



# Full wwPDB X-ray Structure Validation Report ⓘ

Dec 17, 2023 – 12:27 PM EST

PDB ID : 4U26  
Title : Crystal structure of the E. coli ribosome bound to dalfopristin and quinupristin.  
Authors : Noeske, J.; Huang, J.; Olivier, N.B.; Giacobbe, R.A.; Zambrowski, M.; Cate, J.H.D.  
Deposited on : 2014-07-16  
Resolution : 2.80 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](mailto: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>.

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

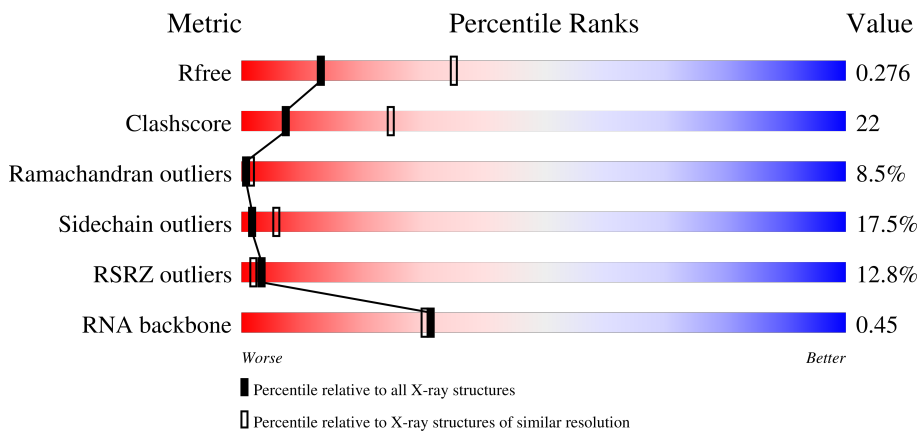
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 2.80 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
$R_{free}$	130704	3140 (2.80-2.80)
Clashscore	141614	3569 (2.80-2.80)
Ramachandran outliers	138981	3498 (2.80-2.80)
Sidechain outliers	138945	3500 (2.80-2.80)
RSRZ outliers	127900	3078 (2.80-2.80)
RNA backbone	3102	1227 (3.10-2.50)

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  $\geq 3$ , 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	1539	 13% 25% 50% 12%
1	CA	1539	 4% 27% 54% 15%
2	AB	218	 13% 12% 50% 18% 7%

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Mol	Chain	Length	Quality of chain
2	CB	218	
3	AC	206	
3	CC	206	
4	AD	205	
4	CD	205	
5	AE	150	
5	CE	150	
6	AF	100	
6	CF	100	
7	AG	151	
7	CG	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	
13	CM	114	
14	AN	100	
14	CN	100	

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Mol	Chain	Length	Quality of chain
15	AO	88	
15	CO	88	
16	AP	82	
16	CP	82	
17	AQ	80	
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	
22	DA	2903	
23	BB	119	
23	DB	119	
24	BC	271	
24	DC	271	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	177	





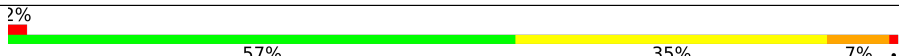

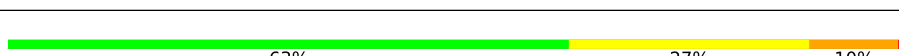
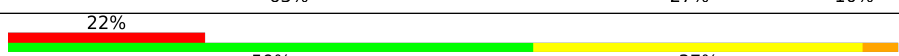
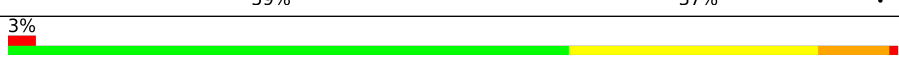

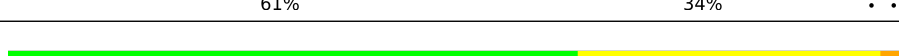
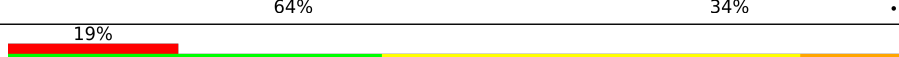
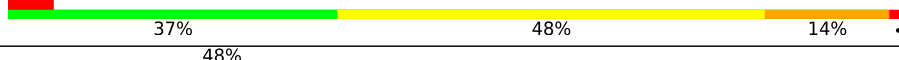



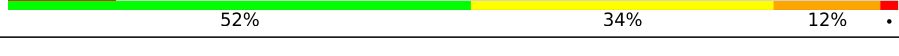


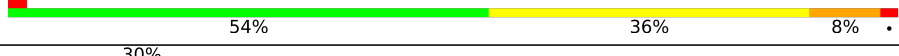
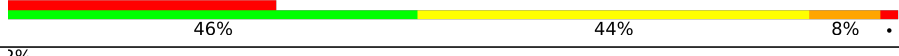
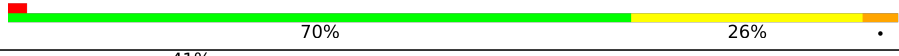



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Mol	Chain	Length	Quality of chain
27	DF	177	72% 56% 32% 11% .
28	BG	176	2% 65% 26% 9%
28	DG	176	51% 59% 34% 6% .
29	BH	149	49% 30% 48% 19% .
29	DH	149	20% 36% 51% 11% .
30	BI	141	71% 35% 45% 18% .
30	DI	141	85% 38% 42% 19% .
31	BJ	142	61% 33% 6%
31	DJ	142	11% 44% 39% 17%
32	BK	122	56% 32% 11% .
32	DK	122	24% 45% 43% 11% .
33	BL	143	65% 27% 6% .
33	DL	143	43% 50% 39% 9% .
34	BM	136	63% 31% 6%
34	DM	136	19% 57% 36% 7%
35	BN	120	58% 38% 5%
35	DN	120	23% 38% 44% 15% .
36	BO	116	56% 33% 10% .
36	DO	116	65% 46% 50% .
37	BP	114	57% 32% 9% .
37	DP	114	24% 58% 33% 9%
38	BQ	117	62% 34% .
38	DQ	117	21% 58% 37% 5%
39	BR	103	48% 40% 12% .
39	DR	103	34% 55% 40% . .

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Mol	Chain	Length	Quality of chain
40	BS	110	
40	DS	110	
41	BT	93	
41	DT	93	
42	BU	102	
42	DU	102	
43	BV	94	
43	DV	94	
44	BW	76	
44	DW	76	
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	

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Mol	Chain	Length	Quality of chain
52	D4	38	
53	B5	228	
54	B6	8	
54	D6	8	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	AA	1659	-	-	-	X
55	MG	AM	201	-	-	-	X
55	MG	BA	3134	-	-	-	X
55	MG	DA	3003	-	-	-	X
55	MG	DA	3005	-	-	-	X
55	MG	DA	3026	-	-	-	X
55	MG	DA	3028	-	-	-	X
55	MG	DA	3041	-	-	-	X
55	MG	DA	3048	-	-	-	X
55	MG	DA	3056	-	-	-	X
55	MG	DA	3062	-	-	-	X
55	MG	DA	3071	-	-	-	X
55	MG	DA	3072	-	-	-	X
55	MG	DA	3077	-	-	-	X
55	MG	DA	3131	-	-	-	X
55	MG	DA	3133	-	-	-	X
55	MG	DA	3155	-	-	-	X
56	DOL	DA	3001	-	-	X	-

## 2 Entry composition

There are 58 unique types of molecules in this entry. The entry contains 288423 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	AA	1538	Total 32995	C 14716	N 6050	O 10691	P 1538	0	0	0
1	CA	1539	Total 33015	C 14725	N 6052	O 10699	P 1539	0	0	0

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

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

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

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

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

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

- 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			
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			
7	CG	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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
13	CM	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	96	Total	C	N	O	S	0	0	0
			774	483	160	128	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
			710	437	143	129	1			
15	CO	88	Total	C	N	O	S	0	0	0
			710	437	143	129	1			

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

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

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

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

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

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

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

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

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

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

- 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	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			
22	DA	2897	Total	C	N	O	P	0	0	0
			62195	27745	11446	20107	2897			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	119	Total	C	N	O	P	0	0	0
			2549	1135	466	829	119			
23	DB	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			

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	BH	149	1110	699	197	213	1	0	0	0
29	DH	149	1110	699	197	213	1	0	0	0

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

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

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

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

- 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	S	0	0	0
			947	604	192	151				
38	DQ	117	Total	C	N	O	S	0	0	0
			947	604	192	151				

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	BW	76	580	359	117	103	1	0	0	0
44	DW	75	569	353	113	102	1	0	0	0

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

- Molecule 53 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
53	B5	191	1142	691	221	230	0	0	1

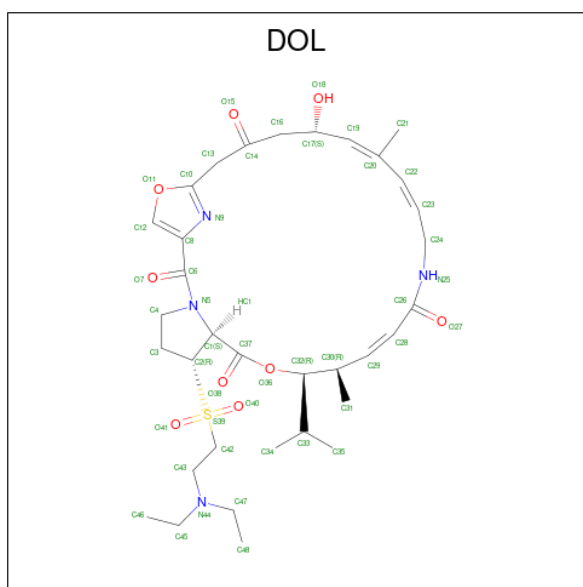
- Molecule 54 is a protein called Quinupristin.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
54	B6	8	73	53	9	10	1	0	0	0
54	D6	8	73	53	9	10	1	0	0	0

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	AA	71	Total 71	Mg 71	0	0
55	AM	1	Total 1	Mg 1	0	0
55	BA	194	Total 194	Mg 194	0	0
55	BB	4	Total 4	Mg 4	0	0
55	BQ	1	Total 1	Mg 1	0	0
55	CA	56	Total 56	Mg 56	0	0
55	DA	166	Total 166	Mg 166	0	0
55	DB	3	Total 3	Mg 3	0	0
55	DQ	1	Total 1	Mg 1	0	0
55	D2	1	Total 1	Mg 1	0	0

- Molecule 56 is 5-(2-DIETHYLAMINO-ETHANESULFONYL)-21-HYDROXY-10-ISOPROPYL-11,19-DIMETHYL-9,26-DIOXA-3,15,28-TRIAZA-TRICYCLO[23.2.1.00,255]OCTACOSA-1(27),12,17,19,25(28)-PENTAENE-2,8,14,23-TETRAONE (three-letter code: DOL) (formula: C<sub>34</sub>H<sub>50</sub>N<sub>4</sub>O<sub>9</sub>S).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
56	BA	1	Total	C	N	O	S	0	0
			48	34	4	9	1		
56	DA	1	Total	C	N	O	S	0	0
			48	34	4	9	1		

- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 58 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	AA	194	Total	O	0	0
			194	194		
58	AE	2	Total	O	0	0
			2	2		
58	AL	1	Total	O	0	0
			1	1		
58	AN	3	Total	O	0	0
			3	3		
58	AT	2	Total	O	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	AU	1	Total O 1 1	0	0
58	BA	617	Total O 617 617	0	0
58	BB	14	Total O 14 14	0	0
58	BC	6	Total O 6 6	0	0
58	BD	4	Total O 4 4	0	0
58	BE	1	Total O 1 1	0	0
58	BF	1	Total O 1 1	0	0
58	BG	1	Total O 1 1	0	0
58	BJ	1	Total O 1 1	0	0
58	BL	7	Total O 7 7	0	0
58	BN	5	Total O 5 5	0	0
58	BQ	1	Total O 1 1	0	0
58	BS	1	Total O 1 1	0	0
58	BT	2	Total O 2 2	0	0
58	B3	3	Total O 3 3	0	0
58	B4	1	Total O 1 1	0	0
58	CA	192	Total O 192 192	0	0
58	CL	1	Total O 1 1	0	0
58	CN	2	Total O 2 2	0	0
58	CT	2	Total O 2 2	0	0
58	CU	1	Total O 1 1	0	0

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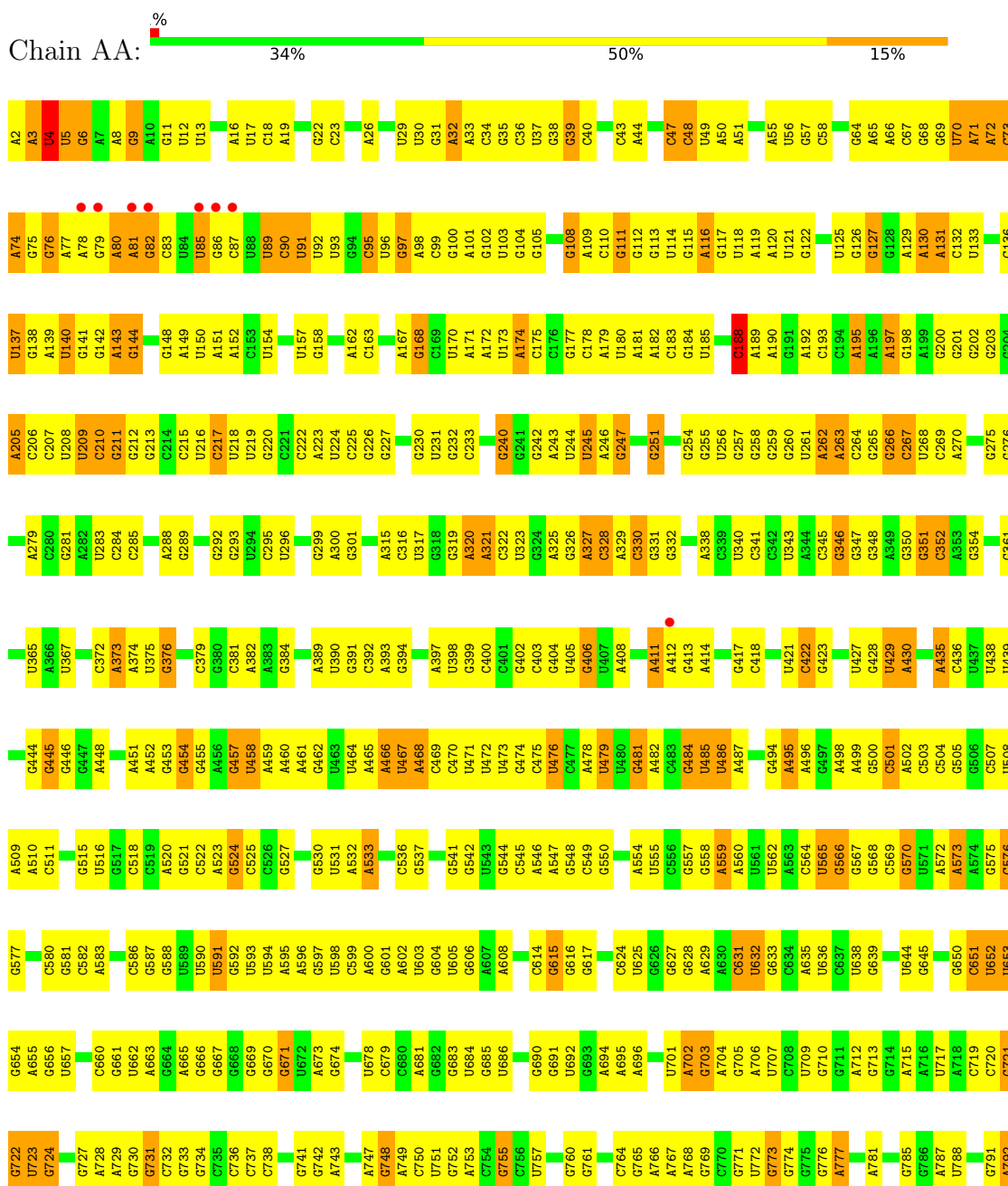
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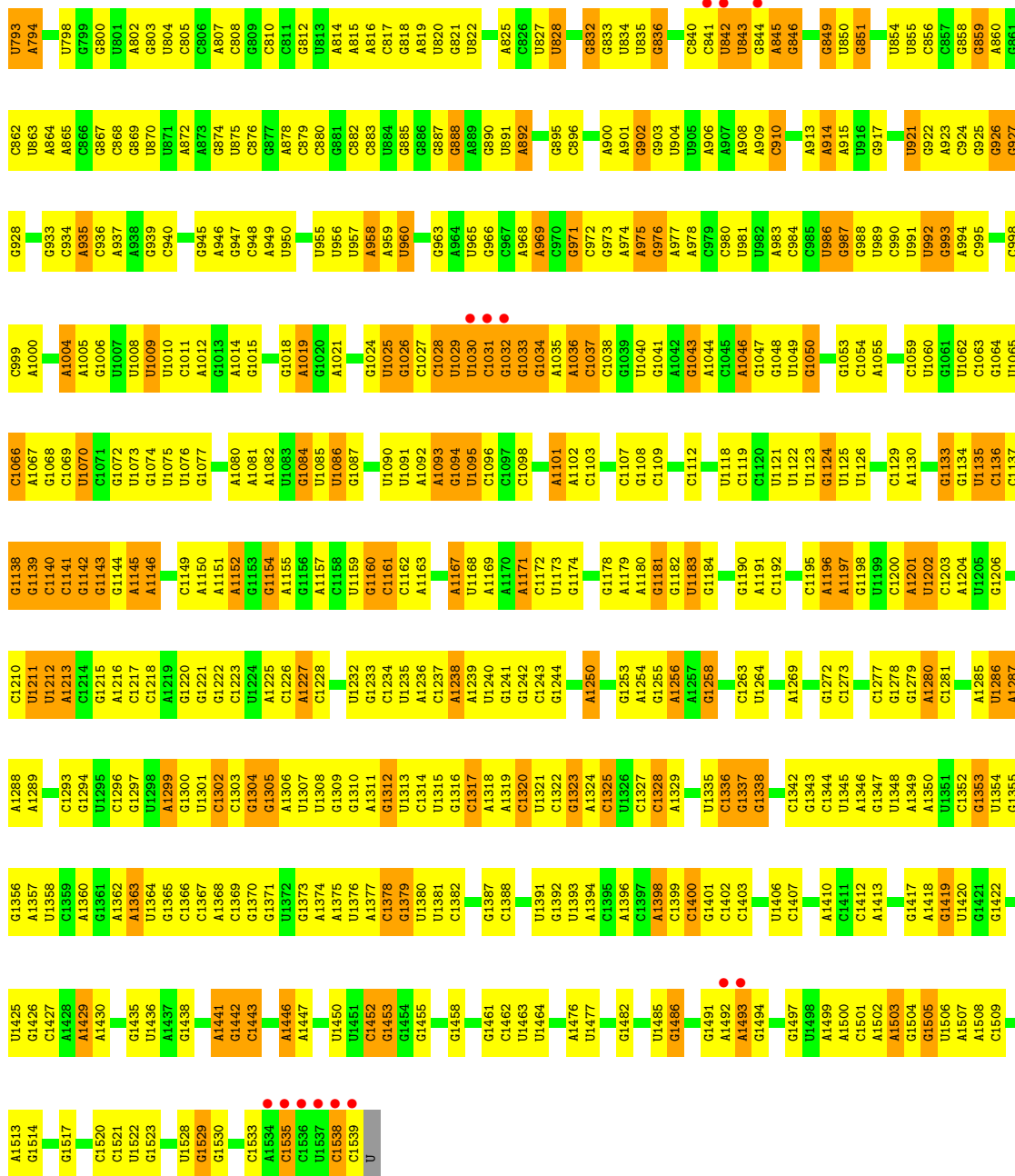
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
58	DA	610	Total 610	O 610	0	0
58	DB	13	Total 13	O 13	0	0
58	DC	8	Total 8	O 8	0	0
58	DD	4	Total 4	O 4	0	0
58	DE	4	Total 4	O 4	0	0
58	DJ	1	Total 1	O 1	0	0
58	DL	4	Total 4	O 4	0	0
58	DN	2	Total 2	O 2	0	0
58	DS	2	Total 2	O 2	0	0
58	DT	3	Total 3	O 3	0	0
58	DU	1	Total 1	O 1	0	0
58	DV	1	Total 1	O 1	0	0
58	D2	1	Total 1	O 1	0	0
58	D3	1	Total 1	O 1	0	0
58	D4	1	Total 1	O 1	0	0

### 3 Residue-property plots

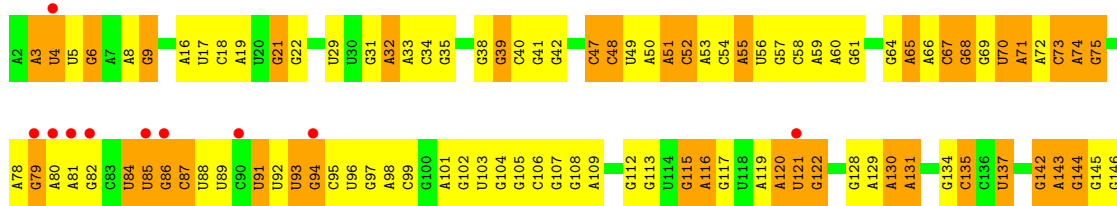
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. 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



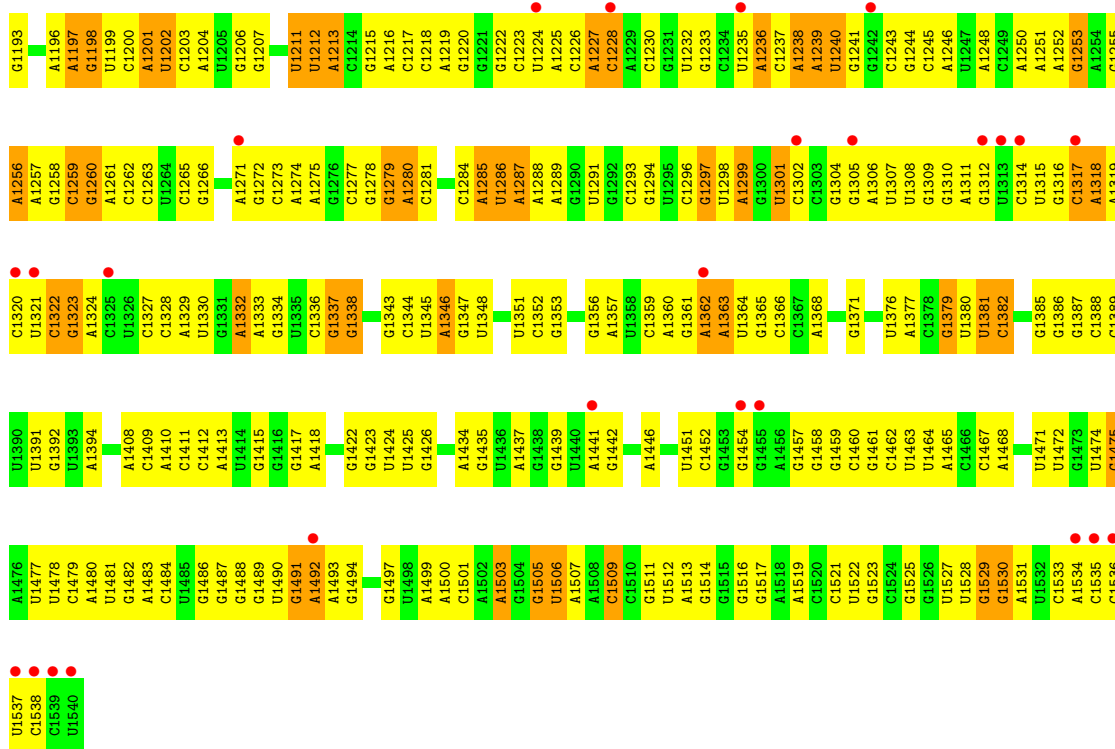


● Molecule 1: 16S rRNA

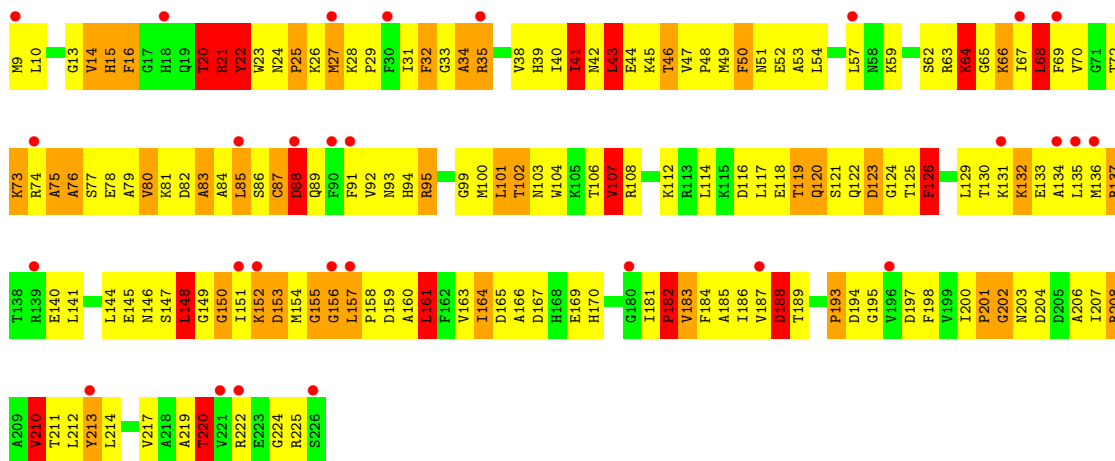


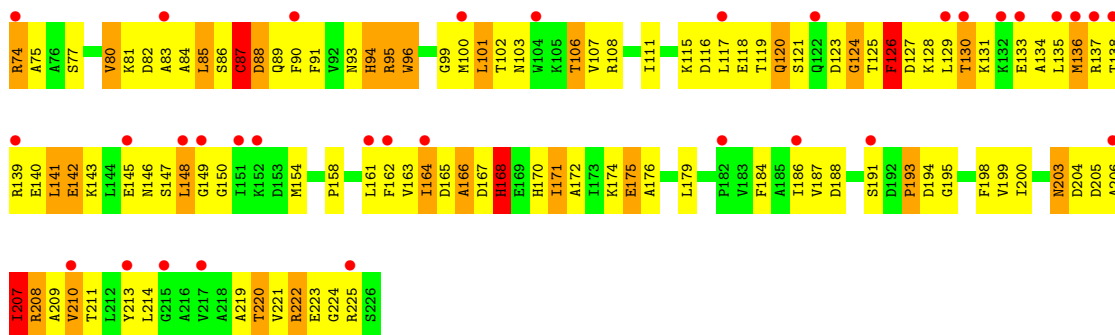




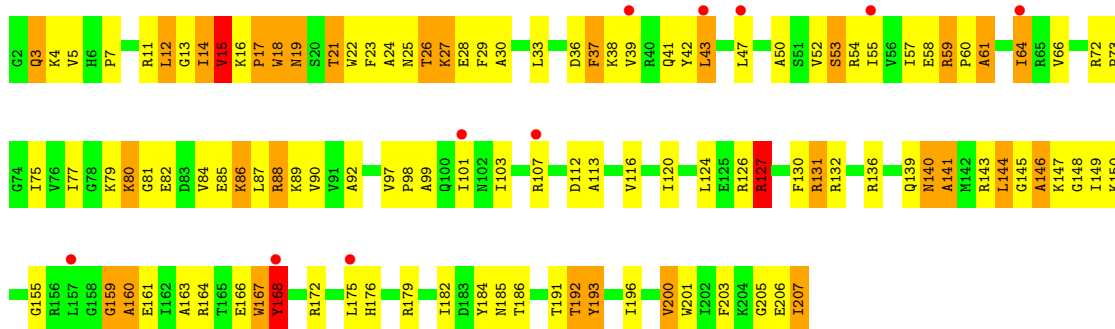
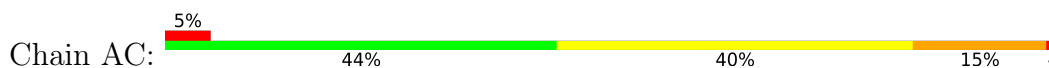


• Molecule 2: 30S ribosomal protein S2

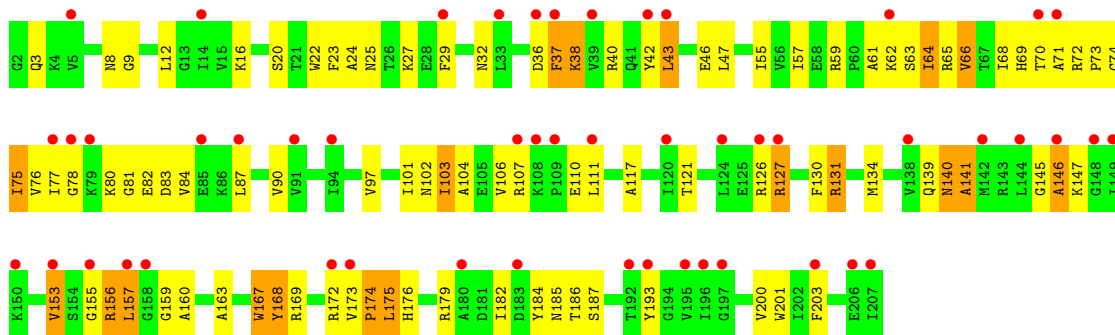




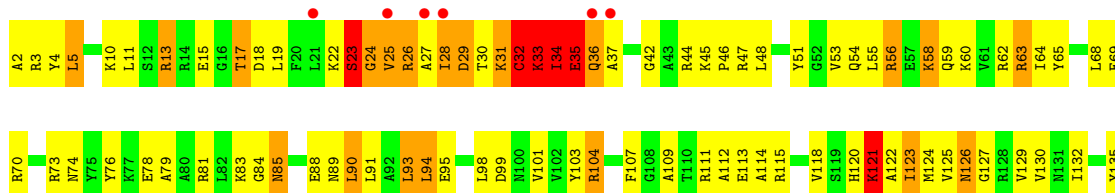
• Molecule 3: 30S ribosomal protein S3



• Molecule 3: 30S ribosomal protein S3

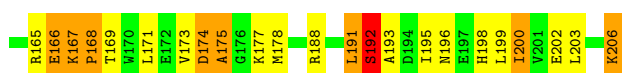
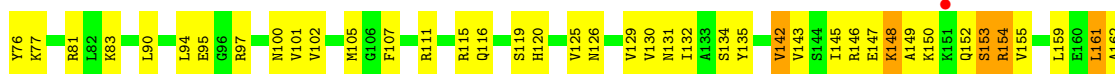
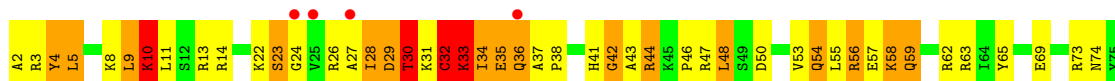
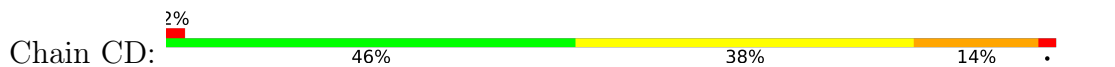


• Molecule 4: 30S ribosomal protein S4

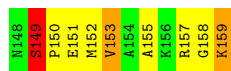
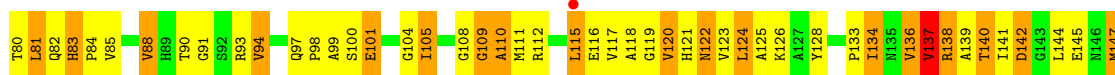
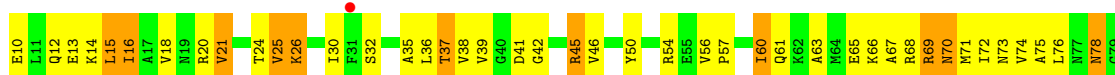




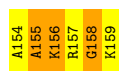
- Molecule 4: 30S ribosomal protein S4



- Molecule 5: 30S ribosomal protein S5

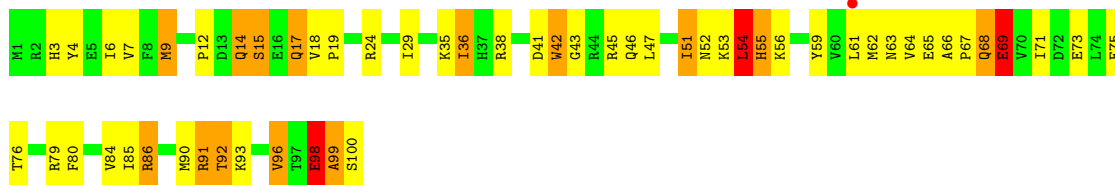


- Molecule 5: 30S ribosomal protein S5

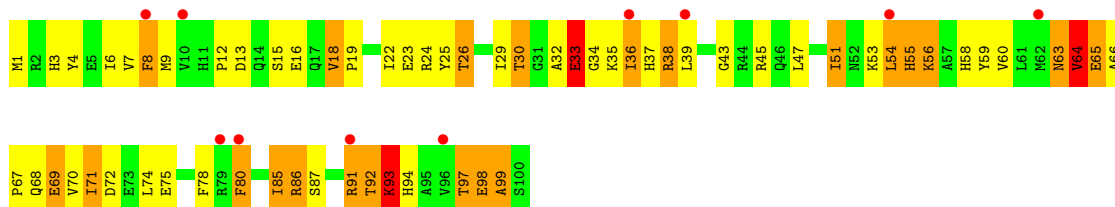


- Molecule 6: 30S ribosomal protein S6

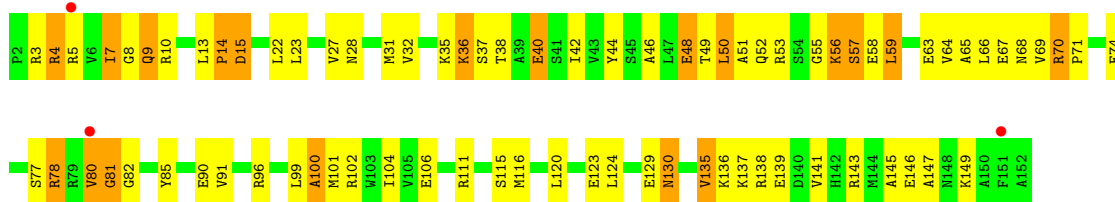




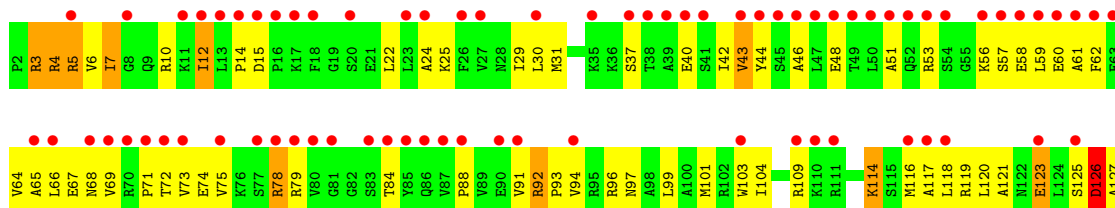
• Molecule 6: 30S ribosomal protein S6



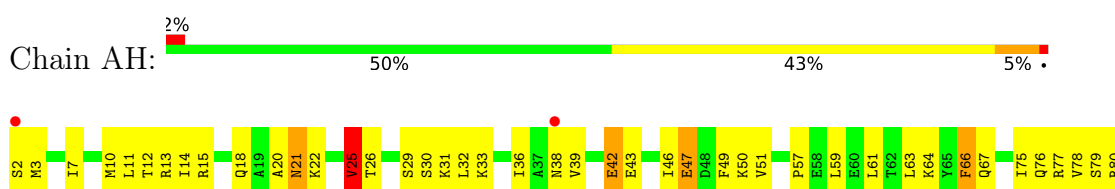
• Molecule 7: 30S ribosomal protein S7

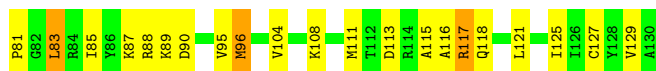


• Molecule 7: 30S ribosomal protein S7

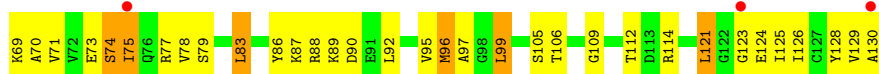
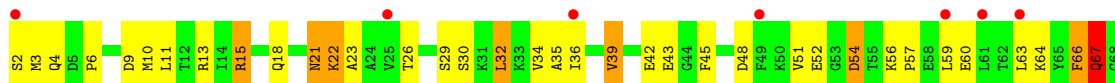


• Molecule 8: 30S ribosomal protein S8

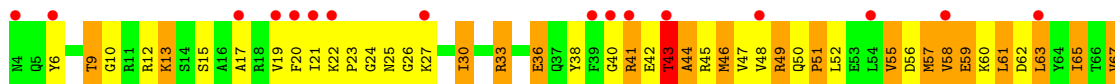




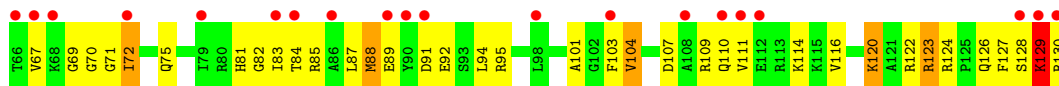
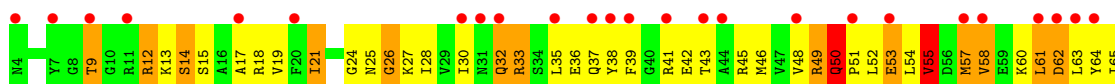
- Molecule 8: 30S ribosomal protein S8



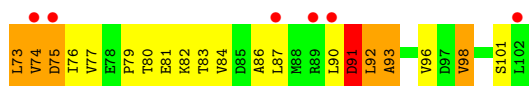
- Molecule 9: 30S ribosomal protein S9



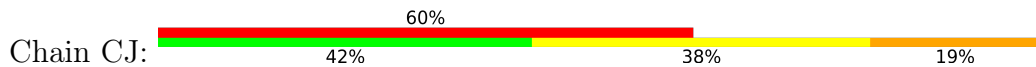
- Molecule 9: 30S ribosomal protein S9

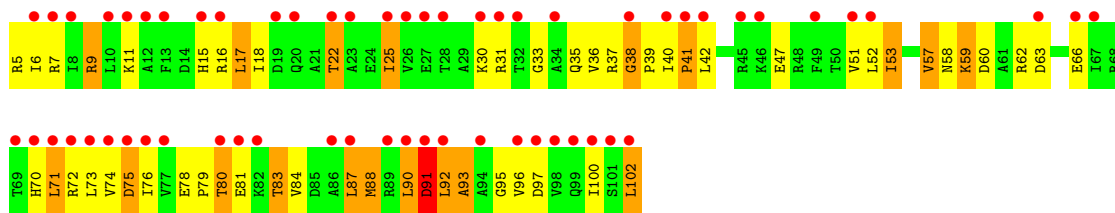


- Molecule 10: 30S ribosomal protein S10

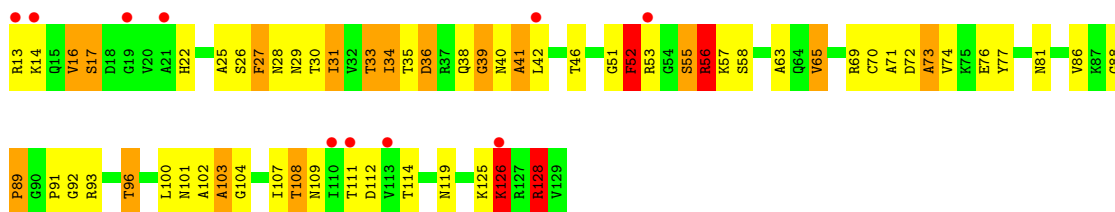


- Molecule 10: 30S ribosomal protein S10

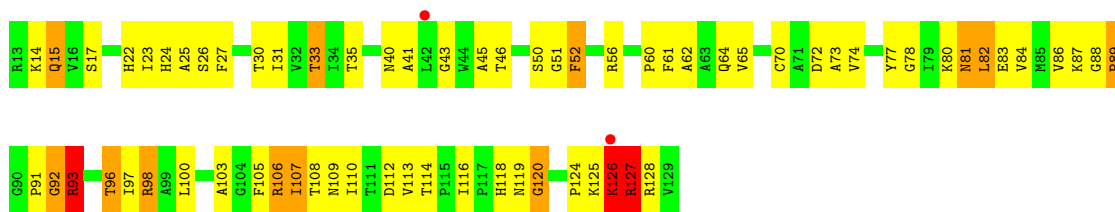




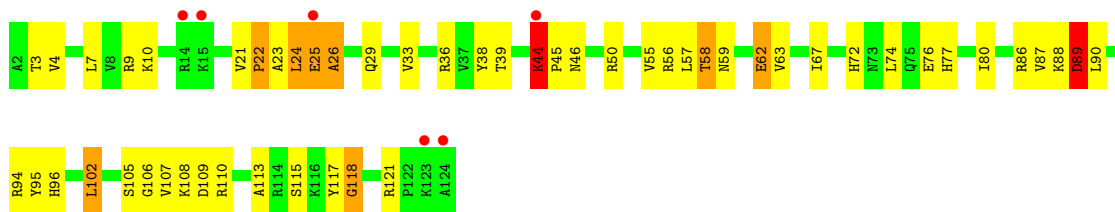
• Molecule 11: 30S ribosomal protein S11



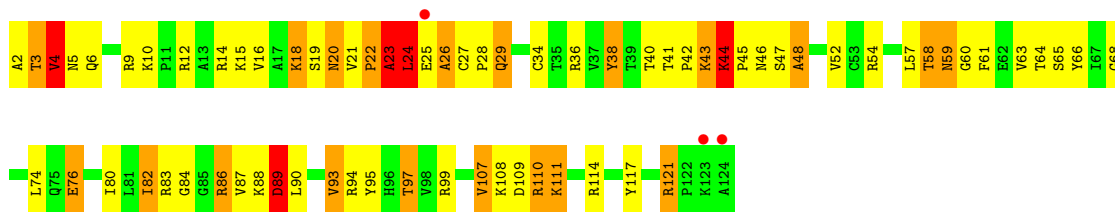
• Molecule 11: 30S ribosomal protein S11



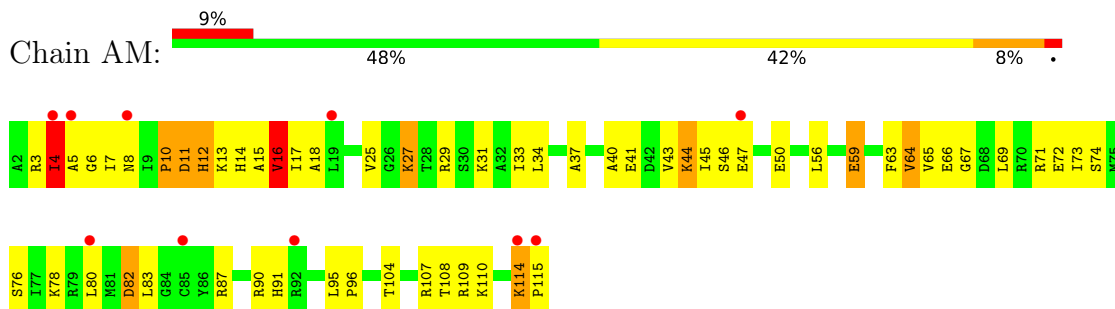
• Molecule 12: 30S ribosomal protein S12



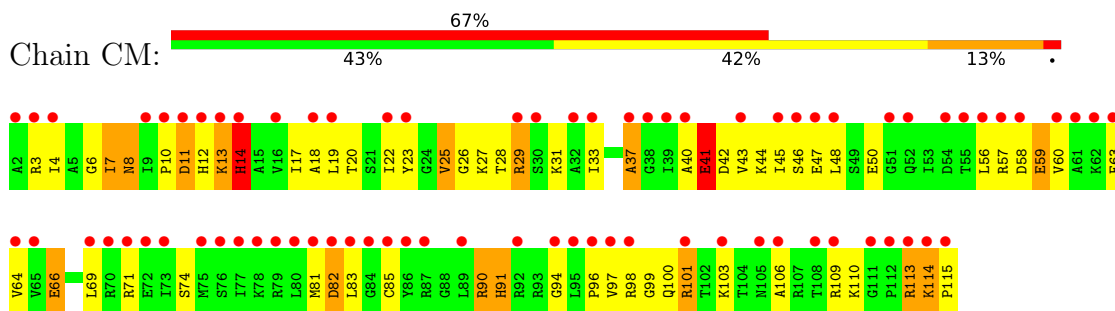
• Molecule 12: 30S ribosomal protein S12



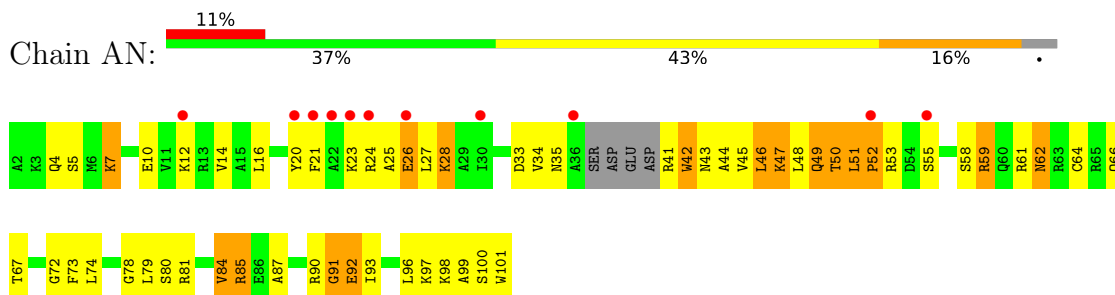
- Molecule 13: 30S ribosomal protein S13



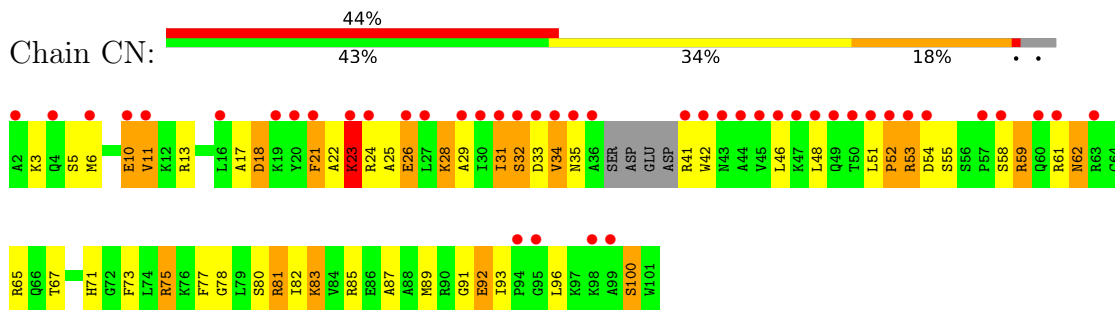
- Molecule 13: 30S ribosomal protein S13



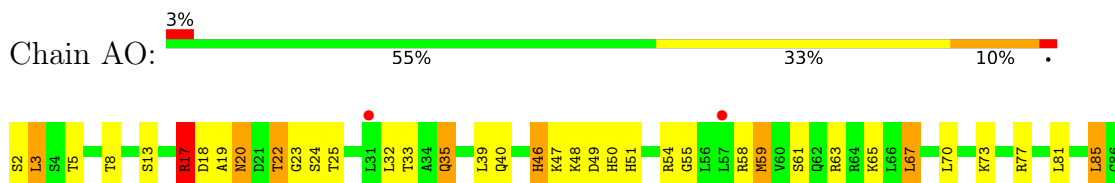
- Molecule 14: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S14

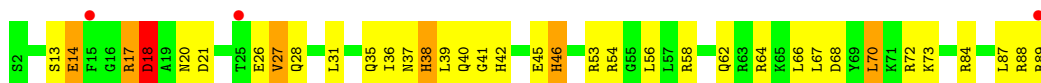


- Molecule 15: 30S ribosomal protein S15

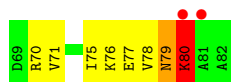
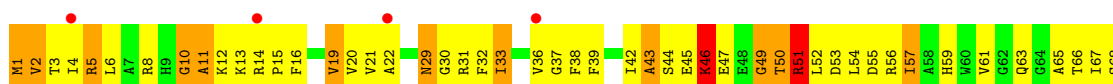




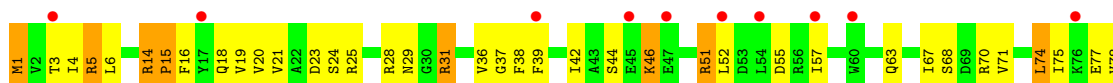
- Molecule 15: 30S ribosomal protein S15



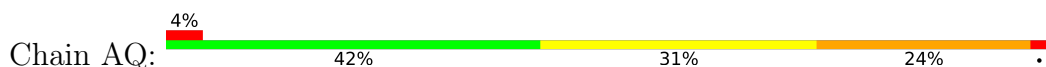
- Molecule 16: 30S ribosomal protein S16



- Molecule 16: 30S ribosomal protein S16



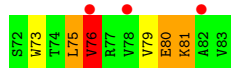
- Molecule 17: 30S ribosomal protein S17



- Molecule 17: 30S ribosomal protein S17







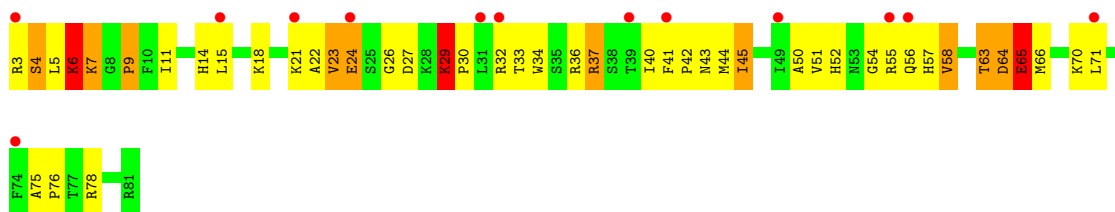
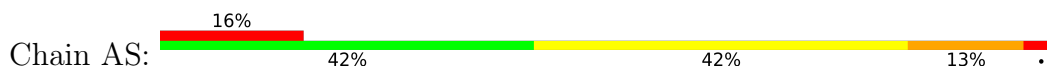
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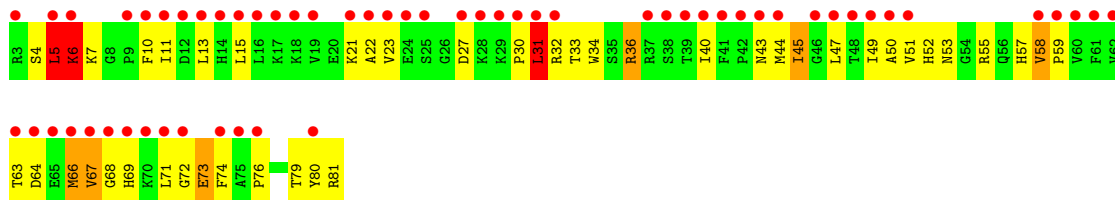
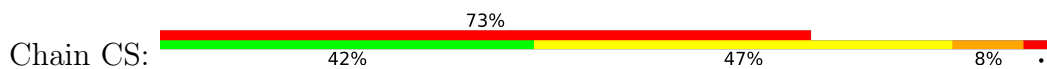
- Molecule 18: 30S ribosomal protein S18



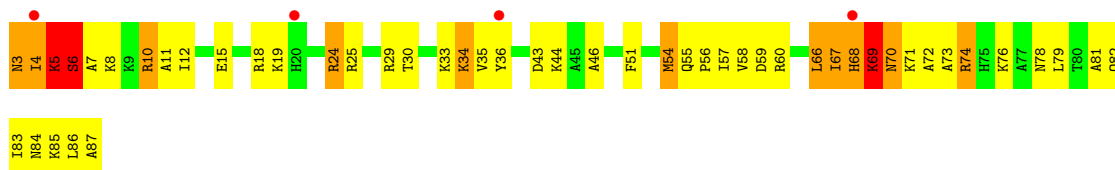
- Molecule 19: 30S ribosomal protein S19



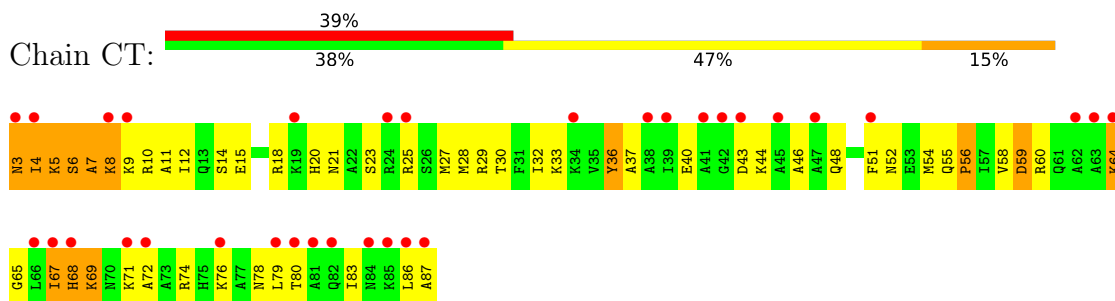
- Molecule 19: 30S ribosomal protein S19



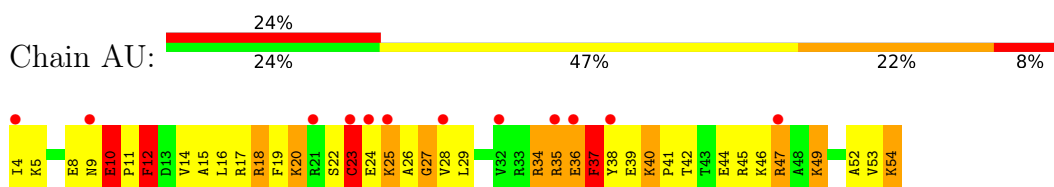
- Molecule 20: 30S ribosomal protein S20



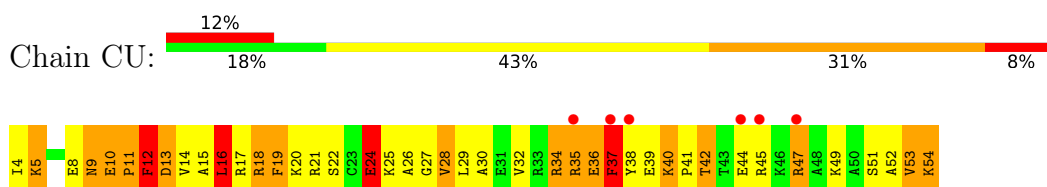
- Molecule 20: 30S ribosomal protein S20



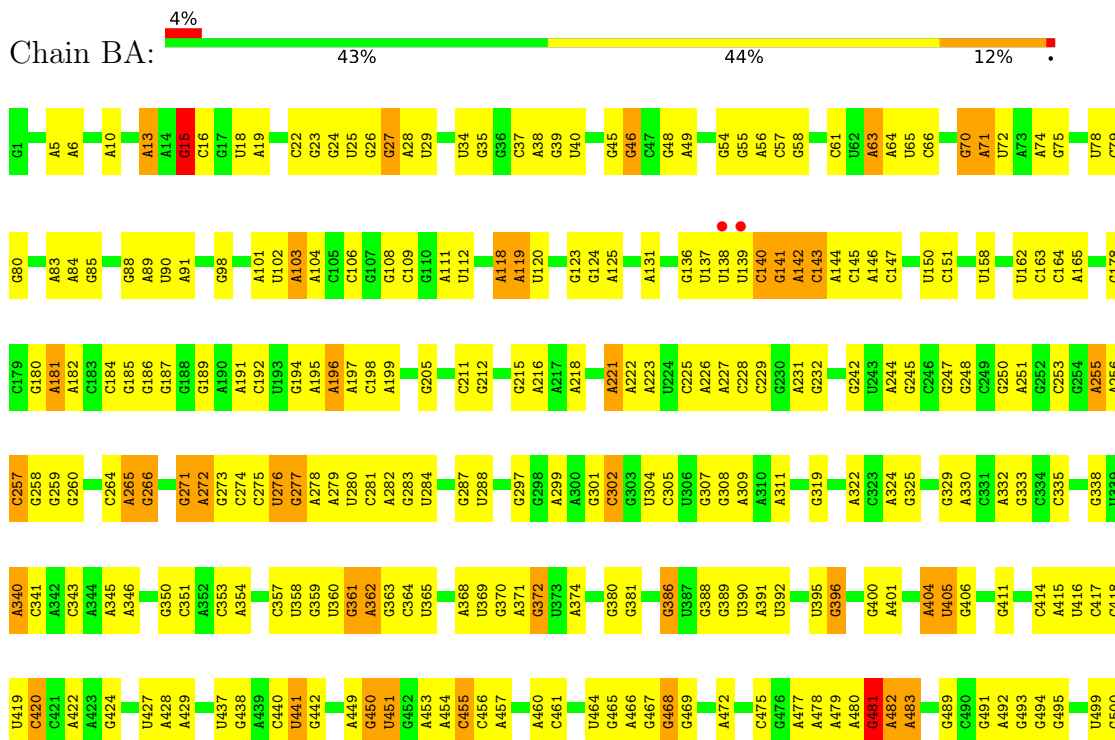
- Molecule 21: 30S ribosomal protein S21



- Molecule 21: 30S ribosomal protein S21

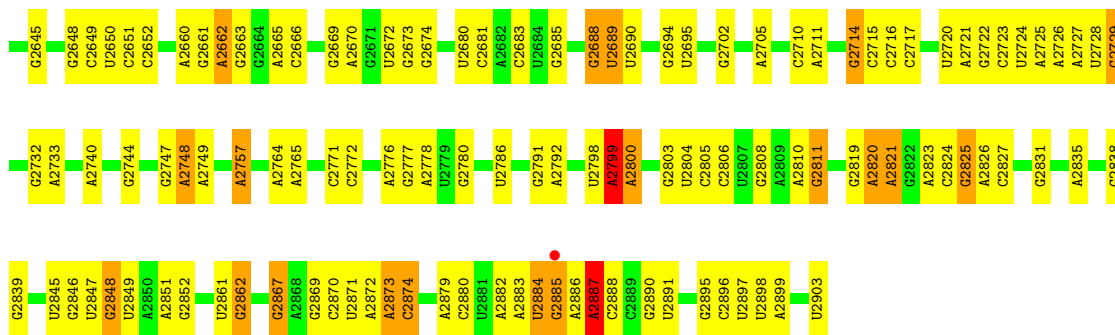


- Molecule 22: 23S rRNA

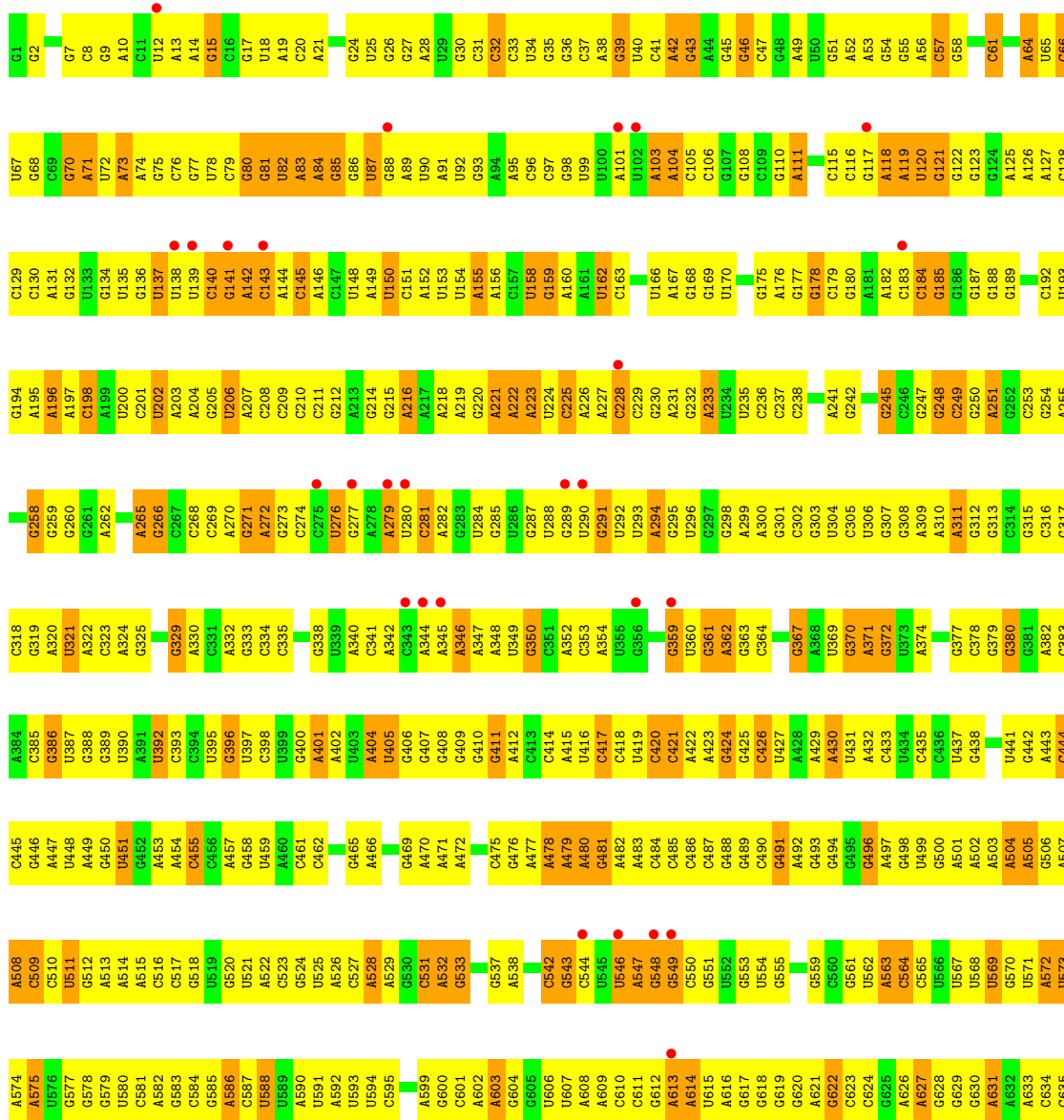


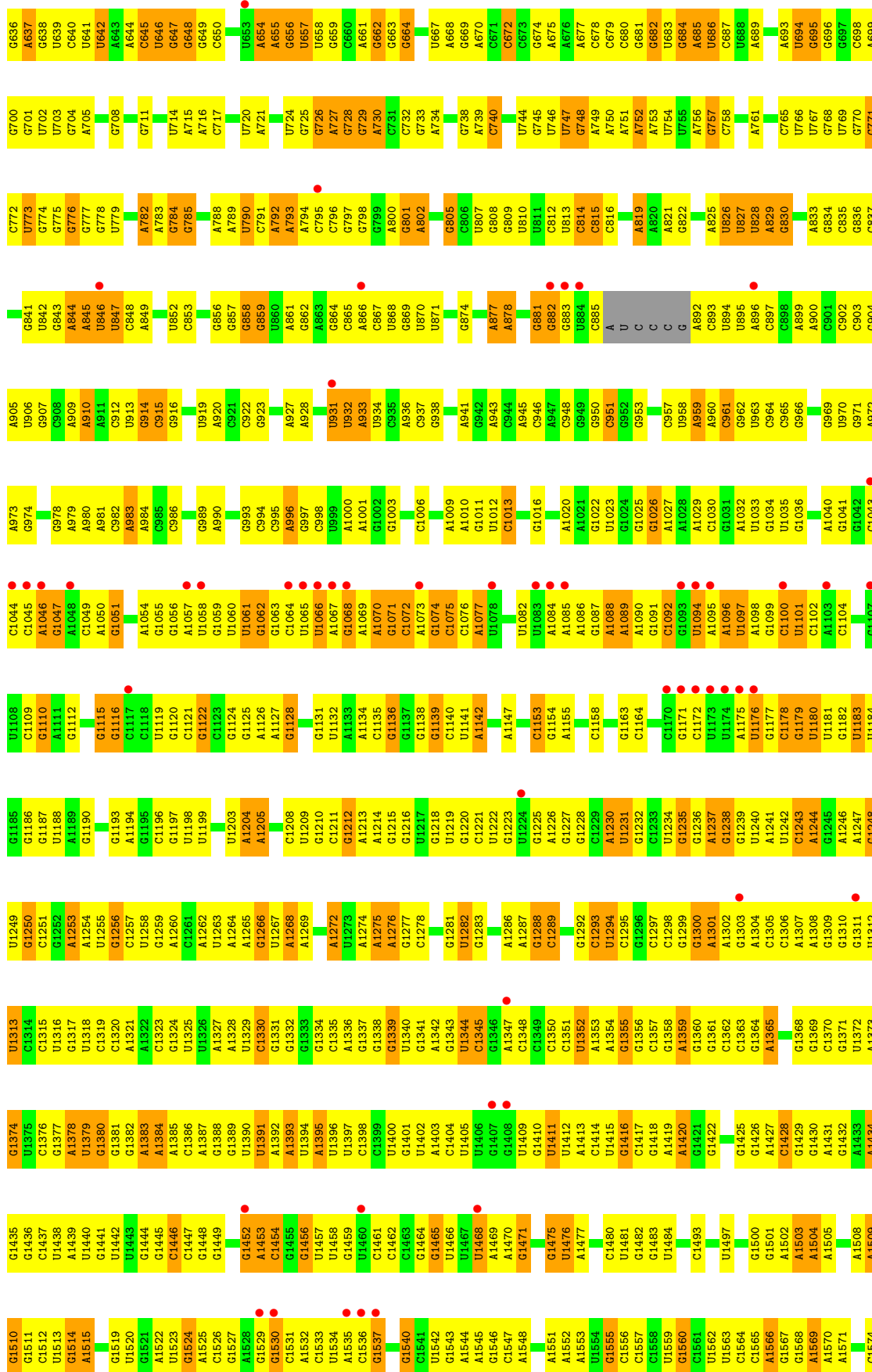


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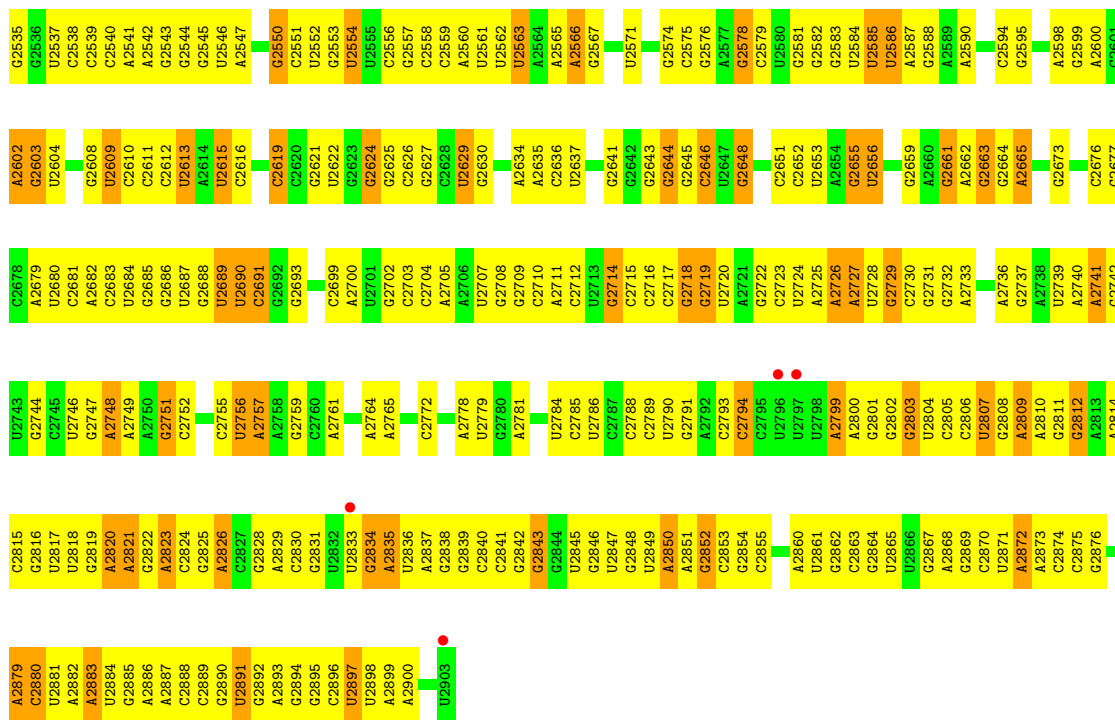


• Molecule 22: 23S rRNA

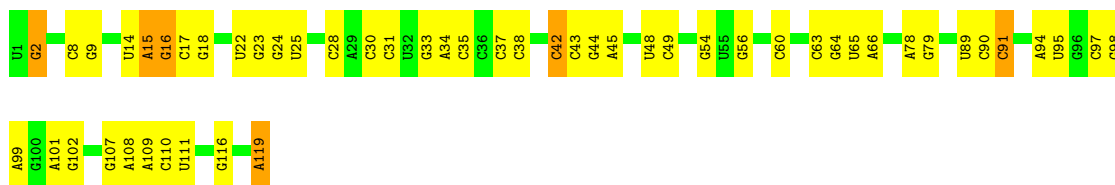




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A2433	G2241	G2241	G2115	U2180	G2115	A1977	G1907	C1836	G1767	U1693	A1616
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• Molecule 23: 5S rRNA



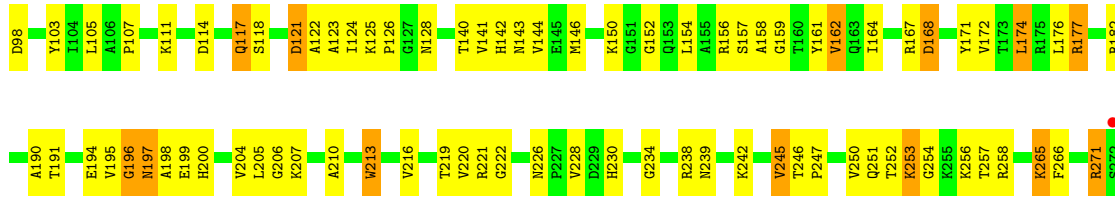
• Molecule 23: 5S rRNA



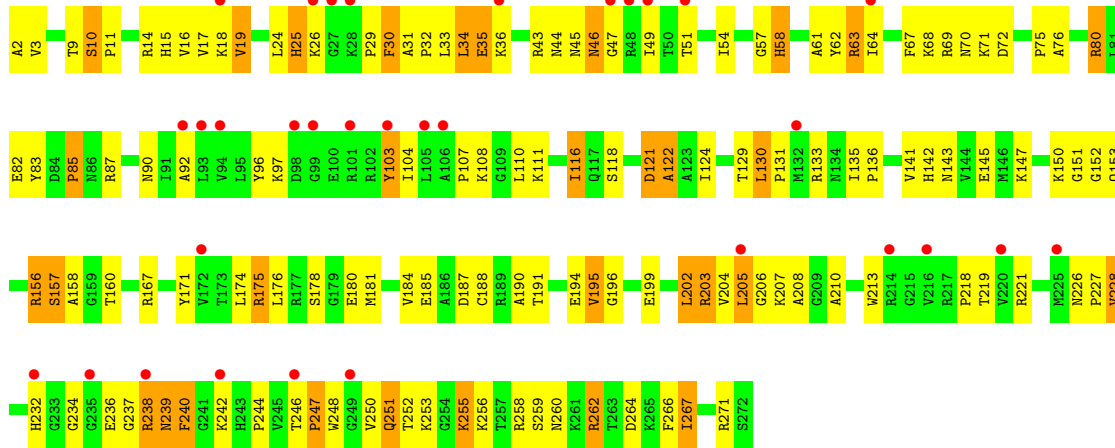
• Molecule 24: 50S ribosomal protein L2



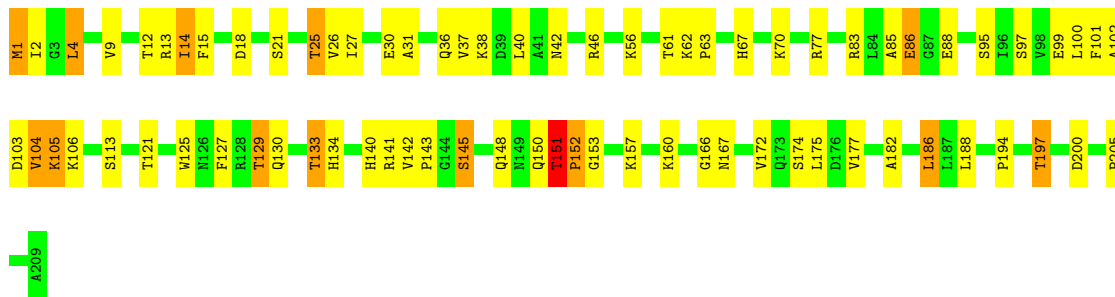




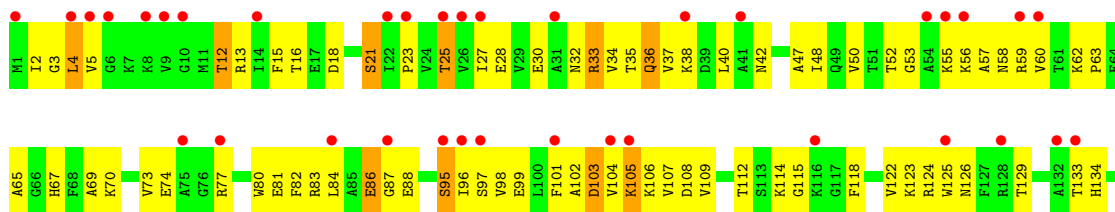
• Molecule 24: 50S ribosomal protein L2

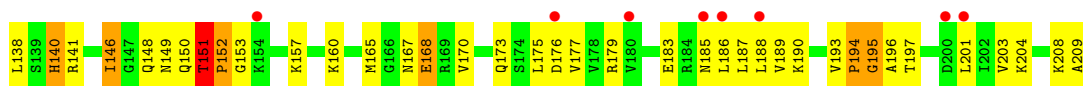


• Molecule 25: 50S ribosomal protein L3



• Molecule 25: 50S ribosomal protein L3





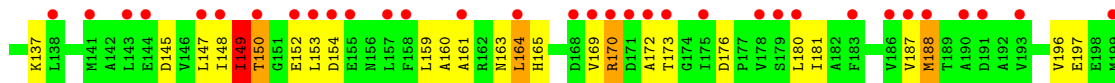
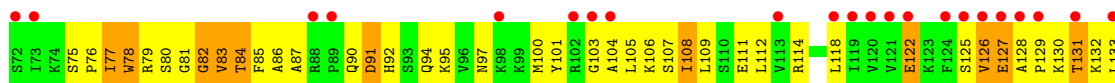
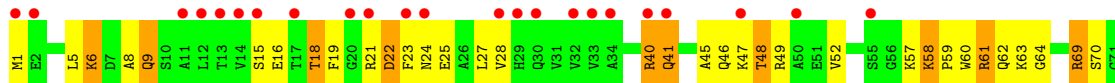
- Molecule 26: 50S ribosomal protein L4

Chain BE:    59% 34% 7%



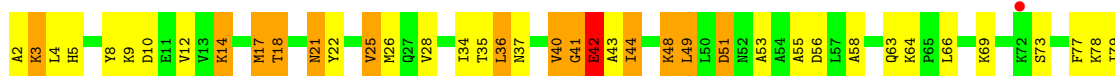
- Molecule 26: 50S ribosomal protein L4

Chain DE:     40% 49% 38% 12%

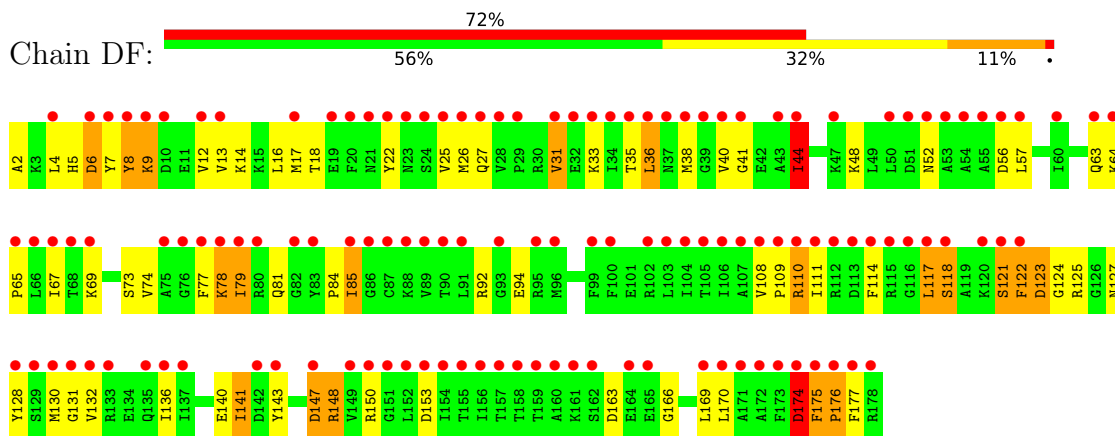


- Molecule 27: 50S ribosomal protein L5

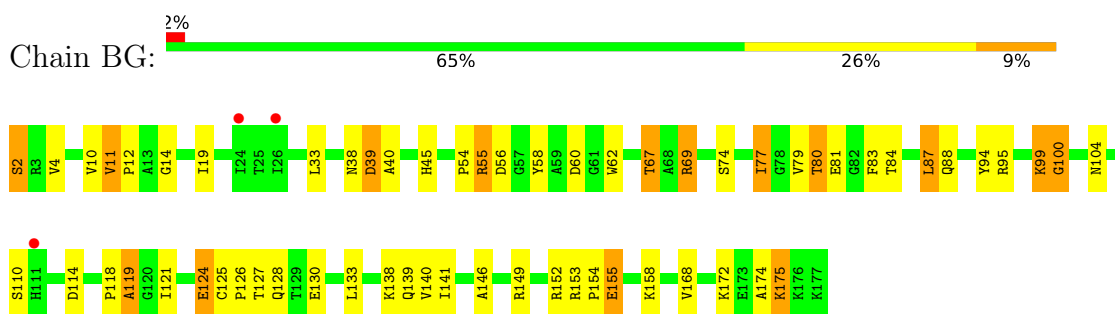
Chain BF:     2% 47% 37% 14%



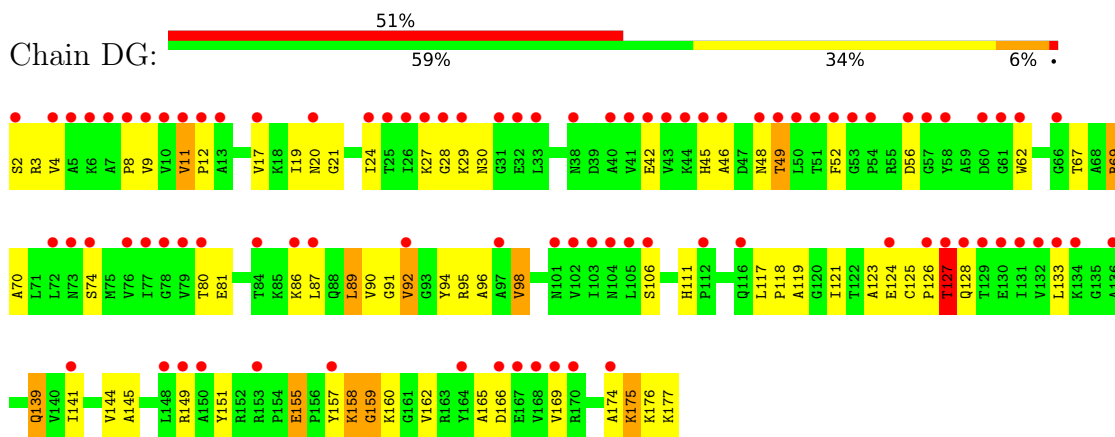
- Molecule 27: 50S ribosomal protein L5



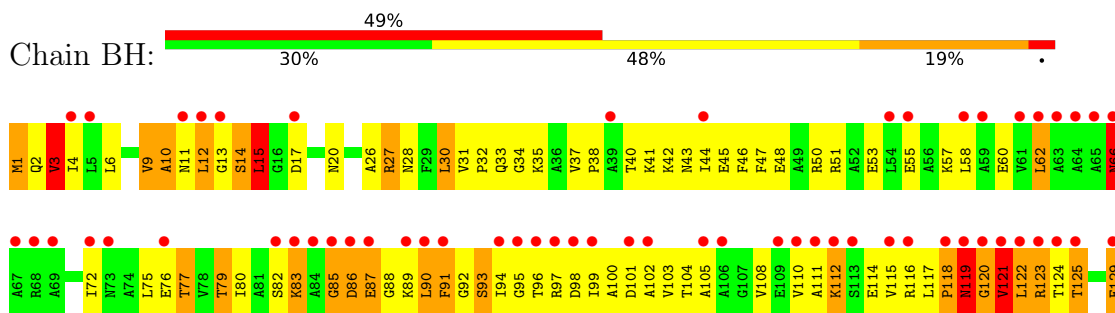
• Molecule 28: 50S ribosomal protein L6

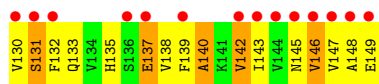


• Molecule 28: 50S ribosomal protein L6

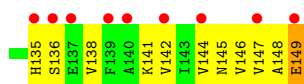
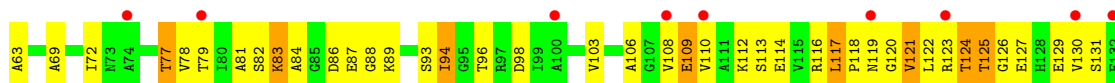
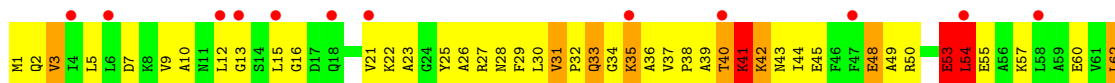


• Molecule 29: 50S ribosomal protein L9

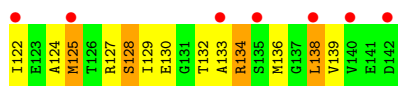
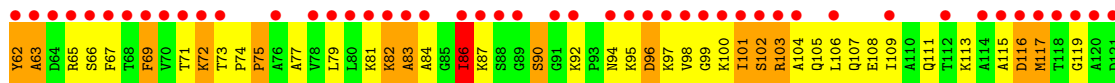
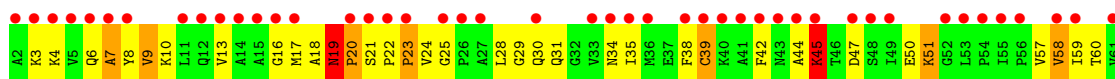
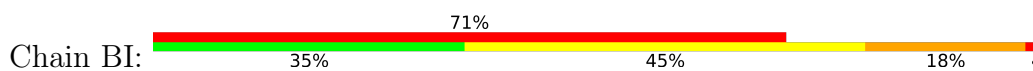




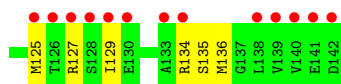
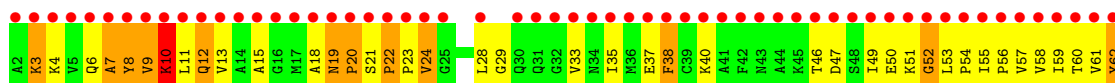
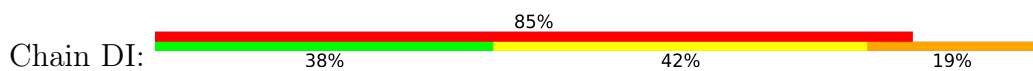
- Molecule 29: 50S ribosomal protein L9



- Molecule 30: 50S ribosomal protein L11



- Molecule 30: 50S ribosomal protein L11

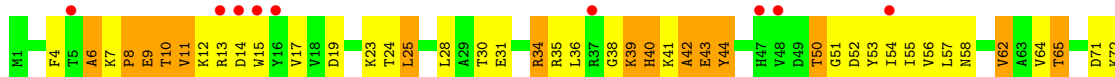


- Molecule 31: 50S ribosomal protein L13

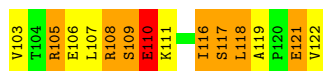
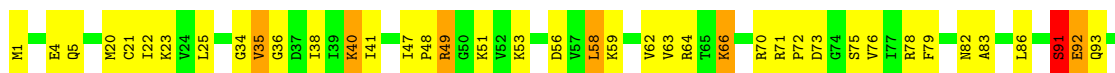




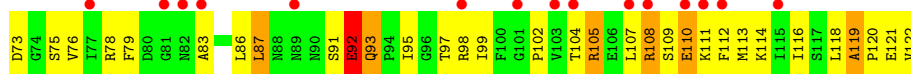
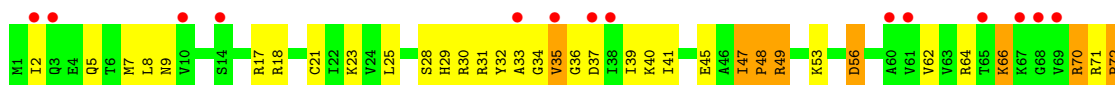
- Molecule 31: 50S ribosomal protein L13



- Molecule 32: 50S ribosomal protein L14



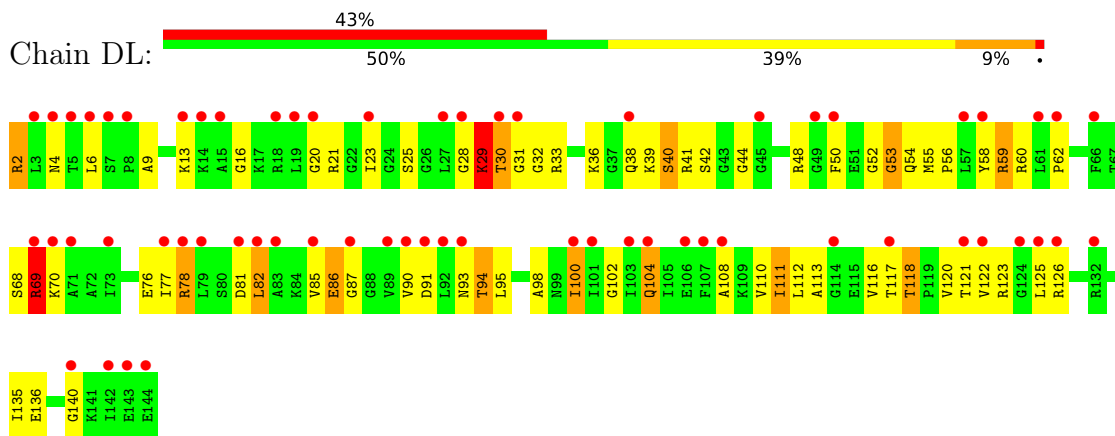
- Molecule 32: 50S ribosomal protein L14



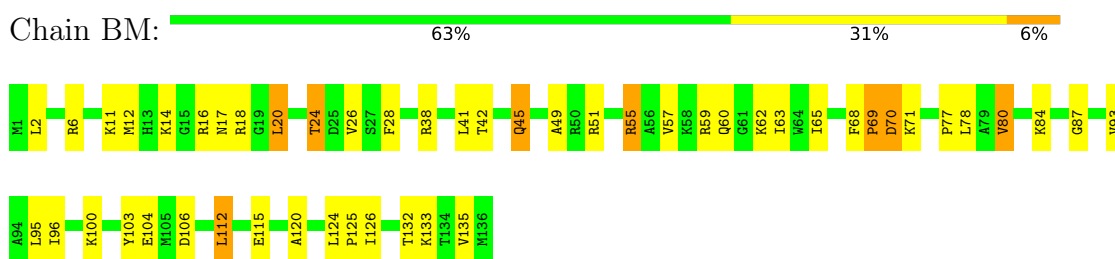
- Molecule 33: 50S ribosomal protein L15



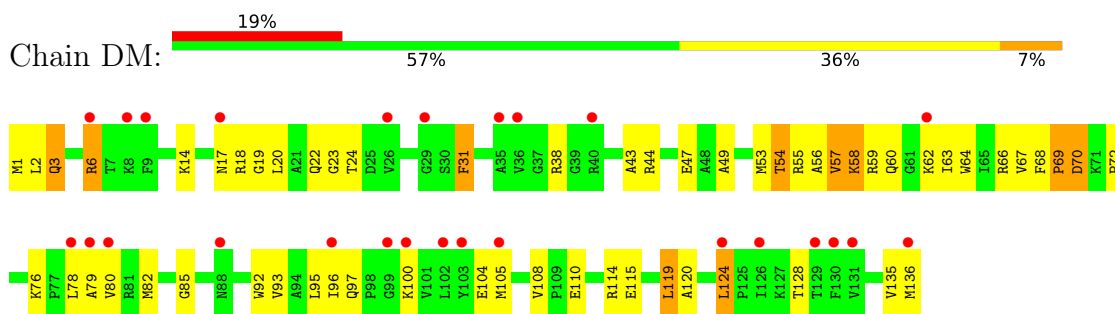
- Molecule 33: 50S ribosomal protein L15



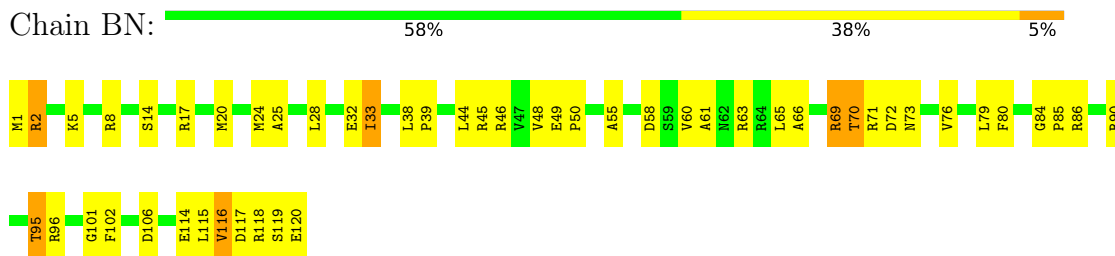
- Molecule 34: 50S ribosomal protein L16



- Molecule 34: 50S ribosomal protein L16

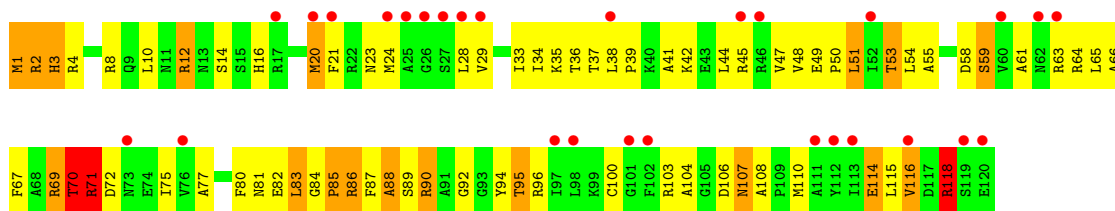


- Molecule 35: 50S ribosomal protein L17



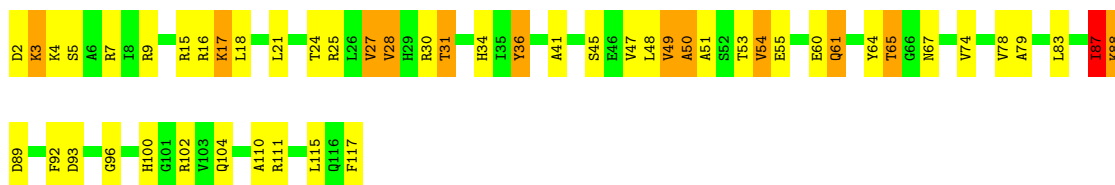
- Molecule 35: 50S ribosomal protein L17





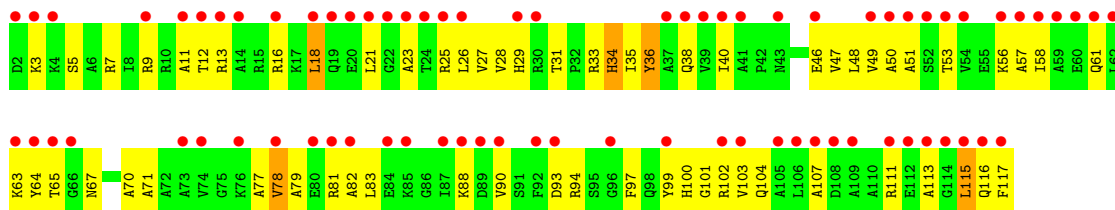
- Molecule 36: 50S ribosomal protein L18

Chain BO: 56% 33% 10%



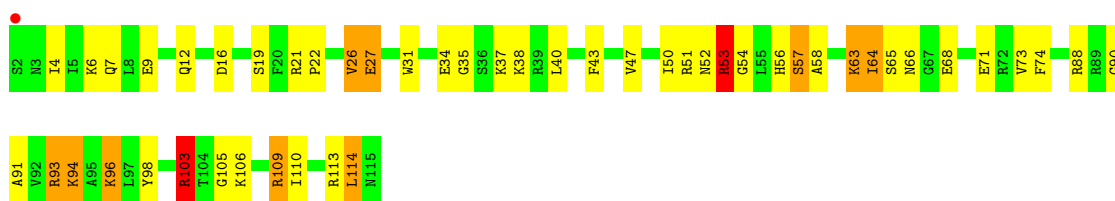
- Molecule 36: 50S ribosomal protein L18

Chain DO: 46% 65% 50%



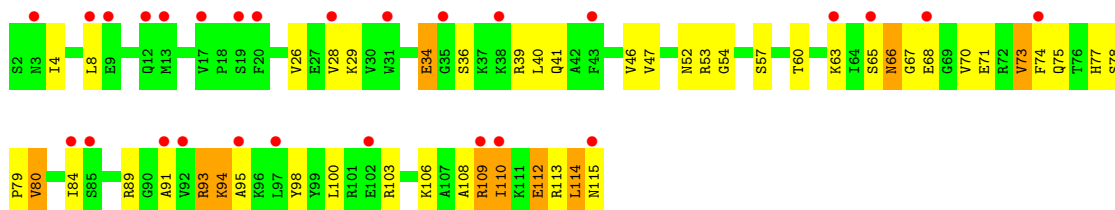
- Molecule 37: 50S ribosomal protein L19

Chain BP: 57% 32% 9%



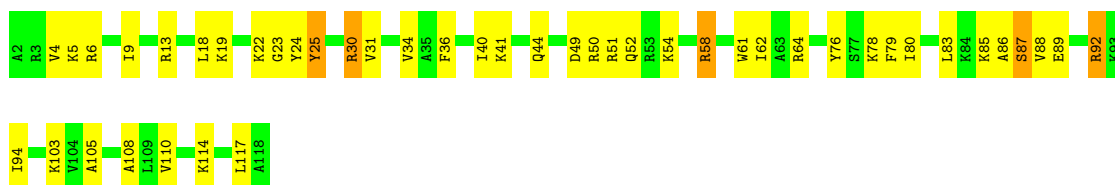
- Molecule 37: 50S ribosomal protein L19

Chain DP: 24% 58% 33% 9%



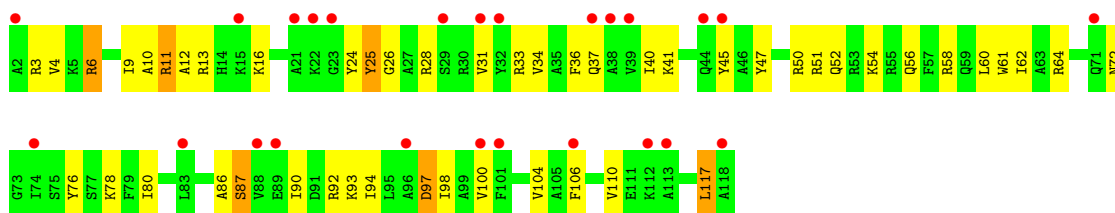
- Molecule 38: 50S ribosomal protein L20

Chain BQ:  62% 34%



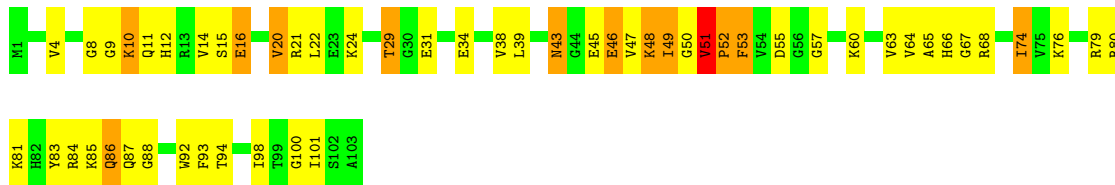
- Molecule 38: 50S ribosomal protein L20

Chain DQ:  21% 58% 37% 5%



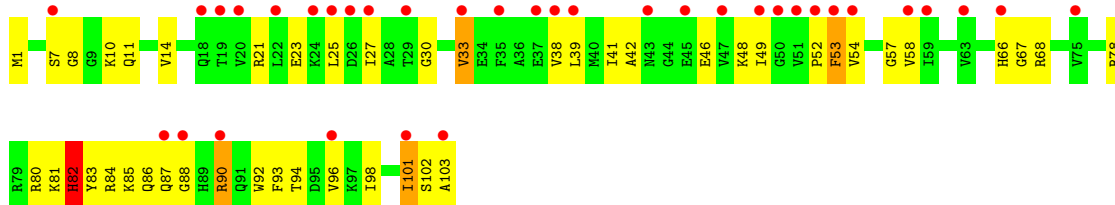
- Molecule 39: 50S ribosomal protein L21

Chain BR:  48% 40% 12%



- Molecule 39: 50S ribosomal protein L21

Chain DR:  34% 55% 40%



- Molecule 40: 50S ribosomal protein L22

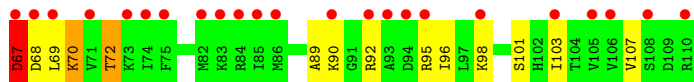
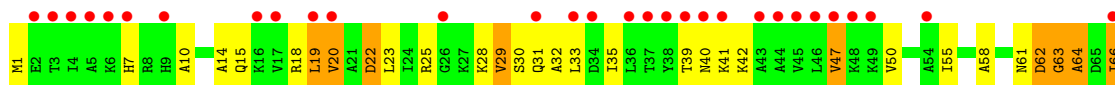
Chain BS:  59% 30% 11%



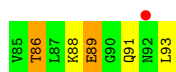




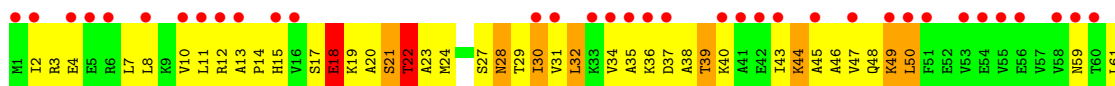
- Molecule 40: 50S ribosomal protein L22



- Molecule 41: 50S ribosomal protein L23



- Molecule 41: 50S ribosomal protein L23

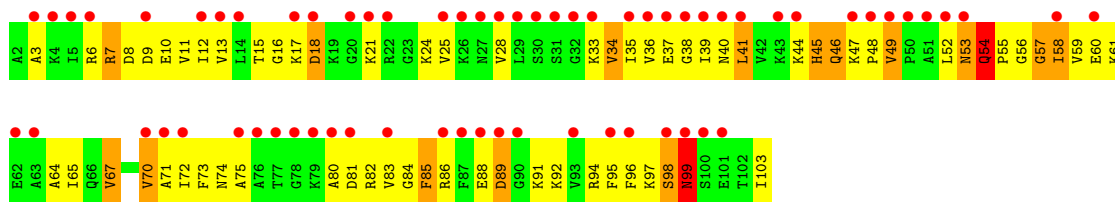


- Molecule 42: 50S ribosomal protein L24



- Molecule 42: 50S ribosomal protein L24

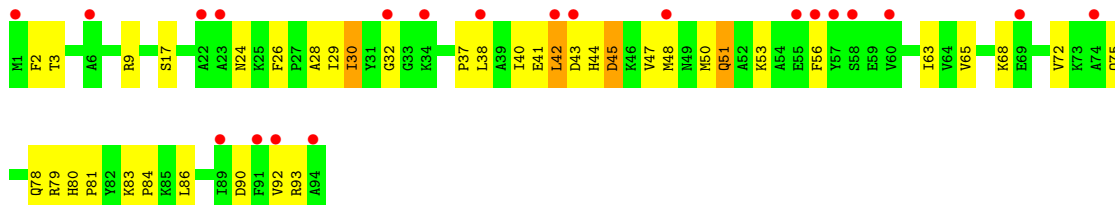




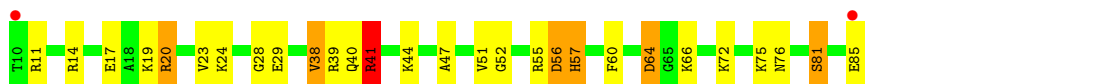
• Molecule 43: 50S ribosomal protein L25



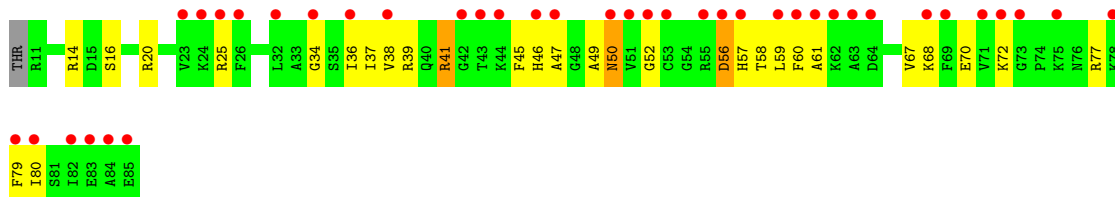
• Molecule 43: 50S ribosomal protein L25



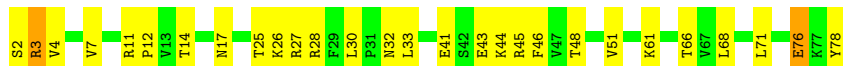
• Molecule 44: 50S ribosomal protein L27



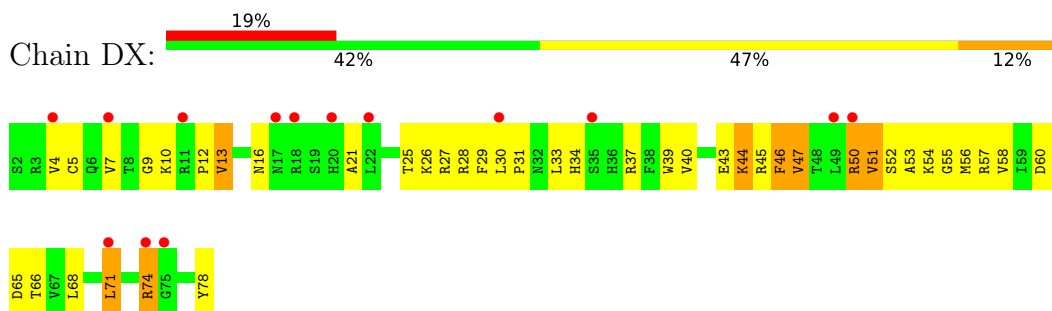
• Molecule 44: 50S ribosomal protein L27



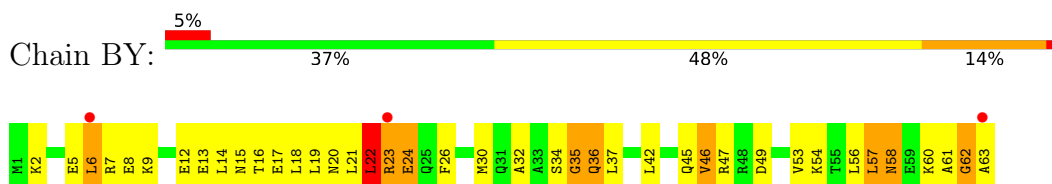
• Molecule 45: 50S ribosomal protein L28



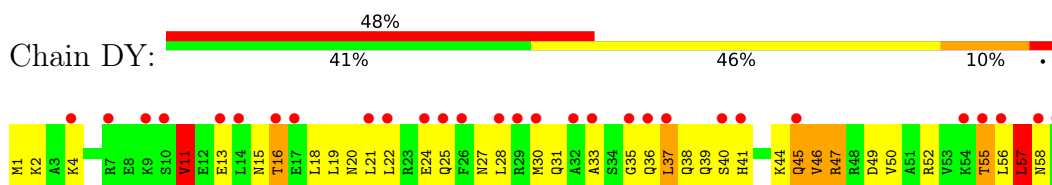
- Molecule 45: 50S ribosomal protein L28



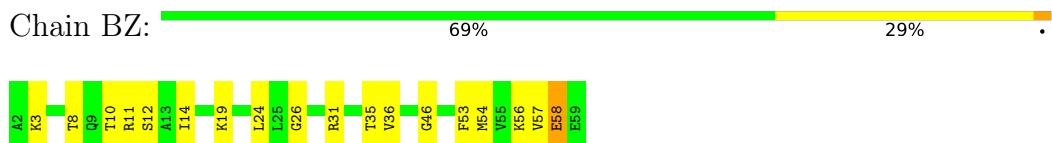
- Molecule 46: 50S ribosomal protein L29



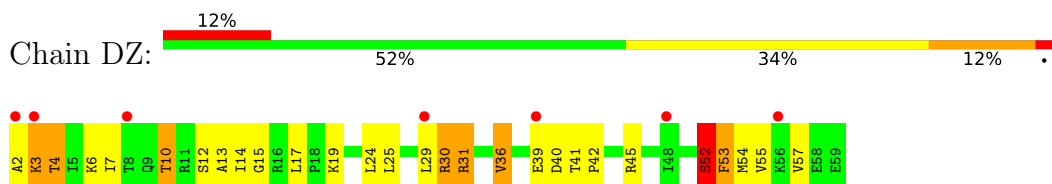
- Molecule 46: 50S ribosomal protein L29



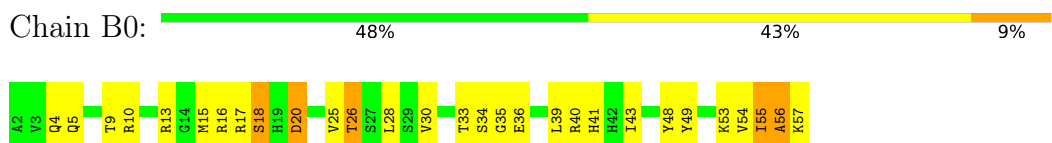
- Molecule 47: 50S ribosomal protein L30



- Molecule 47: 50S ribosomal protein L30

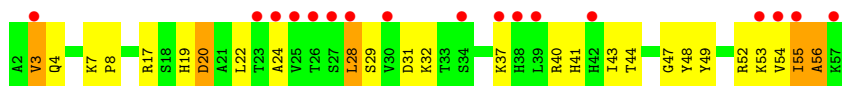


- Molecule 48: 50S ribosomal protein L32



- Molecule 48: 50S ribosomal protein L32

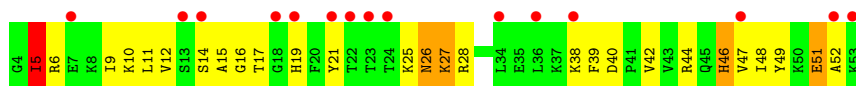




- Molecule 49: 50S ribosomal protein L33



- Molecule 49: 50S ribosomal protein L33



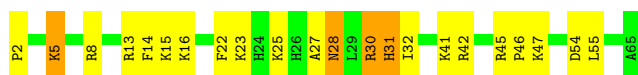
- Molecule 50: 50S ribosomal protein L34



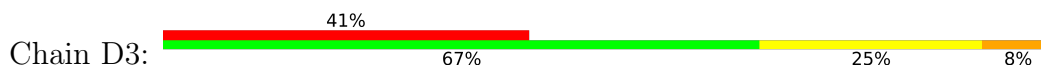
- Molecule 50: 50S ribosomal protein L34



- Molecule 51: 50S ribosomal protein L35



- Molecule 51: 50S ribosomal protein L35



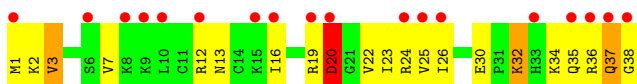
- Molecule 52: 50S ribosomal protein L36

Chain B4:  74% 24% .

