1	0.99	0.04	56,56,56,56	0
60	MG	BA	3050	1/1	0.99	0.03	12,12,12,12	0
60	MG	BA	3051	1/1	0.99	0.05	48,48,48,48	0
60	MG	BA	3052	1/1	0.99	0.03	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	BA	3093	1/1	0.99	0.06	68,68,68,68	0
60	MG	AA	1611	1/1	0.99	0.05	81,81,81,81	0
60	MG	AA	1615	1/1	0.99	0.03	127,127,127,127	0
60	MG	CA	1609	1/1	0.99	0.04	71,71,71,71	0
60	MG	BA	3006	1/1	0.99	0.03	47,47,47,47	0
60	MG	BA	3057	1/1	0.99	0.04	43,43,43,43	0
60	MG	AA	1625	1/1	0.99	0.14	31,31,31,31	0
60	MG	DA	3066	1/1	0.99	0.04	65,65,65,65	0
60	MG	AA	1605	1/1	0.99	0.04	30,30,30,30	0
60	MG	BA	3101	1/1	0.99	0.09	105,105,105,105	0
60	MG	DA	3020	1/1	0.99	0.11	36,36,36,36	0
60	MG	BA	3103	1/1	0.99	0.08	8,8,8,8	0
60	MG	BA	3029	1/1	0.99	0.09	10,10,10,10	0
60	MG	BA	3106	1/1	0.99	0.05	13,13,13,13	0
60	MG	BA	3061	1/1	0.99	0.03	11,11,11,11	0
60	MG	BA	3108	1/1	0.99	0.06	6,6,6,6	0
60	MG	BA	3067	1/1	0.99	0.03	22,22,22,22	0
60	MG	BA	3030	1/1	0.99	0.05	34,34,34,34	0
60	MG	BA	3031	1/1	0.99	0.04	15,15,15,15	0
60	MG	BA	3112	1/1	0.99	0.07	33,33,33,33	0
60	MG	BA	3113	1/1	0.99	0.04	34,34,34,34	0
60	MG	BA	3070	1/1	0.99	0.06	76,76,76,76	0
60	MG	CA	1626	1/1	0.99	0.11	27,27,27,27	0
60	MG	BA	3072	1/1	0.99	0.07	81,81,81,81	0
60	MG	BA	3009	1/1	0.99	0.05	12,12,12,12	0
60	MG	BA	3034	1/1	0.99	0.02	9,9,9,9	0
60	MG	BA	3119	1/1	0.99	0.05	15,15,15,15	0
60	MG	BA	3120	1/1	0.99	0.04	44,44,44,44	0
60	MG	BA	3076	1/1	0.99	0.05	31,31,31,31	0
60	MG	AA	1642	1/1	0.99	0.04	42,42,42,42	0
60	MG	BA	3038	1/1	0.99	0.05	21,21,21,21	0
60	MG	BA	3039	1/1	0.99	0.12	9,9,9,9	0
60	MG	BA	3126	1/1	0.99	0.04	32,32,32,32	0
60	MG	BA	3048	1/1	1.00	0.02	18,18,18,18	0