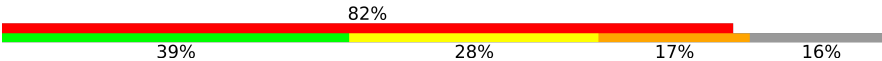


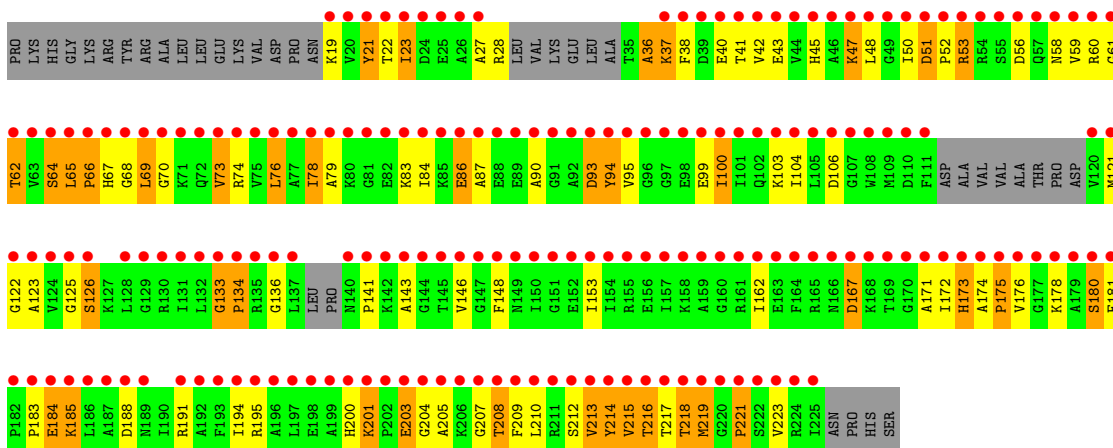
- Molecule 52: 50S ribosomal protein L36

Chain D4:  47% 45% 45% 8% .



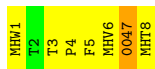
- Molecule 53: 50S ribosomal protein L1

Chain B5:  39% 82% 28% 17% 16%



- Molecule 54: Quinupristin

Chain B6:  12% 75% 12%



- Molecule 54: Quinupristin

Chain D6:  12% 38% 50%



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	211.26Å 432.34Å 621.39Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.08 – 2.80 69.08 – 2.80	Depositor EDS
% Data completeness (in resolution range)	94.1 (69.08-2.80) 94.1 (69.08-2.80)	Depositor EDS
$R_{merge}$	0.14	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.40 (at 2.81Å)	Xtrriage
Refinement program	PHENIX (phenix.refine: 1.8.1_1160)	Depositor
R, $R_{free}$	0.225 , 0.271 0.230 , 0.276	Depositor DCC
$R_{free}$ test set	5217 reflections (0.40%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	48.8	Xtrriage
Anisotropy	0.379	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.28 , 54.2	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.92	EDS
Total number of atoms	288423	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	61.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.65% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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 i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: MHU, ZN, MG, MHT, 004, DOL, MHW, DBB, MHV

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	0.34	0/36944	0.80	3/57632 (0.0%)
1	CA	0.28	0/36966	0.78	1/57666 (0.0%)
2	AB	0.28	0/1736	0.56	0/2338
2	CB	0.26	0/1736	0.50	0/2338
3	AC	0.28	0/1652	0.53	0/2225
3	CC	0.25	0/1652	0.48	0/2225
4	AD	0.29	0/1665	0.55	0/2227
4	CD	0.31	0/1665	0.55	0/2227
5	AE	0.31	0/1119	0.61	0/1504
5	CE	0.29	0/1119	0.59	0/1504
6	AF	0.30	0/836	0.55	0/1128
6	CF	0.27	0/836	0.57	1/1128 (0.1%)
7	AG	0.26	0/1196	0.48	0/1602
7	CG	0.25	0/1196	0.49	0/1602
8	AH	0.31	0/989	0.50	0/1326
8	CH	0.25	0/989	0.48	0/1326
9	AI	0.26	0/1034	0.54	0/1375
9	CI	0.26	0/1034	0.52	0/1375
10	AJ	0.29	0/797	0.55	0/1077
10	CJ	0.25	0/797	0.50	0/1077
11	AK	0.29	0/893	0.63	1/1205 (0.1%)
11	CK	0.26	0/893	0.52	0/1205
12	AL	0.31	0/969	0.58	0/1300
12	CL	0.29	0/969	0.60	0/1300
13	AM	0.27	0/893	0.55	0/1193
13	CM	0.26	0/893	0.50	0/1193
14	AN	0.28	0/785	0.55	0/1043
14	CN	0.25	0/785	0.46	0/1043
15	AO	0.28	0/718	0.53	0/959
15	CO	0.26	0/718	0.46	0/959
16	AP	0.30	0/659	0.66	1/884 (0.1%)
16	CP	0.27	0/659	0.49	0/884

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.30	0/658	0.58	0/881
17	CQ	0.28	0/658	0.51	0/881
18	AR	0.26	0/463	0.53	0/621
18	CR	0.26	0/463	0.49	0/621
19	AS	0.27	0/653	0.50	0/877
19	CS	0.27	0/653	0.54	0/877
20	AT	0.31	0/671	0.55	0/888
20	CT	0.25	0/671	0.50	0/888
21	AU	0.36	0/431	0.62	0/570
21	CU	0.33	0/431	0.56	0/570
22	BA	0.59	5/69659 (0.0%)	0.99	92/108672 (0.1%)
22	DA	0.27	0/69659	0.79	4/108672 (0.0%)
23	BB	0.52	0/2850	0.93	0/4444
23	DB	0.23	0/2828	0.76	0/4410
24	BC	0.38	0/2122	0.60	0/2852
24	DC	0.27	0/2122	0.52	0/2852
25	BD	0.42	0/1586	0.63	1/2134 (0.0%)
25	DD	0.26	0/1586	0.51	0/2134
26	BE	0.37	0/1571	0.60	0/2113
26	DE	0.26	0/1571	0.51	0/2113
27	BF	0.30	0/1435	0.52	0/1926
27	DF	0.24	0/1435	0.46	0/1926
28	BG	0.30	0/1343	0.53	0/1816
28	DG	0.25	0/1343	0.46	0/1816
29	BH	0.36	0/1121	0.66	1/1515 (0.1%)
29	DH	0.35	0/1121	0.56	0/1515
30	BI	0.29	0/1046	0.54	0/1410
30	DI	0.28	0/1046	0.52	0/1410
31	BJ	0.42	0/1152	0.58	0/1551
31	DJ	0.25	0/1152	0.51	0/1551
32	BK	0.41	0/948	0.64	0/1268
32	DK	0.27	0/948	0.51	0/1268
33	BL	0.39	0/1054	0.64	0/1403
33	DL	0.26	0/1054	0.51	0/1403
34	BM	0.42	0/1093	0.63	0/1460
34	DM	0.25	0/1093	0.46	0/1460
35	BN	0.43	0/974	0.68	0/1301
35	DN	0.27	0/974	0.56	1/1301 (0.1%)
36	BO	0.34	0/902	0.55	0/1209
36	DO	0.24	0/902	0.45	0/1209
37	BP	0.42	0/929	0.69	2/1242 (0.2%)
37	DP	0.26	0/929	0.47	0/1242
38	BQ	0.50	0/960	0.66	0/1278



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.26	0/960	0.47	0/1278
39	BR	0.47	0/829	0.73	1/1107 (0.1%)
39	DR	0.25	0/829	0.50	0/1107
40	BS	0.51	0/864	0.64	0/1156
40	DS	0.26	0/864	0.50	0/1156
41	BT	0.36	0/745	0.60	0/994
41	DT	0.25	0/745	0.49	0/994
42	BU	0.36	0/788	0.57	0/1051
42	DU	0.28	0/788	0.52	0/1051
43	BV	0.37	0/766	0.58	0/1025
43	DV	0.24	0/766	0.44	0/1025
44	BW	0.44	0/587	0.71	2/776 (0.3%)
44	DW	0.25	0/576	0.47	0/762
45	BX	0.34	0/635	0.57	0/848
45	DX	0.28	0/635	0.53	0/848
46	BY	0.32	0/510	0.63	0/677
46	DY	0.25	0/510	0.50	0/677
47	BZ	0.43	0/453	0.61	0/605
47	DZ	0.26	0/453	0.48	0/605
48	B0	0.44	0/450	0.64	0/599
48	D0	0.27	0/450	0.50	0/599
49	B1	0.37	0/417	0.53	0/554
49	D1	0.28	0/417	0.49	0/554
50	B2	0.44	0/380	0.69	0/498
50	D2	0.28	0/380	0.51	0/498
51	B3	0.38	0/513	0.57	0/676
51	D3	0.25	0/513	0.44	0/676
52	B4	0.43	0/303	0.63	0/397
52	D4	0.25	0/303	0.49	0/397
53	B5	0.25	0/1145	0.49	0/1556
54	B6	1.77	0/13	2.40	1/15 (6.7%)
54	D6	1.44	0/13	2.02	1/15 (6.7%)
All	All	0.39	5/310652 (0.0%)	0.79	113/464396 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
6	CF	0	1
11	AK	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
12	CL	0	2
25	BD	0	1
25	DD	0	1
All	All	0	6

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	984	A	N9-C4	-8.33	1.32	1.37
22	BA	1142	A	N9-C4	-7.64	1.33	1.37
22	BA	1936	A	N9-C4	-7.63	1.33	1.37
22	BA	528	A	N9-C4	-7.62	1.33	1.37
22	BA	528	A	N3-C4	-5.47	1.31	1.34

All (113) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	974	G	C4-C5-N7	10.83	115.13	110.80
22	BA	974	G	C6-C5-N7	-10.21	124.27	130.40
25	BD	151	THR	C-N-CD	-9.98	98.64	120.60
22	BA	984	A	C2-N3-C4	-9.95	105.62	110.60
22	BA	974	G	C5-N7-C8	-9.65	99.48	104.30
22	BA	974	G	C5-C6-O6	-9.39	122.96	128.60
22	BA	974	G	N1-C6-O6	9.23	125.44	119.90
22	BA	528	A	C2-N3-C4	-8.94	106.13	110.60
22	BA	984	A	N3-C4-C5	8.82	132.97	126.80
22	BA	752	A	C5-N7-C8	-8.81	99.50	103.90
22	BA	752	A	N1-C6-N6	8.79	123.87	118.60
22	BA	984	A	N3-C4-N9	-8.56	120.55	127.40
16	AP	51	ARG	NE-CZ-NH1	8.43	124.51	120.30
22	BA	528	A	N1-C6-N6	8.42	123.65	118.60
22	BA	974	G	N7-C8-N9	8.29	117.25	113.10
22	BA	752	A	C4-C5-N7	8.03	114.71	110.70
22	BA	1142	A	C2-N3-C4	-7.99	106.60	110.60
37	BP	103	ARG	NE-CZ-NH1	7.92	124.26	120.30
37	BP	53	ARG	NE-CZ-NH1	7.84	124.22	120.30
22	BA	1936	A	C2-N3-C4	-7.70	106.75	110.60
22	BA	704	G	O4'-C1'-N9	7.38	114.11	108.20
22	BA	1936	A	N3-C4-C5	7.36	131.95	126.80
22	BA	784	G	O4'-C1'-N9	-7.22	102.42	108.20
11	AK	128	ARG	NE-CZ-NH1	7.19	123.89	120.30
35	DN	71	ARG	NE-CZ-NH2	7.19	123.89	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	974	G	C4-N9-C1'	7.04	135.65	126.50
22	BA	752	A	C6-C5-N7	-7.01	127.39	132.30
22	BA	586	A	O5'-P-OP1	-6.96	99.44	105.70
22	BA	528	A	C5-N7-C8	-6.81	100.49	103.90
22	BA	2588	G	O5'-P-OP2	-6.80	99.58	105.70
22	BA	783	A	C5-N7-C8	-6.70	100.55	103.90
22	BA	752	A	N7-C8-N9	6.68	117.14	113.80
22	BA	1936	A	N1-C6-N6	6.55	122.53	118.60
22	BA	2499	C	N1-C2-O2	-6.55	114.97	118.90
22	BA	2250	G	C5-N7-C8	-6.46	101.07	104.30
22	BA	2606	C	C6-N1-C2	6.45	122.88	120.30
22	BA	1936	A	N3-C4-N9	-6.32	122.35	127.40
22	BA	1985	C	N1-C2-O2	-6.30	115.12	118.90
22	BA	752	A	C5-C6-N6	-6.28	118.68	123.70
22	BA	2645	G	O4'-C1'-N9	6.24	113.19	108.20
22	DA	1313	U	C2-N1-C1'	6.18	125.12	117.70
22	BA	967	U	N3-C4-O4	-6.17	115.08	119.40
22	BA	481	G	O4'-C1'-N9	6.14	113.11	108.20
22	BA	2453	A	N1-C6-N6	6.08	122.25	118.60
22	BA	752	A	O4'-C1'-N9	6.07	113.06	108.20
22	BA	967	U	C5-C4-O4	6.06	129.54	125.90
22	BA	784	G	P-O3'-C3'	6.03	126.94	119.70
22	BA	963	U	O5'-P-OP2	-5.99	100.31	105.70
22	BA	783	A	C4-C5-N7	5.95	113.67	110.70
22	BA	1331	G	N1-C6-O6	-5.93	116.34	119.90
1	AA	4	U	C2-N1-C1'	5.93	124.82	117.70
6	CF	86	ARG	NE-CZ-NH1	5.91	123.25	120.30
22	BA	783	A	C2-N3-C4	-5.90	107.65	110.60
22	BA	2250	G	C4-C5-N7	5.87	113.15	110.80
22	BA	705	A	N1-C6-N6	5.87	122.12	118.60
22	BA	1779	U	N3-C2-O2	-5.87	118.09	122.20
22	BA	2799	A	N1-C6-N6	5.86	122.11	118.60
22	BA	528	A	O4'-C1'-N9	-5.83	103.54	108.20
22	BA	837	C	N1-C2-O2	-5.81	115.41	118.90
22	BA	1779	U	O4'-C1'-N1	5.81	112.85	108.20
22	BA	1142	A	N3-C4-C5	5.80	130.86	126.80
22	BA	783	A	N3-C4-C5	5.79	130.85	126.80
54	D6	4	PRO	N-CA-CB	5.78	110.23	103.30
22	BA	1452	G	C5-N7-C8	-5.75	101.43	104.30
22	BA	2286	G	N3-C4-C5	5.74	131.47	128.60
44	BW	41	ARG	NE-CZ-NH2	-5.71	117.44	120.30
1	AA	188	C	C2-N1-C1'	5.71	125.08	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2542	A	N1-C6-N6	-5.69	115.19	118.60
22	BA	1452	G	C4-C5-N7	5.67	113.07	110.80
22	BA	2890	G	C4-C5-N7	5.62	113.05	110.80
1	CA	4	U	C2-N1-C1'	5.59	124.41	117.70
22	BA	1645	G	C6-C5-N7	-5.55	127.07	130.40
22	BA	698	C	C6-N1-C2	5.54	122.52	120.30
22	BA	2887	A	N1-C6-N6	5.53	121.92	118.60
54	B6	4	PRO	N-CA-CB	5.52	109.93	103.30
22	BA	2580	U	OP2-P-O3'	5.48	117.26	105.20
39	BR	51	VAL	C-N-CD	5.48	139.91	128.40
22	DA	2447	G	C4-N9-C1'	-5.43	119.43	126.50
22	BA	1658	C	C6-N1-C2	5.42	122.47	120.30
22	BA	974	G	C8-N9-C1'	-5.41	119.97	127.00
22	BA	528	A	C6-C5-N7	-5.38	128.53	132.30
22	BA	1645	G	C4-C5-N7	5.37	112.95	110.80
22	BA	984	A	C4-N9-C1'	-5.37	116.64	126.30
22	BA	2512	C	N1-C2-O2	-5.36	115.69	118.90
22	BA	1761	C	O5'-P-OP1	-5.35	100.88	105.70
22	BA	1783	A	O5'-P-OP2	-5.34	100.90	105.70
22	BA	528	A	C5-C6-N1	-5.32	115.04	117.70
22	BA	2705	A	N1-C6-N6	5.29	121.77	118.60
44	BW	41	ARG	NE-CZ-NH1	5.28	122.94	120.30
22	BA	2447	G	O4'-C1'-N9	5.28	112.42	108.20
22	BA	1230	A	O5'-P-OP2	-5.27	100.96	105.70
22	BA	2501	C	C2-N1-C1'	-5.24	113.04	118.80
22	BA	990	A	C5-C6-N6	-5.23	119.52	123.70
22	BA	2609	U	C2-N1-C1'	-5.20	111.46	117.70
22	BA	1331	G	C5-C6-O6	5.18	131.71	128.60
22	BA	2030	A	N9-C4-C5	5.17	107.87	105.80
1	AA	279	A	N1-C6-N6	5.17	121.70	118.60
22	DA	2501	C	O4'-C1'-N1	5.17	112.33	108.20
22	BA	974	G	C8-N9-C4	-5.16	104.33	106.40
29	BH	121	VAL	C-N-CA	5.15	134.57	121.70
22	BA	2030	A	C5-C6-N6	5.14	127.81	123.70
22	DA	2447	G	C8-N9-C1'	5.14	133.69	127.00
22	BA	15	G	C5-C6-O6	5.13	131.68	128.60
22	BA	1134	A	O5'-P-OP1	-5.13	101.08	105.70
22	BA	528	A	C4-C5-N7	5.13	113.27	110.70
22	BA	2017	U	O5'-P-OP1	-5.09	101.12	105.70
22	BA	563	A	N9-C4-C5	5.08	107.83	105.80
22	BA	528	A	N3-C4-C5	5.07	130.35	126.80
22	BA	2581	G	O4'-C1'-N9	5.07	112.25	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1900	A	O5'-P-OP1	-5.07	101.14	105.70
22	BA	2848	G	O4'-C1'-N9	5.06	112.25	108.20
22	BA	2060	A	N1-C6-N6	-5.05	115.57	118.60
22	BA	984	A	C8-N9-C1'	5.03	136.75	127.70

There are no chirality outliers.

All (6) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
11	AK	126	LYS	Peptide
25	BD	151	THR	Peptide
6	CF	54	LEU	Peptide
12	CL	23	ALA	Peptide
12	CL	24	LEU	Peptide
25	DD	151	THR	Peptide

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32995	0	16607	962	0
1	CA	33015	0	16617	1107	1
2	AB	1705	0	1732	164	0
2	CB	1705	0	1732	135	0
3	AC	1625	0	1696	78	0
3	CC	1625	0	1696	69	0
4	AD	1643	0	1707	116	0
4	CD	1643	0	1707	116	0
5	AE	1106	0	1148	88	0
5	CE	1106	0	1148	99	0
6	AF	818	0	808	47	0
6	CF	818	0	808	60	0
7	AG	1182	0	1238	58	0
7	CG	1182	0	1238	66	0
8	AH	979	0	1031	49	0
8	CH	979	0	1031	52	0
9	AI	1022	0	1070	87	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	CI	1022	0	1070	66	0
10	AJ	787	0	828	81	0
10	CJ	787	0	828	56	0
11	AK	877	0	887	68	0
11	CK	877	0	887	55	0
12	AL	955	0	1016	44	0
12	CL	955	0	1016	74	0
13	AM	884	0	941	44	0
13	CM	884	0	941	51	0
14	AN	774	0	824	58	0
14	CN	774	0	824	51	0
15	AO	710	0	728	31	0
15	CO	710	0	728	29	0
16	AP	649	0	666	53	0
16	CP	649	0	666	36	0
17	AQ	649	0	691	63	0
17	CQ	649	0	691	53	0
18	AR	456	0	478	17	0
18	CR	456	0	478	25	0
19	AS	638	0	665	39	0
19	CS	638	0	665	42	0
20	AT	665	0	714	65	0
20	CT	665	0	714	46	0
21	AU	426	0	449	52	0
21	CU	426	0	449	53	0
22	BA	62195	0	31280	1486	0
22	DA	62195	0	31280	2451	1
23	BB	2549	0	1291	37	0
23	DB	2529	0	1281	66	0
24	BC	2083	0	2154	102	0
24	DC	2083	0	2154	128	0
25	BD	1565	0	1616	66	0
25	DD	1565	0	1616	97	0
26	BE	1552	0	1619	67	0
26	DE	1552	0	1619	91	0
27	BF	1411	0	1444	84	0
27	DF	1411	0	1444	54	0
28	BG	1323	0	1371	41	0
28	DG	1323	0	1371	42	0
29	BH	1110	0	1147	139	0
29	DH	1110	0	1148	87	0
30	BI	1032	0	1085	76	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	DI	1032	0	1085	85	0
31	BJ	1129	0	1162	48	0
31	DJ	1129	0	1162	62	0
32	BK	939	0	1012	45	0
32	DK	939	0	1012	53	0
33	BL	1045	0	1117	54	0
33	DL	1045	0	1117	75	0
34	BM	1074	0	1157	43	0
34	DM	1074	0	1157	41	0
35	BN	961	0	1000	39	0
35	DN	961	0	1000	71	0
36	BO	892	0	923	38	0
36	DO	892	0	923	41	0
37	BP	917	0	962	45	0
37	DP	917	0	962	42	0
38	BQ	947	0	1019	39	0
38	DQ	947	0	1019	47	0
39	BR	816	0	839	66	0
39	DR	816	0	839	36	0
40	BS	857	0	922	33	0
40	DS	857	0	922	37	0
41	BT	739	0	807	41	0
41	DT	739	0	807	60	0
42	BU	780	0	831	37	0
42	DU	780	0	831	68	0
43	BV	753	0	780	28	0
43	DV	753	0	780	21	0
44	BW	580	0	594	20	0
44	DW	569	0	581	23	0
45	BX	625	0	652	15	0
45	DX	625	0	652	46	0
46	BY	509	0	543	34	0
46	DY	509	0	543	26	0
47	BZ	449	0	488	9	0
47	DZ	449	0	488	24	0
48	B0	444	0	458	27	0
48	D0	444	0	458	23	0
49	B1	410	0	440	19	0
49	D1	410	0	440	22	0
50	B2	377	0	418	10	0
50	D2	377	0	418	31	0
51	B3	504	0	572	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
51	D3	504	0	572	22	0
52	B4	302	0	340	7	0
52	D4	302	0	340	15	0
53	B5	1142	0	865	69	0
54	B6	73	0	64	3	0
54	D6	73	0	65	12	0
55	AA	71	0	0	0	0
55	AM	1	0	0	0	0
55	BA	194	0	0	0	0
55	BB	4	0	0	0	0
55	BQ	1	0	0	0	0
55	CA	56	0	0	0	0
55	D2	1	0	0	0	0
55	DA	166	0	0	0	0
55	DB	3	0	0	0	0
55	DQ	1	0	0	0	0
56	BA	48	0	50	15	0
56	DA	48	0	50	25	0
57	B4	1	0	0	0	0
57	D4	1	0	0	0	0
58	AA	194	0	0	18	0
58	AE	2	0	0	0	0
58	AL	1	0	0	0	0
58	AN	3	0	0	0	0
58	AT	2	0	0	0	0
58	AU	1	0	0	0	0
58	B3	3	0	0	0	0
58	B4	1	0	0	0	0
58	BA	617	0	0	66	0
58	BB	14	0	0	1	0
58	BC	6	0	0	1	0
58	BD	4	0	0	2	0
58	BE	1	0	0	0	0
58	BF	1	0	0	1	0
58	BG	1	0	0	1	0
58	BJ	1	0	0	0	0
58	BL	7	0	0	0	0
58	BN	5	0	0	0	0
58	BQ	1	0	0	0	0
58	BS	1	0	0	0	0
58	BT	2	0	0	0	0
58	CA	192	0	0	12	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	CL	1	0	0	0	0
58	CN	2	0	0	0	0
58	CT	2	0	0	0	0
58	CU	1	0	0	1	0
58	D2	1	0	0	1	0
58	D3	1	0	0	0	0
58	D4	1	0	0	0	0
58	DA	610	0	0	84	0
58	DB	13	0	0	1	0
58	DC	8	0	0	1	0
58	DD	4	0	0	2	0
58	DE	4	0	0	0	0
58	DJ	1	0	0	0	0
58	DL	4	0	0	1	0
58	DN	2	0	0	0	0
58	DS	2	0	0	0	0
58	DT	3	0	0	1	0
58	DU	1	0	0	0	0
58	DV	1	0	0	0	0
All	All	288423	0	193016	10587	1

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 22.

All (10587) 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)
29:BH:117:LEU:O	29:BH:121:VAL:HG23	1.34	1.22
22:BA:730:A:OP2	58:BA:3693:HOH:O	1.58	1.21
1:AA:533:A:OP1	58:AA:1848:HOH:O	1.65	1.15
29:BH:117:LEU:O	29:BH:121:VAL:CG2	1.95	1.14
22:BA:2498:C:OP2	58:BA:3684:HOH:O	1.64	1.13
22:BA:627:A:OP1	33:BL:78:ARG:NH1	1.83	1.11
22:BA:731:C:OP2	58:BA:3693:HOH:O	1.66	1.11
25:DD:151:THR:O	25:DD:153:GLY:N	1.84	1.10
29:BH:123:ARG:O	29:BH:124:THR:CG2	2.01	1.09
22:DA:1378:A:O2'	22:DA:1380:G:N7	1.86	1.08
5:CE:101:GLU:O	5:CE:103:THR:N	1.89	1.05
22:BA:2720:U:OP1	37:BP:53:ARG:NH2	1.89	1.04
22:DA:2711:A:OP2	58:DA:3546:HOH:O	1.73	1.03
56:DA:3001:DOL:H483	56:DA:3001:DOL:H463	1.41	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1395:A:OP1	58:BA:3411:HOH:O	1.76	1.02
22:DA:1439:A:OP2	58:DA:3627:HOH:O	1.76	1.02
22:DA:842:U:O4	58:DA:3577:HOH:O	1.75	1.02
22:BA:842:U:O4	58:BA:3587:HOH:O	1.75	1.02
22:DA:310:A:O2'	22:DA:311:A:OP2	1.77	1.01
22:BA:1342:A:OP2	58:BA:3712:HOH:O	1.76	1.01
22:DA:784:G:OP1	58:DA:3315:HOH:O	1.79	1.01
22:DA:2349:G:OP1	51:D3:45:ARG:NH2	1.93	1.01
23:DB:28:C:OP1	36:DO:36:TYR:OH	1.78	1.01
22:DA:789:A:N1	58:DA:3311:HOH:O	1.91	1.00
13:AM:11:ASP:OD1	13:AM:12:HIS:N	1.94	1.00
22:BA:1153:C:OP2	58:BA:3359:HOH:O	1.78	1.00
25:BD:140:HIS:NE2	58:BD:303:HOH:O	1.95	0.99
2:AB:193:PRO:O	2:AB:195:GLY:N	1.95	0.99
29:BH:117:LEU:HD21	29:BH:121:VAL:H	1.23	0.99
22:BA:517:C:OP2	48:B0:10:ARG:NH2	1.94	0.99
29:BH:123:ARG:O	29:BH:124:THR:HG23	1.61	0.99
28:DG:126:PRO:O	28:DG:127:THR:OG1	1.81	0.99
22:BA:1001:A:OP2	58:BA:3735:HOH:O	1.78	0.98
5:CE:157:ARG:O	5:CE:159:LYS:N	1.96	0.98
22:DA:2588:G:OP1	58:DA:3315:HOH:O	1.81	0.98
4:CD:41:HIS:O	4:CD:43:ALA:N	1.97	0.98
1:CA:1500:A:OP2	58:CA:1883:HOH:O	1.82	0.97
22:DA:2714:G:OP2	58:DA:3546:HOH:O	1.82	0.97
22:BA:797:G:O6	58:BA:3322:HOH:O	1.83	0.97
1:AA:516:U:O4	58:AA:1848:HOH:O	1.82	0.97
29:DH:40:THR:O	29:DH:42:LYS:N	1.98	0.96
22:BA:1923:U:H2'	22:BA:1924:C:H5'	1.46	0.96
2:CB:73:LYS:O	2:CB:75:ALA:N	1.98	0.96
22:DA:2627:G:O2'	22:DA:2781:A:N1	1.98	0.96
1:AA:980:C:OP2	58:AA:1835:HOH:O	1.82	0.96
2:AB:21:ARG:O	2:AB:23:TRP:N	1.97	0.96
22:DA:602:A:O2'	22:DA:604:G:O2'	1.84	0.96
22:DA:182:A:O2'	22:DA:433:C:O2'	1.83	0.96
6:AF:91:ARG:O	6:AF:92:THR:OG1	1.84	0.95
29:BH:120:GLY:C	29:BH:122:LEU:HA	1.85	0.95
22:DA:514:A:N3	22:DA:581:C:O2'	1.98	0.95
5:AE:157:ARG:O	5:AE:159:LYS:N	2.00	0.94
22:DA:370:G:N7	58:DA:3555:HOH:O	1.97	0.94
56:BA:3001:DOL:HC1	56:BA:3001:DOL:H463	1.49	0.94
9:CI:107:ASP:OD1	9:CI:109:ARG:NH1	1.99	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1916:A:C4	22:BA:1917:U:H1'	2.02	0.93
22:DA:790:U:OP2	58:DA:3755:HOH:O	1.84	0.93
22:BA:1062:G:N2	22:BA:1077:A:N1	2.16	0.93
22:BA:2428:G:OP1	58:BA:3699:HOH:O	1.85	0.93
22:DA:621:A:OP2	58:DA:3293:HOH:O	1.85	0.93
22:DA:2056:G:OP2	58:DA:3485:HOH:O	1.86	0.92
4:CD:28:ILE:O	4:CD:31:LYS:NZ	2.04	0.91
22:BA:2269:G:OP1	58:BA:3512:HOH:O	1.89	0.91
40:DS:28:LYS:O	40:DS:30:SER:N	2.02	0.91
22:DA:299:A:N3	22:DA:319:G:O2'	2.02	0.91
35:DN:87:PHE:O	35:DN:89:SER:N	2.04	0.91
1:AA:1312:G:N7	19:AS:3:ARG:N	2.17	0.91
22:BA:1602:U:O4	58:BA:3712:HOH:O	1.87	0.91
39:DR:101:ILE:O	39:DR:103:ALA:N	2.03	0.91
23:DB:43:C:O2	27:DF:92:ARG:NH2	2.04	0.90
29:DH:83:LYS:HG3	29:DH:149:GLU:CG	2.02	0.90
22:DA:450:G:O6	58:DA:3242:HOH:O	1.90	0.90
22:DA:1817:G:OP1	24:DC:62:TYR:OH	1.89	0.90
22:DA:1050:A:N6	22:DA:1109:C:O2	2.04	0.90
1:AA:880:C:OP1	12:AL:9:ARG:NH1	2.05	0.90
1:CA:858:G:N7	58:CA:1819:HOH:O	2.04	0.90
2:CB:87:CYS:O	2:CB:89:GLN:N	2.05	0.90
22:DA:729:G:OP2	24:DC:207:LYS:NZ	2.03	0.90
22:DA:488:G:N2	22:DA:493:G:O6	2.05	0.89
5:CE:102:GLY:O	5:CE:104:GLY:N	2.06	0.89
22:BA:1964:G:O2'	22:BA:1967:C:OP2	1.89	0.89
22:DA:2615:U:OP1	58:DA:3745:HOH:O	1.90	0.89
3:AC:85:GLU:OE1	3:AC:88:ARG:NH1	2.05	0.89
17:CQ:69:LYS:O	17:CQ:70:THR:OG1	1.91	0.89
22:DA:58:G:OP1	41:DT:78:SER:OG	1.88	0.89
22:BA:1924:C:H2'	22:BA:1925:C:H5''	1.54	0.89
31:DJ:80:HIS:O	31:DJ:82:GLY:N	2.06	0.89
22:DA:1464:G:N7	58:DA:3633:HOH:O	2.05	0.88
22:BA:1823:G:N7	58:BA:3657:HOH:O	2.06	0.88
22:DA:1268:A:OP1	58:DA:3378:HOH:O	1.89	0.88
13:AM:82:ASP:OD1	27:BF:112:ARG:NH2	2.06	0.88
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.04	0.88
50:D2:11:LYS:NZ	58:D2:201:HOH:O	2.06	0.88
22:BA:2271:G:O6	58:BA:3511:HOH:O	1.91	0.88
29:BH:123:ARG:O	29:BH:124:THR:HG22	1.74	0.88
14:CN:41:ARG:NH1	14:CN:42:TRP:O	2.07	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:C	29:BH:121:VAL:HG23	1.93	0.87
22:BA:747:U:C5	22:BA:2613:U:C5	2.62	0.87
22:BA:1909:C:N4	22:BA:1921:G:O6	2.06	0.87
1:CA:1256:A:O2'	1:CA:1278:G:O6	1.91	0.87
22:DA:528:A:OP1	58:DA:3246:HOH:O	1.90	0.87
1:CA:1046:A:N6	1:CA:1211:U:O2	2.08	0.87
16:AP:42:ILE:O	16:AP:44:SER:N	2.08	0.87
29:DH:83:LYS:HG3	29:DH:149:GLU:HG2	1.56	0.87
22:DA:2834:G:O6	22:DA:2879:A:O2'	1.93	0.86
4:AD:125:VAL:O	4:AD:127:GLY:N	2.07	0.86
22:BA:2448:A:OP2	58:BA:3684:HOH:O	1.92	0.86
1:CA:912:C:OP1	12:CL:43:LYS:NZ	2.07	0.86
4:CD:192:SER:OG	4:CD:193:ALA:N	2.04	0.86
20:CT:5:LYS:O	20:CT:7:ALA:N	2.09	0.86
7:AG:55:GLY:O	7:AG:57:SER:N	2.08	0.86
25:BD:103:ASP:O	25:BD:105:LYS:N	2.07	0.86
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.09	0.86
22:DA:18:U:O4	58:DA:3205:HOH:O	1.94	0.86
22:BA:622:G:OP2	58:BA:3293:HOH:O	1.94	0.86
1:AA:1108:G:O6	58:AA:1861:HOH:O	1.92	0.86
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.57	0.86
22:DA:1010:A:OP2	58:DA:3778:HOH:O	1.94	0.86
22:DA:1508:A:O2'	22:DA:1509:A:O4'	1.93	0.85
31:DJ:41:LYS:O	31:DJ:43:GLU:N	2.09	0.85
1:AA:537:G:OP1	12:AL:110:ARG:NH2	2.09	0.85
22:DA:858:G:O2'	22:DA:2268:A:N3	2.08	0.85
22:DA:618:G:O6	58:DA:3292:HOH:O	1.94	0.85
48:B0:20:ASP:OD2	48:B0:20:ASP:N	2.09	0.85
22:DA:1371:G:N7	58:DA:3399:HOH:O	2.08	0.85
4:AD:163:GLU:OE2	4:AD:164:GLN:N	2.10	0.85
2:AB:118:GLU:O	2:AB:121:SER:N	2.09	0.85
14:AN:61:ARG:O	14:AN:62:ASN:HB2	1.77	0.84
1:CA:1007:U:O4	1:CA:1022:A:N6	2.10	0.84
17:AQ:17:MET:SD	17:AQ:17:MET:N	2.50	0.84
1:CA:684:U:O2'	11:CK:40:ASN:O	1.94	0.84
56:DA:3001:DOL:C6	56:DA:3001:DOL:H432	2.07	0.84
1:CA:1198:G:N7	58:CA:1852:HOH:O	2.09	0.84
39:DR:8:GLY:O	39:DR:10:LYS:NZ	2.09	0.84
29:BH:117:LEU:O	29:BH:119:ASN:N	2.08	0.84
5:CE:41:ASP:OD1	5:CE:42:GLY:N	2.10	0.84
56:DA:3001:DOL:H432	56:DA:3001:DOL:O7	1.76	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:HD21	29:BH:121:VAL:N	1.93	0.84
1:CA:319:G:O6	58:CA:1735:HOH:O	1.95	0.84
29:DH:82:SER:O	29:DH:84:ALA:N	2.10	0.84
22:BA:2453:A:N7	58:BA:3524:HOH:O	2.11	0.84
47:DZ:52:SER:O	47:DZ:54:MET:N	2.10	0.84
22:BA:1651:G:O6	58:BA:3800:HOH:O	1.95	0.84
22:DA:2243:U:OP1	58:DA:3737:HOH:O	1.95	0.84
22:BA:1093:G:N3	22:BA:1098:A:N6	2.25	0.84
1:CA:736:C:OP1	18:CR:61:ARG:NH1	2.10	0.84
22:DA:2684:U:O4'	32:DK:70:ARG:NH1	2.11	0.84
50:D2:43:THR:OG1	50:D2:44:VAL:N	2.09	0.83
1:AA:1222:G:O6	58:AA:1835:HOH:O	1.96	0.83
22:DA:2004:G:OP1	58:DA:3800:HOH:O	1.96	0.83
29:DH:94:ILE:HB	29:DH:122:LEU:HD12	1.60	0.83
46:DY:11:VAL:O	46:DY:15:ASN:ND2	2.10	0.83
14:AN:33:ASP:O	14:AN:35:ASN:N	2.11	0.83
21:AU:35:ARG:O	21:AU:37:PHE:N	2.11	0.83
1:CA:484:G:H4'	1:CA:485:U:O5'	1.79	0.83
21:CU:51:SER:O	21:CU:53:VAL:N	2.12	0.83
4:CD:29:ASP:O	4:CD:31:LYS:N	2.10	0.83
18:CR:20:GLU:O	18:CR:22:ASP:N	2.11	0.83
22:DA:1515:A:O2'	22:DA:1556:C:O2'	1.97	0.83
22:BA:2048:G:O6	58:BA:3678:HOH:O	1.96	0.83
39:BR:49:ILE:HG22	39:BR:53:PHE:N	1.94	0.83
22:DA:1266:G:O2'	22:DA:2012:G:O6	1.96	0.83
4:AD:22:LYS:O	4:AD:24:GLY:N	2.12	0.82
22:BA:2445:G:OP1	26:BE:69:ARG:NH2	2.12	0.82
22:BA:2572:A:N7	25:BD:150:GLN:HG3	1.95	0.82
22:DA:1287:A:O4'	35:DN:103:ARG:NH1	2.12	0.82
23:DB:40:U:N3	23:DB:44:G:OP2	2.13	0.82
29:BH:120:GLY:C	29:BH:122:LEU:CA	2.47	0.82
9:AI:57:MET:N	9:AI:57:MET:SD	2.52	0.82
1:CA:614:C:OP1	4:CD:83:LYS:NZ	2.13	0.82
9:AI:42:GLU:O	9:AI:45:ARG:NH1	2.12	0.82
1:CA:32:A:C2	1:CA:33:A:C5	2.67	0.82
1:CA:201:G:N2	1:CA:469:C:O2	2.13	0.82
22:DA:2134:A:OP2	22:DA:2157:G:N2	2.11	0.82
6:CF:12:PRO:O	6:CF:15:SER:OG	1.98	0.82
22:DA:1378:A:O2'	58:DA:3751:HOH:O	1.96	0.81
39:DR:82:HIS:ND1	39:DR:82:HIS:O	2.13	0.81
22:BA:1064:C:N4	22:BA:1070:A:OP2	2.13	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:72:A:C6	1:CA:73:C:N4	2.48	0.81
8:AH:113:ASP:OD2	8:AH:117:ARG:NH2	2.13	0.81
26:BE:7:ASP:OD2	26:BE:8:ALA:N	2.14	0.81
1:CA:209:U:H4'	1:CA:210:C:OP2	1.81	0.81
26:DE:21:ARG:O	26:DE:114:ARG:NH2	2.12	0.81
22:BA:2116:G:O6	22:BA:2171:A:N6	2.14	0.81
2:CB:193:PRO:O	2:CB:195:GLY:N	2.13	0.81
43:BV:80:HIS:CE1	43:BV:83:LYS:HG3	2.15	0.81
22:DA:258:G:O2'	33:DL:104:GLN:OE1	1.97	0.81
22:DA:2307:G:OP1	22:DA:2308:G:N2	2.14	0.81
1:AA:825:A:O2'	8:AH:13:ARG:NH1	2.14	0.81
5:CE:99:ALA:O	5:CE:101:GLU:N	2.14	0.80
22:DA:188:G:O2'	22:DA:1365:A:N6	2.14	0.80
1:AA:207:C:O2	1:AA:213:G:N2	2.14	0.80
22:BA:2269:G:OP1	58:BA:3510:HOH:O	1.97	0.80
31:BJ:114:LEU:HG	31:BJ:118:MET:HE3	1.61	0.80
22:DA:225:C:N4	22:DA:419:U:O2'	2.13	0.80
22:DA:2550:G:OP1	58:DA:3720:HOH:O	1.99	0.80
7:AG:80:VAL:O	7:AG:82:GLY:N	2.14	0.80
7:CG:93:PRO:O	7:CG:97:ASN:ND2	2.14	0.80
22:DA:613:A:O2'	22:DA:614:A:OP1	1.98	0.80
22:BA:370:G:OP2	58:BA:3560:HOH:O	2.00	0.80
1:AA:1232:U:OP1	9:AI:126:GLN:NE2	2.15	0.80
22:BA:2579:C:OP1	58:BA:3541:HOH:O	1.99	0.80
21:AU:44:GLU:OE2	21:AU:45:ARG:NH1	2.15	0.80
13:CM:40:ALA:O	13:CM:42:ASP:N	2.14	0.80
46:BY:61:ALA:O	46:BY:63:ALA:N	2.14	0.80
1:CA:195:A:OP1	20:CT:60:ARG:NH1	2.15	0.80
22:DA:1606:C:O2'	22:DA:1607:C:OP2	1.99	0.80
22:BA:2611:C:OP2	58:BA:3543:HOH:O	2.00	0.79
22:DA:2575:C:OP2	58:DA:3707:HOH:O	2.00	0.79
22:DA:83:A:OP2	42:DU:92:LYS:NZ	2.15	0.79
22:DA:1269:A:OP2	58:DA:3385:HOH:O	1.98	0.79
1:AA:650:G:H2'	1:AA:651:C:H5'	1.62	0.79
22:BA:194:G:N7	58:BA:3758:HOH:O	2.14	0.79
22:BA:2305:U:C2	27:BF:151:GLY:HA3	2.17	0.79
7:AG:99:LEU:O	7:AG:102:ARG:N	2.16	0.79
22:DA:1427:A:N6	22:DA:1571:A:OP2	2.15	0.79
2:AB:73:LYS:O	2:AB:75:ALA:N	2.15	0.79
1:AA:319:G:N7	58:AA:1708:HOH:O	2.15	0.79
22:DA:1667:G:O2'	22:DA:1991:U:O4	1.99	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:890:G:O2'	1:CA:906:A:N6	2.16	0.79
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.18	0.79
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.65	0.79
40:BS:53:SER:O	40:BS:57:ASN:ND2	2.16	0.79
22:DA:279:A:N6	22:DA:361:G:O2'	2.16	0.79
33:BL:87:GLY:O	33:BL:89:VAL:N	2.16	0.78
22:DA:732:C:OP2	58:DA:3298:HOH:O	2.02	0.78
24:BC:70:ASN:O	24:BC:72:ASP:N	2.16	0.78
22:BA:1827:U:O4	58:BA:3787:HOH:O	1.99	0.78
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.16	0.78
20:CT:59:ASP:OD2	20:CT:76:LYS:NZ	2.14	0.78
22:BA:1061:U:O2'	22:BA:1062:G:O5'	2.00	0.78
1:CA:1095:U:OP2	58:CA:1857:HOH:O	2.01	0.78
35:DN:106:ASP:O	35:DN:108:ALA:N	2.16	0.78
22:DA:2576:G:O2'	22:DA:2579:C:OP2	2.01	0.78
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.00	0.78
22:DA:300:A:N6	58:DA:3551:HOH:O	2.16	0.78
22:DA:1377:G:OP2	58:DA:3394:HOH:O	2.00	0.78
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.20	0.77
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.19	0.77
16:AP:43:ALA:O	16:AP:44:SER:OG	2.01	0.77
20:AT:43:ASP:OD1	20:AT:46:ALA:N	2.17	0.77
22:BA:1923:U:C2'	22:BA:1924:C:H5'	2.14	0.77
47:BZ:8:THR:OG1	47:BZ:35:THR:OG1	2.02	0.77
22:DA:1363:C:O2	22:DA:1369:G:C2	2.37	0.77
22:DA:2453:A:N7	58:DA:3525:HOH:O	2.17	0.77
7:AG:111:ARG:NH1	7:AG:123:GLU:OE2	2.17	0.77
22:BA:2874:C:OP1	58:BA:3803:HOH:O	2.02	0.77
22:DA:1091:G:O2'	22:DA:1092:C:OP2	2.03	0.77
22:DA:1344:U:O2'	22:DA:1345:C:OP2	2.03	0.77
1:CA:183:C:O2'	1:CA:184:G:O5'	2.01	0.77
15:CO:18:ASP:OD1	15:CO:20:ASN:N	2.17	0.77
28:DG:158:LYS:O	28:DG:160:LYS:N	2.18	0.77
2:CB:103:ASN:ND2	2:CB:106:THR:OG1	2.18	0.77
22:DA:370:G:OP2	58:DA:3556:HOH:O	2.03	0.77
1:CA:1061:G:O4'	10:CJ:58:ASN:ND2	2.18	0.77
22:DA:2055:C:OP2	58:DA:3569:HOH:O	2.01	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O5'	1.83	0.77
29:DH:1:MET:SD	29:DH:27:ARG:NH1	2.58	0.77
25:BD:77:ARG:NH2	25:BD:200:ASP:OD1	2.17	0.77
12:CL:66:TYR:O	12:CL:97:THR:OG1	2.03	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DP:65:SER:O	37:DP:67:GLY:N	2.18	0.77
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.03	0.76
1:CA:243:A:H4'	1:CA:244:U:H5'	1.67	0.76
1:CA:992:U:O4'	1:CA:993:G:N2	2.19	0.76
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.19	0.76
22:DA:1607:C:N4	22:DA:1622:G:N7	2.34	0.76
22:DA:1613:G:O6	58:DA:3638:HOH:O	2.03	0.76
22:BA:560:C:OP2	58:BA:3250:HOH:O	2.01	0.76
29:DH:45:GLU:O	29:DH:49:ALA:N	2.19	0.76
14:AN:91:GLY:O	14:AN:93:ILE:N	2.19	0.76
1:CA:243:A:H4'	1:CA:244:U:C5'	2.15	0.76
22:DA:622:G:OP2	58:DA:3293:HOH:O	2.03	0.76
22:DA:1009:A:N3	22:DA:1153:C:O2'	2.18	0.76
29:DH:53:GLU:O	29:DH:55:GLU:N	2.19	0.76
1:CA:205:A:N6	1:CA:213:G:O6	2.17	0.76
1:CA:949:A:O2'	1:CA:971:G:O6	2.04	0.76
17:CQ:19:LYS:O	17:CQ:71:LYS:NZ	2.14	0.76
29:BH:97:ARG:NH1	1:CA:369:G:O2'	2.18	0.76
22:DA:449:A:OP2	58:DA:3244:HOH:O	2.04	0.76
1:CA:404:G:N7	4:CD:2:ALA:N	2.33	0.76
22:DA:1359:A:OP1	58:DA:3610:HOH:O	2.04	0.76
37:BP:54:GLY:O	37:BP:57:SER:OG	2.04	0.76
22:DA:761:A:OP2	58:DA:3295:HOH:O	2.03	0.76
34:DM:66:ARG:NH1	34:DM:104:GLU:OE1	2.19	0.76
22:BA:1776:G:P	58:BA:3449:HOH:O	2.43	0.75
22:DA:910:A:N3	22:DA:2264:C:O2'	2.18	0.75
27:DF:123:ASP:OD1	27:DF:124:GLY:N	2.19	0.75
31:DJ:41:LYS:NZ	31:DJ:52:ASP:OD2	2.16	0.75
22:DA:58:G:N3	22:DA:70:G:N2	2.34	0.75
29:DH:124:THR:OG1	29:DH:125:THR:N	2.17	0.75
22:BA:370:G:N7	58:BA:3561:HOH:O	2.19	0.75
22:BA:1253:A:N7	58:BA:3335:HOH:O	2.18	0.75
22:BA:528:A:C2	22:BA:2043:C:H5'	2.21	0.75
22:DA:1475:G:O2'	22:DA:1476:U:OP1	2.05	0.75
22:BA:372:G:O2'	22:BA:400:G:O6	2.01	0.75
22:BA:481:G:C4	22:BA:507:A:C2	2.75	0.75
1:CA:495:A:C2	1:CA:496:A:C6	2.75	0.75
22:DA:2563:U:O4'	22:DA:2566:A:N6	2.18	0.75
1:AA:1403:C:O2	1:AA:1499:A:N6	2.19	0.75
11:AK:102:ALA:O	11:AK:104:GLY:N	2.20	0.75
1:AA:702:A:N6	22:BA:1846:G:O2'	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:81:LEU:HB3	5:AE:147:MET:HE3	1.69	0.75
22:DA:1223:G:N2	22:DA:1226:A:OP2	2.19	0.75
22:BA:1378:A:O2'	22:BA:1380:G:OP2	2.05	0.75
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.22	0.74
38:BQ:49:ASP:HA	38:BQ:52:GLN:HB2	1.68	0.74
13:CM:13:LYS:O	13:CM:14:HIS:ND1	2.20	0.74
22:DA:27:G:O2'	22:DA:28:A:OP2	2.04	0.74
22:DA:374:A:N6	22:DA:400:G:O2'	2.19	0.74
22:DA:878:A:N6	22:DA:899:A:O2'	2.20	0.74
4:AD:95:GLU:OE2	4:AD:104:ARG:NH1	2.20	0.74
29:BH:88:GLY:O	29:BH:125:THR:OG1	2.04	0.74
1:AA:208:U:C5	1:AA:210:C:C4	2.76	0.74
1:AA:251:G:C6	1:AA:266:G:C6	2.75	0.74
16:AP:50:THR:O	16:AP:50:THR:HG22	1.87	0.74
29:BH:123:ARG:C	29:BH:124:THR:HG23	2.06	0.74
19:CS:4:SER:O	19:CS:5:LEU:HB2	1.87	0.74
22:DA:733:G:OP2	58:DA:3296:HOH:O	2.05	0.74
26:DE:111:GLU:OE2	26:DE:114:ARG:NH1	2.21	0.74
11:AK:38:GLN:O	11:AK:40:ASN:ND2	2.21	0.74
29:BH:117:LEU:HD11	29:BH:122:LEU:HD12	1.69	0.74
22:DA:2502:G:OP2	58:DA:3491:HOH:O	2.03	0.74
1:AA:1422:G:O3'	32:BK:49:ARG:NH2	2.18	0.74
22:BA:1604:C:OP2	58:BA:3411:HOH:O	2.04	0.74
22:DA:581:C:OP2	38:DQ:33:ARG:NH1	2.21	0.74
42:DU:9:ASP:OD2	42:DU:10:GLU:N	2.20	0.74
22:BA:622:G:OP2	58:BA:3292:HOH:O	2.06	0.74
22:BA:1124:G:N7	58:BA:3607:HOH:O	2.19	0.74
1:CA:1067:A:N1	1:CA:1108:G:O2'	2.19	0.74
4:AD:3:ARG:CZ	4:AD:115:ARG:HD3	2.18	0.74
9:CI:12:ARG:NH1	9:CI:107:ASP:OD2	2.21	0.74
12:CL:57:LEU:O	12:CL:60:GLY:N	2.20	0.74
27:DF:122:PHE:O	27:DF:124:GLY:N	2.21	0.74
1:AA:411:A:OP1	4:AD:26:ARG:NH2	2.20	0.74
5:AE:104:GLY:O	5:AE:105:ILE:HG22	1.87	0.74
4:AD:59:GLN:O	4:AD:63:ARG:HG2	1.87	0.74
9:AI:57:MET:SD	9:AI:58:VAL:N	2.61	0.74
23:DB:29:A:O2'	23:DB:58:A:N1	2.21	0.74
22:BA:653:U:OP2	22:BA:653:U:C6	2.41	0.74
22:BA:1179:G:C4	22:BA:1180:U:H1'	2.22	0.74
22:BA:1922:G:N2	22:BA:1923:U:H1'	2.03	0.74
1:CA:374:A:H5''	1:CA:452:A:N1	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:10:PRO:O	13:CM:11:ASP:HB2	1.87	0.74
1:CA:1108:G:O6	58:CA:1857:HOH:O	2.04	0.73
22:DA:1973:G:OP1	58:DA:3462:HOH:O	2.05	0.73
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.41	0.73
22:BA:1917:U:C4	22:BA:1918:A:C6	2.75	0.73
20:CT:44:LYS:NZ	20:CT:86:LEU:O	2.18	0.73
22:BA:2728:U:O2'	22:BA:2729:G:OP2	2.06	0.73
1:CA:266:G:H3'	17:CQ:69:LYS:HB2	1.70	0.73
22:DA:1995:U:OP1	58:DA:3807:HOH:O	2.04	0.73
17:AQ:16:LYS:C	17:AQ:17:MET:SD	2.67	0.73
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	2.03	0.73
22:DA:2127:G:O2'	22:DA:2173:A:N3	2.21	0.73
1:AA:1370:G:O5'	9:AI:111:VAL:HG21	1.88	0.73
21:AU:36:GLU:O	21:AU:37:PHE:HB2	1.87	0.73
28:BG:104:ASN:ND2	28:BG:114:ASP:OD1	2.21	0.73
32:DK:34:GLY:O	32:DK:36:GLY:N	2.22	0.73
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.23	0.73
22:BA:2346:A:H4'	22:BA:2347:C:OP2	1.88	0.73
16:AP:79:ASN:O	16:AP:80:LYS:HB2	1.88	0.73
1:CA:403:C:OP1	4:CD:134:SER:OG	2.03	0.73
4:CD:100:ASN:OD1	4:CD:111:ARG:NH1	2.21	0.73
5:CE:80:THR:OG1	5:CE:122:ASN:ND2	2.21	0.73
21:CU:18:ARG:O	21:CU:21:ARG:N	2.21	0.73
22:DA:777:G:C2	22:DA:778:G:C8	2.77	0.73
46:BY:34:SER:O	46:BY:36:GLN:N	2.22	0.73
1:CA:485:U:O2'	1:CA:486:U:OP1	2.05	0.73
4:CD:26:ARG:HG3	4:CD:27:ALA:N	2.03	0.73
22:DA:242:G:O2'	22:DA:254:G:O6	2.05	0.73
1:AA:1198:G:N7	58:AA:1787:HOH:O	2.21	0.73
10:CJ:63:ASP:OD1	14:CN:85:ARG:NH1	2.22	0.73
50:D2:44:VAL:O	50:D2:45:SER:OG	2.07	0.73
2:AB:87:CYS:O	2:AB:89:GLN:N	2.22	0.73
49:D1:15:ALA:O	49:D1:17:THR:N	2.22	0.73
2:AB:82:ASP:O	2:AB:85:LEU:N	2.22	0.72
3:AC:36:ASP:OD1	3:AC:59:ARG:NH1	2.22	0.72
11:AK:76:GLU:C	22:BA:2141:G:OP1	2.27	0.72
1:CA:1124:G:O2'	1:CA:1145:A:N6	2.21	0.72
22:DA:2091:C:H3'	22:DA:2092:U:H5''	1.69	0.72
22:DA:2355:G:OP1	44:DW:25:ARG:NH2	2.22	0.72
1:CA:376:G:H5'	16:CP:5:ARG:HB3	1.69	0.72
1:CA:1181:G:O2'	1:CA:1182:G:N7	2.21	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:DC:258:ARG:NH1	24:DC:264:ASP:OD2	2.22	0.72
1:AA:131:A:H2'	1:AA:132:C:C6	2.23	0.72
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.25	0.72
14:AN:46:LEU:O	14:AN:48:LEU:N	2.22	0.72
20:AT:59:ASP:OD1	20:AT:76:LYS:NZ	2.19	0.72
21:AU:34:ARG:CZ	21:AU:35:ARG:HB2	2.19	0.72
22:DA:1141:U:OP2	31:DJ:65:THR:OG1	2.05	0.72
22:BA:509:C:O3'	58:BA:3771:HOH:O	2.07	0.72
1:CA:1308:U:OP1	13:CM:97:VAL:N	2.22	0.72
22:DA:79:C:O2'	22:DA:346:A:N3	2.21	0.72
1:AA:800:G:O6	58:AA:1812:HOH:O	2.07	0.72
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.23	0.72
1:CA:688:G:O2'	1:CA:704:A:N1	2.19	0.72
22:DA:70:G:N2	22:DA:71:A:N1	2.37	0.72
22:BA:404:A:O2'	22:BA:405:U:OP2	2.07	0.72
22:BA:826:U:OP1	58:BA:3699:HOH:O	2.08	0.72
22:BA:944:C:OP2	58:BA:3260:HOH:O	2.06	0.72
1:CA:8:A:N6	4:CD:54:GLN:OE1	2.21	0.72
22:DA:2504:U:C5	56:DA:3001:DOL:H161	2.25	0.72
22:DA:2707:U:O2	35:DN:71:ARG:NH1	2.22	0.72
22:DA:2838:G:O2'	35:DN:45:ARG:NH1	2.22	0.72
40:DS:66:ILE:O	40:DS:68:ASP:N	2.23	0.72
22:BA:2757:A:N1	28:BG:67:THR:HG21	2.03	0.72
22:DA:1440:U:O4	58:DA:3627:HOH:O	2.06	0.72
2:AB:63:ARG:O	2:AB:64:LYS:HB2	1.88	0.72
13:AM:73:ILE:O	13:AM:76:SER:OG	2.07	0.72
22:BA:757:G:N7	58:BA:3303:HOH:O	2.23	0.72
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.23	0.72
11:CK:17:SER:O	11:CK:80:LYS:N	2.23	0.72
1:AA:844:G:C6	1:AA:846:G:O2'	2.43	0.71
2:AB:23:TRP:CH2	2:AB:25:PRO:HA	2.25	0.71
27:BF:21:ASN:O	27:BF:21:ASN:ND2	2.22	0.71
22:DA:2199:A:OP1	45:DX:37:ARG:NH1	2.23	0.71
1:AA:173:U:C2	1:AA:197:A:N1	2.58	0.71
1:AA:976:G:OP2	1:AA:1358:U:O2'	2.09	0.71
7:AG:64:VAL:O	7:AG:67:GLU:N	2.23	0.71
20:AT:83:ILE:O	20:AT:87:ALA:HB3	1.90	0.71
22:DA:2343:U:O2'	22:DA:2373:G:O2'	2.07	0.71
27:BF:40:VAL:O	27:BF:42:GLU:N	2.23	0.71
29:DH:31:VAL:HB	29:DH:32:PRO:CD	2.20	0.71
23:BB:30:C:OP1	36:BO:3:LYS:NZ	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:BB:91:C:OP2	34:BM:18:ARG:HG2	1.91	0.71
51:B3:31:HIS:CD2	51:B3:32:ILE:HG13	2.26	0.71
22:DA:593:U:H2'	22:DA:594:U:C6	2.26	0.71
22:DA:668:A:C2	22:DA:670:A:C5	2.79	0.71
22:DA:776:G:O2'	22:DA:2241:A:OP1	2.09	0.71
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.24	0.71
22:BA:2125:G:N3	22:BA:2173:A:N6	2.39	0.71
53:B5:50:ILE:C	53:B5:52:PRO:HD3	2.11	0.71
22:DA:52:A:N3	22:DA:178:G:N2	2.39	0.71
22:BA:2189:U:H2'	22:BA:2190:G:C1'	2.19	0.71
56:BA:3001:DOL:H421	56:BA:3001:DOL:N5	2.06	0.71
9:CI:57:MET:SD	9:CI:58:VAL:N	2.64	0.71
22:DA:46:G:C2	22:DA:47:C:C5	2.78	0.71
22:DA:1153:C:OP1	58:DA:3359:HOH:O	2.08	0.71
22:DA:1154:G:OP2	38:DQ:58:ARG:NH1	2.24	0.71
22:DA:2407:A:OP1	58:DA:3560:HOH:O	2.08	0.71
1:AA:993:G:O2'	1:AA:994:A:N7	2.23	0.71
39:BR:49:ILE:HG22	39:BR:53:PHE:CA	2.20	0.71
22:DA:1335:C:N4	58:DA:3392:HOH:O	2.22	0.71
22:DA:2115:G:O2'	22:DA:2117:A:N6	2.23	0.71
22:BA:181:A:H2'	22:BA:182:A:C8	2.26	0.71
22:BA:1061:U:HO2'	22:BA:1062:G:P	2.13	0.71
24:BC:143:ASN:OD1	24:BC:152:GLY:HA3	1.90	0.71
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.22	0.71
22:DA:827:U:OP2	58:DA:3696:HOH:O	2.08	0.71
10:CJ:87:LEU:HD13	10:CJ:88:MET:N	2.06	0.70
22:BA:566:U:OP1	33:BL:29:LYS:HD2	1.91	0.70
24:DC:45:ASN:OD1	24:DC:46:ASN:N	2.24	0.70
1:AA:683:G:N2	11:AK:39:GLY:O	2.24	0.70
1:CA:537:G:OP1	12:CL:110:ARG:NH2	2.24	0.70
22:DA:277:G:H3'	22:DA:277:G:N3	2.06	0.70
1:AA:652:U:O4	1:AA:752:G:O2'	2.05	0.70
56:BA:3001:DOL:H421	56:BA:3001:DOL:C6	2.22	0.70
42:BU:49:VAL:CG2	42:BU:49:VAL:O	2.39	0.70
22:DA:686:U:OP2	58:DA:3717:HOH:O	2.09	0.70
24:DC:70:ASN:O	24:DC:72:ASP:N	2.23	0.70
1:AA:254:G:OP1	17:AQ:70:THR:HB	1.91	0.70
4:AD:78:GLU:OE1	4:AD:81:ARG:NH1	2.24	0.70
17:AQ:69:LYS:O	17:AQ:70:THR:CB	2.39	0.70
20:AT:6:SER:OG	20:AT:7:ALA:N	2.23	0.70
22:BA:1179:G:N7	22:BA:1180:U:C6	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2192:U:H2'	22:BA:2193:G:H5'	1.72	0.70
2:CB:83:ALA:O	2:CB:86:SER:OG	2.09	0.70
2:CB:203:ASN:OD1	2:CB:204:ASP:N	2.23	0.70
22:DA:2609:U:H2'	54:D6:7:004:HA	1.71	0.70
29:BH:94:ILE:HG22	29:BH:99:ILE:HG13	1.72	0.70
1:CA:679:C:O2	1:CA:712:A:C2	2.45	0.70
22:DA:388:G:N7	22:DA:390:U:H2'	2.05	0.70
22:DA:1603:A:OP1	58:DA:3409:HOH:O	2.10	0.70
56:DA:3001:DOL:C43	56:DA:3001:DOL:HC1	2.22	0.70
22:BA:1450:G:C6	22:BA:1451:C:N4	2.60	0.70
28:BG:80:THR:HG22	28:BG:81:GLU:N	2.07	0.70
1:CA:802:A:C2	1:CA:803:G:H1'	2.26	0.70
12:CL:25:GLU:O	12:CL:26:ALA:C	2.27	0.70
22:DA:2199:A:C5	22:DA:2225:A:C6	2.80	0.70
22:DA:2289:G:HO2'	22:DA:2383:G:HO2'	1.35	0.70
54:D6:6:MHV:HE1	54:D6:7:004:HNA	1.55	0.70
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.07	0.70
12:CL:21:VAL:O	12:CL:23:ALA:N	2.25	0.70
22:DA:1340:U:C5	22:DA:1603:A:C8	2.80	0.70
2:AB:21:ARG:HA	2:AB:21:ARG:CZ	2.22	0.70
1:CA:1204:A:OP2	58:CA:1848:HOH:O	2.09	0.70
22:DA:116:C:O2'	22:DA:126:A:O2'	2.06	0.70
22:DA:377:G:C6	22:DA:378:C:C4	2.80	0.70
2:AB:50:PHE:HA	2:AB:213:TYR:OH	1.92	0.69
22:BA:2057:G:OP2	58:BA:3489:HOH:O	2.10	0.69
12:CL:25:GLU:O	12:CL:27:CYS:N	2.24	0.69
22:DA:564:C:O4'	38:DQ:37:GLN:NE2	2.24	0.69
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.26	0.69
22:DA:1109:C:H5''	22:DA:1110:G:OP2	1.92	0.69
35:DN:107:ASN:ND2	35:DN:107:ASN:O	2.24	0.69
22:BA:301:G:OP2	42:BU:82:ARG:NH1	2.26	0.69
22:BA:2061:G:O6	56:BA:3001:DOL:H162	1.93	0.69
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.06	0.69
39:BR:49:ILE:HB	39:BR:52:PRO:C	2.13	0.69
22:DA:1475:G:O2'	22:DA:1476:U:P	2.49	0.69
41:DT:21:SER:O	41:DT:23:ALA:N	2.24	0.69
1:CA:875:U:O2'	8:CH:15:ARG:NH1	2.24	0.69
1:AA:109:A:H2'	1:AA:326:G:N2	2.06	0.69
22:BA:2380:C:OP1	36:BO:17:LYS:NZ	2.25	0.69
28:DG:118:PRO:CG	28:DG:144:VAL:HG21	2.22	0.69
1:CA:533:A:O2'	1:CA:535:A:OP2	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:858:G:O6	1:CA:869:G:H3'	1.92	0.69
22:DA:453:A:OP1	58:DA:3242:HOH:O	2.09	0.69
6:AF:91:ARG:C	6:AF:92:THR:HG1	1.91	0.69
22:BA:528:A:C2	22:BA:2043:C:H4'	2.27	0.69
22:BA:2886:A:C5	22:BA:2887:A:C8	2.81	0.69
1:CA:1211:U:O2'	1:CA:1212:U:OP2	2.11	0.69
2:CB:21:ARG:HA	2:CB:21:ARG:CZ	2.22	0.69
22:DA:749:A:C5	22:DA:750:A:N7	2.61	0.69
22:DA:1973:G:C6	22:DA:1974:C:C4	2.80	0.69
2:CB:206:ALA:O	2:CB:208:ARG:N	2.25	0.69
5:CE:155:ALA:HB1	8:CH:66:PHE:CD2	2.27	0.69
11:CK:27:PHE:CZ	11:CK:89:PRO:HG2	2.27	0.69
22:DA:247:G:H4'	22:DA:386:G:C5	2.27	0.69
5:AE:82:GLN:NE2	5:AE:150:PRO:HD3	2.08	0.69
5:CE:101:GLU:O	5:CE:101:GLU:CD	2.31	0.69
23:DB:48:U:H4'	36:DO:100:HIS:CD2	2.28	0.69
4:AD:27:ALA:O	4:AD:31:LYS:NZ	2.26	0.69
22:BA:1073:A:H3'	22:BA:1074:G:H5'	1.74	0.69
22:BA:1584:U:O2	22:BA:1584:U:H2'	1.92	0.69
22:BA:1922:G:N3	22:BA:1922:G:H2'	2.06	0.69
1:CA:562:U:OP2	12:CL:14:ARG:NE	2.26	0.69
18:CR:20:GLU:N	18:CR:55:LEU:HD12	2.08	0.69
1:AA:965:U:OP2	58:AA:1831:HOH:O	2.10	0.69
22:BA:2308:G:O6	22:BA:2311:A:N7	2.26	0.69
9:CI:19:VAL:HG21	9:CI:82:GLY:HA3	1.75	0.69
22:DA:866:A:O4'	22:DA:914:G:N2	2.26	0.69
22:DA:1313:U:H4'	22:DA:1332:G:H4'	1.74	0.69
1:AA:81:A:H2'	1:AA:82:G:H5''	1.75	0.68
1:AA:792:A:H4'	1:AA:793:U:O5'	1.92	0.68
23:BB:91:C:OP2	34:BM:18:ARG:NH2	2.26	0.68
1:CA:674:G:OP1	6:CF:86:ARG:NH2	2.26	0.68
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.27	0.68
22:DA:1525:A:C2	22:DA:1526:C:C2	2.80	0.68
22:DA:1677:A:N7	58:DA:3765:HOH:O	2.26	0.68
22:DA:2006:C:OP2	58:DA:3382:HOH:O	2.10	0.68
1:AA:144:G:C4	1:AA:179:A:C2	2.81	0.68
1:AA:1018:G:C2	1:AA:1019:A:C8	2.81	0.68
22:BA:1901:A:OP2	24:BC:253:LYS:NZ	2.22	0.68
35:DN:1:MET:HE2	35:DN:1:MET:H1	1.58	0.68
22:BA:1379:U:C6	22:BA:1379:U:OP1	2.47	0.68
22:BA:1917:U:C4	22:BA:1918:A:C5	2.81	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BH:117:LEU:O	29:BH:121:VAL:HG22	1.93	0.68
22:DA:698:C:O2'	22:DA:734:A:N6	2.26	0.68
22:DA:1237:A:H4'	22:DA:1238:G:OP1	1.92	0.68
22:DA:2585:U:O2'	54:D6:3:DBB:HG2	1.93	0.68
1:AA:111:G:O6	1:AA:330:C:N4	2.27	0.68
1:AA:645:G:N7	58:AA:1748:HOH:O	2.27	0.68
1:AA:1236:A:H2'	1:AA:1237:C:C6	2.29	0.68
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.94	0.68
25:BD:133:THR:HG23	25:BD:134:HIS:N	2.08	0.68
6:CF:91:ARG:O	6:CF:92:THR:OG1	2.10	0.68
22:DA:185:G:C6	22:DA:212:G:C2	2.81	0.68
22:DA:810:U:OP1	58:DA:3333:HOH:O	2.10	0.68
22:DA:2594:C:N4	22:DA:2595:G:O6	2.26	0.68
11:AK:29:ASN:OD1	11:AK:30:THR:N	2.26	0.68
22:BA:2499:C:OP2	58:BA:3685:HOH:O	2.12	0.68
46:BY:9:LYS:O	46:BY:12:GLU:N	2.26	0.68
14:CN:21:PHE:O	14:CN:23:LYS:N	2.26	0.68
22:DA:118:A:C8	22:DA:119:A:C8	2.82	0.68
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.93	0.68
34:DM:19:GLY:O	34:DM:38:ARG:NH1	2.27	0.68
40:DS:67:ASP:OD1	40:DS:67:ASP:N	2.25	0.68
1:AA:130:A:N1	1:AA:233:C:O2'	2.23	0.68
24:BC:15:HIS:O	24:BC:204:VAL:HG21	1.93	0.68
1:AA:203:G:O2'	1:AA:465:A:N1	2.25	0.68
22:DA:1094:U:H2'	22:DA:1096:A:OP2	1.94	0.68
22:DA:2200:C:O2	22:DA:2226:C:N4	2.27	0.68
22:DA:2655:G:O2'	22:DA:2656:U:P	2.51	0.68
1:AA:1006:G:OP1	1:AA:1037:C:O2'	2.12	0.68
22:BA:1915:U:C2	22:BA:1916:A:C8	2.82	0.68
43:BV:32:GLY:O	43:BV:93:ARG:NH1	2.27	0.68
22:DA:2306:C:OP2	22:DA:2307:G:O2'	2.10	0.68
1:AA:728:A:OP1	15:AO:54:ARG:NH2	2.27	0.68
22:BA:276:U:O2'	22:BA:278:A:N7	2.27	0.68
22:BA:1266:G:OP1	48:B0:16:ARG:NE	2.25	0.68
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.74	0.68
22:BA:2325:G:C6	22:BA:2326:C:N4	2.62	0.68
1:CA:1297:G:O2'	7:CG:114:LYS:NZ	2.22	0.68
17:CQ:21:ILE:N	17:CQ:48:ASP:OD1	2.27	0.68
22:DA:1260:A:N6	58:DA:3277:HOH:O	2.27	0.68
22:DA:1411:U:H2'	22:DA:1412:U:O4'	1.94	0.68
22:DA:2886:A:C2	22:DA:2887:A:H1'	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:28:A:C5	22:BA:29:U:C5	2.81	0.67
25:BD:104:VAL:O	25:BD:105:LYS:HB2	1.94	0.67
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.24	0.67
24:DC:237:GLY:O	24:DC:239:ASN:N	2.27	0.67
22:BA:572:A:C2	22:BA:2033:A:C2	2.83	0.67
1:CA:1525:G:O6	58:CA:1891:HOH:O	2.09	0.67
22:DA:152:A:C2	22:DA:175:G:C2	2.83	0.67
22:DA:856:G:N2	22:DA:922:C:C2	2.62	0.67
12:AL:44:LYS:CB	12:AL:45:PRO:CD	2.72	0.67
22:BA:983:A:C6	22:BA:984:A:C2	2.83	0.67
22:BA:2189:U:H2'	22:BA:2190:G:C8	2.29	0.67
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.30	0.67
22:DA:192:C:OP2	58:DA:3739:HOH:O	2.11	0.67
22:DA:1715:G:O2'	22:DA:1743:G:O6	2.13	0.67
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.30	0.67
29:BH:122:LEU:HD23	29:BH:123:ARG:N	2.10	0.67
39:BR:49:ILE:CG2	39:BR:53:PHE:N	2.57	0.67
1:CA:1124:G:N2	1:CA:1127:G:C2	2.63	0.67
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.09	0.67
24:DC:204:VAL:O	24:DC:206:GLY:N	2.27	0.67
25:DD:56:LYS:O	25:DD:58:ASN:N	2.27	0.67
42:DU:38:GLY:HA2	42:DU:41:LEU:CD2	2.23	0.67
49:D1:5:ILE:O	49:D1:28:ARG:NH1	2.27	0.67
13:AM:114:LYS:CB	13:AM:115:PRO:HD3	2.23	0.67
17:AQ:14:SER:HB3	17:AQ:22:VAL:CG1	2.25	0.67
22:BA:361:G:O2'	22:BA:362:A:O5'	2.09	0.67
24:BC:71:LYS:NZ	24:BC:98:ASP:OD2	2.27	0.67
25:BD:101:PHE:O	25:BD:103:ASP:N	2.27	0.67
22:DA:694:U:C2'	22:DA:695:G:H5''	2.24	0.67
22:DA:1342:A:OP2	58:DA:3711:HOH:O	2.12	0.67
22:DA:1603:A:OP2	58:DA:3407:HOH:O	2.13	0.67
17:AQ:81:LYS:O	17:AQ:83:VAL:N	2.28	0.67
22:BA:1494:A:C2'	22:BA:1495:A:O5'	2.42	0.67
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.30	0.67
37:BP:53:ARG:CG	37:BP:53:ARG:HH11	2.08	0.67
4:CD:174:ASP:O	4:CD:175:ALA:CB	2.42	0.67
22:DA:78:U:H2'	22:DA:79:C:O4'	1.94	0.67
22:BA:747:U:C4	22:BA:2613:U:C5	2.83	0.67
37:BP:90:GLY:O	37:BP:113:ARG:NH1	2.26	0.67
1:CA:1006:G:H2'	1:CA:1007:U:C6	2.30	0.67
22:BA:747:U:OP2	54:B6:8:MHT:H5	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:114:LEU:HG	31:BJ:118:MET:CE	2.25	0.67
37:BP:103:ARG:CG	37:BP:103:ARG:HH11	2.08	0.67
39:BR:39:LEU:HA	39:BR:49:ILE:HG23	1.76	0.67
48:B0:55:ILE:O	48:B0:56:ALA:CB	2.43	0.67
1:CA:31:G:O4'	1:CA:306:A:C2	2.47	0.67
12:CL:47:SER:O	12:CL:48:ALA:CB	2.43	0.67
22:DA:2451:A:C4	56:DA:3001:DOL:HC12	2.30	0.67
23:DB:78:A:C5	23:DB:99:A:C8	2.83	0.67
42:DU:7:ARG:HG3	42:DU:8:ASP:N	2.10	0.67
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.10	0.67
22:BA:2799:A:O2'	22:BA:2800:A:O5'	2.12	0.67
30:BI:19:ASN:N	30:BI:20:PRO:CD	2.58	0.67
22:DA:1141:U:H4'	22:DA:1142:A:O4'	1.95	0.67
22:DA:2058:A:N6	22:DA:2059:A:N6	2.43	0.67
30:DI:58:VAL:HG12	30:DI:59:ILE:N	2.10	0.67
46:DY:56:LEU:O	46:DY:57:LEU:CB	2.43	0.67
1:AA:203:G:N2	1:AA:215:C:C2	2.63	0.67
1:AA:381:C:H2'	1:AA:382:A:O4'	1.95	0.67
2:AB:154:MET:O	2:AB:156:GLY:N	2.28	0.67
22:BA:1065:U:O4	22:BA:1074:G:O2'	2.13	0.67
22:BA:1394:U:P	58:BA:3407:HOH:O	2.52	0.67
29:BH:27:ARG:O	29:BH:28:ASN:HB2	1.95	0.67
46:BY:18:LEU:O	46:BY:22:LEU:HB2	1.95	0.67
1:CA:552:U:C4	1:CA:553:A:N7	2.63	0.67
1:CA:1302:C:C4	13:CM:17:ILE:HD13	2.30	0.67
1:AA:89:U:O2'	1:AA:90:C:C5'	2.43	0.66
1:AA:1406:U:C5	1:AA:1407:C:C5	2.83	0.66
29:BH:91:PHE:O	1:CA:55:A:C6	2.48	0.66
1:CA:70:U:H2'	1:CA:94:G:N7	2.10	0.66
1:CA:1072:G:C6	1:CA:1073:U:C4	2.83	0.66
22:DA:981:A:OP2	22:DA:982:C:N4	2.27	0.66
22:DA:1378:A:O3'	58:DA:3751:HOH:O	2.13	0.66
22:DA:2507:C:OP1	58:DA:3708:HOH:O	2.12	0.66
22:DA:2609:U:H6	54:D6:7:004:HA	1.59	0.66
47:DZ:52:SER:OG	47:DZ:53:PHE:N	2.26	0.66
1:AA:1493:A:C8	1:AA:1493:A:OP2	2.49	0.66
5:AE:69:ARG:O	5:AE:71:MET:N	2.27	0.66
13:AM:95:LEU:HB3	13:AM:96:PRO:HD2	1.77	0.66
22:BA:1717:A:H2'	22:BA:1718:G:O5'	1.94	0.66
28:BG:121:ILE:HD12	28:BG:141:ILE:HG22	1.77	0.66
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1737:G:C6	22:DA:1738:G:N1	2.64	0.66
22:DA:2241:A:N7	58:DA:3502:HOH:O	2.27	0.66
28:DG:111:HIS:ND1	28:DG:111:HIS:O	2.28	0.66
1:AA:650:G:C2'	1:AA:651:C:H5'	2.26	0.66
22:BA:1288:G:C4	22:BA:1327:A:C2	2.82	0.66
22:BA:1371:G:N7	58:BA:3401:HOH:O	2.28	0.66
1:CA:154:U:C2'	1:CA:155:A:H5'	2.25	0.66
1:CA:533:A:OP1	58:CA:1763:HOH:O	2.13	0.66
22:DA:2505:G:OP2	56:DA:3001:DOL:HC17	1.95	0.66
22:DA:2751:G:OP1	28:DG:3:ARG:NH1	2.29	0.66
41:DT:17:SER:O	41:DT:19:LYS:N	2.28	0.66
2:AB:24:ASN:O	2:AB:26:LYS:N	2.29	0.66
11:AK:34:ILE:HB	11:AK:74:VAL:HG11	1.78	0.66
13:AM:4:ILE:O	13:AM:6:GLY:N	2.28	0.66
13:AM:64:VAL:O	13:AM:64:VAL:HG12	1.94	0.66
22:BA:142:A:C5	22:BA:143:C:C4	2.83	0.66
22:BA:2591:C:OP1	24:BC:238:ARG:NH1	2.27	0.66
29:BH:94:ILE:CG2	29:BH:99:ILE:HG13	2.26	0.66
10:CJ:91:ASP:N	10:CJ:91:ASP:OD1	2.29	0.66
22:DA:1581:G:C5	22:DA:1582:C:C4	2.84	0.66
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.30	0.66
33:DL:38:GLN:O	33:DL:40:SER:N	2.28	0.66
22:BA:265:A:H4'	22:BA:266:G:OP1	1.96	0.66
22:BA:744:U:OP1	58:BA:3654:HOH:O	2.12	0.66
30:BI:97:LYS:CG	30:BI:139:VAL:HG22	2.25	0.66
22:DA:223:A:C5	22:DA:422:A:C8	2.83	0.66
22:DA:1855:U:C5	22:DA:1856:U:C5	2.83	0.66
22:DA:1875:G:O2'	22:DA:1876:A:OP2	2.14	0.66
50:D2:29:GLN:O	50:D2:33:ARG:NH2	2.27	0.66
22:BA:620:G:H4'	22:BA:621:A:O5'	1.95	0.66
22:BA:1384:A:H1'	22:BA:1405:U:H1'	1.78	0.66
22:BA:1869:G:H3'	22:BA:1870:C:H5'	1.78	0.66
22:BA:1952:A:C6	22:BA:1953:A:N1	2.64	0.66
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.77	0.66
5:CE:137:VAL:O	5:CE:138:ARG:HG2	1.95	0.66
22:DA:444:C:OP1	26:DE:40:ARG:NH1	2.28	0.66
22:DA:1627:G:C2	22:DA:1628:G:N7	2.64	0.66
22:DA:2261:C:C2	22:DA:2280:G:N2	2.64	0.66
30:DI:69:PHE:N	30:DI:69:PHE:CD1	2.64	0.66
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.25	0.66
1:AA:209:U:H4'	1:AA:210:C:OP2	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:345:C:O2'	32:BK:116:ILE:HD11	1.95	0.66
4:AD:32:CYS:O	4:AD:33:LYS:HB2	1.95	0.66
22:BA:2582:G:C2	22:BA:2583:G:C8	2.83	0.66
1:CA:1005:A:O3'	1:CA:1037:C:O2'	2.13	0.66
1:CA:1460:C:N4	1:CA:1461:G:C6	2.64	0.66
22:DA:362:A:C5	22:DA:363:G:C8	2.84	0.66
1:AA:262:A:C6	1:AA:263:A:C6	2.84	0.66
15:AO:63:ARG:HG2	15:AO:67:LEU:HD12	1.76	0.66
22:BA:1509:A:O2'	22:BA:1510:G:P	2.54	0.66
1:CA:1004:A:O2'	1:CA:1036:A:N1	2.28	0.66
1:CA:1408:A:C2	1:CA:1494:G:C4	2.84	0.66
22:DA:352:A:H2'	22:DA:353:C:O4'	1.96	0.66
22:DA:931:U:OP1	47:DZ:30:ARG:NH1	2.29	0.66
22:DA:1826:G:C5	22:DA:1827:U:C5	2.84	0.66
22:DA:2415:G:C6	22:DA:2416:C:C4	2.84	0.66
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.31	0.66
26:DE:149:ILE:CD1	26:DE:172:ALA:HA	2.26	0.66
32:DK:76:VAL:HG12	37:DP:73:VAL:HG22	1.77	0.66
9:AI:91:ASP:OD2	9:AI:93:SER:N	2.29	0.66
1:CA:1108:G:H5''	3:CC:176:HIS:CD2	2.31	0.66
22:DA:395:U:H4'	22:DA:396:G:OP1	1.96	0.66
22:DA:1006:C:OP2	58:DA:3779:HOH:O	2.14	0.66
22:DA:2061:G:O6	56:DA:3001:DOL:H162	1.96	0.66
22:DA:2874:C:H2'	22:DA:2875:C:C6	2.31	0.66
43:DV:51:GLN:HB3	43:DV:56:PHE:CG	2.31	0.66
22:DA:1010:A:OP2	58:DA:3776:HOH:O	2.14	0.66
22:DA:1120:G:C6	22:DA:1121:C:C4	2.84	0.66
22:DA:2146:C:H5''	22:DA:2147:A:OP1	1.95	0.66
35:DN:87:PHE:O	35:DN:90:ARG:N	2.29	0.66
1:AA:67:C:O2'	1:AA:171:A:N3	2.29	0.65
22:BA:1494:A:C2	22:BA:1495:A:C4	2.84	0.65
22:BA:1925:C:H4'	22:BA:1926:U:OP1	1.95	0.65
23:BB:116:G:H4'	36:BO:54:VAL:HG13	1.78	0.65
29:BH:14:SER:O	29:BH:15:LEU:HB2	1.95	0.65
1:CA:154:U:H2'	1:CA:155:A:H5'	1.77	0.65
22:DA:226:A:N6	22:DA:227:A:N1	2.44	0.65
22:DA:2164:C:H2'	22:DA:2165:C:C6	2.32	0.65
14:AN:21:PHE:HA	14:AN:25:ALA:HB3	1.77	0.65
22:DA:425:G:C2	22:DA:426:C:C4	2.84	0.65
22:DA:1359:A:C8	22:DA:1373:A:C2	2.83	0.65
22:DA:2407:A:OP2	58:DA:3558:HOH:O	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:68:G:C5	1:AA:69:G:H1'	2.31	0.65
1:AA:1304:G:N1	1:AA:1305:G:N2	2.45	0.65
22:BA:819:A:C4	22:BA:1189:A:C2	2.84	0.65
22:BA:1922:G:H22	22:BA:1923:U:H1'	1.62	0.65
1:CA:1077:G:N2	1:CA:1080:A:OP2	2.28	0.65
22:DA:2063:C:H4'	56:DA:3001:DOL:H343	1.77	0.65
56:DA:3001:DOL:HC1	56:DA:3001:DOL:H431	1.77	0.65
42:DU:36:VAL:O	42:DU:38:GLY:N	2.29	0.65
22:BA:2430:A:H5'	22:BA:2431:U:OP2	1.96	0.65
5:CE:146:ASN:N	5:CE:146:ASN:OD1	2.26	0.65
20:CT:15:GLU:OE2	20:CT:18:ARG:NH2	2.29	0.65
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.30	0.65
22:DA:250:G:OP2	51:D3:13:ARG:NH1	2.28	0.65
22:DA:1430:G:H2'	22:DA:1431:A:O4'	1.97	0.65
25:DD:104:VAL:O	25:DD:105:LYS:CB	2.44	0.65
4:AD:11:LEU:CD2	4:AD:63:ARG:HD3	2.27	0.65
11:AK:26:SER:O	11:AK:28:ASN:N	2.29	0.65
29:BH:139:PHE:O	29:BH:140:ALA:CB	2.44	0.65
12:CL:57:LEU:O	12:CL:59:ASN:N	2.29	0.65
22:DA:301:G:O4'	22:DA:317:G:N2	2.29	0.65
22:DA:948:C:O2	22:DA:984:A:O2'	2.15	0.65
22:DA:1581:G:C5	22:DA:1582:C:N4	2.65	0.65
22:DA:1638:C:H5''	22:DA:2710:C:O2'	1.97	0.65
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.97	0.65
22:DA:2334:U:C4	36:DO:16:ARG:HD3	2.32	0.65
22:BA:997:G:OP1	38:BQ:92:ARG:HG2	1.96	0.65
22:BA:2749:A:OP1	28:BG:2:SER:N	2.30	0.65
29:BH:114:GLU:HB3	29:BH:133:GLN:O	1.97	0.65
1:CA:706:A:C5	1:CA:707:U:C5	2.85	0.65
1:CA:1490:U:H2'	1:CA:1491:G:O4'	1.96	0.65
4:CD:173:VAL:O	4:CD:174:ASP:HB3	1.97	0.65
12:CL:44:LYS:O	12:CL:46:ASN:N	2.30	0.65
18:CR:33:ILE:HA	18:CR:40:VAL:HG23	1.79	0.65
22:DA:2032:G:H1'	25:DD:150:GLN:NE2	2.11	0.65
22:DA:2603:G:C6	22:DA:2604:U:C4	2.84	0.65
1:AA:16:A:O2'	1:AA:17:U:H5'	1.97	0.65
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.45	0.65
22:BA:84:A:N1	22:BA:98:G:O2'	2.23	0.65
22:BA:142:A:N7	22:BA:143:C:N4	2.45	0.65
22:BA:747:U:C4	22:BA:2613:U:C4	2.84	0.65
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.45	0.65
1:CA:73:C:O2'	1:CA:74:A:O5'	2.14	0.65
1:CA:268:U:H2'	1:CA:269:C:C6	2.30	0.65
1:CA:378:G:C2	1:CA:386:C:O2	2.50	0.65
22:DA:1317:G:C2	22:DA:1336:A:C2	2.84	0.65
22:DA:1801:A:C5	24:DC:262:ARG:NH2	2.65	0.65
22:DA:1938:A:C6	22:DA:2590:A:H1'	2.32	0.65
25:DD:12:THR:OG1	25:DD:13:ARG:N	2.29	0.65
2:AB:151:ILE:HD12	2:AB:154:MET:SD	2.36	0.65
8:AH:10:MET:HE1	8:AH:33:LYS:HB3	1.78	0.65
17:AQ:69:LYS:O	17:AQ:70:THR:HB	1.96	0.65
1:CA:734:G:C2	1:CA:735:C:C6	2.84	0.65
22:DA:527:C:OP1	58:DA:3247:HOH:O	2.14	0.65
22:DA:2297:A:C2	22:DA:2298:A:C8	2.84	0.65
34:DM:2:LEU:O	34:DM:3:GLN:HB3	1.96	0.65
1:AA:536:C:OP1	58:AA:1884:HOH:O	2.13	0.65
2:AB:184:PHE:CZ	2:AB:198:PHE:CD2	2.85	0.65
22:BA:973:A:O4'	22:BA:1188:U:C6	2.50	0.65
22:BA:2321:U:H5'	22:BA:2322:A:OP2	1.95	0.65
22:BA:2728:U:O2'	22:BA:2729:G:P	2.55	0.65
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.12	0.65
41:BT:1:MET:O	41:BT:2:ILE:HG13	1.96	0.65
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.31	0.65
22:DA:1097:U:C5	22:DA:1098:A:H1'	2.32	0.65
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.32	0.65
34:DM:76:LYS:NZ	34:DM:85:GLY:O	2.30	0.65
1:AA:597:G:C2	1:AA:644:U:C2	2.84	0.65
1:AA:684:U:O2'	11:AK:40:ASN:O	2.14	0.65
1:AA:715:A:OP1	1:AA:805:C:O2'	2.10	0.65
13:AM:114:LYS:HB2	13:AM:115:PRO:HD3	1.78	0.65
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.30	0.65
24:BC:141:VAL:HG11	24:BC:190:ALA:HB1	1.77	0.65
22:DA:2056:G:O6	22:DA:2612:C:N3	2.29	0.65
22:DA:2612:C:H5''	22:DA:2613:U:OP1	1.97	0.65
1:AA:89:U:O2'	1:AA:90:C:H5''	1.96	0.64
12:AL:21:VAL:HG23	12:AL:95:TYR:CE1	2.32	0.64
22:BA:455:C:N3	22:BA:472:A:H2'	2.11	0.64
24:BC:6:CYS:SG	24:BC:18:LYS:HD2	2.37	0.64
29:BH:122:LEU:C	29:BH:123:ARG:HG2	2.17	0.64
1:CA:604:G:H2'	1:CA:605:U:O4'	1.97	0.64
22:DA:247:G:H4'	22:DA:386:G:C4	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:443:A:N7	26:DE:40:ARG:HG3	2.12	0.64
22:DA:583:G:C6	22:DA:584:C:C4	2.85	0.64
22:DA:694:U:H2'	22:DA:695:G:H5''	1.79	0.64
22:DA:788:A:OP1	22:DA:791:C:N4	2.30	0.64
22:DA:1566:A:C2	24:DC:213:TRP:CD2	2.85	0.64
22:DA:2147:A:H2'	22:DA:2148:G:O4'	1.97	0.64
26:DE:108:ILE:HD13	26:DE:181:ILE:CG1	2.27	0.64
48:D0:55:ILE:O	48:D0:56:ALA:CB	2.45	0.64
1:AA:202:G:N2	1:AA:216:U:O2	2.29	0.64
4:AD:58:LYS:HG3	4:AD:59:GLN:N	2.11	0.64
19:AS:22:ALA:O	19:AS:26:GLY:N	2.30	0.64
52:B4:37:GLN:HG2	52:B4:37:GLN:O	1.96	0.64
22:DA:53:A:N3	22:DA:179:C:H4'	2.11	0.64
22:DA:160:A:N3	22:DA:2208:C:O2'	2.29	0.64
22:DA:1361:G:C2	22:DA:1362:C:C6	2.85	0.64
22:DA:2498:C:OP2	58:DA:3681:HOH:O	2.15	0.64
1:AA:338:A:N1	1:AA:351:G:O6	2.31	0.64
11:AK:13:ARG:NE	22:BA:2142:A:OP1	2.30	0.64
22:BA:136:G:N2	22:BA:144:A:C5	2.65	0.64
22:BA:1607:C:N4	22:BA:1622:G:N7	2.45	0.64
30:BI:39:CYS:HA	30:BI:42:PHE:CB	2.28	0.64
2:CB:134:ALA:O	2:CB:138:THR:OG1	2.11	0.64
13:CM:98:ARG:O	13:CM:100:GLN:N	2.30	0.64
14:CN:80:SER:O	14:CN:82:ILE:N	2.29	0.64
22:DA:49:A:C8	22:DA:51:G:N2	2.66	0.64
22:DA:1438:U:C5	22:DA:1552:A:C2	2.86	0.64
22:DA:2820:A:C8	25:DD:196:ALA:HB1	2.32	0.64
1:AA:31:G:O2'	1:AA:48:C:N4	2.30	0.64
1:AA:484:G:H4'	1:AA:485:U:OP1	1.97	0.64
4:AD:11:LEU:HD22	4:AD:63:ARG:HD3	1.79	0.64
22:BA:983:A:N6	22:BA:984:A:N1	2.45	0.64
34:BM:42:THR:HG22	34:BM:93:VAL:HG12	1.78	0.64
1:CA:716:A:N3	11:CK:119:ASN:O	2.30	0.64
1:CA:1151:A:C2	1:CA:1152:A:C5	2.85	0.64
5:CE:24:THR:HA	5:CE:29:ARG:HA	1.79	0.64
20:CT:67:ILE:O	20:CT:67:ILE:CG2	2.44	0.64
22:DA:1027:A:C6	22:DA:1126:A:N3	2.66	0.64
22:DA:1606:C:C2'	22:DA:1607:C:OP2	2.44	0.64
8:AH:42:GLU:OE1	8:AH:42:GLU:N	2.30	0.64
12:AL:72:HIS:ND1	12:AL:72:HIS:O	2.30	0.64
22:BA:395:U:O2'	22:BA:396:G:N7	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1056:G:H5''	22:BA:1057:A:O4'	1.98	0.64
6:CF:32:ALA:O	6:CF:34:GLY:N	2.29	0.64
22:DA:192:C:N4	22:DA:193:U:O2	2.31	0.64
22:DA:1210:G:O6	22:DA:1237:A:O2'	2.12	0.64
22:DA:2590:A:O3'	24:DC:238:ARG:NH1	2.31	0.64
22:DA:2824:C:N4	22:DA:2825:G:N7	2.46	0.64
25:DD:97:SER:O	25:DD:99:GLU:N	2.30	0.64
34:DM:136:MET:O	43:DV:79:ARG:NH2	2.31	0.64
1:AA:1304:G:OP2	58:AA:1795:HOH:O	2.15	0.64
22:BA:1924:C:C2'	22:BA:1925:C:H5''	2.27	0.64
41:BT:49:LYS:HD3	41:BT:49:LYS:N	2.13	0.64
1:CA:505:G:C6	1:CA:535:A:C2	2.86	0.64
1:CA:1069:C:C2'	1:CA:1070:U:O5'	2.46	0.64
22:DA:341:C:H2'	22:DA:342:A:C8	2.31	0.64
22:DA:1753:G:C2	22:DA:1756:G:N2	2.66	0.64
17:AQ:12:VAL:HG12	17:AQ:13:VAL:N	2.12	0.64
22:BA:500:G:N2	22:BA:502:A:H3'	2.13	0.64
22:BA:1800:C:H3'	24:BC:146:MET:HE1	1.78	0.64
5:CE:41:ASP:OD1	5:CE:43:ASN:N	2.31	0.64
20:CT:67:ILE:O	20:CT:67:ILE:HG22	1.98	0.64
22:DA:1251:C:OP2	38:DQ:6:ARG:NH2	2.30	0.64
26:DE:21:ARG:NH1	26:DE:103:GLY:O	2.31	0.64
28:DG:11:VAL:O	28:DG:48:ASN:ND2	2.31	0.64
1:AA:736:C:OP1	18:AR:61:ARG:NH1	2.31	0.64
22:BA:1717:A:C2'	22:BA:1718:G:O5'	2.46	0.64
1:CA:1012:A:C2	1:CA:1018:G:C2	2.86	0.64
1:CA:1069:C:H2'	1:CA:1070:U:O5'	1.97	0.64
22:DA:276:U:O2	22:DA:276:U:H2'	1.98	0.64
22:DA:1208:C:C4	22:DA:1209:U:C4	2.86	0.64
22:BA:1066:U:O2	22:BA:1069:A:N7	2.30	0.64
22:BA:1079:C:C5	22:BA:1088:A:C2	2.86	0.64
22:BA:1924:C:H2'	22:BA:1925:C:C5'	2.28	0.64
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.33	0.64
22:BA:2258:C:O2'	22:BA:2427:C:OP2	2.12	0.64
22:BA:2419:U:O2'	22:BA:2420:C:H5'	1.98	0.64
53:B5:213:VAL:O	53:B5:214:TYR:CB	2.45	0.64
22:DA:682:G:N2	22:DA:683:U:C2	2.66	0.64
22:DA:1469:A:C2	22:DA:1470:A:C6	2.86	0.64
23:DB:87:U:O2'	23:DB:88:C:H5'	1.97	0.64
3:AC:64:ILE:HG23	3:AC:99:ALA:HB2	1.80	0.64
4:AD:46:PRO:O	4:AD:48:LEU:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.79	0.64
22:BA:2191:A:H2'	22:BA:2192:U:C6	2.33	0.64
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.13	0.64
1:CA:1147:C:O2	9:CI:18:ARG:NH2	2.31	0.64
22:DA:2111:U:C5	22:DA:2145:C:H2'	2.32	0.64
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.32	0.64
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.46	0.64
1:AA:604:G:C2	1:AA:635:A:C2	2.86	0.63
1:AA:1204:A:OP1	58:AA:1781:HOH:O	2.14	0.63
22:BA:1917:U:C2'	22:BA:1918:A:H5'	2.28	0.63
39:BR:14:VAL:CG1	39:BR:98:ILE:HG13	2.28	0.63
1:CA:706:A:O2'	11:CK:31:ILE:HD11	1.98	0.63
1:CA:791:G:C6	1:CA:792:A:N7	2.65	0.63
16:CP:14:ARG:N	16:CP:15:PRO:CD	2.61	0.63
22:DA:1607:C:O2	22:DA:1621:U:C4	2.50	0.63
22:DA:2816:G:N3	22:DA:2883:A:O2'	2.29	0.63
29:DH:117:LEU:CD1	29:DH:130:VAL:HG22	2.28	0.63
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.34	0.63
1:AA:1299:A:H2'	1:AA:1299:A:N3	2.13	0.63
2:AB:160:ALA:O	2:AB:161:LEU:HB2	1.98	0.63
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.21	0.63
22:BA:1915:U:C2'	22:BA:1916:A:H5'	2.28	0.63
1:CA:811:C:O2'	1:CA:901:A:N1	2.29	0.63
3:CC:74:GLY:O	3:CC:78:GLY:N	2.32	0.63
18:CR:22:ASP:OD1	18:CR:23:TYR:N	2.31	0.63
22:DA:271:G:H4'	22:DA:272:A:OP1	1.98	0.63
22:DA:1826:G:C6	22:DA:1827:U:C4	2.86	0.63
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.79	0.63
22:DA:2121:G:N2	22:DA:2177:C:O2	2.31	0.63
37:DP:29:LYS:HB3	37:DP:40:LEU:HD21	1.79	0.63
5:AE:137:VAL:O	5:AE:138:ARG:HB2	1.98	0.63
20:AT:3:ASN:C	20:AT:3:ASN:OD1	2.35	0.63
53:B5:121:MET:CB	53:B5:143:ALA:HB1	2.29	0.63
1:CA:1521:C:N3	1:CA:1522:U:C5	2.66	0.63
22:DA:1364:G:H2'	22:DA:1365:A:H5'	1.79	0.63
35:DN:71:ARG:HH21	35:DN:71:ARG:CG	2.12	0.63
22:BA:2286:G:H5''	22:BA:2287:A:O4'	1.99	0.63
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.29	0.63
1:CA:1219:A:N6	1:CA:1220:G:O6	2.32	0.63
1:CA:1225:A:H2'	1:CA:1226:C:C5	2.32	0.63
4:CD:95:GLU:OE2	4:CD:100:ASN:ND2	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:174:ASP:OD1	4:CD:175:ALA:N	2.30	0.63
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.31	0.63
17:AQ:16:LYS:N	17:AQ:17:MET:SD	2.72	0.63
22:BA:2189:U:H2'	22:BA:2190:G:N9	2.12	0.63
1:CA:499:A:C6	1:CA:547:A:C8	2.86	0.63
1:CA:801:U:H2'	1:CA:802:A:H8	1.63	0.63
15:CO:17:ARG:O	15:CO:18:ASP:HB3	1.98	0.63
22:DA:19:A:C2	22:DA:522:A:C2	2.86	0.63
23:DB:78:A:C6	23:DB:99:A:C8	2.86	0.63
29:DH:117:LEU:HG	29:DH:120:GLY:O	1.98	0.63
33:DL:93:ASN:OD1	33:DL:94:THR:N	2.31	0.63
22:BA:2191:A:C6	22:BA:2192:U:O4	2.52	0.63
27:BF:176:PRO:O	27:BF:177:PHE:CG	2.52	0.63
1:CA:64:G:C8	1:CA:99:C:N4	2.67	0.63
1:CA:718:A:C5	11:CK:118:HIS:CD2	2.86	0.63
2:CB:21:ARG:O	2:CB:23:TRP:N	2.31	0.63
1:AA:328:C:O2	1:AA:328:C:H2'	1.98	0.63
1:AA:468:A:C2	1:AA:469:C:C4	2.85	0.63
2:AB:149:GLY:O	2:AB:151:ILE:N	2.32	0.63
22:BA:2061:G:C2	56:BA:3001:DOL:HC22	2.34	0.63
22:BA:2211:A:H1'	22:BA:2212:A:OP1	1.99	0.63
22:BA:2444:G:P	26:BE:63:LYS:HD3	2.39	0.63
25:BD:125:TRP:CD2	25:BD:160:LYS:HD2	2.33	0.63
51:B3:27:ALA:O	51:B3:28:ASN:HB2	1.99	0.63
4:CD:32:CYS:SG	4:CD:33:LYS:N	2.72	0.63
6:CF:45:ARG:O	6:CF:56:LYS:HA	1.99	0.63
22:DA:771:G:C2	22:DA:772:C:C6	2.87	0.63
22:DA:1075:C:H2'	22:DA:1076:C:C6	2.34	0.63
22:DA:1707:G:N2	22:DA:1752:C:C2	2.67	0.63
22:DA:2688:G:N1	22:DA:2720:U:OP2	2.27	0.63
3:AC:139:GLN:O	3:AC:141:ALA:N	2.31	0.63
5:AE:99:ALA:O	5:AE:101:GLU:N	2.31	0.63
22:BA:1921:G:C2	22:BA:1922:G:C8	2.87	0.63
27:BF:85:ILE:O	27:BF:85:ILE:CG1	2.47	0.63
22:DA:2353:G:H2'	22:DA:2354:C:O4'	1.99	0.63
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.61	0.63
1:AA:1118:U:H1'	1:AA:1179:A:C4	2.33	0.63
12:AL:25:GLU:O	12:AL:26:ALA:C	2.38	0.63
13:AM:46:SER:O	13:AM:47:GLU:HB3	1.98	0.63
14:AN:51:LEU:O	14:AN:53:ARG:N	2.32	0.63
1:CA:182:A:C5	1:CA:184:G:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:254:G:O2'	17:CQ:18:GLU:O	2.15	0.63
2:CB:58:ASN:ND2	2:CB:220:THR:O	2.32	0.63
22:DA:481:G:C4	22:DA:507:A:C2	2.87	0.63
22:DA:2128:G:N3	22:DA:2173:A:O2'	2.32	0.63
22:DA:2790:U:H5'	22:DA:2893:A:N7	2.13	0.63
35:DN:69:ARG:O	35:DN:71:ARG:N	2.31	0.63
1:AA:773:G:H2'	1:AA:774:G:O4'	1.98	0.62
7:AG:40:GLU:HB2	7:AG:44:TYR:CE2	2.35	0.62
22:BA:2033:A:P	58:BA:3478:HOH:O	2.57	0.62
22:BA:2128:G:H2'	22:BA:2129:C:O4'	1.98	0.62
24:BC:70:ASN:O	24:BC:71:LYS:C	2.37	0.62
2:CB:96:TRP:CE2	2:CB:172:ALA:HB2	2.33	0.62
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.14	0.62
9:AI:43:THR:O	9:AI:44:ALA:HB3	1.99	0.62
22:BA:70:G:H4'	22:BA:71:A:OP1	1.98	0.62
22:BA:245:G:O6	51:B3:8:ARG:HD3	1.99	0.62
22:BA:324:A:N6	22:BA:338:G:O2'	2.32	0.62
22:BA:1176:U:C4	22:BA:1177:G:O6	2.53	0.62
32:BK:78:ARG:NH1	37:BP:71:GLU:OE2	2.31	0.62
12:CL:21:VAL:N	12:CL:22:PRO:HD3	2.14	0.62
22:DA:287:G:C2	22:DA:354:A:C2	2.87	0.62
22:DA:2271:G:O6	58:DA:3508:HOH:O	2.10	0.62
22:DA:2854:G:C2	22:DA:2864:G:C2	2.86	0.62
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.14	0.62
30:BI:117:MET:HE3	30:BI:129:ILE:HD11	1.81	0.62
1:CA:790:A:C6	1:CA:791:G:C6	2.87	0.62
1:CA:801:U:H2'	1:CA:802:A:C8	2.34	0.62
18:CR:24:LYS:O	18:CR:26:ILE:N	2.31	0.62
21:CU:21:ARG:N	21:CU:21:ARG:HD3	2.13	0.62
22:DA:503:A:C2	22:DA:506:G:C4	2.88	0.62
22:DA:1875:G:C2'	22:DA:1876:A:OP2	2.46	0.62
4:AD:84:GLY:O	4:AD:89:ASN:ND2	2.33	0.62
22:BA:1816:C:C5	24:BC:62:TYR:CE1	2.87	0.62
2:CB:167:ASP:O	2:CB:168:HIS:CB	2.46	0.62
22:BA:2190:G:C6	22:BA:2191:A:C5	2.87	0.62
22:BA:2846:G:OP2	37:BP:52:ASN:HB2	1.99	0.62
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.81	0.62
27:BF:2:ALA:O	27:BF:3:LYS:C	2.38	0.62
1:CA:992:U:C4	1:CA:1043:G:C8	2.87	0.62
3:CC:168:TYR:OH	5:CE:55:GLU:OE1	2.16	0.62
22:DA:1088:A:N6	30:DI:135:SER:OG	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1378:A:C2'	22:DA:1380:G:N7	2.62	0.62
22:DA:1973:G:C5	22:DA:1974:C:C5	2.88	0.62
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.80	0.62
1:AA:1539:C:H5''	21:AU:18:ARG:CG	2.30	0.62
20:AT:58:VAL:CG1	20:AT:72:ALA:HB1	2.30	0.62
22:BA:871:U:H2'	22:BA:872:U:C6	2.35	0.62
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.14	0.62
22:BA:2503:A:N3	22:BA:2503:A:H5'	2.14	0.62
1:CA:920:U:H2'	1:CA:921:U:C6	2.34	0.62
1:CA:1092:A:C6	1:CA:1183:U:O2	2.53	0.62
22:DA:990:A:N1	39:DR:78:ARG:NH1	2.48	0.62
22:DA:2467:C:N4	22:DA:2468:A:C6	2.68	0.62
25:DD:35:THR:O	25:DD:36:GLN:CB	2.47	0.62
5:AE:81:LEU:HA	5:AE:147:MET:HE1	1.80	0.62
7:AG:120:LEU:HD13	7:AG:124:LEU:HD23	1.82	0.62
22:BA:265:A:N1	22:BA:427:U:O2'	2.28	0.62
22:BA:572:A:H5''	22:BA:573:U:OP2	1.99	0.62
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.30	0.62
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.00	0.62
23:BB:33:G:O2'	23:BB:34:A:H5'	2.00	0.62
24:BC:252:THR:O	24:BC:253:LYS:C	2.38	0.62
14:CN:52:PRO:O	14:CN:53:ARG:CB	2.47	0.62
22:DA:196:A:O2'	22:DA:805:G:O6	2.08	0.62
22:DA:858:G:C4	22:DA:2268:A:C2	2.87	0.62
22:DA:998:C:OP2	38:DQ:58:ARG:NH2	2.33	0.62
22:DA:1300:G:O6	22:DA:1626:A:O2'	2.18	0.62
22:DA:1844:C:O3'	24:DC:256:LYS:NZ	2.32	0.62
22:DA:2262:U:OP1	44:DW:41:ARG:NH2	2.33	0.62
53:B5:174:ALA:O	53:B5:175:PRO:CB	2.47	0.62
22:DA:608:A:H2'	22:DA:609:A:C8	2.35	0.62
22:DA:674:G:H1'	26:DE:69:ARG:NE	2.15	0.62
22:DA:1187:G:H5''	39:DR:83:TYR:CE2	2.35	0.62
22:DA:1444:G:C2	22:DA:1548:A:C2	2.88	0.62
22:DA:1465:G:C5	22:DA:1466:U:C4	2.88	0.62
22:DA:1649:G:C6	22:DA:2009:A:C6	2.87	0.62
1:AA:995:C:N3	1:AA:1046:A:O2'	2.31	0.62
11:AK:125:LYS:O	11:AK:126:LYS:O	2.18	0.62
22:BA:1923:U:O2'	22:BA:1924:C:C5'	2.48	0.62
48:B0:33:THR:HG22	48:B0:33:THR:O	2.00	0.62
1:CA:1007:U:H2'	1:CA:1008:U:C5'	2.28	0.62
2:CB:219:ALA:O	2:CB:220:THR:HB	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:53:A:N7	22:DA:54:G:C4	2.68	0.62
22:DA:590:A:C6	22:DA:591:U:C4	2.88	0.62
22:DA:2408:U:O4	58:DA:3559:HOH:O	2.14	0.62
22:DA:2531:A:H5'	28:DG:157:TYR:CZ	2.35	0.62
4:AD:99:ASP:OD2	4:AD:115:ARG:NH2	2.33	0.62
7:AG:56:LYS:O	7:AG:57:SER:CB	2.47	0.62
11:AK:13:ARG:N	22:BA:2141:G:H4'	2.13	0.62
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.30	0.62
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.34	0.62
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.00	0.62
1:CA:38:G:C2	1:CA:397:A:C2	2.88	0.62
4:CD:59:GLN:OE1	4:CD:59:GLN:HA	2.00	0.62
22:DA:1806:C:C5	22:DA:1807:G:N7	2.68	0.62
52:D4:22:VAL:O	52:D4:24:ARG:N	2.33	0.62
22:BA:555:G:O2'	22:BA:556:A:OP2	2.16	0.61
22:BA:1433:A:O2'	22:BA:1434:A:H5'	2.00	0.61
22:BA:1605:C:C2'	22:BA:1606:C:H5'	2.30	0.61
22:BA:1731:G:C6	22:BA:1733:G:C5	2.88	0.61
1:CA:692:U:O2'	1:CA:694:A:N7	2.29	0.61
21:CU:8:GLU:HB3	21:CU:12:PHE:CD2	2.35	0.61
22:DA:300:A:O2'	22:DA:318:C:O2'	2.07	0.61
29:DH:32:PRO:O	29:DH:33:GLN:CB	2.48	0.61
1:AA:1157:A:N7	1:AA:1180:A:N6	2.47	0.61
1:AA:1161:C:H2'	1:AA:1162:C:C6	2.35	0.61
1:AA:1278:G:H4'	1:AA:1279:G:C8	2.35	0.61
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.80	0.61
22:BA:528:A:H2	22:BA:2043:C:H5'	1.65	0.61
1:CA:527:G:C6	1:CA:528:C:C5	2.88	0.61
1:CA:801:U:C2	1:CA:802:A:C8	2.88	0.61
21:CU:12:PHE:O	21:CU:13:ASP:HB2	2.00	0.61
22:DA:629:G:N3	22:DA:639:U:O2'	2.32	0.61
22:DA:699:A:N6	22:DA:733:G:O2'	2.33	0.61
23:DB:7:G:H5'	36:DO:29:HIS:CE1	2.35	0.61
1:AA:627:G:OP1	16:AP:51:ARG:NH2	2.33	0.61
22:BA:1327:A:N6	22:BA:1328:A:C2	2.68	0.61
25:BD:140:HIS:CE1	58:BD:303:HOH:O	2.44	0.61
1:CA:577:G:C8	1:CA:816:A:C6	2.87	0.61
1:CA:582:C:N3	1:CA:760:G:C6	2.68	0.61
4:CD:30:THR:C	4:CD:31:LYS:HD3	2.21	0.61
15:CO:42:HIS:O	15:CO:45:GLU:O	2.18	0.61
22:DA:450:G:N1	22:DA:454:A:OP2	2.28	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:776:G:N7	22:DA:793:A:C4	2.68	0.61
22:DA:1360:G:C2	22:DA:1361:G:H1'	2.35	0.61
22:DA:2142:A:C2	22:DA:2150:C:N3	2.69	0.61
22:DA:2162:G:C4'	22:DA:2163:A:OP1	2.48	0.61
42:DU:53:ASN:O	42:DU:53:ASN:ND2	2.33	0.61
1:AA:71:A:O2'	1:AA:72:A:P	2.58	0.61
11:AK:16:VAL:O	11:AK:17:SER:OG	2.16	0.61
22:BA:1232:G:C5	22:BA:1233:C:C5	2.88	0.61
53:B5:180:SER:CB	53:B5:188:ASP:CB	2.79	0.61
21:CU:37:PHE:CD2	21:CU:41:PRO:HG3	2.36	0.61
22:DA:30:G:O2'	22:DA:1214:A:N3	2.33	0.61
25:DD:151:THR:O	25:DD:152:PRO:C	2.38	0.61
30:DI:114:ALA:O	30:DI:115:ALA:CB	2.48	0.61
38:DQ:25:TYR:CD2	38:DQ:26:GLY:N	2.67	0.61
22:BA:1779:U:H5	22:BA:1784:A:N7	1.99	0.61
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.82	0.61
34:BM:69:PRO:O	34:BM:70:ASP:CG	2.39	0.61
35:BN:79:LEU:O	35:BN:80:PHE:HB2	2.01	0.61
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.82	0.61
53:B5:68:GLY:O	53:B5:70:GLY:N	2.33	0.61
2:CB:15:HIS:O	2:CB:17:GLY:N	2.34	0.61
4:CD:4:TYR:O	4:CD:5:LEU:HB2	1.99	0.61
4:CD:34:ILE:O	4:CD:35:GLU:CB	2.48	0.61
5:CE:154:ALA:HA	5:CE:157:ARG:HB3	1.82	0.61
2:AB:187:VAL:HG23	2:AB:187:VAL:O	2.01	0.61
22:BA:18:U:OP1	38:BQ:30:ARG:NH2	2.33	0.61
23:BB:60:C:N4	58:BB:303:HOH:O	2.33	0.61
30:BI:62:TYR:O	30:BI:63:ALA:CB	2.49	0.61
53:B5:50:ILE:O	53:B5:203:GLU:CB	2.48	0.61
1:CA:1211:U:C2'	1:CA:1212:U:OP2	2.49	0.61
4:CD:35:GLU:O	4:CD:38:PRO:HD3	2.00	0.61
22:DA:26:G:C6	22:DA:27:G:N1	2.69	0.61
22:DA:1096:A:H2'	22:DA:1097:U:O4'	2.00	0.61
22:DA:1359:A:C8	22:DA:1373:A:N1	2.68	0.61
22:DA:1951:U:H2'	22:DA:1953:A:OP2	2.01	0.61
23:DB:37:C:C5	23:DB:38:C:C5	2.88	0.61
24:DC:108:LYS:N	24:DC:194:GLU:O	2.33	0.61
29:DH:83:LYS:H	29:DH:149:GLU:HG2	1.64	0.61
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.00	0.61
1:AA:64:G:C8	1:AA:99:C:N4	2.68	0.61
1:AA:807:A:C5	1:AA:808:C:C5	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:70:ARG:O	4:AD:74:ASN:ND2	2.34	0.61
17:AQ:53:CYS:SG	17:AQ:75:LEU:HD23	2.41	0.61
22:BA:482:A:H5''	22:BA:483:A:OP1	2.01	0.61
22:BA:588:U:H2'	22:BA:589:U:C6	2.35	0.61
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.00	0.61
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.35	0.61
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HD11	1.82	0.61
38:BQ:76:TYR:OH	38:BQ:92:ARG:NH1	2.33	0.61
43:BV:80:HIS:CE1	43:BV:83:LYS:CG	2.83	0.61
1:CA:994:A:N3	1:CA:994:A:H2'	2.15	0.61
3:CC:139:GLN:O	3:CC:141:ALA:N	2.34	0.61
4:CD:166:GLU:O	4:CD:167:LYS:HB2	1.99	0.61
22:DA:53:A:C8	22:DA:54:G:C8	2.89	0.61
22:DA:126:A:N7	22:DA:127:A:C2	2.69	0.61
22:DA:511:U:H5''	22:DA:1235:G:H4'	1.83	0.61
22:DA:864:G:C6	22:DA:865:C:N4	2.69	0.61
22:DA:1827:U:C2'	22:DA:1828:G:O5'	2.48	0.61
22:DA:2418:A:OP1	51:D3:45:ARG:NH1	2.34	0.61
22:DA:2725:A:C4	22:DA:2727:A:C8	2.88	0.61
22:DA:2744:G:C6	22:DA:2761:A:N6	2.69	0.61
30:DI:6:GLN:O	30:DI:7:ALA:CB	2.49	0.61
1:AA:1446:A:H2'	1:AA:1447:A:H5'	1.83	0.61
15:AO:2:SER:O	15:AO:3:LEU:CB	2.48	0.61
22:BA:142:A:H2'	22:BA:143:C:C6	2.36	0.61
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.35	0.61
2:CB:21:ARG:HA	2:CB:21:ARG:NH1	2.15	0.61
12:CL:88:LYS:HG3	12:CL:88:LYS:O	2.01	0.61
22:DA:104:A:N7	22:DA:105:C:C4	2.69	0.61
22:DA:192:C:C5	22:DA:193:U:C2	2.88	0.61
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.34	0.61
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.82	0.61
22:DA:2061:G:H2'	22:DA:2501:C:O2'	2.00	0.61
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.35	0.61
1:AA:232:G:H2'	1:AA:233:C:O4'	2.01	0.61
1:AA:1492:A:O2'	22:BA:1913:A:N1	2.31	0.61
1:AA:1528:U:O3'	1:AA:1529:G:H3'	2.01	0.61
9:AI:23:PRO:HA	9:AI:61:LEU:HA	1.82	0.61
22:BA:1250:G:C5'	38:BQ:6:ARG:HD3	2.30	0.61
14:CN:61:ARG:O	14:CN:62:ASN:HB2	2.00	0.61
22:DA:67:U:C2	22:DA:68:G:C8	2.89	0.61
22:DA:353:C:H2'	22:DA:354:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:724:U:H2'	22:DA:725:G:O4'	2.01	0.61
22:DA:2330:G:N2	22:DA:2386:A:C2	2.68	0.61
32:DK:107:LEU:O	32:DK:109:SER:N	2.34	0.61
35:DN:1:MET:H1	35:DN:1:MET:CE	2.13	0.61
1:AA:887:G:H2'	1:AA:888:G:H5'	1.83	0.61
1:AA:1429:A:C2	1:AA:1430:A:C8	2.88	0.61
4:AD:174:ASP:OD2	4:AD:176:GLY:N	2.34	0.61
22:BA:357:C:H2'	22:BA:358:U:C6	2.35	0.61
22:BA:1936:A:C2	22:BA:1945:G:C8	2.89	0.61
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.82	0.61
1:CA:72:A:N6	1:CA:73:C:N4	2.48	0.61
1:CA:1376:U:O4	7:CG:10:ARG:NH1	2.33	0.61
1:CA:1381:U:C2'	1:CA:1382:C:O5'	2.49	0.61
22:DA:54:G:C2	22:DA:55:G:C8	2.88	0.61
22:DA:2571:U:C4	22:DA:2574:G:C8	2.89	0.61
26:DE:108:ILE:HD11	26:DE:180:LEU:CB	2.31	0.61
1:AA:1160:G:O6	1:AA:1181:G:C6	2.54	0.60
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.36	0.60
12:AL:24:LEU:O	12:AL:25:GLU:C	2.37	0.60
23:BB:30:C:H2'	23:BB:31:C:H5'	1.83	0.60
24:BC:230:HIS:CD2	24:BC:247:PRO:HA	2.36	0.60
1:CA:960:U:C5	1:CA:1225:A:C8	2.89	0.60
1:CA:994:A:C8	1:CA:1216:A:H4'	2.36	0.60
1:CA:1521:C:C4	1:CA:1522:U:C5	2.88	0.60
5:CE:133:PRO:O	5:CE:137:VAL:HG12	2.00	0.60
7:CG:74:GLU:O	7:CG:88:PRO:HA	2.01	0.60
22:DA:38:A:H2'	22:DA:39:G:O4'	2.00	0.60
22:DA:616:A:C2	22:DA:617:G:O4'	2.54	0.60
22:DA:2720:U:OP1	37:DP:53:ARG:NH2	2.34	0.60
32:DK:87:LEU:HD22	32:DK:92:GLU:HA	1.82	0.60
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.54	0.60
50:D2:44:VAL:HG13	50:D2:45:SER:N	2.16	0.60
1:AA:108:G:N3	1:AA:108:G:H5'	2.15	0.60
1:AA:154:U:C2	1:AA:168:G:N2	2.69	0.60
2:AB:49:MET:O	2:AB:53:ALA:CB	2.49	0.60
5:AE:90:THR:HG22	5:AE:91:GLY:N	2.16	0.60
5:AE:109:GLY:O	5:AE:110:ALA:CB	2.49	0.60
22:BA:137:U:H2'	22:BA:140:C:C2	2.36	0.60
22:BA:142:A:C5	22:BA:143:C:N4	2.69	0.60
29:BH:121:VAL:N	29:BH:122:LEU:HB2	2.16	0.60
41:BT:2:ILE:CA	41:BT:3:ARG:HB2	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:109:A:C6	1:CA:327:A:C6	2.89	0.60
1:CA:115:G:H4'	1:CA:116:A:O5'	2.01	0.60
1:CA:945:G:C2	1:CA:946:A:C8	2.88	0.60
9:CI:15:SER:OG	9:CI:69:GLY:O	2.12	0.60
12:CL:20:ASN:N	12:CL:20:ASN:OD1	2.34	0.60
20:CT:43:ASP:HB3	20:CT:46:ALA:HB3	1.83	0.60
22:DA:88:G:C2	22:DA:89:A:C8	2.88	0.60
22:DA:187:G:C2	22:DA:210:C:C2	2.89	0.60
22:DA:497:A:H2'	22:DA:498:G:O4'	2.01	0.60
22:DA:1179:G:C5	22:DA:1180:U:H1'	2.36	0.60
22:DA:2146:C:C5'	22:DA:2147:A:OP1	2.49	0.60
30:DI:80:LEU:HD13	30:DI:136:MET:SD	2.41	0.60
35:DN:24:MET:HE3	35:DN:44:LEU:HD13	1.83	0.60
1:AA:701:U:H4'	1:AA:702:A:H5''	1.83	0.60
1:AA:1074:G:OP1	5:AE:69:ARG:NH2	2.34	0.60
22:BA:475:C:C4	22:BA:481:G:O6	2.55	0.60
26:BE:149:ILE:CD1	26:BE:172:ALA:HA	2.31	0.60
29:BH:100:ALA:HB1	29:BH:112:LYS:HA	1.83	0.60
5:CE:89:HIS:CE1	5:CE:90:THR:HG1	2.19	0.60
19:CS:66:MET:SD	19:CS:74:PHE:CZ	2.94	0.60
23:DB:4:C:C2	23:DB:117:G:N2	2.69	0.60
35:DN:49:GLU:N	35:DN:50:PRO:CD	2.65	0.60
1:AA:673:A:H2'	1:AA:674:G:C8	2.36	0.60
5:AE:83:HIS:HB2	5:AE:84:PRO:HD2	1.83	0.60
9:AI:63:LEU:N	9:AI:63:LEU:HD23	2.17	0.60
11:AK:16:VAL:O	11:AK:17:SER:CB	2.49	0.60
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.01	0.60
33:BL:68:SER:O	33:BL:69:ARG:CB	2.50	0.60
35:BN:58:ASP:OD1	35:BN:63:ARG:NH2	2.35	0.60
38:BQ:88:VAL:HG13	39:BR:49:ILE:HD11	1.82	0.60
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.00	0.60
1:CA:475:C:H2'	1:CA:476:U:C6	2.36	0.60
1:CA:485:U:OP2	1:CA:485:U:H4'	2.00	0.60
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.00	0.60
22:DA:749:A:C4	22:DA:750:A:C8	2.89	0.60
22:DA:1355:G:H2'	22:DA:1356:G:H5'	1.84	0.60
22:DA:1735:A:N1	22:DA:1736:U:C2	2.70	0.60
22:DA:1868:C:N4	22:DA:1869:G:O6	2.34	0.60
29:DH:126:GLY:O	29:DH:146:VAL:HG23	2.00	0.60
30:DI:58:VAL:CG1	30:DI:59:ILE:N	2.63	0.60
2:AB:123:ASP:N	2:AB:123:ASP:OD1	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:417:C:H2'	22:BA:418:C:H6	1.66	0.60
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.36	0.60
22:BA:997:G:OP1	38:BQ:92:ARG:CG	2.49	0.60
22:BA:1916:A:C6	22:BA:1917:U:C2	2.90	0.60
27:BF:119:ALA:HB2	27:BF:177:PHE:CD2	2.37	0.60
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.31	0.60
1:CA:227:G:H2'	1:CA:228:A:O4'	2.00	0.60
1:CA:409:U:OP1	4:CD:24:GLY:HA3	2.00	0.60
1:CA:495:A:C2	1:CA:496:A:N6	2.70	0.60
22:DA:324:A:N6	22:DA:338:G:O2'	2.33	0.60
22:DA:528:A:N1	22:DA:2043:C:O5'	2.34	0.60
22:DA:846:U:O2'	22:DA:847:U:O5'	2.19	0.60
22:DA:1127:A:C2'	22:DA:1128:G:H5''	2.32	0.60
22:DA:1390:U:H2'	22:DA:1391:U:H5'	1.83	0.60
22:DA:2058:A:C6	22:DA:2059:A:N6	2.69	0.60
22:DA:2133:G:H2'	22:DA:2157:G:N2	2.15	0.60
49:D1:21:TYR:CD1	49:D1:38:LYS:HD2	2.37	0.60
1:AA:188:C:O2	1:AA:188:C:H2'	2.01	0.60
1:AA:327:A:O3'	1:AA:328:C:H4'	2.02	0.60
4:AD:174:ASP:OD2	4:AD:177:LYS:N	2.35	0.60
22:BA:2786:U:OP1	25:BD:70:LYS:NZ	2.28	0.60
27:BF:108:VAL:HG11	27:BF:176:PRO:HG2	1.82	0.60
1:CA:909:A:H2'	1:CA:910:C:O4'	2.01	0.60
9:CI:19:VAL:HG21	9:CI:82:GLY:CA	2.32	0.60
22:DA:642:U:O2'	22:DA:644:A:N7	2.29	0.60
22:DA:826:U:O2'	33:DL:53:GLY:HA3	2.02	0.60
22:DA:1060:U:O4'	22:DA:1062:G:H5'	2.02	0.60
22:DA:1358:G:O2'	22:DA:1359:A:H5'	2.02	0.60
22:DA:1850:G:O6	22:DA:1892:C:N3	2.35	0.60
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.31	0.60
26:DE:108:ILE:HD11	26:DE:180:LEU:HB2	1.83	0.60
4:AD:3:ARG:NE	4:AD:115:ARG:HD3	2.16	0.60
22:BA:790:U:O2'	22:BA:791:C:O5'	2.19	0.60
22:BA:1688:U:N3	22:BA:1698:A:C2	2.70	0.60
53:B5:65:LEU:HD11	53:B5:191:ARG:CB	2.32	0.60
2:CB:210:VAL:O	2:CB:214:LEU:HB2	2.00	0.60
22:DA:400:G:N7	45:DX:57:ARG:NH1	2.50	0.60
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.37	0.60
23:DB:48:U:H2'	23:DB:49:C:C6	2.37	0.60
22:BA:1078:U:H1'	22:BA:1088:A:C2	2.37	0.60
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1269:A:OP2	58:BA:3385:HOH:O	2.16	0.60
22:BA:1866:A:N1	22:BA:1876:A:C8	2.70	0.60
22:BA:2683:C:OP1	37:BP:51:ARG:NH2	2.34	0.60
29:BH:117:LEU:CD2	29:BH:121:VAL:HA	2.31	0.60
33:BL:61:LEU:O	51:B3:13:ARG:HD3	2.02	0.60
36:BO:53:THR:HB	36:BO:65:THR:HG22	1.84	0.60
43:BV:13:GLY:O	43:BV:17:SER:OG	2.19	0.60
1:CA:1007:U:H2'	1:CA:1008:U:H5'	1.82	0.60
22:DA:39:G:C6	22:DA:40:U:C4	2.90	0.60
22:DA:271:G:C2	22:DA:367:G:C2	2.90	0.60
22:DA:363:G:H2'	22:DA:364:C:C6	2.36	0.60
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.36	0.60
1:AA:495:A:C2	1:AA:496:A:N6	2.69	0.60
4:AD:68:LEU:HD22	4:AD:68:LEU:N	2.17	0.60
22:BA:1179:G:C6	22:BA:1180:U:C2	2.90	0.60