60	MG	BA	3071	1/1	1.00	0.03	8,8,8,8	0
60	MG	BA	3023	1/1	1.00	0.04	8,8,8,8	0
60	MG	BA	3128	1/1	1.00	0.02	6,6,6,6	0
60	MG	BA	3129	1/1	1.00	0.07	15,15,15,15	0
60	MG	BA	3012	1/1	1.00	0.03	5,5,5,5	0
60	MG	BA	3099	1/1	1.00	0.04	32,32,32,32	0
60	MG	BA	3074	1/1	1.00	0.08	15,15,15,15	0
60	MG	BA	3133	1/1	1.00	0.04	5,5,5,5	0

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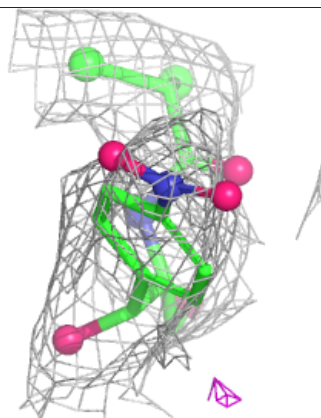
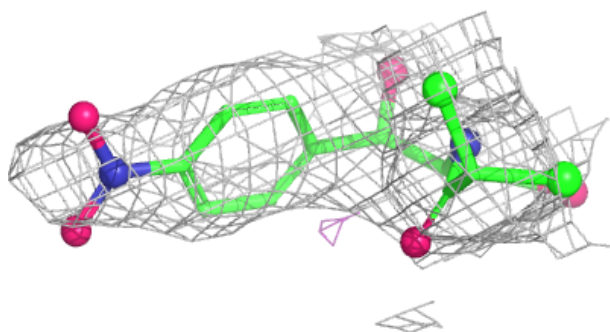
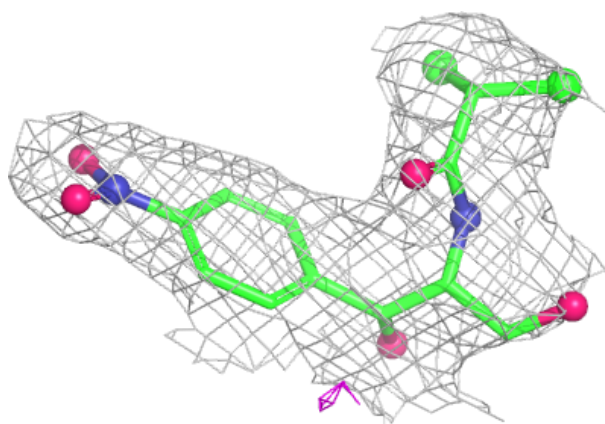
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
60	MG	BA	3016	1/1	1.00	0.03	5,5,5,5	0
60	MG	BA	3102	1/1	1.00	0.04	14,14,14,14	0
60	MG	BA	3036	1/1	1.00	0.04	30,30,30,30	0
60	MG	BA	3053	1/1	1.00	0.02	35,35,35,35	0
60	MG	BA	3105	1/1	1.00	0.06	11,11,11,11	0
60	MG	BA	3037	1/1	1.00	0.04	7,7,7,7	0
60	MG	BA	3013	1/1	1.00	0.07	6,6,6,6	0
60	MG	BA	3018	1/1	1.00	0.17	10,10,10,10	0
60	MG	BA	3040	1/1	1.00	0.03	11,11,11,11	0
60	MG	BA	3041	1/1	1.00	0.03	12,12,12,12	0
60	MG	BA	3019	1/1	1.00	0.08	50,50,50,50	0
60	MG	BA	3084	1/1	1.00	0.02	9,9,9,9	0
60	MG	BA	3043	1/1	1.00	0.13	19,19,19,19	0
60	MG	BA	3020	1/1	1.00	0.03	21,21,21,21	0
60	MG	BA	3062	1/1	1.00	0.03	9,9,9,9	0
60	MG	BA	3116	1/1	1.00	0.04	14,14,14,14	0
60	MG	BA	3063	1/1	1.00	0.01	11,11,11,11	0
60	MG	BA	3064	1/1	1.00	0.02	8,8,8,8	0
60	MG	BA	3065	1/1	1.00	0.03	27,27,27,27	0
60	MG	BA	3066	1/1	1.00	0.02	14,14,14,14	0
60	MG	BA	3121	1/1	1.00	0.02	5,5,5,5	0
60	MG	BA	3021	1/1	1.00	0.02	15,15,15,15	0
60	MG	AA	1641	1/1	1.00	0.05	27,27,27,27	0
60	MG	BA	3032	1/1	1.00	0.04	6,6,6,6	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.