22:BA:2094:A:C2	22:BA:2196:C:C2	2.90	0.60
22:BA:2187:U:H2'	22:BA:2188:U:C1'	2.32	0.60
22:BA:2318:G:C6	22:BA:2319:G:N1	2.70	0.60
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.84	0.60
27:BF:83:TYR:O	27:BF:85:ILE:HG22	2.02	0.60
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.65	0.60
53:B5:56:ASP:OD2	53:B5:58:ASN:ND2	2.34	0.60
1:CA:73:C:C2	1:CA:74:A:C8	2.90	0.60
1:CA:1296:C:H4'	1:CA:1302:C:N4	2.17	0.60
5:CE:56:VAL:N	5:CE:57:PRO:HD2	2.17	0.60
5:CE:157:ARG:HD3	5:CE:158:GLY:N	2.17	0.60
22:DA:269:C:O2	22:DA:269:C:H2'	2.02	0.60
22:DA:680:C:H2'	22:DA:681:G:C8	2.37	0.60
22:DA:1582:C:O2'	22:DA:1585:C:N3	2.33	0.60
56:DA:3001:DOL:H483	56:DA:3001:DOL:C46	2.24	0.60
1:AA:859:G:H2'	1:AA:860:A:C8	2.36	0.60
1:AA:1378:C:C5	1:AA:1379:G:C8	2.90	0.60
9:AI:114:LYS:HG2	9:AI:120:LYS:HA	1.82	0.60
22:BA:1916:A:P	22:BA:1917:U:OP2	2.60	0.60
30:BI:39:CYS:HA	30:BI:42:PHE:HB3	1.83	0.60
1:CA:949:A:C2	1:CA:1233:G:N3	2.70	0.60
1:CA:992:U:C4	1:CA:1043:G:N7	2.70	0.60
5:CE:106:ILE:HD11	5:CE:124:LEU:HD23	1.83	0.60
11:CK:126:LYS:O	11:CK:127:ARG:HB2	2.01	0.60
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.01	0.60
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:29:A:H2'	23:DB:30:C:C6	2.37	0.60
26:DE:149:ILE:HD12	26:DE:172:ALA:HA	1.83	0.60
1:AA:1491:G:H2'	1:AA:1492:A:O4'	2.01	0.59
14:AN:41:ARG:O	14:AN:43:ASN:N	2.35	0.59
19:AS:64:ASP:O	19:AS:65:GLU:HB3	2.02	0.59
22:BA:1735:A:C2	22:BA:1736:U:C1'	2.85	0.59
24:BC:204:VAL:O	24:BC:205:LEU:HB2	2.01	0.59
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.17	0.59
1:CA:734:G:N3	1:CA:735:C:C6	2.70	0.59
1:CA:1201:A:H4'	1:CA:1202:U:O5'	2.01	0.59
5:CE:78:ASN:OD1	5:CE:79:GLY:N	2.35	0.59
9:CI:120:LYS:HG3	9:CI:123:ARG:HB3	1.82	0.59
22:DA:120:U:H1'	22:DA:149:A:C8	2.37	0.59
22:DA:1369:G:C2	22:DA:1370:C:C6	2.90	0.59
22:DA:2757:A:N1	28:DG:67:THR:HG21	2.17	0.59
22:BA:28:A:C4	22:BA:29:U:C6	2.89	0.59
22:BA:350:G:H2'	22:BA:351:C:O4'	2.02	0.59
22:BA:2418:A:C5	22:BA:2419:U:C5	2.89	0.59
27:BF:158:THR:O	58:BF:201:HOH:O	2.17	0.59
1:CA:66:A:C6	1:CA:67:C:C5	2.90	0.59
1:CA:1167:A:N7	1:CA:1169:A:C5	2.70	0.59
1:CA:1190:G:H5'	3:CC:176:HIS:CE1	2.37	0.59
1:CA:1365:G:H2'	1:CA:1366:C:O4'	2.02	0.59
3:CC:42:TYR:CE1	3:CC:90:VAL:HG21	2.36	0.59
21:CU:47:ARG:HA	21:CU:47:ARG:HE	1.66	0.59
22:DA:1668:A:O4'	22:DA:1669:A:C2	2.55	0.59
22:DA:2889:C:N4	22:DA:2890:G:C6	2.70	0.59
24:DC:9:THR:O	24:DC:10:SER:CB	2.49	0.59
22:BA:1922:G:N2	22:BA:1923:U:C1'	2.65	0.59
27:BF:132:VAL:HG22	27:BF:152:LEU:HB3	1.83	0.59
28:BG:60:ASP:OD2	58:BG:201:HOH:O	2.17	0.59
29:BH:94:ILE:HG22	29:BH:99:ILE:CG1	2.32	0.59
29:BH:123:ARG:HH22	1:CA:367:U:P	2.25	0.59
39:BR:51:VAL:HG23	39:BR:52:PRO:HD2	1.84	0.59
43:BV:48:MET:SD	43:BV:86:LEU:HD12	2.43	0.59
53:B5:99:GLU:O	53:B5:103:LYS:CB	2.51	0.59
1:CA:1089:G:C5	1:CA:1090:U:C5	2.91	0.59
22:DA:362:A:C4	22:DA:363:G:C8	2.90	0.59
22:DA:777:G:N7	22:DA:793:A:H2	1.99	0.59
22:DA:1395:A:O2'	22:DA:1397:U:C6	2.54	0.59
22:DA:1790:C:O2'	24:DC:208:ALA:HB2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.01	0.59
22:DA:2815:C:O2'	48:D0:41:HIS:ND1	2.35	0.59
5:AE:45:ARG:HG2	5:AE:73:ASN:HB3	1.84	0.59
9:AI:45:ARG:HG2	9:AI:46:MET:SD	2.43	0.59
22:BA:746:U:O2'	54:B6:8:MHT:H8A	2.02	0.59
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.02	0.59
24:BC:91:ILE:HD12	24:BC:103:TYR:CD1	2.37	0.59
29:BH:99:ILE:HB	29:BH:115:VAL:HG11	1.84	0.59
1:CA:388:G:O2'	1:CA:389:A:OP1	2.17	0.59
1:CA:1141:C:O2'	1:CA:1142:G:O5'	2.19	0.59
2:CB:93:ASN:OD1	2:CB:94:HIS:N	2.36	0.59
2:CB:184:PHE:CE1	2:CB:198:PHE:CD2	2.91	0.59
11:CK:23:ILE:HG21	11:CK:96:THR:HG21	1.84	0.59
17:CQ:48:ASP:N	17:CQ:48:ASP:OD2	2.35	0.59
21:CU:8:GLU:HB3	21:CU:12:PHE:CE2	2.38	0.59
22:DA:118:A:N7	22:DA:119:A:C8	2.70	0.59
41:DT:89:GLU:O	41:DT:91:GLN:N	2.35	0.59
1:AA:205:A:OP1	1:AA:205:A:H4'	2.01	0.59
22:BA:2000:C:O2'	22:BA:2001:C:H5'	2.03	0.59
29:BH:1:MET:O	29:BH:20:ASN:ND2	2.35	0.59
53:B5:87:ALA:HB2	53:B5:153:ILE:CB	2.32	0.59
22:DA:945:A:C8	22:DA:2448:A:C2	2.89	0.59
22:DA:2110:G:O2'	22:DA:2120:G:OP2	2.14	0.59
41:DT:82:LYS:HG2	41:DT:83:ALA:N	2.18	0.59
1:AA:131:A:O2'	1:AA:262:A:N3	2.32	0.59
1:AA:1211:U:HO2'	1:AA:1212:U:P	2.24	0.59
1:AA:1306:A:C4	1:AA:1307:U:C6	2.91	0.59
2:AB:49:MET:O	2:AB:53:ALA:HB2	2.03	0.59
3:AC:25:ASN:O	3:AC:27:LYS:N	2.35	0.59
9:AI:6:TYR:HB3	9:AI:89:GLU:HG2	1.84	0.59
13:AM:3:ARG:O	13:AM:4:ILE:HG12	2.03	0.59
17:AQ:6:ARG:O	17:AQ:7:THR:HG23	2.02	0.59
22:BA:264:C:O2'	22:BA:265:A:H2'	2.02	0.59
22:BA:1952:A:C5	32:BK:22:ILE:HG21	2.37	0.59
48:B0:55:ILE:HG22	48:B0:56:ALA:N	2.17	0.59
1:CA:1302:C:C5	13:CM:17:ILE:HD13	2.38	0.59
1:CA:1364:U:O2	1:CA:1364:U:H2'	2.03	0.59
8:CH:18:GLN:NE2	8:CH:70:ALA:HB1	2.18	0.59
15:CO:53:ARG:O	15:CO:56:LEU:N	2.35	0.59
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.01	0.59
28:DG:118:PRO:HG3	28:DG:144:VAL:HG21	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:18:LEU:O	46:DY:22:LEU:HB3	2.03	0.59
1:AA:984:C:N4	58:AA:1836:HOH:O	2.35	0.59
5:AE:108:GLY:O	5:AE:109:GLY:C	2.41	0.59
9:AI:57:MET:CG	9:AI:58:VAL:H	2.14	0.59
12:AL:76:GLU:O	12:AL:77:HIS:HB2	2.03	0.59
14:AN:21:PHE:HA	14:AN:25:ALA:CB	2.33	0.59
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.83	0.59
22:BA:2182:U:O4	22:BA:2183:A:N6	2.36	0.59
22:BA:2192:U:C2'	22:BA:2193:G:H5'	2.32	0.59
26:BE:48:THR:O	26:BE:50:ALA:N	2.35	0.59
46:BY:18:LEU:O	46:BY:22:LEU:N	2.34	0.59
1:CA:1105:A:C2	1:CA:1106:G:N7	2.71	0.59
2:CB:119:THR:O	2:CB:120:GLN:HB2	2.01	0.59
6:CF:97:THR:O	6:CF:98:GLU:HB3	2.03	0.59
7:CG:68:ASN:O	7:CG:138:ARG:NH2	2.35	0.59
7:CG:92:ARG:HB3	7:CG:93:PRO:HD2	1.84	0.59
22:DA:1410:G:C2	22:DA:1411:U:C4	2.91	0.59
22:DA:1668:A:C4	22:DA:1674:G:N7	2.70	0.59
22:DA:1798:U:O2'	22:DA:1802:A:N3	2.33	0.59
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.02	0.59
22:DA:2250:G:OP1	22:DA:2275:C:O2'	2.13	0.59
22:DA:2293:G:H2'	22:DA:2294:G:O4'	2.03	0.59
23:DB:84:G:N2	23:DB:93:C:C2	2.70	0.59
29:DH:126:GLY:O	29:DH:146:VAL:N	2.35	0.59
31:DJ:105:VAL:HG12	31:DJ:109:LEU:HD12	1.84	0.59
1:AA:178:C:OP2	20:AT:60:ARG:NH2	2.35	0.59
1:AA:582:C:C2	1:AA:583:A:C8	2.91	0.59
1:AA:872:A:C5	1:AA:874:G:C8	2.91	0.59
1:AA:1377:A:C4	7:AG:7:ILE:HD11	2.38	0.59
11:AK:35:THR:OG1	11:AK:41:ALA:N	2.35	0.59
22:BA:616:A:C2	22:BA:617:G:H1'	2.38	0.59
22:BA:734:A:C5	22:BA:735:A:C8	2.90	0.59
22:BA:1935:G:C6	22:BA:1962:C:C5	2.91	0.59
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.34	0.59
1:CA:803:G:C5	1:CA:804:U:C4	2.90	0.59
22:DA:237:C:C4	22:DA:238:C:C5	2.90	0.59
22:DA:583:G:C5	22:DA:584:C:C5	2.91	0.59
22:DA:2262:U:OP2	44:DW:16:SER:HB2	2.03	0.59
30:DI:58:VAL:O	30:DI:69:PHE:HB3	2.03	0.59
1:AA:4:U:O2	1:AA:4:U:H2'	2.03	0.59
5:AE:65:GLU:OE1	5:AE:66:LYS:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:80:THR:O	10:AJ:83:THR:N	2.35	0.59
22:BA:538:A:H5''	31:BJ:7:LYS:HE3	1.85	0.59
1:CA:206:C:H2'	1:CA:207:C:H5'	1.85	0.59
1:CA:1439:G:C2	1:CA:1463:U:O2	2.56	0.59
2:CB:54:LEU:HA	2:CB:57:LEU:HB3	1.84	0.59
4:CD:105:MET:SD	4:CD:143:VAL:HG13	2.43	0.59
22:DA:332:A:O2'	22:DA:334:C:OP2	2.11	0.59
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.37	0.59
22:DA:2305:U:C4	22:DA:2306:C:C4	2.91	0.59
22:DA:2645:G:H3'	22:DA:2646:C:H5'	1.85	0.59
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.37	0.59
46:DY:56:LEU:O	46:DY:57:LEU:HB2	2.03	0.59
1:AA:151:A:H2'	1:AA:152:A:O4'	2.03	0.59
1:AA:212:G:C2	1:AA:213:G:C4	2.90	0.59
30:BI:96:ASP:OD1	30:BI:97:LYS:N	2.36	0.59
39:BR:16:GLU:OE1	39:BR:100:GLY:HA2	2.03	0.59
42:BU:12:ILE:HG21	42:BU:80:ALA:HB2	1.85	0.59
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.38	0.59
3:CC:77:ILE:HA	3:CC:84:VAL:CG2	2.33	0.59
14:CN:52:PRO:O	14:CN:53:ARG:HB3	2.03	0.59
20:CT:55:GLN:N	20:CT:56:PRO:CD	2.65	0.59
22:DA:82:U:C2	22:DA:83:A:C8	2.90	0.59
22:DA:1203:U:H1'	33:DL:4:ASN:HB3	1.85	0.59
39:DR:38:VAL:HG11	39:DR:57:GLY:HA3	1.83	0.59
1:AA:69:G:O6	1:AA:98:A:N6	2.36	0.58
1:AA:90:C:C2	1:AA:91:U:C6	2.91	0.58
1:AA:1134:G:C2	1:AA:1135:U:C2	2.89	0.58
22:BA:1008:A:N6	22:BA:1136:G:C6	2.71	0.58
22:BA:1935:G:C6	22:BA:1962:C:C6	2.91	0.58
1:CA:243:A:H4'	1:CA:244:U:H5''	1.83	0.58
2:CB:141:LEU:O	2:CB:145:GLU:N	2.34	0.58
22:DA:841:G:N2	22:DA:937:C:O2	2.32	0.58
22:DA:1439:A:N7	22:DA:1552:A:C2	2.71	0.58
22:DA:2189:U:H2'	22:DA:2190:G:H5'	1.84	0.58
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.03	0.58
30:DI:76:ALA:CB	30:DI:129:ILE:HG23	2.33	0.58
1:AA:701:U:H4'	1:AA:702:A:C5'	2.33	0.58
2:AB:222:ARG:HB3	2:AB:222:ARG:CZ	2.34	0.58
8:AH:111:MET:HE1	8:AH:116:ALA:HA	1.84	0.58
24:BC:117:GLN:N	24:BC:128:ASN:OD1	2.35	0.58
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:50:ILE:HB	53:B5:52:PRO:HD3	1.85	0.58
22:DA:85:G:OP2	42:DU:28:VAL:HG12	2.03	0.58
23:DB:22:U:O4	58:DB:302:HOH:O	2.15	0.58
2:AB:200:ILE:O	2:AB:201:PRO:O	2.21	0.58
4:AD:58:LYS:NZ	4:AD:69:GLU:OE2	2.32	0.58
7:AG:13:LEU:O	7:AG:15:ASP:N	2.37	0.58
10:AJ:48:ARG:NH1	10:AJ:66:GLU:OE1	2.35	0.58
13:AM:10:PRO:O	13:AM:11:ASP:HB3	2.04	0.58
16:AP:51:ARG:HG2	16:AP:51:ARG:HH11	1.67	0.58
17:AQ:12:VAL:O	17:AQ:13:VAL:HG12	2.03	0.58
22:BA:1355:G:O2'	22:BA:1356:G:H5'	2.03	0.58
27:BF:174:ASP:O	27:BF:175:PHE:O	2.21	0.58
39:BR:52:PRO:O	39:BR:53:PHE:O	2.21	0.58
1:CA:1245:C:C4	1:CA:1246:A:N7	2.71	0.58
2:CB:15:HIS:O	2:CB:15:HIS:CG	2.55	0.58
22:DA:1068:G:H2'	22:DA:1068:G:N3	2.17	0.58
22:DA:1544:A:N1	22:DA:1545:A:C2	2.71	0.58
22:DA:1605:C:H2'	22:DA:1606:C:H5'	1.85	0.58
22:DA:1808:A:N1	45:DX:28:ARG:HD2	2.17	0.58
24:DC:34:LEU:O	24:DC:35:GLU:HB3	2.03	0.58
32:DK:18:ARG:HB2	32:DK:45:GLU:HB3	1.84	0.58
36:DO:33:ARG:O	36:DO:34:HIS:CB	2.50	0.58
21:AU:10:GLU:CG	21:AU:11:PRO:HD3	2.33	0.58
1:CA:913:A:H4'	1:CA:914:A:OP1	2.02	0.58
1:CA:1127:G:H5'	1:CA:1280:A:O2'	2.02	0.58
7:CG:5:ARG:NE	7:CG:5:ARG:HA	2.18	0.58
1:AA:119:A:OP2	1:AA:288:A:N6	2.35	0.58
2:AB:145:GLU:O	2:AB:149:GLY:N	2.37	0.58
5:AE:101:GLU:HB3	5:AE:122:ASN:HB2	1.84	0.58
22:BA:811:U:C2	22:BA:1251:C:C5	2.91	0.58
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.58
30:BI:82:LYS:O	30:BI:83:ALA:HB2	2.04	0.58
1:CA:618:C:H5''	1:CA:619:U:H5''	1.84	0.58
2:CB:119:THR:O	2:CB:120:GLN:CB	2.50	0.58
15:CO:18:ASP:OD1	15:CO:20:ASN:HB2	2.03	0.58
22:DA:129:C:H2'	22:DA:130:C:C6	2.39	0.58
22:DA:636:G:N1	33:DL:76:GLU:OE2	2.36	0.58
42:DU:18:ASP:OD2	42:DU:18:ASP:N	2.36	0.58
1:AA:722:G:H3'	1:AA:722:G:N3	2.18	0.58
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.39	0.58
1:AA:1492:A:OP1	12:AL:44:LYS:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:545:U:H3'	22:BA:546:U:H4'	1.86	0.58
22:BA:1916:A:H2'	22:BA:1917:U:C1'	2.34	0.58
22:BA:2358:A:N1	33:BL:54:GLN:NE2	2.50	0.58
42:BU:18:ASP:O	42:BU:19:LYS:C	2.41	0.58
4:CD:35:GLU:HG3	4:CD:36:GLN:N	2.18	0.58
17:CQ:46:VAL:HG21	17:CQ:61:ILE:CD1	2.34	0.58
22:DA:607:U:N3	22:DA:620:G:O4'	2.36	0.58
22:DA:720:U:H2'	22:DA:721:A:C8	2.38	0.58
22:DA:1099:G:N7	22:DA:1100:C:N4	2.52	0.58
22:DA:1344:U:O2'	22:DA:1345:C:P	2.62	0.58
29:DH:34:GLY:O	29:DH:35:LYS:CB	2.51	0.58
1:AA:1394:A:N1	1:AA:1500:A:O2'	2.32	0.58
2:AB:186:ILE:HA	2:AB:200:ILE:O	2.04	0.58
4:AD:32:CYS:O	4:AD:33:LYS:CB	2.52	0.58
9:AI:9:THR:HG22	9:AI:10:GLY:N	2.18	0.58
16:AP:42:ILE:O	16:AP:43:ALA:C	2.41	0.58
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.03	0.58
22:BA:1439:A:OP2	58:BA:3636:HOH:O	2.17	0.58
24:BC:141:VAL:HG12	24:BC:142:HIS:N	2.19	0.58
28:BG:124:GLU:OE1	28:BG:125:CYS:N	2.37	0.58
28:BG:174:ALA:O	28:BG:175:LYS:CB	2.51	0.58
29:BH:31:VAL:N	29:BH:32:PRO:HD2	2.19	0.58
37:BP:91:ALA:HB2	37:BP:113:ARG:HA	1.84	0.58
1:CA:815:A:N7	1:CA:1509:C:O2'	2.28	0.58
22:DA:1351:C:H2'	22:DA:1352:U:C1'	2.34	0.58
22:DA:1360:G:N1	22:DA:1361:G:H1'	2.18	0.58
22:DA:1510:G:H2'	22:DA:1511:G:O4'	2.03	0.58
22:DA:2266:A:C2	22:DA:2272:U:C5	2.91	0.58
4:AD:120:HIS:O	4:AD:121:LYS:C	2.41	0.58
22:BA:1674:G:N2	22:BA:1677:A:N1	2.49	0.58
22:BA:2517:C:C5	22:BA:2542:A:C5	2.92	0.58
22:BA:2534:A:H2'	22:BA:2535:G:O5'	2.04	0.58
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.39	0.58
1:CA:190:A:C8	1:CA:191:G:H1'	2.39	0.58
6:CF:86:ARG:CG	6:CF:86:ARG:HH11	2.17	0.58
11:CK:125:LYS:O	21:CU:34:ARG:NE	2.35	0.58
22:DA:1648:U:H2'	22:DA:1649:G:O4'	2.03	0.58
22:DA:2061:G:C6	56:DA:3001:DOL:HC19	2.39	0.58
22:DA:2123:G:C2	22:DA:2176:A:C2	2.92	0.58
30:DI:10:LYS:HB2	30:DI:56:PRO:CB	2.33	0.58
11:AK:69:ARG:CD	22:BA:2146:C:N3	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:47:THR:HG22	18:AR:48:ARG:O	2.02	0.58
21:AU:4:ILE:N	21:AU:20:LYS:HZ1	2.02	0.58
22:BA:544:C:H5'	22:BA:545:U:OP2	2.04	0.58
42:BU:49:VAL:O	42:BU:49:VAL:HG22	2.04	0.58
1:CA:1330:U:H4'	13:CM:23:TYR:CE1	2.38	0.58
22:DA:223:A:C4	22:DA:408:G:H1'	2.38	0.58
22:DA:306:U:O2	22:DA:312:G:N2	2.37	0.58
22:DA:425:G:N2	22:DA:426:C:C2	2.72	0.58
22:DA:622:G:H2'	22:DA:623:C:C6	2.38	0.58
36:DO:33:ARG:O	36:DO:34:HIS:HB2	2.04	0.58
1:AA:152:A:N6	1:AA:170:U:C2	2.71	0.58
1:AA:887:G:C2'	1:AA:888:G:H5'	2.34	0.58
1:AA:1337:G:C5'	1:AA:1338:G:OP1	2.51	0.58
3:AC:7:PRO:HG2	3:AC:184:TYR:CD1	2.39	0.58
20:AT:58:VAL:HG12	20:AT:59:ASP:N	2.18	0.58
22:BA:1020:A:C2	22:BA:1141:U:C2	2.92	0.58
22:BA:1695:G:H1'	24:BC:8:PRO:O	2.04	0.58
22:BA:1786:A:C4	22:BA:1938:A:C6	2.91	0.58
22:BA:2665:A:C2	22:BA:2666:C:C6	2.91	0.58
5:CE:56:VAL:O	5:CE:60:ILE:HG23	2.04	0.58
6:CF:8:PHE:CZ	6:CF:60:VAL:HB	2.38	0.58
6:CF:26:THR:O	6:CF:30:THR:OG1	2.22	0.58
18:CR:63:ARG:HB3	18:CR:70:TYR:CE1	2.38	0.58
22:DA:182:A:H2'	22:DA:183:C:C6	2.39	0.58
22:DA:454:A:H4'	22:DA:455:C:OP2	2.02	0.58
22:DA:668:A:N6	22:DA:670:A:O2'	2.37	0.58
22:DA:1802:A:C2	22:DA:1803:A:C4	2.92	0.58
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.39	0.58
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.39	0.58
1:AA:736:C:H2'	1:AA:737:C:C6	2.39	0.57
1:AA:1311:A:C2	1:AA:1327:C:N3	2.72	0.57
2:AB:75:ALA:O	2:AB:76:ALA:HB2	2.02	0.57
2:AB:219:ALA:O	2:AB:220:THR:HB	2.03	0.57
16:AP:75:ILE:HG22	16:AP:80:LYS:HE2	1.86	0.57
20:AT:67:ILE:HG13	20:AT:71:LYS:HG2	1.85	0.57
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.19	0.57
22:BA:1377:G:H5''	22:BA:1378:A:OP2	2.03	0.57
22:BA:1754:A:C6	22:BA:1755:A:C6	2.92	0.57
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.04	0.57
30:BI:69:PHE:O	30:BI:69:PHE:CD1	2.57	0.57
1:CA:152:A:N6	1:CA:170:U:C2	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:765:G:C6	1:CA:812:G:C4	2.92	0.57
1:CA:977:A:H3'	1:CA:977:A:N3	2.19	0.57
4:CD:32:CYS:O	4:CD:33:LYS:CB	2.51	0.57
6:CF:97:THR:O	6:CF:98:GLU:CB	2.51	0.57
9:CI:84:THR:HG21	9:CI:103:PHE:HB3	1.86	0.57
12:CL:44:LYS:CB	12:CL:45:PRO:CD	2.82	0.57
22:DA:396:G:C5'	45:DX:13:VAL:HG21	2.34	0.57
22:DA:479:A:H4'	22:DA:480:A:OP1	2.04	0.57
22:DA:1263:U:O4	40:DS:95:ARG:NH1	2.36	0.57
22:DA:1315:C:O2'	22:DA:1392:A:N3	2.33	0.57
29:DH:108:VAL:O	29:DH:110:VAL:N	2.36	0.57
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.43	0.57
1:AA:1299:A:C6	1:AA:1301:U:O2	2.57	0.57
4:AD:25:VAL:HG12	4:AD:26:ARG:N	2.19	0.57
9:AI:47:VAL:HA	9:AI:50:GLN:HB2	1.86	0.57
22:BA:580:U:H2'	22:BA:581:C:H6	1.69	0.57
22:BA:826:U:O2'	33:BL:53:GLY:HA3	2.04	0.57
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.39	0.57
22:BA:1965:C:OP1	22:BA:1966:A:O2'	2.21	0.57
29:BH:123:ARG:NH2	1:CA:367:U:OP2	2.31	0.57
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.04	0.57
1:CA:1041:G:H2'	1:CA:1042:A:C8	2.39	0.57
22:DA:27:G:HO2'	22:DA:28:A:P	2.27	0.57
22:DA:247:G:N7	22:DA:249:C:C2	2.72	0.57
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.69	0.57
22:DA:842:U:N3	22:DA:843:G:N7	2.52	0.57
22:DA:1109:C:C4	22:DA:1110:G:C6	2.93	0.57
22:DA:1308:A:N6	22:DA:1309:G:C2	2.72	0.57
22:DA:2054:A:OP1	22:DA:2055:C:O2'	2.22	0.57
22:DA:2234:G:C6	22:DA:2235:G:N7	2.72	0.57
29:DH:62:LEU:HD13	29:DH:62:LEU:C	2.25	0.57
35:DN:63:ARG:NH1	35:DN:81:ASN:OD1	2.37	0.57
45:DX:52:SER:OG	45:DX:55:GLY:N	2.35	0.57
1:AA:1107:C:C4	1:AA:1108:G:N7	2.72	0.57
1:AA:1144:G:H5''	1:AA:1145:A:OP2	2.04	0.57
9:AI:49:ARG:NH2	9:AI:52:LEU:O	2.38	0.57
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.04	0.57
22:BA:278:A:C2	22:BA:362:A:C8	2.91	0.57
22:BA:585:G:N7	38:BQ:6:ARG:NH1	2.53	0.57
22:BA:927:A:H2'	22:BA:928:A:C8	2.39	0.57
22:BA:1385:A:C4	22:BA:1386:C:C5	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2032:G:N7	58:BA:3534:HOH:O	2.32	0.57
26:BE:119:ILE:HB	26:BE:187:VAL:HG22	1.84	0.57
1:CA:412:A:O2'	1:CA:413:G:O5'	2.05	0.57
1:CA:496:A:C2	1:CA:497:G:C5	2.92	0.57
1:CA:527:G:C2	1:CA:528:C:C6	2.92	0.57
2:CB:47:VAL:HB	2:CB:48:PRO:HD3	1.86	0.57
12:CL:90:LEU:CB	12:CL:93:VAL:HG21	2.35	0.57
22:DA:142:A:C5	22:DA:143:C:N4	2.72	0.57
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.19	0.57
37:DP:93:ARG:O	37:DP:94:LYS:CB	2.52	0.57
1:AA:22:G:H4'	1:AA:885:G:C8	2.39	0.57
10:AJ:92:LEU:O	10:AJ:93:ALA:CB	2.52	0.57
22:BA:645:C:O2'	22:BA:646:U:H5''	2.04	0.57
22:BA:1189:A:H2'	22:BA:1190:G:O4'	2.04	0.57
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.05	0.57
22:BA:1669:A:OP2	58:BA:3722:HOH:O	2.17	0.57
22:BA:1736:U:H2'	22:BA:1737:G:O4'	2.04	0.57
22:BA:1793:C:O2'	22:BA:1794:A:H5'	2.04	0.57
22:BA:2120:G:N2	22:BA:2179:C:O2	2.37	0.57
22:BA:2491:U:H4'	22:BA:2492:U:OP1	2.04	0.57
43:BV:10:LYS:N	43:BV:10:LYS:HE2	2.19	0.57
1:CA:405:U:OP2	4:CD:3:ARG:NH1	2.37	0.57
11:CK:126:LYS:O	21:CU:34:ARG:CZ	2.52	0.57
22:DA:53:A:N7	22:DA:54:G:C5	2.73	0.57
22:DA:106:C:O2'	22:DA:294:A:O2'	2.08	0.57
22:DA:533:G:H5'	38:DQ:24:TYR:CE2	2.39	0.57
22:DA:563:A:C4	22:DA:2018:G:C2	2.93	0.57
22:DA:588:U:H1'	26:DE:85:PHE:CD1	2.39	0.57
22:DA:1050:A:C2	22:DA:2751:G:C4	2.92	0.57
28:DG:176:LYS:O	28:DG:177:LYS:HB2	2.03	0.57
29:DH:117:LEU:HB3	29:DH:120:GLY:O	2.05	0.57
37:DP:91:ALA:HB2	37:DP:113:ARG:HA	1.85	0.57
1:AA:657:U:O2	15:AO:22:THR:CG2	2.52	0.57
2:AB:67:ILE:O	2:AB:68:LEU:CB	2.51	0.57
9:AI:30:ILE:HD11	9:AI:38:TYR:CD2	2.39	0.57
10:AJ:17:LEU:HD23	10:AJ:17:LEU:C	2.24	0.57
30:BI:82:LYS:O	30:BI:83:ALA:CB	2.52	0.57
38:BQ:9:ILE:O	38:BQ:13:ARG:HG3	2.04	0.57
40:BS:84:ARG:HB2	40:BS:96:ILE:HG13	1.85	0.57
1:CA:938:A:N6	1:CA:939:G:C6	2.72	0.57
1:CA:957:U:O3'	19:CS:79:THR:OG1	2.21	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:17:ARG:O	15:CO:18:ASP:CB	2.51	0.57
22:DA:324:A:C2	22:DA:325:G:H1'	2.39	0.57
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.40	0.57
39:DR:52:PRO:O	39:DR:53:PHE:CG	2.57	0.57
11:AK:51:GLY:O	11:AK:52:PHE:O	2.22	0.57
11:AK:128:ARG:HG2	11:AK:128:ARG:HH11	1.70	0.57
22:BA:618:G:N7	58:BA:3286:HOH:O	2.32	0.57
22:BA:995:C:H5'	22:BA:995:C:H6	1.70	0.57
22:BA:2808:G:N2	22:BA:2891:U:C6	2.73	0.57
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.05	0.57
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.35	0.57
40:BS:55:ILE:CG2	40:BS:66:ILE:HG12	2.35	0.57
53:B5:184:GLU:O	53:B5:185:LYS:CB	2.53	0.57
1:CA:992:U:N3	1:CA:1043:G:N7	2.53	0.57
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.40	0.57
2:CB:16:PHE:CE1	2:CB:18:HIS:CE1	2.93	0.57
22:DA:613:A:HO2'	22:DA:614:A:P	2.25	0.57
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.39	0.57
22:DA:2091:C:H1'	45:DX:34:HIS:CD2	2.39	0.57
22:DA:2615:U:C2	48:D0:4:GLN:HA	2.39	0.57
26:DE:97:ASN:HB2	26:DE:100:MET:SD	2.44	0.57
28:DG:169:VAL:O	28:DG:169:VAL:HG12	2.04	0.57
38:DQ:10:ALA:O	38:DQ:13:ARG:HG3	2.05	0.57
42:DU:74:ASN:ND2	42:DU:96:PHE:CD1	2.72	0.57
1:AA:77:A:N1	1:AA:91:U:O4	2.38	0.57
1:AA:108:G:N3	1:AA:108:G:C5'	2.68	0.57
1:AA:614:C:H2'	1:AA:615:G:O4'	2.05	0.57
10:AJ:53:ILE:HG22	10:AJ:61:ALA:CB	2.35	0.57
22:BA:1078:U:H1'	22:BA:1088:A:N1	2.19	0.57
22:BA:1309:G:H4'	50:B2:7:PRO:HB2	1.85	0.57
22:BA:1731:G:C6	22:BA:1733:G:C6	2.92	0.57
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.40	0.57
29:BH:132:PHE:CE2	29:BH:142:VAL:HG21	2.40	0.57
35:BN:25:ALA:CB	35:BN:48:VAL:HG22	2.35	0.57
38:BQ:89:GLU:H	39:BR:49:ILE:CD1	2.18	0.57
40:BS:63:GLY:O	40:BS:64:ALA:HB3	2.05	0.57
1:CA:1151:A:N3	1:CA:1152:A:C5	2.72	0.57
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.40	0.57
5:CE:83:HIS:CD2	8:CH:96:MET:CE	2.88	0.57
6:CF:9:MET:SD	6:CF:59:TYR:CE1	2.98	0.57
7:CG:125:SER:O	7:CG:127:ALA:N	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:12:U:O2	22:DA:12:U:H2'	2.04	0.57
22:DA:46:G:C2	22:DA:47:C:C6	2.92	0.57
22:DA:1353:A:C8	22:DA:1378:A:N6	2.73	0.57
22:DA:1566:A:C2	24:DC:213:TRP:CE3	2.92	0.57
22:DA:1753:G:C2	22:DA:1756:G:C2	2.92	0.57
22:DA:1843:C:H4'	24:DC:251:GLN:CD	2.25	0.57
22:DA:2272:U:H5''	22:DA:2273:A:OP1	2.03	0.57
22:DA:2387:U:H1'	44:DW:41:ARG:CD	2.35	0.57
24:DC:16:VAL:HG22	24:DC:206:GLY:HA3	1.87	0.57
25:DD:140:HIS:NE2	58:DD:303:HOH:O	2.32	0.57
29:DH:21:VAL:HG22	29:DH:22:LYS:N	2.19	0.57
37:DP:103:ARG:HB3	37:DP:108:ALA:HB2	1.87	0.57
5:AE:101:GLU:HB3	5:AE:122:ASN:CB	2.34	0.57
6:AF:18:VAL:N	6:AF:19:PRO:HD2	2.20	0.57
15:AO:87:LEU:O	15:AO:88:ARG:CB	2.52	0.57
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.40	0.57
22:BA:2191:A:C2	22:BA:2192:U:C4	2.93	0.57
24:BC:167:ARG:O	24:BC:168:ASP:HB2	2.04	0.57
26:BE:106:LYS:HG3	26:BE:200:LEU:HG	1.85	0.57
41:BT:64:LYS:N	41:BT:64:LYS:HD3	2.19	0.57
53:B5:125:GLY:O	53:B5:126:SER:CB	2.53	0.57
1:CA:17:U:H2'	1:CA:18:C:C6	2.40	0.57
1:CA:563:A:H2'	1:CA:567:G:C8	2.40	0.57
16:CP:39:PHE:CD1	16:CP:74:LEU:HD11	2.39	0.57
20:CT:68:HIS:C	20:CT:69:LYS:HG3	2.24	0.57
22:DA:372:G:N2	22:DA:401:A:OP2	2.36	0.57
22:DA:744:U:H4'	22:DA:1658:C:H4'	1.87	0.57
22:DA:893:C:H2'	22:DA:894:U:O4'	2.05	0.57
22:DA:1272:A:C2	22:DA:1618:A:C4	2.92	0.57
22:DA:2199:A:C6	22:DA:2200:C:C2	2.93	0.57
22:DA:2882:A:H5'	35:DN:96:ARG:HB2	1.86	0.57
31:DJ:41:LYS:O	31:DJ:42:ALA:C	2.42	0.57
32:DK:105:ARG:NH2	37:DP:34:GLU:OE2	2.37	0.57
37:DP:103:ARG:CB	37:DP:108:ALA:HB2	2.35	0.57
49:D1:14:SER:OG	49:D1:48:ILE:O	2.11	0.57
1:AA:495:A:C2	1:AA:496:A:C6	2.93	0.57
3:AC:155:GLY:HA2	3:AC:163:ALA:HB1	1.87	0.57
9:AI:112:GLU:OE2	9:AI:115:LYS:NZ	2.38	0.57
11:AK:16:VAL:HG22	11:AK:17:SER:N	2.20	0.57
18:AR:26:ILE:O	18:AR:30:LYS:HG3	2.05	0.57
22:BA:495:G:H1'	40:BS:57:ASN:OD1	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:974:G:H8	22:BA:990:A:H62	1.51	0.57
22:BA:1283:G:N1	22:BA:1286:A:OP2	2.38	0.57
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.35	0.57
29:BH:95:GLY:HA2	29:BH:117:LEU:HD22	1.87	0.57
29:BH:117:LEU:HD21	29:BH:121:VAL:CA	2.35	0.57
42:BU:99:ASN:C	42:BU:99:ASN:OD1	2.43	0.57
1:CA:455:G:N2	1:CA:478:A:C2	2.72	0.57
3:CC:72:ARG:HB3	3:CC:75:ILE:HG23	1.86	0.57
22:DA:43:G:N2	22:DA:437:U:C6	2.73	0.57
22:DA:537:G:N1	22:DA:555:G:C2	2.73	0.57
22:DA:667:U:C4	22:DA:668:A:N7	2.73	0.57
22:DA:2800:A:C2	22:DA:2895:G:H1'	2.40	0.57
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.68	0.57
39:DR:52:PRO:O	39:DR:53:PHE:CB	2.53	0.57
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.86	0.57
1:AA:1238:A:C2	1:AA:1303:C:H4'	2.40	0.57
4:AD:174:ASP:O	4:AD:175:ALA:HB3	2.04	0.57
22:BA:666:A:H4'	33:BL:48:ARG:HD3	1.87	0.57
22:BA:851:C:H2'	22:BA:852:U:C6	2.40	0.57
22:BA:1924:C:OP2	22:BA:1924:C:H3'	2.05	0.57
22:BA:1926:U:O2	22:BA:1928:A:N7	2.38	0.57
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.40	0.57
1:CA:8:A:C5	4:CD:206:LYS:HB3	2.40	0.57
1:CA:160:A:H2'	1:CA:161:A:O4'	2.05	0.57
1:CA:269:C:H2'	1:CA:270:A:C8	2.40	0.57
1:CA:412:A:HO2'	1:CA:413:G:P	2.26	0.57
1:CA:545:C:OP2	4:CD:59:GLN:NE2	2.36	0.57
22:DA:56:A:C2	22:DA:57:C:C2	2.92	0.57
22:DA:411:G:OP2	22:DA:2406:A:O2'	2.15	0.57
22:DA:1125:G:C6	22:DA:1126:A:N6	2.72	0.57
22:DA:1343:G:H1'	22:DA:1597:A:C4	2.40	0.57
22:DA:1509:A:O2'	22:DA:1510:G:P	2.63	0.57
22:DA:2293:G:OP1	22:DA:2377:A:N6	2.38	0.57
28:DG:176:LYS:O	28:DG:177:LYS:CB	2.52	0.57
1:AA:80:A:C2	1:AA:90:C:N3	2.73	0.56
1:AA:269:C:H2'	1:AA:270:A:C8	2.40	0.56
22:BA:831:G:OP1	58:BA:3262:HOH:O	2.17	0.56
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.88	0.56
22:BA:1605:C:H2'	22:BA:1606:C:H5'	1.87	0.56
30:BI:21:SER:N	30:BI:22:PRO:CD	2.68	0.56
1:CA:145:G:C2	1:CA:146:G:C8	2.92	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:214:C:H2'	1:CA:215:C:C6	2.40	0.56
9:CI:116:VAL:CG2	10:CJ:62:ARG:HD3	2.35	0.56
22:DA:749:A:C5	22:DA:1618:A:C2	2.93	0.56
22:DA:1581:G:C6	22:DA:1582:C:C4	2.93	0.56
22:DA:2652:C:C4	22:DA:2653:U:C4	2.93	0.56
26:DE:84:THR:O	26:DE:85:PHE:CG	2.58	0.56
30:DI:77:ALA:HA	30:DI:80:LEU:HD12	1.87	0.56
47:DZ:24:LEU:HD11	47:DZ:54:MET:CE	2.35	0.56
50:D2:15:SER:OG	50:D2:16:HIS:CE1	2.58	0.56
1:AA:560:A:H5'	1:AA:566:G:N2	2.19	0.56
1:AA:1269:A:C2	1:AA:1313:U:O4'	2.57	0.56
1:AA:1289:A:O3'	7:AG:35:LYS:NZ	2.38	0.56
1:AA:1493:A:O2'	1:AA:1494:G:OP2	2.19	0.56
11:AK:76:GLU:O	11:AK:77:TYR:CD1	2.58	0.56
20:AT:29:ARG:O	20:AT:33:LYS:HG2	2.04	0.56
22:BA:1700:A:H5'	22:BA:1701:A:OP2	2.05	0.56
24:BC:97:LYS:N	24:BC:97:LYS:HD2	2.19	0.56
26:BE:54:GLY:O	26:BE:74:LYS:CE	2.53	0.56
32:BK:34:GLY:O	32:BK:35:VAL:C	2.44	0.56
39:BR:48:LYS:O	39:BR:48:LYS:HG2	2.05	0.56
41:BT:48:GLN:O	41:BT:52:GLU:HA	2.04	0.56
4:CD:148:LYS:O	4:CD:149:ALA:HB3	2.04	0.56
5:CE:25:VAL:N	5:CE:28:GLY:O	2.37	0.56
5:CE:153:VAL:O	5:CE:157:ARG:N	2.37	0.56
22:DA:13:A:N1	22:DA:525:U:H2'	2.20	0.56
22:DA:30:G:H2'	22:DA:31:C:O4'	2.05	0.56
22:DA:305:C:H1'	22:DA:313:G:N2	2.20	0.56
22:DA:310:A:O2'	22:DA:311:A:P	2.63	0.56
22:DA:618:G:N7	58:DA:3290:HOH:O	2.33	0.56
22:DA:1091:G:N3	22:DA:1092:C:C5	2.73	0.56
22:DA:1737:G:O6	22:DA:1738:G:N1	2.37	0.56
22:DA:2209:G:C2	22:DA:2216:G:C2	2.94	0.56
22:DA:2725:A:C5	22:DA:2727:A:C8	2.93	0.56
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.05	0.56
23:DB:81:G:C5	23:DB:82:U:C5	2.93	0.56
24:DC:31:ALA:N	24:DC:32:PRO:HD2	2.19	0.56
31:DJ:78:THR:OG1	31:DJ:80:HIS:HB2	2.05	0.56
1:AA:616:G:C2	1:AA:617:G:C8	2.93	0.56
2:AB:119:THR:O	2:AB:120:GLN:CB	2.54	0.56
10:AJ:33:GLY:O	10:AJ:34:ALA:HB3	2.06	0.56
11:AK:76:GLU:N	11:AK:76:GLU:OE2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:AO:63:ARG:HG2	15:AO:67:LEU:CD1	2.36	0.56
16:AP:38:PHE:CE2	16:AP:51:ARG:HB2	2.40	0.56
17:AQ:17:MET:O	17:AQ:19:LYS:N	2.39	0.56
22:BA:274:C:C4	22:BA:275:C:C4	2.94	0.56
22:BA:752:A:H3'	50:B2:1:MET:SD	2.46	0.56
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.80	0.56
22:BA:1494:A:H2'	22:BA:1495:A:O5'	2.04	0.56
22:BA:1932:A:H5''	22:BA:1933:G:OP2	2.05	0.56
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.39	0.56
23:BB:37:C:C5	23:BB:38:C:C4	2.93	0.56
24:BC:125:LYS:HG2	24:BC:128:ASN:ND2	2.20	0.56
26:BE:59:PRO:HD3	26:BE:71:GLY:O	2.05	0.56
29:BH:117:LEU:CD2	29:BH:121:VAL:H	2.08	0.56
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.87	0.56
37:BP:103:ARG:HH11	37:BP:103:ARG:HG3	1.70	0.56
51:B3:27:ALA:O	51:B3:28:ASN:CB	2.53	0.56
1:CA:106:C:O2	1:CA:379:C:H4'	2.05	0.56
1:CA:919:A:C2	1:CA:920:U:C5	2.94	0.56
2:CB:35:ARG:O	2:CB:38:VAL:HG12	2.06	0.56
2:CB:210:VAL:HG22	2:CB:211:THR:N	2.19	0.56
22:DA:204:A:O4'	22:DA:206:U:C6	2.58	0.56
22:DA:290:U:C4	22:DA:291:G:N7	2.73	0.56
22:DA:684:G:C2	22:DA:794:A:C2	2.93	0.56
22:DA:1313:U:O2	22:DA:1313:U:H2'	2.05	0.56
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.06	0.56
22:DA:1973:G:C6	22:DA:1974:C:N4	2.73	0.56
22:DA:2199:A:O4'	29:DH:28:ASN:ND2	2.39	0.56
22:DA:2550:G:O6	22:DA:2551:C:N4	2.37	0.56
22:DA:2599:G:N7	24:DC:236:GLU:HB3	2.19	0.56
1:AA:81:A:C2'	1:AA:82:G:H5''	2.36	0.56
3:AC:192:THR:HG1	3:AC:193:TYR:HD2	1.50	0.56
6:AF:98:GLU:CG	6:AF:99:ALA:N	2.68	0.56
14:AN:43:ASN:OD1	14:AN:47:LYS:NZ	2.38	0.56
17:AQ:45:HIS:CD2	17:AQ:70:THR:CG2	2.88	0.56
22:BA:627:A:C6	22:BA:637:A:C8	2.93	0.56
22:BA:1073:A:C3'	22:BA:1074:G:H5''	2.35	0.56
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.21	0.56
22:BA:1912:A:C2	22:BA:1919:A:C5	2.93	0.56
1:CA:466:A:N1	1:CA:468:A:N7	2.53	0.56
1:CA:572:A:H5'	1:CA:573:A:OP2	2.06	0.56
1:CA:1000:A:H2'	1:CA:1001:C:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:129:GLU:OE1	7:CG:129:GLU:N	2.38	0.56
12:CL:18:LYS:HD2	12:CL:18:LYS:C	2.25	0.56
22:DA:2032:G:N7	58:DA:3531:HOH:O	2.33	0.56
22:DA:2839:G:C6	22:DA:2840:C:C4	2.93	0.56
24:DC:108:LYS:HA	24:DC:196:GLY:HA3	1.86	0.56
29:DH:32:PRO:HB3	45:DX:39:TRP:HB3	1.87	0.56
29:DH:83:LYS:N	29:DH:149:GLU:HG2	2.20	0.56
1:AA:1492:A:OP1	12:AL:44:LYS:HA	2.05	0.56
10:AJ:34:ALA:O	10:AJ:35:GLN:CB	2.53	0.56
15:AO:63:ARG:CG	15:AO:67:LEU:HD12	2.35	0.56
22:BA:655:A:H4'	22:BA:656:G:OP1	2.05	0.56
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.35	0.56
22:BA:1916:A:C2	22:BA:1917:U:O2	2.59	0.56
23:BB:54:G:H21	27:BF:26:MET:HE2	1.71	0.56
26:BE:54:GLY:O	26:BE:74:LYS:HE2	2.05	0.56
49:B1:51:GLU:OE2	49:B1:53:LYS:HD3	2.05	0.56
1:CA:8:A:C6	4:CD:206:LYS:HB3	2.40	0.56
1:CA:247:G:C6	1:CA:278:G:N1	2.72	0.56
1:CA:955:U:O2'	1:CA:1227:A:N6	2.39	0.56
2:CB:85:LEU:HG	2:CB:85:LEU:O	2.05	0.56
22:DA:424:G:C2	22:DA:425:G:C8	2.93	0.56
22:DA:2112:G:H2'	22:DA:2112:G:N3	2.21	0.56
22:DA:2499:C:N4	22:DA:2500:U:O4	2.38	0.56
22:DA:2521:C:C2	22:DA:2545:G:N2	2.74	0.56
22:DA:2820:A:C8	25:DD:196:ALA:CB	2.89	0.56
33:DL:95:LEU:O	33:DL:100:ILE:HG23	2.06	0.56
42:DU:54:GLN:N	42:DU:55:PRO:HD3	2.21	0.56
1:AA:1101:A:H4'	1:AA:1102:A:O5'	2.05	0.56
5:AE:157:ARG:HD2	8:AH:43:GLU:O	2.05	0.56
6:AF:9:MET:HE3	18:AR:65:LEU:HA	1.88	0.56
13:AM:16:VAL:HG23	13:AM:41:GLU:O	2.05	0.56
20:AT:44:LYS:CD	20:AT:87:ALA:HA	2.36	0.56
22:BA:819:A:OP2	22:BA:1187:G:N2	2.29	0.56
22:BA:1001:A:P	58:BA:3735:HOH:O	2.57	0.56
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.41	0.56
22:BA:1824:G:N3	24:BC:252:THR:HG21	2.20	0.56
22:BA:1941:C:O2	22:BA:1941:C:H2'	2.05	0.56
46:BY:6:LEU:O	46:BY:60:LYS:NZ	2.34	0.56
1:CA:511:C:C2	1:CA:512:U:C5	2.93	0.56
1:CA:755:G:C2	1:CA:756:C:C5	2.93	0.56
1:CA:824:G:H1'	8:CH:2:SER:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:294:A:N6	22:DA:345:A:C4	2.73	0.56
22:DA:847:U:O2	22:DA:847:U:H2'	2.06	0.56
22:DA:1312:U:C2	22:DA:1603:A:N1	2.74	0.56
22:DA:1693:U:O2'	24:DC:14:ARG:NH2	2.38	0.56
22:DA:1817:G:H2'	22:DA:1818:U:H5'	1.88	0.56
22:DA:2171:A:O2'	22:DA:2173:A:OP1	2.23	0.56
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.88	0.56
23:DB:32:U:C2	23:DB:51:G:N2	2.74	0.56
30:DI:80:LEU:HA	30:DI:84:ALA:CB	2.35	0.56
39:DR:14:VAL:HG21	39:DR:98:ILE:HG13	1.87	0.56
1:AA:205:A:H2'	1:AA:205:A:N3	2.21	0.56
17:AQ:16:LYS:HG3	17:AQ:16:LYS:O	2.04	0.56
22:BA:644:A:H2'	22:BA:645:C:O4'	2.06	0.56
22:BA:947:A:O2'	22:BA:984:A:C2	2.56	0.56
22:BA:1071:G:C8	22:BA:1089:A:N6	2.74	0.56
22:BA:1915:U:H2'	22:BA:1916:A:H5'	1.87	0.56
22:BA:1916:A:H2'	22:BA:1917:U:O2'	2.05	0.56
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.06	0.56
24:BC:86:ASN:N	24:BC:86:ASN:OD1	2.38	0.56
29:BH:40:THR:OG1	29:BH:43:ASN:OD1	2.24	0.56
53:B5:50:ILE:HG22	53:B5:51:ASP:H	1.71	0.56
1:CA:1348:U:H4'	9:CI:122:ARG:HG3	1.88	0.56
1:CA:1491:G:C6	1:CA:1492:A:N1	2.74	0.56
4:CD:174:ASP:O	4:CD:175:ALA:HB2	2.05	0.56
19:CS:55:ARG:NE	19:CS:79:THR:HG22	2.20	0.56
21:CU:14:VAL:HG12	21:CU:16:LEU:HG	1.88	0.56
22:DA:478:A:C2	22:DA:480:A:C4	2.94	0.56
22:DA:848:C:H2'	22:DA:849:A:C8	2.41	0.56
22:DA:1436:G:N2	22:DA:1557:C:C2	2.74	0.56
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.06	0.56
32:DK:30:ARG:NH2	32:DK:37:ASP:OD1	2.39	0.56
41:DT:23:ALA:O	41:DT:27:SER:N	2.39	0.56
1:AA:683:G:N2	11:AK:40:ASN:HA	2.21	0.56
1:AA:844:G:N3	1:AA:845:A:N7	2.54	0.56
1:AA:1319:A:C8	1:AA:1323:G:C6	2.94	0.56
1:AA:1322:C:OP1	19:AS:78:ARG:NH2	2.39	0.56
22:BA:776:G:H4'	22:BA:777:G:O5'	2.05	0.56
22:BA:953:G:H5''	34:BM:16:ARG:NH1	2.21	0.56
22:BA:1436:G:N2	22:BA:1557:C:C2	2.74	0.56
22:BA:2825:G:H2'	22:BA:2826:A:H5'	1.86	0.56
41:BT:63:VAL:O	41:BT:79:ASP:HB3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:620:C:C2	4:CD:132:ILE:HD13	2.41	0.56
1:CA:632:U:O2	1:CA:632:U:H2'	2.06	0.56
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.58	0.56
6:CF:45:ARG:HD2	6:CF:59:TYR:CE2	2.41	0.56
22:DA:565:C:H4'	22:DA:1253:A:N6	2.21	0.56
22:DA:868:U:C4	22:DA:869:G:N7	2.74	0.56
22:DA:1115:G:O2'	22:DA:1116:G:OP2	2.18	0.56
22:DA:1530:G:C2	22:DA:1542:U:O2	2.58	0.56
22:DA:1907:G:C2	22:DA:1924:C:C2	2.94	0.56
22:DA:2024:G:OP2	22:DA:2034:U:H4'	2.05	0.56
22:DA:2571:U:C4	22:DA:2574:G:H8	2.24	0.56
56:DA:3001:DOL:H463	56:DA:3001:DOL:C48	2.16	0.56
25:DD:187:LEU:CD2	25:DD:203:VAL:HG11	2.36	0.56
36:DO:100:HIS:CD2	36:DO:101:GLY:N	2.74	0.56
1:AA:2:A:N6	1:AA:3:A:N1	2.53	0.56
1:AA:265:G:H4'	17:AQ:67:LEU:O	2.05	0.56
1:AA:429:U:H1'	1:AA:430:A:H5''	1.87	0.56
1:AA:1031:C:H4'	1:AA:1032:G:O5'	2.06	0.56
2:AB:181:ILE:O	2:AB:183:VAL:HG23	2.04	0.56
4:AD:26:ARG:CD	4:AD:31:LYS:HD2	2.36	0.56
5:AE:157:ARG:C	5:AE:159:LYS:N	2.60	0.56
20:AT:58:VAL:CG1	20:AT:72:ALA:CB	2.84	0.56
22:BA:1917:U:H2'	22:BA:1918:A:H5'	1.87	0.56
22:BA:2334:U:C4	36:BO:16:ARG:HD3	2.40	0.56
27:BF:42:GLU:O	27:BF:42:GLU:HG2	2.06	0.56
32:BK:116:ILE:HG13	32:BK:117:SER:N	2.21	0.56
1:CA:375:U:C2	1:CA:376:G:C8	2.94	0.56
1:CA:718:A:C8	1:CA:719:C:C5	2.94	0.56
5:CE:109:GLY:O	5:CE:110:ALA:HB3	2.05	0.56
19:CS:80:TYR:O	19:CS:81:ARG:CB	2.54	0.56
20:CT:60:ARG:O	20:CT:64:LYS:N	2.36	0.56
22:DA:76:C:HO2'	46:DY:55:THR:HG1	1.51	0.56
22:DA:1062:G:C5	22:DA:1088:A:H2'	2.41	0.56
24:DC:57:GLY:HA3	24:DC:213:TRP:HA	1.88	0.56
24:DC:80:ARG:NE	24:DC:82:GLU:OE2	2.39	0.56
32:DK:121:GLU:O	32:DK:122:VAL:O	2.24	0.56
51:D3:26:HIS:CE1	51:D3:48:ALA:HB2	2.41	0.56
52:D4:36:ARG:CG	52:D4:37:GLN:N	2.68	0.56
1:AA:11:G:C5	1:AA:12:U:C5	2.93	0.56
17:AQ:48:ASP:C	17:AQ:48:ASP:OD2	2.43	0.56
19:AS:5:LEU:O	19:AS:7:LYS:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:813:U:H2'	22:BA:814:C:C6	2.41	0.56
22:BA:973:A:H5'	22:BA:1188:U:H1'	1.87	0.56
22:BA:2243:U:OP1	58:BA:3739:HOH:O	2.17	0.56
37:BP:31:TRP:CE2	37:BP:40:LEU:CD1	2.89	0.56
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.20	0.56
1:CA:337:G:H2'	1:CA:338:A:C8	2.40	0.56
1:CA:664:G:N2	1:CA:666:G:C8	2.74	0.56
1:CA:991:U:C4	1:CA:1212:U:O4'	2.59	0.56
1:CA:1004:A:C6	1:CA:1005:A:C6	2.93	0.56
21:CU:35:ARG:NH2	58:CU:101:HOH:O	2.39	0.56
22:DA:546:U:O2'	22:DA:547:A:O4'	2.20	0.56
22:DA:1087:G:C2	22:DA:1089:A:C2	2.94	0.56
22:DA:1304:A:N1	22:DA:1305:C:C4	2.74	0.56
22:DA:2111:U:C4	22:DA:2145:C:H2'	2.41	0.56
22:DA:2365:G:H4'	44:DW:60:PHE:CE2	2.41	0.56
22:DA:2602:A:H4'	22:DA:2603:G:H5'	1.86	0.56
25:DD:16:THR:OG1	25:DD:18:ASP:OD2	2.12	0.56
45:DX:68:LEU:HD22	45:DX:78:TYR:CZ	2.41	0.56
1:AA:17:U:H2'	1:AA:18:C:C6	2.41	0.55
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.36	0.55
20:AT:70:ASN:OD1	20:AT:70:ASN:N	2.28	0.55
22:BA:878:A:N6	22:BA:899:A:O2'	2.39	0.55
22:BA:1009:A:OP2	31:BJ:39:LYS:NZ	2.38	0.55
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.37	0.55
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.23	0.55
30:BI:116:ASP:O	30:BI:117:MET:CB	2.54	0.55
37:BP:52:ASN:O	37:BP:53:ARG:HG2	2.06	0.55
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.87	0.55
1:CA:495:A:N1	1:CA:496:A:N6	2.53	0.55
1:CA:568:G:N2	1:CA:883:C:C2	2.74	0.55
1:CA:866:C:C5	1:CA:867:G:H1'	2.41	0.55
1:CA:1029:U:O2	1:CA:1029:U:H2'	2.05	0.55
1:CA:1417:G:C6	1:CA:1482:G:C6	2.94	0.55
12:CL:3:THR:HB	12:CL:6:GLN:HG3	1.86	0.55
22:DA:158:U:O2	22:DA:169:G:C2	2.58	0.55
22:DA:301:G:H1'	22:DA:302:C:C6	2.41	0.55
22:DA:532:A:N7	22:DA:2021:C:H2'	2.20	0.55
22:DA:559:G:N3	38:DQ:56:GLN:NE2	2.55	0.55
22:DA:776:G:C8	22:DA:793:A:C4	2.94	0.55
22:DA:1627:G:C2	22:DA:1628:G:C8	2.94	0.55
22:DA:2550:G:C6	22:DA:2551:C:N4	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2726:A:O2'	22:DA:2727:A:O5'	2.24	0.55
30:DI:18:ALA:O	30:DI:19:ASN:CB	2.54	0.55
42:DU:54:GLN:N	42:DU:55:PRO:CD	2.69	0.55
1:AA:91:U:H2'	1:AA:92:U:O4'	2.07	0.55
1:AA:211:G:N2	1:AA:212:G:C8	2.74	0.55
1:AA:1426:G:H2'	1:AA:1427:C:O4'	2.06	0.55
2:AB:186:ILE:HA	2:AB:200:ILE:HB	1.88	0.55
5:AE:155:ALA:HB1	8:AH:66:PHE:CZ	2.41	0.55
9:AI:40:GLY:O	9:AI:41:ARG:CB	2.55	0.55
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.05	0.55
22:BA:686:U:H2'	22:BA:788:A:N1	2.22	0.55
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.36	0.55
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.70	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.36	0.55
25:BD:151:THR:HG22	25:BD:152:PRO:HD2	1.87	0.55
27:BF:28:VAL:HG13	27:BF:28:VAL:O	2.06	0.55
1:CA:134:G:H2'	1:CA:135:C:O4'	2.07	0.55
1:CA:407:U:H2'	1:CA:408:A:C8	2.41	0.55
1:CA:644:U:H2'	1:CA:645:G:O4'	2.06	0.55
21:CU:53:VAL:HG13	21:CU:54:LYS:N	2.21	0.55
22:DA:200:U:O4	22:DA:248:G:C2	2.59	0.55
22:DA:478:A:C6	22:DA:480:A:C6	2.94	0.55
22:DA:1847:A:C2'	22:DA:1848:A:OP2	2.54	0.55
22:DA:2019:A:H4'	38:DQ:34:VAL:CG2	2.36	0.55
22:DA:2854:G:N2	22:DA:2864:G:C2	2.75	0.55
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.87	0.55
39:DR:66:HIS:CD2	39:DR:94:THR:HG23	2.41	0.55
45:DX:33:LEU:HD23	45:DX:50:ARG:CZ	2.36	0.55
1:AA:1450:U:H2'	1:AA:1452:C:C5	2.41	0.55
2:AB:151:ILE:O	2:AB:152:LYS:C	2.44	0.55
4:AD:130:VAL:HG11	4:AD:135:TYR:CD1	2.40	0.55
6:AF:9:MET:HE2	18:AR:65:LEU:HD22	1.87	0.55
22:BA:45:G:H5''	22:BA:46:G:H5'	1.88	0.55
22:BA:58:G:OP1	41:BT:78:SER:CB	2.55	0.55
22:BA:626:A:H2'	33:BL:78:ARG:NH1	2.20	0.55
22:BA:1079:C:C5	22:BA:1088:A:N1	2.75	0.55
22:BA:1932:A:C2	22:BA:1969:A:C2	2.95	0.55
22:BA:2153:C:H2'	22:BA:2154:A:O4'	2.07	0.55
22:BA:2177:C:O2'	53:B5:47:LYS:NZ	2.35	0.55
56:BA:3001:DOL:N5	56:BA:3001:DOL:C42	2.68	0.55
27:BF:108:VAL:N	27:BF:109:PRO:CD	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.87	0.55
4:CD:9:LEU:CD2	4:CD:22:LYS:HD2	2.37	0.55
6:CF:80:PHE:CG	6:CF:80:PHE:O	2.59	0.55
18:CR:58:ALA:O	18:CR:61:ARG:N	2.40	0.55
22:DA:669:G:C2	22:DA:801:G:N1	2.74	0.55
22:DA:1020:A:C2	22:DA:1141:U:C2	2.94	0.55
22:DA:1530:G:N2	22:DA:1542:U:O2	2.38	0.55
22:DA:1856:U:C4	22:DA:1857:G:C6	2.95	0.55
22:DA:1998:A:OP2	25:DD:141:ARG:NH2	2.39	0.55
22:DA:2843:G:N2	22:DA:2875:C:C2	2.74	0.55
30:DI:80:LEU:HD23	30:DI:84:ALA:HB2	1.88	0.55
41:DT:21:SER:O	41:DT:22:THR:C	2.44	0.55
50:D2:35:ARG:O	50:D2:38:GLY:N	2.39	0.55
1:AA:1350:A:OP1	9:AI:123:ARG:NE	2.38	0.55
9:AI:58:VAL:O	9:AI:58:VAL:HG12	2.06	0.55
16:AP:38:PHE:CZ	16:AP:51:ARG:HB2	2.42	0.55
20:AT:68:HIS:C	20:AT:69:LYS:HG3	2.25	0.55
22:BA:1911:U:C4	22:BA:1918:A:C5	2.94	0.55
28:BG:99:LYS:O	28:BG:100:GLY:C	2.45	0.55
41:BT:33:LYS:HG3	41:BT:80:TRP:CE3	2.41	0.55
44:BW:17:GLU:O	44:BW:19:LYS:NZ	2.36	0.55
22:DA:699:A:H2'	22:DA:700:G:O4'	2.06	0.55
22:DA:1316:U:C2	22:DA:1337:G:N2	2.75	0.55
22:DA:1438:U:C5	22:DA:1552:A:N1	2.74	0.55
22:DA:1730:C:O2'	22:DA:1731:G:C2	2.58	0.55
22:DA:1869:G:H3'	22:DA:1870:C:H5'	1.88	0.55
22:DA:1935:G:H1'	22:DA:1964:G:N2	2.21	0.55
22:DA:2146:C:H4'	22:DA:2147:A:OP1	2.05	0.55
22:DA:2310:C:C4	27:DF:77:PHE:CZ	2.94	0.55
22:DA:2520:C:HO2'	22:DA:2565:A:HO2'	1.52	0.55
25:DD:112:THR:O	25:DD:195:GLY:HA2	2.06	0.55
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.41	0.55
22:BA:580:U:H2'	22:BA:581:C:C6	2.40	0.55
22:BA:2192:U:C4	22:BA:2193:G:C8	2.94	0.55
22:BA:2314:A:OP1	27:BF:88:LYS:NZ	2.40	0.55
39:BR:29:THR:O	39:BR:63:VAL:HB	2.07	0.55
1:CA:801:U:C2	1:CA:802:A:N7	2.75	0.55
1:CA:1089:G:N2	1:CA:1090:U:H1'	2.22	0.55
1:CA:1298:U:O2	1:CA:1298:U:C2'	2.54	0.55
1:CA:1345:U:C2	1:CA:1377:A:C2	2.95	0.55
16:CP:38:PHE:CE2	16:CP:51:ARG:HD2	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:121:G:H1'	22:DA:131:A:C2	2.41	0.55
22:DA:484:C:N4	22:DA:497:A:C2	2.74	0.55
22:DA:902:C:H2'	22:DA:903:C:C6	2.42	0.55
22:DA:1361:G:C5	22:DA:1371:G:N2	2.74	0.55
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.42	0.55
22:DA:1599:U:P	41:DT:40:LYS:HD2	2.47	0.55
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.37	0.55
22:DA:2162:G:H4'	22:DA:2163:A:OP1	2.06	0.55
34:DM:1:MET:HE3	34:DM:43:ALA:HB3	1.89	0.55
1:AA:1226:C:OP2	13:AM:90:ARG:NH2	2.40	0.55
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.37	0.55
4:AD:123:ILE:HD13	4:AD:123:ILE:N	2.20	0.55
9:AI:58:VAL:O	9:AI:59:GLU:CB	2.55	0.55
22:BA:587:C:C6	22:BA:671:C:H1'	2.42	0.55
22:BA:2077:A:O2'	22:BA:2078:C:H5'	2.07	0.55
22:BA:2683:C:H4'	25:BD:13:ARG:NH1	2.21	0.55
25:BD:12:THR:CG2	37:BP:9:GLU:OE2	2.55	0.55
29:BH:86:ASP:O	29:BH:87:GLU:CB	2.53	0.55
1:CA:624:C:H2'	1:CA:625:U:O4'	2.07	0.55
4:CD:34:ILE:O	4:CD:35:GLU:HB3	2.06	0.55
12:CL:82:ILE:HD11	12:CL:95:TYR:HB2	1.87	0.55
22:DA:35:G:C4	22:DA:454:A:C2	2.94	0.55
22:DA:150:U:H2'	22:DA:151:C:C6	2.41	0.55
22:DA:1740:G:C2	22:DA:1741:C:C2	2.95	0.55
22:DA:2103:C:H2'	22:DA:2104:C:C6	2.41	0.55
22:DA:2390:U:OP2	51:D3:35:LYS:NZ	2.39	0.55
22:DA:2412:A:H3'	22:DA:2413:G:C8	2.42	0.55
22:DA:2469:A:H4'	34:DM:55:ARG:HD3	1.87	0.55
26:DE:8:ALA:O	26:DE:9:GLN:HB2	2.06	0.55
38:DQ:50:ARG:O	38:DQ:54:LYS:NZ	2.33	0.55
45:DX:68:LEU:HD22	45:DX:78:TYR:CE1	2.42	0.55
1:AA:316:C:C2	1:AA:317:U:C5	2.95	0.55
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.23	0.55
5:AE:119:GLY:O	5:AE:121:HIS:ND1	2.39	0.55
9:AI:30:ILE:HD11	9:AI:38:TYR:HB3	1.87	0.55
22:BA:141:G:H5''	22:BA:142:A:C6	2.41	0.55
22:BA:253:C:OP2	51:B3:5:LYS:HE3	2.07	0.55
22:BA:742:A:H2'	22:BA:743:A:C8	2.41	0.55
22:BA:1731:G:C2	22:BA:1733:G:C4	2.95	0.55
29:BH:98:ASP:O	29:BH:102:ALA:HB3	2.07	0.55
30:BI:18:ALA:C	30:BI:20:PRO:HD3	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1060:U:C5'	10:CJ:53:ILE:HG23	2.37	0.55
5:CE:80:THR:OG1	5:CE:98:PRO:O	2.25	0.55
15:CO:27:VAL:HG12	15:CO:28:GLN:N	2.21	0.55
17:CQ:69:LYS:O	17:CQ:69:LYS:HG2	2.06	0.55
22:DA:308:G:C8	22:DA:501:A:H1'	2.42	0.55
22:DA:420:C:H2'	22:DA:421:C:C6	2.41	0.55
22:DA:1138:G:O2'	31:DJ:104:ALA:O	2.23	0.55
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.07	0.55
22:DA:1352:U:H5	22:DA:1377:G:C5	2.25	0.55
22:DA:1380:G:OP2	58:DA:3751:HOH:O	2.18	0.55
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.42	0.55
22:DA:1459:G:C2	22:DA:1461:C:C2	2.95	0.55
22:DA:1623:G:C5	22:DA:1624:U:C5	2.95	0.55
22:DA:1806:C:O2	24:DC:44:ASN:ND2	2.40	0.55
22:DA:2107:G:C2	22:DA:2183:A:C2	2.95	0.55
22:DA:2176:A:H2'	22:DA:2177:C:C6	2.42	0.55
1:AA:263:A:OP2	20:AT:74:ARG:NH1	2.40	0.55
1:AA:723:U:H5'	1:AA:724:G:OP1	2.05	0.55
10:AJ:6:ILE:HD12	10:AJ:76:ILE:HB	1.89	0.55
12:AL:94:ARG:HB2	12:AL:95:TYR:CE2	2.42	0.55
15:AO:19:ALA:O	15:AO:20:ASN:CB	2.54	0.55
15:AO:19:ALA:O	15:AO:20:ASN:HB2	2.07	0.55
22:BA:996:A:C2	22:BA:997:G:C8	2.94	0.55
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.22	0.55
22:BA:1083:U:O2	22:BA:1085:A:C8	2.59	0.55
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.21	0.55
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.37	0.55
29:BH:120:GLY:CA	29:BH:122:LEU:HA	2.37	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CA	2.69	0.55
29:BH:121:VAL:N	29:BH:122:LEU:CB	2.70	0.55
38:BQ:24:TYR:O	38:BQ:25:TYR:HB2	2.07	0.55
39:BR:48:LYS:O	39:BR:49:ILE:C	2.45	0.55
40:BS:4:ILE:HG12	40:BS:106:VAL:HG22	1.89	0.55
1:CA:32:A:H2'	1:CA:32:A:N3	2.21	0.55
1:CA:466:A:C2	1:CA:468:A:C8	2.94	0.55
1:CA:692:U:H1'	1:CA:695:A:N7	2.21	0.55
1:CA:1171:A:C2	1:CA:1172:C:C2	2.95	0.55
1:CA:1394:A:N1	1:CA:1500:A:O2'	2.36	0.55
16:CP:51:ARG:C	16:CP:51:ARG:HD3	2.27	0.55
22:DA:126:A:N7	22:DA:127:A:N1	2.54	0.55
22:DA:144:A:C2	22:DA:145:C:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:187:G:N2	22:DA:210:C:H1'	2.22	0.55
22:DA:200:U:C4	22:DA:248:G:N2	2.75	0.55
22:DA:475:C:N3	22:DA:481:G:C6	2.75	0.55
22:DA:528:A:H2'	22:DA:529:A:H5''	1.88	0.55
22:DA:1077:A:C2	22:DA:1088:A:C2	2.95	0.55
22:DA:1293:C:H2'	22:DA:1294:U:O4'	2.07	0.55
22:DA:1827:U:H2'	22:DA:1828:G:O5'	2.06	0.55
22:DA:1856:U:O4	22:DA:1857:G:N1	2.40	0.55
22:DA:2395:C:H2'	22:DA:2396:G:O4'	2.07	0.55
25:DD:123:LYS:HG2	25:DD:165:MET:SD	2.47	0.55
30:DI:90:SER:HB3	30:DI:93:PRO:HG3	1.89	0.55
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.21	0.55
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.42	0.55
7:AG:15:ASP:OD2	7:AG:44:TYR:OH	2.25	0.55
9:AI:43:THR:O	9:AI:44:ALA:CB	2.55	0.55
13:AM:15:ALA:HB1	13:AM:34:LEU:HD21	1.88	0.55
17:AQ:52:GLU:CD	17:AQ:52:GLU:N	2.60	0.55
22:BA:479:A:N3	22:BA:481:G:H5''	2.22	0.55
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.42	0.55
22:BA:2043:C:OP1	22:BA:2777:G:O2'	2.22	0.55
35:BN:33:ILE:HG13	35:BN:114:GLU:HB3	1.88	0.55
39:BR:64:VAL:HG23	39:BR:65:ALA:N	2.22	0.55
40:BS:55:ILE:HG23	40:BS:66:ILE:HG12	1.89	0.55
1:CA:1003:G:C2	1:CA:1038:C:C4	2.95	0.55
5:CE:50:TYR:O	5:CE:51:GLY:O	2.24	0.55
22:DA:277:G:C2'	22:DA:361:G:O6	2.55	0.55
22:DA:374:A:C6	22:DA:401:A:C8	2.95	0.55
22:DA:1027:A:N6	22:DA:1126:A:N3	2.55	0.55
22:DA:2091:C:C3'	22:DA:2092:U:H5''	2.35	0.55
22:DA:2120:G:C2	22:DA:2121:G:C8	2.95	0.55
22:DA:2341:G:C6	22:DA:2342:C:C4	2.95	0.55
22:DA:2831:G:OP1	25:DD:56:LYS:NZ	2.36	0.55
24:DC:210:ALA:HA	24:DC:213:TRP:CE2	2.41	0.55
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.89	0.55
42:DU:41:LEU:HD12	42:DU:60:GLU:HG2	1.89	0.55
42:DU:72:ILE:HD13	42:DU:83:VAL:CG2	2.37	0.55
45:DX:31:PRO:HB2	45:DX:33:LEU:CD1	2.37	0.55
1:AA:254:G:OP1	17:AQ:69:LYS:O	2.25	0.55
1:AA:582:C:C4	1:AA:583:A:N7	2.74	0.55
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.22	0.55
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.40	0.55
17:AQ:45:HIS:CD2	17:AQ:70:THR:HG23	2.42	0.55
22:BA:308:G:C8	22:BA:501:A:H1'	2.41	0.55
22:BA:686:U:H2'	22:BA:788:A:C2	2.42	0.55
22:BA:1288:G:C5	22:BA:1327:A:C2	2.95	0.55
22:BA:1355:G:C2'	22:BA:1356:G:H5'	2.37	0.55
22:BA:1435:G:O2'	22:BA:1436:G:H5'	2.07	0.55
22:BA:1587:G:C4	22:BA:1588:G:C8	2.94	0.55
22:BA:1795:C:C4	22:BA:1796:U:C4	2.95	0.55
22:BA:1876:A:C2	22:BA:1877:A:C4	2.95	0.55
24:BC:57:GLY:HA2	24:BC:213:TRP:HA	1.88	0.55
38:BQ:87:SER:HB3	39:BR:51:VAL:HA	1.89	0.55
46:BY:23:ARG:O	46:BY:24:GLU:C	2.45	0.55
1:CA:1224:U:C4	1:CA:1322:C:O2	2.60	0.55
5:CE:98:PRO:O	5:CE:122:ASN:ND2	2.37	0.55
10:CJ:92:LEU:O	10:CJ:93:ALA:HB2	2.07	0.55
17:CQ:69:LYS:C	17:CQ:70:THR:OG1	2.45	0.55
22:DA:24:G:C5	22:DA:25:U:C5	2.94	0.55
22:DA:202:U:H2'	22:DA:203:A:C8	2.42	0.55
22:DA:289:G:H2'	22:DA:290:U:O4'	2.06	0.55
22:DA:630:G:H3'	22:DA:631:A:C5'	2.37	0.55
22:DA:647:G:C5	22:DA:648:G:N7	2.75	0.55
22:DA:1248:G:N7	26:DE:46:GLN:NE2	2.55	0.55
22:DA:1355:G:C2'	22:DA:1356:G:H5'	2.37	0.55
22:DA:1389:G:C2	22:DA:1390:U:O2	2.60	0.55
22:DA:1769:U:O2'	22:DA:1958:C:OP1	2.25	0.55
22:DA:1826:G:C4	22:DA:1827:U:C5	2.95	0.55
22:DA:2373:G:C2	22:DA:2374:C:C2	2.94	0.55
22:DA:2842:G:C2	22:DA:2843:G:H1'	2.42	0.55
22:DA:2888:C:H2'	22:DA:2889:C:C6	2.41	0.55
23:DB:80:U:H2'	23:DB:81:G:C8	2.42	0.55
31:DJ:30:THR:HG22	31:DJ:31:GLU:N	2.21	0.55
31:DJ:36:LEU:O	31:DJ:121:LYS:NZ	2.40	0.55
39:DR:81:LYS:O	39:DR:82:HIS:C	2.44	0.55
43:DV:9:ARG:NH2	43:DV:17:SER:OG	2.40	0.55
45:DX:12:PRO:HB3	45:DX:28:ARG:NH2	2.21	0.55
1:AA:405:U:OP1	1:AA:406:G:O2'	2.20	0.54
1:AA:882:C:O2'	1:AA:883:C:H5'	2.07	0.54
1:AA:1055:A:C6	1:AA:1206:G:C5	2.95	0.54
4:AD:65:TYR:O	4:AD:115:ARG:NH2	2.40	0.54
14:AN:51:LEU:CB	14:AN:52:PRO:HD2	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:760:G:H2'	22:BA:761:A:O4'	2.08	0.54
22:BA:1847:A:C8	22:BA:1847:A:OP2	2.60	0.54
22:BA:1936:A:H2	22:BA:1943:U:H3	1.53	0.54
22:BA:2017:U:H4'	48:B0:5:GLN:O	2.07	0.54
22:BA:2406:A:C2	33:BL:69:ARG:NH2	2.76	0.54
29:BH:10:ALA:O	29:BH:12:LEU:N	2.40	0.54
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.89	0.54
36:BO:49:VAL:HG13	36:BO:50:ALA:N	2.22	0.54
48:B0:55:ILE:O	48:B0:56:ALA:HB3	2.05	0.54
49:B1:14:SER:HB3	49:B1:48:ILE:O	2.07	0.54
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.88	0.54
1:CA:636:U:H2'	1:CA:637:C:C6	2.41	0.54
1:CA:728:A:H2'	1:CA:729:A:C8	2.42	0.54
1:CA:1178:G:N2	1:CA:1181:G:OP2	2.41	0.54
1:CA:1279:G:H5''	10:CJ:9:ARG:NH2	2.22	0.54
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.08	0.54
9:CI:33:ARG:NE	9:CI:37:GLN:OE1	2.40	0.54
15:CO:53:ARG:O	15:CO:56:LEU:HB3	2.07	0.54
21:CU:12:PHE:O	21:CU:13:ASP:CB	2.55	0.54
22:DA:27:G:N2	22:DA:512:G:H1'	2.22	0.54
22:DA:295:G:H2'	22:DA:295:G:N3	2.21	0.54
22:DA:2057:G:OP2	58:DA:3485:HOH:O	2.18	0.54
22:DA:2497:A:N3	22:DA:2498:C:N4	2.54	0.54
27:DF:128:TYR:CG	27:DF:170:LEU:CD1	2.90	0.54
36:DO:111:ARG:NH2	36:DO:117:PHE:O	2.40	0.54
1:AA:89:U:O2'	1:AA:90:C:H5'	2.07	0.54
1:AA:390:U:H2'	1:AA:391:G:C8	2.42	0.54
5:AE:46:VAL:CG2	5:AE:118:ALA:HA	2.37	0.54
6:AF:98:GLU:HG3	6:AF:99:ALA:N	2.22	0.54
9:AI:57:MET:O	9:AI:59:GLU:N	2.41	0.54
20:AT:15:GLU:OE1	20:AT:19:LYS:NZ	2.40	0.54
22:BA:273:G:N2	22:BA:365:U:C2	2.75	0.54
22:BA:1324:G:C4	22:BA:1328:A:N6	2.75	0.54
22:BA:2660:A:H2'	22:BA:2661:G:O4'	2.07	0.54
24:BC:88:SER:HB2	24:BC:200:HIS:CD2	2.42	0.54
24:BC:146:MET:SD	24:BC:154:LEU:HD21	2.47	0.54
29:BH:90:LEU:CD2	29:BH:93:SER:HA	2.37	0.54
33:BL:77:ILE:HD11	33:BL:101:ILE:CG2	2.37	0.54
40:BS:38:TYR:CD2	48:B0:39:LEU:HD21	2.41	0.54
1:CA:71:A:C2	1:CA:72:A:C8	2.95	0.54
1:CA:1255:G:C6	1:CA:1279:G:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:54:ASP:HA	14:CN:59:ARG:HD3	1.89	0.54
20:CT:36:TYR:CD1	20:CT:36:TYR:C	2.81	0.54
22:DA:526:A:N6	22:DA:2626:C:H4'	2.22	0.54
22:DA:537:G:C6	22:DA:555:G:C2	2.95	0.54
22:DA:732:C:H2'	22:DA:733:G:O4'	2.07	0.54
22:DA:834:G:H1'	22:DA:2358:A:N3	2.23	0.54
22:DA:1410:G:N1	22:DA:1411:U:O4	2.41	0.54
22:DA:1439:A:N7	22:DA:1552:A:H2	2.04	0.54
22:DA:1585:C:C5	22:DA:1586:A:N7	2.76	0.54
22:DA:1623:G:C6	22:DA:1624:U:C5	2.95	0.54
22:DA:1779:U:H5	22:DA:1784:A:N7	2.05	0.54
36:DO:33:ARG:O	36:DO:34:HIS:CD2	2.60	0.54
1:AA:1000:A:C2	1:AA:1041:G:C2	2.95	0.54
1:AA:1253:G:C4	1:AA:1254:A:C8	2.94	0.54
5:AE:101:GLU:CB	5:AE:122:ASN:HB2	2.37	0.54
9:AI:120:LYS:HG3	9:AI:123:ARG:HB3	1.88	0.54
22:BA:783:A:C8	22:BA:784:G:H4'	2.42	0.54
22:BA:980:A:C6	22:BA:981:A:N1	2.75	0.54
22:BA:1073:A:OP1	22:BA:1073:A:C8	2.60	0.54
22:BA:2517:C:C6	22:BA:2542:A:C5	2.95	0.54
30:BI:16:GLY:HA2	30:BI:51:LYS:HB3	1.89	0.54
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.22	0.54
44:BW:56:ASP:O	44:BW:57:HIS:HB2	2.07	0.54
1:CA:477:C:H2'	1:CA:478:A:C8	2.43	0.54
1:CA:859:G:H2'	1:CA:860:A:C8	2.42	0.54
2:CB:57:LEU:HD11	2:CB:221:VAL:CG2	2.37	0.54
5:CE:132:ASN:O	5:CE:136:VAL:HG12	2.08	0.54
8:CH:29:SER:HB2	8:CH:59:LEU:HB2	1.89	0.54
19:CS:79:THR:OG1	19:CS:79:THR:O	2.24	0.54
22:DA:132:G:N2	22:DA:148:U:C2	2.75	0.54
22:DA:585:G:C2	22:DA:1256:G:C6	2.95	0.54
22:DA:909:A:C6	22:DA:912:C:C2	2.95	0.54
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.42	0.54
22:DA:1356:G:C2	22:DA:1357:C:H1'	2.43	0.54
22:DA:1446:C:H2'	22:DA:1447:C:O4'	2.07	0.54
22:DA:1524:G:H2'	22:DA:1524:G:N3	2.23	0.54
29:DH:79:THR:HA	29:DH:145:ASN:HB2	1.89	0.54
34:DM:135:VAL:O	34:DM:136:MET:CB	2.54	0.54
1:AA:49:U:O4	1:AA:365:U:H5	1.89	0.54
1:AA:373:A:C2	1:AA:374:A:C8	2.95	0.54
1:AA:1093:A:OP2	7:AG:4:ARG:NH2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1446:A:C2'	1:AA:1447:A:H5'	2.37	0.54
4:AD:17:THR:CG2	4:AD:18:ASP:N	2.69	0.54
13:AM:11:ASP:CG	13:AM:12:HIS:N	2.61	0.54
22:BA:804:A:H5''	22:BA:805:G:OP1	2.07	0.54
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.30	0.54
22:BA:1022:G:N2	22:BA:1142:A:C2	2.75	0.54
22:BA:1359:A:C8	22:BA:1373:A:C2	2.96	0.54
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.07	0.54
22:BA:1731:G:C4	22:BA:1733:G:C8	2.96	0.54
22:BA:2056:G:H2'	22:BA:2056:G:N3	2.21	0.54
22:BA:2058:A:N6	58:BA:3487:HOH:O	2.40	0.54
29:BH:90:LEU:HA	29:BH:125:THR:HG23	1.90	0.54
30:BI:79:LEU:HD22	30:BI:109:ILE:CG2	2.37	0.54
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.91	0.54
40:BS:25:ARG:HB2	40:BS:74:ILE:CG2	2.38	0.54
1:CA:211:G:N3	1:CA:211:G:H2'	2.22	0.54
1:CA:295:C:C4	1:CA:296:U:C5	2.95	0.54
3:CC:130:PHE:CE1	3:CC:157:LEU:HB3	2.43	0.54
4:CD:29:ASP:C	4:CD:31:LYS:H	2.11	0.54
6:CF:22:ILE:O	6:CF:26:THR:OG1	2.25	0.54
6:CF:69:GLU:O	6:CF:72:ASP:HB3	2.07	0.54
7:CG:92:ARG:NE	7:CG:93:PRO:CD	2.71	0.54
12:CL:21:VAL:N	12:CL:22:PRO:CD	2.69	0.54
12:CL:90:LEU:HB3	12:CL:93:VAL:CG2	2.37	0.54
22:DA:247:G:C8	22:DA:249:C:C6	2.95	0.54
22:DA:513:A:C2	22:DA:514:A:C5	2.94	0.54
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.08	0.54
22:DA:1076:C:H2'	22:DA:1077:A:O4'	2.08	0.54
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.22	0.54
22:DA:1805:A:N3	22:DA:1813:G:C2	2.75	0.54
22:DA:1914:C:H3'	22:DA:1915:U:C6	2.43	0.54
22:DA:2159:G:H2'	22:DA:2160:C:C6	2.42	0.54
22:DA:2345:G:C5	22:DA:2381:A:C2	2.96	0.54
30:DI:101:ILE:O	30:DI:102:SER:CB	2.55	0.54
1:AA:125:U:H2'	1:AA:126:G:O4'	2.06	0.54
1:AA:1306:A:C5	1:AA:1307:U:C5	2.95	0.54
1:AA:1342:C:O2'	9:AI:126:GLN:HG3	2.08	0.54
2:AB:10:LEU:C	2:AB:10:LEU:HD23	2.28	0.54
4:AD:19:LEU:HD22	4:AD:64:ILE:HG13	1.89	0.54
16:AP:51:ARG:HH11	16:AP:51:ARG:CG	2.20	0.54
22:BA:1006:C:P	58:BA:3781:HOH:O	2.66	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BE:149:ILE:HD11	26:BE:172:ALA:CA	2.37	0.54
27:BF:127:ASN:OD1	27:BF:157:THR:HA	2.08	0.54
38:BQ:105:ALA:O	38:BQ:108:ALA:HB3	2.07	0.54
1:CA:212:G:C2	1:CA:213:G:C8	2.96	0.54
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.90	0.54
1:CA:1167:A:N7	1:CA:1169:A:C6	2.76	0.54
1:CA:1259:C:H3'	1:CA:1260:G:H5''	1.90	0.54
8:CH:106:THR:OG1	8:CH:109:GLY:O	2.16	0.54
11:CK:88:GLY:N	11:CK:114:THR:HG22	2.21	0.54
14:CN:3:LYS:HD3	14:CN:6:MET:HG2	1.89	0.54
22:DA:235:U:C4	22:DA:236:C:C5	2.95	0.54
22:DA:449:A:C5	22:DA:450:G:C8	2.95	0.54
28:DG:27:LYS:HG3	28:DG:27:LYS:O	2.08	0.54
1:AA:760:G:N7	1:AA:761:G:C8	2.76	0.54
1:AA:1126:U:O2	1:AA:1280:A:H5'	2.08	0.54
1:AA:1167:A:N7	1:AA:1169:A:C6	2.76	0.54
2:AB:151:ILE:HG23	2:AB:152:LYS:N	2.22	0.54
5:AE:81:LEU:HB3	5:AE:147:MET:CE	2.37	0.54
13:AM:29:ARG:CZ	13:AM:63:PHE:HB2	2.37	0.54
20:AT:5:LYS:O	20:AT:7:ALA:N	2.40	0.54
22:BA:744:U:P	58:BA:3654:HOH:O	2.64	0.54
22:BA:1095:A:C6	22:BA:1096:A:N6	2.76	0.54
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.43	0.54
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.08	0.54
22:BA:1414:C:C4	22:BA:1415:U:C5	2.95	0.54
22:BA:1584:U:O2	22:BA:1584:U:C2'	2.56	0.54
29:BH:14:SER:OG	29:BH:17:ASP:CG	2.46	0.54
29:BH:77:THR:O	29:BH:77:THR:CG2	2.56	0.54
29:BH:103:VAL:HG21	29:BH:132:PHE:CE1	2.42	0.54
30:BI:130:GLU:HB3	30:BI:134:ARG:NH2	2.22	0.54
1:CA:106:C:C2'	1:CA:107:G:H5'	2.37	0.54
1:CA:1521:C:C2	1:CA:1522:U:C6	2.95	0.54
3:CC:134:MET:SD	3:CC:153:VAL:CG1	2.96	0.54
22:DA:53:A:C2	22:DA:179:C:H4'	2.42	0.54
22:DA:447:A:N1	22:DA:454:A:O2'	2.36	0.54
22:DA:453:A:H4'	22:DA:472:A:N6	2.23	0.54
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.55	0.54
22:DA:635:C:O2'	22:DA:639:U:H5''	2.07	0.54
22:DA:980:A:C4	22:DA:1136:G:O4'	2.61	0.54
22:DA:1060:U:H4'	22:DA:1061:U:H5'	1.90	0.54
22:DA:2817:U:O2	22:DA:2836:U:H1'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DL:81:ASP:O	33:DL:82:LEU:HB3	2.07	0.54
47:DZ:24:LEU:HD11	47:DZ:54:MET:HE2	1.89	0.54
1:AA:71:A:H3'	1:AA:71:A:OP2	2.07	0.54
1:AA:129:A:H1'	1:AA:130:A:C8	2.43	0.54
1:AA:1093:A:N3	1:AA:1109:C:O2'	2.24	0.54
4:AD:109:ALA:N	4:AD:113:GLU:OE2	2.37	0.54
8:AH:20:ALA:O	8:AH:21:ASN:C	2.46	0.54
21:AU:40:LYS:N	21:AU:41:PRO:CD	2.71	0.54
22:BA:1027:A:C6	22:BA:1126:A:N3	2.76	0.54
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.43	0.54
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.07	0.54
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.26	0.54
53:B5:19:LYS:HG3	53:B5:23:ILE:CG1	2.38	0.54
1:CA:502:A:H2'	1:CA:503:C:O4'	2.08	0.54
1:CA:844:G:H2'	1:CA:844:G:N3	2.23	0.54
1:CA:949:A:C2	1:CA:1233:G:C4	2.96	0.54
1:CA:1027:C:N4	1:CA:1034:G:C6	2.76	0.54
1:CA:1089:G:C4	1:CA:1090:U:C6	2.95	0.54
1:CA:1381:U:H2'	1:CA:1382:C:O5'	2.08	0.54
19:CS:15:LEU:HD13	19:CS:33:THR:HG21	1.90	0.54
22:DA:230:G:C2	22:DA:231:A:C8	2.96	0.54
22:DA:2146:C:C4'	22:DA:2147:A:OP1	2.55	0.54
22:DA:2803:G:N2	22:DA:2804:U:C2	2.76	0.54
41:DT:69:ARG:HB2	41:DT:74:ILE:HG22	1.89	0.54
1:AA:126:G:OP1	1:AA:605:U:O2'	2.17	0.54
1:AA:891:U:C2'	1:AA:892:A:H5'	2.37	0.54
1:AA:1053:G:O5'	1:AA:1054:C:H3'	2.08	0.54
22:BA:1084:A:HO2'	22:BA:1105:U:HO2'	1.54	0.54
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.24	0.54
24:BC:252:THR:O	24:BC:254:GLY:N	2.40	0.54
29:BH:90:LEU:O	1:CA:358:U:H4'	2.08	0.54
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.08	0.54
1:CA:280:C:N3	17:CQ:40:ARG:HA	2.23	0.54
1:CA:474:G:H2'	1:CA:475:C:O4'	2.08	0.54
1:CA:555:U:H2'	1:CA:556:C:C6	2.43	0.54
1:CA:597:G:H2'	1:CA:598:U:H5'	1.90	0.54
1:CA:1151:A:C2	1:CA:1152:A:C6	2.96	0.54
1:CA:1347:G:O2'	1:CA:1348:U:OP2	2.24	0.54
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.89	0.54
5:CE:65:GLU:OE1	5:CE:69:ARG:NH2	2.41	0.54
6:CF:8:PHE:CE2	6:CF:60:VAL:HB	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:658:U:C2	22:DA:659:G:C8	2.96	0.54
22:DA:2835:A:C2	22:DA:2879:A:N7	2.76	0.54
22:DA:2873:A:H4'	58:DA:3804:HOH:O	2.08	0.54
42:DU:98:SER:O	42:DU:99:ASN:HB3	2.08	0.54
1:AA:8:A:C6	4:AD:206:LYS:HB3	2.43	0.54
1:AA:596:A:C6	1:AA:645:G:C2	2.96	0.54
1:AA:946:A:C2	1:AA:1236:A:C2	2.96	0.54
2:AB:22:TYR:N	2:AB:22:TYR:CD1	2.75	0.54
2:AB:28:LYS:N	2:AB:29:PRO:CD	2.70	0.54
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.90	0.54
22:BA:481:G:H1'	22:BA:507:A:N1	2.22	0.54
22:BA:852:U:H2'	22:BA:853:C:C6	2.43	0.54
22:BA:1061:U:O2'	22:BA:1062:G:C5'	2.55	0.54
33:BL:57:LEU:CD2	51:B3:54:ASP:HB3	2.38	0.54
48:B0:15:MET:O	48:B0:18:SER:HB3	2.07	0.54
1:CA:798:U:H2'	1:CA:799:G:O5'	2.08	0.54
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.43	0.54
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.42	0.54
3:CC:111:LEU:CD1	3:CC:146:ALA:HB2	2.38	0.54
21:CU:37:PHE:HA	21:CU:40:LYS:HE3	1.90	0.54
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.26	0.54
22:DA:2484:G:OP1	34:DM:44:ARG:NH2	2.41	0.54
22:DA:2531:A:C5'	28:DG:157:TYR:CZ	2.91	0.54
42:DU:67:VAL:HA	42:DU:70:VAL:CG2	2.38	0.54
1:AA:202:G:C2	1:AA:216:U:O2	2.61	0.54
1:AA:343:U:H2'	1:AA:345:C:C5	2.43	0.54
1:AA:702:A:H3'	1:AA:703:G:C5'	2.37	0.54
1:AA:821:G:H4'	58:AA:1740:HOH:O	2.06	0.54
1:AA:1167:A:N7	1:AA:1169:A:C5	2.76	0.54
3:AC:60:PRO:O	3:AC:61:ALA:C	2.46	0.54
22:BA:962:G:H21	22:BA:2250:G:H1	1.55	0.54
22:BA:1131:G:C5	31:BJ:77:HIS:CD2	2.96	0.54
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.43	0.54
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.89	0.54
32:BK:121:GLU:O	32:BK:122:VAL:O	2.26	0.54
37:BP:31:TRP:CZ2	37:BP:40:LEU:CD1	2.90	0.54
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.07	0.54
1:CA:1262:C:C4	1:CA:1263:C:C4	2.96	0.54
1:CA:1298:U:O2	1:CA:1298:U:H2'	2.07	0.54
6:CF:18:VAL:HG12	6:CF:19:PRO:N	2.22	0.54
9:CI:81:HIS:O	9:CI:85:ARG:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:71:A:H5'	22:DA:73:A:C4	2.43	0.54
22:DA:852:U:H2'	22:DA:853:C:O4'	2.08	0.54
22:DA:1127:A:H2'	22:DA:1128:G:H5''	1.90	0.54
22:DA:1440:U:H2'	22:DA:1441:G:O4'	2.08	0.54
22:DA:1453:A:C2	35:DN:77:ALA:CB	2.91	0.54
22:DA:1645:G:H5''	22:DA:1646:C:O5'	2.08	0.54
22:DA:2772:C:H5'	25:DD:173:GLN:NE2	2.23	0.54
23:DB:71:C:C2	23:DB:106:G:N2	2.76	0.54
24:DC:43:ARG:CZ	24:DC:49:ILE:HG12	2.38	0.54
24:DC:76:ALA:HB2	24:DC:96:TYR:CD2	2.41	0.54
26:DE:130:LYS:HB2	26:DE:133:LEU:CB	2.38	0.54
30:DI:101:ILE:O	30:DI:102:SER:HB3	2.07	0.54
31:DJ:71:ASP:O	31:DJ:73:VAL:HG23	2.08	0.54
31:DJ:109:LEU:HD23	31:DJ:110:PRO:HD2	1.90	0.54
32:DK:17:ARG:HG2	32:DK:47:ILE:CG2	2.38	0.54
40:DS:28:LYS:O	40:DS:29:VAL:C	2.47	0.54
42:DU:13:VAL:HG21	42:DU:39:ILE:HD12	1.90	0.54
45:DX:71:LEU:HA	45:DX:74:ARG:HG2	1.89	0.54
1:AA:11:G:C6	1:AA:12:U:C4	2.96	0.53
1:AA:110:C:N4	1:AA:111:G:C6	2.77	0.53
1:AA:1108:G:H5'	3:AC:176:HIS:ND1	2.22	0.53
10:AJ:6:ILE:CD1	10:AJ:76:ILE:HB	2.38	0.53
10:AJ:65:TYR:CB	14:AN:96:LEU:HD11	2.39	0.53
11:AK:128:ARG:HH11	11:AK:128:ARG:CG	2.21	0.53
12:AL:24:LEU:HB2	12:AL:59:ASN:ND2	2.23	0.53
13:AM:64:VAL:O	13:AM:69:LEU:HB2	2.08	0.53
27:BF:171:ALA:O	27:BF:174:ASP:N	2.39	0.53
39:BR:14:VAL:HG13	39:BR:98:ILE:HG13	1.88	0.53
53:B5:19:LYS:HG3	53:B5:23:ILE:HG12	1.90	0.53
1:CA:3:A:HO2'	1:CA:612:C:HO2'	1.56	0.53
1:CA:803:G:C6	1:CA:804:U:N3	2.76	0.53
1:CA:1134:G:C6	1:CA:1141:C:N4	2.76	0.53
1:CA:1150:A:N6	1:CA:1151:A:H62	2.06	0.53
2:CB:15:HIS:C	2:CB:15:HIS:ND1	2.61	0.53
4:CD:146:ARG:O	4:CD:150:LYS:HB2	2.08	0.53
8:CH:89:LYS:HA	8:CH:92:LEU:CD1	2.38	0.53
22:DA:134:G:C2	22:DA:146:A:C2	2.96	0.53
22:DA:197:A:H2'	22:DA:197:A:N3	2.23	0.53
22:DA:485:C:C4	22:DA:496:G:C6	2.96	0.53
22:DA:1027:A:C6	22:DA:1126:A:C4	2.96	0.53
22:DA:1310:G:C2'	22:DA:1311:G:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1774:C:O2	24:DC:11:PRO:HB2	2.08	0.53
26:DE:128:ALA:O	26:DE:130:LYS:N	2.40	0.53
31:DJ:39:LYS:HZ3	31:DJ:39:LYS:HB2	1.73	0.53
36:DO:100:HIS:CG	36:DO:101:GLY:N	2.76	0.53
42:DU:34:VAL:HG22	42:DU:67:VAL:HG23	1.89	0.53
1:AA:49:U:C2	1:AA:361:G:N2	2.76	0.53
1:AA:90:C:C2	1:AA:91:U:C5	2.97	0.53
2:AB:41:ILE:HG21	2:AB:202:GLY:HA2	1.89	0.53
11:AK:52:PHE:CB	11:AK:56:ARG:HB3	2.38	0.53
22:BA:65:U:H2'	22:BA:66:C:H6	1.73	0.53
22:BA:839:U:H2'	22:BA:840:C:C6	2.43	0.53
22:BA:2306:C:OP2	22:BA:2307:G:O2'	2.17	0.53
22:BA:2343:U:HO2'	22:BA:2373:G:HO2'	1.54	0.53
24:BC:197:ASN:CG	24:BC:197:ASN:O	2.45	0.53
26:BE:23:PHE:HB2	26:BE:111:GLU:HG3	1.90	0.53
41:BT:2:ILE:HA	41:BT:3:ARG:HB2	1.90	0.53
49:B1:17:THR:HG22	49:B1:42:VAL:CG1	2.38	0.53
53:B5:52:PRO:O	53:B5:53:ARG:CB	2.57	0.53
1:CA:484:G:N7	1:CA:486:U:H1'	2.23	0.53
1:CA:604:G:C5	1:CA:605:U:C5	2.96	0.53
1:CA:1288:A:N6	1:CA:1289:A:N6	2.56	0.53
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.57	0.53
9:CI:55:VAL:O	9:CI:55:VAL:CG2	2.56	0.53
22:DA:197:A:H62	22:DA:2430:A:H2'	1.73	0.53
22:DA:445:C:O2'	22:DA:449:A:N3	2.41	0.53
22:DA:548:G:H4'	22:DA:549:G:C2	2.43	0.53
22:DA:696:G:C2	22:DA:767:U:O2	2.62	0.53
22:DA:770:G:H1'	22:DA:1379:U:C4	2.44	0.53
22:DA:937:C:C2	22:DA:938:G:C8	2.97	0.53
22:DA:1027:A:N7	22:DA:1126:A:C2	2.76	0.53
22:DA:1874:C:C4	22:DA:1875:G:C6	2.96	0.53
22:DA:2104:C:H2'	22:DA:2105:U:O4'	2.09	0.53
22:DA:2742:G:H5''	52:D4:1:MET:HE1	1.90	0.53
24:DC:62:TYR:CE1	24:DC:63:ARG:O	2.61	0.53
25:DD:86:GLU:HG3	25:DD:87:GLY:N	2.22	0.53
33:DL:85:VAL:O	33:DL:86:GLU:HG3	2.09	0.53
42:DU:34:VAL:HG23	42:DU:65:ILE:O	2.08	0.53
1:AA:19:A:N3	1:AA:917:G:C2	2.77	0.53
1:AA:32:A:H2'	1:AA:32:A:N3	2.23	0.53
1:AA:469:C:C5	1:AA:470:C:C4	2.97	0.53
1:AA:1181:G:C2	1:AA:1182:G:N2	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:104:GLY:HA3	5:AE:122:ASN:HA	1.90	0.53
14:AN:41:ARG:O	14:AN:42:TRP:C	2.46	0.53
17:AQ:81:LYS:O	17:AQ:82:ALA:C	2.46	0.53
22:BA:440:C:C2'	22:BA:441:U:H5'	2.39	0.53
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.36	0.53
22:BA:1735:A:C2	22:BA:1736:U:H1'	2.44	0.53
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.26	0.53
24:BC:8:PRO:HB3	24:BC:14:ARG:HB2	1.90	0.53
43:BV:14:LYS:HD3	43:BV:18:ARG:NH1	2.23	0.53
1:CA:106:C:H2'	1:CA:107:G:H5'	1.90	0.53
1:CA:216:U:H2'	1:CA:217:C:C6	2.43	0.53
1:CA:392:C:C2	1:CA:393:A:C8	2.96	0.53
1:CA:1062:U:H2'	1:CA:1063:C:C6	2.43	0.53
1:CA:1411:C:H2'	1:CA:1412:C:H6	1.73	0.53
6:CF:93:LYS:O	6:CF:93:LYS:HG2	2.08	0.53
8:CH:106:THR:HG21	8:CH:121:LEU:HD13	1.91	0.53
10:CJ:83:THR:O	10:CJ:87:LEU:HD12	2.08	0.53
17:CQ:61:ILE:HG23	17:CQ:73:TRP:CE3	2.43	0.53
22:DA:484:C:OP1	42:DU:48:PRO:HG3	2.08	0.53
22:DA:1420:A:C2	22:DA:2211:A:C4	2.96	0.53
22:DA:2746:U:H1'	28:DG:139:GLN:HG3	1.91	0.53
30:DI:8:TYR:HA	30:DI:59:ILE:HB	1.90	0.53
51:D3:31:HIS:ND1	51:D3:32:ILE:HG13	2.22	0.53
1:AA:474:G:C2	1:AA:475:C:C6	2.96	0.53
1:AA:702:A:N6	22:BA:1846:G:HO2'	2.07	0.53
2:AB:67:ILE:HG21	2:AB:69:PHE:CE2	2.43	0.53
2:AB:120:GLN:O	2:AB:120:GLN:HG2	2.08	0.53
5:AE:46:VAL:HG21	5:AE:118:ALA:HB2	1.91	0.53
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.39	0.53
19:AS:29:LYS:HB3	19:AS:30:PRO:HD2	1.91	0.53
21:AU:37:PHE:HB3	21:AU:41:PRO:CG	2.38	0.53
22:BA:276:U:H2'	22:BA:276:U:O2	2.08	0.53
22:BA:2452:C:C2	56:BA:3001:DOL:H131	2.44	0.53
22:BA:2820:A:C6	25:BD:197:THR:HG22	2.44	0.53
30:BI:101:ILE:O	30:BI:102:SER:HB2	2.07	0.53
36:BO:49:VAL:O	36:BO:50:ALA:HB2	2.09	0.53
42:BU:39:ILE:HG22	42:BU:40:ASN:N	2.23	0.53
43:BV:6:ALA:HB1	43:BV:40:ILE:HG23	1.90	0.53
49:B1:51:GLU:OE2	49:B1:53:LYS:HG2	2.07	0.53
1:CA:1082:A:C6	1:CA:1083:U:N3	2.76	0.53
1:CA:1491:G:H3'	1:CA:1492:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:183:C:C5	22:DA:184:C:C5	2.96	0.53
22:DA:600:G:C5	22:DA:601:C:C4	2.97	0.53
22:DA:1097:U:C4	22:DA:1098:A:H1'	2.44	0.53
22:DA:1364:G:C4	22:DA:1368:G:C2	2.96	0.53
22:DA:1512:C:C4	22:DA:1513:U:C4	2.97	0.53
22:DA:2491:U:O4	22:DA:2518:A:N6	2.41	0.53
22:DA:2571:U:N3	22:DA:2574:G:C8	2.76	0.53
22:DA:2805:C:H2'	22:DA:2806:C:C6	2.42	0.53
22:DA:2811:G:H2'	22:DA:2812:G:O4'	2.09	0.53
29:DH:32:PRO:O	29:DH:33:GLN:HB2	2.08	0.53
30:DI:79:LEU:HD13	30:DI:109:ILE:CG2	2.37	0.53
34:DM:124:LEU:CD2	34:DM:124:LEU:N	2.70	0.53
1:AA:340:U:H2'	1:AA:341:C:H6	1.74	0.53
1:AA:655:A:C2	1:AA:656:G:C4	2.97	0.53
1:AA:1349:A:C2	1:AA:1374:A:C4	2.96	0.53
2:AB:126:PHE:CD2	2:AB:126:PHE:N	2.76	0.53
10:AJ:91:ASP:OD2	10:AJ:91:ASP:N	2.41	0.53
19:AS:14:HIS:O	19:AS:18:LYS:HB2	2.08	0.53
22:BA:997:G:O2'	22:BA:998:C:H5'	2.09	0.53
22:BA:1817:G:H2'	22:BA:1818:U:H5'	1.91	0.53
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.36	0.53
33:BL:82:LEU:HD23	33:BL:82:LEU:C	2.29	0.53
53:B5:66:PRO:HG3	53:B5:194:ILE:CB	2.39	0.53
1:CA:667:G:C2	1:CA:740:U:O2	2.62	0.53
1:CA:1169:A:C2	1:CA:1170:A:C4	2.96	0.53
1:CA:1296:C:H4'	1:CA:1302:C:C4	2.43	0.53
2:CB:139:ARG:HD2	2:CB:139:ARG:C	2.29	0.53
4:CD:29:ASP:C	4:CD:31:LYS:N	2.61	0.53
20:CT:83:ILE:O	20:CT:87:ALA:HB3	2.08	0.53
22:DA:288:U:H2'	22:DA:289:G:O4'	2.09	0.53
22:DA:584:C:N4	22:DA:585:G:C6	2.77	0.53
22:DA:792:A:H1'	22:DA:2072:C:O2'	2.08	0.53
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.44	0.53
22:DA:2506:U:C5	56:DA:3001:DOL:O41	2.61	0.53
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.06	0.53
1:AA:74:A:H1'	1:AA:97:G:N2	2.24	0.53
1:AA:764:C:H5''	15:AO:50:HIS:CD2	2.43	0.53
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.43	0.53
2:AB:72:THR:O	2:AB:73:LYS:HB3	2.09	0.53
2:AB:147:SER:O	2:AB:148:LEU:CB	2.56	0.53
22:BA:63:A:C2	22:BA:64:A:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.08	0.53
22:BA:1923:U:C2'	22:BA:1924:C:C5'	2.87	0.53
22:BA:2443:C:O2'	22:BA:2444:G:H5'	2.07	0.53
22:BA:2517:C:C6	22:BA:2542:A:N7	2.77	0.53
30:BI:44:ALA:O	30:BI:45:LYS:HG3	2.09	0.53
53:B5:51:ASP:N	53:B5:52:PRO:HD3	2.23	0.53
1:CA:457:G:C5	1:CA:458:U:C4	2.97	0.53
1:CA:978:A:O2'	1:CA:1322:C:C5	2.61	0.53
1:CA:1040:U:H2'	1:CA:1041:G:C8	2.43	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53
3:CC:155:GLY:O	3:CC:157:LEU:N	2.39	0.53
4:CD:9:LEU:HD12	4:CD:32:CYS:SG	2.49	0.53
5:CE:96:MET:HE3	5:CE:111:MET:CE	2.38	0.53
11:CK:25:ALA:HB3	11:CK:87:LYS:O	2.09	0.53
21:CU:10:GLU:HB2	21:CU:11:PRO:HD3	1.89	0.53
22:DA:1343:G:N2	22:DA:1405:U:C2	2.76	0.53
22:DA:2214:C:H2'	22:DA:2215:C:O5'	2.09	0.53
22:DA:2300:C:C4	22:DA:2317:A:C2	2.96	0.53
22:DA:2504:U:C4	56:DA:3001:DOL:H161	2.43	0.53
22:DA:2810:A:C8	22:DA:2811:G:C8	2.96	0.53
26:DE:27:LEU:HG	26:DE:104:ALA:HB2	1.91	0.53
28:DG:86:LYS:HB3	28:DG:165:ALA:HB2	1.89	0.53
29:DH:103:VAL:HA	29:DH:106:ALA:HB3	1.89	0.53
35:DN:20:MET:HG3	35:DN:21:PHE:CD1	2.43	0.53
38:DQ:72:ASN:HB3	38:DQ:110:VAL:HG11	1.91	0.53
1:AA:1320:C:N3	19:AS:36:ARG:NH1	2.57	0.53
2:AB:33:GLY:HA3	2:AB:40:ILE:N	2.24	0.53
2:AB:83:ALA:O	2:AB:86:SER:OG	2.26	0.53
2:AB:91:PHE:CD2	2:AB:150:GLY:HA3	2.44	0.53
2:AB:154:MET:O	2:AB:155:GLY:C	2.47	0.53
9:AI:36:GLU:OE2	9:AI:36:GLU:N	2.41	0.53
22:BA:657:U:H2'	22:BA:658:U:C6	2.43	0.53
22:BA:1142:A:C2	22:BA:1144:A:C1'	2.92	0.53
22:BA:2191:A:N1	22:BA:2192:U:O4	2.42	0.53
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.44	0.53
56:BA:3001:DOL:N44	56:BA:3001:DOL:O40	2.41	0.53
30:BI:81:LYS:HA	30:BI:86:ILE:O	2.09	0.53
34:BM:51:ARG:O	34:BM:55:ARG:HG3	2.09	0.53
1:CA:552:U:C2	1:CA:553:A:C8	2.96	0.53
1:CA:597:G:N7	1:CA:598:U:C5	2.76	0.53
1:CA:632:U:H3'	1:CA:633:G:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:649:A:H2'	1:CA:650:G:O4'	2.08	0.53
1:CA:731:G:H5'	1:CA:766:A:H4'	1.91	0.53
5:CE:150:PRO:HA	8:CH:99:LEU:CD2	2.38	0.53
20:CT:32:ILE:HG12	20:CT:54:MET:HE3	1.90	0.53
22:DA:315:G:H2'	22:DA:316:C:O4'	2.09	0.53
22:DA:696:G:N1	22:DA:767:U:C2	2.76	0.53
22:DA:1101:U:C5	22:DA:1102:C:C5	2.96	0.53
22:DA:1226:A:OP1	38:DQ:16:LYS:NZ	2.41	0.53
22:DA:1555:G:N2	22:DA:1556:C:H1'	2.24	0.53
22:DA:1581:G:N7	22:DA:1582:C:N4	2.57	0.53
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.08	0.53
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.24	0.53
29:DH:2:GLN:O	29:DH:3:VAL:HG22	2.09	0.53
30:DI:59:ILE:HG22	30:DI:60:THR:N	2.24	0.53
30:DI:80:LEU:HD23	30:DI:84:ALA:CB	2.38	0.53
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.09	0.53
37:DP:40:LEU:HD23	37:DP:41:GLN:N	2.24	0.53
51:D3:32:ILE:HG22	51:D3:32:ILE:O	2.09	0.53
1:AA:76:G:H2'	1:AA:76:G:N3	2.23	0.53
1:AA:323:U:OP1	20:AT:25:ARG:NH2	2.42	0.53
3:AC:87:LEU:O	3:AC:88:ARG:C	2.46	0.53
13:AM:29:ARG:O	13:AM:33:ILE:HG12	2.08	0.53
22:BA:528:A:C8	22:BA:528:A:H3'	2.43	0.53
22:BA:536:G:C6	22:BA:537:G:C4	2.96	0.53
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.56	0.53
22:BA:2619:C:OP1	25:BD:157:LYS:HE2	2.09	0.53
28:BG:127:THR:HG22	28:BG:128:GLN:N	2.24	0.53
34:BM:57:VAL:HG12	34:BM:112:LEU:HD23	1.90	0.53
1:CA:223:A:H2'	1:CA:224:U:C6	2.44	0.53
1:CA:666:G:C6	1:CA:741:G:C6	2.97	0.53
1:CA:922:G:H4'	5:CE:25:VAL:HA	1.91	0.53
4:CD:3:ARG:HD2	4:CD:115:ARG:NE	2.24	0.53
11:CK:84:VAL:HG11	11:CK:97:ILE:HG22	1.91	0.53
22:DA:232:G:N1	22:DA:420:C:OP1	2.41	0.53
22:DA:319:G:C4	22:DA:333:G:N2	2.77	0.53
22:DA:441:U:O2'	26:DE:41:GLN:OE1	2.26	0.53
22:DA:451:U:H2'	22:DA:453:A:N7	2.24	0.53
22:DA:1428:C:C5	22:DA:1569:A:H5''	2.44	0.53
29:DH:37:VAL:CG2	29:DH:38:PRO:HD2	2.39	0.53
33:DL:56:PRO:O	33:DL:60:ARG:HB2	2.09	0.53
36:DO:104:GLN:O	36:DO:107:ALA:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:C4	1:AA:259:G:C8	2.97	0.53
1:AA:452:A:H2'	1:AA:453:G:C5'	2.39	0.53
1:AA:568:G:C2	1:AA:569:C:C5	2.97	0.53
1:AA:933:G:OP2	7:AG:3:ARG:HB3	2.09	0.53
1:AA:1109:C:OP2	3:AC:176:HIS:ND1	2.34	0.53
1:AA:1135:U:C2'	1:AA:1136:C:O5'	2.57	0.53
1:AA:1353:G:C2	1:AA:1354:U:C6	2.97	0.53
1:AA:1523:G:OP1	11:AK:128:ARG:NH2	2.42	0.53
3:AC:12:LEU:O	3:AC:13:GLY:C	2.47	0.53
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.38	0.53
22:BA:1627:G:C2	22:BA:1628:G:C8	2.97	0.53
22:BA:1926:U:O2	22:BA:1926:U:H2'	2.09	0.53
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.09	0.53
22:BA:2309:A:C6	22:BA:2310:C:C4	2.97	0.53
34:BM:12:MET:CE	34:BM:71:LYS:HG3	2.39	0.53
40:BS:1:MET:N	40:BS:109:ASP:OD1	2.41	0.53
1:CA:203:G:N2	1:CA:215:C:N3	2.57	0.53
1:CA:866:C:C4	1:CA:867:G:H1'	2.44	0.53
1:CA:878:A:C5	1:CA:879:C:C5	2.96	0.53
1:CA:885:G:O2'	1:CA:914:A:N1	2.33	0.53
2:CB:67:ILE:HG22	2:CB:68:LEU:N	2.24	0.53
4:CD:57:GLU:OE2	4:CD:196:ASN:N	2.41	0.53
14:CN:51:LEU:O	14:CN:53:ARG:N	2.42	0.53
22:DA:197:A:C2	22:DA:198:C:H1'	2.44	0.53
22:DA:483:A:C2	42:DU:58:ILE:HD11	2.43	0.53
22:DA:728:G:C2	22:DA:730:A:C4	2.97	0.53
22:DA:1519:G:C6	22:DA:1520:U:C2	2.97	0.53
30:DI:33:VAL:HG13	30:DI:67:PHE:CZ	2.43	0.53
1:AA:71:A:O2'	1:AA:72:A:OP2	2.27	0.53
1:AA:259:G:N2	1:AA:260:G:H1'	2.23	0.53
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.09	0.53
9:AI:30:ILE:HD11	9:AI:38:TYR:CB	2.39	0.53
9:AI:40:GLY:O	9:AI:41:ARG:HB2	2.07	0.53
9:AI:50:GLN:C	9:AI:52:LEU:H	2.11	0.53
10:AJ:52:LEU:HB2	14:AN:81:ARG:NE	2.24	0.53
21:AU:18:ARG:N	21:AU:18:ARG:HD2	2.24	0.53
22:BA:102:U:C2	46:BY:2:LYS:HE3	2.44	0.53
22:BA:287:G:H2'	22:BA:288:U:C6	2.45	0.53
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.09	0.53
22:BA:1805:A:H1'	24:BC:50:THR:O	2.08	0.53
53:B5:204:GLY:O	53:B5:205:ALA:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:690:G:H2'	1:CA:691:G:O4'	2.09	0.53
2:CB:85:LEU:O	2:CB:85:LEU:CG	2.57	0.53
2:CB:167:ASP:O	2:CB:168:HIS:HB3	2.09	0.53
3:CC:57:ILE:HG13	3:CC:66:VAL:HG22	1.90	0.53
8:CH:35:ALA:O	8:CH:39:VAL:HG23	2.09	0.53
9:CI:30:ILE:HA	9:CI:65:ILE:HG13	1.91	0.53
12:CL:25:GLU:C	12:CL:27:CYS:N	2.60	0.53
13:CM:114:LYS:HB2	13:CM:115:PRO:HD3	1.91	0.53
22:DA:37:C:H2'	22:DA:38:A:O4'	2.09	0.53
22:DA:95:A:O2'	46:DY:40:SER:N	2.42	0.53
22:DA:301:G:N3	22:DA:302:C:C2	2.77	0.53
22:DA:658:U:N3	22:DA:659:G:N7	2.57	0.53
22:DA:979:A:C8	22:DA:982:C:N4	2.77	0.53
22:DA:1627:G:N2	22:DA:1628:G:C8	2.77	0.53
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.91	0.53
24:DC:147:LYS:HB2	24:DC:150:LYS:HB2	1.91	0.53
32:DK:31:ARG:CB	32:DK:32:TYR:CD2	2.92	0.53
1:AA:100:G:N7	1:AA:101:A:N7	2.57	0.52
1:AA:587:G:C2	1:AA:755:G:C5	2.97	0.52
1:AA:692:U:O2'	1:AA:694:A:N7	2.24	0.52
1:AA:1157:A:N6	1:AA:1180:A:N7	2.58	0.52
1:AA:1191:A:OP2	3:AC:3:GLN:NE2	2.41	0.52
4:AD:37:ALA:HA	4:AD:42:GLY:HA3	1.91	0.52
21:AU:10:GLU:HG3	21:AU:11:PRO:HD3	1.92	0.52
22:BA:26:G:C6	22:BA:27:G:N1	2.77	0.52
22:BA:482:A:C5'	22:BA:483:A:OP1	2.56	0.52
22:BA:1206:G:C5	22:BA:1207:C:C5	2.97	0.52
27:BF:2:ALA:O	27:BF:4:LEU:N	2.42	0.52
30:BI:116:ASP:O	30:BI:117:MET:HB2	2.09	0.52
34:BM:77:PRO:HG2	34:BM:80:VAL:HG21	1.91	0.52
40:BS:28:LYS:O	40:BS:29:VAL:C	2.47	0.52
1:CA:60:A:N3	1:CA:61:G:H1'	2.24	0.52
1:CA:259:G:N2	1:CA:268:U:C2	2.77	0.52
1:CA:1211:U:O2'	1:CA:1212:U:P	2.66	0.52
1:CA:1363:A:O2'	1:CA:1365:G:N7	2.37	0.52
2:CB:81:LYS:HG3	2:CB:91:PHE:CZ	2.44	0.52
2:CB:125:THR:O	2:CB:126:PHE:HB3	2.09	0.52
4:CD:202:GLU:OE1	5:CE:105:ILE:HG23	2.09	0.52
8:CH:66:PHE:CE2	8:CH:67:GLN:OE1	2.62	0.52
10:CJ:73:LEU:CD2	10:CJ:75:ASP:HB2	2.38	0.52
20:CT:21:ASN:HB3	20:CT:25:ARG:NH2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CT:33:LYS:O	20:CT:36:TYR:CE2	2.62	0.52
22:DA:134:G:C6	22:DA:135:U:N3	2.78	0.52
22:DA:406:G:H2'	22:DA:407:G:O4'	2.08	0.52
22:DA:630:G:C3'	22:DA:631:A:H5''	2.39	0.52
22:DA:945:A:C5	22:DA:2448:A:C2	2.97	0.52
22:DA:1352:U:C5	22:DA:1377:G:C5	2.97	0.52
22:DA:1776:G:N2	22:DA:1789:A:H1'	2.25	0.52
22:DA:2325:G:C6	22:DA:2326:C:N4	2.77	0.52
22:DA:2550:G:C6	22:DA:2551:C:C4	2.97	0.52
22:DA:2851:A:O2'	35:DN:64:ARG:NH2	2.41	0.52
25:DD:186:LEU:CD1	37:DP:8:LEU:HD12	2.39	0.52
29:DH:40:THR:O	29:DH:41:LYS:C	2.48	0.52
1:AA:255:G:C6	1:AA:256:U:C4	2.98	0.52
1:AA:374:A:H5''	1:AA:452:A:C2	2.44	0.52
1:AA:596:A:N6	1:AA:645:G:C6	2.77	0.52
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.55	0.52
2:AB:20:THR:HA	2:AB:38:VAL:HA	1.91	0.52
14:AN:72:GLY:O	14:AN:80:SER:HA	2.09	0.52
17:AQ:16:LYS:O	17:AQ:17:MET:HE3	2.08	0.52
21:AU:11:PRO:O	21:AU:12:PHE:CG	2.62	0.52
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.52
22:BA:720:U:H2'	22:BA:721:A:C8	2.45	0.52
22:BA:981:A:H5''	58:BA:3595:HOH:O	2.09	0.52
22:BA:1650:A:N6	58:BA:3800:HOH:O	2.41	0.52
26:BE:91:ASP:C	26:BE:91:ASP:OD1	2.47	0.52
39:BR:9:GLY:C	39:BR:10:LYS:HG2	2.29	0.52
44:BW:56:ASP:N	44:BW:56:ASP:OD1	2.40	0.52
49:B1:47:VAL:HG13	49:B1:48:ILE:N	2.24	0.52
53:B5:52:PRO:O	53:B5:53:ARG:HB2	2.10	0.52
1:CA:183:C:O2'	1:CA:184:G:C5'	2.57	0.52
1:CA:1105:A:N3	1:CA:1106:G:C8	2.77	0.52
1:CA:1126:U:O4	10:CJ:73:LEU:HD12	2.10	0.52
2:CB:35:ARG:O	2:CB:37:LYS:N	2.42	0.52
6:CF:66:ALA:HB1	6:CF:67:PRO:HD2	1.91	0.52
11:CK:81:ASN:HA	11:CK:106:ARG:O	2.09	0.52
20:CT:74:ARG:O	20:CT:78:ASN:ND2	2.41	0.52
22:DA:85:G:OP2	42:DU:7:ARG:HB2	2.10	0.52
22:DA:329:G:O4'	22:DA:477:A:H1'	2.10	0.52
22:DA:547:A:H3'	22:DA:548:G:H5'	1.91	0.52
22:DA:1577:C:H2'	22:DA:1578:U:O4'	2.09	0.52
22:DA:1645:G:H4'	22:DA:1646:C:C6	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2519:U:C6	22:DA:2542:A:N6	2.77	0.52
23:DB:76:G:O2'	43:DV:78:GLN:OE1	2.19	0.52
27:DF:111:ILE:HB	27:DF:114:PHE:HB2	1.90	0.52
29:DH:31:VAL:CB	29:DH:32:PRO:CD	2.86	0.52
34:DM:119:LEU:O	34:DM:119:LEU:HD13	2.09	0.52
46:DY:45:GLN:O	46:DY:47:ARG:N	2.43	0.52
1:AA:6:G:H3'	1:AA:6:G:N3	2.24	0.52
1:AA:198:G:C5	1:AA:220:G:C2	2.97	0.52
1:AA:1118:U:C1'	1:AA:1179:A:C4	2.92	0.52
3:AC:145:GLY:O	3:AC:146:ALA:C	2.48	0.52
4:AD:2:ALA:O	4:AD:68:LEU:HD21	2.10	0.52
5:AE:15:LEU:HB3	5:AE:37:THR:CG2	2.39	0.52
8:AH:111:MET:HE2	8:AH:116:ALA:N	2.24	0.52
22:BA:441:U:H2'	22:BA:442:G:C8	2.45	0.52
22:BA:1026:G:C8	22:BA:1134:A:C4	2.97	0.52
22:BA:1061:U:H3'	22:BA:1062:G:H5'	1.91	0.52
23:BB:2:G:C2	23:BB:119:A:C2	2.98	0.52
53:B5:40:GLU:HA	53:B5:181:PHE:HA	1.91	0.52
53:B5:67:HIS:CD2	53:B5:188:ASP:HA	2.45	0.52
1:CA:332:G:OP2	20:CT:5:LYS:HB3	2.09	0.52
1:CA:1478:U:H2'	1:CA:1479:C:C6	2.44	0.52
3:CC:117:ALA:HB1	3:CC:187:SER:CB	2.39	0.52
7:CG:68:ASN:ND2	7:CG:130:ASN:OD1	2.42	0.52
22:DA:404:A:H1'	22:DA:405:U:OP2	2.10	0.52
22:DA:634:C:H2'	22:DA:635:C:C6	2.45	0.52
22:DA:681:G:C2	22:DA:682:G:C8	2.98	0.52
22:DA:747:U:O2	22:DA:2014:A:H1'	2.09	0.52
22:DA:1355:G:C6	22:DA:1377:G:C2	2.96	0.52
22:DA:2093:G:O2'	22:DA:2094:A:H5'	2.08	0.52
22:DA:2267:A:H5''	22:DA:2268:A:H5'	1.90	0.52
22:DA:2505:G:N2	54:D6:4:PRO:HB3	2.23	0.52
22:DA:2575:C:H2'	22:DA:2578:G:O6	2.10	0.52
22:DA:2611:C:H1'	54:D6:8:MHT:H2	1.91	0.52
26:DE:59:PRO:HB2	26:DE:70:SER:OG	2.09	0.52
29:DH:72:ILE:HG22	29:DH:72:ILE:O	2.09	0.52
40:DS:61:ASN:O	40:DS:62:ASP:HB3	2.09	0.52
48:D0:28:LEU:HD23	48:D0:37:LYS:HB3	1.92	0.52
1:AA:1014:A:H2'	1:AA:1015:G:O4'	2.10	0.52
1:AA:1195:C:H5''	1:AA:1196:A:OP2	2.09	0.52
2:AB:53:ALA:O	2:AB:57:LEU:HB2	2.10	0.52
22:BA:15:G:C5	22:BA:16:C:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:136:G:H2'	22:BA:137:U:C6	2.44	0.52
22:BA:244:A:OP2	51:B3:8:ARG:NH2	2.40	0.52
22:BA:1153:C:P	58:BA:3362:HOH:O	2.67	0.52
22:BA:1379:U:OP1	22:BA:1379:U:C5	2.62	0.52
22:BA:1565:C:OP1	24:BC:18:LYS:NZ	2.41	0.52
22:BA:1594:U:H2'	22:BA:1595:C:C6	2.45	0.52
22:BA:1916:A:N1	22:BA:1917:U:C2	2.77	0.52
22:BA:2441:U:OP2	22:BA:2586:U:O2'	2.28	0.52
26:BE:145:ASP:HB3	26:BE:184:ASP:OD2	2.09	0.52
29:BH:77:THR:HA	29:BH:143:ILE:O	2.10	0.52
30:BI:97:LYS:HG3	30:BI:139:VAL:HG22	1.91	0.52
31:BJ:65:THR:O	31:BJ:68:LYS:HG3	2.09	0.52
37:BP:26:VAL:HG13	37:BP:47:VAL:HG23	1.89	0.52
1:CA:406:G:C2	1:CA:407:U:C6	2.98	0.52
1:CA:747:A:C6	1:CA:748:G:C6	2.97	0.52
1:CA:1133:G:H2'	1:CA:1133:G:N3	2.25	0.52
1:CA:1235:U:H2'	1:CA:1236:A:O4'	2.08	0.52
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.09	0.52
1:CA:1296:C:C5'	1:CA:1297:G:OP2	2.57	0.52
2:CB:162:PHE:HA	2:CB:184:PHE:O	2.09	0.52
6:CF:4:TYR:CD2	6:CF:71:ILE:HG12	2.44	0.52
13:CM:6:GLY:O	13:CM:8:ASN:N	2.42	0.52
18:CR:22:ASP:OD2	18:CR:24:LYS:NZ	2.42	0.52
19:CS:6:LYS:CB	19:CS:7:LYS:HE2	2.40	0.52
22:DA:749:A:C5	22:DA:750:A:C8	2.97	0.52
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.09	0.52
22:DA:1874:C:H3'	22:DA:1875:G:C8	2.44	0.52
22:DA:2225:A:H1'	22:DA:2226:C:OP2	2.09	0.52
24:DC:141:VAL:CG1	24:DC:190:ALA:HB1	2.39	0.52
30:DI:28:LEU:C	30:DI:28:LEU:HD12	2.30	0.52
36:DO:7:ARG:HD2	36:DO:97:PHE:CE1	2.44	0.52
1:AA:118:U:O4	1:AA:288:A:H2'	2.10	0.52
1:AA:260:G:H2'	1:AA:261:U:C6	2.45	0.52
1:AA:624:C:H4'	16:AP:11:ALA:HB2	1.91	0.52
1:AA:1060:U:OP1	14:AN:85:ARG:NH2	2.39	0.52
1:AA:1277:C:HO2'	1:AA:1279:G:H8	1.54	0.52
3:AC:193:TYR:N	3:AC:193:TYR:CD2	2.76	0.52
22:BA:1124:G:N3	52:B4:38:GLY:O	2.43	0.52
22:BA:1575:C:H2'	22:BA:1576:U:O4'	2.10	0.52
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.09	0.52
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2243:U:O2'	22:BA:2244:U:H5'	2.10	0.52
22:BA:2318:G:C6	22:BA:2319:G:C6	2.97	0.52
22:BA:2512:C:H4'	25:BD:127:PHE:CE1	2.45	0.52
24:BC:21:ASN:O	24:BC:24:LEU:HB2	2.10	0.52
29:BH:51:ARG:NH1	29:BH:55:GLU:OE1	2.43	0.52
35:BN:66:ALA:O	35:BN:69:ARG:O	2.27	0.52
1:CA:72:A:C6	1:CA:73:C:C4	2.98	0.52
1:CA:179:A:C5	1:CA:180:U:C4	2.97	0.52
1:CA:186:C:O2'	1:CA:187:G:H5'	2.10	0.52
1:CA:802:A:N3	1:CA:802:A:H2'	2.25	0.52
3:CC:77:ILE:HD11	3:CC:103:ILE:HG12	1.92	0.52
3:CC:173:VAL:O	3:CC:175:LEU:N	2.42	0.52
10:CJ:84:VAL:O	10:CJ:88:MET:HB2	2.10	0.52
22:DA:459:U:C5	22:DA:469:G:N2	2.77	0.52
22:DA:593:U:C2	22:DA:594:U:C5	2.98	0.52
22:DA:931:U:H4'	22:DA:932:U:OP2	2.08	0.52
22:DA:1055:G:O2'	22:DA:1085:A:N1	2.31	0.52
22:DA:1253:A:OP2	58:DA:3283:HOH:O	2.19	0.52
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.45	0.52
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.45	0.52
37:DP:106:LYS:HA	37:DP:109:ARG:HD2	1.90	0.52
51:D3:24:HIS:CE1	51:D3:48:ALA:HB3	2.45	0.52
1:AA:1160:G:O2'	1:AA:1161:C:P	2.68	0.52
3:AC:130:PHE:CZ	3:AC:131:ARG:HD3	2.45	0.52
4:AD:26:ARG:HD2	4:AD:31:LYS:HD2	1.92	0.52
22:BA:528:A:N1	22:BA:2043:C:H5'	2.24	0.52
22:BA:947:A:HO2'	22:BA:984:A:H2	1.51	0.52
22:BA:996:A:N6	22:BA:1160:G:C6	2.77	0.52
22:BA:2307:G:H4'	22:BA:2308:G:O5'	2.10	0.52
27:BF:42:GLU:O	27:BF:42:GLU:CG	2.57	0.52
1:CA:31:G:C5	1:CA:306:A:H1'	2.44	0.52
1:CA:321:A:C8	1:CA:328:C:C2	2.97	0.52
1:CA:505:G:C5	1:CA:535:A:C2	2.98	0.52
1:CA:1052:U:H5''	1:CA:1053:G:OP2	2.08	0.52
1:CA:1511:G:C5	1:CA:1512:U:C5	2.97	0.52
4:CD:173:VAL:HG13	4:CD:174:ASP:N	2.25	0.52
6:CF:6:ILE:HG22	6:CF:7:VAL:N	2.24	0.52
10:CJ:57:VAL:HG13	10:CJ:58:ASN:N	2.25	0.52
11:CK:72:ASP:OD1	11:CK:73:ALA:N	2.42	0.52
14:CN:10:GLU:O	14:CN:13:ARG:N	2.43	0.52
17:CQ:16:LYS:C	17:CQ:17:MET:SD	2.88	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:247:G:OP2	22:DA:249:C:N4	2.43	0.52
22:DA:1082:U:H5'	30:DI:119:GLY:HA2	1.92	0.52
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.52
22:DA:1281:G:C2'	22:DA:1282:U:H5'	2.39	0.52
22:DA:1438:U:C4	22:DA:1552:A:C2	2.98	0.52
22:DA:1439:A:C8	22:DA:1440:U:C6	2.98	0.52
22:DA:1645:G:OP1	22:DA:1646:C:H5'	2.09	0.52
22:DA:2314:A:C2	22:DA:2315:G:C4	2.97	0.52
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.25	0.52
24:DC:34:LEU:O	24:DC:35:GLU:CB	2.57	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HB2	2.08	0.52
29:DH:34:GLY:O	29:DH:35:LYS:HD2	2.10	0.52
42:DU:83:VAL:CG1	42:DU:84:GLY:N	2.73	0.52
45:DX:27:ARG:NE	45:DX:28:ARG:O	2.40	0.52
1:AA:208:U:C5	1:AA:210:C:N3	2.78	0.52
1:AA:1311:A:H2'	1:AA:1312:G:O5'	2.10	0.52
13:AM:11:ASP:O	13:AM:12:HIS:HB2	2.09	0.52
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.40	0.52
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.10	0.52
45:BX:17:ASN:OD1	45:BX:27:ARG:HD2	2.09	0.52
53:B5:122:GLY:HA3	53:B5:146:VAL:CB	2.40	0.52
1:CA:513:C:H2'	1:CA:514:C:C6	2.45	0.52
1:CA:734:G:C4	1:CA:735:C:C5	2.98	0.52
1:CA:838:G:H2'	1:CA:839:C:O4'	2.09	0.52
2:CB:186:ILE:HG13	2:CB:200:ILE:O	2.10	0.52
5:CE:15:LEU:C	5:CE:15:LEU:HD12	2.30	0.52
6:CF:43:GLY:HA2	6:CF:58:HIS:NE2	2.24	0.52
7:CG:116:MET:HA	7:CG:119:ARG:HD3	1.91	0.52
16:CP:23:ASP:OD2	16:CP:25:ARG:CG	2.58	0.52
22:DA:1352:U:C5	22:DA:1377:G:C6	2.98	0.52
22:DA:1355:G:C2	22:DA:1356:G:C8	2.98	0.52
22:DA:1363:C:H2'	22:DA:1364:G:H8	1.75	0.52
22:DA:2093:G:C6	22:DA:2225:A:C8	2.98	0.52
22:DA:2677:G:C4	22:DA:2731:G:N2	2.77	0.52
24:DC:141:VAL:HG11	24:DC:190:ALA:HB1	1.90	0.52
26:DE:8:ALA:HB2	26:DE:122:GLU:HG3	1.92	0.52
27:DF:122:PHE:CE1	27:DF:166:GLY:HA3	2.45	0.52
30:DI:62:TYR:HB2	30:DI:66:SER:O	2.08	0.52
1:AA:202:G:O2'	1:AA:468:A:C8	2.62	0.52
1:AA:1118:U:O2	1:AA:1179:A:C6	2.63	0.52
4:AD:88:GLU:HG2	4:AD:188:ARG:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:11:ASP:OD1	13:AM:45:ILE:HB	2.09	0.52
15:AO:35:GLN:HB3	15:AO:59:MET:CE	2.40	0.52
19:AS:5:LEU:HD23	19:AS:9:PRO:HA	1.92	0.52
22:BA:1317:G:C2	22:BA:1336:A:C2	2.98	0.52
22:BA:2291:U:H2'	22:BA:2292:U:C5	2.45	0.52
23:BB:2:G:N1	23:BB:119:A:C2	2.78	0.52
29:BH:2:GLN:O	29:BH:3:VAL:HG22	2.10	0.52
29:BH:94:ILE:HD12	29:BH:98:ASP:HB3	1.92	0.52
41:BT:19:LYS:NZ	41:BT:84:TYR:OH	2.42	0.52
17:CQ:50:ASN:O	17:CQ:51:ASN:C	2.48	0.52
22:DA:30:G:C6	22:DA:31:C:N3	2.78	0.52
22:DA:61:C:OP1	46:DY:44:LYS:HD3	2.10	0.52
22:DA:67:U:H2'	22:DA:68:G:O4'	2.10	0.52
22:DA:142:A:C6	22:DA:143:C:N4	2.77	0.52
22:DA:158:U:H2'	22:DA:159:G:H5'	1.92	0.52
22:DA:250:G:H2'	22:DA:251:A:C8	2.44	0.52
22:DA:996:A:C2	22:DA:997:G:C8	2.98	0.52
22:DA:1722:A:C6	22:DA:1739:A:C8	2.98	0.52
22:DA:1893:C:C5	22:DA:1894:C:C5	2.98	0.52
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.25	0.52
22:DA:2073:C:H5''	24:DC:228:VAL:HB	1.91	0.52
22:DA:2690:U:C5	22:DA:2873:A:N1	2.78	0.52
28:DG:126:PRO:C	28:DG:127:THR:OG1	2.48	0.52
29:DH:25:TYR:CZ	29:DH:30:LEU:HD21	2.45	0.52
33:DL:2:ARG:HD3	33:DL:2:ARG:N	2.25	0.52
42:DU:88:GLU:O	42:DU:89:ASP:CB	2.58	0.52
1:AA:92:U:H2'	1:AA:93:U:C6	2.45	0.52
1:AA:502:A:H2'	1:AA:503:C:O4'	2.09	0.52
1:AA:926:G:N2	1:AA:1505:G:H2'	2.25	0.52
1:AA:1296:C:H4'	1:AA:1302:C:C4	2.44	0.52
2:AB:27:MET:HG2	2:AB:189:THR:HA	1.92	0.52
2:AB:219:ALA:O	2:AB:220:THR:CB	2.57	0.52
7:AG:71:PRO:HD2	7:AG:96:ARG:O	2.10	0.52
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.25	0.52
14:AN:10:GLU:OE2	14:AN:61:ARG:HB3	2.10	0.52
19:AS:50:ALA:HB1	19:AS:57:HIS:HB3	1.90	0.52
22:BA:65:U:H2'	22:BA:66:C:C6	2.44	0.52
22:BA:1224:U:C4	22:BA:1225:G:C6	2.98	0.52
22:BA:1779:U:C5	22:BA:1784:A:N7	2.78	0.52
22:BA:1916:A:OP2	22:BA:1917:U:OP2	2.28	0.52
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2154:A:H2'	22:BA:2155:U:C5	2.45	0.52
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.44	0.52
26:BE:164:LEU:HB3	26:BE:167:VAL:HB	1.92	0.52
27:BF:36:LEU:HD21	27:BF:99:PHE:CE1	2.45	0.52
48:B0:48:TYR:CE2	48:B0:53:LYS:HB2	2.44	0.52
53:B5:83:LYS:HB3	53:B5:87:ALA:HB3	1.92	0.52
1:CA:197:A:C6	1:CA:221:C:H4'	2.45	0.52
1:CA:328:C:O2	1:CA:328:C:C2'	2.58	0.52
1:CA:632:U:O2	1:CA:632:U:C2'	2.58	0.52
1:CA:1001:C:H2'	1:CA:1002:G:N7	2.25	0.52
4:CD:65:TYR:CG	4:CD:94:LEU:HD22	2.45	0.52
5:CE:104:GLY:O	5:CE:105:ILE:CG2	2.57	0.52
5:CE:125:ALA:O	5:CE:126:LYS:HB3	2.09	0.52
11:CK:51:GLY:O	11:CK:52:PHE:O	2.28	0.52
22:DA:207:A:H2'	22:DA:207:A:N3	2.24	0.52
22:DA:249:C:P	22:DA:2394:C:O2'	2.68	0.52
22:DA:927:A:O2'	47:DZ:39:GLU:OE1	2.28	0.52
22:DA:1289:C:O2'	22:DA:1330:C:H4'	2.10	0.52
22:DA:1318:U:H2'	22:DA:1319:C:C6	2.45	0.52
22:DA:1338:G:H5''	41:DT:17:SER:HB2	1.92	0.52
22:DA:1566:A:C2	24:DC:213:TRP:CG	2.98	0.52
22:DA:1731:G:C6	22:DA:1733:G:N7	2.77	0.52
22:DA:2199:A:N7	22:DA:2225:A:N6	2.58	0.52
22:DA:2214:C:C2'	22:DA:2215:C:O5'	2.57	0.52
22:DA:2621:G:OP1	25:DD:124:ARG:NH2	2.43	0.52
25:DD:151:THR:HB	25:DD:152:PRO:HD2	1.92	0.52
30:DI:97:LYS:N	30:DI:97:LYS:HD2	2.25	0.52
42:DU:10:GLU:OE2	42:DU:73:PHE:CD2	2.62	0.52
1:AA:1452:C:O4'	1:AA:1453:G:C2	2.63	0.52
1:AA:1463:U:H2'	1:AA:1464:U:C6	2.45	0.52
2:AB:126:PHE:N	2:AB:126:PHE:HD2	2.06	0.52
2:AB:147:SER:O	2:AB:148:LEU:HB2	2.08	0.52
8:AH:25:VAL:HG12	8:AH:61:LEU:HB2	1.92	0.52
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.92	0.52
11:AK:36:ASP:OD2	11:AK:38:GLN:N	2.42	0.52
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.45	0.52
17:AQ:16:LYS:O	17:AQ:16:LYS:CG	2.57	0.52
22:BA:141:G:N1	41:BT:1:MET:HE1	2.25	0.52
22:BA:271:G:H4'	22:BA:272:A:OP1	2.10	0.52
22:BA:280:U:H2'	22:BA:281:C:O4'	2.09	0.52
22:BA:819:A:N3	22:BA:1189:A:C2	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1007:C:OP1	31:BJ:39:LYS:HD2	2.10	0.52
22:BA:2393:U:C2'	22:BA:2394:C:O5'	2.58	0.52
32:BK:107:LEU:O	32:BK:109:SER:N	2.43	0.52
35:BN:69:ARG:O	35:BN:70:THR:HG23	2.10	0.52
53:B5:65:LEU:HD21	53:B5:191:ARG:CB	2.39	0.52
1:CA:109:A:C6	1:CA:327:A:C5	2.98	0.52
1:CA:455:G:C6	1:CA:456:A:C6	2.98	0.52
1:CA:518:C:H5''	1:CA:519:C:C6	2.45	0.52
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.09	0.52
1:CA:892:A:C5	1:CA:893:C:C5	2.98	0.52
1:CA:1053:G:O5'	1:CA:1054:C:H3'	2.09	0.52
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.10	0.52
1:CA:1458:G:O2'	20:CT:23:SER:HB3	2.09	0.52
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.45	0.52
13:CM:29:ARG:NH1	13:CM:59:GLU:O	2.43	0.52
14:CN:31:ILE:O	14:CN:33:ASP:N	2.43	0.52
22:DA:294:A:C6	22:DA:345:A:C4	2.97	0.52
22:DA:815:C:H2'	22:DA:816:C:C6	2.45	0.52
22:DA:1204:A:C2	22:DA:1240:U:N3	2.77	0.52
22:DA:2230:G:H5'	45:DX:30:LEU:HD13	1.92	0.52
22:DA:2297:A:N3	22:DA:2297:A:H2'	2.25	0.52
22:DA:2870:C:H5''	35:DN:65:LEU:HD21	1.92	0.52
29:DH:23:ALA:O	29:DH:27:ARG:N	2.38	0.52
33:DL:102:GLY:N	58:DL:301:HOH:O	2.43	0.52
37:DP:39:ARG:HA	37:DP:39:ARG:HE	1.74	0.52
41:DT:77:ARG:O	41:DT:78:SER:CB	2.57	0.52
47:DZ:10:THR:HG23	47:DZ:54:MET:C	2.30	0.52
50:D2:10:LEU:O	50:D2:14:ARG:HG3	2.10	0.52
1:AA:47:C:O2	1:AA:49:U:C5	2.62	0.51
1:AA:102:G:C2	1:AA:103:U:C5	2.98	0.51
1:AA:760:G:C5	1:AA:761:G:C8	2.98	0.51
1:AA:862:C:C2'	1:AA:863:U:H5'	2.40	0.51
1:AA:878:A:OP2	8:AH:80:ARG:NH1	2.43	0.51
1:AA:1171:A:C2	1:AA:1172:C:C2	2.98	0.51
1:AA:1367:C:OP2	9:AI:114:LYS:NZ	2.41	0.51
2:AB:169:GLU:O	2:AB:170:HIS:C	2.47	0.51
2:AB:206:ALA:O	2:AB:210:VAL:HG22	2.10	0.51
4:AD:125:VAL:O	4:AD:126:ASN:C	2.47	0.51
5:AE:13:GLU:CB	5:AE:39:VAL:HG12	2.41	0.51
6:AF:47:LEU:HD13	6:AF:51:ILE:HG23	1.91	0.51
22:BA:195:A:C6	22:BA:198:C:C5	2.97	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:225:C:H2'	22:BA:226:A:O4'	2.10	0.51
22:BA:1098:A:C8	22:BA:1099:G:N7	2.78	0.51
27:BF:85:ILE:O	27:BF:85:ILE:HG12	2.10	0.51
27:BF:103:LEU:O	27:BF:108:VAL:HB	2.10	0.51
30:BI:24:VAL:CG2	30:BI:28:LEU:HD23	2.40	0.51
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HB	1.92	0.51
1:CA:519:C:H2'	1:CA:520:A:O4'	2.10	0.51
3:CC:117:ALA:HB1	3:CC:187:SER:HB2	1.90	0.51
4:CD:26:ARG:CG	4:CD:27:ALA:N	2.73	0.51
12:CL:38:TYR:CB	12:CL:52:VAL:HG13	2.40	0.51
17:CQ:50:ASN:O	17:CQ:52:GLU:N	2.43	0.51
18:CR:25:ASP:OD1	18:CR:25:ASP:N	2.43	0.51
22:DA:425:G:N2	22:DA:426:C:N3	2.58	0.51
22:DA:522:A:C6	22:DA:523:C:N3	2.78	0.51
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.39	0.51
22:DA:973:A:O4'	22:DA:1188:U:C6	2.63	0.51
22:DA:1544:A:C6	22:DA:1545:A:N1	2.78	0.51
22:DA:1678:A:C5	22:DA:1679:A:C8	2.98	0.51
22:DA:1809:A:C6	22:DA:1810:A:C6	2.98	0.51
22:DA:1853:A:N3	22:DA:2233:U:O2'	2.37	0.51
22:DA:2209:G:C2	22:DA:2216:G:N3	2.78	0.51
22:DA:2221:G:C5	22:DA:2222:C:C5	2.98	0.51
25:DD:140:HIS:CE1	58:DD:303:HOH:O	2.63	0.51
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.10	0.51
30:DI:80:LEU:HA	30:DI:84:ALA:HB2	1.92	0.51
32:DK:71:ARG:HB3	32:DK:72:PRO:HD2	1.92	0.51
49:D1:5:ILE:HG22	49:D1:28:ARG:NH1	2.25	0.51
51:D3:4:ILE:HG21	51:D3:63:PRO:HG3	1.92	0.51
1:AA:601:G:H2'	1:AA:602:A:C8	2.44	0.51
1:AA:1315:U:C4	1:AA:1316:G:C6	2.98	0.51
2:AB:164:ILE:HD12	2:AB:210:VAL:CG1	2.41	0.51
9:AI:50:GLN:O	9:AI:52:LEU:N	2.42	0.51
14:AN:49:GLN:HA	14:AN:49:GLN:OE1	2.09	0.51
17:AQ:80:GLU:C	17:AQ:81:LYS:HD3	2.30	0.51
22:BA:307:G:N2	22:BA:309:A:H3'	2.25	0.51
22:BA:563:A:C2	22:BA:564:C:C2	2.99	0.51
22:BA:861:A:C2	22:BA:917:A:C4	2.99	0.51
22:BA:1056:G:C2	22:BA:1102:C:C5	2.98	0.51
22:BA:1730:C:O2'	22:BA:1731:G:C4	2.55	0.51
22:BA:1737:G:C6	22:BA:1738:G:N1	2.78	0.51
22:BA:2140:G:N3	22:BA:2140:G:H2'	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:21:ASN:O	27:BF:21:ASN:CG	2.48	0.51
49:B1:23:THR:OG1	49:B1:24:THR:N	2.44	0.51
1:CA:137:U:H1'	1:CA:227:G:N2	2.25	0.51
1:CA:151:A:H2'	1:CA:152:A:O4'	2.10	0.51
3:CC:172:ARG:HG3	3:CC:174:PRO:HD3	1.92	0.51
15:CO:67:LEU:O	15:CO:70:LEU:N	2.44	0.51
22:DA:169:G:C2	22:DA:170:U:C6	2.98	0.51
22:DA:176:A:N7	22:DA:177:G:C6	2.79	0.51
22:DA:195:A:C6	22:DA:198:C:C5	2.99	0.51
22:DA:270:A:C2	22:DA:369:U:H4'	2.46	0.51
22:DA:398:C:OP1	45:DX:53:ALA:CB	2.59	0.51
22:DA:856:G:H2'	22:DA:857:G:C8	2.44	0.51
22:DA:914:G:H5'	22:DA:915:C:OP2	2.10	0.51
22:DA:1049:C:H2'	22:DA:1050:A:H5'	1.92	0.51
22:DA:2174:C:H2'	22:DA:2175:C:O4'	2.09	0.51
42:DU:13:VAL:HG21	42:DU:39:ILE:CG2	2.40	0.51
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.92	0.51
1:AA:1255:G:O2'	1:AA:1258:G:N3	2.40	0.51
10:AJ:10:LEU:CD1	10:AJ:98:VAL:HG12	2.40	0.51
12:AL:23:ALA:O	12:AL:24:LEU:O	2.27	0.51
22:BA:547:A:H3'	22:BA:548:G:C5'	2.40	0.51
22:BA:1050:A:H2'	22:BA:1051:G:O4'	2.10	0.51
22:BA:1075:C:H2'	22:BA:1076:C:C2	2.46	0.51
22:BA:1171:G:N3	22:BA:1179:G:N1	2.57	0.51
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.10	0.51
22:BA:2882:A:OP1	35:BN:96:ARG:HD3	2.10	0.51
29:BH:99:ILE:O	29:BH:103:VAL:CG2	2.58	0.51
1:CA:74:A:C2	1:CA:75:G:C5	2.98	0.51
1:CA:620:C:N1	4:CD:132:ILE:HD13	2.25	0.51
1:CA:1072:G:C5	1:CA:1073:U:C5	2.99	0.51
1:CA:1240:U:C5	7:CG:109:ARG:NH1	2.78	0.51
2:CB:187:VAL:HG23	2:CB:188:ASP:O	2.09	0.51
8:CH:75:ILE:HD13	8:CH:129:VAL:HG22	1.92	0.51
17:CQ:8:LEU:HD13	17:CQ:73:TRP:CZ3	2.46	0.51
19:CS:31:LEU:O	19:CS:33:THR:N	2.42	0.51
22:DA:333:G:C5	22:DA:334:C:C5	2.99	0.51
22:DA:370:G:O2'	22:DA:423:A:H3'	2.09	0.51
22:DA:491:G:C6	22:DA:492:A:C5	2.98	0.51
22:DA:617:G:H2'	22:DA:618:G:O4'	2.10	0.51
22:DA:963:U:H2'	22:DA:964:C:C6	2.45	0.51
22:DA:1286:A:N6	22:DA:1329:U:C2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.10	0.51
22:DA:2145:C:H5''	22:DA:2146:C:P	2.51	0.51
22:DA:2284:A:O2'	22:DA:2288:A:N1	2.33	0.51
29:DH:121:VAL:O	29:DH:122:LEU:HB2	2.11	0.51
30:DI:76:ALA:HA	30:DI:79:LEU:HB2	1.91	0.51
31:DJ:142:ILE:OXT	31:DJ:142:ILE:HG23	2.10	0.51
37:DP:54:GLY:O	37:DP:77:HIS:NE2	2.44	0.51
37:DP:113:ARG:O	37:DP:114:LEU:C	2.48	0.51
50:D2:18:PHE:O	50:D2:21:ARG:N	2.44	0.51
51:D3:31:HIS:CE1	51:D3:32:ILE:CD1	2.94	0.51
1:AA:340:U:H2'	1:AA:341:C:C6	2.45	0.51
1:AA:374:A:C6	1:AA:375:U:C4	2.99	0.51
4:AD:26:ARG:HD2	4:AD:31:LYS:HE3	1.93	0.51
7:AG:13:LEU:HD22	7:AG:13:LEU:N	2.26	0.51
14:AN:4:GLN:O	14:AN:7:LYS:N	2.44	0.51
21:AU:12:PHE:N	21:AU:12:PHE:CD2	2.76	0.51
22:BA:244:A:C2	22:BA:255:A:C4	2.98	0.51
22:BA:2009:A:OP1	40:BS:41:LYS:HE2	2.11	0.51
22:BA:2298:A:C4	22:BA:2321:U:C5	2.98	0.51
23:BB:78:A:C2	23:BB:99:A:C4	2.98	0.51
24:BC:238:ARG:O	24:BC:239:ASN:ND2	2.43	0.51
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.10	0.51
26:BE:77:ILE:O	26:BE:77:ILE:CG1	2.58	0.51
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.40	0.51
44:BW:23:VAL:HA	44:BW:38:VAL:HG12	1.92	0.51
53:B5:50:ILE:HG22	53:B5:51:ASP:N	2.26	0.51
1:CA:686:U:O2'	1:CA:687:A:OP2	2.22	0.51
1:CA:743:A:C6	1:CA:744:C:C4	2.98	0.51
1:CA:963:G:C2'	1:CA:964:A:H5'	2.40	0.51
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.91	0.51
3:CC:145:GLY:O	3:CC:146:ALA:O	2.28	0.51
4:CD:74:ASN:HA	4:CD:77:LYS:HB2	1.92	0.51
12:CL:57:LEU:O	12:CL:58:THR:C	2.49	0.51
15:CO:35:GLN:NE2	15:CO:39:LEU:HD21	2.25	0.51
22:DA:491:G:C6	22:DA:492:A:C6	2.98	0.51
22:DA:621:A:C5	22:DA:622:G:H1'	2.45	0.51
22:DA:749:A:C6	22:DA:1618:A:C2	2.99	0.51
22:DA:1324:G:O4'	22:DA:1616:A:N6	2.43	0.51
22:DA:1620:G:C6	22:DA:1621:U:C4	2.99	0.51
33:DL:59:ARG:HB3	33:DL:59:ARG:CZ	2.40	0.51
35:DN:12:ARG:HG2	35:DN:16:HIS:HB3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:261:U:P	20:AT:71:LYS:HE2	2.51	0.51
1:AA:560:A:C6	5:AE:128:TYR:CE1	2.98	0.51
1:AA:992:U:O2	1:AA:1043:G:N7	2.44	0.51
8:AH:79:SER:HA	8:AH:85:ILE:HG12	1.92	0.51
11:AK:88:GLY:H	11:AK:114:THR:HG22	1.76	0.51
13:AM:15:ALA:O	13:AM:18:ALA:N	2.44	0.51
20:AT:44:LYS:NZ	20:AT:86:LEU:O	2.38	0.51
22:BA:283:G:N7	22:BA:284:U:C5	2.78	0.51
22:BA:304:U:H2'	22:BA:305:C:C6	2.46	0.51
22:BA:929:U:H1'	47:BZ:26:GLY:O	2.11	0.51
22:BA:2223:G:OP1	24:BC:171:TYR:OH	2.23	0.51
22:BA:2492:U:C2	22:BA:2493:U:C5	2.99	0.51
23:BB:63:C:C2	23:BB:64:G:C8	2.99	0.51
24:BC:28:LYS:HD3	24:BC:28:LYS:N	2.26	0.51
29:BH:85:GLY:HA2	29:BH:91:PHE:CE2	2.46	0.51
29:BH:94:ILE:CG2	29:BH:99:ILE:CG1	2.88	0.51
29:BH:110:VAL:HG22	29:BH:114:GLU:HB2	1.90	0.51
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.92	0.51
43:BV:61:LEU:HD13	43:BV:61:LEU:N	2.25	0.51
1:CA:16:A:C2'	1:CA:17:U:H5'	2.41	0.51
1:CA:213:G:C8	1:CA:214:C:C5	2.99	0.51
1:CA:756:C:H2'	1:CA:757:U:C5'	2.40	0.51
1:CA:927:G:O2'	1:CA:1503:A:N7	2.36	0.51
1:CA:1380:U:C5	7:CG:3:ARG:HA	2.45	0.51
2:CB:10:LEU:CD2	2:CB:12:ALA:O	2.58	0.51
2:CB:15:HIS:O	2:CB:16:PHE:C	2.48	0.51
3:CC:64:ILE:HG12	3:CC:66:VAL:HG23	1.92	0.51
5:CE:137:VAL:O	5:CE:138:ARG:CB	2.58	0.51
8:CH:10:MET:HE1	8:CH:36:ILE:HB	1.92	0.51
9:CI:13:LYS:O	9:CI:14:SER:HB3	2.10	0.51
9:CI:32:GLN:NE2	9:CI:64:TYR:OH	2.43	0.51
9:CI:88:MET:O	9:CI:88:MET:HG2	2.09	0.51
9:CI:120:LYS:CG	9:CI:123:ARG:HB3	2.40	0.51
22:DA:32:C:H5''	22:DA:33:C:OP2	2.10	0.51
22:DA:228:C:H4'	22:DA:229:C:H5''	1.91	0.51
22:DA:410:G:C2	22:DA:2407:A:C5	2.98	0.51
22:DA:415:A:C2	22:DA:2409:G:C6	2.98	0.51
22:DA:504:A:C2	22:DA:1234:U:H4'	2.46	0.51
22:DA:547:A:H3'	22:DA:548:G:C5'	2.40	0.51
22:DA:1435:G:C2'	22:DA:1436:G:H5'	2.41	0.51
22:DA:1651:G:C2	22:DA:2007:U:O2	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.41	0.51
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.92	0.51
22:DA:2019:A:H4'	38:DQ:34:VAL:HG22	1.92	0.51
27:DF:128:TYR:CG	27:DF:170:LEU:HD13	2.46	0.51
29:DH:26:ALA:HA	29:DH:30:LEU:HB2	1.92	0.51
29:DH:53:GLU:O	29:DH:54:LEU:C	2.49	0.51
30:DI:51:LYS:N	30:DI:51:LYS:HD3	2.24	0.51
46:DY:18:LEU:O	46:DY:22:LEU:CB	2.58	0.51
1:AA:651:C:C2'	1:AA:652:U:O5'	2.59	0.51
1:AA:1349:A:C6	1:AA:1374:A:C8	2.99	0.51
1:AA:1429:A:C2	1:AA:1430:A:N9	2.78	0.51
2:AB:14:VAL:HG23	2:AB:208:ARG:NH2	2.25	0.51
2:AB:59:LYS:O	2:AB:63:ARG:HG3	2.11	0.51
5:AE:136:VAL:O	5:AE:138:ARG:N	2.43	0.51
10:AJ:51:VAL:HB	14:AN:81:ARG:HB2	1.91	0.51
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.46	0.51
22:BA:1366:A:C5	22:BA:1367:A:C8	2.98	0.51
22:BA:1838:C:C5	22:BA:1899:A:C6	2.99	0.51
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.36	0.51
27:BF:106:ILE:C	27:BF:109:PRO:HD2	2.31	0.51
29:BH:100:ALA:CB	29:BH:112:LYS:HA	2.41	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:N	2.70	0.51
29:BH:132:PHE:O	29:BH:139:PHE:HB3	2.11	0.51
43:BV:14:LYS:CD	43:BV:18:ARG:NH1	2.73	0.51
1:CA:101:A:C4	1:CA:102:G:C8	2.98	0.51
1:CA:437:U:C4	1:CA:438:U:C5	2.99	0.51
1:CA:736:C:H2'	1:CA:737:C:C6	2.45	0.51
1:CA:1014:A:O4'	19:CS:34:TRP:CZ3	2.63	0.51
1:CA:1285:A:H4'	1:CA:1286:U:C5	2.46	0.51
2:CB:133:GLU:O	2:CB:137:ARG:HB3	2.10	0.51
4:CD:147:GLU:O	4:CD:150:LYS:HB3	2.11	0.51
10:CJ:91:ASP:O	10:CJ:92:LEU:HB2	2.11	0.51
12:CL:38:TYR:N	12:CL:52:VAL:O	2.43	0.51
20:CT:28:MET:HE3	20:CT:58:VAL:HG22	1.92	0.51
22:DA:38:A:H5'	26:DE:45:ALA:HB3	1.92	0.51
22:DA:531:C:C5	22:DA:2035:G:C2	2.98	0.51
22:DA:777:G:N7	22:DA:793:A:C2	2.78	0.51
22:DA:1319:C:H2'	22:DA:1320:C:H5'	1.91	0.51
22:DA:2111:U:C4	22:DA:2147:A:C2	2.99	0.51
22:DA:2341:G:C5	22:DA:2342:C:C4	2.99	0.51
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:6:GLN:O	30:DI:7:ALA:HB3	2.10	0.51
32:DK:31:ARG:HB3	32:DK:32:TYR:CE2	2.46	0.51
41:DT:59:ASN:O	41:DT:84:TYR:N	2.44	0.51
42:DU:44:LYS:HE3	42:DU:46:GLN:HB2	1.92	0.51
44:DW:56:ASP:O	44:DW:57:HIS:HB2	2.10	0.51
1:AA:139:A:C2'	1:AA:140:U:H5'	2.40	0.51
1:AA:201:G:C2	1:AA:217:C:O2	2.64	0.51
1:AA:702:A:H3'	1:AA:703:G:H5'	1.91	0.51
1:AA:921:U:H2'	1:AA:922:G:O4'	2.11	0.51
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.46	0.51
4:AD:151:LYS:HB3	4:AD:178:MET:HE3	1.93	0.51
5:AE:16:ILE:CG2	5:AE:110:ALA:HA	2.40	0.51
6:AF:98:GLU:O	6:AF:99:ALA:O	2.28	0.51
9:AI:52:LEU:HD13	9:AI:57:MET:HG3	1.93	0.51
21:AU:11:PRO:O	21:AU:12:PHE:CB	2.58	0.51
22:BA:142:A:N7	22:BA:143:C:C4	2.79	0.51
22:BA:478:A:C6	22:BA:480:A:C6	2.99	0.51
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.76	0.51
25:BD:150:GLN:O	25:BD:153:GLY:N	2.44	0.51
39:BR:39:LEU:CA	39:BR:49:ILE:HG23	2.41	0.51
1:CA:57:G:C5	1:CA:58:C:C4	2.98	0.51
1:CA:130:A:N1	1:CA:233:C:O2'	2.43	0.51
1:CA:1238:A:N3	1:CA:1241:G:O2'	2.38	0.51
1:CA:1255:G:N1	1:CA:1279:G:C8	2.79	0.51
1:CA:1347:G:O2'	1:CA:1348:U:P	2.68	0.51
3:CC:36:ASP:C	3:CC:38:LYS:H	2.14	0.51
3:CC:75:ILE:O	3:CC:75:ILE:HG13	2.10	0.51
7:CG:5:ARG:HA	7:CG:5:ARG:HE	1.75	0.51
8:CH:64:LYS:HB3	8:CH:71:VAL:HG21	1.93	0.51
14:CN:91:GLY:O	14:CN:93:ILE:N	2.43	0.51
16:CP:28:ARG:HG3	16:CP:29:ASN:OD1	2.10	0.51
20:CT:55:GLN:N	20:CT:56:PRO:HD2	2.26	0.51
22:DA:200:U:C4	22:DA:248:G:C2	2.98	0.51
22:DA:201:C:C4	22:DA:202:U:C5	2.98	0.51
22:DA:488:G:N2	22:DA:493:G:C6	2.79	0.51
22:DA:2335:A:C6	22:DA:2337:G:H1'	2.45	0.51
22:DA:2531:A:H5'	28:DG:157:TYR:CE2	2.45	0.51
26:DE:77:ILE:O	26:DE:77:ILE:CG1	2.59	0.51
30:DI:57:VAL:CG2	30:DI:69:PHE:HB2	2.40	0.51
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.10	0.51
39:DR:80:ARG:C	39:DR:82:HIS:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DZ:13:ALA:HB2	47:DZ:24:LEU:CD1	2.41	0.51
1:AA:475:C:H2'	1:AA:476:U:O4'	2.10	0.51
5:AE:74:VAL:HG23	5:AE:76:LEU:CD1	2.41	0.51
21:AU:34:ARG:O	21:AU:36:GLU:N	2.42	0.51
22:BA:13:A:N3	22:BA:15:G:C6	2.79	0.51
22:BA:277:G:O2'	22:BA:361:G:C6	2.57	0.51
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.45	0.51
22:BA:1791:A:O2'	24:BC:206:GLY:HA2	2.11	0.51
24:BC:25:HIS:CE1	24:BC:26:LYS:O	2.64	0.51
24:BC:125:LYS:HB2	24:BC:126:PRO:HD2	1.93	0.51
25:BD:4:LEU:HD21	25:BD:100:LEU:HB3	1.92	0.51
1:CA:298:A:H2'	1:CA:299:G:O4'	2.10	0.51
1:CA:1474:U:H2'	1:CA:1475:G:H5''	1.93	0.51
4:CD:32:CYS:O	4:CD:33:LYS:HB3	2.09	0.51
7:CG:4:ARG:HG3	7:CG:5:ARG:N	2.26	0.51
20:CT:60:ARG:O	20:CT:64:LYS:HB2	2.11	0.51
21:CU:12:PHE:N	21:CU:12:PHE:CD1	2.79	0.51
22:DA:195:A:C4	22:DA:198:C:N4	2.78	0.51
22:DA:471:A:OP1	26:DE:79:ARG:NH1	2.44	0.51
22:DA:563:A:C6	22:DA:2018:G:C4	2.99	0.51
22:DA:915:C:C4	22:DA:916:G:C5	2.99	0.51
22:DA:1029:A:N1	22:DA:2465:C:O2'	2.36	0.51
22:DA:1054:A:H2'	22:DA:1055:G:C8	2.46	0.51
22:DA:1096:A:C5	22:DA:1097:U:C5	2.99	0.51
22:DA:1246:A:O2'	26:DE:40:ARG:NH2	2.44	0.51
22:DA:1584:U:O2	22:DA:1584:U:H3'	2.10	0.51
22:DA:1731:G:C6	22:DA:1733:G:C5	2.99	0.51
22:DA:1916:A:H2'	22:DA:1917:U:O4'	2.09	0.51
22:DA:2127:G:N3	22:DA:2162:G:C8	2.79	0.51
22:DA:2645:G:H3'	22:DA:2646:C:C5'	2.41	0.51
23:DB:62:C:H2'	23:DB:63:C:C6	2.45	0.51
29:DH:5:LEU:HA	29:DH:36:ALA:HA	1.93	0.51
36:DO:49:VAL:HG21	36:DO:82:ALA:HA	1.93	0.51
44:DW:45:PHE:HB3	44:DW:80:ILE:HD12	1.92	0.51
1:AA:109:A:C6	1:AA:326:G:C6	2.99	0.51
1:AA:704:A:C6	1:AA:705:G:C4	2.99	0.51
1:AA:901:A:N7	1:AA:902:G:H1'	2.26	0.51
1:AA:1138:G:C2	1:AA:1140:C:C5	2.99	0.51
5:AE:97:GLN:HB3	5:AE:124:LEU:HD12	1.92	0.51
8:AH:47:GLU:N	8:AH:64:LYS:HG3	2.26	0.51
22:BA:958:U:OP2	34:BM:14:LYS:NZ	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:962:G:N2	22:BA:2250:G:H1	2.08	0.51
22:BA:1485:U:H2'	22:BA:1486:U:C6	2.45	0.51
22:BA:1917:U:O2	22:BA:1917:U:H2'	2.09	0.51
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.46	0.51
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.11	0.51
29:BH:83:LYS:HA	29:BH:148:ALA:HA	1.93	0.51
33:BL:77:ILE:HG23	33:BL:100:ILE:HD11	1.93	0.51
49:B1:17:THR:HG21	49:B1:43:VAL:HG13	1.92	0.51
1:CA:97:G:C5	1:CA:98:A:H1'	2.46	0.51
1:CA:355:C:H2'	1:CA:356:A:O4'	2.11	0.51
1:CA:1202:U:H2'	1:CA:1203:C:O4'	2.11	0.51
2:CB:53:ALA:O	2:CB:57:LEU:HB2	2.11	0.51
3:CC:40:ARG:HG2	3:CC:55:ILE:HD11	1.93	0.51
8:CH:21:ASN:O	8:CH:23:ALA:N	2.44	0.51
9:CI:21:ILE:HG12	9:CI:62:ASP:O	2.10	0.51
13:CM:14:HIS:HB2	13:CM:17:ILE:CD1	2.41	0.51
22:DA:321:U:OP2	26:DE:130:LYS:HA	2.11	0.51
22:DA:912:C:N4	22:DA:913:U:O4	2.44	0.51
22:DA:971:G:H2'	22:DA:972:A:O4'	2.09	0.51
22:DA:1831:G:C6	22:DA:1832:C:C4	2.99	0.51
22:DA:2331:G:C5	22:DA:2332:C:C5	2.99	0.51
22:DA:2845:U:H5''	37:DP:52:ASN:O	2.11	0.51
24:DC:92:ALA:HB3	24:DC:104:ILE:CD1	2.41	0.51
24:DC:141:VAL:HG13	24:DC:191:THR:O	2.11	0.51
25:DD:52:THR:OG1	25:DD:53:GLY:N	2.44	0.51
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.92	0.51
33:DL:68:SER:O	33:DL:69:ARG:CB	2.57	0.51
35:DN:28:LEU:HG	35:DN:28:LEU:O	2.11	0.51
41:DT:69:ARG:NH1	58:DT:102:HOH:O	2.43	0.51
1:AA:208:U:C6	1:AA:210:C:C4	2.99	0.51
1:AA:706:A:C5	1:AA:707:U:C5	2.98	0.51
1:AA:1037:C:H2'	1:AA:1038:C:C6	2.46	0.51
1:AA:1356:G:N2	1:AA:1357:A:C2	2.79	0.51
2:AB:72:THR:O	2:AB:73:LYS:CB	2.59	0.51
5:AE:74:VAL:HG23	5:AE:76:LEU:HD12	1.93	0.51
9:AI:120:LYS:HG3	9:AI:123:ARG:CB	2.41	0.51
14:AN:52:PRO:O	14:AN:53:ARG:HB3	2.11	0.51
22:BA:869:G:H2'	22:BA:870:U:O4'	2.11	0.51
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.11	0.51
22:BA:1161:C:H1'	39:BR:8:GLY:O	2.11	0.51
22:BA:1458:U:H5'	22:BA:1459:G:C2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1846:G:N2	22:BA:1895:C:C2	2.79	0.51
22:BA:2230:G:H1'	45:BX:32:ASN:OD1	2.11	0.51
29:BH:117:LEU:CD2	29:BH:121:VAL:CA	2.89	0.51
43:BV:8:VAL:HG23	43:BV:9:ARG:N	2.25	0.51
1:CA:39:G:C6	1:CA:40:C:C4	2.99	0.51
1:CA:374:A:OP1	1:CA:452:A:N1	2.43	0.51
1:CA:608:A:H2'	1:CA:609:A:O4'	2.12	0.51
1:CA:1048:G:OP2	58:CA:1849:HOH:O	2.20	0.51
2:CB:94:HIS:CD2	2:CB:146:ASN:HB2	2.45	0.51
2:CB:131:LYS:O	2:CB:135:LEU:N	2.44	0.51
8:CH:126:ILE:N	8:CH:126:ILE:HD12	2.26	0.51
11:CK:43:GLY:HA3	11:CK:74:VAL:HG12	1.93	0.51
12:CL:90:LEU:CB	12:CL:93:VAL:CG2	2.88	0.51
17:CQ:47:HIS:HB2	17:CQ:67:LEU:HD12	1.92	0.51
22:DA:85:G:OP2	42:DU:28:VAL:CG1	2.59	0.51
22:DA:228:C:N3	22:DA:418:C:O4'	2.44	0.51
22:DA:344:A:C2	22:DA:345:A:N7	2.79	0.51
22:DA:669:G:N2	22:DA:670:A:C2	2.79	0.51
22:DA:1559:U:H4'	22:DA:1560:G:OP2	2.10	0.51
22:DA:1596:A:N6	22:DA:1597:A:C6	2.79	0.51
22:DA:1651:G:N2	22:DA:2007:U:O2	2.45	0.51
22:DA:1674:G:N2	22:DA:1677:A:H61	2.08	0.51
22:DA:2127:G:N3	22:DA:2162:G:N7	2.59	0.51
24:DC:51:THR:CG2	24:DC:54:ILE:HD11	2.42	0.51
33:DL:93:ASN:O	33:DL:95:LEU:N	2.40	0.51
35:DN:29:VAL:HG13	35:DN:83:LEU:HD11	1.93	0.51
35:DN:54:LEU:HD21	35:DN:66:ALA:HB2	1.93	0.51
36:DO:36:TYR:N	36:DO:36:TYR:CD1	2.78	0.51
46:DY:27:ASN:HA	46:DY:30:MET:HB2	1.93	0.51
1:AA:1203:C:H4'	14:AN:67:THR:HG22	1.93	0.50
1:AA:1319:A:C8	1:AA:1323:G:C5	2.99	0.50
1:AA:1366:C:O2'	10:AJ:62:ARG:NH2	2.43	0.50
1:AA:1464:U:OP2	37:BP:109:ARG:NH1	2.45	0.50
3:AC:11:ARG:NH1	3:AC:182:ILE:HB	2.26	0.50
4:AD:197:GLU:O	4:AD:199:LEU:N	2.43	0.50
6:AF:36:ILE:HG23	6:AF:36:ILE:O	2.11	0.50
7:AG:49:THR:O	7:AG:53:ARG:CB	2.59	0.50
9:AI:58:VAL:O	9:AI:59:GLU:CG	2.59	0.50
10:AJ:65:TYR:HB3	14:AN:96:LEU:HD11	1.93	0.50
11:AK:31:ILE:HB	11:AK:46:THR:HG22	1.93	0.50
14:AN:20:TYR:CE1	14:AN:52:PRO:HG2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:44:LYS:HG2	20:AT:87:ALA:CB	2.41	0.50
22:BA:998:C:H2'	22:BA:999:U:O5'	2.11	0.50
22:BA:1542:U:H2'	22:BA:1543:G:O4'	2.11	0.50
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.11	0.50
29:BH:14:SER:OG	29:BH:17:ASP:OD1	2.29	0.50
45:BX:68:LEU:HD13	45:BX:78:TYR:CE1	2.46	0.50
1:CA:409:U:H2'	1:CA:410:G:O4'	2.11	0.50
1:CA:939:G:C6	1:CA:940:C:N4	2.79	0.50
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.45	0.50
5:CE:10:GLU:OE1	5:CE:10:GLU:N	2.44	0.50
5:CE:36:LEU:HD21	5:CE:137:VAL:HG11	1.93	0.50
7:CG:99:LEU:HB3	7:CG:103:TRP:CZ2	2.46	0.50
9:CI:54:LEU:O	9:CI:55:VAL:HG22	2.11	0.50
12:CL:61:PHE:N	12:CL:61:PHE:CD1	2.79	0.50
17:CQ:8:LEU:N	17:CQ:8:LEU:HD12	2.25	0.50
19:CS:50:ALA:HB1	19:CS:57:HIS:HB3	1.94	0.50
22:DA:77:G:OP1	46:DY:52:ARG:HD3	2.11	0.50
22:DA:126:A:C2	50:D2:18:PHE:CE2	3.00	0.50
22:DA:748:G:C8	40:DS:89:ALA:HB1	2.47	0.50
22:DA:807:U:OP2	33:DL:41:ARG:NH1	2.44	0.50
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.76	0.50
22:DA:1301:A:N6	22:DA:1303:G:C2	2.79	0.50
22:DA:1519:G:C2	22:DA:1520:U:H1'	2.47	0.50
22:DA:1567:G:C8	24:DC:83:TYR:CE1	2.99	0.50
22:DA:1627:G:N2	22:DA:1628:G:C5	2.79	0.50
22:DA:1805:A:C2	22:DA:1813:G:C2	2.99	0.50
22:DA:1946:U:H2'	22:DA:1947:C:C6	2.45	0.50
22:DA:2209:G:C6	22:DA:2210:U:C4	2.99	0.50
22:DA:2718:G:C6	22:DA:2719:G:C4	2.99	0.50
22:DA:2883:A:OP2	48:D0:49:TYR:OH	2.24	0.50
24:DC:33:LEU:O	24:DC:64:ILE:HD12	2.11	0.50
26:DE:75:SER:O	26:DE:78:TRP:HB2	2.11	0.50
33:DL:50:PHE:CE2	33:DL:52:GLY:O	2.63	0.50
33:DL:77:ILE:O	33:DL:110:VAL:O	2.29	0.50
38:DQ:86:ALA:O	38:DQ:87:SER:CB	2.58	0.50
1:AA:148:G:H2'	1:AA:149:A:O5'	2.12	0.50
1:AA:251:G:C6	1:AA:266:G:O6	2.64	0.50
1:AA:524:G:C6	1:AA:525:C:N4	2.79	0.50
1:AA:1107:C:C4	1:AA:1108:G:C8	3.00	0.50
2:AB:68:LEU:HD22	2:AB:70:VAL:HG23	1.93	0.50
2:AB:106:THR:O	2:AB:107:VAL:HG23	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:22:LYS:O	9:AI:62:ASP:HB2	2.10	0.50
11:AK:69:ARG:HD3	22:BA:2146:C:N3	2.26	0.50
11:AK:126:LYS:CA	21:AU:34:ARG:HH21	2.24	0.50
22:BA:64:A:H2'	22:BA:65:U:C6	2.46	0.50
22:BA:136:G:C2	22:BA:144:A:C6	2.98	0.50
22:BA:753:A:H2'	22:BA:754:U:H6	1.77	0.50
22:BA:1384:A:H5''	22:BA:1385:A:OP2	2.11	0.50
22:BA:1483:G:C6	22:BA:1484:U:C4	2.99	0.50
22:BA:1494:A:O2'	22:BA:1495:A:O5'	2.30	0.50
22:BA:2665:A:C2	22:BA:2666:C:N1	2.79	0.50
31:BJ:31:GLU:OE1	31:BJ:34:ARG:HD3	2.11	0.50
33:BL:63:LYS:HA	51:B3:13:ARG:HG3	1.93	0.50
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.47	0.50
1:CA:170:U:O2'	1:CA:171:A:H5'	2.11	0.50
1:CA:562:U:H2'	12:CL:14:ARG:HD3	1.91	0.50
1:CA:575:G:C6	1:CA:821:G:N7	2.80	0.50
1:CA:991:U:N3	1:CA:1212:U:O4'	2.45	0.50
1:CA:1296:C:H5''	1:CA:1297:G:OP2	2.11	0.50
1:CA:1343:G:O2'	9:CI:123:ARG:HD2	2.11	0.50
1:CA:1461:G:H2'	1:CA:1462:C:O4'	2.10	0.50
9:CI:30:ILE:HA	9:CI:65:ILE:O	2.10	0.50
17:CQ:81:LYS:CD	17:CQ:81:LYS:N	2.74	0.50
20:CT:67:ILE:O	20:CT:68:HIS:C	2.49	0.50
22:DA:58:G:C4	22:DA:70:G:N2	2.79	0.50
22:DA:122:G:H2'	22:DA:123:G:O4'	2.11	0.50
22:DA:289:G:N2	22:DA:352:A:C2	2.80	0.50
22:DA:295:G:N2	22:DA:296:U:C6	2.80	0.50
22:DA:570:G:C4	22:DA:2030:A:N7	2.80	0.50
22:DA:577:G:O2'	22:DA:1254:A:OP1	2.30	0.50
22:DA:1500:G:C6	22:DA:1501:G:N7	2.79	0.50
22:DA:1640:A:H2'	22:DA:1641:A:C8	2.46	0.50
22:DA:1791:A:H2'	22:DA:1792:G:H5'	1.93	0.50
24:DC:67:PHE:CE2	24:DC:156:ARG:NH2	2.79	0.50
25:DD:32:ASN:N	25:DD:96:ILE:O	2.44	0.50
33:DL:117:THR:HG22	33:DL:118:THR:N	2.25	0.50
41:DT:12:ARG:O	41:DT:13:ALA:HB2	2.11	0.50
1:AA:545:C:H5'	4:AD:69:GLU:CG	2.41	0.50
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.93	0.50
2:AB:51:ASN:O	2:AB:52:GLU:HB2	2.12	0.50
2:AB:64:LYS:HE2	2:AB:64:LYS:HA	1.92	0.50
3:AC:79:LYS:O	3:AC:82:GLU:HG3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:152:GLN:O	4:AD:153:SER:C	2.49	0.50
6:AF:4:TYR:CD2	6:AF:71:ILE:HD13	2.46	0.50
10:AJ:67:ILE:O	10:AJ:67:ILE:HG22	2.11	0.50
20:AT:44:LYS:CB	20:AT:87:ALA:HB1	2.41	0.50
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.11	0.50
22:BA:790:U:O2'	22:BA:791:C:P	2.69	0.50
22:BA:945:A:OP2	22:BA:945:A:H4'	2.12	0.50
22:BA:1070:A:H2'	22:BA:1097:U:OP1	2.11	0.50
25:BD:129:THR:HG23	25:BD:130:GLN:O	2.11	0.50
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.72	0.50
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.11	0.50
40:BS:17:VAL:HG12	40:BS:76:VAL:HG21	1.93	0.50
42:BU:38:GLY:N	42:BU:62:GLU:OE2	2.35	0.50
1:CA:79:G:N2	1:CA:91:U:O2	2.45	0.50
1:CA:206:C:C2'	1:CA:207:C:H5'	2.40	0.50
1:CA:373:A:C2	1:CA:374:A:C8	2.98	0.50
1:CA:436:C:C2	1:CA:437:U:C5	2.99	0.50
1:CA:573:A:C2	1:CA:574:A:C2	2.99	0.50
1:CA:673:A:H2'	1:CA:674:G:C8	2.46	0.50
1:CA:1309:G:C6	1:CA:1329:A:C2	2.99	0.50
1:CA:1321:U:C4	1:CA:1322:C:C5	2.99	0.50
14:CN:61:ARG:O	14:CN:62:ASN:CB	2.59	0.50
21:CU:37:PHE:CD1	21:CU:40:LYS:HE3	2.46	0.50
22:DA:753:A:H2'	22:DA:754:U:C6	2.46	0.50
22:DA:1791:A:O3'	24:DC:205:LEU:HB2	2.11	0.50
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.45	0.50
22:DA:2163:A:H2'	22:DA:2164:C:H4'	1.93	0.50
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.11	0.50
23:DB:39:A:H2'	23:DB:40:U:C6	2.46	0.50
26:DE:108:ILE:HD13	26:DE:181:ILE:HG12	1.93	0.50
29:DH:44:ILE:O	29:DH:48:GLU:HB2	2.11	0.50
30:DI:10:LYS:HB2	30:DI:56:PRO:HB3	1.93	0.50
30:DI:22:PRO:HB2	30:DI:23:PRO:HD3	1.94	0.50
30:DI:58:VAL:CG1	30:DI:59:ILE:H	2.24	0.50
48:D0:55:ILE:O	48:D0:56:ALA:HB3	2.11	0.50
1:AA:275:G:O3'	17:AQ:17:MET:HE2	2.11	0.50
1:AA:728:A:C6	1:AA:729:A:C6	3.00	0.50
1:AA:1201:A:H1'	1:AA:1202:U:OP2	2.11	0.50
4:AD:78:GLU:HG3	4:AD:93:LEU:HD21	1.93	0.50
8:AH:83:LEU:C	8:AH:83:LEU:HD22	2.32	0.50
11:AK:34:ILE:HG13	11:AK:70:CYS:SG	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:417:C:H2'	22:BA:418:C:C6	2.46	0.50
22:BA:454:A:H4'	22:BA:455:C:OP2	2.11	0.50
22:BA:1670:C:C5	22:BA:1671:U:C4	2.99	0.50
22:BA:1916:A:N9	22:BA:1917:U:H1'	2.26	0.50
22:BA:2526:G:C2'	52:B4:1:MET:H1	2.24	0.50
23:BB:110:C:C4	23:BB:111:U:C5	3.00	0.50
26:BE:149:ILE:HD12	26:BE:150:THR:N	2.26	0.50
29:BH:66:ASN:OD1	29:BH:138:VAL:HG21	2.11	0.50
35:BN:28:LEU:O	35:BN:32:GLU:N	2.44	0.50
37:BP:53:ARG:HH11	37:BP:53:ARG:HG2	1.77	0.50
37:BP:53:ARG:HH11	37:BP:53:ARG:HG3	1.76	0.50
43:BV:1:MET:SD	43:BV:1:MET:C	2.90	0.50
48:B0:55:ILE:HG22	48:B0:57:LYS:H	1.76	0.50
1:CA:642:A:H2'	1:CA:643:C:C6	2.46	0.50
1:CA:728:A:C8	15:CO:54:ARG:CZ	2.94	0.50
1:CA:1359:C:OP2	14:CN:75:ARG:NH1	2.45	0.50
4:CD:34:ILE:O	4:CD:34:ILE:HG23	2.10	0.50
5:CE:20:ARG:NH2	5:CE:31:PHE:CZ	2.79	0.50
14:CN:80:SER:O	14:CN:81:ARG:C	2.50	0.50
20:CT:48:GLN:OE1	20:CT:52:ASN:ND2	2.42	0.50
22:DA:12:U:O2	22:DA:12:U:C2'	2.59	0.50
22:DA:219:A:N6	22:DA:220:G:C6	2.80	0.50
22:DA:508:A:H3'	22:DA:509:C:H5'	1.93	0.50
22:DA:694:U:C3'	22:DA:695:G:H5''	2.41	0.50
22:DA:747:U:O4'	40:DS:92:ARG:NH1	2.44	0.50
22:DA:1317:G:H2'	22:DA:1318:U:O4'	2.11	0.50
22:DA:1343:G:C4	22:DA:1597:A:C6	3.00	0.50
22:DA:1544:A:N6	22:DA:1545:A:N1	2.58	0.50
22:DA:2060:A:O4'	22:DA:2502:G:H1'	2.11	0.50
22:DA:2109:U:H4'	22:DA:2110:G:OP1	2.10	0.50
22:DA:2297:A:N1	22:DA:2321:U:C5	2.80	0.50
24:DC:267:ILE:O	24:DC:267:ILE:HG22	2.12	0.50
40:DS:63:GLY:O	40:DS:64:ALA:HB3	2.11	0.50
44:DW:45:PHE:CD2	44:DW:80:ILE:HD11	2.46	0.50
1:AA:1143:G:C4	1:AA:1144:G:C8	2.99	0.50
2:AB:21:ARG:HA	2:AB:21:ARG:NH1	2.26	0.50
3:AC:64:ILE:CG2	3:AC:99:ALA:HB2	2.41	0.50
5:AE:60:ILE:HD13	5:AE:61:GLN:N	2.27	0.50
21:AU:11:PRO:C	21:AU:12:PHE:CD2	2.84	0.50
22:BA:624:C:O2'	22:BA:657:U:H5''	2.11	0.50
22:BA:769:U:C2	22:BA:770:G:C8	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:796:C:H2'	22:BA:797:G:C8	2.46	0.50
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.12	0.50
22:BA:2297:A:N1	22:BA:2321:U:C5	2.80	0.50
22:BA:2458:G:C2	22:BA:2490:G:N2	2.79	0.50
22:BA:2469:A:O2'	34:BM:55:ARG:NH1	2.45	0.50
22:BA:2609:U:H2'	54:B6:7:004:CB	2.42	0.50
27:BF:92:ARG:HA	27:BF:96:MET:HE2	1.93	0.50
30:BI:122:ILE:HG23	30:BI:125:MET:SD	2.52	0.50
45:BX:2:SER:O	45:BX:4:VAL:N	2.44	0.50
45:BX:43:GLU:OE2	45:BX:45:ARG:NH2	2.44	0.50
1:CA:374:A:C2	1:CA:375:U:C6	2.99	0.50
1:CA:484:G:C5	1:CA:486:U:H1'	2.46	0.50
1:CA:695:A:H2'	1:CA:696:A:C8	2.47	0.50
1:CA:756:C:O2'	1:CA:757:U:H5'	2.11	0.50
1:CA:951:G:C6	1:CA:952:U:C4	3.00	0.50
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.47	0.50
1:CA:1530:G:H2'	1:CA:1531:A:C8	2.47	0.50
2:CB:207:ILE:HD13	2:CB:207:ILE:N	2.26	0.50
4:CD:105:MET:SD	4:CD:143:VAL:CG1	3.00	0.50
4:CD:198:HIS:CE1	4:CD:199:LEU:CD2	2.95	0.50
5:CE:16:ILE:HD11	5:CE:38:VAL:HG23	1.92	0.50
5:CE:111:MET:HG3	5:CE:140:THR:HG21	1.93	0.50
12:CL:65:SER:OG	12:CL:97:THR:HG23	2.12	0.50
12:CL:68:GLY:O	12:CL:99:ARG:NH1	2.45	0.50
17:CQ:19:LYS:CD	17:CQ:49:GLU:HA	2.41	0.50
20:CT:80:THR:O	20:CT:83:ILE:HG13	2.11	0.50
22:DA:20:C:H2'	22:DA:21:A:C8	2.47	0.50
22:DA:21:A:N1	22:DA:520:G:C6	2.80	0.50
22:DA:532:A:H4'	22:DA:533:G:C8	2.46	0.50
22:DA:668:A:C2	22:DA:670:A:C6	3.00	0.50
22:DA:769:U:C4	22:DA:770:G:N7	2.79	0.50
22:DA:1364:G:C6	22:DA:1368:G:C6	2.99	0.50
22:DA:1566:A:N3	24:DC:213:TRP:CG	2.80	0.50
24:DC:57:GLY:O	24:DC:58:HIS:O	2.29	0.50
24:DC:68:LYS:HG2	24:DC:151:GLY:HA2	1.94	0.50
25:DD:101:PHE:HA	25:DD:104:VAL:HG13	1.94	0.50
25:DD:125:TRP:O	25:DD:126:ASN:HB2	2.11	0.50
27:DF:108:VAL:HG11	27:DF:176:PRO:CG	2.42	0.50
47:DZ:40:ASP:OD2	47:DZ:45:ARG:NH1	2.44	0.50
1:AA:1151:A:C4	1:AA:1152:A:N7	2.80	0.50
7:AG:137:LYS:O	7:AG:141:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:271:G:C4'	22:BA:272:A:OP1	2.59	0.50
22:BA:641:U:C5	22:BA:642:U:O4	2.64	0.50
22:BA:947:A:O2'	22:BA:984:A:H2	1.94	0.50
22:BA:1014:A:C5	22:BA:1015:U:C5	2.99	0.50
22:BA:1071:G:O2'	22:BA:1072:C:O4'	2.30	0.50
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.12	0.50
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.44	0.50
22:BA:1731:G:C5	22:BA:1733:G:N7	2.80	0.50
22:BA:1735:A:N3	22:BA:1735:A:H2'	2.26	0.50
22:BA:1866:A:C2	22:BA:1876:A:C5	3.00	0.50
22:BA:2217:G:O2'	22:BA:2218:G:H5'	2.11	0.50
22:BA:2506:U:C2	56:BA:3001:DOL:H472	2.46	0.50
29:BH:80:ILE:O	29:BH:147:VAL:N	2.44	0.50
39:BR:67:GLY:C	39:BR:93:PHE:CE2	2.84	0.50
41:BT:67:VAL:HG22	41:BT:76:ARG:HG2	1.92	0.50
51:B3:42:ARG:HG3	51:B3:45:ARG:NH2	2.27	0.50
1:CA:135:C:O2	16:CP:1:MET:HB2	2.12	0.50
1:CA:425:G:H2'	1:CA:426:U:O4'	2.11	0.50
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.45	0.50
1:CA:811:C:C5	1:CA:812:G:C6	3.00	0.50
1:CA:1345:U:N3	1:CA:1377:A:C2	2.80	0.50
4:CD:22:LYS:O	4:CD:23:SER:C	2.49	0.50
4:CD:116:GLN:HG3	4:CD:120:HIS:CE1	2.47	0.50
9:CI:57:MET:HB3	9:CI:61:LEU:CD2	2.42	0.50
13:CM:4:ILE:HA	13:CM:57:ARG:CZ	2.41	0.50
22:DA:532:A:N1	22:DA:2020:A:H1'	2.26	0.50
22:DA:777:G:N3	22:DA:778:G:C8	2.80	0.50
22:DA:825:A:H4'	22:DA:2428:G:C5	2.47	0.50
22:DA:1009:A:O2'	22:DA:1153:C:H4'	2.12	0.50
22:DA:1360:G:C6	22:DA:1372:U:C2	2.99	0.50
22:DA:1390:U:C2'	22:DA:1391:U:H5'	2.41	0.50
22:DA:1754:A:C6	22:DA:1755:A:C6	2.99	0.50
22:DA:2454:G:H1'	58:DA:3531:HOH:O	2.12	0.50
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.46	0.50
28:DG:87:LEU:HD12	28:DG:87:LEU:N	2.26	0.50
29:DH:5:LEU:HD11	29:DH:13:GLY:HA2	1.93	0.50
35:DN:36:THR:HG23	35:DN:41:ALA:HB2	1.94	0.50
41:DT:10:VAL:HG12	41:DT:11:LEU:N	2.26	0.50
1:AA:224:U:H2'	1:AA:225:C:C6	2.47	0.50
1:AA:453:G:H2'	1:AA:454:G:C8	2.47	0.50
1:AA:685:G:N1	1:AA:686:U:O4	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1520:C:C2	1:AA:1521:C:C5	3.00	0.50
2:AB:42:ASN:O	2:AB:44:GLU:N	2.45	0.50
2:AB:140:GLU:O	2:AB:144:LEU:HG	2.12	0.50
4:AD:65:TYR:CG	4:AD:94:LEU:HD22	2.47	0.50
4:AD:170:TRP:CD2	4:AD:186:PRO:HG3	2.47	0.50
5:AE:25:VAL:O	5:AE:26:LYS:C	2.50	0.50
11:AK:126:LYS:O	21:AU:34:ARG:NE	2.45	0.50
12:AL:44:LYS:HB3	12:AL:45:PRO:CD	2.41	0.50
20:AT:54:MET:HE1	20:AT:58:VAL:HG21	1.94	0.50
22:BA:102:U:C4	46:BY:2:LYS:HD2	2.47	0.50
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.41	0.50
22:BA:734:A:C4	22:BA:735:A:C8	3.00	0.50
22:BA:1168:G:H2'	22:BA:1169:A:O4'	2.12	0.50
22:BA:1586:A:N7	22:BA:1587:G:C8	2.80	0.50
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.41	0.50
22:BA:2376:A:N3	36:BO:111:ARG:NH1	2.60	0.50
47:BZ:24:LEU:HD11	47:BZ:54:MET:HE1	1.94	0.50
1:CA:453:G:H2'	1:CA:454:G:C8	2.47	0.50
1:CA:782:A:C8	1:CA:783:C:C5	2.99	0.50
1:CA:1034:G:H5'	1:CA:1035:A:OP2	2.11	0.50
1:CA:1228:C:H5'	13:CM:113:ARG:HB2	1.94	0.50
1:CA:1411:C:H2'	1:CA:1412:C:C6	2.46	0.50
2:CB:120:GLN:HG2	2:CB:125:THR:O	2.12	0.50
5:CE:35:ALA:O	5:CE:50:TYR:O	2.29	0.50
5:CE:153:VAL:HG23	5:CE:157:ARG:HB2	1.92	0.50
11:CK:52:PHE:CE2	11:CK:62:ALA:HB1	2.47	0.50
14:CN:80:SER:O	14:CN:83:LYS:N	2.44	0.50
16:CP:14:ARG:N	16:CP:15:PRO:HD2	2.25	0.50
22:DA:64:A:H2'	22:DA:65:U:O4'	2.12	0.50
22:DA:392:U:H2'	22:DA:393:C:C6	2.47	0.50
22:DA:586:A:H1'	22:DA:672:C:H1'	1.93	0.50
22:DA:1351:C:C2	22:DA:1381:G:C2	3.00	0.50
22:DA:1930:G:O2'	22:DA:1931:U:P	2.69	0.50
22:DA:2013:A:N6	22:DA:2014:A:C6	2.80	0.50
22:DA:2250:G:C2	34:DM:82:MET:HB2	2.47	0.50
22:DA:2308:G:C5'	22:DA:2309:A:OP2	2.60	0.50
22:DA:2379:G:H4'	36:DO:21:LEU:HD11	1.94	0.50
22:DA:2461:A:C2	22:DA:2490:G:N2	2.80	0.50
22:DA:2546:U:O4'	22:DA:2565:A:C2	2.65	0.50
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.12	0.50
28:DG:19:ILE:O	28:DG:21:GLY:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:33:ARG:O	36:DO:34:HIS:CG	2.64	0.50
42:DU:44:LYS:O	42:DU:58:ILE:HA	2.12	0.50
1:AA:202:G:O2'	1:AA:468:A:H2'	2.11	0.50
1:AA:520:A:N1	1:AA:536:C:H1'	2.27	0.50
1:AA:568:G:C4	1:AA:569:C:C5	2.99	0.50
1:AA:872:A:C4	1:AA:874:G:C8	3.00	0.50
1:AA:876:C:OP1	8:AH:76:GLN:NE2	2.44	0.50
1:AA:927:G:N1	1:AA:1391:U:O2	2.45	0.50
1:AA:1010:U:H2'	1:AA:1011:C:C6	2.46	0.50
1:AA:1029:U:O2'	1:AA:1032:G:O6	2.30	0.50
5:AE:46:VAL:HG21	5:AE:118:ALA:CB	2.41	0.50
6:AF:35:LYS:HD3	6:AF:35:LYS:N	2.26	0.50
9:AI:113:ARG:NH2	14:AN:101:TRP:CZ2	2.79	0.50
13:AM:33:ILE:HG23	13:AM:59:GLU:HB3	1.94	0.50
16:AP:70:ARG:HD2	16:AP:70:ARG:O	2.12	0.50
22:BA:15:G:C6	22:BA:16:C:C4	3.00	0.50
22:BA:226:A:C6	22:BA:227:A:C6	3.00	0.50
22:BA:362:A:C8	22:BA:362:A:OP2	2.65	0.50
22:BA:510:C:OP1	22:BA:512:G:O6	2.30	0.50
22:BA:693:A:O2'	22:BA:694:U:H5'	2.11	0.50
22:BA:1153:C:OP1	38:BQ:92:ARG:NH1	2.45	0.50
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.11	0.50
24:BC:141:VAL:HG12	24:BC:142:HIS:H	1.76	0.50
25:BD:99:GLU:HG2	25:BD:182:ALA:HB2	1.94	0.50
37:BP:22:PRO:HD3	37:BP:50:ILE:HD12	1.94	0.50
1:CA:687:A:O2'	1:CA:701:U:O4	2.11	0.50
1:CA:756:C:H2'	1:CA:757:U:H5'	1.94	0.50
2:CB:167:ASP:HA	2:CB:170:HIS:HB3	1.94	0.50
4:CD:58:LYS:NZ	4:CD:59:GLN:OE1	2.41	0.50
7:CG:148:ASN:O	7:CG:151:PHE:N	2.43	0.50
22:DA:477:A:C2'	22:DA:478:A:O5'	2.59	0.50
22:DA:526:A:C6	22:DA:2626:C:H4'	2.46	0.50
22:DA:695:G:C5	22:DA:768:G:C6	2.99	0.50
22:DA:747:U:C5	22:DA:2613:U:C5	2.99	0.50
22:DA:1310:G:H1'	22:DA:1611:C:H5''	1.93	0.50
22:DA:1383:A:C2	22:DA:1384:A:C4	2.99	0.50
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.47	0.50
22:DA:1654:A:OP2	35:DN:1:MET:N	2.43	0.50
22:DA:2199:A:N7	22:DA:2225:A:C6	2.80	0.50
22:DA:2308:G:O6	22:DA:2311:A:N7	2.45	0.50
22:DA:2544:G:H5'	22:DA:2645:G:C2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2824:C:N4	22:DA:2825:G:C5	2.80	0.50
23:DB:39:A:N6	23:DB:44:G:C6	2.79	0.50
24:DC:171:TYR:CD2	24:DC:185:GLU:HA	2.47	0.50
27:DF:108:VAL:N	27:DF:109:PRO:CD	2.75	0.50
45:DX:51:VAL:HG23	45:DX:52:SER:N	2.27	0.50
1:AA:575:G:H4'	1:AA:576:C:OP1	2.12	0.50
1:AA:601:G:C6	1:AA:602:A:C6	3.00	0.50
1:AA:614:C:H2'	1:AA:615:G:O5'	2.11	0.50
1:AA:803:G:C6	1:AA:804:U:N3	2.80	0.50
1:AA:1179:A:H2'	1:AA:1180:A:O4'	2.12	0.50
1:AA:1287:A:C6	1:AA:1288:A:C6	2.99	0.50
3:AC:85:GLU:O	3:AC:87:LEU:N	2.45	0.50
11:AK:55:SER:O	11:AK:57:LYS:N	2.44	0.50
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.94	0.50
22:BA:1695:G:C8	24:BC:8:PRO:HG2	2.46	0.50
22:BA:1870:C:H4'	22:BA:1871:A:OP2	2.12	0.50
22:BA:2547:A:C2	22:BA:2562:U:C2	3.00	0.50
22:BA:2714:G:C2'	22:BA:2715:C:H5'	2.42	0.50
26:BE:15:SER:N	26:BE:197:GLU:OE2	2.45	0.50
26:BE:29:HIS:CE1	26:BE:33:VAL:HG21	2.46	0.50
26:BE:48:THR:C	26:BE:50:ALA:N	2.63	0.50
32:BK:58:LEU:HD23	32:BK:59:LYS:O	2.12	0.50
35:BN:60:VAL:O	35:BN:61:ALA:C	2.50	0.50
46:BY:20:ASN:O	46:BY:24:GLU:HB2	2.11	0.50
1:CA:4:U:O2	1:CA:4:U:H2'	2.11	0.50
1:CA:174:A:C4	1:CA:175:C:C6	2.99	0.50
1:CA:263:A:P	20:CT:74:ARG:NH1	2.85	0.50
1:CA:717:U:O2'	1:CA:734:G:O4'	2.24	0.50
1:CA:756:C:C2'	1:CA:757:U:H5'	2.42	0.50
1:CA:840:C:C4	1:CA:842:U:H4'	2.47	0.50
1:CA:1002:G:C6	1:CA:1039:G:C2	2.99	0.50
2:CB:68:LEU:HD22	2:CB:70:VAL:HG23	1.93	0.50
2:CB:90:PHE:CZ	2:CB:154:MET:HA	2.47	0.50
8:CH:30:SER:O	8:CH:34:VAL:HG23	2.12	0.50
9:CI:116:VAL:HG21	10:CJ:62:ARG:HD3	1.93	0.50
11:CK:33:THR:HG22	11:CK:33:THR:O	2.11	0.50
11:CK:107:ILE:C	11:CK:107:ILE:HD13	2.32	0.50
19:CS:73:GLU:HB2	19:CS:74:PHE:CE1	2.47	0.50
21:CU:28:VAL:O	21:CU:32:VAL:HG23	2.11	0.50
22:DA:301:G:C2	22:DA:302:C:C2	3.00	0.50
22:DA:397:U:OP1	45:DX:31:PRO:HA	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1243:C:H2'	22:DA:1244:A:O4'	2.12	0.50
22:DA:1301:A:H2'	22:DA:1301:A:N3	2.27	0.50
22:DA:1454:C:H5'	35:DN:63:ARG:HD3	1.93	0.50
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.47	0.50
22:DA:1855:U:C5	22:DA:1856:U:C4	3.00	0.50
22:DA:1876:A:C8	22:DA:1877:A:N7	2.80	0.50
22:DA:2024:G:C4	22:DA:2040:G:N2	2.80	0.50
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.47	0.50
22:DA:2473:U:O2	22:DA:2473:U:H2'	2.10	0.50
23:DB:42:C:O2'	27:DF:63:GLN:NE2	2.45	0.50
26:DE:108:ILE:HD12	26:DE:108:ILE:O	2.12	0.50
27:DF:121:SER:O	27:DF:123:ASP:N	2.44	0.50
28:DG:91:GLY:O	28:DG:94:TYR:CD1	2.65	0.50
32:DK:47:ILE:HB	32:DK:48:PRO:HD2	1.93	0.50
33:DL:94:THR:O	33:DL:98:ALA:N	2.45	0.50
38:DQ:76:TYR:CZ	38:DQ:80:ILE:HG13	2.47	0.50
49:D1:10:LYS:O	49:D1:51:GLU:CG	2.60	0.50
1:AA:2:A:C6	1:AA:3:A:N1	2.80	0.49
1:AA:858:G:C2'	1:AA:859:G:H5'	2.42	0.49
1:AA:939:G:H2'	1:AA:940:C:C6	2.47	0.49
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.34	0.49
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.12	0.49
3:AC:149:ILE:HG12	3:AC:150:LYS:N	2.27	0.49
4:AD:195:ILE:O	4:AD:195:ILE:HG13	2.11	0.49
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.26	0.49
10:AJ:56:HIS:O	10:AJ:57:VAL:CG1	2.60	0.49
12:AL:88:LYS:O	12:AL:88:LYS:HG3	2.11	0.49
22:BA:26:G:H1'	22:BA:514:A:N6	2.27	0.49
22:BA:641:U:C5	22:BA:642:U:C4	3.00	0.49
22:BA:819:A:H1'	22:BA:1189:A:N1	2.26	0.49
22:BA:933:A:H5'	22:BA:934:U:OP2	2.12	0.49
22:BA:1712:U:C4	22:BA:1713:A:C5	3.00	0.49
22:BA:2127:G:H4'	22:BA:2128:G:OP1	2.11	0.49
22:BA:2307:G:N3	22:BA:2308:G:O6	2.45	0.49
22:BA:2309:A:N6	22:BA:2310:C:N4	2.60	0.49
22:BA:2552:U:C2	22:BA:2554:U:H5'	2.48	0.49
22:BA:2728:U:HO2'	22:BA:2729:G:P	2.30	0.49
22:BA:2869:G:H2'	22:BA:2870:C:O4'	2.11	0.49
26:BE:171:ASP:OD1	26:BE:173:THR:N	2.44	0.49
29:BH:43:ASN:O	29:BH:46:PHE:HB3	2.12	0.49
29:BH:86:ASP:O	29:BH:87:GLU:HB2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BM:42:THR:HG22	34:BM:93:VAL:CG1	2.42	0.49
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.93	0.49
38:BQ:58:ARG:HA	38:BQ:61:TRP:CE3	2.47	0.49
40:BS:28:LYS:O	40:BS:31:GLN:N	2.45	0.49
1:CA:157:U:O2	1:CA:165:G:C2	2.64	0.49
1:CA:158:G:C5	1:CA:164:G:C6	2.99	0.49
1:CA:256:U:H2'	1:CA:257:G:O4'	2.12	0.49
1:CA:408:A:H2'	1:CA:409:U:O4'	2.12	0.49
1:CA:1055:A:C6	1:CA:1206:G:C5	3.00	0.49
7:CG:101:MET:HA	7:CG:104:ILE:HD12	1.94	0.49
12:CL:90:LEU:HB3	12:CL:93:VAL:HG21	1.94	0.49
17:CQ:60:GLU:HB3	17:CQ:76:VAL:HG23	1.94	0.49
22:DA:621:A:C6	22:DA:622:G:H1'	2.47	0.49
22:DA:679:C:H2'	22:DA:680:C:H6	1.77	0.49
22:DA:753:A:C2	22:DA:754:U:C2	3.00	0.49
22:DA:1340:U:H4'	22:DA:1341:G:OP2	2.12	0.49
22:DA:1456:G:C6	22:DA:1457:U:C4	2.99	0.49
22:DA:1911:U:H2'	22:DA:1918:A:C2	2.47	0.49
22:DA:2067:G:C6	22:DA:2444:G:C2	3.00	0.49
22:DA:2156:G:C6	22:DA:2157:G:C2	3.00	0.49
22:DA:2539:C:H4'	52:D4:3:VAL:HG11	1.94	0.49
29:DH:127:GLU:HG3	29:DH:145:ASN:HA	1.93	0.49
46:DY:31:GLN:HG2	46:DY:36:GLN:HB2	1.95	0.49
1:AA:978:A:C4	1:AA:1319:A:C2	3.00	0.49
1:AA:1027:C:C5	1:AA:1028:C:N4	2.80	0.49
1:AA:1048:G:N3	1:AA:1050:G:C8	2.80	0.49
2:AB:54:LEU:HD12	2:AB:220:THR:HG21	1.94	0.49
3:AC:92:ALA:HB2	3:AC:99:ALA:HB3	1.94	0.49
7:AG:64:VAL:O	7:AG:65:ALA:C	2.51	0.49
10:AJ:32:THR:OG1	10:AJ:33:GLY:N	2.39	0.49
12:AL:86:ARG:CZ	12:AL:88:LYS:HB3	2.41	0.49
22:BA:1022:G:C5	22:BA:1140:C:C4	3.00	0.49
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.12	0.49
26:BE:79:ARG:CG	26:BE:79:ARG:HH11	2.23	0.49
30:BI:75:PRO:O	30:BI:79:LEU:HD12	2.11	0.49
33:BL:62:PRO:HB2	51:B3:30:ARG:NH2	2.26	0.49
44:BW:52:GLY:HA3	44:BW:60:PHE:CE2	2.48	0.49
1:CA:71:A:C6	1:CA:72:A:N7	2.80	0.49
1:CA:104:G:C2	1:CA:105:G:C8	3.00	0.49
1:CA:106:C:O2	1:CA:379:C:C5'	2.59	0.49
1:CA:580:C:H2'	1:CA:581:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:609:A:N7	58:CA:1799:HOH:O	2.33	0.49
1:CA:609:A:N7	1:CA:610:U:C5	2.81	0.49
1:CA:1114:C:O2'	14:CN:100:SER:O	2.24	0.49
1:CA:1167:A:C8	1:CA:1169:A:C5	2.99	0.49
1:CA:1363:A:H2'	1:CA:1363:A:N3	2.27	0.49
1:CA:1423:G:H2'	1:CA:1424:U:O4'	2.12	0.49
2:CB:123:ASP:O	2:CB:124:GLY:C	2.51	0.49
3:CC:42:TYR:CZ	3:CC:46:GLU:HG3	2.47	0.49
3:CC:69:HIS:HA	3:CC:104:ALA:HB3	1.93	0.49
3:CC:83:ASP:O	3:CC:84:VAL:C	2.51	0.49
5:CE:83:HIS:NE2	8:CH:96:MET:HE3	2.27	0.49
6:CF:86:ARG:HH11	6:CF:86:ARG:HG2	1.77	0.49
11:CK:82:LEU:HD22	11:CK:105:PHE:HB3	1.94	0.49
14:CN:62:ASN:HB3	14:CN:73:PHE:CD1	2.48	0.49
22:DA:35:G:O2'	22:DA:451:U:O4	2.30	0.49
22:DA:36:G:H4'	22:DA:451:U:C2	2.48	0.49
22:DA:443:A:N7	26:DE:40:ARG:CG	2.75	0.49
22:DA:600:G:OP1	26:DE:24:ASN:ND2	2.42	0.49
22:DA:776:G:C8	22:DA:793:A:C5	3.00	0.49
22:DA:864:G:O6	22:DA:865:C:N4	2.45	0.49
22:DA:2283:C:C2'	22:DA:2284:A:H5'	2.42	0.49
25:DD:150:GLN:C	25:DD:151:THR:O	2.50	0.49
35:DN:69:ARG:O	35:DN:70:THR:HG23	2.12	0.49
39:DR:14:VAL:CG2	39:DR:98:ILE:HG13	2.42	0.49
1:AA:142:G:H2'	1:AA:142:G:N3	2.27	0.49
1:AA:662:U:H2'	1:AA:663:A:C8	2.46	0.49
2:AB:63:ARG:O	2:AB:64:LYS:CB	2.56	0.49
2:AB:88:ASP:C	2:AB:89:GLN:HG3	2.31	0.49
4:AD:138:SER:HB2	4:AD:139:PRO:HD2	1.94	0.49
22:BA:894:U:H2'	22:BA:895:U:C6	2.46	0.49
22:BA:1171:G:C6	22:BA:1172:C:N3	2.80	0.49
22:BA:1180:U:C2'	22:BA:1181:U:H5'	2.42	0.49
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.95	0.49
22:BA:1909:C:C4	22:BA:1921:G:O6	2.66	0.49
26:BE:104:ALA:O	26:BE:108:ILE:HG23	2.13	0.49
27:BF:69:LYS:N	27:BF:69:LYS:HD2	2.27	0.49
29:BH:99:ILE:O	29:BH:99:ILE:HG22	2.12	0.49
30:BI:116:ASP:OD2	30:BI:117:MET:N	2.45	0.49
53:B5:73:VAL:CG2	53:B5:162:ILE:CB	2.90	0.49
1:CA:242:G:N2	1:CA:285:C:C2	2.80	0.49
1:CA:375:U:N3	1:CA:376:G:N7	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:577:G:C2	1:CA:578:C:C6	3.00	0.49
1:CA:1240:U:OP2	7:CG:116:MET:N	2.44	0.49
1:CA:1244:G:C6	1:CA:1245:C:N4	2.81	0.49
1:CA:1261:A:C2	1:CA:1262:C:C5	3.01	0.49
1:CA:1273:C:H2'	1:CA:1274:A:O4'	2.12	0.49
5:CE:101:GLU:C	5:CE:103:THR:N	2.64	0.49
7:CG:92:ARG:NE	7:CG:93:PRO:HD2	2.27	0.49
17:CQ:70:THR:O	17:CQ:71:LYS:C	2.49	0.49
19:CS:40:ILE:HA	19:CS:44:MET:SD	2.52	0.49
19:CS:55:ARG:CZ	19:CS:79:THR:HG22	2.42	0.49
22:DA:104:A:H2'	22:DA:105:C:O4'	2.12	0.49
22:DA:136:G:N2	22:DA:144:A:N7	2.61	0.49
22:DA:819:A:C8	22:DA:1188:U:O4	2.64	0.49
22:DA:1299:G:H5''	22:DA:1300:G:H5''	1.93	0.49
22:DA:1360:G:O6	22:DA:1372:U:C2	2.65	0.49
22:DA:1378:A:N3	22:DA:1379:U:H2'	2.27	0.49
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.12	0.49
22:DA:1869:G:C3'	22:DA:1870:C:H5'	2.43	0.49
22:DA:2209:G:C5	22:DA:2210:U:C4	3.00	0.49
22:DA:2392:A:OP2	51:D3:31:HIS:CE1	2.65	0.49
22:DA:2747:G:C2	22:DA:2756:U:C5	3.00	0.49
22:DA:2824:C:C4	22:DA:2825:G:C5	3.01	0.49
24:DC:240:PHE:CE1	24:DC:242:LYS:O	2.65	0.49
25:DD:183:GLU:OE1	25:DD:183:GLU:N	2.45	0.49
26:DE:150:THR:O	26:DE:172:ALA:HB2	2.12	0.49
30:DI:37:GLU:OE1	30:DI:65:ARG:NH2	2.45	0.49
35:DN:1:MET:CE	35:DN:1:MET:N	2.75	0.49
43:DV:80:HIS:CE1	43:DV:83:LYS:HB2	2.47	0.49
1:AA:8:A:N6	4:AD:202:GLU:O	2.45	0.49
1:AA:1005:A:N6	1:AA:1006:G:N2	2.61	0.49
1:AA:1005:A:H4'	1:AA:1037:C:H1'	1.94	0.49
2:AB:163:VAL:HG22	2:AB:185:ALA:HB1	1.94	0.49
4:AD:3:ARG:NH2	4:AD:115:ARG:HD3	2.28	0.49
4:AD:120:HIS:O	4:AD:122:ALA:N	2.45	0.49
11:AK:126:LYS:HA	21:AU:34:ARG:HH21	1.77	0.49
18:AR:52:GLN:OE1	18:AR:52:GLN:HA	2.12	0.49
22:BA:84:A:H4'	22:BA:85:G:O5'	2.12	0.49
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.94	0.49
22:BA:1177:G:C2'	22:BA:1178:C:O5'	2.60	0.49
22:BA:2531:A:OP2	28:BG:174:ALA:O	2.30	0.49
22:BA:2688:G:N1	22:BA:2720:U:OP2	2.37	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:17:VAL:HB	24:BC:204:VAL:HG13	1.94	0.49
24:BC:167:ARG:O	24:BC:168:ASP:CB	2.58	0.49
38:BQ:79:PHE:CZ	38:BQ:83:LEU:HD11	2.48	0.49
1:CA:237:G:C6	1:CA:238:A:C5	3.01	0.49
1:CA:238:A:O2'	1:CA:239:U:H5'	2.13	0.49
1:CA:527:G:N1	1:CA:528:C:C5	2.80	0.49
1:CA:861:G:C5	1:CA:862:C:C5	3.00	0.49
1:CA:1088:G:C4	1:CA:1089:G:C8	3.00	0.49
2:CB:93:ASN:OD1	2:CB:94:HIS:ND1	2.46	0.49
5:CE:147:MET:HG2	5:CE:147:MET:O	2.12	0.49
5:CE:154:ALA:C	5:CE:156:LYS:N	2.66	0.49
7:CG:51:ALA:CB	7:CG:58:GLU:HA	2.43	0.49
7:CG:126:ASP:N	7:CG:126:ASP:OD1	2.45	0.49
8:CH:2:SER:C	8:CH:4:GLN:H	2.14	0.49
9:CI:101:ALA:HB1	9:CI:103:PHE:CZ	2.47	0.49
12:CL:74:LEU:HD11	12:CL:80:ILE:HG21	1.94	0.49
19:CS:66:MET:O	19:CS:68:GLY:N	2.46	0.49
22:DA:241:A:N1	22:DA:255:A:H5''	2.27	0.49
22:DA:307:G:N2	22:DA:310:A:C8	2.81	0.49
22:DA:528:A:N1	22:DA:2042:A:H2'	2.27	0.49
22:DA:861:A:H2'	22:DA:862:G:O4'	2.12	0.49
22:DA:937:C:H2'	22:DA:938:G:C8	2.47	0.49
22:DA:1087:G:N1	22:DA:1089:A:C2	2.80	0.49
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.47	0.49
22:DA:1330:C:O2'	22:DA:1331:G:H5'	2.11	0.49
22:DA:1663:G:C6	22:DA:1992:G:C8	2.99	0.49
22:DA:1695:G:H3'	22:DA:1695:G:N3	2.27	0.49
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.27	0.49
22:DA:2121:G:C2	22:DA:2122:U:C2	3.01	0.49
22:DA:2808:G:N2	22:DA:2891:U:C6	2.81	0.49
27:DF:147:ASP:O	27:DF:148:ARG:HB2	2.13	0.49
29:DH:81:ALA:C	29:DH:149:GLU:HB3	2.33	0.49
30:DI:53:LEU:HG	30:DI:82:LYS:HE2	1.93	0.49
47:DZ:14:ILE:HG22	47:DZ:15:GLY:N	2.27	0.49
1:AA:149:A:C2	1:AA:150:U:C2	3.00	0.49
1:AA:299:G:H2'	1:AA:300:A:C8	2.47	0.49
1:AA:402:G:C6	1:AA:403:C:C4	3.00	0.49
1:AA:760:G:N7	1:AA:761:G:N7	2.59	0.49
1:AA:923:A:O4'	1:AA:1398:A:C2	2.65	0.49
1:AA:1314:C:H41	19:AS:4:SER:HA	1.77	0.49
1:AA:1349:A:C2	1:AA:1374:A:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1539:C:H5''	21:AU:18:ARG:HG3	1.93	0.49
2:AB:133:GLU:O	2:AB:137:ARG:HB2	2.11	0.49
3:AC:3:GLN:OE1	3:AC:3:GLN:N	2.45	0.49
7:AG:27:VAL:HG23	7:AG:28:ASN:N	2.28	0.49
7:AG:71:PRO:O	7:AG:96:ARG:HG3	2.12	0.49
11:AK:31:ILE:O	11:AK:31:ILE:HG13	2.12	0.49
16:AP:79:ASN:O	16:AP:80:LYS:HE3	2.13	0.49
22:BA:437:U:H2'	22:BA:438:G:C8	2.46	0.49
22:BA:1026:G:H1'	22:BA:1134:A:C2	2.48	0.49
22:BA:1586:A:C8	22:BA:1587:G:C8	3.00	0.49
22:BA:1846:G:H2'	22:BA:1847:A:C4	2.47	0.49
22:BA:2131:U:OP2	22:BA:2132:U:C6	2.66	0.49
22:BA:2532:G:N2	22:BA:2663:G:O2'	2.46	0.49
25:BD:85:ALA:O	25:BD:86:GLU:C	2.50	0.49
29:BH:123:ARG:HD3	1:CA:358:U:OP1	2.12	0.49
35:BN:25:ALA:HB1	35:BN:48:VAL:HG22	1.93	0.49
39:BR:49:ILE:CB	39:BR:52:PRO:C	2.79	0.49
48:B0:30:VAL:HG12	48:B0:35:GLY:HA2	1.95	0.49
1:CA:411:A:C6	1:CA:429:U:C5	3.00	0.49
1:CA:579:A:C4	1:CA:763:G:N2	2.80	0.49
1:CA:794:A:H2'	1:CA:795:C:C6	2.47	0.49
1:CA:945:G:H2'	1:CA:945:G:N3	2.26	0.49
1:CA:1014:A:N7	1:CA:1015:G:C6	2.80	0.49
1:CA:1463:U:H2'	1:CA:1464:U:C6	2.47	0.49
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.12	0.49
3:CC:77:ILE:HA	3:CC:84:VAL:HG23	1.94	0.49
4:CD:46:PRO:O	4:CD:48:LEU:N	2.45	0.49
5:CE:11:LEU:HG	5:CE:12:GLN:N	2.28	0.49
14:CN:10:GLU:O	14:CN:11:VAL:C	2.49	0.49
20:CT:9:LYS:O	20:CT:12:ILE:HG12	2.12	0.49
22:DA:1127:A:C3'	22:DA:1128:G:H5''	2.43	0.49
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.47	0.49
22:DA:2184:A:H2'	22:DA:2185:U:C6	2.47	0.49
22:DA:2386:A:H2'	22:DA:2387:U:C6	2.48	0.49
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.47	0.49
22:DA:2854:G:N2	22:DA:2864:G:N3	2.61	0.49
26:DE:61:ARG:O	26:DE:63:LYS:N	2.45	0.49
28:DG:95:ARG:HA	28:DG:128:GLN:O	2.11	0.49
29:DH:112:LYS:CG	29:DH:113:SER:N	2.76	0.49
34:DM:120:ALA:O	34:DM:124:LEU:HD23	2.12	0.49
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:19:ARG:O	52:D4:20:ASP:HB2	2.11	0.49
1:AA:188:C:O2	1:AA:188:C:C2'	2.61	0.49
1:AA:345:C:N3	32:BK:117:SER:OG	2.46	0.49
1:AA:472:U:C4	1:AA:473:U:O4	2.66	0.49
1:AA:1226:C:O2'	13:AM:110:LYS:NZ	2.45	0.49
1:AA:1243:C:H2'	1:AA:1244:G:C8	2.48	0.49
2:AB:46:THR:CG2	2:AB:201:PRO:HB2	2.42	0.49
10:AJ:73:LEU:O	10:AJ:74:VAL:CB	2.61	0.49
22:BA:603:A:C8	22:BA:655:A:C6	3.00	0.49
22:BA:687:C:H2'	22:BA:688:U:O4'	2.11	0.49
22:BA:830:G:H4'	22:BA:831:G:OP2	2.13	0.49
22:BA:1084:A:C5	22:BA:1085:A:C6	3.00	0.49
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.44	0.49
22:BA:1791:A:O3'	24:BC:204:VAL:O	2.31	0.49
22:BA:1832:C:N4	22:BA:1833:C:C4	2.81	0.49
22:BA:2298:A:N6	22:BA:2318:G:H1'	2.28	0.49
23:BB:43:C:O2	27:BF:92:ARG:NH2	2.42	0.49
24:BC:82:GLU:OE1	24:BC:103:TYR:OH	2.23	0.49
24:BC:246:THR:N	24:BC:250:VAL:O	2.40	0.49
27:BF:40:VAL:CG1	27:BF:41:GLY:N	2.75	0.49
33:BL:68:SER:O	33:BL:69:ARG:HG3	2.12	0.49
49:B1:6:ARG:HG2	49:B1:24:THR:HB	1.95	0.49
1:CA:53:A:C2	1:CA:359:G:C6	3.00	0.49
1:CA:840:C:N3	1:CA:842:U:H4'	2.28	0.49
1:CA:983:A:C2'	1:CA:983:A:N3	2.76	0.49
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.78	0.49
1:CA:1213:A:C5	1:CA:1215:G:C4	3.01	0.49
1:CA:1337:G:C5'	1:CA:1338:G:OP1	2.60	0.49
1:CA:1361:G:H3'	1:CA:1362:A:H5''	1.94	0.49
9:CI:49:ARG:C	9:CI:49:ARG:HD3	2.32	0.49
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.76	0.49
12:CL:28:PRO:HB2	12:CL:29:GLN:OE1	2.13	0.49
16:CP:23:ASP:OD2	16:CP:25:ARG:HG2	2.12	0.49
22:DA:197:A:C8	22:DA:2430:A:C8	3.01	0.49
22:DA:410:G:C6	22:DA:2407:A:N6	2.81	0.49
22:DA:570:G:H2'	22:DA:571:U:H5'	1.93	0.49
22:DA:1931:U:OP2	22:DA:1968:G:N1	2.43	0.49
22:DA:2057:G:H2'	22:DA:2058:A:O4'	2.13	0.49
22:DA:2283:C:H2'	22:DA:2284:A:H5'	1.95	0.49
22:DA:2862:G:C6	22:DA:2863:C:N4	2.81	0.49
34:DM:57:VAL:HG11	34:DM:105:MET:SD	2.52	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DN:48:VAL:N	35:DN:50:PRO:HD2	2.27	0.49
41:DT:61:LEU:HD12	41:DT:62:VAL:N	2.27	0.49
1:AA:705:G:C5	1:AA:706:A:C8	3.01	0.49
1:AA:850:U:H2'	1:AA:851:G:O5'	2.13	0.49
1:AA:1030:U:OP2	1:AA:1031:C:C5	2.66	0.49
1:AA:1048:G:N3	1:AA:1050:G:N7	2.60	0.49
1:AA:1417:G:C6	1:AA:1482:G:C6	3.01	0.49
4:AD:173:VAL:HG13	4:AD:174:ASP:N	2.28	0.49
19:AS:23:VAL:HG12	19:AS:24:GLU:N	2.28	0.49
22:BA:1487:U:C2	22:BA:1503:A:C2	3.00	0.49
22:BA:2006:C:O2'	22:BA:2823:A:O2'	2.27	0.49
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.94	0.49
22:BA:2452:C:N3	56:BA:3001:DOL:H131	2.28	0.49
27:BF:8:TYR:HA	27:BF:12:VAL:CG2	2.41	0.49
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.95	0.49
39:BR:49:ILE:HB	39:BR:52:PRO:CA	2.43	0.49
41:BT:1:MET:O	41:BT:2:ILE:CG1	2.61	0.49
51:B3:45:ARG:N	51:B3:46:PRO:HD2	2.27	0.49
1:CA:154:U:C2	1:CA:168:G:N2	2.81	0.49
1:CA:890:G:N2	1:CA:906:A:H2'	2.28	0.49
1:CA:1361:G:H3'	1:CA:1362:A:C5'	2.41	0.49
1:CA:1437:A:C2	1:CA:1465:A:C2	3.01	0.49
6:CF:78:PHE:CD2	6:CF:78:PHE:N	2.81	0.49
21:CU:44:GLU:OE1	21:CU:45:ARG:NH1	2.46	0.49
22:DA:49:A:N6	22:DA:177:G:C5	2.81	0.49
22:DA:411:G:OP1	22:DA:2407:A:OP2	2.29	0.49
22:DA:569:U:H5''	22:DA:821:A:C2	2.48	0.49
22:DA:1071:G:O2'	22:DA:1072:C:O4'	2.23	0.49
22:DA:1248:G:C4	38:DQ:3:ARG:HG3	2.47	0.49
22:DA:1250:G:H5'	38:DQ:6:ARG:HD3	1.95	0.49
22:DA:1779:U:C5	22:DA:1784:A:N7	2.80	0.49
22:DA:2599:G:N7	24:DC:236:GLU:CB	2.76	0.49
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.11	0.49
22:DA:2848:G:OP2	37:DP:95:ALA:N	2.46	0.49
22:DA:2849:U:H4'	22:DA:2868:A:C2	2.47	0.49
23:DB:109:A:C6	23:DB:110:C:C4	3.00	0.49
34:DM:22:GLN:O	34:DM:24:THR:N	2.46	0.49
41:DT:7:LEU:HD21	41:DT:45:ALA:HB3	1.95	0.49
42:DU:16:GLY:O	42:DU:17:LYS:HB2	2.12	0.49
42:DU:98:SER:O	42:DU:99:ASN:CB	2.60	0.49
1:AA:82:G:N2	1:AA:89:U:OP1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:455:G:C2	1:AA:478:A:C2	3.00	0.49
1:AA:652:U:C4	1:AA:752:G:N3	2.81	0.49
1:AA:1182:G:C3'	1:AA:1183:U:H5'	2.43	0.49
1:AA:1381:U:C2	7:AG:78:ARG:NH1	2.80	0.49
2:AB:166:ALA:HB2	2:AB:187:VAL:HG12	1.94	0.49
11:AK:30:THR:HG21	11:AK:91:PRO:O	2.13	0.49
14:AN:43:ASN:C	14:AN:45:VAL:N	2.64	0.49
22:BA:58:G:OP1	41:BT:78:SER:HB2	2.13	0.49
22:BA:360:U:C4	22:BA:361:G:C6	3.00	0.49
22:BA:1088:A:N3	22:BA:1088:A:H5''	2.27	0.49
22:BA:1419:A:HO2'	22:BA:1421:G:H8	1.57	0.49
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.47	0.49
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.48	0.49
22:BA:2190:G:N1	22:BA:2191:A:C4	2.81	0.49
24:BC:15:HIS:O	24:BC:204:VAL:CG2	2.61	0.49
25:BD:101:PHE:C	25:BD:103:ASP:N	2.66	0.49
30:BI:86:ILE:N	30:BI:86:ILE:HD12	2.28	0.49
31:BJ:60:ASP:HA	31:BJ:97:PRO:HB3	1.95	0.49
53:B5:215:VAL:O	53:B5:216:THR:CB	2.61	0.49
1:CA:597:G:C8	1:CA:598:U:C5	3.01	0.49
1:CA:1000:A:C2	1:CA:1041:G:C2	3.01	0.49
5:CE:38:VAL:HG12	5:CE:117:VAL:HG21	1.94	0.49
12:CL:40:THR:HG22	12:CL:41:THR:N	2.28	0.49
19:CS:73:GLU:HB2	19:CS:74:PHE:CD1	2.47	0.49
22:DA:182:A:N6	22:DA:214:G:O6	2.45	0.49
22:DA:508:A:C3'	22:DA:509:C:H5'	2.42	0.49
22:DA:792:A:O2'	22:DA:2440:C:N3	2.36	0.49
22:DA:1361:G:C5	22:DA:1362:C:C5	3.01	0.49
22:DA:1504:A:N6	22:DA:1505:A:C6	2.81	0.49
22:DA:1814:G:C6	22:DA:1815:A:C6	3.00	0.49
22:DA:1973:G:C5	22:DA:1974:C:C4	3.00	0.49
22:DA:2111:U:O4	22:DA:2147:A:C2	2.66	0.49
22:DA:2146:C:H4'	22:DA:2147:A:C8	2.47	0.49
22:DA:2307:G:N2	22:DA:2312:U:N3	2.60	0.49
22:DA:2371:G:C2	22:DA:2372:U:C5	3.00	0.49
29:DH:72:ILE:O	29:DH:141:LYS:O	2.30	0.49
32:DK:31:ARG:HB2	32:DK:32:TYR:CD2	2.47	0.49
37:DP:28:VAL:HG21	37:DP:74:PHE:CE2	2.48	0.49
1:AA:130:A:C8	17:AQ:65:ARG:HB2	2.47	0.49
1:AA:438:U:C2	1:AA:494:G:C6	3.00	0.49
1:AA:501:C:H2'	1:AA:502:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1308:U:O2'	1:AA:1309:G:H5'	2.13	0.49
3:AC:19:ASN:OD1	3:AC:19:ASN:N	2.45	0.49
5:AE:137:VAL:O	5:AE:138:ARG:CB	2.60	0.49
8:AH:125:ILE:O	8:AH:125:ILE:CG1	2.60	0.49
22:BA:2177:C:N4	22:BA:2178:C:O2	2.46	0.49
22:BA:2287:A:OP1	49:B1:30:LYS:NZ	2.35	0.49
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.13	0.49
26:BE:108:ILE:HG13	26:BE:109:LEU:N	2.28	0.49
28:BG:80:THR:CG2	28:BG:81:GLU:N	2.75	0.49
30:BI:105:GLN:O	30:BI:106:LEU:HB2	2.13	0.49
36:BO:25:ARG:HG3	36:BO:27:VAL:HG12	1.94	0.49
42:BU:13:VAL:HG12	42:BU:19:LYS:HA	1.95	0.49
48:B0:13:ARG:O	48:B0:17:ARG:HG3	2.12	0.49
53:B5:65:LEU:O	53:B5:67:HIS:N	2.45	0.49
1:CA:215:C:H2'	1:CA:216:U:O4'	2.13	0.49
1:CA:218:U:H2'	1:CA:219:U:O4'	2.13	0.49
1:CA:846:G:C2	1:CA:847:G:C8	3.01	0.49
1:CA:1061:G:N7	1:CA:1062:U:C5	2.81	0.49
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.13	0.49
1:CA:1211:U:H1'	1:CA:1213:A:C2	2.48	0.49
2:CB:58:ASN:CG	2:CB:220:THR:O	2.51	0.49
2:CB:62:SER:HA	2:CB:224:GLY:HA3	1.94	0.49
4:CD:174:ASP:OD1	4:CD:177:LYS:N	2.46	0.49
7:CG:88:PRO:HD2	7:CG:152:ALA:HA	1.94	0.49
11:CK:110:ILE:HG22	21:CU:17:ARG:NH1	2.28	0.49
12:CL:38:TYR:HB3	12:CL:52:VAL:HG13	1.94	0.49
22:DA:58:G:C2	22:DA:70:G:C2	3.01	0.49
22:DA:430:A:H2'	22:DA:431:U:H5'	1.95	0.49
22:DA:636:G:O2'	22:DA:638:G:O2'	2.29	0.49
22:DA:856:G:C2	22:DA:922:C:N3	2.81	0.49
22:DA:878:A:C2	22:DA:900:A:C4	3.01	0.49
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.43	0.49
22:DA:2231:U:H2'	22:DA:2232:C:C6	2.48	0.49
22:DA:2360:G:H1'	33:DL:60:ARG:HD3	1.94	0.49
22:DA:2586:U:C5	22:DA:2587:A:C8	3.01	0.49
23:DB:37:C:C5	23:DB:38:C:C4	3.01	0.49
30:DI:76:ALA:HB2	30:DI:129:ILE:HG23	1.95	0.49
31:DJ:31:GLU:OE2	31:DJ:35:ARG:NH1	2.46	0.49
35:DN:87:PHE:O	35:DN:88:ALA:C	2.52	0.49
42:DU:85:PHE:N	42:DU:85:PHE:CD1	2.81	0.49
46:DY:20:ASN:O	46:DY:24:GLU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D4:16:ILE:HD13	52:D4:25:VAL:HG22	1.95	0.49
1:AA:71:A:N3	1:AA:72:A:C8	2.81	0.49
1:AA:375:U:C4	1:AA:376:G:N7	2.81	0.49
1:AA:872:A:C8	1:AA:874:G:C8	3.01	0.49
3:AC:42:TYR:CZ	3:AC:90:VAL:HG21	2.48	0.49
10:AJ:53:ILE:HD11	14:AN:85:ARG:NH1	2.28	0.49
16:AP:45:GLU:O	16:AP:46:LYS:O	2.31	0.49
22:BA:250:G:C6	22:BA:251:A:C6	3.01	0.49
22:BA:1922:G:N3	22:BA:1922:G:C2'	2.76	0.49
22:BA:2560:A:C5	22:BA:2561:U:C5	3.00	0.49
27:BF:158:THR:CG2	27:BF:160:ALA:H	2.26	0.49
36:BO:100:HIS:O	36:BO:104:GLN:HB3	2.13	0.49
47:BZ:11:ARG:NH1	47:BZ:53:PHE:O	2.46	0.49
1:CA:157:U:O2'	1:CA:158:G:H5'	2.12	0.49
1:CA:1007:U:H2'	1:CA:1008:U:H5''	1.93	0.49
1:CA:1149:C:C4	1:CA:1150:A:C6	3.00	0.49
7:CG:42:ILE:HG21	7:CG:116:MET:HG3	1.95	0.49
7:CG:92:ARG:NE	7:CG:93:PRO:HD3	2.28	0.49
11:CK:116:ILE:O	11:CK:116:ILE:HG22	2.13	0.49
16:CP:16:PHE:CE1	16:CP:38:PHE:HB2	2.48	0.49
22:DA:55:G:C2	22:DA:56:A:C8	3.00	0.49
22:DA:152:A:C2	22:DA:175:G:N3	2.81	0.49
22:DA:382:A:N1	22:DA:383:C:C2	2.81	0.49
22:DA:581:C:OP2	38:DQ:33:ARG:NE	2.46	0.49
22:DA:883:G:N2	22:DA:894:U:O2	2.46	0.49
22:DA:1567:G:C8	24:DC:83:TYR:CD1	3.00	0.49
22:DA:1638:C:C5'	22:DA:2710:C:O2'	2.61	0.49
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.43	0.49
22:DA:1869:G:C2	22:DA:1873:G:N1	2.81	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.01	0.49
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.13	0.49
22:DA:2428:G:H5''	22:DA:2429:G:OP1	2.13	0.49
22:DA:2532:G:N2	22:DA:2663:G:O2'	2.46	0.49
22:DA:2729:G:H2'	22:DA:2730:C:O4'	2.13	0.49
24:DC:43:ARG:NH2	24:DC:49:ILE:HD11	2.28	0.49
27:DF:16:LEU:HD11	27:DF:169:LEU:CD1	2.43	0.49
32:DK:92:GLU:N	32:DK:92:GLU:OE2	2.43	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
40:DS:20:VAL:CG2	40:DS:39:THR:HG21	2.43	0.49
1:AA:144:G:C2	1:AA:179:A:N3	2.81	0.48
1:AA:411:A:C5	1:AA:429:U:C5	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:591:U:P	8:AH:31:LYS:HD2	2.54	0.48
1:AA:709:U:O2'	1:AA:710:G:H5'	2.13	0.48
1:AA:1077:G:N2	1:AA:1080:A:OP2	2.46	0.48
2:AB:79:ALA:O	2:AB:214:LEU:CD2	2.60	0.48
2:AB:82:ASP:O	2:AB:84:ALA:N	2.46	0.48
5:AE:149:SER:O	5:AE:153:VAL:HG12	2.13	0.48
10:AJ:41:PRO:O	10:AJ:42:LEU:CB	2.61	0.48
11:AK:88:GLY:N	11:AK:114:THR:HG22	2.28	0.48
13:AM:27:LYS:O	13:AM:31:LYS:HG3	2.12	0.48
14:AN:46:LEU:O	14:AN:47:LYS:C	2.51	0.48
17:AQ:82:ALA:O	17:AQ:83:VAL:O	2.30	0.48
18:AR:34:THR:OG1	18:AR:35:GLU:N	2.46	0.48
22:BA:78:U:H2'	22:BA:79:C:C6	2.48	0.48
22:BA:1206:G:C6	22:BA:1207:C:C4	3.01	0.48
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.13	0.48
22:BA:2019:A:H4'	38:BQ:34:VAL:HG21	1.94	0.48
22:BA:2553:G:N1	22:BA:2554:U:O2	2.46	0.48
22:BA:2555:U:C5	22:BA:2556:C:C2	3.01	0.48
22:BA:2615:U:C2'	22:BA:2616:C:H5'	2.42	0.48
29:BH:121:VAL:H	29:BH:122:LEU:HB2	1.77	0.48
29:BH:139:PHE:O	29:BH:140:ALA:HB2	2.13	0.48
30:BI:6:GLN:O	30:BI:7:ALA:HB3	2.13	0.48
1:CA:66:A:H4'	1:CA:173:U:C5	2.47	0.48
1:CA:73:C:HO2'	1:CA:74:A:P	2.34	0.48
1:CA:630:A:H2'	1:CA:631:C:O4'	2.13	0.48
1:CA:786:G:H2'	1:CA:786:G:N3	2.27	0.48
1:CA:881:G:C6	1:CA:882:C:C4	3.01	0.48
1:CA:920:U:C2	1:CA:921:U:C5	3.01	0.48
1:CA:960:U:O2'	1:CA:1223:C:H4'	2.13	0.48
1:CA:1537:U:C5	1:CA:1538:C:C4	3.01	0.48
2:CB:143:LYS:O	2:CB:147:SER:OG	2.24	0.48
4:CD:174:ASP:CG	4:CD:175:ALA:N	2.65	0.48
5:CE:13:GLU:HB2	5:CE:39:VAL:HG12	1.94	0.48
7:CG:78:ARG:O	7:CG:79:ARG:HB2	2.12	0.48
9:CI:24:GLY:N	9:CI:61:LEU:HA	2.29	0.48
13:CM:46:SER:O	13:CM:47:GLU:HB3	2.11	0.48
17:CQ:45:HIS:O	17:CQ:71:LYS:HA	2.13	0.48
19:CS:51:VAL:O	19:CS:58:VAL:HG13	2.13	0.48
22:DA:477:A:H2'	22:DA:478:A:O5'	2.13	0.48
22:DA:591:U:H1'	51:D3:2:PRO:HD2	1.94	0.48
22:DA:771:G:O2'	22:DA:1355:G:O2'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:933:A:C5'	22:DA:934:U:OP2	2.61	0.48
22:DA:1029:A:N7	22:DA:1030:C:C2	2.81	0.48
22:DA:1076:C:H1'	30:DI:93:PRO:HG2	1.95	0.48
22:DA:1569:A:C6	22:DA:1570:A:C2	3.01	0.48
22:DA:1773:A:N3	22:DA:1978:A:C2	2.81	0.48
22:DA:1981:A:H5''	22:DA:1982:U:OP2	2.12	0.48
22:DA:2119:A:N1	22:DA:2169:A:H2'	2.28	0.48
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.94	0.48
23:DB:34:A:N6	23:DB:44:G:H1'	2.28	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:CG1	2.61	0.48
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.28	0.48
45:DX:54:LYS:HA	45:DX:57:ARG:HB2	1.94	0.48
47:DZ:7:ILE:N	47:DZ:36:VAL:O	2.45	0.48
47:DZ:41:THR:HB	47:DZ:42:PRO:HD2	1.95	0.48
1:AA:72:A:H2'	1:AA:73:C:H5'	1.94	0.48
1:AA:215:C:H2'	1:AA:216:U:O4'	2.13	0.48
1:AA:451:A:H4'	1:AA:452:A:O4'	2.13	0.48
1:AA:586:C:O3'	8:AH:81:PRO:HB3	2.13	0.48
1:AA:721:G:H4'	1:AA:722:G:O4'	2.13	0.48
2:AB:40:ILE:N	2:AB:40:ILE:HD13	2.27	0.48
3:AC:37:PHE:O	3:AC:41:GLN:HB2	2.13	0.48
6:AF:93:LYS:CG	6:AF:93:LYS:O	2.61	0.48
8:AH:125:ILE:O	8:AH:125:ILE:HG13	2.13	0.48
9:AI:57:MET:CG	9:AI:58:VAL:N	2.76	0.48
12:AL:44:LYS:HB2	12:AL:45:PRO:CD	2.42	0.48
21:AU:20:LYS:CE	21:AU:20:LYS:HA	2.42	0.48
22:BA:749:A:C6	22:BA:1618:A:C2	3.01	0.48
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.94	0.48
22:BA:1421:G:N2	22:BA:1495:A:N1	2.58	0.48
22:BA:1583:A:HO2'	22:BA:1584:U:P	2.37	0.48
22:BA:1820:U:OP1	24:BC:177:ARG:NH2	2.46	0.48
22:BA:2419:U:OP1	51:B3:41:LYS:HE2	2.13	0.48
1:CA:183:C:HO2'	1:CA:184:G:P	2.35	0.48
1:CA:211:G:O2'	1:CA:212:G:H4'	2.14	0.48
1:CA:1259:C:N4	1:CA:1260:G:C4	2.81	0.48
1:CA:1311:A:C2	1:CA:1327:C:N3	2.81	0.48
1:CA:1408:A:N1	1:CA:1494:G:C5	2.81	0.48
4:CD:168:PRO:HB2	4:CD:171:LEU:HD12	1.95	0.48
12:CL:4:VAL:HG22	12:CL:5:ASN:N	2.27	0.48
20:CT:21:ASN:O	20:CT:25:ARG:HB3	2.12	0.48
20:CT:36:TYR:CG	20:CT:37:ALA:N	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CU:12:PHE:CD1	21:CU:13:ASP:N	2.81	0.48
22:DA:223:A:H2'	22:DA:408:G:N3	2.28	0.48
22:DA:248:G:H5'	22:DA:250:G:N7	2.28	0.48
22:DA:470:A:C2	22:DA:471:A:C4	3.01	0.48
22:DA:581:C:OP2	38:DQ:33:ARG:CZ	2.61	0.48
22:DA:796:C:H2'	22:DA:797:G:C8	2.48	0.48
22:DA:1331:G:O2'	22:DA:1332:G:H5'	2.13	0.48
22:DA:1866:A:N3	22:DA:1876:A:C6	2.81	0.48
22:DA:2073:C:H5''	24:DC:228:VAL:CB	2.43	0.48
22:DA:2819:G:H2'	22:DA:2821:A:N7	2.29	0.48
29:DH:21:VAL:CG2	29:DH:22:LYS:N	2.76	0.48
30:DI:54:PRO:HG2	30:DI:78:VAL:HB	1.95	0.48
35:DN:85:PRO:O	35:DN:86:ARG:C	2.51	0.48
1:AA:64:G:C8	1:AA:99:C:C4	3.01	0.48
1:AA:471:U:H2'	1:AA:472:U:O4'	2.14	0.48
1:AA:872:A:C4	1:AA:874:G:N7	2.81	0.48
1:AA:1373:G:H5''	7:AG:36:LYS:HB2	1.95	0.48
2:AB:32:PHE:CG	2:AB:32:PHE:O	2.66	0.48
3:AC:79:LYS:O	3:AC:81:GLY:N	2.46	0.48
5:AE:80:THR:OG1	5:AE:81:LEU:N	2.45	0.48
5:AE:109:GLY:O	5:AE:110:ALA:HB2	2.12	0.48
14:AN:41:ARG:HD3	14:AN:42:TRP:CH2	2.49	0.48
17:AQ:12:VAL:O	17:AQ:13:VAL:CB	2.61	0.48
21:AU:4:ILE:N	21:AU:19:PHE:CD1	2.80	0.48
22:BA:186:G:O2'	22:BA:187:G:H5'	2.13	0.48
22:BA:877:A:O2'	22:BA:900:A:N6	2.45	0.48
22:BA:1838:C:C5	22:BA:1899:A:C5	3.00	0.48
32:BK:4:GLU:O	32:BK:5:GLN:CB	2.61	0.48
33:BL:81:ASP:O	33:BL:83:ALA:N	2.39	0.48
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.77	0.48
37:BP:31:TRP:CE2	37:BP:40:LEU:HD11	2.48	0.48
53:B5:40:GLU:O	53:B5:42:VAL:N	2.45	0.48
1:CA:145:G:N2	1:CA:146:G:C4	2.81	0.48
1:CA:246:A:C4	1:CA:279:A:C6	3.01	0.48
1:CA:458:U:H2'	1:CA:459:A:C8	2.48	0.48
1:CA:946:A:H2'	1:CA:947:G:C8	2.48	0.48
1:CA:963:G:C2	1:CA:973:G:C6	3.01	0.48
1:CA:1060:U:H5'	10:CJ:53:ILE:HG23	1.95	0.48
4:CD:97:ARG:O	4:CD:101:VAL:HG23	2.14	0.48
4:CD:107:PHE:N	4:CD:107:PHE:CD1	2.80	0.48
5:CE:150:PRO:C	5:CE:152:MET:H	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CH:86:TYR:CD2	8:CH:124:GLU:HB2	2.48	0.48
9:CI:17:ALA:HA	9:CI:67:VAL:HA	1.94	0.48
17:CQ:21:ILE:HB	17:CQ:48:ASP:OD1	2.12	0.48
21:CU:32:VAL:O	21:CU:32:VAL:HG12	2.11	0.48
22:DA:193:U:C5	22:DA:194:G:N7	2.82	0.48
22:DA:242:G:N7	51:D3:3:LYS:O	2.46	0.48
22:DA:449:A:H2'	22:DA:450:G:H5'	1.95	0.48
22:DA:655:A:H4'	22:DA:656:G:OP1	2.11	0.48
22:DA:661:A:H2'	22:DA:662:G:O4'	2.12	0.48
22:DA:1011:G:O2'	22:DA:1013:C:H5''	2.14	0.48
22:DA:1068:G:H2'	22:DA:1096:A:C5'	2.43	0.48
22:DA:1095:A:C2	22:DA:1096:A:C2	3.01	0.48
22:DA:2727:A:N1	22:DA:2728:U:C4	2.81	0.48
56:DA:3001:DOL:C43	56:DA:3001:DOL:C1	2.91	0.48
23:DB:50:A:H2'	23:DB:51:G:O4'	2.13	0.48
28:DG:96:ALA:N	28:DG:128:GLN:O	2.46	0.48
35:DN:106:ASP:O	35:DN:107:ASN:C	2.52	0.48
40:DS:70:LYS:O	40:DS:107:VAL:HG23	2.14	0.48
42:DU:12:ILE:HG21	42:DU:80:ALA:HB2	1.95	0.48
1:AA:32:A:C2	1:AA:33:A:C5	3.01	0.48
1:AA:259:G:C2	1:AA:260:G:H1'	2.48	0.48
1:AA:958:A:C6	1:AA:959:A:N1	2.82	0.48
1:AA:983:A:H5''	1:AA:984:C:OP2	2.13	0.48
1:AA:988:G:C6	1:AA:989:U:C4	3.01	0.48
1:AA:1210:C:C4	1:AA:1211:U:C4	3.02	0.48
1:AA:1362:A:H5''	1:AA:1363:A:OP2	2.14	0.48
2:AB:68:LEU:HD21	2:AB:92:VAL:HG23	1.95	0.48
2:AB:82:ASP:C	2:AB:84:ALA:N	2.64	0.48
3:AC:97:VAL:HB	3:AC:98:PRO:HD2	1.94	0.48
3:AC:150:LYS:HG3	3:AC:201:TRP:CE3	2.48	0.48
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.78	0.48
9:AI:57:MET:C	9:AI:59:GLU:H	2.17	0.48
10:AJ:42:LEU:HG	10:AJ:43:PRO:HD2	1.94	0.48
10:AJ:61:ALA:O	10:AJ:62:ARG:HB2	2.11	0.48
14:AN:90:ARG:NH1	14:AN:92:GLU:OE2	2.46	0.48
19:AS:29:LYS:CB	19:AS:30:PRO:HD2	2.43	0.48
21:AU:16:LEU:HA	21:AU:18:ARG:CZ	2.42	0.48
22:BA:589:U:H2'	22:BA:590:A:C8	2.49	0.48
22:BA:1353:A:O2'	22:BA:1354:A:H5'	2.13	0.48
22:BA:1746:A:H2'	22:BA:1747:U:H6	1.75	0.48
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:36:LYS:O	24:BC:37:ASN:CB	2.62	0.48
26:BE:77:ILE:O	26:BE:77:ILE:HG13	2.13	0.48
32:BK:41:ILE:HD11	32:BK:58:LEU:CD2	2.44	0.48
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.45	0.48
1:CA:169:C:H2'	1:CA:170:U:C6	2.47	0.48
1:CA:195:A:C6	1:CA:196:A:N1	2.81	0.48
1:CA:457:G:C6	1:CA:458:U:N3	2.81	0.48
1:CA:805:C:C2	1:CA:806:C:C5	3.02	0.48
1:CA:932:C:OP1	7:CG:4:ARG:HB3	2.13	0.48
2:CB:91:PHE:CD2	2:CB:150:GLY:HA3	2.47	0.48
2:CB:141:LEU:O	2:CB:142:GLU:C	2.52	0.48
3:CC:62:LYS:O	3:CC:97:VAL:HB	2.14	0.48
5:CE:149:SER:OG	5:CE:152:MET:HB2	2.13	0.48
12:CL:86:ARG:NH1	12:CL:88:LYS:HA	2.28	0.48
17:CQ:13:VAL:HG13	17:CQ:22:VAL:HG13	1.94	0.48
17:CQ:52:GLU:CD	17:CQ:75:LEU:HD21	2.34	0.48
22:DA:116:C:O2'	22:DA:126:A:C2'	2.61	0.48
22:DA:158:U:C4	22:DA:159:G:C5	3.01	0.48
22:DA:801:G:C8	26:DE:49:ARG:HG3	2.49	0.48
22:DA:1223:G:N2	22:DA:1225:G:H3'	2.28	0.48
22:DA:1355:G:C5	22:DA:1377:G:N2	2.81	0.48
22:DA:1568:G:N3	24:DC:58:HIS:CE1	2.81	0.48
22:DA:2199:A:C5	22:DA:2225:A:N1	2.82	0.48
22:DA:2409:G:H2'	22:DA:2410:G:O4'	2.13	0.48
22:DA:2451:A:C2	56:DA:3001:DOL:C12	2.97	0.48
22:DA:2656:U:OP2	22:DA:2664:G:N1	2.41	0.48
22:DA:2693:G:N2	22:DA:2717:C:C2	2.81	0.48
22:DA:2784:U:H4'	25:DD:42:ASN:O	2.13	0.48
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.13	0.48
31:DJ:84:ILE:O	31:DJ:84:ILE:HG13	2.13	0.48
49:D1:39:PHE:CG	49:D1:40:ASP:N	2.82	0.48
1:AA:57:G:H2'	1:AA:58:C:C6	2.48	0.48
1:AA:104:G:C2	1:AA:105:G:C5	3.02	0.48
1:AA:765:G:C6	1:AA:812:G:C4	3.01	0.48
1:AA:781:A:C5	1:AA:802:A:C2	3.01	0.48
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.48
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.48	0.48
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.49	0.48
4:AD:36:GLN:O	4:AD:37:ALA:HB2	2.13	0.48
7:AG:48:GLU:O	7:AG:51:ALA:HB3	2.12	0.48
11:AK:22:HIS:N	11:AK:33:THR:O	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:46:LEU:C	14:AN:46:LEU:HD12	2.34	0.48
15:AO:70:LEU:HD21	15:AO:77:ARG:HB2	1.96	0.48
16:AP:77:GLU:C	16:AP:79:ASN:H	2.16	0.48
19:AS:42:PRO:O	19:AS:45:ILE:HG13	2.13	0.48
20:AT:66:LEU:HD12	20:AT:66:LEU:C	2.34	0.48
22:BA:39:G:H2'	22:BA:40:U:C6	2.48	0.48
22:BA:141:G:N1	41:BT:1:MET:CE	2.77	0.48
22:BA:1132:U:C3'	22:BA:1133:A:H5''	2.42	0.48
22:BA:1289:C:O2'	22:BA:1330:C:H4'	2.13	0.48
22:BA:2355:G:O3'	44:BW:24:LYS:NZ	2.45	0.48
29:BH:97:ARG:HD3	1:CA:370:C:H5'	1.95	0.48
37:BP:58:ALA:HB1	37:BP:74:PHE:O	2.13	0.48
53:B5:83:LYS:HB3	53:B5:87:ALA:CB	2.44	0.48
1:CA:509:A:N3	1:CA:543:U:O2'	2.39	0.48
1:CA:860:A:N6	1:CA:861:G:C2	2.81	0.48
1:CA:1361:G:H2'	1:CA:1362:A:H5''	1.96	0.48
2:CB:19:GLN:O	2:CB:38:VAL:HG23	2.13	0.48
5:CE:96:MET:HE3	5:CE:111:MET:HE3	1.95	0.48
7:CG:65:ALA:O	7:CG:127:ALA:HB1	2.14	0.48
8:CH:86:TYR:CE2	8:CH:124:GLU:HB2	2.49	0.48
10:CJ:7:ARG:HD3	10:CJ:75:ASP:OD1	2.13	0.48
21:CU:40:LYS:N	21:CU:41:PRO:CD	2.76	0.48
22:DA:249:C:P	22:DA:2394:C:HO2'	2.36	0.48
22:DA:410:G:H2'	22:DA:2407:A:C8	2.47	0.48
22:DA:543:G:C2	22:DA:551:G:C5	3.01	0.48
22:DA:1350:C:C2	22:DA:1382:G:C2	3.01	0.48
22:DA:1596:A:C6	22:DA:1597:A:C6	3.01	0.48
22:DA:1688:U:H1'	22:DA:1701:A:C6	2.49	0.48
22:DA:2134:A:N3	22:DA:2159:G:H1'	2.28	0.48
22:DA:2562:U:C2'	22:DA:2563:U:H5'	2.43	0.48
24:DC:252:THR:HG22	24:DC:253:LYS:N	2.28	0.48
28:DG:89:LEU:CD1	28:DG:162:VAL:HG22	2.44	0.48
29:DH:127:GLU:HG3	29:DH:144:VAL:O	2.13	0.48
31:DJ:71:ASP:O	31:DJ:73:VAL:CG2	2.62	0.48
36:DO:79:ALA:O	36:DO:83:LEU:HG	2.13	0.48
41:DT:35:ALA:O	41:DT:36:LYS:C	2.51	0.48
1:AA:119:A:C4	1:AA:240:G:N7	2.81	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.49	0.48
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.14	0.48
1:AA:1064:G:O4'	1:AA:1066:C:C6	2.66	0.48
1:AA:1157:A:C2	1:AA:1181:G:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:64:LYS:C	2:AB:64:LYS:HD3	2.34	0.48
4:AD:124:MET:HG3	4:AD:146:ARG:HG2	1.96	0.48
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.29	0.48
8:AH:18:GLN:O	8:AH:21:ASN:N	2.47	0.48
10:AJ:35:GLN:OE1	10:AJ:35:GLN:HA	2.14	0.48
12:AL:22:PRO:C	12:AL:24:LEU:N	2.67	0.48
22:BA:181:A:C2	22:BA:182:A:C4	3.01	0.48
22:BA:1866:A:C6	22:BA:1876:A:N7	2.82	0.48
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.49	0.48
22:BA:2847:U:C2'	22:BA:2848:G:H5'	2.44	0.48
24:BC:22:PRO:C	24:BC:24:LEU:H	2.17	0.48
35:BN:45:ARG:HG2	35:BN:95:THR:HG21	1.96	0.48
39:BR:14:VAL:HG11	39:BR:98:ILE:HG13	1.95	0.48
39:BR:49:ILE:CG2	39:BR:52:PRO:C	2.82	0.48
39:BR:74:ILE:N	39:BR:74:ILE:CD1	2.77	0.48
42:BU:96:PHE:O	42:BU:100:SER:HA	2.13	0.48
48:B0:48:TYR:CZ	48:B0:53:LYS:HD2	2.48	0.48
1:CA:309:A:O2'	1:CA:607:A:N1	2.33	0.48
1:CA:1114:C:C2	1:CA:1187:G:N2	2.82	0.48
1:CA:1240:U:H5'	1:CA:1241:G:C8	2.48	0.48
1:CA:1259:C:N4	1:CA:1260:G:C5	2.82	0.48
1:CA:1302:C:C4	13:CM:17:ILE:CD1	2.97	0.48
1:CA:1328:C:H5''	13:CM:28:THR:HG21	1.94	0.48
1:CA:1394:A:C5	1:CA:1501:C:H4'	2.48	0.48
9:CI:25:ASN:O	9:CI:27:LYS:N	2.45	0.48
12:CL:22:PRO:O	12:CL:24:LEU:N	2.41	0.48
16:CP:70:ARG:O	16:CP:74:LEU:HD23	2.14	0.48
16:CP:78:VAL:HG22	16:CP:78:VAL:O	2.14	0.48
20:CT:25:ARG:HD2	20:CT:29:ARG:NH1	2.29	0.48
22:DA:517:C:O2'	22:DA:518:G:O5'	2.30	0.48
22:DA:654:A:H3'	22:DA:654:A:N3	2.27	0.48
22:DA:842:U:C4	22:DA:843:G:N7	2.81	0.48
22:DA:919:U:H2'	22:DA:920:A:O4'	2.13	0.48
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.13	0.48
22:DA:1344:U:HO2'	22:DA:1345:C:P	2.32	0.48
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.49	0.48
22:DA:2062:A:C8	54:D6:1:MHW:CD	2.97	0.48
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.43	0.48
22:DA:2520:C:O2'	22:DA:2565:A:O2'	2.25	0.48
22:DA:2815:C:HO2'	48:D0:41:HIS:CE1	2.31	0.48
22:DA:2840:C:H2'	22:DA:2841:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.47	0.48
24:DC:107:PRO:HB3	24:DC:142:HIS:CE1	2.49	0.48
25:DD:15:PHE:CD2	37:DP:78:SER:HA	2.49	0.48
33:DL:116:VAL:O	33:DL:116:VAL:HG13	2.13	0.48
40:DS:7:HIS:HB2	40:DS:50:VAL:HG21	1.96	0.48
45:DX:54:LYS:O	45:DX:57:ARG:N	2.46	0.48
49:D1:9:ILE:CG2	49:D1:25:LYS:HB3	2.43	0.48
1:AA:82:G:O6	1:AA:87:C:N4	2.46	0.48
1:AA:1084:G:C5	1:AA:1085:U:C4	3.01	0.48
1:AA:1441:A:H2'	1:AA:1442:G:O5'	2.13	0.48
2:AB:91:PHE:CE2	2:AB:150:GLY:CA	2.96	0.48
3:AC:7:PRO:HG2	3:AC:184:TYR:CG	2.48	0.48
4:AD:191:LEU:O	4:AD:192:SER:HB3	2.13	0.48
4:AD:197:GLU:O	4:AD:200:ILE:N	2.46	0.48
10:AJ:44:THR:HG22	10:AJ:70:HIS:HA	1.95	0.48
17:AQ:17:MET:HB2	17:AQ:20:SER:HB3	1.95	0.48
22:BA:48:G:N2	22:BA:49:A:N1	2.61	0.48
22:BA:735:A:N7	22:BA:761:A:H2	2.10	0.48
22:BA:1798:U:OP2	24:BC:271:ARG:NH2	2.45	0.48
22:BA:2298:A:C6	22:BA:2321:U:O4	2.66	0.48
22:BA:2584:U:H2'	22:BA:2585:U:H5'	1.95	0.48
25:BD:26:VAL:HG22	25:BD:188:LEU:CD2	2.44	0.48
27:BF:48:LYS:O	27:BF:51:ASP:HB2	2.14	0.48
27:BF:63:GLN:OE1	27:BF:95:ARG:HD2	2.14	0.48
30:BI:127:ARG:HA	30:BI:130:GLU:CG	2.44	0.48
31:BJ:42:ALA:O	38:BQ:64:ARG:HG2	2.14	0.48
32:BK:20:MET:C	32:BK:41:ILE:HG22	2.34	0.48
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.48
1:CA:585:G:C6	1:CA:586:C:C4	3.02	0.48
1:CA:722:G:H3'	1:CA:722:G:N3	2.29	0.48
1:CA:745:G:H5''	1:CA:851:G:O2'	2.13	0.48
1:CA:772:U:O2'	1:CA:773:G:H5'	2.14	0.48
1:CA:1088:G:C5	1:CA:1089:G:N7	2.82	0.48
1:CA:1306:A:H1'	1:CA:1332:A:C5	2.49	0.48
3:CC:36:ASP:O	3:CC:40:ARG:HG3	2.14	0.48
3:CC:61:ALA:O	3:CC:62:LYS:HB2	2.14	0.48
5:CE:133:PRO:HA	5:CE:136:VAL:HG13	1.96	0.48
7:CG:123:GLU:OE1	7:CG:123:GLU:HA	2.13	0.48
13:CM:81:MET:O	13:CM:83:LEU:N	2.46	0.48
18:CR:32:TYR:CD2	18:CR:55:LEU:HD21	2.49	0.48
22:DA:396:G:OP2	45:DX:10:LYS:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:532:A:N7	22:DA:2021:C:C2'	2.77	0.48
22:DA:532:A:H2'	22:DA:532:A:N3	2.27	0.48
22:DA:640:C:C4	22:DA:641:U:C5	3.02	0.48
22:DA:646:U:H3'	22:DA:647:G:C4'	2.44	0.48
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.44	0.48
22:DA:769:U:C2	22:DA:770:G:C8	3.02	0.48
22:DA:1361:G:C6	22:DA:1371:G:C2	3.01	0.48
22:DA:1365:A:N3	22:DA:1365:A:H2'	2.27	0.48
22:DA:1373:A:N6	22:DA:1374:G:C2	2.82	0.48
22:DA:1598:A:H2'	22:DA:1599:U:C6	2.49	0.48
22:DA:1754:A:N6	22:DA:1755:A:C6	2.82	0.48
22:DA:1830:C:H5'	24:DC:15:HIS:CD2	2.48	0.48
22:DA:2839:G:N2	22:DA:2880:C:C2	2.81	0.48
24:DC:157:SER:HB2	24:DC:160:THR:HG21	1.95	0.48
25:DD:104:VAL:O	25:DD:105:LYS:HB2	2.13	0.48
25:DD:151:THR:HG22	25:DD:152:PRO:N	2.29	0.48
26:DE:18:THR:HG22	26:DE:19:PHE:CD2	2.48	0.48
28:DG:158:LYS:O	28:DG:159:GLY:C	2.51	0.48
30:DI:49:ILE:O	30:DI:50:GLU:HB2	2.13	0.48
35:DN:28:LEU:O	35:DN:28:LEU:CG	2.62	0.48
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.95	0.48
36:DO:115:LEU:O	36:DO:117:PHE:N	2.41	0.48
42:DU:7:ARG:CG	42:DU:8:ASP:N	2.76	0.48
45:DX:43:GLU:O	45:DX:44:LYS:C	2.52	0.48
49:D1:26:ASN:O	49:D1:27:LYS:C	2.52	0.48
1:AA:57:G:C5	1:AA:58:C:C4	3.01	0.48
1:AA:652:U:O2'	1:AA:653:U:OP2	2.27	0.48
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.14	0.48
2:AB:15:HIS:ND1	2:AB:15:HIS:C	2.66	0.48
2:AB:70:VAL:O	2:AB:163:VAL:HA	2.13	0.48
3:AC:206:GLU:O	3:AC:207:ILE:HG22	2.14	0.48
13:AM:6:GLY:C	13:AM:8:ASN:N	2.66	0.48
14:AN:16:LEU:N	14:AN:16:LEU:HD23	2.29	0.48
17:AQ:16:LYS:C	17:AQ:17:MET:HE3	2.34	0.48
17:AQ:50:ASN:O	17:AQ:51:ASN:C	2.52	0.48
22:BA:55:G:C2	22:BA:56:A:C8	3.02	0.48
22:BA:528:A:C8	22:BA:528:A:C3'	2.97	0.48
22:BA:1064:C:H4'	30:BI:90:SER:HB2	1.94	0.48
22:BA:1080:A:H2'	22:BA:1080:A:N3	2.28	0.48
22:BA:1086:A:O2'	22:BA:1087:G:N7	2.47	0.48
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1402:U:C2'	22:BA:1403:A:O5'	2.62	0.48
22:BA:1452:G:C4	22:BA:2702:G:C6	3.02	0.48
22:BA:1820:U:O4	24:BC:198:ALA:HB1	2.13	0.48
22:BA:2256:G:O2'	22:BA:2257:U:H5'	2.14	0.48
22:BA:2615:U:C2	48:B0:4:GLN:HA	2.49	0.48
22:BA:2851:A:H2'	22:BA:2852:G:O4'	2.14	0.48
27:BF:121:SER:HB2	27:BF:128:TYR:CE1	2.49	0.48
37:BP:64:ILE:O	37:BP:64:ILE:HG22	2.13	0.48
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.62	0.48
49:B1:17:THR:HG22	49:B1:42:VAL:HG11	1.96	0.48
53:B5:100:ILE:HG22	53:B5:104:ILE:CB	2.43	0.48
53:B5:122:GLY:CA	53:B5:146:VAL:CB	2.92	0.48
1:CA:374:A:H5''	1:CA:452:A:C2	2.47	0.48
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.48
1:CA:456:A:H2'	1:CA:457:G:O4'	2.14	0.48
1:CA:604:G:N7	1:CA:605:U:C5	2.82	0.48
1:CA:1123:U:O2'	10:CJ:39:PRO:O	2.28	0.48
1:CA:1134:G:H2'	1:CA:1135:U:O4'	2.14	0.48
1:CA:1490:U:C2'	1:CA:1491:G:O4'	2.62	0.48
2:CB:102:THR:HB	2:CB:175:GLU:CG	2.44	0.48
4:CD:29:ASP:O	4:CD:30:THR:C	2.52	0.48
4:CD:148:LYS:CD	4:CD:148:LYS:H	2.27	0.48
7:CG:46:ALA:HA	7:CG:121:ALA:HB2	1.96	0.48
7:CG:71:PRO:HD2	7:CG:96:ARG:O	2.14	0.48
9:CI:12:ARG:CZ	9:CI:107:ASP:OD2	2.60	0.48
10:CJ:52:LEU:HB2	14:CN:81:ARG:HD2	1.96	0.48
22:DA:83:A:C2	22:DA:103:A:N7	2.82	0.48
22:DA:591:U:C2	22:DA:592:A:C8	3.02	0.48
22:DA:663:G:C6	22:DA:664:G:C5	3.02	0.48
22:DA:683:U:OP1	50:D2:26:ASN:HB3	2.14	0.48
22:DA:833:A:H2'	22:DA:834:G:C8	2.48	0.48
22:DA:1668:A:C4	22:DA:1674:G:C8	3.02	0.48
22:DA:1845:G:P	24:DC:256:LYS:HZ3	2.37	0.48
22:DA:2283:C:N3	22:DA:2389:G:C2	2.82	0.48
26:DE:23:PHE:CG	26:DE:111:GLU:HG3	2.49	0.48
38:DQ:78:LYS:HE2	38:DQ:117:LEU:HD21	1.96	0.48
40:DS:58:ALA:O	40:DS:62:ASP:O	2.31	0.48
41:DT:77:ARG:O	41:DT:78:SER:HB2	2.14	0.48
42:DU:82:ARG:O	42:DU:97:LYS:HB2	2.14	0.48
43:DV:38:LEU:HD23	43:DV:40:ILE:CD1	2.43	0.48
1:AA:72:A:C2'	1:AA:73:C:H5'	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:115:G:H1'	1:AA:116:A:N7	2.29	0.48
1:AA:484:G:C5	1:AA:486:U:H1'	2.48	0.48
1:AA:652:U:C2	1:AA:752:G:N2	2.81	0.48
1:AA:785:G:N2	1:AA:798:U:C2	2.81	0.48
1:AA:1108:G:H5'	3:AC:176:HIS:CE1	2.49	0.48
1:AA:1157:A:C5	1:AA:1180:A:C6	3.01	0.48
1:AA:1210:C:N4	1:AA:1211:U:C4	2.82	0.48
1:AA:1348:U:C5	1:AA:1373:G:N2	2.81	0.48
3:AC:11:ARG:O	3:AC:12:LEU:C	2.53	0.48
4:AD:4:TYR:O	4:AD:5:LEU:CB	2.60	0.48
4:AD:103:TYR:HB2	4:AD:114:ALA:CB	2.43	0.48
5:AE:133:PRO:HA	5:AE:136:VAL:CG1	2.44	0.48
7:AG:68:ASN:O	7:AG:138:ARG:HD3	2.14	0.48
7:AG:130:ASN:HA	7:AG:135:VAL:HG11	1.96	0.48
10:AJ:30:LYS:HA	10:AJ:34:ALA:HA	1.95	0.48
10:AJ:56:HIS:C	10:AJ:57:VAL:HG12	2.34	0.48
17:AQ:45:HIS:CG	17:AQ:70:THR:CG2	2.97	0.48
21:AU:40:LYS:N	21:AU:41:PRO:HD2	2.29	0.48
22:BA:585:G:H5''	22:BA:586:A:OP1	2.14	0.48
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.48	0.48
22:BA:2534:A:C2'	22:BA:2535:G:O5'	2.62	0.48
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.48	0.48
29:BH:103:VAL:HG21	29:BH:132:PHE:CZ	2.49	0.48
46:BY:57:LEU:O	46:BY:58:ASN:HB2	2.14	0.48
1:CA:29:U:H5'	1:CA:296:U:OP1	2.14	0.48
1:CA:55:A:C6	1:CA:56:U:C2	3.01	0.48
1:CA:546:A:P	4:CD:69:GLU:HB3	2.53	0.48
1:CA:749:A:O2'	1:CA:750:C:H5'	2.13	0.48
1:CA:1161:C:O2	1:CA:1176:A:C2	2.67	0.48
4:CD:192:SER:O	4:CD:193:ALA:HB3	2.14	0.48
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.28	0.48
13:CM:91:HIS:CD2	13:CM:97:VAL:HG21	2.49	0.48
14:CN:25:ALA:O	14:CN:28:LYS:HG2	2.14	0.48
17:CQ:15:ASP:OD1	17:CQ:54:GLY:HA2	2.13	0.48
18:CR:57:ARG:HG2	18:CR:58:ALA:N	2.27	0.48
21:CU:36:GLU:OE1	21:CU:36:GLU:HA	2.13	0.48
22:DA:142:A:H2'	22:DA:143:C:C6	2.48	0.48
22:DA:228:C:N3	22:DA:418:C:C4'	2.77	0.48
22:DA:284:U:H2'	22:DA:284:U:O2	2.13	0.48
22:DA:323:C:O2	22:DA:323:C:O4'	2.32	0.48
22:DA:379:G:C6	22:DA:396:G:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:487:C:C2	22:DA:494:G:N2	2.82	0.48
22:DA:593:U:N3	22:DA:594:U:C4	2.82	0.48
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.43	0.48
22:DA:782:A:H4'	22:DA:783:A:O5'	2.14	0.48
22:DA:846:U:HO2'	22:DA:847:U:P	2.37	0.48
22:DA:1097:U:H1'	30:DI:9:VAL:HG11	1.95	0.48
22:DA:1250:G:C5'	38:DQ:6:ARG:HD2	2.44	0.48
22:DA:1470:A:H2'	22:DA:1471:G:H5'	1.96	0.48
22:DA:1675:C:N4	22:DA:1676:A:C2	2.82	0.48
22:DA:1870:C:C3'	22:DA:1871:A:H5'	2.44	0.48
22:DA:2234:G:C5	22:DA:2235:G:C8	3.02	0.48
22:DA:2507:C:C4	22:DA:2508:G:C5	3.02	0.48
23:DB:27:C:C5	23:DB:28:C:C4	3.02	0.48
23:DB:109:A:C5	23:DB:110:C:C4	3.01	0.48
26:DE:1:MET:HB2	26:DE:16:GLU:HA	1.95	0.48
26:DE:25:GLU:OE1	33:DL:6:LEU:HA	2.14	0.48
30:DI:114:ALA:O	30:DI:115:ALA:HB2	2.13	0.48
33:DL:82:LEU:O	33:DL:82:LEU:HG	2.14	0.48
35:DN:36:THR:OG1	35:DN:37:THR:N	2.46	0.48
36:DO:58:ILE:HG22	36:DO:58:ILE:O	2.13	0.48
41:DT:2:ILE:HG23	41:DT:4:GLU:N	2.28	0.48
46:DY:36:GLN:O	46:DY:37:LEU:C	2.52	0.48
1:AA:90:C:O2'	1:AA:91:U:P	2.72	0.48
1:AA:261:U:C5	20:AT:74:ARG:NH1	2.81	0.48
1:AA:448:A:C4	1:AA:487:A:C2	3.01	0.48
1:AA:509:A:O5'	58:AA:1721:HOH:O	2.20	0.48
1:AA:1018:G:N2	1:AA:1019:A:C8	2.81	0.48
1:AA:1387:G:C6	1:AA:1388:C:C4	3.02	0.48
2:AB:99:GLY:O	2:AB:103:ASN:N	2.46	0.48
4:AD:150:LYS:O	4:AD:151:LYS:C	2.51	0.48
5:AE:69:ARG:O	5:AE:70:ASN:C	2.52	0.48
8:AH:51:VAL:O	8:AH:51:VAL:CG2	2.62	0.48
9:AI:81:HIS:NE2	9:AI:104:VAL:O	2.46	0.48
10:AJ:49:PHE:N	10:AJ:49:PHE:CD1	2.81	0.48
21:AU:15:ALA:O	21:AU:16:LEU:HB2	2.14	0.48
22:BA:191:A:H2'	22:BA:192:C:C6	2.49	0.48
22:BA:228:C:H4'	22:BA:229:C:H5''	1.96	0.48
22:BA:503:A:C6	22:BA:505:A:C6	3.02	0.48
22:BA:523:C:O2'	22:BA:524:G:H5'	2.13	0.48
22:BA:1064:C:H4'	30:BI:90:SER:CB	2.43	0.48
22:BA:1352:U:O2'	22:BA:1353:A:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1406:U:C2	22:BA:1407:G:C8	3.01	0.48
22:BA:2151:U:H2'	22:BA:2152:G:N7	2.28	0.48
22:BA:2451:A:C2	56:BA:3001:DOL:C8	2.97	0.48
22:BA:2555:U:H5''	22:BA:2556:C:OP2	2.14	0.48
34:BM:12:MET:HE3	34:BM:71:LYS:HG3	1.95	0.48
51:B3:15:LYS:HD3	51:B3:23:LYS:HE2	1.95	0.48
1:CA:119:A:H4'	1:CA:120:A:O5'	2.14	0.48
1:CA:509:A:C6	1:CA:510:A:N1	2.82	0.48
1:CA:620:C:C6	4:CD:132:ILE:HD13	2.49	0.48
1:CA:966:G:O2'	9:CI:130:ARG:O	2.31	0.48
7:CG:46:ALA:HB2	7:CG:117:ALA:HA	1.95	0.48
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.13	0.48
12:CL:42:PRO:HD3	12:CL:48:ALA:O	2.14	0.48
17:CQ:13:VAL:CG1	17:CQ:22:VAL:HG13	2.44	0.48
20:CT:3:ASN:N	20:CT:8:LYS:HD3	2.29	0.48
20:CT:67:ILE:HD12	20:CT:71:LYS:HE3	1.95	0.48
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.48	0.48
22:DA:126:A:C8	22:DA:127:A:C2	3.01	0.48
22:DA:183:C:O2'	22:DA:432:A:O2'	2.23	0.48
22:DA:200:U:C5	22:DA:201:C:C5	3.02	0.48
22:DA:218:A:C2	22:DA:219:A:C4	3.02	0.48
22:DA:306:U:O4	22:DA:307:G:C6	2.66	0.48
22:DA:457:A:N1	22:DA:470:A:H5''	2.29	0.48
22:DA:704:G:H1'	22:DA:726:G:H22	1.79	0.48
22:DA:738:G:C6	22:DA:739:A:N1	2.82	0.48
22:DA:1124:G:O2'	52:D4:37:GLN:O	2.32	0.48
22:DA:1272:A:C6	22:DA:1618:A:H1'	2.49	0.48
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.49	0.48
22:DA:1891:G:H2'	22:DA:1892:C:O4'	2.14	0.48
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.48	0.48
22:DA:2233:U:H2'	22:DA:2234:G:C8	2.49	0.48
22:DA:2321:U:H5'	22:DA:2322:A:OP2	2.14	0.48
22:DA:2415:G:C2	22:DA:2416:C:C2	3.02	0.48
22:DA:2562:U:H2'	22:DA:2563:U:H5'	1.95	0.48
22:DA:2755:C:C4	52:D4:19:ARG:NH1	2.82	0.48
33:DL:78:ARG:HB3	33:DL:113:ALA:CB	2.44	0.48
1:AA:19:A:C2	1:AA:917:G:C5	3.02	0.47
1:AA:39:G:C2	1:AA:40:C:C6	3.02	0.47
1:AA:195:A:H1'	1:AA:222:C:O2'	2.13	0.47
1:AA:601:G:C2	1:AA:602:A:C4	3.02	0.47
1:AA:1012:A:C2	1:AA:1018:G:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:164:ILE:O	2:AB:186:ILE:HG12	2.13	0.47
5:AE:81:LEU:N	5:AE:81:LEU:HD13	2.29	0.47
6:AF:53:LYS:O	6:AF:54:LEU:CD1	2.62	0.47
9:AI:80:ARG:NH1	9:AI:103:PHE:CD1	2.82	0.47
14:AN:20:TYR:O	14:AN:24:ARG:N	2.47	0.47
15:AO:89:ARG:NH1	22:BA:714:U:C5	2.82	0.47
22:BA:164:C:H2'	22:BA:165:A:O4'	2.14	0.47
22:BA:608:A:C6	22:BA:609:A:C6	3.02	0.47
22:BA:609:A:H2'	22:BA:610:C:O4'	2.14	0.47
22:BA:726:G:O2'	22:BA:727:A:OP2	2.28	0.47
22:BA:1250:G:H5''	38:BQ:6:ARG:HD3	1.96	0.47
22:BA:2187:U:H2'	22:BA:2188:U:O4'	2.14	0.47
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.43	0.47
28:BG:121:ILE:CD1	28:BG:141:ILE:HG22	2.43	0.47
29:BH:135:HIS:CD2	29:BH:137:GLU:HG3	2.48	0.47
36:BO:53:THR:HG23	36:BO:74:VAL:HG21	1.95	0.47
39:BR:51:VAL:CG2	39:BR:52:PRO:HD2	2.43	0.47
40:BS:8:ARG:O	40:BS:9:HIS:HB2	2.14	0.47
41:BT:1:MET:HG3	41:BT:2:ILE:N	2.29	0.47
49:B1:25:LYS:HD3	49:B1:52:ALA:O	2.13	0.47
1:CA:203:G:N2	1:CA:215:C:C2	2.82	0.47
1:CA:429:U:O3'	4:CD:22:LYS:HE3	2.14	0.47
1:CA:1201:A:H1'	1:CA:1202:U:OP2	2.14	0.47
3:CC:81:GLY:O	3:CC:83:ASP:N	2.47	0.47
6:CF:4:TYR:CD2	6:CF:71:ILE:HG21	2.49	0.47
8:CH:78:VAL:N	8:CH:126:ILE:O	2.47	0.47
12:CL:44:LYS:HB3	12:CL:45:PRO:CD	2.43	0.47
13:CM:43:VAL:HG23	13:CM:43:VAL:O	2.14	0.47
13:CM:81:MET:O	13:CM:82:ASP:C	2.52	0.47
17:CQ:52:GLU:HG2	17:CQ:53:CYS:N	2.29	0.47
22:DA:38:A:C2	22:DA:39:G:C4	3.02	0.47
22:DA:580:U:H4'	38:DQ:31:VAL:HG11	1.96	0.47
22:DA:1544:A:C6	22:DA:1545:A:C6	3.02	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.67	0.47
22:DA:1845:G:P	24:DC:256:LYS:NZ	2.87	0.47
22:DA:2305:U:O4	22:DA:2306:C:N4	2.47	0.47
22:DA:2478:A:C8	22:DA:2529:G:C5	3.02	0.47
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.49	0.47
24:DC:108:LYS:HA	24:DC:196:GLY:CA	2.44	0.47
31:DJ:42:ALA:O	38:DQ:64:ARG:HD3	2.14	0.47
36:DO:49:VAL:HG12	36:DO:50:ALA:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:71:ALA:HB2	36:DO:102:ARG:HB2	1.96	0.47
36:DO:117:PHE:CD1	36:DO:117:PHE:C	2.87	0.47
42:DU:60:GLU:HG2	42:DU:60:GLU:O	2.14	0.47
1:AA:9:G:OP2	5:AE:126:LYS:HG3	2.14	0.47
1:AA:162:A:H1'	1:AA:348:G:O2'	2.14	0.47
1:AA:667:G:OP1	1:AA:732:C:O2'	2.21	0.47
1:AA:923:A:N6	1:AA:1392:G:O6	2.46	0.47
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.14	0.47
1:AA:1034:G:C6	1:AA:1035:A:C2	3.02	0.47
1:AA:1053:G:H4'	1:AA:1054:C:H5''	1.96	0.47
1:AA:1123:U:O2'	10:AJ:39:PRO:O	2.30	0.47
6:AF:99:ALA:O	6:AF:100:SER:CB	2.62	0.47
8:AH:30:SER:OG	8:AH:33:LYS:HG3	2.14	0.47
9:AI:26:GLY:N	9:AI:59:GLU:HA	2.29	0.47
20:AT:71:LYS:HD2	20:AT:74:ARG:HH21	1.80	0.47
22:BA:118:A:N3	22:BA:178:G:H1'	2.29	0.47
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.13	0.47
22:BA:2192:U:C5	22:BA:2193:G:C8	3.02	0.47
22:BA:2748:A:H1'	28:BG:67:THR:HG22	1.95	0.47
24:BC:44:ASN:C	24:BC:44:ASN:OD1	2.51	0.47
25:BD:12:THR:HG21	37:BP:9:GLU:OE2	2.13	0.47
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.96	0.47
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.30	0.47
27:BF:152:LEU:HD12	27:BF:153:ASP:N	2.29	0.47
27:BF:175:PHE:HD1	27:BF:177:PHE:CE1	2.32	0.47
29:BH:117:LEU:HD23	29:BH:121:VAL:HA	1.95	0.47
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.96	0.47
1:CA:1084:G:C5	1:CA:1085:U:C4	3.01	0.47
1:CA:1364:U:O2	1:CA:1364:U:C2'	2.61	0.47
1:CA:1377:A:C6	7:CG:7:ILE:HD12	2.49	0.47
6:CF:37:HIS:CD2	6:CF:65:GLU:HB2	2.49	0.47
14:CN:51:LEU:HB3	14:CN:52:PRO:HD2	1.95	0.47
18:CR:37:GLY:O	18:CR:63:ARG:NH2	2.48	0.47
19:CS:34:TRP:HA	19:CS:52:HIS:HB2	1.96	0.47
22:DA:228:C:O2	22:DA:418:C:H4'	2.15	0.47
22:DA:305:C:C2	22:DA:313:G:N1	2.82	0.47
22:DA:574:A:H4'	22:DA:575:A:C5'	2.43	0.47
22:DA:1027:A:C5	22:DA:1126:A:C2	3.02	0.47
22:DA:1250:G:H4'	38:DQ:6:ARG:HD2	1.96	0.47
22:DA:1464:G:C2	22:DA:1465:G:C4	3.02	0.47
22:DA:1645:G:H5''	22:DA:1646:C:C5'	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.97	0.47
22:DA:1855:U:C4	22:DA:1856:U:C4	3.02	0.47
22:DA:2110:G:C6	22:DA:2120:G:C8	3.02	0.47
22:DA:2119:A:C6	22:DA:2170:A:C5	3.02	0.47
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.49	0.47
22:DA:2258:C:O2'	22:DA:2427:C:OP2	2.27	0.47
22:DA:2301:C:C2	22:DA:2316:G:N2	2.82	0.47
22:DA:2747:G:O2'	28:DG:67:THR:HG22	2.14	0.47
22:DA:2814:A:C6	22:DA:2815:C:C4	3.01	0.47
29:DH:117:LEU:HD11	29:DH:130:VAL:HG22	1.95	0.47
44:DW:49:ALA:O	44:DW:50:ASN:HB2	2.13	0.47
1:AA:66:A:C2	1:AA:104:G:H1'	2.49	0.47
1:AA:292:G:N7	1:AA:293:G:H1'	2.30	0.47
1:AA:901:A:C5	1:AA:902:G:H1'	2.50	0.47
1:AA:980:C:C5	1:AA:981:U:C5	3.02	0.47
1:AA:1418:A:N6	1:AA:1482:G:O2'	2.46	0.47
3:AC:89:LYS:HG2	3:AC:90:VAL:N	2.28	0.47
4:AD:107:PHE:CD1	4:AD:145:ILE:HD13	2.49	0.47
9:AI:30:ILE:O	9:AI:33:ARG:N	2.48	0.47
10:AJ:15:HIS:O	10:AJ:17:LEU:N	2.40	0.47
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.83	0.47
10:AJ:63:ASP:HB3	10:AJ:65:TYR:CE2	2.50	0.47
15:AO:48:LYS:O	15:AO:50:HIS:N	2.47	0.47
19:AS:5:LEU:C	19:AS:6:LYS:HG3	2.34	0.47
22:BA:196:A:N3	22:BA:196:A:H2'	2.29	0.47
22:BA:1251:C:OP2	38:BQ:6:ARG:HD2	2.14	0.47
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.48	0.47
22:BA:1916:A:H2'	22:BA:1917:U:H1'	1.96	0.47
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.78	0.47
22:BA:2364:C:OP1	44:BW:55:ARG:NH1	2.47	0.47
22:BA:2721:A:C2	22:BA:2873:A:C5	3.02	0.47
22:BA:2747:G:O2'	28:BG:67:THR:HB	2.14	0.47
27:BF:88:LYS:HG3	27:BF:89:VAL:N	2.29	0.47
38:BQ:24:TYR:O	38:BQ:25:TYR:CB	2.62	0.47
39:BR:43:ASN:N	39:BR:45:GLU:O	2.47	0.47
1:CA:552:U:N3	1:CA:553:A:N7	2.62	0.47
1:CA:1001:C:H2'	1:CA:1002:G:C8	2.48	0.47
1:CA:1088:G:C6	1:CA:1089:G:N7	2.82	0.47
2:CB:102:THR:HB	2:CB:175:GLU:HG3	1.97	0.47
8:CH:64:LYS:HE2	8:CH:71:VAL:HG21	1.96	0.47
9:CI:71:GLY:O	9:CI:75:GLN:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:24:HIS:O	11:CK:30:THR:HA	2.14	0.47
11:CK:92:GLY:O	11:CK:93:ARG:C	2.53	0.47
22:DA:56:A:C2	22:DA:115:C:C2	3.01	0.47
22:DA:89:A:C2	22:DA:90:U:C2	3.02	0.47
22:DA:523:C:H2'	22:DA:524:G:C8	2.49	0.47
22:DA:616:A:OP2	58:DA:3291:HOH:O	2.20	0.47
22:DA:792:A:H2'	22:DA:2440:C:O2	2.13	0.47
22:DA:1131:G:OP1	31:DJ:82:GLY:HA2	2.13	0.47
22:DA:1203:U:OP2	22:DA:1204:A:H2'	2.14	0.47
22:DA:1607:C:H4'	22:DA:1608:A:C5'	2.45	0.47
22:DA:1665:A:H5''	32:DK:66:LYS:HG3	1.95	0.47
22:DA:1692:U:O2'	22:DA:1693:U:H2'	2.14	0.47
22:DA:2199:A:C6	22:DA:2225:A:C5	3.01	0.47
22:DA:2432:A:N1	45:DX:21:ALA:HA	2.29	0.47
22:DA:2505:G:OP2	56:DA:3001:DOL:C17	2.62	0.47
22:DA:2718:G:C2	22:DA:2719:G:H1'	2.49	0.47
24:DC:67:PHE:CE2	24:DC:156:ARG:CZ	2.97	0.47
29:DH:62:LEU:O	29:DH:62:LEU:HD22	2.14	0.47
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.95	0.47
43:DV:9:ARG:HG2	43:DV:41:GLU:HB3	1.95	0.47
1:AA:631:C:C5'	1:AA:632:U:O5'	2.62	0.47
1:AA:720:C:H5''	18:AR:41:PRO:HA	1.97	0.47
1:AA:1035:A:H2'	1:AA:1036:A:C8	2.49	0.47
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.50	0.47
3:AC:175:LEU:HD12	3:AC:175:LEU:O	2.14	0.47
7:AG:99:LEU:O	7:AG:101:MET:N	2.46	0.47
16:AP:50:THR:O	16:AP:50:THR:CG2	2.56	0.47
20:AT:81:ALA:O	20:AT:85:LYS:HG2	2.14	0.47
22:BA:416:U:H2'	22:BA:417:C:C6	2.48	0.47
22:BA:851:C:O2'	47:BZ:46:GLY:HA3	2.15	0.47
22:BA:1072:C:C2	22:BA:1093:G:O6	2.67	0.47
29:BH:116:ARG:O	29:BH:118:PRO:HD3	2.14	0.47
30:BI:57:VAL:HG22	30:BI:58:VAL:N	2.29	0.47
41:BT:88:LYS:O	41:BT:89:GLU:CB	2.63	0.47
49:B1:28:ARG:HG2	49:B1:28:ARG:O	2.14	0.47
53:B5:172:ILE:O	53:B5:173:HIS:CB	2.62	0.47
1:CA:307:C:H5''	1:CA:308:C:OP2	2.15	0.47
1:CA:811:C:N4	1:CA:812:G:C6	2.82	0.47
2:CB:100:MET:HA	2:CB:107:VAL:HG21	1.97	0.47
3:CC:87:LEU:HA	3:CC:90:VAL:HG22	1.97	0.47
9:CI:42:GLU:O	9:CI:45:ARG:NE	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:22:ILE:HB	13:CM:25:VAL:CG1	2.45	0.47
16:CP:75:ILE:HA	16:CP:78:VAL:HG12	1.96	0.47
22:DA:291:G:N2	22:DA:350:G:C5	2.83	0.47
22:DA:500:G:N2	22:DA:502:A:C8	2.82	0.47
22:DA:579:G:C5'	22:DA:2018:G:OP2	2.63	0.47
22:DA:586:A:N1	22:DA:809:G:O2'	2.35	0.47
22:DA:830:G:C4	22:DA:2448:A:C5	3.03	0.47
22:DA:971:G:O2'	22:DA:983:A:N3	2.43	0.47
22:DA:1016:G:C2	22:DA:1147:A:C2	3.02	0.47
22:DA:1046:A:O2'	22:DA:1047:G:OP1	2.25	0.47
22:DA:1277:G:C6	22:DA:1294:U:C2	3.02	0.47
22:DA:1569:A:N1	22:DA:1570:A:C2	2.82	0.47
22:DA:1598:A:C6	22:DA:1599:U:N3	2.83	0.47
22:DA:1819:A:H4'	22:DA:1820:U:H5''	1.96	0.47
22:DA:2110:G:N1	22:DA:2120:G:C8	2.82	0.47
32:DK:28:SER:O	32:DK:29:HIS:HB2	2.13	0.47
33:DL:76:GLU:HG3	33:DL:76:GLU:O	2.14	0.47
35:DN:58:ASP:HA	35:DN:80:PHE:CD1	2.50	0.47
39:DR:68:ARG:HG3	39:DR:92:TRP:CZ3	2.49	0.47
48:D0:48:TYR:CE2	48:D0:53:LYS:HD3	2.50	0.47
1:AA:5:U:C6	1:AA:5:U:OP1	2.68	0.47
1:AA:19:A:C2	1:AA:917:G:C4	3.02	0.47
1:AA:704:A:C6	1:AA:705:G:C5	3.02	0.47
1:AA:858:G:O6	1:AA:869:G:C8	2.67	0.47
1:AA:1124:G:H2'	1:AA:1145:A:C6	2.49	0.47
1:AA:1399:C:H4'	1:AA:1400:C:H5''	1.96	0.47
2:AB:34:ALA:O	2:AB:35:ARG:C	2.52	0.47
3:AC:140:ASN:O	3:AC:141:ALA:HB2	2.15	0.47
5:AE:155:ALA:HB1	8:AH:66:PHE:CE2	2.49	0.47
9:AI:99:ARG:O	9:AI:102:GLY:N	2.48	0.47
11:AK:89:PRO:HG3	21:AU:29:LEU:HD21	1.95	0.47
12:AL:22:PRO:C	12:AL:24:LEU:H	2.17	0.47
16:AP:75:ILE:HG22	16:AP:80:LYS:CE	2.44	0.47
22:BA:449:A:H2'	22:BA:450:G:O5'	2.13	0.47
22:BA:511:U:C5	22:BA:512:G:C5	3.03	0.47
22:BA:1003:G:N2	22:BA:1004:U:C2	2.82	0.47
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.45	0.47
22:BA:1124:G:H1'	52:B4:38:GLY:OXT	2.14	0.47
22:BA:1959:G:C2'	22:BA:1960:A:O5'	2.62	0.47
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.50	0.47
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.12	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:108:VAL:HG13	27:BF:114:PHE:CE2	2.49	0.47
28:BG:19:ILE:HD12	28:BG:45:HIS:HB2	1.96	0.47
33:BL:109:LYS:HG2	33:BL:126:ARG:HB2	1.96	0.47
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.88	0.47
35:BN:116:VAL:O	35:BN:116:VAL:HG13	2.14	0.47
48:B0:43:ILE:HG22	48:B0:49:TYR:HB2	1.96	0.47
1:CA:976:G:C8	1:CA:1361:G:O6	2.68	0.47
1:CA:1009:U:C2	1:CA:1021:A:N6	2.82	0.47
4:CD:102:VAL:HG13	4:CD:107:PHE:HB2	1.95	0.47
11:CK:61:PHE:C	11:CK:61:PHE:CD2	2.88	0.47
11:CK:112:ASP:HB3	21:CU:4:ILE:CG2	2.44	0.47
12:CL:107:VAL:HG23	12:CL:117:TYR:HB3	1.97	0.47
13:CM:22:ILE:HB	13:CM:25:VAL:HG12	1.96	0.47
22:DA:167:A:C2	22:DA:168:G:H1'	2.50	0.47
22:DA:200:U:C6	22:DA:201:C:C6	3.02	0.47
22:DA:249:C:O2	51:D3:12:LYS:NZ	2.48	0.47
22:DA:320:A:H4'	22:DA:322:A:C8	2.50	0.47
22:DA:498:G:C2	22:DA:499:U:C6	3.03	0.47
22:DA:749:A:C6	22:DA:750:A:N7	2.82	0.47
22:DA:1096:A:OP2	22:DA:1096:A:C8	2.67	0.47
22:DA:1153:C:H5'	38:DQ:62:ILE:HD13	1.95	0.47
22:DA:1257:C:C4	22:DA:1258:U:C4	3.02	0.47
22:DA:1361:G:N3	22:DA:1362:C:C6	2.82	0.47
22:DA:1565:C:C5	22:DA:1567:G:C6	3.02	0.47
22:DA:1662:U:O2	22:DA:2687:U:H5''	2.14	0.47
22:DA:1683:U:O5'	22:DA:1683:U:H6	1.98	0.47
22:DA:1760:C:H2'	22:DA:1761:C:O4'	2.15	0.47
22:DA:1782:U:O4	22:DA:2586:U:H5	1.97	0.47
22:DA:2062:A:N7	54:D6:1:MHW:CD	2.77	0.47
22:DA:2685:G:C4	22:DA:2686:G:C8	3.02	0.47
22:DA:2802:G:C6	22:DA:2803:G:C5	3.02	0.47
22:DA:2885:G:N2	48:D0:32:LYS:HA	2.29	0.47
23:DB:66:A:N6	23:DB:107:G:H2'	2.30	0.47
25:DD:176:ASP:HB2	25:DD:190:LYS:HB3	1.95	0.47
26:DE:5:LEU:O	26:DE:6:LYS:C	2.52	0.47
27:DF:117:LEU:HB3	27:DF:130:MET:SD	2.54	0.47
30:DI:86:ILE:HD13	30:DI:89:GLY:N	2.29	0.47
34:DM:53:MET:HG3	34:DM:54:THR:N	2.30	0.47
40:DS:55:ILE:CG2	40:DS:66:ILE:CD1	2.93	0.47
1:AA:212:G:N2	1:AA:213:G:C4	2.82	0.47
1:AA:577:G:C8	1:AA:816:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:21:ARG:HA	2:AB:21:ARG:NE	2.28	0.47
3:AC:146:ALA:C	3:AC:148:GLY:H	2.18	0.47
4:AD:68:LEU:N	4:AD:68:LEU:CD2	2.77	0.47
5:AE:82:GLN:HG2	5:AE:150:PRO:HB3	1.96	0.47
6:AF:41:ASP:O	6:AF:43:GLY:N	2.47	0.47
7:AG:120:LEU:O	7:AG:124:LEU:HD23	2.14	0.47
10:AJ:28:THR:O	10:AJ:28:THR:HG22	2.15	0.47
20:AT:5:LYS:O	20:AT:6:SER:C	2.52	0.47
20:AT:83:ILE:HD12	20:AT:84:ASN:N	2.29	0.47
22:BA:140:C:O4'	22:BA:140:C:O2	2.33	0.47
22:BA:388:G:N7	22:BA:390:U:H2'	2.29	0.47
22:BA:1199:U:H1'	38:BQ:4:VAL:HG22	1.97	0.47
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.14	0.47
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.13	0.47
22:BA:2063:C:O2	22:BA:2450:A:N1	2.47	0.47
22:BA:2131:U:OP2	22:BA:2132:U:C5	2.68	0.47
22:BA:2311:A:N7	27:BF:77:PHE:CD2	2.83	0.47
23:BB:37:C:C5	23:BB:38:C:C5	3.03	0.47
24:BC:161:TYR:CD2	24:BC:194:GLU:HG2	2.49	0.47
24:BC:250:VAL:HG12	24:BC:251:GLN:N	2.30	0.47
25:BD:36:GLN:OE1	25:BD:67:HIS:HE1	1.97	0.47
29:BH:14:SER:O	29:BH:15:LEU:CB	2.61	0.47
29:BH:111:ALA:O	29:BH:114:GLU:HB2	2.13	0.47
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.96	0.47
35:BN:65:LEU:HD11	35:BN:69:ARG:HH21	1.76	0.47
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.97	0.47
46:BY:46:VAL:O	46:BY:49:ASP:N	2.48	0.47
49:B1:19:HIS:HE1	49:B1:21:TYR:CE2	2.33	0.47
1:CA:74:A:C2	1:CA:75:G:C8	3.02	0.47
1:CA:155:A:C2	1:CA:167:A:C5	3.03	0.47
1:CA:782:A:N7	1:CA:783:C:C5	2.82	0.47
1:CA:991:U:H4'	1:CA:992:U:H5''	1.96	0.47
1:CA:1007:U:C4	1:CA:1008:U:C5	3.02	0.47
1:CA:1105:A:C2	1:CA:1106:G:C8	3.02	0.47
3:CC:130:PHE:CZ	3:CC:131:ARG:HD2	2.50	0.47
9:CI:26:GLY:N	9:CI:61:LEU:O	2.48	0.47
12:CL:34:CYS:O	12:CL:76:GLU:O	2.33	0.47
22:DA:881:G:C2	22:DA:882:G:N7	2.83	0.47
22:DA:957:C:C4	22:DA:2459:A:H1'	2.49	0.47
22:DA:1250:G:H5'	38:DQ:6:ARG:CD	2.45	0.47
22:DA:1306:C:C2	22:DA:1307:A:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1574:C:N4	58:DA:3620:HOH:O	2.47	0.47
22:DA:2164:C:H2'	22:DA:2165:C:C5	2.50	0.47
22:DA:2202:U:H5''	22:DA:2203:U:OP1	2.14	0.47
22:DA:2847:U:O4	22:DA:2848:G:C6	2.67	0.47
26:DE:109:LEU:O	26:DE:112:LEU:HB2	2.14	0.47
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.96	0.47
36:DO:78:VAL:HA	36:DO:81:ARG:HB2	1.96	0.47
40:DS:15:GLN:NE2	48:DO:17:ARG:NH2	2.63	0.47
45:DX:56:MET:O	45:DX:60:ASP:N	2.44	0.47
1:AA:350:G:O2'	1:AA:351:G:H5'	2.15	0.47
1:AA:445:G:C4	1:AA:446:G:C8	3.03	0.47
1:AA:729:A:H2'	1:AA:730:G:O4'	2.14	0.47
1:AA:922:G:C6	1:AA:923:A:C6	3.02	0.47
1:AA:958:A:N1	19:AS:54:GLY:HA3	2.29	0.47
1:AA:1277:C:O2'	1:AA:1279:G:C8	2.67	0.47
1:AA:1324:A:C2	1:AA:1325:C:C2	3.03	0.47
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.15	0.47
6:AF:92:THR:O	6:AF:93:LYS:HG2	2.14	0.47
8:AH:7:ILE:HD12	8:AH:7:ILE:N	2.29	0.47
11:AK:25:ALA:HA	11:AK:30:THR:HG22	1.96	0.47
20:AT:67:ILE:CG1	20:AT:71:LYS:HG2	2.45	0.47
22:BA:136:G:N2	22:BA:144:A:C6	2.83	0.47
22:BA:197:A:N6	22:BA:2430:A:H2'	2.29	0.47
22:BA:599:A:O2'	22:BA:600:G:H5'	2.15	0.47
22:BA:731:C:P	58:BA:3693:HOH:O	2.51	0.47
22:BA:864:G:C6	22:BA:865:C:N4	2.82	0.47
22:BA:877:A:N6	22:BA:899:A:C6	2.83	0.47
22:BA:877:A:C6	22:BA:899:A:C6	3.02	0.47
22:BA:983:A:N6	22:BA:984:A:C2	2.83	0.47
22:BA:1074:G:H2'	22:BA:1075:C:C6	2.49	0.47
22:BA:1153:C:N4	22:BA:1154:G:N1	2.62	0.47
22:BA:1169:A:H2'	22:BA:1170:C:O4'	2.15	0.47
22:BA:1237:A:H4'	22:BA:1238:G:OP1	2.15	0.47
22:BA:1259:G:O2'	22:BA:1260:A:H5'	2.15	0.47
22:BA:1421:G:N3	22:BA:1421:G:H2'	2.29	0.47
22:BA:1696:G:C6	22:BA:1697:G:C4	3.02	0.47
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.48	0.47
22:BA:2056:G:C2	22:BA:2057:G:C8	3.02	0.47
22:BA:2393:U:H2'	22:BA:2394:C:O5'	2.14	0.47
56:BA:3001:DOL:H452	56:BA:3001:DOL:H483	1.54	0.47
23:BB:14:U:O2	23:BB:107:G:H4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:182:ARG:NH2	24:BC:266:PHE:HB3	2.30	0.47
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.98	0.47
26:BE:155:GLU:OE1	26:BE:155:GLU:HA	2.15	0.47
27:BF:104:ILE:HG22	27:BF:176:PRO:CD	2.44	0.47
32:BK:41:ILE:HD11	32:BK:58:LEU:HD22	1.96	0.47
33:BL:14:LYS:HG2	33:BL:15:ALA:N	2.29	0.47
33:BL:53:GLY:O	33:BL:54:GLN:C	2.52	0.47
33:BL:100:ILE:O	33:BL:100:ILE:HG13	2.14	0.47
35:BN:14:SER:HA	35:BN:17:ARG:NH1	2.30	0.47
35:BN:117:ASP:O	35:BN:119:SER:N	2.47	0.47
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.79	0.47
36:BO:67:ASN:HA	36:BO:102:ARG:HD3	1.96	0.47
38:BQ:40:ILE:O	38:BQ:44:GLN:HG3	2.15	0.47
39:BR:46:GLU:OE1	39:BR:46:GLU:O	2.32	0.47
42:BU:39:ILE:CG2	42:BU:40:ASN:N	2.78	0.47
43:BV:65:VAL:O	43:BV:66:ASP:C	2.53	0.47
46:BY:26:PHE:CE1	46:BY:30:MET:HG3	2.49	0.47
49:B1:39:PHE:HB2	49:B1:46:HIS:CE1	2.50	0.47
1:CA:91:U:C4	1:CA:92:U:C5	3.03	0.47
1:CA:161:A:H2'	1:CA:162:A:C8	2.49	0.47
1:CA:369:G:OP2	1:CA:388:G:N1	2.45	0.47
1:CA:509:A:C6	1:CA:510:A:C6	3.03	0.47
1:CA:568:G:O6	12:CL:2:ALA:HB2	2.15	0.47
1:CA:771:G:C4	1:CA:809:G:N2	2.83	0.47
1:CA:920:U:H2'	1:CA:921:U:H6	1.78	0.47
1:CA:957:U:O2	1:CA:959:A:C8	2.68	0.47
1:CA:991:U:H4'	1:CA:992:U:OP1	2.15	0.47
1:CA:1151:A:H1'	1:CA:1152:A:C8	2.49	0.47
1:CA:1202:U:N3	14:CN:82:ILE:HG21	2.29	0.47
1:CA:1224:U:N3	1:CA:1322:C:O2	2.47	0.47
1:CA:1288:A:N1	1:CA:1371:G:H1'	2.29	0.47
1:CA:1458:G:O3'	20:CT:23:SER:HA	2.14	0.47
5:CE:13:GLU:OE1	5:CE:68:ARG:NH1	2.48	0.47
6:CF:9:MET:CE	6:CF:59:TYR:CE1	2.98	0.47
9:CI:88:MET:O	9:CI:88:MET:CG	2.63	0.47
9:CI:95:ARG:HG2	9:CI:104:VAL:HG11	1.97	0.47
15:CO:27:VAL:O	15:CO:31:LEU:HD13	2.15	0.47
18:CR:25:ASP:C	18:CR:27:ALA:N	2.67	0.47
22:DA:66:C:C4	22:DA:67:U:C5	3.03	0.47
22:DA:81:G:N7	22:DA:82:U:C4	2.83	0.47
22:DA:301:G:C2	22:DA:302:C:N3	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:686:U:H2'	22:DA:788:A:N1	2.30	0.47
22:DA:703:U:C5	22:DA:704:G:C6	3.03	0.47
22:DA:770:G:C2	22:DA:771:G:C8	3.03	0.47
22:DA:915:C:N4	22:DA:916:G:C6	2.83	0.47
22:DA:1034:G:C6	22:DA:1035:U:N3	2.82	0.47
22:DA:1184:U:OP1	47:DZ:30:ARG:HD2	2.14	0.47
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.49	0.47
22:DA:1287:A:C2'	22:DA:1288:G:H5'	2.45	0.47
22:DA:1340:U:O2	22:DA:1340:U:H2'	2.15	0.47
22:DA:1445:G:C2	22:DA:1547:C:N3	2.83	0.47
22:DA:1678:A:C4	22:DA:1679:A:C8	3.02	0.47
22:DA:1831:G:C5	22:DA:1832:C:C4	3.02	0.47
22:DA:2040:G:C6	22:DA:2041:U:C4	3.02	0.47
22:DA:2122:U:H2'	22:DA:2123:G:O4'	2.15	0.47
22:DA:2345:G:C6	22:DA:2347:C:N4	2.82	0.47
22:DA:2392:A:C8	22:DA:2429:G:C2	3.03	0.47
22:DA:2677:G:C2	22:DA:2731:G:C2	3.03	0.47
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.97	0.47
25:DD:35:THR:O	25:DD:36:GLN:HB3	2.15	0.47
25:DD:109:VAL:CG1	25:DD:201:LEU:HD22	2.44	0.47
26:DE:106:LYS:HG3	26:DE:200:LEU:HD23	1.95	0.47
29:DH:5:LEU:HD13	29:DH:13:GLY:HA3	1.96	0.47
32:DK:41:ILE:HD11	32:DK:86:LEU:HD22	1.97	0.47
33:DL:108:ALA:HB3	33:DL:125:LEU:HG	1.96	0.47
37:DP:46:VAL:HG12	37:DP:47:VAL:N	2.30	0.47
47:DZ:7:ILE:O	47:DZ:36:VAL:N	2.48	0.47
52:D4:1:MET:SD	52:D4:34:LYS:HG2	2.54	0.47
1:AA:66:A:C6	1:AA:67:C:C5	3.03	0.47
1:AA:189:A:H2'	1:AA:190:A:O4'	2.15	0.47
1:AA:444:G:C6	1:AA:445:G:C5	3.02	0.47
1:AA:591:U:H2'	1:AA:592:G:C8	2.50	0.47
1:AA:927:G:N1	1:AA:1391:U:C2	2.82	0.47
1:AA:947:G:C2	1:AA:948:C:C2	3.02	0.47
2:AB:188:ASP:HB2	2:AB:204:ASP:OD1	2.14	0.47
3:AC:47:LEU:HB3	3:AC:50:ALA:HB3	1.96	0.47
4:AD:51:TYR:CE2	4:AD:55:LEU:HD12	2.50	0.47
5:AE:39:VAL:HG22	5:AE:67:ALA:HB1	1.97	0.47
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.29	0.47
7:AG:56:LYS:O	7:AG:57:SER:HB3	2.14	0.47
8:AH:10:MET:O	8:AH:12:THR:N	2.47	0.47
9:AI:58:VAL:O	9:AI:59:GLU:HG2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:39:THR:O	12:AL:39:THR:OG1	2.23	0.47
16:AP:29:ASN:N	16:AP:29:ASN:OD1	2.48	0.47
20:AT:57:ILE:HD12	20:AT:60:ARG:HD2	1.97	0.47
21:AU:18:ARG:HD2	21:AU:18:ARG:H	1.80	0.47
22:BA:137:U:H2'	22:BA:140:C:N1	2.30	0.47
22:BA:223:A:C4	22:BA:422:A:C8	3.03	0.47
22:BA:528:A:H2	22:BA:2043:C:C5'	2.27	0.47
22:BA:591:U:HO2'	51:B3:2:PRO:N	2.12	0.47
22:BA:622:G:P	58:BA:3293:HOH:O	2.66	0.47
22:BA:975:A:C8	22:BA:990:A:N6	2.83	0.47
22:BA:1554:U:H3'	22:BA:1555:G:C8	2.49	0.47
22:BA:1554:U:H4'	22:BA:1555:G:OP2	2.15	0.47
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.50	0.47
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.45	0.47
22:BA:2714:G:C5	22:BA:2715:C:C5	3.03	0.47
25:BD:142:VAL:HB	25:BD:143:PRO:HD2	1.97	0.47
28:BG:54:PRO:HG3	28:BG:62:TRP:NE1	2.30	0.47
33:BL:78:ARG:HG2	33:BL:113:ALA:HB3	1.97	0.47
34:BM:20:LEU:HD12	43:BV:81:PRO:HG2	1.96	0.47
34:BM:59:ARG:HG3	34:BM:59:ARG:O	2.14	0.47
41:BT:17:SER:O	41:BT:18:GLU:C	2.53	0.47
53:B5:78:ILE:HG22	53:B5:123:ALA:HA	1.96	0.47
1:CA:121:U:H3'	1:CA:122:G:H5'	1.97	0.47
1:CA:172:A:C5	1:CA:174:A:N7	2.83	0.47
1:CA:247:G:C6	1:CA:278:G:C2	3.03	0.47
1:CA:339:C:O2	1:CA:351:G:N2	2.47	0.47
1:CA:376:G:OP1	16:CP:6:LEU:N	2.46	0.47
1:CA:653:U:C2	8:CH:56:LYS:HG2	2.49	0.47
1:CA:662:U:H2'	1:CA:663:A:C8	2.50	0.47
1:CA:818:G:O2'	1:CA:819:A:H5'	2.14	0.47
1:CA:1000:A:C2	1:CA:1041:G:N2	2.83	0.47
1:CA:1262:C:C2'	1:CA:1263:C:H5'	2.45	0.47
3:CC:64:ILE:CG1	3:CC:66:VAL:HG23	2.45	0.47
22:DA:310:A:H5''	42:DU:15:THR:HB	1.96	0.47
22:DA:396:G:H5''	45:DX:13:VAL:HG21	1.95	0.47
22:DA:511:U:O4	22:DA:512:G:N1	2.47	0.47
22:DA:1416:G:C4	22:DA:1417:C:C5	3.03	0.47
22:DA:1832:C:H2'	22:DA:1833:C:O4'	2.15	0.47
22:DA:1973:G:O6	22:DA:1974:C:N4	2.48	0.47
32:DK:97:THR:C	32:DK:98:ARG:HG2	2.36	0.47
33:DL:90:VAL:N	33:DL:121:THR:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:130:A:N7	17:AQ:65:ARG:HB2	2.29	0.47
1:AA:259:G:H2'	1:AA:260:G:O4'	2.15	0.47
1:AA:266:G:H3'	17:AQ:69:LYS:HB3	1.96	0.47
1:AA:507:C:C4	1:AA:508:U:C4	3.03	0.47
1:AA:1121:U:H2'	1:AA:1122:U:O4'	2.15	0.47
1:AA:1122:U:C4	1:AA:1123:U:C5	3.02	0.47
1:AA:1135:U:H2'	1:AA:1136:C:O5'	2.14	0.47
1:AA:1144:G:N1	1:AA:1145:A:H2	2.13	0.47
1:AA:1157:A:N7	1:AA:1180:A:C6	2.83	0.47
1:AA:1161:C:H2'	1:AA:1162:C:H6	1.80	0.47
2:AB:42:ASN:O	2:AB:43:LEU:C	2.53	0.47
2:AB:79:ALA:O	2:AB:80:VAL:HG23	2.15	0.47
4:AD:29:ASP:C	4:AD:30:THR:O	2.51	0.47
4:AD:168:PRO:HB2	4:AD:171:LEU:HD11	1.97	0.47
5:AE:13:GLU:HB3	5:AE:39:VAL:HG12	1.97	0.47
5:AE:144:LEU:O	5:AE:147:MET:HB3	2.15	0.47
9:AI:19:VAL:HA	9:AI:65:ILE:HG22	1.97	0.47
10:AJ:36:VAL:HA	10:AJ:76:ILE:HA	1.95	0.47
10:AJ:63:ASP:OD1	14:AN:85:ARG:HD2	2.15	0.47
13:AM:64:VAL:O	13:AM:64:VAL:CG1	2.62	0.47
14:AN:41:ARG:HB2	14:AN:42:TRP:CZ3	2.50	0.47
16:AP:1:MET:O	16:AP:1:MET:SD	2.72	0.47
22:BA:250:G:OP2	51:B3:13:ARG:NH1	2.47	0.47
22:BA:601:C:O2	22:BA:605:G:H4'	2.15	0.47
22:BA:752:A:C2	22:BA:1781:U:C2	3.03	0.47
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.15	0.47
22:BA:1747:U:O2'	22:BA:1748:C:H5'	2.14	0.47
22:BA:1851:U:C4	22:BA:1852:U:C4	3.02	0.47
22:BA:1959:G:H2'	22:BA:1960:A:O4'	2.15	0.47
22:BA:2436:G:C2	22:BA:2437:G:C8	3.03	0.47
23:BB:48:U:H2'	23:BB:49:C:C6	2.50	0.47
26:BE:149:ILE:HD12	26:BE:149:ILE:C	2.34	0.47
30:BI:106:LEU:HA	30:BI:109:ILE:HB	1.97	0.47
30:BI:117:MET:SD	30:BI:129:ILE:HD11	2.55	0.47
31:BJ:31:GLU:CG	31:BJ:142:ILE:HD11	2.44	0.47
35:BN:32:GLU:OE1	35:BN:86:ARG:NH2	2.46	0.47
42:BU:12:ILE:CG2	42:BU:80:ALA:HB2	2.45	0.47
1:CA:160:A:C6	1:CA:346:G:O6	2.68	0.47
1:CA:179:A:H2'	1:CA:180:U:C6	2.50	0.47
1:CA:740:U:O2'	1:CA:741:G:H5'	2.15	0.47
1:CA:1162:C:C2	1:CA:1175:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1314:C:H2'	1:CA:1315:U:C6	2.50	0.47
3:CC:59:ARG:HB2	3:CC:63:SER:O	2.15	0.47
9:CI:122:ARG:O	9:CI:124:ARG:N	2.48	0.47
11:CK:31:ILE:HB	11:CK:46:THR:HG22	1.97	0.47
11:CK:45:ALA:HB3	11:CK:70:CYS:HB2	1.96	0.47
13:CM:3:ARG:HG2	13:CM:7:ILE:HA	1.97	0.47
13:CM:20:THR:HG22	13:CM:20:THR:O	2.15	0.47
13:CM:45:ILE:HG22	13:CM:45:ILE:O	2.15	0.47
16:CP:52:LEU:HD22	16:CP:57:ILE:HD11	1.97	0.47
21:CU:5:LYS:HD2	21:CU:5:LYS:O	2.15	0.47
22:DA:279:A:N6	22:DA:361:G:C2'	2.78	0.47
22:DA:302:C:C2	22:DA:303:G:C8	3.03	0.47
22:DA:389:G:O4'	22:DA:2413:G:H5'	2.15	0.47
22:DA:579:G:N2	22:DA:1262:A:C4	2.83	0.47
22:DA:746:U:O2'	22:DA:2611:C:O2'	2.24	0.47
22:DA:779:U:OP1	24:DC:49:ILE:HG13	2.15	0.47
22:DA:846:U:O2'	22:DA:847:U:P	2.73	0.47
22:DA:1076:C:O2'	30:DI:93:PRO:HD2	2.15	0.47
22:DA:1361:G:C6	22:DA:1362:C:C5	3.03	0.47
22:DA:1532:A:C2	22:DA:1540:G:C6	3.02	0.47
22:DA:1726:C:H2'	22:DA:1727:C:C6	2.50	0.47
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.15	0.47
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.67	0.47
22:DA:1835:G:C5	22:DA:1836:C:C5	3.03	0.47
22:DA:1857:G:N2	22:DA:1884:G:C4	2.83	0.47
22:DA:1980:G:C2	22:DA:1982:U:C4	3.03	0.47
22:DA:2074:U:O2'	22:DA:2075:U:H5'	2.15	0.47
22:DA:2291:U:OP1	22:DA:2380:C:O2'	2.30	0.47
22:DA:2331:G:C6	22:DA:2332:C:C4	3.03	0.47
22:DA:2372:U:O4'	49:D1:46:HIS:ND1	2.48	0.47
22:DA:2702:G:N7	22:DA:2703:C:C5	2.83	0.47
22:DA:2736:A:C4	22:DA:2737:G:C8	3.02	0.47
24:DC:184:VAL:O	24:DC:185:GLU:C	2.54	0.47
26:DE:77:ILE:O	26:DE:77:ILE:HG13	2.14	0.47
32:DK:41:ILE:HD11	32:DK:86:LEU:CD2	2.44	0.47
37:DP:89:ARG:O	37:DP:112:GLU:HA	2.15	0.47
40:DS:47:VAL:CG2	40:DS:47:VAL:O	2.63	0.47
40:DS:89:ALA:O	40:DS:90:LYS:HB2	2.15	0.47
42:DU:13:VAL:HG21	42:DU:39:ILE:HG23	1.96	0.47
50:D2:18:PHE:O	50:D2:19:ARG:C	2.54	0.47
1:AA:223:A:C6	1:AA:224:U:C4	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1095:U:H2'	1:AA:1096:C:O4'	2.14	0.47
2:AB:91:PHE:CD2	2:AB:150:GLY:CA	2.98	0.47
2:AB:144:LEU:O	2:AB:148:LEU:HB2	2.15	0.47
3:AC:113:ALA:HA	3:AC:200:VAL:HG21	1.97	0.47
4:AD:130:VAL:HG11	4:AD:135:TYR:CG	2.50	0.47
5:AE:136:VAL:O	5:AE:139:ALA:N	2.47	0.47
7:AG:50:LEU:O	7:AG:50:LEU:HD13	2.14	0.47
21:AU:34:ARG:NE	21:AU:35:ARG:HB2	2.29	0.47
22:BA:277:G:C2'	22:BA:361:G:O6	2.62	0.47
22:BA:630:G:H5'	22:BA:631:A:OP2	2.14	0.47
22:BA:1098:A:N7	22:BA:1099:G:O6	2.47	0.47
22:BA:1394:U:C2'	22:BA:1395:A:O5'	2.63	0.47
22:BA:1583:A:O2'	22:BA:1584:U:O5'	2.31	0.47
22:BA:1793:C:C2'	22:BA:1794:A:H5'	2.45	0.47
22:BA:1949:G:C2	22:BA:1958:C:O2	2.67	0.47
22:BA:2173:A:C8	22:BA:2174:C:C5	3.02	0.47
22:BA:2318:G:C5	22:BA:2319:G:C6	3.03	0.47
25:BD:13:ARG:HD2	25:BD:15:PHE:CZ	2.50	0.47
25:BD:101:PHE:C	25:BD:103:ASP:H	2.17	0.47
25:BD:103:ASP:OD2	25:BD:104:VAL:N	2.48	0.47
27:BF:25:VAL:O	27:BF:28:VAL:HG12	2.14	0.47
27:BF:135:GLN:OE1	27:BF:135:GLN:N	2.45	0.47
28:BG:155:GLU:OE2	28:BG:158:LYS:N	2.47	0.47
34:BM:28:PHE:N	34:BM:104:GLU:OE2	2.46	0.47
46:BY:6:LEU:HD22	46:BY:56:LEU:HD21	1.96	0.47
46:BY:21:LEU:O	46:BY:22:LEU:O	2.33	0.47
1:CA:202:G:H2'	1:CA:203:G:O4'	2.15	0.47
1:CA:445:G:C2	1:CA:490:C:C2	3.02	0.47
1:CA:734:G:C5	1:CA:735:C:C5	3.03	0.47
1:CA:802:A:C2	1:CA:803:G:C1'	2.96	0.47
1:CA:892:A:C2	1:CA:907:A:C4	3.03	0.47
1:CA:927:G:N2	1:CA:1391:U:H1'	2.30	0.47
1:CA:1315:U:O2'	1:CA:1360:A:N3	2.35	0.47
3:CC:22:TRP:CH2	3:CC:32:ASN:HB3	2.50	0.47
3:CC:130:PHE:CZ	3:CC:131:ARG:CD	2.98	0.47
5:CE:157:ARG:HD3	5:CE:158:GLY:H	1.78	0.47
12:CL:3:THR:CB	12:CL:6:GLN:HG3	2.44	0.47
14:CN:35:ASN:O	14:CN:42:TRP:CH2	2.68	0.47
15:CO:35:GLN:NE2	15:CO:39:LEU:CD2	2.78	0.47
20:CT:67:ILE:CD1	20:CT:71:LYS:HE3	2.45	0.47
21:CU:36:GLU:HG3	21:CU:37:PHE:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:185:G:N1	22:DA:212:G:C2	2.82	0.47
22:DA:711:G:C2	22:DA:721:A:N3	2.83	0.47
22:DA:1335:C:H2'	22:DA:1336:A:C8	2.49	0.47
22:DA:1343:G:C5	22:DA:1344:U:O4	2.67	0.47
22:DA:1581:G:C6	22:DA:1582:C:N4	2.83	0.47
22:DA:1782:U:O4	22:DA:2586:U:C5	2.68	0.47
22:DA:1835:G:C4	22:DA:1836:C:C6	3.02	0.47
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.15	0.47
22:DA:2144:G:C2	22:DA:2146:C:O2	2.68	0.47
22:DA:2297:A:N1	22:DA:2321:U:H5	2.13	0.47
22:DA:2681:C:C2	22:DA:2724:U:O4	2.68	0.47
22:DA:2732:G:O2'	22:DA:2733:A:H5'	2.15	0.47
24:DC:72:ASP:HA	24:DC:118:SER:O	2.15	0.47
24:DC:87:ARG:HB3	24:DC:87:ARG:NH1	2.30	0.47
24:DC:232:HIS:NE2	24:DC:244:PRO:HA	2.30	0.47
30:DI:28:LEU:HD13	30:DI:38:PHE:CD2	2.50	0.47
31:DJ:41:LYS:O	31:DJ:44:TYR:N	2.43	0.47
34:DM:76:LYS:HE3	34:DM:80:VAL:HG12	1.97	0.47
41:DT:28:ASN:HB3	41:DT:87:LEU:HB2	1.96	0.47
42:DU:41:LEU:HD12	42:DU:60:GLU:CG	2.45	0.47
51:D3:7:VAL:O	51:D3:10:ALA:N	2.45	0.47
1:AA:132:C:H2'	1:AA:133:U:O4'	2.15	0.46
1:AA:542:G:OP1	4:AD:10:LYS:HE2	2.15	0.46
1:AA:654:G:H2'	1:AA:655:A:H5'	1.96	0.46
7:AG:55:GLY:C	7:AG:57:SER:N	2.68	0.46
7:AG:69:VAL:HG23	7:AG:100:ALA:HB1	1.97	0.46
10:AJ:57:VAL:CG2	10:AJ:58:ASN:N	2.78	0.46
11:AK:74:VAL:C	11:AK:76:GLU:N	2.66	0.46
12:AL:44:LYS:CB	12:AL:45:PRO:HD3	2.45	0.46
13:AM:114:LYS:CB	13:AM:115:PRO:CD	2.91	0.46
22:BA:111:A:N1	22:BA:112:U:C2	2.83	0.46
22:BA:259:G:O2'	22:BA:260:G:H5'	2.14	0.46
22:BA:287:G:C2	22:BA:354:A:C2	3.03	0.46
22:BA:1174:U:O2	22:BA:1174:U:O4'	2.32	0.46
22:BA:1239:G:H2'	22:BA:1240:U:O4'	2.15	0.46
22:BA:1385:A:C2	22:BA:1386:C:C2	3.04	0.46
22:BA:1491:G:N2	22:BA:1500:G:H1'	2.29	0.46
22:BA:1883:U:O4	22:BA:1884:G:N1	2.48	0.46
22:BA:2592:G:C6	22:BA:2593:U:C4	3.03	0.46
22:BA:2847:U:H2'	22:BA:2848:G:H5'	1.96	0.46
22:BA:2898:U:O2'	22:BA:2899:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BI:65:ARG:NH1	30:BI:66:SER:OG	2.48	0.46
33:BL:26:GLY:O	33:BL:27:LEU:HD23	2.14	0.46
39:BR:49:ILE:HB	39:BR:52:PRO:HA	1.97	0.46
1:CA:93:U:C2'	1:CA:94:G:H5''	2.45	0.46
1:CA:108:G:C6	20:CT:10:ARG:HG2	2.50	0.46
1:CA:223:A:C6	1:CA:224:U:C4	3.03	0.46
1:CA:412:A:O2'	1:CA:414:A:H5'	2.15	0.46
1:CA:748:G:H2'	1:CA:749:A:H8	1.78	0.46
1:CA:791:G:C5	1:CA:792:A:N7	2.83	0.46
1:CA:1004:A:C6	1:CA:1005:A:N1	2.83	0.46
1:CA:1022:A:C5	1:CA:1023:U:C5	3.03	0.46
1:CA:1130:A:N9	1:CA:1146:A:C2	2.83	0.46
1:CA:1160:G:O6	1:CA:1181:G:C6	2.67	0.46
2:CB:164:ILE:O	2:CB:186:ILE:HG23	2.16	0.46
5:CE:137:VAL:O	5:CE:138:ARG:CG	2.60	0.46
9:CI:30:ILE:HD13	9:CI:39:PHE:CE2	2.50	0.46
12:CL:44:LYS:HD3	12:CL:44:LYS:N	2.29	0.46
13:CM:33:ILE:HG22	13:CM:56:LEU:HD23	1.96	0.46
22:DA:84:A:C2	22:DA:103:A:C5	3.03	0.46
22:DA:104:A:C8	22:DA:105:C:C4	3.03	0.46
22:DA:125:A:H3'	50:D2:19:ARG:HG3	1.97	0.46
22:DA:372:G:O2'	22:DA:400:G:O6	2.25	0.46
22:DA:765:C:C4	22:DA:766:U:C4	3.03	0.46
22:DA:1277:G:N3	35:DN:23:ASN:HB3	2.30	0.46
22:DA:1343:G:C6	22:DA:1344:U:O4	2.68	0.46
22:DA:1394:U:H6	22:DA:1394:U:H3'	1.80	0.46
22:DA:1731:G:N1	22:DA:1733:G:C4	2.83	0.46
22:DA:1805:A:C2	22:DA:1813:G:N1	2.83	0.46
22:DA:2199:A:C4	22:DA:2225:A:N1	2.83	0.46
22:DA:2799:A:C6	22:DA:2801:G:C4	3.03	0.46
23:DB:81:G:C6	23:DB:82:U:C4	3.03	0.46
24:DC:30:PHE:CD1	24:DC:32:PRO:HD2	2.50	0.46
26:DE:130:LYS:HB2	26:DE:133:LEU:HB3	1.97	0.46
38:DQ:36:PHE:CE1	38:DQ:40:ILE:HD11	2.49	0.46
39:DR:66:HIS:CD2	39:DR:94:THR:CG2	2.98	0.46
39:DR:68:ARG:HB3	39:DR:90:ARG:HG2	1.96	0.46
50:D2:30:VAL:O	50:D2:34:ARG:HG3	2.15	0.46
1:AA:474:G:C5	1:AA:475:C:C5	3.03	0.46
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.48	0.46
2:AB:33:GLY:HA3	2:AB:40:ILE:H	1.79	0.46
4:AD:118:VAL:HA	4:AD:123:ILE:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:20:ARG:HG3	5:AE:21:VAL:N	2.29	0.46
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	1.97	0.46
7:AG:8:GLY:O	7:AG:9:GLN:HB3	2.14	0.46
11:AK:112:ASP:HB2	21:AU:20:LYS:HD2	1.96	0.46
13:AM:12:HIS:HA	13:AM:44:LYS:HE3	1.96	0.46
19:AS:3:ARG:O	19:AS:4:SER:HB2	2.16	0.46
21:AU:25:LYS:O	21:AU:29:LEU:HB3	2.16	0.46
22:BA:1084:A:C2	22:BA:1106:G:H1'	2.50	0.46
22:BA:1839:G:H2'	22:BA:1840:G:O5'	2.15	0.46
22:BA:1886:U:C2'	22:BA:1887:C:H5'	2.45	0.46
22:BA:1915:U:C4	22:BA:1916:A:C5	3.03	0.46
22:BA:2820:A:C6	25:BD:197:THR:CG2	2.98	0.46
22:BA:2871:U:OP1	35:BN:69:ARG:NH1	2.48	0.46
26:BE:119:ILE:O	26:BE:187:VAL:HA	2.15	0.46
33:BL:85:VAL:HB	33:BL:94:THR:HG23	1.97	0.46
42:BU:14:LEU:HD11	42:BU:71:ALA:HB2	1.96	0.46
1:CA:50:A:H1'	1:CA:52:C:O4'	2.15	0.46
1:CA:517:G:H5'	1:CA:519:C:C2	2.51	0.46
1:CA:577:G:C2	1:CA:578:C:C5	3.03	0.46
1:CA:1019:A:H2'	1:CA:1020:G:O4'	2.16	0.46
1:CA:1027:C:N4	1:CA:1034:G:N1	2.63	0.46
1:CA:1032:G:H2'	1:CA:1032:G:N3	2.31	0.46
1:CA:1237:C:O2	1:CA:1334:G:O2'	2.17	0.46
4:CD:9:LEU:HD11	4:CD:29:ASP:OD1	2.14	0.46
4:CD:35:GLU:HG3	4:CD:36:GLN:HG3	1.97	0.46
8:CH:2:SER:C	8:CH:4:GLN:N	2.68	0.46
12:CL:47:SER:O	12:CL:48:ALA:HB2	2.12	0.46
14:CN:23:LYS:O	14:CN:26:GLU:HG3	2.15	0.46
21:CU:4:ILE:O	21:CU:4:ILE:HG22	2.15	0.46
22:DA:188:G:C2	22:DA:209:C:N3	2.84	0.46
22:DA:273:G:H2'	22:DA:274:C:O4'	2.14	0.46
22:DA:981:A:H5''	58:DA:3588:HOH:O	2.14	0.46
22:DA:1062:G:C6	22:DA:1063:G:O6	2.68	0.46
22:DA:1121:C:C2	22:DA:1122:G:C8	3.03	0.46
22:DA:1317:G:N2	22:DA:1336:A:N3	2.63	0.46
22:DA:1669:A:O4'	32:DK:5:GLN:HG3	2.15	0.46
22:DA:1954:G:H1'	22:DA:1956:U:O4	2.15	0.46
22:DA:2121:G:C2	22:DA:2177:C:O2	2.68	0.46
22:DA:2297:A:N7	22:DA:2320:U:C4	2.83	0.46
22:DA:2405:G:H1'	22:DA:2412:A:N6	2.30	0.46
22:DA:2693:G:N2	22:DA:2717:C:O2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2751:G:H4'	28:DG:4:VAL:HG23	1.96	0.46
22:DA:2839:G:C5	22:DA:2840:C:C5	3.03	0.46
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.81	0.46
26:DE:76:PRO:HA	26:DE:82:GLY:HA2	1.96	0.46
32:DK:105:ARG:N	32:DK:122:VAL:OXT	2.48	0.46
34:DM:2:LEU:HD12	34:DM:2:LEU:N	2.30	0.46
1:AA:74:A:C2	1:AA:97:G:C6	3.03	0.46
1:AA:404:G:H4'	1:AA:439:U:O2	2.16	0.46
1:AA:572:A:H5'	1:AA:573:A:P	2.56	0.46
1:AA:596:A:N6	1:AA:645:G:N1	2.63	0.46
1:AA:663:A:C2	1:AA:743:A:C2	3.04	0.46
1:AA:737:C:H2'	1:AA:738:C:C6	2.50	0.46
2:AB:94:HIS:O	2:AB:95:ARG:C	2.53	0.46
2:AB:103:ASN:O	2:AB:106:THR:N	2.47	0.46
2:AB:213:TYR:O	2:AB:217:VAL:HG23	2.15	0.46
3:AC:149:ILE:HG13	3:AC:201:TRP:O	2.15	0.46
4:AD:98:LEU:HD23	4:AD:118:VAL:HG11	1.98	0.46
12:AL:38:TYR:O	12:AL:39:THR:HG22	2.15	0.46
13:AM:11:ASP:O	13:AM:12:HIS:CB	2.62	0.46
20:AT:25:ARG:O	20:AT:29:ARG:HG2	2.14	0.46
22:BA:528:A:C2	22:BA:2043:C:C5'	2.95	0.46
22:BA:1268:A:C2	22:BA:2013:A:C4	3.03	0.46
22:BA:1489:C:C2	22:BA:1501:G:C2	3.03	0.46
22:BA:1951:U:H2'	22:BA:1953:A:OP2	2.15	0.46
22:BA:2661:G:H2'	22:BA:2662:A:C8	2.50	0.46
24:BC:144:VAL:HG21	24:BC:162:VAL:HG21	1.96	0.46
28:BG:87:LEU:N	28:BG:87:LEU:HD12	2.30	0.46
29:BH:80:ILE:HG21	29:BH:94:ILE:CG1	2.45	0.46
29:BH:132:PHE:CD2	29:BH:142:VAL:CG2	2.99	0.46
42:BU:26:LYS:O	42:BU:27:ASN:HB3	2.15	0.46
46:BY:46:VAL:O	46:BY:47:ARG:C	2.54	0.46
1:CA:81:A:C2	1:CA:89:U:C2	3.03	0.46
1:CA:182:A:C5	1:CA:184:G:C5	3.03	0.46
1:CA:496:A:C2	1:CA:497:G:C6	3.03	0.46
1:CA:517:G:C8	1:CA:531:U:C4	3.03	0.46
1:CA:543:U:O2'	1:CA:544:G:H5'	2.15	0.46
1:CA:578:C:C2	1:CA:579:A:C8	3.03	0.46
2:CB:34:ALA:O	2:CB:35:ARG:O	2.34	0.46
6:CF:32:ALA:O	6:CF:33:GLU:C	2.54	0.46
7:CG:91:VAL:HG21	7:CG:96:ARG:HA	1.97	0.46
10:CJ:53:ILE:HD11	14:CN:85:ARG:NH1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:30:LYS:HB2	17:CQ:37:PHE:CZ	2.50	0.46
22:DA:218:A:H2'	22:DA:219:A:O4'	2.15	0.46
22:DA:265:A:H4'	22:DA:266:G:OP1	2.15	0.46
22:DA:487:C:N4	22:DA:488:G:C6	2.83	0.46
22:DA:570:G:C2'	22:DA:571:U:H5'	2.45	0.46
22:DA:997:G:OP1	38:DQ:92:ARG:NE	2.48	0.46
22:DA:1184:U:OP1	47:DZ:30:ARG:NH2	2.48	0.46
22:DA:1470:A:H2'	22:DA:1471:G:C5'	2.45	0.46
22:DA:1734:G:C2	22:DA:1735:A:C5	3.04	0.46
22:DA:2283:C:C2	22:DA:2389:G:C2	3.03	0.46
22:DA:2305:U:C4	22:DA:2306:C:N4	2.83	0.46
22:DA:2682:A:C2	25:DD:23:PRO:HB3	2.50	0.46
24:DC:247:PRO:HG2	24:DC:248:TRP:CZ3	2.51	0.46
26:DE:23:PHE:CD1	26:DE:111:GLU:HG3	2.49	0.46
29:DH:41:LYS:O	29:DH:44:ILE:HG12	2.15	0.46
30:DI:20:PRO:HB2	30:DI:23:PRO:HD2	1.98	0.46
30:DI:93:PRO:HB3	30:DI:136:MET:HA	1.97	0.46
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.96	0.46
38:DQ:61:TRP:HB3	38:DQ:92:ARG:O	2.16	0.46
1:AA:818:G:O2'	1:AA:819:A:H5'	2.15	0.46
1:AA:1286:U:H2'	1:AA:1286:U:O2	2.15	0.46
3:AC:79:LYS:O	3:AC:80:LYS:C	2.54	0.46
20:AT:68:HIS:HB3	20:AT:69:LYS:HZ2	1.80	0.46
22:BA:146:A:H2'	22:BA:147:C:O4'	2.16	0.46
22:BA:322:A:C5	22:BA:340:A:C2	3.03	0.46
22:BA:1087:G:O2'	22:BA:1089:A:O4'	2.29	0.46
22:BA:2018:G:O2'	22:BA:2019:A:H5'	2.15	0.46
22:BA:2444:G:OP2	26:BE:63:LYS:HD3	2.16	0.46
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.16	0.46
24:BC:162:VAL:CG1	24:BC:176:LEU:HD23	2.45	0.46
28:BG:54:PRO:HG3	28:BG:62:TRP:CE2	2.50	0.46
29:BH:37:VAL:CG2	29:BH:38:PRO:HD2	2.45	0.46
39:BR:11:GLN:C	39:BR:12:HIS:CG	2.88	0.46
40:BS:74:ILE:HG23	40:BS:74:ILE:O	2.16	0.46
42:BU:72:ILE:HD12	42:BU:72:ILE:O	2.15	0.46
53:B5:200:HIS:O	53:B5:201:LYS:C	2.53	0.46
1:CA:651:C:N4	1:CA:753:A:OP2	2.47	0.46
1:CA:779:C:C2'	1:CA:780:A:H5'	2.46	0.46
1:CA:1010:U:C2	1:CA:1020:G:C2	3.04	0.46
1:CA:1279:G:OP2	10:CJ:11:LYS:NZ	2.44	0.46
1:CA:1307:U:C4	1:CA:1308:U:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1460:C:C4	1:CA:1461:G:C5	3.03	0.46
3:CC:126:ARG:O	3:CC:127:ARG:CB	2.63	0.46
4:CD:161:LEU:HD23	4:CD:162:ALA:N	2.30	0.46
5:CE:70:ASN:N	5:CE:70:ASN:OD1	2.49	0.46
12:CL:61:PHE:N	12:CL:61:PHE:HD1	2.13	0.46
13:CM:23:TYR:CD2	13:CM:23:TYR:O	2.69	0.46
15:CO:45:GLU:O	15:CO:46:HIS:HB2	2.16	0.46
16:CP:19:VAL:HG13	16:CP:37:GLY:N	2.31	0.46
22:DA:295:G:C2	22:DA:296:U:C6	3.03	0.46
22:DA:771:G:C6	22:DA:772:C:C5	3.03	0.46
22:DA:813:U:H2'	22:DA:814:C:C6	2.50	0.46
22:DA:881:G:N1	22:DA:895:U:O2	2.47	0.46
22:DA:1070:A:H2'	22:DA:1097:U:O5'	2.16	0.46
22:DA:1330:C:C2'	22:DA:1331:G:O5'	2.63	0.46
22:DA:1475:G:H4'	22:DA:1732:C:C5	2.50	0.46
22:DA:1577:C:H2'	22:DA:1578:U:C1'	2.46	0.46
22:DA:1845:G:OP1	24:DC:256:LYS:NZ	2.40	0.46
22:DA:1924:C:H2'	22:DA:1925:C:O4'	2.16	0.46
22:DA:2015:A:C6	48:D0:3:VAL:HG23	2.51	0.46
24:DC:226:ASN:HB3	24:DC:227:PRO:CD	2.45	0.46
25:DD:148:GLN:OE1	25:DD:148:GLN:N	2.48	0.46
26:DE:52:VAL:HG21	26:DE:81:GLY:HA2	1.98	0.46
37:DP:89:ARG:NH1	37:DP:115:ASN:OXT	2.48	0.46
39:DR:52:PRO:O	39:DR:53:PHE:HB2	2.14	0.46
52:D4:25:VAL:HB	52:D4:35:GLN:HB2	1.97	0.46
1:AA:104:G:C2	1:AA:105:G:C8	3.04	0.46
1:AA:737:C:H2'	1:AA:738:C:H6	1.79	0.46
1:AA:858:G:O2'	1:AA:859:G:H5'	2.15	0.46
1:AA:1126:U:O2	1:AA:1280:A:C5'	2.63	0.46
1:AA:1211:U:C2'	1:AA:1212:U:OP2	2.63	0.46
8:AH:11:LEU:N	8:AH:11:LEU:HD23	2.31	0.46
14:AN:49:GLN:OE1	14:AN:49:GLN:CA	2.64	0.46
17:AQ:45:HIS:CB	17:AQ:70:THR:HG22	2.46	0.46
19:AS:63:THR:HB	19:AS:65:GLU:OE2	2.15	0.46
20:AT:71:LYS:HD2	20:AT:74:ARG:NH2	2.31	0.46
22:BA:578:G:OP1	22:BA:1255:U:O2'	2.29	0.46
22:BA:918:A:H4'	23:BB:97:C:O2	2.16	0.46
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.16	0.46
22:BA:1592:C:C2'	22:BA:1593:A:H5'	2.46	0.46
22:BA:1637:A:H5'	22:BA:1760:C:O2'	2.15	0.46
22:BA:1958:C:O2'	22:BA:1959:G:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2262:U:OP1	22:BA:2387:U:O2'	2.29	0.46
25:BD:12:THR:HG22	37:BP:9:GLU:OE2	2.15	0.46
34:BM:95:LEU:C	34:BM:96:ILE:HD13	2.35	0.46
36:BO:7:ARG:HG3	36:BO:96:GLY:HA3	1.97	0.46
37:BP:26:VAL:CG1	37:BP:47:VAL:HG23	2.45	0.46
38:BQ:36:PHE:CZ	38:BQ:40:ILE:HD11	2.49	0.46
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.96	0.46
1:CA:81:A:H2'	1:CA:82:G:C8	2.50	0.46
1:CA:669:G:N2	1:CA:738:C:C2	2.84	0.46
1:CA:872:A:C4	1:CA:874:G:C8	3.03	0.46
1:CA:1134:G:C6	1:CA:1135:U:C2	3.03	0.46
2:CB:128:LYS:O	2:CB:129:LEU:HB2	2.15	0.46
7:CG:25:LYS:O	7:CG:29:ILE:HG12	2.15	0.46
19:CS:44:MET:HE1	19:CS:71:LEU:HD21	1.95	0.46
22:DA:72:U:O2'	22:DA:73:A:O5'	2.25	0.46
22:DA:197:A:N6	22:DA:2430:A:H2'	2.30	0.46
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.63	0.46
22:DA:571:U:C4	22:DA:575:A:C5	3.04	0.46
22:DA:678:C:H2'	22:DA:679:C:C6	2.51	0.46
22:DA:989:G:C8	47:DZ:14:ILE:HD11	2.50	0.46
22:DA:1323:C:C4	22:DA:1324:G:N7	2.83	0.46
22:DA:1325:U:OP1	22:DA:1647:U:O2'	2.28	0.46
22:DA:1529:G:O6	22:DA:1543:G:C2	2.68	0.46
22:DA:1753:G:N1	22:DA:1756:G:C2	2.83	0.46
22:DA:1819:A:H5''	24:DC:157:SER:HB2	1.98	0.46
22:DA:2420:C:OP1	51:D3:34:THR:HB	2.16	0.46
22:DA:2602:A:H4'	22:DA:2603:G:C5'	2.45	0.46
23:DB:71:C:C2	23:DB:106:G:C2	3.03	0.46
32:DK:31:ARG:HB3	32:DK:32:TYR:CD2	2.50	0.46
34:DM:56:ALA:C	34:DM:58:LYS:H	2.19	0.46
35:DN:67:PHE:O	35:DN:71:ARG:HD2	2.16	0.46
35:DN:84:GLY:N	35:DN:85:PRO:HD2	2.30	0.46
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.31	0.46
44:DW:52:GLY:HA3	44:DW:60:PHE:CE1	2.50	0.46
50:D2:34:ARG:HB2	50:D2:42:LEU:CD1	2.46	0.46
1:AA:36:C:H2'	1:AA:37:U:O4'	2.16	0.46
1:AA:509:A:P	58:AA:1721:HOH:O	2.73	0.46
1:AA:670:G:C2'	1:AA:671:G:O5'	2.63	0.46
1:AA:723:U:OP2	1:AA:723:U:H4'	2.14	0.46
1:AA:1244:G:C2	1:AA:1294:G:C2	3.03	0.46
2:AB:84:ALA:O	2:AB:89:GLN:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:144:LEU:HD13	3:AC:144:LEU:N	2.31	0.46
3:AC:203:PHE:CE1	3:AC:205:GLY:O	2.69	0.46
5:AE:88:VAL:HG23	5:AE:93:ARG:HG2	1.98	0.46
9:AI:30:ILE:O	9:AI:33:ARG:HB2	2.15	0.46
21:AU:20:LYS:HE2	21:AU:20:LYS:N	2.31	0.46
22:BA:526:A:O2'	22:BA:2043:C:O2	2.27	0.46
22:BA:920:A:O2'	22:BA:921:C:H5'	2.15	0.46
22:BA:1181:U:H2'	22:BA:1182:G:C8	2.51	0.46
22:BA:2190:G:C6	22:BA:2191:A:C6	3.04	0.46
22:BA:2648:G:H2'	22:BA:2649:C:O4'	2.16	0.46
24:BC:162:VAL:HG11	24:BC:174:LEU:HB3	1.96	0.46
27:BF:73:SER:HB2	27:BF:81:GLN:N	2.31	0.46
30:BI:62:TYR:O	30:BI:63:ALA:HB2	2.15	0.46
30:BI:116:ASP:O	30:BI:117:MET:HG2	2.15	0.46
33:BL:87:GLY:O	33:BL:89:VAL:HG12	2.16	0.46
51:B3:31:HIS:CD2	51:B3:31:HIS:C	2.88	0.46
1:CA:33:A:H2'	1:CA:34:C:H6	1.81	0.46
1:CA:429:U:H4'	1:CA:430:A:OP1	2.15	0.46
1:CA:429:U:H3'	4:CD:9:LEU:HD23	1.96	0.46
1:CA:541:G:H2'	1:CA:542:G:O4'	2.15	0.46
1:CA:620:C:H2'	1:CA:621:A:O4'	2.15	0.46
1:CA:681:A:C2	1:CA:710:G:C2	3.04	0.46
1:CA:748:G:H2'	1:CA:749:A:C8	2.51	0.46
1:CA:846:G:OP2	18:CR:48:ARG:NH2	2.49	0.46
1:CA:1226:C:N4	13:CM:103:LYS:HB2	2.31	0.46
4:CD:9:LEU:HG	4:CD:32:CYS:HB2	1.97	0.46
5:CE:16:ILE:N	5:CE:16:ILE:HD12	2.30	0.46
6:CF:8:PHE:N	6:CF:8:PHE:CD2	2.83	0.46
7:CG:31:MET:O	7:CG:31:MET:HG2	2.16	0.46
7:CG:114:LYS:HB2	7:CG:118:LEU:HD12	1.97	0.46
12:CL:25:GLU:CB	12:CL:27:CYS:SG	3.03	0.46
17:CQ:38:ILE:CG2	17:CQ:39:LYS:N	2.79	0.46
20:CT:51:PHE:C	20:CT:51:PHE:CD1	2.88	0.46
22:DA:485:C:C2	22:DA:496:G:C2	3.04	0.46
22:DA:867:C:C5	22:DA:868:U:C5	3.03	0.46
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.25	0.46
22:DA:1177:G:H2'	22:DA:1178:C:H4'	1.97	0.46
22:DA:1682:G:N3	22:DA:1757:A:H1'	2.31	0.46
22:DA:1940:U:C2	22:DA:1965:C:OP2	2.68	0.46
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.16	0.46
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2336:A:N3	22:DA:2385:C:H1'	2.30	0.46
22:DA:2581:G:H2'	22:DA:2581:G:N3	2.30	0.46
22:DA:2741:A:H2'	22:DA:2742:G:H5'	1.98	0.46
22:DA:2889:C:C4	22:DA:2890:G:C5	3.03	0.46
25:DD:122:VAL:HG21	25:DD:141:ARG:NH1	2.31	0.46
31:DJ:19:ASP:O	31:DJ:23:LYS:HE3	2.16	0.46
31:DJ:124:VAL:O	31:DJ:124:VAL:HG23	2.16	0.46
32:DK:118:LEU:O	32:DK:119:ALA:HB3	2.15	0.46
41:DT:14:PRO:HD2	46:DY:33:ALA:HB1	1.96	0.46
1:AA:32:A:OP1	1:AA:398:U:H1'	2.15	0.46
1:AA:445:G:H2'	1:AA:446:G:O4'	2.15	0.46
1:AA:712:A:C6	1:AA:713:G:C6	3.04	0.46
1:AA:968:A:H4'	1:AA:969:A:OP2	2.16	0.46
1:AA:978:A:C5	1:AA:1318:A:C6	3.03	0.46
1:AA:1059:C:N3	1:AA:1060:U:C5	2.83	0.46
4:AD:34:ILE:O	4:AD:35:GLU:CB	2.64	0.46
4:AD:34:ILE:HG12	4:AD:35:GLU:N	2.29	0.46
8:AH:75:ILE:O	8:AH:75:ILE:HG23	2.16	0.46
8:AH:78:VAL:HG11	8:AH:125:ILE:CD1	2.46	0.46
8:AH:89:LYS:HG3	8:AH:90:ASP:N	2.31	0.46
11:AK:92:GLY:O	11:AK:96:THR:HB	2.16	0.46
12:AL:44:LYS:HB3	12:AL:45:PRO:HD3	1.96	0.46
15:AO:2:SER:O	15:AO:3:LEU:HB2	2.14	0.46
20:AT:54:MET:SD	20:AT:79:LEU:CD1	3.04	0.46
22:BA:281:C:H2'	22:BA:282:A:C8	2.51	0.46
22:BA:851:C:H2'	22:BA:852:U:H6	1.80	0.46
22:BA:1047:G:N2	22:BA:1110:G:C4	2.84	0.46
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.16	0.46
28:BG:141:ILE:C	28:BG:141:ILE:HD12	2.36	0.46
29:BH:90:LEU:HD23	29:BH:93:SER:HA	1.97	0.46
29:BH:94:ILE:HG23	29:BH:98:ASP:HB2	1.98	0.46
30:BI:117:MET:CE	30:BI:129:ILE:HD11	2.46	0.46
31:BJ:32:LEU:O	31:BJ:36:LEU:HG	2.16	0.46
41:BT:16:VAL:O	41:BT:17:SER:HB3	2.15	0.46
1:CA:3:A:C6	1:CA:629:A:H4'	2.51	0.46
1:CA:73:C:O2'	1:CA:74:A:P	2.74	0.46
1:CA:84:U:O2'	1:CA:85:U:H5'	2.16	0.46
1:CA:517:G:H5'	1:CA:519:C:O2	2.16	0.46
1:CA:643:C:H5'	8:CH:32:LEU:HD22	1.96	0.46
1:CA:671:G:N1	1:CA:672:U:C2	2.84	0.46
1:CA:933:G:OP2	7:CG:3:ARG:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1170:A:H3'	1:CA:1171:A:H8	1.80	0.46
1:CA:1232:U:OP1	9:CI:126:GLN:HG2	2.16	0.46
2:CB:219:ALA:O	2:CB:220:THR:CB	2.64	0.46
6:CF:36:ILE:HG12	6:CF:36:ILE:O	2.15	0.46
7:CG:30:LEU:HD11	7:CG:116:MET:HE2	1.98	0.46
9:CI:88:MET:HB2	9:CI:92:GLU:CD	2.36	0.46
12:CL:107:VAL:CG2	12:CL:117:TYR:HB3	2.45	0.46
20:CT:3:ASN:O	20:CT:4:ILE:C	2.53	0.46
21:CU:37:PHE:HD2	21:CU:41:PRO:HG3	1.80	0.46
22:DA:404:A:C1'	22:DA:405:U:OP2	2.63	0.46
22:DA:415:A:C2	22:DA:2409:G:C2	3.04	0.46
22:DA:647:G:N7	22:DA:648:G:N7	2.64	0.46
22:DA:682:G:N3	22:DA:682:G:H2'	2.30	0.46
22:DA:882:G:C2	22:DA:883:G:H1'	2.51	0.46
22:DA:1264:A:C8	22:DA:1265:A:C8	3.03	0.46
22:DA:1361:G:C6	22:DA:1362:C:C4	3.04	0.46
22:DA:1437:C:N4	22:DA:1438:U:O4	2.49	0.46
22:DA:1514:G:H5''	22:DA:1515:A:P	2.56	0.46
22:DA:1806:C:C5	22:DA:1807:G:C8	3.03	0.46
22:DA:1818:U:H2'	24:DC:156:ARG:HD3	1.98	0.46
22:DA:2114:A:N6	22:DA:2119:A:N7	2.64	0.46
22:DA:2282:G:N3	22:DA:2425:A:N6	2.64	0.46
22:DA:2318:G:C6	22:DA:2319:G:C6	3.02	0.46
22:DA:2330:G:N2	22:DA:2386:A:C4	2.83	0.46
22:DA:2335:A:N6	22:DA:2337:G:H1'	2.31	0.46
25:DD:65:ALA:O	25:DD:69:ALA:N	2.44	0.46
26:DE:40:ARG:CZ	26:DE:92:HIS:CE1	2.99	0.46
26:DE:147:LEU:HD11	26:DE:170:ARG:HG2	1.97	0.46
29:DH:34:GLY:O	29:DH:35:LYS:CG	2.64	0.46
38:DQ:98:ILE:HG22	38:DQ:106:PHE:HB2	1.98	0.46
41:DT:32:LEU:HD12	41:DT:32:LEU:O	2.15	0.46
43:DV:38:LEU:HD23	43:DV:40:ILE:HD11	1.96	0.46
1:AA:572:A:H5'	1:AA:573:A:OP2	2.15	0.46
1:AA:1014:A:C2	19:AS:34:TRP:CZ2	3.04	0.46
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.30	0.46
1:AA:1492:A:OP1	12:AL:44:LYS:CA	2.64	0.46
2:AB:42:ASN:O	2:AB:45:LYS:N	2.42	0.46
4:AD:190:ASP:C	4:AD:191:LEU:HG	2.36	0.46
6:AF:51:ILE:HD12	6:AF:86:ARG:CZ	2.45	0.46
7:AG:145:ALA:O	7:AG:146:GLU:HB3	2.16	0.46
9:AI:30:ILE:HA	9:AI:65:ILE:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:43:PRO:O	10:AJ:71:LEU:HD23	2.16	0.46
13:AM:15:ALA:CB	13:AM:34:LEU:HD21	2.45	0.46
20:AT:78:ASN:O	20:AT:82:GLN:HG2	2.15	0.46
21:AU:17:ARG:NH1	21:AU:20:LYS:CG	2.79	0.46
21:AU:22:SER:C	21:AU:23:CYS:SG	2.94	0.46
22:BA:380:G:H2'	22:BA:381:G:O4'	2.15	0.46
22:BA:723:C:H2'	22:BA:724:U:C6	2.50	0.46
22:BA:996:A:C6	22:BA:1160:G:C2	3.03	0.46
22:BA:1047:G:N2	22:BA:1110:G:O2'	2.49	0.46
22:BA:1319:C:H2'	22:BA:1320:C:H5'	1.98	0.46
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.16	0.46
22:BA:1508:A:H4'	22:BA:1508:A:OP1	2.15	0.46
22:BA:2122:U:C4	22:BA:2123:G:N7	2.84	0.46
24:BC:252:THR:HG22	24:BC:253:LYS:N	2.30	0.46
25:BD:104:VAL:O	25:BD:105:LYS:CB	2.61	0.46
27:BF:108:VAL:HG13	27:BF:114:PHE:CZ	2.51	0.46
28:BG:121:ILE:HD11	28:BG:140:VAL:HG12	1.98	0.46
30:BI:62:TYR:CD2	30:BI:62:TYR:N	2.83	0.46
32:BK:116:ILE:O	32:BK:118:LEU:O	2.34	0.46
33:BL:132:ARG:HG3	33:BL:142:ILE:CD1	2.45	0.46
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.51	0.46
40:BS:36:LEU:HD13	40:BS:48:LYS:CA	2.46	0.46
42:BU:6:ARG:O	42:BU:9:ASP:HB2	2.16	0.46
1:CA:38:G:N2	1:CA:397:A:C4	2.84	0.46
1:CA:131:A:O2'	1:CA:262:A:N3	2.40	0.46
1:CA:147:G:N2	1:CA:148:G:C6	2.84	0.46
1:CA:510:A:H5''	1:CA:511:C:P	2.55	0.46
1:CA:688:G:C5	1:CA:700:G:C2	3.04	0.46
1:CA:724:G:C2	1:CA:725:G:C8	3.04	0.46
1:CA:851:G:C2	1:CA:852:G:C8	3.04	0.46
1:CA:983:A:N3	1:CA:983:A:H2'	2.31	0.46
1:CA:1197:A:H2'	1:CA:1198:G:H5'	1.97	0.46
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.16	0.46
2:CB:16:PHE:CD2	2:CB:16:PHE:N	2.84	0.46
4:CD:168:PRO:CB	4:CD:171:LEU:HD12	2.46	0.46
6:CF:51:ILE:O	6:CF:51:ILE:CG1	2.64	0.46
11:CK:52:PHE:HB2	11:CK:56:ARG:HB2	1.98	0.46
12:CL:3:THR:O	12:CL:4:VAL:C	2.52	0.46
14:CN:18:ASP:OD2	14:CN:18:ASP:N	2.49	0.46
16:CP:6:LEU:CD1	16:CP:71:VAL:CG2	2.93	0.46
22:DA:228:C:C2	22:DA:418:C:H4'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:324:A:C6	22:DA:325:G:C4	3.04	0.46
22:DA:359:G:H2'	22:DA:360:U:O4'	2.16	0.46
22:DA:613:A:O2'	22:DA:614:A:P	2.71	0.46
22:DA:1288:G:C4	22:DA:1327:A:C2	3.04	0.46
22:DA:1352:U:H5	22:DA:1377:G:N7	2.14	0.46
22:DA:1437:C:C4	22:DA:1438:U:O4	2.69	0.46
22:DA:1446:C:O2	22:DA:1545:A:O2'	2.32	0.46
22:DA:1570:A:H5'	24:DC:36:LYS:HB3	1.96	0.46
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.16	0.46
22:DA:2283:C:H2'	22:DA:2284:A:C5'	2.46	0.46
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.16	0.46
22:DA:2499:C:C4	22:DA:2500:U:O4	2.69	0.46
22:DA:2574:G:N1	22:DA:2575:C:C2	2.84	0.46
22:DA:2880:C:N3	22:DA:2881:U:C5	2.84	0.46
23:DB:8:C:O3'	36:DO:25:ARG:NH1	2.49	0.46
30:DI:9:VAL:HG23	30:DI:10:LYS:N	2.31	0.46
30:DI:46:THR:HG22	30:DI:51:LYS:HG3	1.98	0.46
34:DM:72:PRO:HB3	34:DM:92:TRP:CZ3	2.51	0.46
35:DN:71:ARG:HH21	35:DN:71:ARG:HG3	1.81	0.46
35:DN:92:GLY:HA2	35:DN:94:TYR:CZ	2.51	0.46
45:DX:25:THR:O	45:DX:25:THR:HG22	2.15	0.46
47:DZ:3:LYS:CD	47:DZ:3:LYS:N	2.78	0.46
1:AA:263:A:P	20:AT:74:ARG:NH1	2.89	0.46
1:AA:292:G:O2'	1:AA:608:A:N6	2.47	0.46
1:AA:615:G:C2	1:AA:616:G:C8	3.04	0.46
1:AA:927:G:C6	1:AA:1391:U:O2	2.69	0.46
1:AA:927:G:N2	1:AA:1391:U:H1'	2.30	0.46
1:AA:1075:U:OP1	2:AB:102:THR:HG21	2.16	0.46
1:AA:1081:A:P	5:AE:21:VAL:HG21	2.56	0.46
1:AA:1129:C:O2	1:AA:1130:A:N6	2.49	0.46
1:AA:1133:G:C6	1:AA:1142:G:C6	3.04	0.46
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.51	0.46
1:AA:1458:G:OP1	20:AT:30:THR:OG1	2.29	0.46
1:AA:1492:A:N7	1:AA:1493:A:C2	2.84	0.46
2:AB:87:CYS:HB2	2:AB:89:GLN:NE2	2.30	0.46
2:AB:106:THR:O	2:AB:107:VAL:CB	2.64	0.46
3:AC:143:ARG:CG	3:AC:144:LEU:HD13	2.46	0.46
5:AE:136:VAL:HG22	5:AE:137:VAL:N	2.29	0.46
11:AK:69:ARG:HD2	22:BA:2146:C:N3	2.31	0.46
12:AL:38:TYR:O	12:AL:39:THR:CG2	2.63	0.46
22:BA:374:A:C2	22:BA:401:A:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:141:VAL:CG1	24:BC:190:ALA:HB1	2.45	0.46
24:BC:222:GLY:HA3	24:BC:230:HIS:CE1	2.51	0.46
39:BR:80:ARG:O	39:BR:80:ARG:HG2	2.15	0.46
1:CA:32:A:OP1	1:CA:398:U:H1'	2.16	0.46
1:CA:597:G:C5	1:CA:598:U:C6	3.04	0.46
1:CA:955:U:H2'	1:CA:956:U:O4'	2.16	0.46
1:CA:1041:G:C6	1:CA:1042:A:N6	2.83	0.46
1:CA:1152:A:H4'	10:CJ:15:HIS:CD2	2.51	0.46
2:CB:49:MET:HG2	2:CB:199:VAL:O	2.16	0.46
2:CB:57:LEU:HD13	2:CB:57:LEU:C	2.36	0.46
12:CL:83:ARG:CG	12:CL:84:GLY:N	2.79	0.46
22:DA:208:C:H2'	22:DA:209:C:C6	2.50	0.46
22:DA:320:A:H2'	26:DE:131:THR:CG2	2.46	0.46
22:DA:349:U:C2'	22:DA:350:G:H5'	2.45	0.46
22:DA:458:G:O2'	22:DA:459:U:OP2	2.33	0.46
22:DA:476:G:O4'	22:DA:505:A:C2	2.69	0.46
22:DA:1050:A:C2	22:DA:2751:G:C5	3.03	0.46
22:DA:1265:A:P	58:DA:3745:HOH:O	2.74	0.46
22:DA:1404:C:H2'	22:DA:1405:U:O5'	2.16	0.46
22:DA:2048:G:H2'	22:DA:2049:G:O5'	2.16	0.46
22:DA:2234:G:C4	22:DA:2235:G:C8	3.04	0.46
22:DA:2279:G:N7	44:DW:14:ARG:NH2	2.61	0.46
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.51	0.46
22:DA:2896:C:C2'	22:DA:2897:U:O5'	2.64	0.46
24:DC:18:LYS:O	24:DC:19:VAL:HG23	2.16	0.46
24:DC:107:PRO:HD2	24:DC:110:LEU:HD22	1.97	0.46
25:DD:104:VAL:O	25:DD:105:LYS:HB3	2.16	0.46
26:DE:61:ARG:HD2	26:DE:63:LYS:O	2.15	0.46
28:DG:98:VAL:HG22	28:DG:125:CYS:SG	2.55	0.46
29:DH:60:GLU:HA	29:DH:60:GLU:OE2	2.15	0.46
32:DK:32:TYR:CD2	32:DK:32:TYR:N	2.84	0.46
34:DM:31:PHE:CZ	34:DM:110:GLU:HA	2.51	0.46
37:DP:91:ALA:HB2	37:DP:113:ARG:HG3	1.97	0.46
40:DS:55:ILE:HG21	40:DS:66:ILE:CD1	2.46	0.46
42:DU:34:VAL:O	42:DU:64:ALA:HA	2.16	0.46
49:D1:39:PHE:CD2	49:D1:40:ASP:N	2.83	0.46
54:D6:5:MHU:H12	54:D6:8:MHT:H8	1.98	0.46
1:AA:594:U:C4	1:AA:595:A:C6	3.03	0.46
1:AA:660:C:OP1	15:AO:5:THR:HG21	2.16	0.46
1:AA:844:G:N3	1:AA:845:A:C8	2.83	0.46
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1250:A:H4'	9:AI:70:GLY:O	2.15	0.46
4:AD:85:ASN:OD1	4:AD:88:GLU:HG3	2.16	0.46
13:AM:3:ARG:O	13:AM:4:ILE:CG1	2.64	0.46
13:AM:37:ALA:CB	13:AM:56:LEU:HD23	2.46	0.46
16:AP:4:ILE:HG13	16:AP:21:VAL:CG2	2.46	0.46
16:AP:67:ILE:CG2	16:AP:71:VAL:HG12	2.46	0.46
17:AQ:10:GLY:HA3	17:AQ:24:ALA:O	2.16	0.46
21:AU:14:VAL:CG1	21:AU:16:LEU:HD21	2.46	0.46
22:BA:340:A:H2'	22:BA:341:C:C5'	2.46	0.46
22:BA:464:U:C5	22:BA:788:A:C4	3.04	0.46
22:BA:1234:U:H2'	22:BA:1235:G:O4'	2.16	0.46
22:BA:1316:U:C2	22:BA:1337:G:N2	2.84	0.46
22:BA:1956:U:H2'	22:BA:1957:C:H5'	1.98	0.46
22:BA:1980:G:H4'	58:BA:3451:HOH:O	2.14	0.46
22:BA:2133:G:C2'	22:BA:2134:A:OP2	2.64	0.46
22:BA:2469:A:C2	22:BA:2482:A:C4	3.04	0.46
22:BA:2593:U:C2'	22:BA:2594:C:O5'	2.64	0.46
22:BA:2669:G:O2'	22:BA:2670:A:H5'	2.16	0.46
25:BD:133:THR:CG2	25:BD:134:HIS:N	2.79	0.46
27:BF:122:PHE:HB3	27:BF:163:ASP:CG	2.36	0.46
28:BG:155:GLU:OE2	28:BG:158:LYS:HB2	2.16	0.46
29:BH:79:THR:HG23	29:BH:147:VAL:HB	1.98	0.46
29:BH:90:LEU:HD21	29:BH:93:SER:HA	1.97	0.46
36:BO:88:LYS:HA	36:BO:115:LEU:HD12	1.98	0.46
38:BQ:19:LYS:O	38:BQ:22:LYS:HG3	2.16	0.46
39:BR:86:GLN:HG2	39:BR:87:GLN:N	2.31	0.46
1:CA:824:G:H1'	8:CH:2:SER:HA	1.97	0.46
1:CA:939:G:C6	1:CA:940:C:C4	3.04	0.46
1:CA:1006:G:OP1	1:CA:1038:C:H5''	2.16	0.46
1:CA:1022:A:C5	1:CA:1023:U:C4	3.04	0.46
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.51	0.46
1:CA:1074:G:O2'	2:CB:102:THR:HG23	2.15	0.46
1:CA:1130:A:C8	1:CA:1146:A:N1	2.84	0.46
1:CA:1491:G:C5	1:CA:1492:A:C6	3.04	0.46
8:CH:96:MET:HB2	8:CH:99:LEU:O	2.16	0.46
10:CJ:74:VAL:HG12	10:CJ:75:ASP:N	2.31	0.46
11:CK:113:VAL:HB	18:CR:73:ARG:NH2	2.31	0.46
13:CM:13:LYS:O	13:CM:14:HIS:CG	2.69	0.46
22:DA:79:C:C2'	22:DA:346:A:N3	2.79	0.46
22:DA:303:G:C2	22:DA:315:G:C6	3.04	0.46
22:DA:396:G:H2'	22:DA:397:U:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:532:A:N7	22:DA:2021:C:O2'	2.43	0.46
22:DA:685:A:C2	22:DA:689:A:C6	3.04	0.46
22:DA:945:A:N7	22:DA:2448:A:C2	2.84	0.46
22:DA:1304:A:C6	22:DA:1305:C:C4	3.04	0.46
22:DA:1389:G:N2	22:DA:1398:C:N3	2.64	0.46
22:DA:1404:C:C2'	22:DA:1405:U:O5'	2.63	0.46
22:DA:1551:A:C5	22:DA:1552:A:C8	3.04	0.46
22:DA:1847:A:H2'	22:DA:1848:A:OP2	2.16	0.46
22:DA:1931:U:OP2	22:DA:1968:G:N2	2.47	0.46
22:DA:2094:A:C2	22:DA:2196:C:C2	3.04	0.46
22:DA:2823:A:C5	22:DA:2824:C:C5	3.04	0.46
27:DF:123:ASP:N	27:DF:127:ASN:O	2.49	0.46
30:DI:101:ILE:HG22	30:DI:102:SER:N	2.30	0.46
33:DL:29:LYS:O	33:DL:30:THR:OG1	2.31	0.46
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.31	0.46
43:DV:42:LEU:HD23	43:DV:42:LEU:N	2.31	0.46
45:DX:65:ASP:O	45:DX:66:THR:C	2.54	0.46
1:AA:144:G:C5	1:AA:179:A:C2	3.04	0.45
1:AA:275:G:H5'	17:AQ:17:MET:CE	2.46	0.45
1:AA:575:G:C6	1:AA:821:G:N7	2.84	0.45
1:AA:674:G:N2	1:AA:717:U:O2	2.49	0.45
1:AA:949:A:C4	1:AA:950:U:C6	3.04	0.45
1:AA:1026:G:N1	1:AA:1035:A:C2	2.84	0.45
1:AA:1202:U:C5	1:AA:1203:C:C5	3.04	0.45
1:AA:1210:C:C4	1:AA:1211:U:C5	3.04	0.45
2:AB:32:PHE:CD1	2:AB:32:PHE:C	2.89	0.45
2:AB:62:SER:C	2:AB:64:LYS:N	2.69	0.45
5:AE:149:SER:CB	5:AE:152:MET:HB2	2.46	0.45
7:AG:80:VAL:O	7:AG:81:GLY:C	2.55	0.45
8:AH:95:VAL:HG12	8:AH:96:MET:N	2.31	0.45
9:AI:91:ASP:OD2	9:AI:91:ASP:C	2.54	0.45
10:AJ:59:LYS:N	10:AJ:59:LYS:HD2	2.31	0.45
11:AK:102:ALA:C	11:AK:104:GLY:N	2.69	0.45
15:AO:18:ASP:OD1	15:AO:18:ASP:N	2.49	0.45
20:AT:25:ARG:HG2	20:AT:29:ARG:NH1	2.31	0.45
22:BA:368:A:N6	22:BA:369:U:O4	2.49	0.45
22:BA:878:A:H5'	22:BA:879:G:OP2	2.17	0.45
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.16	0.45
22:BA:1413:A:O2'	22:BA:1414:C:H5'	2.16	0.45
22:BA:1422:G:C4	22:BA:1423:G:C8	3.04	0.45
22:BA:1840:G:C6	22:BA:1841:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1856:U:C4	22:BA:1857:G:C6	3.04	0.45
22:BA:1875:G:HO2'	22:BA:1876:A:P	2.38	0.45
22:BA:2885:G:C2'	22:BA:2886:A:H5'	2.46	0.45
32:BK:73:ASP:OD1	32:BK:75:SER:OG	2.30	0.45
33:BL:91:ASP:O	33:BL:94:THR:HB	2.16	0.45
35:BN:119:SER:O	35:BN:120:GLU:C	2.53	0.45
38:BQ:110:VAL:O	38:BQ:114:LYS:HG3	2.15	0.45
39:BR:49:ILE:O	39:BR:51:VAL:O	2.34	0.45
53:B5:191:ARG:O	53:B5:195:ARG:CB	2.63	0.45
1:CA:285:C:H2'	1:CA:286:C:C6	2.52	0.45
1:CA:451:A:N6	1:CA:480:U:H2'	2.31	0.45
1:CA:570:G:H5''	1:CA:571:U:OP2	2.16	0.45
1:CA:711:G:N2	1:CA:712:A:C4	2.84	0.45
1:CA:1006:G:OP1	1:CA:1038:C:C5'	2.64	0.45
1:CA:1250:A:C2	1:CA:1287:A:N1	2.84	0.45
1:CA:1255:G:C6	1:CA:1279:G:N7	2.83	0.45
1:CA:1299:A:H2'	1:CA:1299:A:N3	2.30	0.45
2:CB:18:HIS:O	2:CB:19:GLN:HB2	2.16	0.45
2:CB:30:PHE:CD1	2:CB:30:PHE:N	2.81	0.45
5:CE:15:LEU:C	5:CE:15:LEU:CD1	2.84	0.45
8:CH:2:SER:O	8:CH:4:GLN:N	2.49	0.45
10:CJ:15:HIS:CD2	10:CJ:15:HIS:C	2.88	0.45
12:CL:43:LYS:O	12:CL:44:LYS:O	2.34	0.45
12:CL:108:LYS:O	12:CL:109:ASP:HB2	2.16	0.45
15:CO:35:GLN:O	15:CO:38:HIS:N	2.50	0.45
17:CQ:46:VAL:HG11	17:CQ:61:ILE:CG1	2.45	0.45
22:DA:371:A:N6	22:DA:402:A:OP2	2.48	0.45
22:DA:408:G:C6	22:DA:409:G:C5	3.04	0.45
22:DA:466:A:N1	22:DA:795:C:O2'	2.36	0.45
22:DA:585:G:H2'	22:DA:586:A:N7	2.31	0.45
22:DA:830:G:C2	22:DA:2448:A:N7	2.84	0.45
22:DA:858:G:H3'	22:DA:859:G:C8	2.51	0.45
22:DA:1208:C:C5	22:DA:1209:U:C5	3.04	0.45
22:DA:1327:A:N6	22:DA:1328:A:C2	2.83	0.45
22:DA:2725:A:C5	22:DA:2727:A:N7	2.84	0.45
24:DC:121:ASP:OD1	24:DC:121:ASP:N	2.50	0.45
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.50	0.45
29:DH:39:ALA:O	29:DH:41:LYS:N	2.47	0.45
33:DL:120:VAL:CG1	33:DL:121:THR:N	2.80	0.45
1:AA:559:A:H2'	1:AA:559:A:N3	2.30	0.45
1:AA:1035:A:H2'	1:AA:1036:A:C1'	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1197:A:OP2	58:AA:1785:HOH:O	2.21	0.45
1:AA:1211:U:O2'	1:AA:1212:U:P	2.73	0.45
3:AC:167:TRP:O	3:AC:168:TYR:HB2	2.15	0.45
8:AH:42:GLU:OE1	8:AH:42:GLU:CA	2.65	0.45
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.16	0.45
16:AP:59:HIS:O	16:AP:63:GLN:HB2	2.17	0.45
21:AU:37:PHE:HB3	21:AU:41:PRO:HG3	1.97	0.45
22:BA:242:G:C8	51:B3:5:LYS:HG2	2.51	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.84	0.45
22:BA:989:G:C8	47:BZ:14:ILE:HD11	2.51	0.45
22:BA:1008:A:N6	22:BA:1136:G:O6	2.50	0.45
22:BA:1340:U:OP1	41:BT:19:LYS:NZ	2.50	0.45
22:BA:1464:G:H2'	22:BA:1465:G:C8	2.51	0.45
22:BA:1474:U:C3'	22:BA:1475:G:H5'	2.46	0.45
22:BA:1613:G:H4'	50:B2:3:ARG:HD3	1.98	0.45
22:BA:1622:G:C2	22:BA:1623:G:C8	3.04	0.45
22:BA:1709:U:C2	22:BA:1750:G:N2	2.85	0.45
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.16	0.45
22:BA:1949:G:N2	22:BA:1958:C:O2	2.49	0.45
22:BA:2001:C:H4'	22:BA:2689:U:H2'	1.97	0.45
22:BA:2727:A:C6	22:BA:2728:U:O4	2.70	0.45
24:BC:71:LYS:HB3	24:BC:96:TYR:CE2	2.50	0.45
30:BI:19:ASN:N	30:BI:20:PRO:HD2	2.31	0.45
33:BL:57:LEU:HA	33:BL:60:ARG:HD2	1.97	0.45
34:BM:2:LEU:HD22	34:BM:2:LEU:N	2.32	0.45
44:BW:41:ARG:HA	44:BW:41:ARG:HD3	1.54	0.45
1:CA:57:G:H2'	1:CA:58:C:C6	2.51	0.45
1:CA:68:G:O4'	1:CA:171:A:H1'	2.16	0.45
1:CA:518:C:H2'	1:CA:530:G:C8	2.51	0.45
1:CA:583:A:C2	1:CA:759:A:C5	3.04	0.45
1:CA:741:G:N1	1:CA:742:G:C5	2.84	0.45
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.16	0.45
1:CA:1087:G:N2	1:CA:1099:G:H1'	2.31	0.45
5:CE:101:GLU:O	5:CE:103:THR:CA	2.62	0.45
9:CI:50:GLN:N	9:CI:51:PRO:HD2	2.31	0.45
12:CL:25:GLU:HB2	12:CL:27:CYS:SG	2.57	0.45
21:CU:34:ARG:CD	21:CU:35:ARG:HB2	2.46	0.45
22:DA:183:C:H1'	22:DA:433:C:H1'	1.97	0.45
22:DA:189:G:C4	22:DA:205:G:N2	2.84	0.45
22:DA:230:G:C2	22:DA:231:A:N7	2.84	0.45
22:DA:414:C:N4	22:DA:415:A:N6	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1288:G:C5	22:DA:1327:A:C2	3.04	0.45
22:DA:1649:G:O6	22:DA:2009:A:N6	2.49	0.45
22:DA:1682:G:H2'	22:DA:1683:U:C6	2.51	0.45
22:DA:1731:G:H2'	22:DA:1732:C:H3'	1.98	0.45
22:DA:1797:G:O3'	24:DC:256:LYS:HA	2.16	0.45
22:DA:2209:G:C6	22:DA:2210:U:O4	2.68	0.45
22:DA:2267:A:OP2	22:DA:2268:A:H5''	2.16	0.45
22:DA:2322:A:H2'	22:DA:2323:G:O4'	2.16	0.45
22:DA:2507:C:N4	22:DA:2508:G:C6	2.84	0.45
22:DA:2552:U:C2	22:DA:2554:U:C5'	2.99	0.45
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.37	0.45
24:DC:266:PHE:N	24:DC:266:PHE:CD1	2.83	0.45
29:DH:112:LYS:HG2	29:DH:113:SER:N	2.32	0.45
33:DL:54:GLN:HG2	33:DL:55:MET:N	2.31	0.45
40:DS:22:ASP:OD2	40:DS:22:ASP:N	2.49	0.45
41:DT:45:ALA:HA	41:DT:49:LYS:HE3	1.98	0.45
1:AA:1028:C:O2	1:AA:1034:G:C6	2.69	0.45
1:AA:1107:C:N3	1:AA:1108:G:C8	2.85	0.45
2:AB:47:VAL:O	2:AB:49:MET:N	2.50	0.45
2:AB:50:PHE:CD2	2:AB:51:ASN:OD1	2.70	0.45
7:AG:129:GLU:O	7:AG:130:ASN:C	2.55	0.45
22:BA:88:G:C6	22:BA:89:A:N7	2.84	0.45
22:BA:697:G:H2'	22:BA:698:C:C6	2.51	0.45
22:BA:1138:G:O2'	31:BJ:107:GLY:HA3	2.17	0.45
22:BA:1176:U:OP1	22:BA:1176:U:H4'	2.16	0.45
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.17	0.45
22:BA:1430:G:C6	22:BA:1431:A:C5	3.04	0.45
22:BA:2164:C:H3'	22:BA:2165:C:H5''	1.98	0.45
26:BE:147:LEU:HB2	26:BE:183:PHE:CD1	2.51	0.45
27:BF:158:THR:HG22	27:BF:160:ALA:H	1.81	0.45
29:BH:94:ILE:HG23	29:BH:98:ASP:CB	2.47	0.45
36:BO:64:TYR:O	36:BO:67:ASN:ND2	2.49	0.45
49:B1:26:ASN:OD1	49:B1:28:ARG:HB3	2.15	0.45
53:B5:78:ILE:HG23	53:B5:78:ILE:O	2.17	0.45
1:CA:128:G:N2	1:CA:234:C:C2	2.85	0.45
1:CA:219:U:C2	1:CA:220:G:C8	3.04	0.45
1:CA:230:G:H2'	1:CA:231:U:O4'	2.16	0.45
1:CA:369:G:C6	1:CA:370:C:C4	3.03	0.45
1:CA:575:G:C6	1:CA:821:G:C5	3.04	0.45
1:CA:798:U:C2'	1:CA:799:G:O5'	2.64	0.45
1:CA:821:G:H2'	1:CA:822:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1005:A:N7	1:CA:1006:G:C4	2.84	0.45
1:CA:1304:G:O2'	1:CA:1333:A:N6	2.41	0.45
1:CA:1377:A:C5	7:CG:7:ILE:HD12	2.51	0.45
4:CD:11:LEU:HD23	4:CD:11:LEU:N	2.31	0.45
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.45
22:DA:308:G:N1	22:DA:309:A:C2	2.84	0.45
22:DA:649:G:H2'	22:DA:650:C:C6	2.51	0.45
22:DA:1337:G:H2'	22:DA:1338:G:O4'	2.15	0.45
22:DA:1355:G:N1	22:DA:1356:G:C8	2.84	0.45
22:DA:1385:A:C2	22:DA:1386:C:C2	3.04	0.45
22:DA:1555:G:N1	22:DA:1556:C:C2	2.84	0.45
22:DA:1666:G:N7	22:DA:1667:G:C6	2.85	0.45
22:DA:1866:A:N7	22:DA:1867:G:C8	2.84	0.45
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.16	0.45
22:DA:2106:U:H2'	22:DA:2107:G:C8	2.51	0.45
22:DA:2148:G:C2	22:DA:2149:U:C5	3.04	0.45
22:DA:2163:A:OP2	22:DA:2171:A:C8	2.69	0.45
22:DA:2387:U:H1'	44:DW:41:ARG:HD2	1.99	0.45
22:DA:2655:G:HO2'	22:DA:2656:U:P	2.38	0.45
22:DA:2718:G:OP1	37:DP:98:TYR:CD1	2.70	0.45
22:DA:2748:A:C2	22:DA:2757:A:C5	3.05	0.45
22:DA:2804:U:C4	22:DA:2805:C:C4	3.04	0.45
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.46	0.45
22:DA:2896:C:H2'	22:DA:2897:U:O5'	2.16	0.45
23:DB:100:G:H2'	23:DB:101:A:O4'	2.17	0.45
31:DJ:12:LYS:HE3	31:DJ:14:ASP:OD2	2.16	0.45
34:DM:69:PRO:O	34:DM:93:VAL:O	2.35	0.45
43:DV:42:LEU:HD12	43:DV:47:VAL:HG21	1.99	0.45
46:DY:46:VAL:O	46:DY:50:VAL:HG23	2.16	0.45
1:AA:351:G:H4'	1:AA:352:C:OP2	2.16	0.45
1:AA:522:C:N4	1:AA:523:A:C6	2.84	0.45
1:AA:554:A:H2'	1:AA:555:U:C6	2.52	0.45
1:AA:757:U:OP1	1:AA:822:U:O2'	2.28	0.45
1:AA:1162:C:H2'	1:AA:1163:A:O4'	2.16	0.45
1:AA:1163:A:C2	1:AA:1174:G:C2	3.04	0.45
1:AA:1202:U:C2	1:AA:1203:C:C6	3.05	0.45
1:AA:1241:G:C2	1:AA:1242:G:C5	3.05	0.45
2:AB:155:GLY:O	2:AB:157:LEU:N	2.50	0.45
3:AC:39:VAL:O	3:AC:43:LEU:HB2	2.16	0.45
3:AC:126:ARG:O	3:AC:127:ARG:CB	2.64	0.45
5:AE:75:ALA:O	5:AE:82:GLN:NE2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:29:ILE:HG23	6:AF:66:ALA:HB2	1.98	0.45
7:AG:67:GLU:HA	7:AG:70:ARG:HE	1.82	0.45
7:AG:146:GLU:O	7:AG:149:LYS:HB2	2.16	0.45
9:AI:21:ILE:CG2	9:AI:22:LYS:N	2.78	0.45
12:AL:55:VAL:HG21	12:AL:80:ILE:HD11	1.99	0.45
16:AP:4:ILE:HG13	16:AP:21:VAL:HG22	1.99	0.45
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.16	0.45
21:AU:10:GLU:CB	21:AU:11:PRO:HD3	2.46	0.45
22:BA:790:U:HO2'	22:BA:791:C:P	2.37	0.45
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.52	0.45
22:BA:1947:C:O2'	22:BA:1948:G:H5'	2.16	0.45
22:BA:2020:A:H5'	48:B0:9:THR:CG2	2.46	0.45
22:BA:2031:A:C6	22:BA:2498:C:H1'	2.51	0.45
22:BA:2077:A:C6	22:BA:2435:A:N6	2.85	0.45
22:BA:2575:C:O2'	25:BD:145:SER:HB2	2.17	0.45
22:BA:2808:G:C2	22:BA:2891:U:C6	3.04	0.45
27:BF:175:PHE:O	27:BF:176:PRO:O	2.35	0.45
32:BK:41:ILE:CD1	32:BK:58:LEU:HD22	2.47	0.45
46:BY:53:VAL:O	46:BY:56:LEU:O	2.35	0.45
1:CA:299:G:N2	1:CA:565:U:O2	2.49	0.45
1:CA:607:A:C2	1:CA:608:A:C4	3.05	0.45
1:CA:819:A:H4'	1:CA:820:U:OP2	2.17	0.45
1:CA:891:U:C5	1:CA:906:A:C2	3.05	0.45
1:CA:971:G:OP1	1:CA:972:C:H5''	2.16	0.45
2:CB:167:ASP:OD2	2:CB:191:SER:HA	2.17	0.45
8:CH:89:LYS:HG3	8:CH:90:ASP:N	2.32	0.45
9:CI:46:MET:O	9:CI:49:ARG:HB3	2.16	0.45
10:CJ:15:HIS:HB3	10:CJ:70:HIS:CD2	2.52	0.45
12:CL:12:ARG:HG2	12:CL:12:ARG:HH11	1.81	0.45
14:CN:23:LYS:HG3	14:CN:24:ARG:N	2.31	0.45
16:CP:38:PHE:O	16:CP:38:PHE:CD1	2.69	0.45
17:CQ:81:LYS:N	17:CQ:81:LYS:HD2	2.32	0.45
21:CU:14:VAL:O	21:CU:16:LEU:HG	2.17	0.45
21:CU:39:GLU:HA	21:CU:42:THR:OG1	2.16	0.45
22:DA:137:U:H2'	22:DA:140:C:C2	2.52	0.45
22:DA:192:C:H2'	22:DA:193:U:H5'	1.99	0.45
22:DA:220:G:H5''	22:DA:221:A:P	2.57	0.45
22:DA:282:A:N1	22:DA:359:G:C6	2.84	0.45
22:DA:600:G:H1'	26:DE:100:MET:CG	2.46	0.45
22:DA:727:A:H2'	22:DA:728:G:C8	2.51	0.45
22:DA:836:G:C5	22:DA:837:C:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:965:C:H4'	22:DA:2273:A:H1'	1.99	0.45
22:DA:1059:G:H1'	30:DI:117:MET:HE1	1.97	0.45
22:DA:1203:U:O4	22:DA:1204:A:C6	2.70	0.45
22:DA:1246:A:OP2	33:DL:13:LYS:NZ	2.49	0.45
22:DA:1332:G:C6	22:DA:1609:A:N7	2.85	0.45
22:DA:1565:C:O2'	22:DA:1566:A:OP2	2.28	0.45
22:DA:1598:A:H2'	22:DA:1599:U:O4'	2.17	0.45
22:DA:1799:G:N1	22:DA:1819:A:OP2	2.46	0.45
22:DA:2215:C:O2'	22:DA:2216:G:H5'	2.17	0.45
22:DA:2221:G:C6	22:DA:2222:C:C5	3.04	0.45
22:DA:2283:C:C4	22:DA:2389:G:C4	3.04	0.45
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.70	0.45
22:DA:2756:U:C4	22:DA:2759:G:O6	2.70	0.45
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.52	0.45
25:DD:101:PHE:O	25:DD:103:ASP:N	2.50	0.45
29:DH:34:GLY:O	29:DH:35:LYS:CD	2.65	0.45
42:DU:39:ILE:HG22	42:DU:39:ILE:O	2.16	0.45
1:AA:66:A:H4'	1:AA:173:U:C5	2.52	0.45
1:AA:69:G:H5'	1:AA:70:U:P	2.57	0.45
1:AA:346:G:P	32:BK:105:ARG:NH1	2.89	0.45
1:AA:767:A:H2'	1:AA:768:A:O4'	2.17	0.45
1:AA:1010:U:O2	1:AA:1019:A:N1	2.50	0.45
1:AA:1033:G:O2'	1:AA:1034:G:H5'	2.16	0.45
1:AA:1237:C:C4	1:AA:1336:C:N3	2.84	0.45
2:AB:119:THR:O	2:AB:120:GLN:HB2	2.17	0.45
4:AD:15:GLU:OE2	4:AD:56:ARG:NH2	2.49	0.45
7:AG:145:ALA:C	7:AG:147:ALA:H	2.20	0.45
9:AI:127:PHE:O	9:AI:127:PHE:CD2	2.70	0.45
10:AJ:86:ALA:O	10:AJ:90:LEU:HB2	2.16	0.45
12:AL:86:ARG:HA	12:AL:94:ARG:HA	1.98	0.45
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.36	0.45
20:AT:44:LYS:HD3	20:AT:87:ALA:HA	1.98	0.45
20:AT:54:MET:HA	20:AT:57:ILE:HG22	1.98	0.45
22:BA:55:G:N2	22:BA:56:A:C4	2.85	0.45
22:BA:404:A:C8	22:BA:406:G:C6	3.04	0.45
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.51	0.45
22:BA:1131:G:C6	31:BJ:77:HIS:CD2	3.05	0.45
22:BA:1775:U:H2'	22:BA:1776:G:O5'	2.17	0.45
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.31	0.45
22:BA:2154:A:H2'	22:BA:2155:U:C6	2.51	0.45
27:BF:108:VAL:HG12	27:BF:109:PRO:HD3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:121:SER:HB3	27:BF:129:SER:O	2.16	0.45
28:BG:69:ARG:C	28:BG:69:ARG:HD3	2.36	0.45
30:BI:58:VAL:HG12	30:BI:59:ILE:H	1.81	0.45
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.98	0.45
31:BJ:73:VAL:HG11	31:BJ:75:TYR:CZ	2.52	0.45
31:BJ:77:HIS:HA	31:BJ:83:GLY:O	2.17	0.45
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.32	0.45
42:BU:72:ILE:HD12	42:BU:72:ILE:N	2.32	0.45
42:BU:99:ASN:O	42:BU:100:SER:C	2.54	0.45
53:B5:214:TYR:O	53:B5:215:VAL:CB	2.64	0.45
1:CA:162:A:H2'	1:CA:163:C:O4'	2.17	0.45
1:CA:1272:G:H2'	1:CA:1273:C:O4'	2.16	0.45
1:CA:1317:C:C4	14:CN:53:ARG:HD2	2.51	0.45
2:CB:71:GLY:CA	2:CB:164:ILE:CG2	2.95	0.45
2:CB:131:LYS:HE2	2:CB:131:LYS:HA	1.98	0.45
2:CB:135:LEU:O	2:CB:139:ARG:HG3	2.17	0.45
2:CB:139:ARG:HD2	2:CB:140:GLU:N	2.31	0.45
2:CB:148:LEU:HD12	2:CB:148:LEU:N	2.32	0.45
12:CL:24:LEU:HD22	12:CL:59:ASN:OD1	2.17	0.45
21:CU:24:GLU:OE1	21:CU:24:GLU:N	2.50	0.45
22:DA:36:G:N1	22:DA:445:C:C4	2.85	0.45
22:DA:78:U:OP2	46:DY:2:LYS:HD2	2.16	0.45
22:DA:515:A:C8	22:DA:516:C:C6	3.04	0.45
22:DA:606:U:O2'	26:DE:95:LYS:NZ	2.46	0.45
22:DA:613:A:OP2	22:DA:614:A:N7	2.50	0.45
22:DA:656:G:O2'	22:DA:657:U:H5'	2.17	0.45
22:DA:1292:G:C6	22:DA:1293:C:N4	2.84	0.45
22:DA:1357:C:H2'	22:DA:1358:G:C5'	2.47	0.45
22:DA:1435:G:O2'	22:DA:1436:G:H5'	2.16	0.45
22:DA:1663:G:C6	22:DA:1992:G:N7	2.85	0.45
22:DA:2371:G:C2	22:DA:2372:U:C6	3.04	0.45
22:DA:2848:G:C8	37:DP:95:ALA:HB2	2.51	0.45
29:DH:147:VAL:HG12	29:DH:148:ALA:N	2.32	0.45
40:DS:61:ASN:O	40:DS:62:ASP:CB	2.63	0.45
1:AA:731:G:OP1	1:AA:766:A:H1'	2.17	0.45
1:AA:771:G:C5	1:AA:772:U:C5	3.05	0.45
1:AA:900:A:N1	1:AA:901:A:C2	2.85	0.45
1:AA:999:C:H2'	1:AA:1000:A:C8	2.51	0.45
1:AA:1012:A:N1	1:AA:1018:G:N7	2.64	0.45
1:AA:1309:G:C6	1:AA:1310:G:C5	3.04	0.45
2:AB:104:TRP:CZ3	2:AB:158:PRO:HD3	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:125:THR:O	2:AB:126:PHE:HB3	2.16	0.45
2:AB:132:LYS:HG3	2:AB:133:GLU:N	2.32	0.45
4:AD:76:TYR:CD1	4:AD:76:TYR:C	2.89	0.45
4:AD:107:PHE:CG	4:AD:145:ILE:HD11	2.50	0.45
7:AG:99:LEU:O	7:AG:100:ALA:C	2.55	0.45
8:AH:11:LEU:HD11	8:AH:127:CYS:CB	2.47	0.45
11:AK:108:THR:HG22	11:AK:109:ASN:ND2	2.31	0.45
12:AL:21:VAL:HG22	12:AL:21:VAL:O	2.17	0.45
20:AT:44:LYS:HB3	20:AT:87:ALA:HB1	1.99	0.45
22:BA:669:G:C5	22:BA:801:G:C6	3.04	0.45
22:BA:749:A:H4'	22:BA:1271:G:N3	2.32	0.45
22:BA:909:A:H2'	22:BA:912:C:C5	2.51	0.45
22:BA:1056:G:N1	22:BA:1102:C:C5	2.84	0.45
22:BA:1456:G:C5	22:BA:1457:U:C5	3.04	0.45
22:BA:1469:A:C2	22:BA:1470:A:C4	3.04	0.45
22:BA:1503:A:N6	22:BA:1504:A:N6	2.65	0.45
22:BA:1586:A:N7	22:BA:1587:G:N7	2.65	0.45
22:BA:1683:U:O2'	22:BA:1684:G:H5'	2.16	0.45
22:BA:2185:U:C2'	22:BA:2186:G:H5'	2.47	0.45
22:BA:2488:G:C2'	22:BA:2489:U:H5'	2.47	0.45
28:BG:118:PRO:O	28:BG:119:ALA:C	2.55	0.45
28:BG:126:PRO:HG2	28:BG:130:GLU:HB3	1.98	0.45
31:BJ:7:LYS:HA	31:BJ:8:PRO:HD3	1.85	0.45
39:BR:74:ILE:O	39:BR:86:GLN:HA	2.16	0.45
41:BT:34:VAL:HG21	41:BT:43:ILE:HD11	1.99	0.45
42:BU:49:VAL:O	42:BU:49:VAL:HG23	2.17	0.45
45:BX:3:ARG:CD	45:BX:30:LEU:HD13	2.47	0.45
1:CA:109:A:N1	1:CA:327:A:C6	2.84	0.45
1:CA:862:C:C4	1:CA:863:U:C5	3.05	0.45
1:CA:926:G:C6	1:CA:1505:G:C6	3.04	0.45
1:CA:951:G:N3	1:CA:970:C:O2'	2.39	0.45
1:CA:992:U:C2	1:CA:1043:G:N7	2.85	0.45
1:CA:1053:G:C4	1:CA:1199:U:C5	3.05	0.45
1:CA:1181:G:O2'	1:CA:1182:G:C8	2.64	0.45
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.52	0.45
4:CD:14:ARG:HG2	4:CD:56:ARG:NH2	2.31	0.45
14:CN:54:ASP:HA	14:CN:59:ARG:CD	2.46	0.45
15:CO:62:GLN:O	15:CO:66:LEU:HD23	2.17	0.45
21:CU:29:LEU:C	21:CU:29:LEU:HD23	2.37	0.45
22:DA:2:G:O6	22:DA:2900:A:N6	2.50	0.45
22:DA:82:U:O2	22:DA:83:A:C8	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:515:A:H2'	22:DA:516:C:H5'	1.98	0.45
22:DA:571:U:C4	22:DA:2030:A:C6	3.05	0.45
22:DA:641:U:C5	22:DA:642:U:O4	2.69	0.45
22:DA:645:C:H2'	22:DA:647:G:C5	2.52	0.45
22:DA:681:G:C2	22:DA:797:G:C2	3.04	0.45
22:DA:1090:A:C2	22:DA:1091:G:N7	2.85	0.45
22:DA:1208:C:C4	22:DA:1209:U:C5	3.05	0.45
22:DA:1264:A:N7	22:DA:1265:A:C5	2.85	0.45
22:DA:1275:A:C5	35:DN:16:HIS:CD2	3.04	0.45
22:DA:1277:G:H5'	35:DN:20:MET:HE1	1.98	0.45
22:DA:1347:A:C5	22:DA:1348:C:C5	3.04	0.45
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.51	0.45
22:DA:1838:C:C5	22:DA:1899:A:C5	3.05	0.45
22:DA:2044:C:C2	22:DA:2625:G:N2	2.84	0.45
22:DA:2066:C:H5''	58:DA:3504:HOH:O	2.17	0.45
22:DA:2074:U:C2	22:DA:2436:G:C2	3.05	0.45
22:DA:2193:G:C4	22:DA:2194:U:C5	3.04	0.45
22:DA:2311:A:H3'	22:DA:2312:U:C6	2.52	0.45
22:DA:2345:G:N3	22:DA:2381:A:H2'	2.31	0.45
25:DD:13:ARG:HD3	25:DD:21:SER:OG	2.16	0.45
30:DI:47:ASP:HA	30:DI:51:LYS:HD2	1.99	0.45
32:DK:34:GLY:O	32:DK:35:VAL:C	2.53	0.45
36:DO:7:ARG:CD	36:DO:97:PHE:CE1	2.99	0.45
37:DP:39:ARG:HG3	37:DP:40:LEU:N	2.31	0.45
41:DT:7:LEU:HD22	41:DT:46:ALA:CA	2.47	0.45
1:AA:207:C:H2'	1:AA:208:U:O2	2.17	0.45
1:AA:374:A:N1	1:AA:390:U:O2'	2.45	0.45
1:AA:542:G:OP1	4:AD:10:LYS:CE	2.65	0.45
1:AA:575:G:O2'	1:AA:821:G:H5'	2.17	0.45
1:AA:587:G:N2	1:AA:755:G:C5	2.85	0.45
1:AA:638:U:H2'	1:AA:639:G:O4'	2.16	0.45
1:AA:820:U:H4'	1:AA:821:G:OP2	2.16	0.45
1:AA:994:A:N1	1:AA:1047:G:H4'	2.31	0.45
1:AA:1064:G:O2'	1:AA:1190:G:N2	2.49	0.45
2:AB:47:VAL:C	2:AB:49:MET:H	2.19	0.45
2:AB:67:ILE:O	2:AB:68:LEU:HB3	2.16	0.45
2:AB:82:ASP:OD1	2:AB:84:ALA:HB3	2.16	0.45
7:AG:14:PRO:O	7:AG:15:ASP:O	2.35	0.45
11:AK:102:ALA:O	11:AK:103:ALA:C	2.55	0.45
19:AS:50:ALA:HB1	19:AS:57:HIS:CB	2.45	0.45
22:BA:231:A:C6	22:BA:232:G:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:245:G:N7	51:B3:8:ARG:NH1	2.64	0.45
22:BA:595:C:H2'	22:BA:596:U:C6	2.51	0.45
22:BA:783:A:H8	22:BA:784:G:H4'	1.80	0.45
22:BA:876:C:H2'	22:BA:877:A:O4'	2.16	0.45
22:BA:998:C:C2'	22:BA:999:U:O5'	2.65	0.45
22:BA:1360:G:C6	22:BA:1372:U:C2	3.05	0.45
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.17	0.45
22:BA:1917:U:O4	22:BA:1918:A:C6	2.68	0.45
22:BA:2032:G:C8	58:BA:3534:HOH:O	2.70	0.45
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.17	0.45
30:BI:103:ARG:HE	30:BI:104:ALA:N	2.15	0.45
34:BM:41:LEU:HD22	34:BM:124:LEU:HD22	1.99	0.45
38:BQ:76:TYR:C	38:BQ:76:TYR:CD2	2.89	0.45
38:BQ:76:TYR:CZ	38:BQ:80:ILE:HG13	2.52	0.45
38:BQ:89:GLU:H	39:BR:49:ILE:HD12	1.81	0.45
44:BW:41:ARG:HH11	44:BW:41:ARG:CG	2.30	0.45
46:BY:14:LEU:HA	46:BY:17:GLU:HB3	1.99	0.45
1:CA:792:A:H1'	1:CA:794:A:N7	2.32	0.45
1:CA:976:G:H1'	1:CA:1363:A:N6	2.32	0.45
1:CA:1053:G:N7	1:CA:1200:C:H5'	2.32	0.45
1:CA:1293:C:H2'	1:CA:1294:G:O4'	2.17	0.45
2:CB:62:SER:C	2:CB:64:LYS:N	2.70	0.45
2:CB:165:ASP:O	2:CB:166:ALA:C	2.54	0.45
4:CD:90:LEU:HD21	4:CD:200:ILE:HD11	1.98	0.45
6:CF:59:TYR:HE2	18:CR:67:LEU:CD2	2.30	0.45
7:CG:53:ARG:NH2	7:CG:125:SER:OG	2.49	0.45
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HG	1.97	0.45
22:DA:7:G:H2'	22:DA:8:C:O4'	2.17	0.45
22:DA:17:G:H4'	38:DQ:25:TYR:CE1	2.51	0.45
22:DA:87:U:O2	46:DY:44:LYS:NZ	2.49	0.45
22:DA:211:C:OP1	50:D2:25:LYS:NZ	2.37	0.45
22:DA:303:G:C6	22:DA:304:U:N3	2.85	0.45
22:DA:572:A:H5''	22:DA:573:U:OP2	2.17	0.45
22:DA:966:G:H4'	22:DA:2272:U:O2	2.16	0.45
22:DA:994:C:O2'	39:DR:10:LYS:HE3	2.16	0.45
22:DA:1040:A:C2	22:DA:1041:G:C4	3.05	0.45
22:DA:1351:C:H2'	22:DA:1352:U:H1'	1.99	0.45
22:DA:1358:G:N2	22:DA:1374:G:C6	2.85	0.45
22:DA:1452:G:C8	22:DA:1457:U:N3	2.85	0.45
22:DA:1651:G:C6	22:DA:1652:A:C5	3.05	0.45
22:DA:1813:G:H2'	22:DA:1814:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2037:A:C6	22:DA:2038:G:C6	3.04	0.45
22:DA:2170:A:C2	22:DA:2171:A:C6	3.04	0.45
22:DA:2370:G:O2'	49:D1:44:ARG:NH1	2.50	0.45
22:DA:2446:G:C6	22:DA:2501:C:H2'	2.51	0.45
22:DA:2499:C:C4	22:DA:2500:U:C4	3.05	0.45
22:DA:2880:C:C2	22:DA:2881:U:C6	3.05	0.45
24:DC:69:ARG:NH2	24:DC:116:ILE:CD1	2.80	0.45
25:DD:108:ASP:N	25:DD:204:LYS:O	2.50	0.45
25:DD:187:LEU:HD21	25:DD:203:VAL:HG11	1.99	0.45
27:DF:40:VAL:HG13	27:DF:41:GLY:N	2.31	0.45
29:DH:31:VAL:CG1	29:DH:32:PRO:HD3	2.47	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HG3	1.94	0.45
29:DH:93:SER:HB3	29:DH:123:ARG:HG3	1.99	0.45
33:DL:135:ILE:HG22	33:DL:140:GLY:HA2	1.98	0.45
40:DS:39:THR:O	40:DS:41:LYS:N	2.50	0.45
44:DW:70:GLU:O	44:DW:79:PHE:N	2.49	0.45
48:D0:20:ASP:N	48:D0:20:ASP:OD2	2.49	0.45
54:D6:4:PRO:CB	54:D6:5:MHU:HM1	2.46	0.45
1:AA:351:G:H1'	1:AA:352:C:OP1	2.17	0.45
1:AA:792:A:H1'	1:AA:794:A:N7	2.31	0.45
1:AA:980:C:C5	1:AA:981:U:C4	3.04	0.45
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.51	0.45
3:AC:84:VAL:HG13	3:AC:101:ILE:HG21	1.99	0.45
5:AE:94:VAL:CG2	5:AE:111:MET:SD	3.05	0.45
6:AF:45:ARG:O	6:AF:56:LYS:HA	2.17	0.45
11:AK:69:ARG:HD2	22:BA:2146:C:C4	2.52	0.45
21:AU:35:ARG:O	21:AU:36:GLU:C	2.55	0.45
22:BA:38:A:H5'	26:BE:45:ALA:HB3	1.99	0.45
22:BA:211:C:O2'	22:BA:212:G:H5'	2.17	0.45
22:BA:528:A:H3'	22:BA:528:A:H8	1.80	0.45
22:BA:1167:C:H2'	22:BA:1168:G:H5''	1.99	0.45
22:BA:1381:G:H1'	22:BA:1571:A:N1	2.32	0.45
22:BA:1585:C:H2'	22:BA:1586:A:H5'	1.99	0.45
22:BA:1816:C:C6	24:BC:62:TYR:CE1	3.04	0.45
22:BA:2681:C:C2	22:BA:2724:U:O4	2.69	0.45
22:BA:2810:A:H2'	22:BA:2811:G:O4'	2.16	0.45
26:BE:111:GLU:CG	26:BE:114:ARG:NH1	2.80	0.45
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.16	0.45
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.45
29:BH:72:ILE:HG23	29:BH:142:VAL:HG22	1.99	0.45
30:BI:39:CYS:HA	30:BI:42:PHE:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:23:LYS:HB3	32:BK:40:LYS:HB3	1.99	0.45
33:BL:91:ASP:O	33:BL:92:LEU:C	2.55	0.45
33:BL:111:ILE:N	33:BL:111:ILE:CD1	2.80	0.45
43:BV:14:LYS:CD	43:BV:18:ARG:HH11	2.30	0.45
46:BY:7:ARG:O	46:BY:8:GLU:HG3	2.17	0.45
1:CA:101:A:C5	1:CA:102:G:N7	2.85	0.45
1:CA:263:A:OP2	20:CT:74:ARG:NH1	2.50	0.45
1:CA:1117:A:H5'	9:CI:110:GLN:NE2	2.32	0.45
1:CA:1124:G:N2	1:CA:1127:G:N2	2.65	0.45
3:CC:101:ILE:HG23	3:CC:101:ILE:O	2.16	0.45
4:CD:22:LYS:C	4:CD:24:GLY:N	2.68	0.45
5:CE:19:ASN:O	5:CE:33:PHE:HA	2.17	0.45
8:CH:78:VAL:HG12	8:CH:79:SER:N	2.32	0.45
10:CJ:17:LEU:HD23	10:CJ:18:ILE:N	2.31	0.45
18:CR:46:GLY:C	18:CR:47:THR:HG23	2.37	0.45
21:CU:37:PHE:O	21:CU:39:GLU:N	2.44	0.45
22:DA:55:G:H2'	22:DA:55:G:N3	2.32	0.45
22:DA:259:G:C4	22:DA:260:G:C8	3.04	0.45
22:DA:453:A:O3'	22:DA:472:A:N6	2.49	0.45
22:DA:686:U:H6	22:DA:788:A:N1	2.15	0.45
22:DA:779:U:H5''	24:DC:49:ILE:HD11	1.98	0.45
22:DA:1312:U:C2	22:DA:1603:A:C2	3.05	0.45
22:DA:1464:G:N1	22:DA:1465:G:C5	2.84	0.45
22:DA:1476:U:O2'	22:DA:1477:A:H5'	2.17	0.45
22:DA:1949:G:C6	22:DA:1950:G:C6	3.05	0.45
22:DA:2135:A:C2	22:DA:2136:G:H1'	2.51	0.45
23:DB:17:C:H2'	23:DB:18:G:H5'	1.98	0.45
23:DB:59:A:H2'	23:DB:60:C:O4'	2.17	0.45
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.98	0.45
37:DP:70:VAL:HG12	37:DP:71:GLU:N	2.32	0.45
44:DW:34:GLY:N	44:DW:61:ALA:O	2.40	0.45
1:AA:316:C:C5	1:AA:351:G:C2	3.04	0.45
1:AA:927:G:H4'	1:AA:1503:A:N7	2.32	0.45
1:AA:947:G:C6	1:AA:948:C:C4	3.04	0.45
1:AA:1048:G:C2	1:AA:1050:G:C5	3.05	0.45
1:AA:1134:G:N2	1:AA:1135:U:C2	2.84	0.45
1:AA:1140:C:O2'	1:AA:1141:C:P	2.75	0.45
1:AA:1144:G:N1	1:AA:1145:A:C2	2.85	0.45
1:AA:1387:G:C6	1:AA:1388:C:N4	2.85	0.45
1:AA:1425:U:O2'	1:AA:1426:G:H5'	2.17	0.45
5:AE:46:VAL:HG22	5:AE:118:ALA:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:69:VAL:HG21	7:AG:104:ILE:HG13	1.99	0.45
10:AJ:52:LEU:HB2	14:AN:81:ARG:CD	2.47	0.45
22:BA:5:A:H2'	22:BA:6:A:C8	2.52	0.45
22:BA:674:G:H1'	26:BE:69:ARG:HD3	1.99	0.45
22:BA:674:G:H5''	26:BE:71:GLY:N	2.32	0.45
22:BA:695:G:C2	22:BA:696:G:C8	3.05	0.45
22:BA:1056:G:H5''	22:BA:1057:A:C4'	2.47	0.45
22:BA:1486:U:O2'	22:BA:1487:U:H5'	2.17	0.45
22:BA:1832:C:C4	22:BA:1833:C:C5	3.05	0.45
22:BA:1916:A:OP2	22:BA:1916:A:H3'	2.17	0.45
22:BA:2020:A:H5'	48:B0:9:THR:HG22	1.98	0.45
22:BA:2052:A:H4'	25:BD:148:GLN:O	2.16	0.45
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.47	0.45
22:BA:2515:C:O2	22:BA:2570:G:C2	2.70	0.45
27:BF:14:LYS:O	27:BF:18:THR:CG2	2.65	0.45
27:BF:143:TYR:O	27:BF:146:VAL:HG22	2.17	0.45
30:BI:97:LYS:HG2	30:BI:139:VAL:HG22	1.99	0.45
36:BO:36:TYR:N	36:BO:36:TYR:CD2	2.84	0.45
42:BU:26:LYS:HD2	42:BU:26:LYS:HA	1.89	0.45
42:BU:52:LEU:HA	42:BU:54:GLN:OE1	2.17	0.45
46:BY:15:ASN:O	46:BY:19:LEU:HG	2.16	0.45
53:B5:64:SER:O	53:B5:65:LEU:HB3	2.17	0.45
1:CA:9:G:OP2	5:CE:126:LYS:NZ	2.47	0.45
1:CA:206:C:H2'	1:CA:207:C:C5'	2.45	0.45
1:CA:669:G:N2	1:CA:738:C:O2	2.50	0.45
1:CA:756:C:C4	1:CA:757:U:C5	3.05	0.45
1:CA:1004:A:C2	1:CA:1026:G:N3	2.84	0.45
1:CA:1315:U:O4	1:CA:1316:G:C6	2.70	0.45
2:CB:16:PHE:CZ	2:CB:18:HIS:CE1	3.05	0.45
2:CB:85:LEU:O	2:CB:85:LEU:HD12	2.17	0.45
9:CI:12:ARG:CD	9:CI:107:ASP:HB3	2.47	0.45
10:CJ:91:ASP:O	10:CJ:92:LEU:CB	2.64	0.45
11:CK:100:LEU:O	11:CK:103:ALA:N	2.49	0.45
13:CM:22:ILE:HD12	13:CM:22:ILE:N	2.32	0.45
14:CN:67:THR:HG23	14:CN:83:LYS:HD2	1.98	0.45
15:CO:45:GLU:O	15:CO:46:HIS:CB	2.65	0.45
19:CS:22:ALA:CB	19:CS:47:LEU:HD13	2.46	0.45
22:DA:30:G:C5	22:DA:31:C:N3	2.85	0.45
22:DA:45:G:H2'	22:DA:215:G:N7	2.32	0.45
22:DA:143:C:H2'	22:DA:144:A:H5'	1.98	0.45
22:DA:292:U:C5	22:DA:293:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:377:G:C6	22:DA:378:C:N4	2.85	0.45
22:DA:599:A:C2	22:DA:659:G:C6	3.04	0.45
22:DA:663:G:O6	22:DA:664:G:C6	2.70	0.45
22:DA:669:G:N2	22:DA:670:A:N1	2.65	0.45
22:DA:708:G:N2	22:DA:724:U:H1'	2.31	0.45
22:DA:745:G:O2'	22:DA:748:G:H1'	2.17	0.45
22:DA:794:A:C6	22:DA:795:C:N3	2.85	0.45
22:DA:1222:U:H1'	22:DA:1228:G:N2	2.32	0.45
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.52	0.45
22:DA:1358:G:C2'	22:DA:1359:A:OP2	2.65	0.45
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.17	0.45
22:DA:1662:U:O2	22:DA:2687:U:H4'	2.16	0.45
22:DA:1724:G:O6	22:DA:1736:U:C2	2.70	0.45
22:DA:2331:G:C5	22:DA:2332:C:C4	3.05	0.45
22:DA:2345:G:H5'	22:DA:2347:C:O4'	2.16	0.45
22:DA:2504:U:C5	56:DA:3001:DOL:C16	2.98	0.45
22:DA:2543:G:N3	22:DA:2765:A:H2'	2.32	0.45
22:DA:2740:A:C6	22:DA:2764:A:C8	3.05	0.45
23:DB:25:U:C4	23:DB:26:C:C4	3.04	0.45
24:DC:246:THR:C	24:DC:248:TRP:H	2.20	0.45
27:DF:128:TYR:CB	27:DF:170:LEU:CD1	2.95	0.45
29:DH:86:ASP:C	29:DH:88:GLY:H	2.19	0.45
30:DI:91:GLY:O	30:DI:93:PRO:HD3	2.17	0.45
33:DL:56:PRO:O	33:DL:60:ARG:CB	2.64	0.45
33:DL:58:TYR:O	51:D3:13:ARG:HD3	2.17	0.45
35:DN:114:GLU:OE2	35:DN:118:ARG:HD2	2.17	0.45
41:DT:38:ALA:O	41:DT:39:THR:CB	2.65	0.45
41:DT:73:ARG:HA	41:DT:73:ARG:CZ	2.47	0.45
47:DZ:13:ALA:HB2	47:DZ:24:LEU:HD12	1.98	0.45
49:D1:9:ILE:HG23	49:D1:25:LYS:HB3	1.99	0.45
1:AA:85:U:O2	1:AA:85:U:O4'	2.35	0.45
1:AA:105:G:N2	1:AA:379:C:O3'	2.50	0.45
1:AA:500:G:C6	1:AA:546:A:C2	3.05	0.45
1:AA:832:G:C4	1:AA:833:G:C8	3.05	0.45
1:AA:933:G:OP2	7:AG:3:ARG:CB	2.65	0.45
2:AB:77:SER:O	2:AB:80:VAL:HB	2.17	0.45
4:AD:91:LEU:HD11	4:AD:195:ILE:HD11	1.99	0.45
8:AH:80:ARG:HB2	8:AH:81:PRO:HD2	1.99	0.45
9:AI:44:ALA:H	9:AI:46:MET:HE1	1.82	0.45
14:AN:93:ILE:HD12	14:AN:96:LEU:HD23	1.99	0.45
17:AQ:17:MET:CG	17:AQ:20:SER:HB3	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AS:11:ILE:HG13	19:AS:15:LEU:HD23	1.99	0.45
22:BA:18:U:O3'	38:BQ:23:GLY:HA2	2.16	0.45
22:BA:83:A:N6	22:BA:101:A:C4	2.85	0.45
22:BA:136:G:C6	22:BA:137:U:O4	2.70	0.45
22:BA:503:A:H4'	22:BA:504:A:O5'	2.17	0.45
22:BA:780:G:H2'	22:BA:782:A:N7	2.32	0.45
22:BA:832:U:H2'	22:BA:833:A:C8	2.51	0.45
22:BA:1064:C:O2	22:BA:1064:C:H2'	2.16	0.45
22:BA:1283:G:N2	22:BA:1285:A:H3'	2.32	0.45
22:BA:1501:G:C2	22:BA:1502:A:C8	3.04	0.45
22:BA:1838:C:C6	22:BA:1899:A:C6	3.05	0.45
22:BA:1885:A:C2'	22:BA:1886:U:H5'	2.47	0.45
22:BA:1993:U:C2'	22:BA:1994:C:H5'	2.47	0.45
22:BA:2273:A:H2'	22:BA:2274:A:C8	2.52	0.45
22:BA:2345:G:H4'	22:BA:2346:A:H5''	1.98	0.45
22:BA:2451:A:C2	56:BA:3001:DOL:C12	2.99	0.45
23:BB:42:C:OP1	27:BF:64:LYS:HE2	2.16	0.45
27:BF:2:ALA:O	27:BF:5:HIS:N	2.50	0.45
29:BH:12:LEU:HG	29:BH:13:GLY:N	2.31	0.45
29:BH:76:GLU:HA	29:BH:142:VAL:CG1	2.46	0.45
42:BU:34:VAL:HG23	42:BU:65:ILE:HG22	1.99	0.45
1:CA:115:G:C2	1:CA:289:G:N7	2.84	0.45
1:CA:803:G:C6	1:CA:804:U:C4	3.05	0.45
1:CA:842:U:O2'	1:CA:846:G:C6	2.70	0.45
1:CA:878:A:C6	1:CA:879:C:C4	3.05	0.45
1:CA:1080:A:C8	1:CA:1081:A:H1'	2.52	0.45
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.17	0.45
1:CA:1227:A:OP2	13:CM:110:LYS:HD2	2.17	0.45
1:CA:1386:G:C2	1:CA:1387:G:C8	3.05	0.45
1:CA:1410:A:H2'	1:CA:1411:C:C6	2.52	0.45
1:CA:1422:G:O3'	32:DK:49:ARG:NH2	2.49	0.45
12:CL:90:LEU:HB2	12:CL:93:VAL:HG21	1.98	0.45
14:CN:65:ARG:HB2	14:CN:78:GLY:O	2.17	0.45
16:CP:6:LEU:CD1	16:CP:71:VAL:HG23	2.47	0.45
21:CU:34:ARG:HE	21:CU:35:ARG:HB2	1.82	0.45
22:DA:8:C:O2'	22:DA:9:G:H5'	2.16	0.45
22:DA:158:U:C2'	22:DA:159:G:H5'	2.45	0.45
22:DA:204:A:H5'	22:DA:206:U:O4'	2.17	0.45
22:DA:249:C:O5'	22:DA:2394:C:O2'	2.35	0.45
22:DA:415:A:C2	22:DA:2409:G:N1	2.84	0.45
22:DA:515:A:C2'	22:DA:516:C:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:581:C:H2'	22:DA:582:A:C8	2.52	0.45
22:DA:630:G:H3'	22:DA:631:A:H5''	1.99	0.45
22:DA:683:U:OP1	50:D2:26:ASN:CB	2.65	0.45
22:DA:1006:C:P	58:DA:3779:HOH:O	2.74	0.45
22:DA:1262:A:N3	22:DA:1262:A:H2'	2.32	0.45
22:DA:1358:G:H2'	22:DA:1359:A:OP2	2.17	0.45
22:DA:1388:G:N2	22:DA:1400:U:C2	2.85	0.45
22:DA:1614:A:H2'	22:DA:1615:C:H5'	1.99	0.45
22:DA:1649:G:N1	22:DA:2009:A:C6	2.85	0.45
22:DA:1651:G:H4'	35:DN:39:PRO:HG2	1.99	0.45
22:DA:1829:A:H2'	24:DC:15:HIS:NE2	2.32	0.45
22:DA:2063:C:O2	22:DA:2063:C:H2'	2.17	0.45
22:DA:2111:U:O2	22:DA:2111:U:O4'	2.34	0.45
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.52	0.45
22:DA:2211:A:C4'	22:DA:2212:A:OP1	2.65	0.45
22:DA:2221:G:C2'	22:DA:2222:C:H5'	2.47	0.45
22:DA:2308:G:H4'	22:DA:2309:A:OP2	2.15	0.45
22:DA:2451:A:C2	56:DA:3001:DOL:HC12	2.52	0.45
22:DA:2821:A:OP2	25:DD:115:GLY:N	2.50	0.45
22:DA:2868:A:C6	22:DA:2869:G:C6	3.05	0.45
27:DF:111:ILE:HB	27:DF:114:PHE:CB	2.47	0.45
29:DH:15:LEU:HD22	29:DH:15:LEU:N	2.32	0.45
30:DI:24:VAL:HB	30:DI:28:LEU:HD23	1.99	0.45
32:DK:73:ASP:OD2	32:DK:75:SER:OG	2.28	0.45
33:DL:29:LYS:HG3	33:DL:30:THR:HG23	1.98	0.45
34:DM:67:VAL:HG11	34:DM:96:ILE:HD12	1.99	0.45
34:DM:124:LEU:N	34:DM:124:LEU:HD23	2.32	0.45
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.56	0.45
50:D2:34:ARG:HB2	50:D2:42:LEU:HD12	1.99	0.45
1:AA:9:G:C6	1:AA:26:A:N6	2.85	0.44
1:AA:192:A:C2	1:AA:193:C:C2	3.05	0.44
1:AA:320:A:H2'	1:AA:321:A:C1'	2.48	0.44
1:AA:531:U:H5''	3:AC:161:GLU:OE2	2.16	0.44
1:AA:855:U:N3	1:AA:856:C:C5	2.86	0.44
2:AB:79:ALA:O	2:AB:214:LEU:HD21	2.18	0.44
2:AB:84:ALA:O	2:AB:89:GLN:CB	2.65	0.44
3:AC:7:PRO:HD2	3:AC:184:TYR:CD2	2.52	0.44
4:AD:126:ASN:HA	4:AD:142:VAL:HG23	1.99	0.44
5:AE:35:ALA:CB	5:AE:60:ILE:HA	2.47	0.44
5:AE:50:TYR:O	5:AE:63:ALA:HB2	2.17	0.44
10:AJ:66:GLU:HB3	14:AN:99:ALA:CB	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:80:THR:C	10:AJ:82:LYS:N	2.71	0.44
14:AN:64:CYS:HB2	14:AN:80:SER:HB2	1.99	0.44
14:AN:93:ILE:HG21	14:AN:96:LEU:HD22	2.00	0.44
15:AO:61:SER:O	15:AO:65:LYS:HG3	2.18	0.44
16:AP:46:LYS:HD3	16:AP:47:GLU:H	1.80	0.44
20:AT:3:ASN:O	20:AT:4:ILE:C	2.55	0.44
20:AT:7:ALA:HB1	20:AT:10:ARG:HB2	1.99	0.44
22:BA:250:G:H2'	22:BA:251:A:C8	2.52	0.44
22:BA:301:G:HO2'	22:BA:302:C:H6	1.61	0.44
22:BA:613:A:H2'	22:BA:614:A:H5'	1.98	0.44
22:BA:1098:A:H5'	22:BA:1099:G:OP2	2.17	0.44
24:BC:162:VAL:HG13	24:BC:176:LEU:HD23	1.97	0.44
25:BD:61:THR:HB	25:BD:63:PRO:HD2	1.99	0.44
29:BH:93:SER:O	1:CA:368:U:C6	2.71	0.44
30:BI:108:GLU:HA	30:BI:111:GLN:HB3	1.99	0.44
34:BM:57:VAL:O	34:BM:60:GLN:HB2	2.16	0.44
40:BS:36:LEU:HD13	40:BS:48:LYS:HA	1.99	0.44
41:BT:29:THR:OG1	41:BT:86:THR:HG22	2.17	0.44
42:BU:61:LYS:HE3	42:BU:62:GLU:O	2.17	0.44
43:BV:26:PHE:CE1	43:BV:42:LEU:HD12	2.52	0.44
43:BV:80:HIS:ND1	43:BV:83:LYS:CG	2.80	0.44
1:CA:186:C:O2	1:CA:186:C:H2'	2.17	0.44
1:CA:484:G:N7	1:CA:486:U:C1'	2.80	0.44
1:CA:519:C:N4	1:CA:520:A:N1	2.65	0.44
1:CA:609:A:C5	1:CA:610:U:C6	3.05	0.44
1:CA:714:G:H2'	1:CA:715:A:C8	2.53	0.44
1:CA:992:U:O4'	1:CA:993:G:C2	2.70	0.44
1:CA:1000:A:H3'	1:CA:1001:C:C6	2.53	0.44
1:CA:1306:A:H1'	1:CA:1332:A:N7	2.32	0.44
5:CE:38:VAL:HG11	5:CE:114:VAL:HA	1.99	0.44
9:CI:35:LEU:HD21	9:CI:48:VAL:HG21	1.97	0.44
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.98	0.44
20:CT:58:VAL:CG1	20:CT:72:ALA:HB1	2.47	0.44
22:DA:185:G:C5	22:DA:212:G:N2	2.84	0.44
22:DA:294:A:C6	22:DA:345:A:N3	2.85	0.44
22:DA:846:U:H1'	22:DA:847:U:C5	2.51	0.44
22:DA:993:G:N2	39:DR:23:GLU:OE1	2.50	0.44
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.17	0.44
22:DA:1211:C:H3'	22:DA:1212:G:H5'	1.99	0.44
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.17	0.44
22:DA:1731:G:C6	22:DA:1733:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1783:A:C6	22:DA:2587:A:C2	3.05	0.44
22:DA:1906:G:OP1	22:DA:1930:G:C8	2.69	0.44
22:DA:2043:C:H2'	22:DA:2043:C:O2	2.16	0.44
22:DA:2634:A:C2	22:DA:2635:A:C4	3.05	0.44
24:DC:87:ARG:HB3	24:DC:87:ARG:CZ	2.46	0.44
27:DF:85:ILE:HG13	27:DF:85:ILE:O	2.17	0.44
29:DH:5:LEU:CD1	29:DH:13:GLY:CA	2.95	0.44
30:DI:33:VAL:O	30:DI:33:VAL:HG12	2.16	0.44
31:DJ:9:GLU:O	31:DJ:10:THR:HG23	2.18	0.44
33:DL:55:MET:SD	33:DL:59:ARG:CB	3.06	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:CB	2.46	0.44
36:DO:51:ALA:HB1	36:DO:77:ALA:HB1	1.99	0.44
1:AA:131:A:C2	1:AA:132:C:C4	3.05	0.44
1:AA:172:A:N7	1:AA:174:A:N7	2.65	0.44
1:AA:603:U:H2'	1:AA:604:G:C8	2.52	0.44
1:AA:874:G:C6	1:AA:875:U:C4	3.06	0.44
1:AA:908:A:O2'	1:AA:909:A:H5'	2.17	0.44
1:AA:1419:G:C5	1:AA:1420:U:C5	3.06	0.44
1:AA:1535:C:OP2	1:AA:1535:C:C6	2.71	0.44
3:AC:21:THR:HG23	3:AC:58:GLU:HB3	1.99	0.44
8:AH:10:MET:HE1	8:AH:33:LYS:CB	2.46	0.44
9:AI:25:ASN:HB2	9:AI:27:LYS:HG2	1.99	0.44
11:AK:63:ALA:CB	11:AK:92:GLY:HA3	2.48	0.44
13:AM:14:HIS:HB2	13:AM:17:ILE:HD13	1.99	0.44
17:AQ:16:LYS:CA	17:AQ:17:MET:SD	3.05	0.44
17:AQ:30:LYS:HG2	17:AQ:37:PHE:CZ	2.52	0.44
21:AU:34:ARG:NH2	21:AU:35:ARG:HD2	2.32	0.44
22:BA:111:A:C2	22:BA:112:U:C2	3.06	0.44
22:BA:465:G:H2'	22:BA:466:A:C8	2.52	0.44
22:BA:846:U:O2'	22:BA:847:U:OP2	2.34	0.44
22:BA:954:G:C5	22:BA:955:U:C5	3.05	0.44
22:BA:1768:C:C2	22:BA:1769:U:C6	3.05	0.44
22:BA:1935:G:O2'	22:BA:1936:A:H5'	2.18	0.44
22:BA:2128:G:OP2	53:B5:37:LYS:HB2	2.17	0.44
22:BA:2554:U:C4	22:BA:2555:U:O4	2.70	0.44
23:BB:24:G:N2	23:BB:28:C:O2	2.50	0.44
25:BD:13:ARG:HD3	25:BD:21:SER:OG	2.17	0.44
26:BE:197:GLU:O	26:BE:201:ALA:N	2.50	0.44
28:BG:153:ARG:O	28:BG:154:PRO:C	2.55	0.44
30:BI:73:THR:HG21	30:BI:116:ASP:HB3	1.98	0.44
31:BJ:98:GLU:OE2	31:BJ:126:ALA:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BP:73:VAL:HG23	37:BP:73:VAL:O	2.15	0.44
41:BT:29:THR:HG23	41:BT:86:THR:N	2.31	0.44
41:BT:47:VAL:HG12	41:BT:55:VAL:CG2	2.47	0.44
1:CA:829:G:C5	1:CA:858:G:N2	2.85	0.44
1:CA:1345:U:H4'	1:CA:1346:A:H5'	1.97	0.44
1:CA:1434:A:N6	1:CA:1435:G:C6	2.85	0.44
2:CB:35:ARG:O	2:CB:38:VAL:N	2.45	0.44
2:CB:117:LEU:HB3	2:CB:141:LEU:HG	1.98	0.44
3:CC:65:ARG:O	3:CC:66:VAL:C	2.55	0.44
17:CQ:14:SER:HB3	17:CQ:22:VAL:HG12	1.99	0.44
22:DA:590:A:C5	22:DA:591:U:C5	3.05	0.44
22:DA:626:A:C2	33:DL:78:ARG:HD3	2.52	0.44
22:DA:877:A:H2'	22:DA:878:A:OP2	2.17	0.44
22:DA:1343:G:C5	22:DA:1344:U:C4	3.04	0.44
22:DA:1483:G:C4	22:DA:1484:U:C5	3.05	0.44
22:DA:1688:U:C4	22:DA:1698:A:C2	3.06	0.44
22:DA:1965:C:OP1	22:DA:1966:A:H2'	2.17	0.44
22:DA:2286:G:C4'	22:DA:2287:A:O5'	2.60	0.44
22:DA:2502:G:H5'	22:DA:2503:A:C5'	2.46	0.44
22:DA:2526:G:C5	22:DA:2527:C:C5	3.05	0.44
22:DA:2582:G:C2	22:DA:2583:G:C8	3.05	0.44
22:DA:2683:C:H4'	25:DD:13:ARG:NH1	2.31	0.44
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.53	0.44
25:DD:32:ASN:HB3	25:DD:50:VAL:HB	1.99	0.44
27:DF:122:PHE:O	27:DF:123:ASP:C	2.56	0.44
28:DG:70:ALA:O	28:DG:74:SER:OG	2.34	0.44
29:DH:1:MET:CE	29:DH:27:ARG:NH1	2.80	0.44
31:DJ:24:THR:O	31:DJ:25:LEU:C	2.56	0.44
33:DL:110:VAL:O	33:DL:111:ILE:O	2.35	0.44
35:DN:2:ARG:O	35:DN:2:ARG:CD	2.65	0.44
35:DN:65:LEU:HD11	35:DN:69:ARG:NH2	2.33	0.44
41:DT:74:ILE:HD12	41:DT:75:GLY:N	2.32	0.44
44:DW:45:PHE:HB3	44:DW:80:ILE:CD1	2.47	0.44
46:DY:46:VAL:O	46:DY:46:VAL:HG12	2.18	0.44
1:AA:587:G:N2	1:AA:755:G:C8	2.85	0.44
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.65	0.44
1:AA:1493:A:HO2'	1:AA:1494:G:P	2.39	0.44
2:AB:24:ASN:O	2:AB:27:MET:N	2.47	0.44
2:AB:208:ARG:O	2:AB:210:VAL:N	2.50	0.44
4:AD:26:ARG:HD3	4:AD:31:LYS:HD2	1.99	0.44
6:AF:80:PHE:C	6:AF:80:PHE:CD2	2.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:91:ARG:CG	6:AF:92:THR:N	2.81	0.44
9:AI:63:LEU:N	9:AI:63:LEU:CD2	2.79	0.44
10:AJ:35:GLN:O	10:AJ:36:VAL:O	2.35	0.44
11:AK:71:ALA:O	11:AK:73:ALA:N	2.49	0.44
13:AM:16:VAL:HG22	13:AM:41:GLU:HB2	1.98	0.44
19:AS:15:LEU:CD1	19:AS:33:THR:HG21	2.48	0.44
22:BA:829:A:N7	22:BA:2247:A:O2'	2.49	0.44
22:BA:1177:G:O2'	22:BA:1178:C:O5'	2.30	0.44
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.17	0.44
22:BA:1392:A:C6	22:BA:1393:A:C6	3.06	0.44
22:BA:1536:C:O4'	22:BA:1537:G:C2	2.70	0.44
22:BA:1735:A:C2'	22:BA:1736:U:H5'	2.47	0.44
22:BA:2488:G:O2'	22:BA:2489:U:H5'	2.17	0.44
22:BA:2885:G:H2'	22:BA:2886:A:C4'	2.47	0.44
23:BB:15:A:O2'	23:BB:16:G:H5'	2.16	0.44
26:BE:29:HIS:NE2	33:BL:8:PRO:HD3	2.32	0.44
29:BH:57:LYS:CG	29:BH:58:LEU:N	2.81	0.44
30:BI:105:GLN:O	30:BI:106:LEU:CB	2.65	0.44
31:BJ:75:TYR:CD1	31:BJ:86:GLN:HB3	2.52	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.37	0.44
43:BV:51:GLN:HB2	43:BV:57:TYR:OH	2.17	0.44
46:BY:61:ALA:O	46:BY:62:GLY:C	2.55	0.44
53:B5:133:GLY:O	53:B5:134:PRO:CB	2.64	0.44
1:CA:39:G:C2	1:CA:40:C:C2	3.05	0.44
1:CA:218:U:C2'	1:CA:219:U:H5'	2.47	0.44
1:CA:327:A:C2	1:CA:329:A:C4	3.04	0.44
1:CA:407:U:OP1	4:CD:3:ARG:NH2	2.50	0.44
1:CA:689:C:H2'	1:CA:690:G:O4'	2.16	0.44
1:CA:775:G:C2'	1:CA:776:G:H5'	2.48	0.44
1:CA:836:G:C6	1:CA:837:U:C2	3.05	0.44
1:CA:1007:U:C2'	1:CA:1008:U:H5'	2.46	0.44
1:CA:1206:G:C6	1:CA:1207:G:C5	3.05	0.44
1:CA:1265:C:C2	1:CA:1266:G:N7	2.85	0.44
3:CC:141:ALA:O	3:CC:146:ALA:HB3	2.16	0.44
7:CG:136:LYS:O	7:CG:136:LYS:HD2	2.17	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:HG2	1.98	0.44
10:CJ:52:LEU:HD23	10:CJ:62:ARG:CG	2.47	0.44
11:CK:112:ASP:HB3	21:CU:20:LYS:HE3	2.00	0.44
12:CL:114:ARG:CZ	12:CL:121:ARG:HA	2.47	0.44
14:CN:58:SER:O	14:CN:59:ARG:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:92:U:H2'	22:DA:93:G:O4'	2.15	0.44
22:DA:121:G:H1'	22:DA:131:A:N1	2.32	0.44
22:DA:200:U:C6	22:DA:201:C:C5	3.05	0.44
22:DA:253:C:H2'	22:DA:254:G:H5'	1.98	0.44
22:DA:419:U:C4	22:DA:420:C:C5	3.06	0.44
22:DA:600:G:H1'	26:DE:100:MET:HG2	2.00	0.44
22:DA:681:G:C4	22:DA:682:G:C8	3.06	0.44
22:DA:730:A:OP1	22:DA:1775:U:O2'	2.24	0.44
22:DA:769:U:N3	22:DA:770:G:N7	2.65	0.44
22:DA:1439:A:C2	22:DA:1553:A:C4	3.05	0.44
22:DA:2234:G:C6	22:DA:2235:G:C5	3.05	0.44
22:DA:2518:A:N3	22:DA:2518:A:H2'	2.32	0.44
22:DA:2800:A:H3'	22:DA:2801:G:H5'	1.99	0.44
24:DC:18:LYS:O	24:DC:19:VAL:CB	2.65	0.44
24:DC:221:ARG:NH2	58:DC:306:HOH:O	2.50	0.44
25:DD:18:ASP:OD2	25:DD:18:ASP:N	2.51	0.44
27:DF:136:ILE:HA	27:DF:141:ILE:HG21	1.98	0.44
28:DG:91:GLY:HA3	28:DG:160:LYS:HG3	1.99	0.44
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.18	0.44
29:DH:37:VAL:HG22	29:DH:38:PRO:HD2	1.98	0.44
30:DI:20:PRO:CG	30:DI:23:PRO:HG2	2.47	0.44
33:DL:50:PHE:CZ	33:DL:52:GLY:O	2.70	0.44
33:DL:91:ASP:HB3	33:DL:94:THR:HB	2.00	0.44
35:DN:34:ILE:HD11	35:DN:44:LEU:CD2	2.48	0.44
35:DN:87:PHE:CZ	35:DN:94:TYR:HB3	2.52	0.44
38:DQ:93:LYS:O	38:DQ:97:ASP:HB2	2.17	0.44
41:DT:72:GLN:O	41:DT:74:ILE:HG23	2.18	0.44
44:DW:45:PHE:CG	44:DW:80:ILE:HD11	2.52	0.44
44:DW:46:HIS:CD2	44:DW:77:ARG:HD3	2.52	0.44
1:AA:600:A:C2	1:AA:601:G:C4	3.05	0.44
1:AA:636:U:H5''	17:AQ:6:ARG:HG2	1.99	0.44
1:AA:727:G:N2	1:AA:731:G:C4	2.85	0.44
1:AA:803:G:C5	1:AA:804:U:C4	3.06	0.44
1:AA:945:G:C2	1:AA:946:A:C8	3.05	0.44
1:AA:1182:G:C4'	1:AA:1183:U:H5'	2.48	0.44
1:AA:1317:C:O2'	14:AN:49:GLN:HG2	2.17	0.44
4:AD:4:TYR:O	4:AD:5:LEU:HB3	2.18	0.44
4:AD:90:LEU:C	4:AD:90:LEU:HD12	2.38	0.44
5:AE:83:HIS:HB2	5:AE:84:PRO:CD	2.48	0.44
5:AE:101:GLU:CB	5:AE:122:ASN:CB	2.94	0.44
8:AH:30:SER:O	8:AH:31:LYS:C	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:13:LYS:O	9:AI:15:SER:N	2.47	0.44
9:AI:84:THR:HG21	9:AI:103:PHE:CB	2.47	0.44
13:AM:16:VAL:CG2	13:AM:41:GLU:HB2	2.47	0.44
22:BA:428:A:H2'	22:BA:429:A:C8	2.52	0.44
22:BA:668:A:H2'	22:BA:669:G:OP1	2.17	0.44
22:BA:1059:G:O2'	30:BI:129:ILE:HA	2.17	0.44
22:BA:1071:G:P	22:BA:1071:G:H8	2.39	0.44
22:BA:1794:A:C2'	22:BA:1795:C:O5'	2.66	0.44
22:BA:1850:G:C2	22:BA:1893:C:O2	2.71	0.44
22:BA:1875:G:C2'	22:BA:1876:A:OP2	2.65	0.44
22:BA:2218:G:O2'	22:BA:2219:U:H5'	2.17	0.44
22:BA:2280:G:C2	22:BA:2281:A:C8	3.05	0.44
22:BA:2716:C:C2'	22:BA:2717:C:H5'	2.48	0.44
24:BC:195:VAL:CG1	24:BC:196:GLY:N	2.80	0.44
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.32	0.44
27:BF:5:HIS:CE1	27:BF:9:LYS:HE3	2.53	0.44
29:BH:62:LEU:HD12	29:BH:62:LEU:O	2.17	0.44
32:BK:66:LYS:HB3	32:BK:66:LYS:HE2	1.84	0.44
33:BL:62:PRO:CG	51:B3:25:LYS:HD3	2.47	0.44
34:BM:78:LEU:N	34:BM:78:LEU:HD12	2.32	0.44
44:BW:56:ASP:O	44:BW:57:HIS:CB	2.65	0.44
1:CA:142:G:C2	1:CA:143:A:H1'	2.52	0.44
1:CA:374:A:N3	1:CA:375:U:C6	2.86	0.44
1:CA:743:A:C5	1:CA:744:C:C5	3.06	0.44
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.82	0.44
2:CB:71:GLY:HA2	2:CB:164:ILE:CG2	2.47	0.44
14:CN:87:ALA:HB1	14:CN:92:GLU:HB2	2.00	0.44
15:CO:13:SER:O	15:CO:14:GLU:HG3	2.18	0.44
17:CQ:51:ASN:ND2	17:CQ:51:ASN:O	2.51	0.44
22:DA:84:A:N6	22:DA:99:U:H4'	2.32	0.44
22:DA:188:G:C6	22:DA:189:G:C4	3.05	0.44
22:DA:207:A:C4	22:DA:208:C:C6	3.06	0.44
22:DA:449:A:N7	22:DA:450:G:N7	2.65	0.44
22:DA:1179:G:C6	22:DA:1180:U:H1'	2.52	0.44
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.16	0.44
22:DA:1286:A:C6	22:DA:1329:U:C4	3.04	0.44
22:DA:1310:G:H2'	22:DA:1311:G:H5'	1.99	0.44
22:DA:1312:U:O2	22:DA:1603:A:C2	2.71	0.44
22:DA:1345:C:H5'	22:DA:1396:U:O4	2.17	0.44
22:DA:1409:U:H2'	22:DA:1410:G:O4'	2.17	0.44
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2032:G:H1'	25:DD:150:GLN:HE22	1.79	0.44
22:DA:2308:G:C4'	22:DA:2309:A:OP2	2.65	0.44
23:DB:76:G:H2'	23:DB:77:U:O4'	2.18	0.44
24:DC:178:SER:O	24:DC:271:ARG:HB2	2.17	0.44
26:DE:108:ILE:HD13	26:DE:181:ILE:HG13	1.98	0.44
27:DF:117:LEU:CD2	27:DF:176:PRO:HG2	2.47	0.44
30:DI:28:LEU:HD11	30:DI:35:ILE:CD1	2.47	0.44
1:AA:8:A:H5'	5:AE:125:ALA:O	2.17	0.44
1:AA:721:G:C6	1:AA:733:G:C2	3.05	0.44
1:AA:723:U:O5'	21:AU:49:LYS:HG2	2.17	0.44
1:AA:926:G:C6	1:AA:1505:G:C5	3.05	0.44
1:AA:937:A:N6	1:AA:1345:U:O4	2.50	0.44
1:AA:949:A:C5	1:AA:950:U:C5	3.05	0.44
1:AA:1504:G:OP2	1:AA:1507:A:O2'	2.26	0.44
2:AB:15:HIS:O	2:AB:16:PHE:C	2.55	0.44
2:AB:33:GLY:O	2:AB:34:ALA:HB2	2.18	0.44
2:AB:87:CYS:C	2:AB:89:GLN:N	2.71	0.44
3:AC:159:GLY:O	3:AC:160:ALA:C	2.55	0.44
5:AE:56:VAL:N	5:AE:57:PRO:HD2	2.33	0.44
6:AF:45:ARG:HG2	6:AF:46:GLN:N	2.32	0.44
6:AF:90:MET:O	6:AF:91:ARG:O	2.36	0.44
8:AH:111:MET:CE	8:AH:116:ALA:HA	2.46	0.44
11:AK:16:VAL:HG13	11:AK:17:SER:H	1.82	0.44
14:AN:87:ALA:O	14:AN:92:GLU:HB2	2.18	0.44
22:BA:414:C:H2'	22:BA:415:A:C8	2.52	0.44
22:BA:685:A:H1'	22:BA:688:U:O4	2.18	0.44
22:BA:1100:C:H2'	22:BA:1101:U:C6	2.52	0.44
22:BA:1359:A:N7	22:BA:1373:A:C2	2.85	0.44
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.44
22:BA:1442:U:H2'	22:BA:1443:U:C6	2.52	0.44
22:BA:1635:A:C2	22:BA:1636:U:H1'	2.52	0.44
22:BA:1688:U:C4	22:BA:1698:A:C2	3.06	0.44
22:BA:1917:U:N3	22:BA:1918:A:C4	2.85	0.44
22:BA:2352:A:C2'	22:BA:2353:G:H5'	2.48	0.44
22:BA:2511:U:O4	22:BA:2575:C:N3	2.50	0.44
22:BA:2623:G:H4'	22:BA:2825:G:C8	2.53	0.44
23:BB:54:G:H21	27:BF:26:MET:CE	2.30	0.44
24:BC:195:VAL:O	24:BC:196:GLY:O	2.35	0.44
29:BH:31:VAL:N	29:BH:32:PRO:CD	2.80	0.44
30:BI:67:PHE:CD2	30:BI:67:PHE:N	2.85	0.44
30:BI:74:PRO:O	30:BI:75:PRO:O	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BN:69:ARG:C	35:BN:70:THR:HG23	2.37	0.44
35:BN:106:ASP:C	35:BN:106:ASP:OD1	2.55	0.44
38:BQ:58:ARG:O	38:BQ:62:ILE:HG13	2.18	0.44
39:BR:49:ILE:HG22	39:BR:52:PRO:C	2.38	0.44
48:B0:25:VAL:C	48:B0:26:THR:HG23	2.38	0.44
1:CA:68:G:N2	1:CA:152:A:H1'	2.33	0.44
1:CA:178:C:H2'	1:CA:179:A:O4'	2.18	0.44
1:CA:302:G:C6	1:CA:303:A:C5	3.05	0.44
1:CA:330:C:O2	1:CA:330:C:H2'	2.15	0.44
1:CA:577:G:O2'	1:CA:578:C:H5'	2.17	0.44
1:CA:1068:G:H2'	1:CA:1069:C:H5'	2.00	0.44
2:CB:56:GLU:HG2	2:CB:198:PHE:CZ	2.53	0.44
2:CB:82:ASP:N	2:CB:85:LEU:HB3	2.33	0.44
2:CB:99:GLY:C	2:CB:101:LEU:H	2.21	0.44
2:CB:186:ILE:HA	2:CB:200:ILE:HB	1.98	0.44
2:CB:206:ALA:O	2:CB:207:ILE:C	2.55	0.44
4:CD:11:LEU:HD13	4:CD:63:ARG:HD3	2.00	0.44
5:CE:103:THR:O	5:CE:122:ASN:HA	2.18	0.44
9:CI:130:ARG:HD2	9:CI:130:ARG:HA	1.81	0.44
10:CJ:7:ARG:HD2	10:CJ:73:LEU:HD21	1.99	0.44
14:CN:48:LEU:O	14:CN:48:LEU:HD23	2.17	0.44
16:CP:67:ILE:HG22	16:CP:68:SER:O	2.17	0.44
17:CQ:28:PHE:CE1	17:CQ:37:PHE:HB3	2.53	0.44
18:CR:33:ILE:CA	18:CR:40:VAL:HG23	2.45	0.44
19:CS:74:PHE:CD1	19:CS:74:PHE:N	2.84	0.44
22:DA:39:G:C5	22:DA:40:U:C5	3.05	0.44
22:DA:118:A:N3	22:DA:178:G:H1'	2.32	0.44
22:DA:207:A:C2	22:DA:208:C:H1'	2.52	0.44
22:DA:469:G:O6	50:D2:37:LYS:NZ	2.43	0.44
22:DA:699:A:C2'	22:DA:700:G:H5'	2.48	0.44
22:DA:1090:A:N1	22:DA:1091:G:N7	2.66	0.44
22:DA:1369:G:N3	22:DA:1370:C:C6	2.84	0.44
22:DA:1497:U:O2'	22:DA:1577:C:H5''	2.18	0.44
22:DA:1524:G:C2	22:DA:1525:A:C8	3.05	0.44
22:DA:1604:C:H5''	58:DA:3406:HOH:O	2.17	0.44
22:DA:1867:G:O6	22:DA:1875:G:C2	2.70	0.44
22:DA:2436:G:C2	22:DA:2437:G:C8	3.05	0.44
23:DB:58:A:H2'	23:DB:59:A:O4'	2.18	0.44
24:DC:124:ILE:O	24:DC:124:ILE:HG22	2.16	0.44
27:DF:57:LEU:HB2	27:DF:65:PRO:HG2	2.00	0.44
30:DI:65:ARG:HG3	30:DI:66:SER:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DO:67:ASN:O	36:DO:70:ALA:N	2.51	0.44
37:DP:103:ARG:HD3	37:DP:108:ALA:HB2	1.98	0.44
39:DR:27:ILE:HG13	39:DR:33:VAL:HG11	2.00	0.44
42:DU:83:VAL:HG11	42:DU:94:ARG:HB3	1.99	0.44
46:DY:1:MET:HA	46:DY:4:LYS:HB2	1.99	0.44
1:AA:417:G:C2	1:AA:418:C:C2	3.06	0.44
1:AA:452:A:H2'	1:AA:453:G:H5'	2.00	0.44
1:AA:663:A:N1	1:AA:743:A:C2	2.85	0.44
1:AA:771:G:O2'	1:AA:772:U:H5'	2.16	0.44
1:AA:781:A:H4'	1:AA:1522:U:O2'	2.17	0.44
1:AA:1014:A:C4	19:AS:34:TRP:CZ3	3.06	0.44
1:AA:1068:G:O2'	1:AA:1191:A:N1	2.38	0.44
1:AA:1538:C:O2'	1:AA:1539:C:H5'	2.17	0.44
2:AB:117:LEU:O	2:AB:120:GLN:HB3	2.18	0.44
2:AB:144:LEU:N	2:AB:144:LEU:HD23	2.32	0.44
3:AC:14:ILE:O	3:AC:15:VAL:HG22	2.18	0.44
3:AC:191:THR:HB	3:AC:193:TYR:CE2	2.52	0.44
5:AE:45:ARG:HA	5:AE:72:ILE:O	2.18	0.44
18:AR:70:TYR:HB2	18:AR:71:THR:HG22	2.00	0.44
20:AT:55:GLN:N	20:AT:56:PRO:HD2	2.33	0.44
22:BA:26:G:H1'	22:BA:514:A:H61	1.83	0.44
22:BA:297:G:OP1	42:BU:92:LYS:NZ	2.49	0.44
22:BA:662:G:O3'	33:BL:16:GLY:HA2	2.17	0.44
22:BA:880:G:C4	22:BA:881:G:C8	3.06	0.44
22:BA:1014:A:C6	22:BA:1015:U:C4	3.05	0.44
22:BA:1179:G:C5	22:BA:1180:U:N1	2.86	0.44
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.33	0.44
22:BA:2824:C:C4	22:BA:2825:G:C5	3.05	0.44
23:BB:94:A:H2'	23:BB:95:U:C6	2.53	0.44
24:BC:123:ALA:O	24:BC:125:LYS:N	2.51	0.44
25:BD:9:VAL:O	25:BD:197:THR:OG1	2.35	0.44
29:BH:89:LYS:CE	29:BH:124:THR:HG22	2.48	0.44
31:BJ:114:LEU:CG	31:BJ:118:MET:HE3	2.39	0.44
41:BT:67:VAL:C	41:BT:68:LYS:HG2	2.38	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.48	0.44
46:BY:32:ALA:HB2	46:BY:37:LEU:CD2	2.48	0.44
48:B0:41:HIS:HA	48:B0:49:TYR:OH	2.17	0.44
53:B5:65:LEU:HD21	53:B5:195:ARG:CB	2.47	0.44
1:CA:57:G:C6	1:CA:58:C:C4	3.06	0.44
1:CA:121:U:H3'	1:CA:122:G:C5'	2.48	0.44
1:CA:183:C:H2'	1:CA:183:C:O2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:427:U:O2'	1:CA:541:G:OP1	2.29	0.44
1:CA:528:C:O2	1:CA:528:C:H2'	2.16	0.44
1:CA:570:G:H1'	1:CA:820:U:C4	2.52	0.44
1:CA:676:A:H2'	1:CA:677:U:C6	2.52	0.44
3:CC:23:PHE:CG	3:CC:24:ALA:N	2.85	0.44
3:CC:172:ARG:C	3:CC:174:PRO:HD3	2.37	0.44
3:CC:184:TYR:CD1	3:CC:201:TRP:CD1	3.06	0.44
7:CG:42:ILE:CG2	7:CG:116:MET:HG3	2.48	0.44
10:CJ:22:THR:HA	10:CJ:25:ILE:HG22	1.98	0.44
10:CJ:81:GLU:HA	10:CJ:84:VAL:HG12	2.00	0.44
12:CL:44:LYS:HB3	12:CL:45:PRO:HD3	1.99	0.44
14:CN:31:ILE:N	14:CN:31:ILE:HD12	2.32	0.44
20:CT:36:TYR:CD1	20:CT:37:ALA:N	2.85	0.44
22:DA:108:G:H1'	22:DA:347:A:N3	2.33	0.44
22:DA:453:A:H4'	22:DA:472:A:H62	1.82	0.44
22:DA:693:A:C5	22:DA:694:U:C4	3.06	0.44
22:DA:920:A:OP1	47:DZ:19:LYS:HE3	2.18	0.44
22:DA:1066:U:C2'	22:DA:1067:A:OP1	2.66	0.44
22:DA:1190:G:OP1	33:DL:32:GLY:CA	2.66	0.44
22:DA:1364:G:H2'	22:DA:1365:A:C5'	2.44	0.44
22:DA:1645:G:H4'	22:DA:1646:C:C5	2.52	0.44
22:DA:2128:G:H1'	22:DA:2173:A:O2'	2.17	0.44
22:DA:2513:A:C5	22:DA:2514:U:C4	3.06	0.44
22:DA:2540:C:C2	22:DA:2541:A:C8	3.05	0.44
22:DA:2699:C:H2'	22:DA:2700:A:O4'	2.17	0.44
23:DB:68:C:H2'	23:DB:69:G:O4'	2.16	0.44
24:DC:174:LEU:O	24:DC:181:MET:HA	2.17	0.44
27:DF:2:ALA:N	27:DF:94:GLU:OE2	2.50	0.44
30:DI:28:LEU:HD11	30:DI:35:ILE:HD12	1.99	0.44
34:DM:70:ASP:C	34:DM:70:ASP:OD1	2.56	0.44
1:AA:77:A:H2'	1:AA:78:A:C8	2.53	0.44
1:AA:268:U:H2'	1:AA:269:C:C6	2.52	0.44
1:AA:276:G:P	17:AQ:17:MET:HE2	2.57	0.44
1:AA:427:U:C4	1:AA:428:G:C6	3.06	0.44
1:AA:828:U:C5	1:AA:859:G:C4	3.06	0.44
1:AA:957:U:H1'	1:AA:960:U:N3	2.33	0.44
1:AA:1024:G:C2'	1:AA:1025:U:O5'	2.66	0.44
1:AA:1027:C:C2	1:AA:1034:G:O6	2.70	0.44
2:AB:132:LYS:O	2:AB:136:MET:HB2	2.17	0.44
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.80	0.44
10:AJ:23:ALA:O	10:AJ:27:GLU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.17	0.44
11:AK:91:PRO:C	11:AK:93:ARG:H	2.20	0.44
16:AP:6:LEU:HD13	16:AP:71:VAL:HG23	1.99	0.44
16:AP:43:ALA:O	16:AP:46:LYS:HD2	2.17	0.44
20:AT:54:MET:CE	20:AT:58:VAL:HG21	2.47	0.44
21:AU:19:PHE:O	21:AU:22:SER:HB3	2.18	0.44
22:BA:57:C:H2'	22:BA:58:G:O4'	2.18	0.44
22:BA:197:A:C6	22:BA:198:C:C2	3.06	0.44
22:BA:481:G:C2	22:BA:507:A:C4	3.06	0.44
22:BA:1103:A:OP2	22:BA:1104:C:C5	2.71	0.44
22:BA:1185:G:H5''	22:BA:1186:G:P	2.58	0.44
22:BA:1366:A:C2	22:BA:1367:A:H1'	2.52	0.44
22:BA:2502:G:C5'	22:BA:2503:A:H5''	2.46	0.44
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.99	0.44
29:BH:97:ARG:O	29:BH:101:ASP:HB2	2.17	0.44
29:BH:100:ALA:HB2	29:BH:115:VAL:HG21	1.98	0.44
30:BI:72:LYS:CD	30:BI:72:LYS:N	2.80	0.44
30:BI:97:LYS:HB3	30:BI:139:VAL:CG2	2.48	0.44
33:BL:77:ILE:HD11	33:BL:101:ILE:HG21	2.00	0.44
33:BL:89:VAL:O	33:BL:94:THR:HG21	2.18	0.44
37:BP:34:GLU:N	37:BP:37:LYS:O	2.46	0.44
1:CA:78:A:C2	1:CA:92:U:O2	2.71	0.44
1:CA:128:G:C2	1:CA:234:C:C2	3.05	0.44
1:CA:462:G:O6	1:CA:469:C:N4	2.50	0.44
1:CA:635:A:C6	1:CA:636:U:C4	3.05	0.44
1:CA:756:C:H2'	1:CA:757:U:O5'	2.18	0.44
1:CA:1002:G:C2	1:CA:1003:G:H1'	2.53	0.44
1:CA:1007:U:C2'	1:CA:1008:U:C5'	2.95	0.44
1:CA:1015:G:H2'	1:CA:1016:A:O4'	2.18	0.44
1:CA:1092:A:N1	1:CA:1183:U:O2	2.51	0.44
1:CA:1265:C:N3	1:CA:1266:G:N7	2.65	0.44
1:CA:1291:U:H4'	9:CI:42:GLU:HG2	2.00	0.44
1:CA:1537:U:C4	1:CA:1538:C:C4	3.06	0.44
2:CB:21:ARG:HA	2:CB:21:ARG:NE	2.30	0.44
4:CD:24:GLY:O	4:CD:161:LEU:HD11	2.17	0.44
4:CD:195:ILE:O	4:CD:195:ILE:CG1	2.66	0.44
5:CE:83:HIS:HB2	5:CE:84:PRO:HD2	1.98	0.44
5:CE:105:ILE:HG13	5:CE:105:ILE:O	2.17	0.44
16:CP:67:ILE:HG23	16:CP:71:VAL:CG1	2.48	0.44
19:CS:58:VAL:HA	19:CS:59:PRO:HD3	1.89	0.44
22:DA:40:U:C5	22:DA:41:C:N4	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:54:G:N1	22:DA:55:G:N7	2.65	0.44
22:DA:187:G:N1	22:DA:210:C:C2	2.85	0.44
22:DA:406:G:H2'	22:DA:407:G:C8	2.52	0.44
22:DA:422:A:C2	22:DA:423:A:C4	3.05	0.44
22:DA:426:C:C4	22:DA:427:U:C5	3.06	0.44
22:DA:465:G:N2	22:DA:684:G:H1'	2.33	0.44
22:DA:517:C:C2'	22:DA:518:G:O5'	2.66	0.44
22:DA:599:A:C2	22:DA:659:G:C5	3.05	0.44
22:DA:1193:G:C2	22:DA:1194:A:C5	3.06	0.44
22:DA:1248:G:C5	26:DE:46:GLN:NE2	2.86	0.44
22:DA:1403:A:C2	22:DA:1404:C:C2	3.06	0.44
22:DA:1999:C:H5''	22:DA:2723:C:O2'	2.18	0.44
22:DA:2134:A:C2	22:DA:2159:G:H1'	2.53	0.44
22:DA:2166:U:H2'	22:DA:2167:U:H5'	2.00	0.44
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.17	0.44
22:DA:2410:G:H2'	22:DA:2411:A:O4'	2.17	0.44
24:DC:158:ALA:HA	24:DC:195:VAL:HG22	2.00	0.44
25:DD:4:LEU:HD22	25:DD:101:PHE:CE2	2.52	0.44
25:DD:125:TRP:O	25:DD:126:ASN:CB	2.66	0.44
26:DE:131:THR:HB	26:DE:164:LEU:HD22	1.99	0.44
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.47	0.44
32:DK:111:LYS:HG3	32:DK:112:PHE:CE1	2.52	0.44
33:DL:55:MET:SD	33:DL:59:ARG:CZ	3.06	0.44
40:DS:30:SER:HA	40:DS:33:LEU:HD12	1.99	0.44
41:DT:24:MET:HG2	41:DT:29:THR:O	2.18	0.44
45:DX:39:TRP:HB2	45:DX:46:PHE:CE2	2.53	0.44
45:DX:47:VAL:O	45:DX:47:VAL:CG1	2.65	0.44
45:DX:52:SER:O	45:DX:55:GLY:N	2.51	0.44
48:D0:40:ARG:O	48:D0:41:HIS:HB2	2.18	0.44
1:AA:197:A:N3	1:AA:198:G:H1'	2.33	0.44
1:AA:200:G:N2	1:AA:218:U:O2	2.51	0.44
1:AA:264:C:H2'	1:AA:265:G:O4'	2.18	0.44
1:AA:397:A:N7	1:AA:548:G:C8	2.85	0.44
1:AA:723:U:H2'	1:AA:855:U:H4'	1.99	0.44
1:AA:1028:C:C5	1:AA:1029:U:C5	3.05	0.44
1:AA:1220:G:H2'	1:AA:1221:G:O4'	2.18	0.44
1:AA:1317:C:H2'	1:AA:1318:A:H5'	1.99	0.44
1:AA:1399:C:C4	1:AA:1502:A:N1	2.86	0.44
2:AB:81:LYS:HG3	2:AB:91:PHE:CZ	2.53	0.44
2:AB:94:HIS:ND1	2:AB:146:ASN:HB2	2.32	0.44
4:AD:152:GLN:O	4:AD:155:VAL:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:26:GLU:HG2	14:AN:27:LEU:N	2.33	0.44
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.18	0.44
17:AQ:79:VAL:O	17:AQ:80:GLU:HB2	2.18	0.44
22:BA:18:U:O2'	22:BA:19:A:H5'	2.17	0.44
22:BA:590:A:H2'	22:BA:591:U:C6	2.53	0.44
22:BA:900:A:C5	22:BA:901:C:C6	3.06	0.44
22:BA:910:A:H2'	22:BA:911:A:C8	2.53	0.44
22:BA:1087:G:N2	22:BA:1090:A:C8	2.86	0.44
22:BA:1091:G:H2'	22:BA:1092:C:C5	2.52	0.44
22:BA:1408:G:C6	22:BA:1409:U:C4	3.06	0.44
22:BA:2232:C:C4	22:BA:2233:U:C4	3.05	0.44
22:BA:2533:U:H2'	22:BA:2534:A:H5'	1.99	0.44
27:BF:132:VAL:O	27:BF:132:VAL:CG2	2.66	0.44
29:BH:57:LYS:HG3	29:BH:58:LEU:N	2.33	0.44
33:BL:26:GLY:C	33:BL:27:LEU:HD23	2.38	0.44
34:BM:45:GLN:HG2	34:BM:125:PRO:HD3	1.99	0.44
39:BR:34:GLU:HG3	39:BR:60:LYS:HE2	1.99	0.44
45:BX:4:VAL:N	45:BX:33:LEU:HD11	2.33	0.44
1:CA:120:A:H2'	1:CA:120:A:OP2	2.18	0.44
1:CA:237:G:C4	1:CA:238:A:C8	3.06	0.44
1:CA:685:G:C2	1:CA:686:U:C4	3.06	0.44
1:CA:1361:G:C4	1:CA:1362:A:C8	3.06	0.44
9:CI:88:MET:HB2	9:CI:92:GLU:OE2	2.17	0.44
11:CK:35:THR:OG1	11:CK:40:ASN:N	2.51	0.44
21:CU:14:VAL:C	21:CU:16:LEU:HG	2.38	0.44
22:DA:82:U:N3	22:DA:83:A:N7	2.66	0.44
22:DA:281:C:H2'	22:DA:282:A:C8	2.53	0.44
22:DA:601:C:H2'	22:DA:602:A:O4'	2.18	0.44
22:DA:687:C:N3	22:DA:788:A:H5'	2.33	0.44
22:DA:770:G:O4'	22:DA:1379:U:C5	2.71	0.44
22:DA:835:C:C4	22:DA:836:G:N7	2.85	0.44
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.53	0.44
22:DA:1362:C:N3	22:DA:1363:C:C2	2.86	0.44
22:DA:1804:C:N4	22:DA:1814:G:N2	2.66	0.44
22:DA:1936:A:C8	22:DA:1945:G:C6	3.06	0.44
24:DC:69:ARG:NH2	24:DC:116:ILE:HD11	2.32	0.44
27:DF:4:LEU:O	27:DF:8:TYR:N	2.51	0.44
27:DF:33:LYS:HD3	27:DF:92:ARG:NH1	2.33	0.44
33:DL:116:VAL:HG21	33:DL:135:ILE:HA	1.99	0.44
36:DO:53:THR:HB	36:DO:65:THR:CG2	2.48	0.44
42:DU:12:ILE:CG2	42:DU:80:ALA:HB2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DU:18:ASP:HB3	42:DU:21:LYS:HG3	1.99	0.44
47:DZ:2:ALA:CB	47:DZ:39:GLU:HB2	2.48	0.44
50:D2:9:VAL:O	50:D2:10:LEU:C	2.56	0.44
1:AA:43:C:H2'	1:AA:44:A:O4'	2.18	0.44
1:AA:283:U:C5	1:AA:284:C:C5	3.06	0.44
1:AA:557:G:C6	1:AA:558:G:N1	2.86	0.44
1:AA:602:A:C2	1:AA:603:U:O2	2.71	0.44
1:AA:722:G:C2'	1:AA:723:U:OP2	2.65	0.44
1:AA:1149:C:O2'	1:AA:1150:A:H5'	2.18	0.44
1:AA:1211:U:H1'	1:AA:1213:A:C2	2.53	0.44
1:AA:1296:C:H5''	1:AA:1297:G:OP2	2.18	0.44
2:AB:66:LYS:N	2:AB:66:LYS:HD3	2.33	0.44
7:AG:139:GLU:OE1	7:AG:139:GLU:HA	2.18	0.44
9:AI:20:PHE:O	9:AI:63:LEU:HA	2.17	0.44
9:AI:36:GLU:HA	9:AI:40:GLY:HA3	2.00	0.44
10:AJ:27:GLU:C	10:AJ:29:ALA:H	2.22	0.44
11:AK:86:VAL:HG12	11:AK:93:ARG:NH1	2.33	0.44
12:AL:56:ARG:NH1	12:AL:62:GLU:HG3	2.33	0.44
14:AN:53:ARG:HG3	14:AN:59:ARG:CZ	2.48	0.44
16:AP:2:VAL:HG22	16:AP:65:ALA:HB2	1.99	0.44
16:AP:77:GLU:C	16:AP:79:ASN:N	2.71	0.44
17:AQ:12:VAL:O	17:AQ:13:VAL:CG1	2.66	0.44
22:BA:142:A:C8	22:BA:143:C:C5	3.06	0.44
22:BA:273:G:N2	22:BA:365:U:O2	2.51	0.44
22:BA:301:G:H4'	22:BA:301:G:OP1	2.18	0.44
22:BA:713:G:C6	22:BA:714:U:C4	3.06	0.44
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.33	0.44
22:BA:1996:C:H4'	22:BA:1997:C:OP1	2.18	0.44
22:BA:2018:G:C2	22:BA:2019:A:C4	3.06	0.44
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.17	0.44
29:BH:99:ILE:CD1	29:BH:117:LEU:HD13	2.48	0.44
31:BJ:30:THR:CG2	31:BJ:31:GLU:N	2.81	0.44
32:BK:103:VAL:O	32:BK:122:VAL:HB	2.18	0.44
35:BN:8:ARG:NH2	35:BN:39:PRO:HA	2.33	0.44
35:BN:84:GLY:N	35:BN:85:PRO:HD2	2.33	0.44
39:BR:48:LYS:O	39:BR:48:LYS:CG	2.66	0.44
52:B4:25:VAL:HB	52:B4:35:GLN:HB2	1.99	0.44
53:B5:65:LEU:CD2	53:B5:195:ARG:CB	2.95	0.44
53:B5:84:ILE:O	53:B5:84:ILE:HG22	2.17	0.44
1:CA:9:G:H5'	5:CE:108:GLY:HA3	2.00	0.44
1:CA:39:G:N2	1:CA:40:C:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:539:A:H2'	1:CA:540:G:C8	2.53	0.44
1:CA:844:G:C8	1:CA:844:G:OP2	2.71	0.44
1:CA:974:A:C8	14:CN:71:HIS:CD2	3.06	0.44
1:CA:1004:A:C5	1:CA:1005:A:C6	3.05	0.44
1:CA:1317:C:H2'	1:CA:1318:A:O5'	2.18	0.44
1:CA:1417:G:N2	1:CA:1484:C:C4	2.86	0.44
2:CB:186:ILE:HA	2:CB:200:ILE:O	2.18	0.44
3:CC:111:LEU:HD22	3:CC:111:LEU:N	2.33	0.44
11:CK:40:ASN:O	11:CK:41:ALA:HB3	2.18	0.44
11:CK:77:TYR:CD1	11:CK:77:TYR:N	2.86	0.44
14:CN:41:ARG:HG2	14:CN:42:TRP:N	2.32	0.44
17:CQ:25:ILE:HG12	17:CQ:42:THR:O	2.18	0.44
17:CQ:25:ILE:O	17:CQ:41:THR:HA	2.18	0.44
22:DA:738:G:N1	22:DA:739:A:C2	2.86	0.44
22:DA:856:G:C2	22:DA:922:C:C2	3.06	0.44
22:DA:972:A:N1	22:DA:973:A:N6	2.65	0.44
22:DA:983:A:N6	22:DA:984:A:C2	2.86	0.44
22:DA:1109:C:C4	22:DA:1110:G:O6	2.71	0.44
22:DA:1139:G:N2	22:DA:1140:C:C2	2.86	0.44
22:DA:1330:C:H2'	22:DA:1331:G:O5'	2.17	0.44
22:DA:1332:G:O6	22:DA:1609:A:C8	2.71	0.44
22:DA:1355:G:H2'	22:DA:1356:G:C5'	2.48	0.44
22:DA:1362:C:C2'	22:DA:1363:C:H5'	2.48	0.44
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.18	0.44
22:DA:2018:G:H2'	22:DA:2019:A:O4'	2.18	0.44
22:DA:2064:C:H2'	22:DA:2065:C:C6	2.53	0.44
22:DA:2104:C:N3	22:DA:2186:G:N2	2.66	0.44
22:DA:2179:C:H2'	22:DA:2180:U:C6	2.52	0.44
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.17	0.44
22:DA:2409:G:C6	22:DA:2410:G:C6	3.06	0.44
24:DC:104:ILE:HD12	24:DC:104:ILE:O	2.18	0.44
24:DC:176:LEU:HD12	24:DC:180:GLU:HB3	1.99	0.44
24:DC:251:GLN:HG2	24:DC:255:LYS:HB2	2.00	0.44
26:DE:130:LYS:HB2	26:DE:133:LEU:HB2	2.00	0.44
31:DJ:39:LYS:HZ3	31:DJ:39:LYS:CB	2.31	0.44
31:DJ:40:HIS:CG	31:DJ:40:HIS:O	2.69	0.44
33:DL:30:THR:OG1	33:DL:31:GLY:N	2.51	0.44
39:DR:78:ARG:CB	39:DR:83:TYR:CD1	3.00	0.44
42:DU:96:PHE:CZ	42:DU:103:ILE:HG13	2.53	0.44
43:DV:80:HIS:CG	43:DV:81:PRO:HD2	2.53	0.44
50:D2:12:ARG:NH2	50:D2:44:VAL:CG1	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:184:G:C6	1:AA:185:U:C4	3.06	0.43
1:AA:192:A:H2'	1:AA:193:C:C6	2.53	0.43
1:AA:554:A:H5'	12:AL:26:ALA:HB1	2.00	0.43
1:AA:651:C:H2'	1:AA:652:U:O5'	2.18	0.43
1:AA:654:G:C2'	1:AA:655:A:H5'	2.48	0.43
1:AA:862:C:H2'	1:AA:863:U:H5'	2.00	0.43
1:AA:935:A:C2	1:AA:936:C:C2	3.05	0.43
1:AA:1005:A:N6	1:AA:1006:G:C2	2.87	0.43
1:AA:1130:A:C1'	1:AA:1146:A:C2	3.01	0.43
1:AA:1154:G:H2'	1:AA:1155:A:C8	2.53	0.43
4:AD:58:LYS:HE2	4:AD:69:GLU:OE2	2.18	0.43
9:AI:30:ILE:CG2	9:AI:65:ILE:HD11	2.48	0.43
18:AR:32:TYR:CG	18:AR:55:LEU:HD11	2.53	0.43
22:BA:141:G:C6	41:BT:1:MET:HE1	2.53	0.43
22:BA:143:C:O2	41:BT:1:MET:N	2.44	0.43
22:BA:464:U:C6	22:BA:788:A:C2	3.06	0.43
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.48	0.43
22:BA:1098:A:N7	22:BA:1099:G:C6	2.86	0.43
22:BA:1125:G:C6	22:BA:1126:A:N6	2.86	0.43
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.53	0.43
22:BA:1479:G:H2'	22:BA:1480:C:O4'	2.18	0.43
22:BA:1839:G:C2'	22:BA:1840:G:O5'	2.66	0.43
22:BA:1880:U:H2'	22:BA:1881:C:C6	2.53	0.43
22:BA:2298:A:C2	22:BA:2321:U:C5	3.06	0.43
22:BA:2315:G:H2'	22:BA:2316:G:C8	2.52	0.43
22:BA:2808:G:C2	22:BA:2891:U:C5	3.06	0.43
26:BE:157:LEU:HG	26:BE:169:VAL:HG21	2.00	0.43
29:BH:89:LYS:HE3	29:BH:124:THR:HG22	1.99	0.43
31:BJ:52:ASP:O	31:BJ:121:LYS:HE2	2.18	0.43
1:CA:198:G:O2'	1:CA:199:A:H5'	2.18	0.43
1:CA:229:U:H2'	1:CA:230:G:C8	2.53	0.43
1:CA:747:A:N6	1:CA:748:G:C6	2.86	0.43
1:CA:980:C:O3'	14:CN:13:ARG:NH2	2.51	0.43
1:CA:1018:G:O6	1:CA:1019:A:N6	2.51	0.43
1:CA:1052:U:C5'	1:CA:1053:G:OP2	2.66	0.43
1:CA:1361:G:C4	1:CA:1362:A:N7	2.86	0.43
2:CB:26:LYS:HB2	2:CB:193:PRO:HD2	2.00	0.43
2:CB:164:ILE:O	2:CB:186:ILE:O	2.36	0.43
4:CD:62:ARG:NH1	4:CD:69:GLU:OE1	2.51	0.43
4:CD:153:SER:O	4:CD:154:ARG:C	2.56	0.43
5:CE:83:HIS:NE2	8:CH:96:MET:CE	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:CQ:10:GLY:HA3	17:CQ:25:ILE:HD13	2.00	0.43
17:CQ:14:SER:HB3	17:CQ:22:VAL:CG1	2.48	0.43
22:DA:104:A:C5	22:DA:105:C:N3	2.86	0.43
22:DA:528:A:C2	22:DA:2043:C:H4'	2.53	0.43
22:DA:936:A:C2	22:DA:937:C:C2	3.06	0.43
22:DA:1448:G:C4	22:DA:1449:G:C8	3.06	0.43
22:DA:1744:A:C5	22:DA:1745:A:C5	3.05	0.43
22:DA:1757:A:N1	22:DA:1762:A:C2	2.86	0.43
22:DA:2061:G:C8	22:DA:2501:C:H4'	2.53	0.43
22:DA:2141:G:N2	22:DA:2151:U:O2	2.51	0.43
22:DA:2513:A:C6	22:DA:2514:U:C4	3.06	0.43
22:DA:2720:U:C6	22:DA:2872:A:N1	2.86	0.43
22:DA:2843:G:N2	22:DA:2875:C:N3	2.66	0.43
26:DE:45:ALA:HA	26:DE:87:ALA:O	2.18	0.43
27:DF:5:HIS:O	27:DF:9:LYS:HG3	2.18	0.43
27:DF:163:ASP:N	27:DF:163:ASP:OD1	2.51	0.43
30:DI:33:VAL:HA	30:DI:67:PHE:CE2	2.53	0.43
31:DJ:10:THR:O	31:DJ:11:VAL:O	2.35	0.43
37:DP:53:ARG:N	37:DP:57:SER:OG	2.50	0.43
42:DU:82:ARG:HB2	42:DU:82:ARG:CZ	2.47	0.43
48:D0:44:THR:OG1	48:D0:48:TYR:N	2.51	0.43
51:D3:7:VAL:O	51:D3:10:ALA:HB3	2.18	0.43
1:AA:300:A:H2'	1:AA:301:G:O4'	2.18	0.43
1:AA:690:G:C6	1:AA:691:G:C6	3.07	0.43
1:AA:998:C:H2'	1:AA:999:C:C6	2.54	0.43
1:AA:1227:A:O2'	13:AM:115:PRO:HD2	2.18	0.43
1:AA:1250:A:O3'	9:AI:69:GLY:HA2	2.18	0.43
1:AA:1322:C:O2'	1:AA:1323:G:OP2	2.29	0.43
4:AD:30:THR:O	4:AD:31:LYS:C	2.55	0.43
7:AG:42:ILE:HG21	7:AG:116:MET:CG	2.48	0.43
8:AH:29:SER:OG	8:AH:30:SER:N	2.50	0.43
9:AI:36:GLU:HA	9:AI:40:GLY:CA	2.49	0.43
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.18	0.43
17:AQ:4:LYS:HD2	17:AQ:4:LYS:C	2.39	0.43
22:BA:255:A:H2'	22:BA:256:A:O4'	2.19	0.43
22:BA:976:G:C2	22:BA:977:G:C8	3.06	0.43
22:BA:1003:G:C2	22:BA:1004:U:C5	3.06	0.43
22:BA:1439:A:C2	22:BA:1553:A:C5	3.06	0.43
22:BA:1665:A:H2'	22:BA:1666:G:O4'	2.18	0.43
22:BA:1754:A:N6	22:BA:1755:A:C6	2.86	0.43
22:BA:1844:C:O3'	24:BC:256:LYS:NZ	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.01	0.43
22:BA:2248:C:OP2	22:BA:2249:U:C5	2.70	0.43
22:BA:2267:A:H2	58:BA:3511:HOH:O	2.00	0.43
26:BE:46:GLN:O	26:BE:88:ARG:NH1	2.51	0.43
37:BP:106:LYS:O	37:BP:109:ARG:HD3	2.19	0.43
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	2.00	0.43
1:CA:421:U:C4'	1:CA:421:U:OP1	2.67	0.43
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.47	0.43
1:CA:1151:A:C2	1:CA:1152:A:C4	3.06	0.43
1:CA:1225:A:C2'	1:CA:1225:A:N3	2.81	0.43
1:CA:1457:G:H2'	1:CA:1458:G:O4'	2.18	0.43
2:CB:115:LYS:O	2:CB:119:THR:HB	2.18	0.43
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.98	0.43
9:CI:116:VAL:HG23	10:CJ:62:ARG:HD3	2.00	0.43
12:CL:25:GLU:HB3	12:CL:27:CYS:SG	2.58	0.43
22:DA:35:G:N2	22:DA:450:G:H1'	2.33	0.43
22:DA:54:G:C6	22:DA:55:G:N7	2.86	0.43
22:DA:185:G:C6	22:DA:212:G:N2	2.86	0.43
22:DA:192:C:O2'	22:DA:802:A:N3	2.51	0.43
22:DA:483:A:O2'	42:DU:56:GLY:HA3	2.18	0.43
22:DA:603:A:N3	22:DA:604:G:H1'	2.34	0.43
22:DA:633:A:H5''	33:DL:70:LYS:CD	2.48	0.43
22:DA:969:G:H2'	22:DA:970:U:C6	2.54	0.43
22:DA:1341:G:C2	41:DT:84:TYR:CD2	3.06	0.43
22:DA:1351:C:O3'	22:DA:1571:A:O2'	2.36	0.43
22:DA:1362:C:H2'	22:DA:1363:C:H5'	2.00	0.43
22:DA:1477:A:N6	22:DA:1514:G:H1'	2.33	0.43
22:DA:1568:G:H5''	24:DC:61:ALA:N	2.33	0.43
22:DA:1670:C:C5	22:DA:1671:U:C4	3.06	0.43
22:DA:2232:C:OP1	45:DX:27:ARG:NH1	2.50	0.43
22:DA:2280:G:O2'	22:DA:2388:A:N1	2.46	0.43
22:DA:2331:G:N2	22:DA:2385:C:C2	2.86	0.43
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.17	0.43
22:DA:2897:U:H2'	22:DA:2898:U:C6	2.53	0.43
24:DC:9:THR:O	24:DC:10:SER:HB3	2.15	0.43
25:DD:148:GLN:N	25:DD:148:GLN:CD	2.72	0.43
29:DH:127:GLU:CG	29:DH:144:VAL:O	2.65	0.43
33:DL:62:PRO:HG3	51:D3:26:HIS:O	2.18	0.43
35:DN:108:ALA:HB3	35:DN:110:MET:CE	2.49	0.43
37:DP:65:SER:O	37:DP:66:ASN:C	2.57	0.43
44:DW:36:ILE:HG23	44:DW:58:THR:CG2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D0:44:THR:O	48:D0:47:GLY:N	2.52	0.43
49:D1:9:ILE:HB	49:D1:52:ALA:HA	2.00	0.43
49:D1:19:HIS:CD2	49:D1:19:HIS:C	2.91	0.43
50:D2:43:THR:O	50:D2:44:VAL:HB	2.17	0.43
1:AA:167:A:H2'	1:AA:168:G:O4'	2.18	0.43
1:AA:500:G:C2'	1:AA:501:C:O5'	2.66	0.43
1:AA:558:G:C5	1:AA:559:A:C2	3.07	0.43
1:AA:681:A:C6	1:AA:710:G:C6	3.07	0.43
1:AA:1069:C:H4'	1:AA:1192:C:O2	2.19	0.43
1:AA:1126:U:O4'	1:AA:1281:C:C2	2.71	0.43
1:AA:1442:G:H2'	1:AA:1443:C:H6	1.83	0.43
2:AB:75:ALA:O	2:AB:76:ALA:CB	2.65	0.43
3:AC:141:ALA:O	3:AC:146:ALA:HB3	2.18	0.43
4:AD:174:ASP:O	4:AD:175:ALA:CB	2.66	0.43
6:AF:42:TRP:HB2	6:AF:59:TYR:HB2	2.01	0.43
8:AH:115:ALA:O	8:AH:118:GLN:N	2.51	0.43
14:AN:90:ARG:HB2	14:AN:92:GLU:HG2	2.00	0.43
14:AN:100:SER:O	14:AN:101:TRP:HB3	2.18	0.43
17:AQ:81:LYS:C	17:AQ:83:VAL:N	2.72	0.43
19:AS:58:VAL:CG1	19:AS:75:ALA:HB1	2.49	0.43
20:AT:72:ALA:O	20:AT:73:ALA:C	2.56	0.43
22:BA:45:G:H5''	22:BA:46:G:OP1	2.18	0.43
22:BA:587:C:C5	22:BA:671:C:H1'	2.53	0.43
22:BA:784:G:C5'	24:BC:226:ASN:OD1	2.66	0.43
22:BA:927:A:H2'	22:BA:928:A:O4'	2.19	0.43
22:BA:1087:G:C2'	22:BA:1089:A:H1'	2.48	0.43
22:BA:1607:C:N4	22:BA:1622:G:C8	2.86	0.43
22:BA:2308:G:O6	22:BA:2311:A:C8	2.71	0.43
22:BA:2517:C:C5	22:BA:2542:A:C4	3.06	0.43
23:BB:22:U:H2'	23:BB:23:G:C8	2.52	0.43
27:BF:171:ALA:O	27:BF:173:PHE:N	2.51	0.43
28:BG:10:VAL:HG13	28:BG:10:VAL:O	2.18	0.43
29:BH:80:ILE:HG21	29:BH:94:ILE:HG13	2.00	0.43
31:BJ:53:TYR:CD1	31:BJ:121:LYS:HB3	2.53	0.43
1:CA:97:G:C6	1:CA:98:A:H1'	2.53	0.43
1:CA:256:U:OP1	17:CQ:19:LYS:NZ	2.40	0.43
1:CA:404:G:O6	4:CD:2:ALA:N	2.51	0.43
1:CA:411:A:H4'	1:CA:412:A:O5'	2.17	0.43
1:CA:459:A:C8	1:CA:459:A:OP2	2.72	0.43
1:CA:577:G:N3	1:CA:578:C:C6	2.86	0.43
1:CA:1027:C:N4	1:CA:1034:G:O6	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1244:G:C2	1:CA:1294:G:C2	3.07	0.43
1:CA:1319:A:H5'	19:CS:5:LEU:HD11	1.99	0.43
1:CA:1385:G:H2'	1:CA:1386:G:O4'	2.19	0.43
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.53	0.43
2:CB:20:THR:OG1	2:CB:21:ARG:N	2.51	0.43
2:CB:68:LEU:HG	2:CB:154:MET:HE1	2.00	0.43
4:CD:34:ILE:O	4:CD:34:ILE:CG2	2.66	0.43
5:CE:38:VAL:HG12	5:CE:39:VAL:N	2.34	0.43
9:CI:63:LEU:HG	9:CI:63:LEU:O	2.18	0.43
11:CK:60:PRO:N	11:CK:91:PRO:HB2	2.34	0.43
12:CL:9:ARG:HB2	12:CL:9:ARG:CZ	2.48	0.43
13:CM:50:GLU:HA	13:CM:50:GLU:OE2	2.19	0.43
15:CO:53:ARG:O	15:CO:54:ARG:C	2.57	0.43
19:CS:40:ILE:HD13	19:CS:66:MET:HB3	1.98	0.43
22:DA:498:G:C4	22:DA:499:U:C5	3.07	0.43
22:DA:513:A:C2	22:DA:514:A:N7	2.86	0.43
22:DA:683:U:H2'	22:DA:684:G:O5'	2.18	0.43
22:DA:694:U:C3'	22:DA:695:G:C5'	2.95	0.43
22:DA:1357:C:N4	22:DA:1358:G:N1	2.66	0.43
22:DA:1519:G:H3'	22:DA:1520:U:C6	2.53	0.43
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.52	0.43
22:DA:1622:G:H2'	22:DA:1623:G:O4'	2.18	0.43
22:DA:1638:C:O3'	22:DA:2709:G:N2	2.51	0.43
22:DA:1754:A:C6	22:DA:1755:A:C5	3.06	0.43
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.53	0.43
22:DA:1881:C:H2'	22:DA:1882:U:O4'	2.17	0.43
22:DA:2502:G:H5'	22:DA:2503:A:O5'	2.19	0.43
22:DA:2711:A:N6	22:DA:2714:G:C5	2.86	0.43
25:DD:3:GLY:O	25:DD:82:PHE:CE1	2.72	0.43
31:DJ:31:GLU:HB3	31:DJ:142:ILE:CG1	2.48	0.43
37:DP:75:GLN:HB2	37:DP:78:SER:HB2	2.00	0.43
40:DS:15:GLN:O	40:DS:19:LEU:HD22	2.18	0.43
42:DU:57:GLY:O	42:DU:59:VAL:HG23	2.18	0.43
42:DU:72:ILE:HD13	42:DU:83:VAL:HB	2.00	0.43
43:DV:28:ALA:O	43:DV:40:ILE:HB	2.18	0.43
43:DV:75:GLN:HB3	43:DV:90:ASP:O	2.17	0.43
48:D0:54:VAL:O	48:D0:55:ILE:HB	2.18	0.43
1:AA:116:A:C4	1:AA:117:G:C8	3.07	0.43
1:AA:157:U:O2'	1:AA:158:G:H5'	2.18	0.43
1:AA:266:G:H4'	1:AA:267:C:OP1	2.17	0.43
1:AA:389:A:C6	1:AA:390:U:H1'	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:867:G:N2	1:AA:868:C:C2	2.86	0.43
1:AA:963:G:H2'	1:AA:963:G:N3	2.33	0.43
2:AB:93:ASN:OD1	2:AB:94:HIS:ND1	2.52	0.43
4:AD:23:SER:O	4:AD:24:GLY:O	2.37	0.43
5:AE:30:ILE:HD11	5:AE:54:ARG:NH1	2.34	0.43
6:AF:67:PRO:O	6:AF:69:GLU:N	2.52	0.43
7:AG:27:VAL:O	7:AG:31:MET:N	2.50	0.43
7:AG:49:THR:O	7:AG:53:ARG:HB2	2.18	0.43
7:AG:69:VAL:HG12	7:AG:135:VAL:HA	2.01	0.43
9:AI:6:TYR:CD1	9:AI:89:GLU:OE2	2.71	0.43
14:AN:21:PHE:HE1	14:AN:55:SER:HG	1.62	0.43
14:AN:43:ASN:C	14:AN:45:VAL:H	2.20	0.43
19:AS:51:VAL:CG2	19:AS:71:LEU:HB3	2.48	0.43
20:AT:58:VAL:HG12	20:AT:72:ALA:HB1	2.00	0.43
22:BA:24:G:O2'	40:BS:77:ASP:HB3	2.18	0.43
22:BA:103:A:H2'	22:BA:104:A:O4'	2.18	0.43
22:BA:362:A:C4	22:BA:363:G:C8	3.07	0.43
22:BA:744:U:H2'	22:BA:745:G:O4'	2.19	0.43
22:BA:975:A:C4	22:BA:990:A:C5	3.06	0.43
22:BA:1153:C:N4	22:BA:1154:G:C6	2.86	0.43
22:BA:1253:A:C8	58:BA:3335:HOH:O	2.66	0.43
22:BA:1494:A:C2	22:BA:1495:A:N9	2.87	0.43
22:BA:1840:G:C2	22:BA:1841:U:C2	3.06	0.43
22:BA:2622:U:O2'	22:BA:2825:G:N7	2.50	0.43
22:BA:2680:U:O2'	22:BA:2681:C:H5'	2.18	0.43
23:BB:2:G:C2	23:BB:119:A:N3	2.87	0.43
26:BE:48:THR:O	26:BE:49:ARG:C	2.55	0.43
27:BF:17:MET:CE	27:BF:22:TYR:HB2	2.49	0.43
29:BH:27:ARG:O	29:BH:28:ASN:CB	2.66	0.43
29:BH:76:GLU:HA	29:BH:142:VAL:HG12	2.00	0.43
30:BI:77:ALA:HB2	30:BI:132:THR:CG2	2.48	0.43
30:BI:124:ALA:O	30:BI:127:ARG:HG2	2.17	0.43
31:BJ:35:ARG:HG2	31:BJ:40:HIS:CD2	2.52	0.43
1:CA:86:G:O2'	1:CA:87:C:P	2.76	0.43
1:CA:160:A:C5	1:CA:346:G:O6	2.72	0.43
1:CA:216:U:H5''	1:CA:464:U:H4'	2.00	0.43
1:CA:451:A:OP2	16:CP:70:ARG:NH2	2.47	0.43
1:CA:652:U:C2	1:CA:752:G:N2	2.86	0.43
1:CA:683:G:O2'	1:CA:684:U:H5'	2.19	0.43
1:CA:706:A:O2'	11:CK:31:ILE:CD1	2.66	0.43
1:CA:1014:A:C2	19:CS:34:TRP:CZ2	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:81:LYS:CG	2:CB:85:LEU:HD22	2.48	0.43
3:CC:182:ILE:HD13	3:CC:203:PHE:HA	2.00	0.43
5:CE:96:MET:CE	5:CE:111:MET:CE	2.95	0.43
6:CF:70:VAL:HG23	6:CF:71:ILE:HD12	1.99	0.43
8:CH:74:SER:O	8:CH:130:ALA:N	2.50	0.43
12:CL:43:LYS:N	12:CL:89:ASP:O	2.44	0.43
15:CO:27:VAL:O	15:CO:31:LEU:CD1	2.67	0.43
16:CP:5:ARG:O	16:CP:19:VAL:HA	2.19	0.43
17:CQ:14:SER:CB	17:CQ:22:VAL:HG12	2.49	0.43
17:CQ:75:LEU:CD1	17:CQ:75:LEU:C	2.87	0.43
22:DA:40:U:C4	22:DA:41:C:N4	2.86	0.43
22:DA:301:G:H5'	22:DA:334:C:O2	2.18	0.43
22:DA:672:C:C2	22:DA:809:G:N2	2.86	0.43
22:DA:772:C:H2'	22:DA:773:U:O4'	2.18	0.43
22:DA:892:A:H3'	22:DA:892:A:N3	2.34	0.43
22:DA:972:A:C6	22:DA:973:A:C6	3.06	0.43
22:DA:1045:C:H4'	22:DA:1046:A:H5'	2.00	0.43
22:DA:1120:G:C6	22:DA:1121:C:N4	2.86	0.43
22:DA:1287:A:H2'	22:DA:1288:G:H5'	2.01	0.43
22:DA:1378:A:C4'	22:DA:1379:U:OP1	2.66	0.43
22:DA:1567:G:H2'	24:DC:85:PRO:HG3	2.00	0.43
22:DA:1829:A:OP2	22:DA:1829:A:O4'	2.36	0.43
22:DA:2112:G:H5'	22:DA:2113:U:OP2	2.19	0.43
22:DA:2167:U:O2	22:DA:2170:A:OP2	2.37	0.43
22:DA:2333:A:N7	22:DA:2335:A:C4	2.86	0.43
22:DA:2489:U:HO2'	22:DA:2491:U:H5	1.64	0.43
22:DA:2756:U:H4'	22:DA:2757:A:OP1	2.19	0.43
24:DC:2:ALA:N	24:DC:199:GLU:OE1	2.51	0.43
25:DD:186:LEU:CD1	37:DP:8:LEU:CD1	2.97	0.43
26:DE:22:ASP:OD2	26:DE:22:ASP:N	2.51	0.43
27:DF:12:VAL:O	27:DF:12:VAL:HG12	2.19	0.43
27:DF:114:PHE:O	27:DF:114:PHE:CG	2.71	0.43
30:DI:15:ALA:HB3	30:DI:52:GLY:N	2.32	0.43
32:DK:23:LYS:HB3	32:DK:40:LYS:HB3	1.99	0.43
33:DL:29:LYS:O	33:DL:29:LYS:CG	2.66	0.43
41:DT:8:LEU:CD2	41:DT:50:LEU:HD21	2.47	0.43
41:DT:61:LEU:HD12	41:DT:61:LEU:C	2.38	0.43
1:AA:219:U:H2'	1:AA:220:G:C8	2.53	0.43
1:AA:404:G:N7	4:AD:2:ALA:HB3	2.32	0.43
1:AA:557:G:C6	1:AA:558:G:C6	3.07	0.43
1:AA:803:G:C6	1:AA:804:U:C4	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1319:A:C5	1:AA:1323:G:C4	3.07	0.43
2:AB:15:HIS:O	2:AB:16:PHE:O	2.36	0.43
4:AD:107:PHE:CD1	4:AD:145:ILE:CD1	3.02	0.43
7:AG:49:THR:O	7:AG:53:ARG:HB3	2.19	0.43
12:AL:87:VAL:CG2	12:AL:96:HIS:CE1	3.01	0.43
18:AR:25:ASP:C	18:AR:27:ALA:N	2.71	0.43
22:BA:71:A:H5''	22:BA:72:U:H3'	2.01	0.43
22:BA:275:C:H3'	22:BA:276:U:H5''	1.99	0.43
22:BA:612:G:H2'	22:BA:614:A:C8	2.52	0.43
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.18	0.43
22:BA:1922:G:C2	22:BA:1923:U:C1'	3.02	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.48	0.43
22:BA:2495:G:C2'	22:BA:2496:C:H5'	2.49	0.43
22:BA:2620:C:H2'	22:BA:2621:G:O4'	2.18	0.43
25:BD:104:VAL:HG23	25:BD:105:LYS:N	2.33	0.43
26:BE:48:THR:C	26:BE:50:ALA:H	2.22	0.43
27:BF:108:VAL:CG2	27:BF:117:LEU:HD21	2.49	0.43
28:BG:74:SER:HA	28:BG:77:ILE:CG1	2.49	0.43
28:BG:83:PHE:CE2	28:BG:138:LYS:HB2	2.54	0.43
29:BH:9:VAL:O	29:BH:10:ALA:O	2.36	0.43
29:BH:96:THR:O	29:BH:100:ALA:N	2.50	0.43
34:BM:24:THR:HG23	34:BM:24:THR:O	2.18	0.43
37:BP:96:LYS:HB3	37:BP:98:TYR:CE1	2.52	0.43
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.00	0.43
1:CA:211:G:O2'	1:CA:212:G:C4'	2.67	0.43
1:CA:369:G:OP2	1:CA:388:G:N2	2.51	0.43
1:CA:635:A:C5	1:CA:636:U:C5	3.07	0.43
1:CA:800:G:N2	1:CA:801:U:O4	2.51	0.43
1:CA:1319:A:OP2	19:CS:5:LEU:HD21	2.18	0.43
1:CA:1483:A:N1	22:DA:1959:G:O2'	2.43	0.43
2:CB:86:SER:O	2:CB:87:CYS:O	2.36	0.43
3:CC:25:ASN:O	3:CC:29:PHE:HB2	2.19	0.43
3:CC:147:LYS:HB2	3:CC:203:PHE:CD2	2.54	0.43
5:CE:105:ILE:H	5:CE:122:ASN:C	2.22	0.43
6:CF:25:TYR:N	6:CF:25:TYR:CD2	2.84	0.43
13:CM:14:HIS:HB2	13:CM:17:ILE:HD12	1.99	0.43
13:CM:83:LEU:N	13:CM:83:LEU:HD23	2.33	0.43
16:CP:3:THR:HG22	16:CP:4:ILE:N	2.34	0.43
22:DA:39:G:C6	22:DA:40:U:O4	2.72	0.43
22:DA:45:G:O3'	22:DA:46:G:O4'	2.36	0.43
22:DA:49:A:N6	22:DA:177:G:C4	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:64:A:H2'	22:DA:65:U:C6	2.53	0.43
22:DA:380:G:O3'	45:DX:16:ASN:HB2	2.18	0.43
22:DA:607:U:H5	22:DA:619:G:C5	2.37	0.43
22:DA:874:G:C2	22:DA:904:G:C2	3.06	0.43
22:DA:922:C:H2'	22:DA:923:G:C8	2.54	0.43
22:DA:1272:A:C2	22:DA:1618:A:N3	2.86	0.43
22:DA:1364:G:C5	22:DA:1368:G:N1	2.86	0.43
22:DA:1760:C:H3'	22:DA:1761:C:C6	2.53	0.43
22:DA:1791:A:C8	22:DA:1792:G:C8	3.06	0.43
22:DA:1896:G:H2'	22:DA:1897:G:O4'	2.19	0.43
22:DA:1965:C:H3'	22:DA:1966:A:C8	2.54	0.43
22:DA:2038:G:N7	22:DA:2039:U:C5	2.87	0.43
22:DA:2061:G:C5	56:DA:3001:DOL:HC19	2.53	0.43
22:DA:2092:U:H4'	22:DA:2093:G:H5''	2.00	0.43
22:DA:2283:C:N4	22:DA:2389:G:C5	2.86	0.43
22:DA:2515:C:O2'	22:DA:2516:A:H5'	2.19	0.43
22:DA:2641:G:H5''	31:DJ:78:THR:HB	2.01	0.43
22:DA:2676:C:O2	22:DA:2732:G:N2	2.51	0.43
22:DA:2684:U:C4'	32:DK:70:ARG:NH1	2.81	0.43
30:DI:67:PHE:N	30:DI:67:PHE:CD2	2.86	0.43
38:DQ:25:TYR:CD2	38:DQ:25:TYR:C	2.92	0.43
41:DT:48:GLN:HB2	41:DT:49:LYS:CE	2.49	0.43
50:D2:6:GLN:OE1	50:D2:6:GLN:HA	2.18	0.43
52:D4:7:VAL:HG13	52:D4:38:GLY:CA	2.49	0.43
1:AA:242:G:C2	1:AA:245:U:C4	3.07	0.43
1:AA:244:U:O4	1:AA:906:A:H1'	2.18	0.43
1:AA:590:U:N3	1:AA:591:U:C4	2.87	0.43
1:AA:730:G:H2'	1:AA:730:G:N3	2.33	0.43
1:AA:810:C:O2	1:AA:810:C:H2'	2.17	0.43
1:AA:840:C:N3	1:AA:846:G:O6	2.52	0.43
1:AA:1108:G:N3	1:AA:1108:G:H2'	2.34	0.43
1:AA:1264:U:O2	1:AA:1272:G:C2	2.71	0.43
10:AJ:28:THR:HG22	10:AJ:86:ALA:HB1	2.01	0.43
11:AK:26:SER:O	11:AK:27:PHE:C	2.57	0.43
14:AN:43:ASN:O	14:AN:45:VAL:N	2.51	0.43
15:AO:46:HIS:C	15:AO:48:LYS:H	2.22	0.43
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.18	0.43
20:AT:33:LYS:O	20:AT:34:LYS:C	2.57	0.43
22:BA:25:U:C2'	22:BA:26:G:H5'	2.49	0.43
22:BA:90:U:C4	22:BA:91:A:C5	3.07	0.43
22:BA:332:A:C2	22:BA:335:C:C5	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:569:U:H1'	22:BA:947:A:O4'	2.18	0.43
22:BA:1081:U:O2	22:BA:1081:U:H2'	2.19	0.43
22:BA:1374:G:H2'	22:BA:1375:U:O4'	2.19	0.43
22:BA:1910:G:N1	22:BA:1921:G:C5	2.87	0.43
22:BA:2311:A:O2'	27:BF:85:ILE:HD11	2.18	0.43
22:BA:2507:C:H5''	22:BA:2573:C:N4	2.33	0.43
24:BC:207:LYS:O	24:BC:210:ALA:HB3	2.19	0.43
25:BD:37:VAL:HG12	25:BD:38:LYS:N	2.33	0.43
27:BF:41:GLY:C	27:BF:43:ALA:H	2.21	0.43
28:BG:2:SER:C	28:BG:4:VAL:N	2.71	0.43
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	2.01	0.43
29:BH:94:ILE:CD1	29:BH:98:ASP:HB3	2.48	0.43
29:BH:103:VAL:O	29:BH:108:VAL:O	2.37	0.43
30:BI:132:THR:O	30:BI:132:THR:HG22	2.18	0.43
31:BJ:7:LYS:O	31:BJ:11:VAL:HG23	2.19	0.43
31:BJ:84:ILE:HG23	31:BJ:84:ILE:O	2.18	0.43
32:BK:109:SER:O	32:BK:110:GLU:C	2.56	0.43
33:BL:81:ASP:HB3	33:BL:100:ILE:CD1	2.49	0.43
34:BM:11:LYS:CE	34:BM:87:GLY:O	2.67	0.43
39:BR:49:ILE:O	39:BR:49:ILE:HG13	2.19	0.43
39:BR:79:ARG:O	39:BR:81:LYS:HG2	2.19	0.43
42:BU:54:GLN:N	42:BU:55:PRO:CD	2.82	0.43
1:CA:51:A:H4'	1:CA:52:C:C5'	2.48	0.43
1:CA:130:A:OP1	17:CQ:65:ARG:HD2	2.18	0.43
1:CA:135:C:C2	16:CP:1:MET:HB2	2.53	0.43
1:CA:161:A:C2	1:CA:162:A:C4	3.07	0.43
1:CA:185:U:H2'	1:CA:186:C:C6	2.54	0.43
1:CA:577:G:C8	1:CA:816:A:N1	2.86	0.43
1:CA:767:A:H2'	1:CA:768:A:O4'	2.19	0.43
1:CA:793:U:O2'	1:CA:1516:G:H1'	2.18	0.43
1:CA:1107:C:C2	1:CA:1108:G:C8	3.06	0.43
1:CA:1125:U:O2'	1:CA:1126:U:H2'	2.18	0.43
1:CA:1323:G:O2'	1:CA:1362:A:N3	2.40	0.43
1:CA:1409:C:N4	1:CA:1410:A:N6	2.67	0.43
3:CC:102:ASN:C	3:CC:103:ILE:HG13	2.38	0.43
4:CD:53:VAL:HG23	4:CD:54:GLN:N	2.34	0.43
5:CE:122:ASN:O	5:CE:123:VAL:O	2.36	0.43
8:CH:6:PRO:O	8:CH:9:ASP:HB3	2.18	0.43
12:CL:29:GLN:HB2	12:CL:82:ILE:O	2.17	0.43
14:CN:17:ALA:HA	14:CN:55:SER:O	2.19	0.43
21:CU:18:ARG:O	21:CU:19:PHE:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:38:A:C2	22:DA:442:G:C6	3.07	0.43
22:DA:55:G:C2	22:DA:116:C:C2	3.06	0.43
22:DA:193:U:C4	22:DA:194:G:N7	2.87	0.43
22:DA:200:U:C5	22:DA:201:C:C4	3.06	0.43
22:DA:216:A:OP2	22:DA:429:A:OP1	2.37	0.43
22:DA:480:A:O3'	42:DU:44:LYS:HG3	2.19	0.43
22:DA:553:G:H2'	22:DA:554:U:O4'	2.19	0.43
22:DA:563:A:C2	22:DA:2018:G:H1'	2.53	0.43
22:DA:614:A:H2'	22:DA:614:A:OP2	2.19	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.43
22:DA:696:G:C6	22:DA:767:U:C2	3.07	0.43
22:DA:771:G:N3	22:DA:771:G:H2'	2.33	0.43
22:DA:982:C:H5''	22:DA:983:A:OP1	2.18	0.43
22:DA:1178:C:C2	22:DA:1179:G:N7	2.87	0.43
22:DA:1219:U:H2'	22:DA:1220:G:C8	2.54	0.43
22:DA:1267:U:N3	22:DA:2013:A:N7	2.65	0.43
22:DA:1324:G:C1'	22:DA:1616:A:N6	2.81	0.43
22:DA:1403:A:H2'	22:DA:1404:C:C6	2.54	0.43
22:DA:1422:G:N2	22:DA:1577:C:H1'	2.33	0.43
22:DA:1445:G:C2	22:DA:1446:C:C2	3.07	0.43
22:DA:1677:A:N6	22:DA:1678:A:C2	2.87	0.43
22:DA:1749:A:C2	22:DA:1750:G:C4	3.07	0.43
22:DA:1789:A:H5''	24:DC:219:THR:O	2.19	0.43
22:DA:2104:C:C2	22:DA:2186:G:N2	2.86	0.43
22:DA:2114:A:C2	22:DA:2115:G:H1'	2.54	0.43
22:DA:2333:A:OP2	44:DW:77:ARG:NH2	2.42	0.43
22:DA:2415:G:C6	22:DA:2416:C:N4	2.87	0.43
22:DA:2643:G:C2'	22:DA:2644:G:H5'	2.49	0.43
22:DA:2756:U:N3	22:DA:2759:G:O6	2.52	0.43
23:DB:52:A:C4	36:DO:33:ARG:NH2	2.86	0.43
24:DC:124:ILE:CD1	24:DC:136:PRO:HD3	2.48	0.43
25:DD:33:ARG:HA	25:DD:95:SER:HA	2.01	0.43
27:DF:44:ILE:CG2	27:DF:79:ILE:HG22	2.49	0.43
32:DK:91:SER:O	32:DK:92:GLU:C	2.56	0.43
32:DK:92:GLU:O	32:DK:93:GLN:HB2	2.18	0.43
38:DQ:90:ILE:CG2	38:DQ:94:ILE:CG2	2.97	0.43
1:AA:29:U:O2'	1:AA:30:U:H5'	2.18	0.43
1:AA:112:G:C2	1:AA:113:G:C8	3.07	0.43
1:AA:670:G:H2'	1:AA:671:G:O5'	2.18	0.43
1:AA:903:G:H2'	1:AA:904:U:H6	1.83	0.43
1:AA:1130:A:C4	1:AA:1146:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1145:A:O2'	1:AA:1146:A:P	2.77	0.43
3:AC:72:ARG:N	3:AC:73:PRO:HD3	2.32	0.43
6:AF:51:ILE:O	6:AF:52:ASN:HB2	2.19	0.43
9:AI:49:ARG:C	9:AI:51:PRO:HD2	2.39	0.43
9:AI:52:LEU:HB3	9:AI:57:MET:HG3	2.00	0.43
10:AJ:56:HIS:C	10:AJ:57:VAL:CG1	2.87	0.43
11:AK:38:GLN:O	11:AK:38:GLN:HG2	2.19	0.43
20:AT:4:ILE:HA	20:AT:8:LYS:HD3	2.00	0.43
22:BA:404:A:H1'	22:BA:405:U:OP2	2.18	0.43
22:BA:1082:U:H5'	30:BI:119:GLY:N	2.34	0.43
22:BA:1142:A:C2	22:BA:1144:A:O4'	2.72	0.43
22:BA:1439:A:C2	22:BA:1553:A:C4	3.06	0.43
22:BA:1464:G:C6	22:BA:1465:G:C6	3.06	0.43
22:BA:1734:G:H2'	22:BA:1735:A:O4'	2.19	0.43
22:BA:1916:A:H2'	22:BA:1917:U:C4'	2.49	0.43
22:BA:2196:C:C2'	22:BA:2197:U:H5'	2.48	0.43
22:BA:2244:U:H2'	22:BA:2245:U:O4'	2.18	0.43
34:BM:78:LEU:O	34:BM:80:VAL:HG23	2.19	0.43
37:BP:21:ARG:HB2	37:BP:22:PRO:HD2	2.01	0.43
37:BP:31:TRP:CD2	37:BP:40:LEU:HD12	2.53	0.43
53:B5:76:LEU:O	53:B5:76:LEU:HD13	2.18	0.43
1:CA:60:A:H4'	1:CA:61:G:O5'	2.19	0.43
1:CA:923:A:H2'	1:CA:924:C:O4'	2.19	0.43
1:CA:957:U:H4'	19:CS:79:THR:O	2.18	0.43
1:CA:971:G:N2	1:CA:1363:A:C8	2.87	0.43
1:CA:1197:A:C2'	1:CA:1198:G:H5'	2.48	0.43
1:CA:1361:G:C3'	1:CA:1362:A:H5''	2.48	0.43
2:CB:18:HIS:O	2:CB:19:GLN:CB	2.67	0.43
3:CC:36:ASP:OD2	3:CC:57:ILE:HG12	2.19	0.43
6:CF:70:VAL:HG23	6:CF:71:ILE:CD1	2.49	0.43
8:CH:88:ARG:O	8:CH:92:LEU:HD12	2.18	0.43
14:CN:46:LEU:HG	14:CN:46:LEU:O	2.18	0.43
22:DA:116:C:C4	22:DA:117:G:N7	2.86	0.43
22:DA:153:U:H2'	22:DA:154:U:C6	2.53	0.43
22:DA:377:G:O6	22:DA:378:C:N4	2.51	0.43
22:DA:828:U:H2'	22:DA:829:A:C8	2.53	0.43
22:DA:1060:U:OP2	30:DI:75:PRO:HA	2.18	0.43
22:DA:1063:G:C4'	30:DI:77:ALA:HB1	2.49	0.43
22:DA:1241:A:N3	22:DA:1241:A:H2'	2.32	0.43
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.53	0.43
22:DA:1272:A:N3	22:DA:1618:A:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1544:A:N6	22:DA:1545:A:C6	2.86	0.43
22:DA:1616:A:H2	22:DA:1647:U:C5	2.37	0.43
22:DA:1874:C:C5'	22:DA:1875:G:OP2	2.67	0.43
22:DA:2326:C:C1'	22:DA:2327:A:OP1	2.67	0.43
22:DA:2598:A:OP1	24:DC:234:GLY:O	2.36	0.43
23:DB:31:C:O2'	23:DB:53:A:N1	2.48	0.43
25:DD:193:VAL:HB	25:DD:194:PRO:CD	2.49	0.43
26:DE:15:SER:OG	26:DE:197:GLU:OE2	2.32	0.43
26:DE:48:THR:OG1	26:DE:49:ARG:N	2.51	0.43
31:DJ:15:TRP:CD2	31:DJ:53:TYR:HB2	2.54	0.43
31:DJ:57:LEU:O	31:DJ:58:ASN:HB2	2.18	0.43
1:AA:474:G:C6	1:AA:475:C:C5	3.06	0.43
1:AA:567:G:C2	1:AA:568:G:H1'	2.54	0.43
1:AA:597:G:N7	1:AA:598:U:C5	2.86	0.43
1:AA:751:U:C4	1:AA:752:G:C6	3.06	0.43
1:AA:914:A:C4	1:AA:915:A:C8	3.07	0.43
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.19	0.43
3:AC:22:TRP:CD1	3:AC:59:ARG:CD	3.02	0.43
3:AC:167:TRP:C	3:AC:167:TRP:CE3	2.92	0.43
4:AD:27:ALA:O	4:AD:28:ILE:C	2.57	0.43
4:AD:78:GLU:CG	4:AD:93:LEU:HD21	2.48	0.43
4:AD:78:GLU:O	4:AD:79:ALA:C	2.57	0.43
5:AE:72:ILE:CD1	5:AE:145:GLU:OE2	2.67	0.43
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	2.01	0.43
8:AH:7:ILE:O	8:AH:11:LEU:HG	2.18	0.43
12:AL:63:VAL:HG21	12:AL:95:TYR:CE2	2.54	0.43
19:AS:65:GLU:OE2	19:AS:66:MET:N	2.52	0.43
20:AT:51:PHE:HA	20:AT:54:MET:HG2	2.00	0.43
22:BA:118:A:C8	22:BA:119:A:C8	3.06	0.43
22:BA:242:G:N7	51:B3:5:LYS:HG2	2.34	0.43
22:BA:282:A:H2'	22:BA:283:G:C8	2.54	0.43
22:BA:483:A:H1'	42:BU:58:ILE:CD1	2.49	0.43
22:BA:572:A:P	58:BA:3569:HOH:O	2.77	0.43
22:BA:580:U:O3'	38:BQ:31:VAL:HG13	2.18	0.43
22:BA:735:A:H3'	22:BA:736:C:C6	2.54	0.43
22:BA:753:A:H2'	22:BA:754:U:C6	2.54	0.43
22:BA:971:G:OP2	22:BA:974:G:N2	2.52	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.01	0.43
22:BA:1607:C:N4	22:BA:1622:G:C5	2.86	0.43
22:BA:1916:A:O3'	22:BA:1917:U:H4'	2.18	0.43
22:BA:1937:A:C2	22:BA:1939:U:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2116:G:C6	22:BA:2171:A:N6	2.87	0.43
22:BA:2190:G:C4	22:BA:2191:A:C8	3.07	0.43
22:BA:2356:U:O3'	44:BW:20:ARG:HD3	2.18	0.43
22:BA:2435:A:C2'	22:BA:2436:G:O5'	2.67	0.43
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.53	0.43
22:BA:2820:A:N1	25:BD:197:THR:CG2	2.81	0.43
26:BE:1:MET:N	26:BE:14:VAL:O	2.50	0.43
41:BT:28:ASN:HD21	41:BT:91:GLN:HB2	1.84	0.43
42:BU:12:ILE:HG13	42:BU:22:ARG:HG3	2.00	0.43
53:B5:50:ILE:CB	53:B5:52:PRO:HD3	2.48	0.43
1:CA:21:G:H2'	1:CA:22:G:C8	2.54	0.43
1:CA:32:A:N1	1:CA:33:A:C6	2.87	0.43
1:CA:91:U:C4	1:CA:92:U:C4	3.07	0.43
1:CA:461:A:H2'	1:CA:462:G:O4'	2.19	0.43
1:CA:582:C:C4	1:CA:760:G:C6	3.07	0.43
1:CA:741:G:C6	1:CA:742:G:C5	3.07	0.43
1:CA:824:G:H1'	8:CH:2:SER:CA	2.49	0.43
1:CA:1137:C:H1'	1:CA:1138:G:N2	2.33	0.43
1:CA:1203:C:H4'	14:CN:67:THR:HG22	2.00	0.43
1:CA:1314:C:OP2	19:CS:6:LYS:HG2	2.19	0.43
3:CC:9:GLY:HA3	14:CN:89:MET:SD	2.59	0.43
3:CC:156:ARG:NH1	3:CC:159:GLY:O	2.52	0.43
5:CE:109:GLY:O	5:CE:110:ALA:CB	2.67	0.43
5:CE:156:LYS:HD3	8:CH:71:VAL:HG13	2.01	0.43
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.33	0.43
12:CL:16:VAL:HG23	12:CL:16:VAL:O	2.19	0.43
12:CL:80:ILE:HD12	12:CL:97:THR:HG21	2.01	0.43
19:CS:53:ASN:OD1	19:CS:55:ARG:HG2	2.19	0.43
22:DA:245:G:O6	51:D3:8:ARG:HD2	2.19	0.43
22:DA:288:U:H2'	22:DA:289:G:C8	2.54	0.43
22:DA:349:U:O2'	22:DA:350:G:H5'	2.18	0.43
22:DA:599:A:H1'	22:DA:659:G:N2	2.34	0.43
22:DA:1109:C:C5	22:DA:1110:G:O6	2.72	0.43
22:DA:1179:G:H2'	22:DA:1180:U:H4'	2.00	0.43
22:DA:1249:U:H4'	38:DQ:4:VAL:HB	2.00	0.43
22:DA:1464:G:C4	22:DA:1465:G:C8	3.06	0.43
22:DA:1502:A:C2	22:DA:1503:A:C4	3.07	0.43
22:DA:1663:G:H3'	58:DA:3423:HOH:O	2.17	0.43
22:DA:1715:G:O2'	22:DA:1716:U:OP2	2.36	0.43
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.54	0.43
22:DA:1874:C:N4	22:DA:1875:G:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2156:G:C6	22:DA:2157:G:N2	2.87	0.43
22:DA:2819:G:N3	22:DA:2828:G:C2	2.86	0.43
22:DA:2849:U:C3'	22:DA:2850:A:H5'	2.49	0.43
24:DC:17:VAL:N	24:DC:204:VAL:HG22	2.34	0.43
24:DC:75:PRO:HB2	24:DC:97:LYS:CG	2.49	0.43
24:DC:251:GLN:CG	24:DC:255:LYS:HB2	2.49	0.43
25:DD:106:LYS:HA	25:DD:175:LEU:O	2.19	0.43
27:DF:16:LEU:HD11	27:DF:169:LEU:HD13	2.01	0.43
27:DF:31:VAL:O	27:DF:31:VAL:HG13	2.19	0.43
29:DH:62:LEU:HD13	29:DH:63:ALA:N	2.34	0.43
29:DH:82:SER:O	29:DH:83:LYS:C	2.57	0.43
30:DI:80:LEU:HA	30:DI:84:ALA:HB3	2.01	0.43
31:DJ:38:GLY:O	31:DJ:44:TYR:HB2	2.18	0.43
31:DJ:114:LEU:O	31:DJ:118:MET:HG2	2.18	0.43
33:DL:82:LEU:HA	33:DL:85:VAL:HG13	1.99	0.43
38:DQ:76:TYR:CE1	38:DQ:80:ILE:HD11	2.54	0.43
39:DR:67:GLY:C	39:DR:93:PHE:CE2	2.92	0.43
42:DU:46:GLN:HG2	42:DU:47:LYS:N	2.34	0.43
45:DX:30:LEU:HB3	45:DX:31:PRO:CD	2.49	0.43
1:AA:188:C:N3	1:AA:189:A:C2	2.86	0.43
1:AA:209:U:C4'	1:AA:210:C:OP2	2.64	0.43
1:AA:258:G:C5	1:AA:259:G:C8	3.06	0.43
1:AA:1367:C:C4	1:AA:1368:A:N7	2.87	0.43
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.18	0.43
2:AB:47:VAL:C	2:AB:49:MET:N	2.71	0.43
4:AD:150:LYS:O	4:AD:152:GLN:NE2	2.51	0.43
10:AJ:40:ILE:HB	10:AJ:73:LEU:HB2	2.00	0.43
13:AM:66:GLU:O	13:AM:69:LEU:N	2.51	0.43
13:AM:83:LEU:HD21	19:AS:65:GLU:HG2	1.99	0.43
22:BA:460:A:H2'	22:BA:461:C:O4'	2.18	0.43
22:BA:818:G:H5'	22:BA:839:U:OP1	2.19	0.43
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.19	0.43
22:BA:1442:U:H2'	22:BA:1443:U:H6	1.84	0.43
22:BA:1535:A:H5'	22:BA:1536:C:C5	2.54	0.43
22:BA:1637:A:H4'	22:BA:2711:A:O2'	2.19	0.43
22:BA:1675:C:N3	25:BD:133:THR:HG21	2.34	0.43
22:BA:2029:G:N1	22:BA:2033:A:OP2	2.36	0.43
29:BH:45:GLU:HA	29:BH:48:GLU:HB2	2.01	0.43
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	2.01	0.43
37:BP:31:TRP:CE2	37:BP:40:LEU:HD12	2.54	0.43
41:BT:29:THR:OG1	41:BT:86:THR:CG2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BT:57:VAL:HG22	41:BT:58:VAL:N	2.34	0.43
53:B5:218:THR:O	53:B5:219:MET:CB	2.65	0.43
1:CA:94:G:H4'	1:CA:95:C:C5	2.54	0.43
1:CA:378:G:N2	1:CA:386:C:O2	2.51	0.43
1:CA:552:U:H4'	12:CL:83:ARG:HG3	2.00	0.43
1:CA:786:G:N2	1:CA:787:A:H1'	2.34	0.43
1:CA:959:A:O3'	1:CA:960:U:H4'	2.19	0.43
1:CA:1105:A:C2	1:CA:1106:G:C5	3.07	0.43
1:CA:1160:G:O6	1:CA:1181:G:C5	2.72	0.43
1:CA:1386:G:H2'	1:CA:1387:G:H8	1.84	0.43
5:CE:56:VAL:N	5:CE:57:PRO:CD	2.81	0.43
8:CH:59:LEU:HD12	8:CH:60:GLU:N	2.34	0.43
10:CJ:80:THR:O	10:CJ:84:VAL:HG12	2.19	0.43
12:CL:14:ARG:NH1	12:CL:15:LYS:HG3	2.34	0.43
14:CN:46:LEU:HD23	19:CS:10:PHE:HB2	2.01	0.43
16:CP:37:GLY:HA2	16:CP:51:ARG:NH1	2.34	0.43
22:DA:46:G:N1	22:DA:47:C:C4	2.87	0.43
22:DA:110:G:N2	22:DA:111:A:H1'	2.34	0.43
22:DA:155:A:H2'	22:DA:156:A:C8	2.53	0.43
22:DA:167:A:H2'	22:DA:168:G:O4'	2.19	0.43
22:DA:372:G:P	45:DX:62:LYS:NZ	2.92	0.43
22:DA:415:A:N1	22:DA:2409:G:C6	2.87	0.43
22:DA:571:U:H1'	22:DA:573:U:C6	2.54	0.43
22:DA:668:A:C4	22:DA:670:A:N7	2.87	0.43
22:DA:668:A:H3'	22:DA:669:G:H5''	2.00	0.43
22:DA:784:G:H5''	24:DC:226:ASN:OD1	2.18	0.43
22:DA:845:A:C6	22:DA:847:U:C6	3.07	0.43
22:DA:950:G:H2'	22:DA:951:C:O4'	2.19	0.43
22:DA:1056:G:N1	22:DA:1102:C:OP2	2.48	0.43
22:DA:1062:G:C2	22:DA:1063:G:N1	2.87	0.43
22:DA:1239:G:H2'	22:DA:1240:U:O4'	2.18	0.43
22:DA:1383:A:C2	22:DA:1384:A:C5	3.07	0.43
22:DA:1677:A:N6	22:DA:1678:A:N1	2.67	0.43
22:DA:1833:C:C4	22:DA:1834:U:C4	3.07	0.43
22:DA:2103:C:H2'	22:DA:2104:C:C5	2.54	0.43
22:DA:2115:G:H2'	22:DA:2117:A:N7	2.34	0.43
22:DA:2201:G:H2'	22:DA:2202:U:C6	2.54	0.43
22:DA:2253:G:C5	22:DA:2254:C:C5	3.06	0.43
22:DA:2345:G:C4	22:DA:2381:A:C2	3.06	0.43
22:DA:2478:A:C8	22:DA:2529:G:C6	3.06	0.43
22:DA:2478:A:N7	22:DA:2529:G:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2720:U:C5	22:DA:2872:A:N1	2.87	0.43
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.49	0.43
24:DC:187:ASP:O	24:DC:188:CYS:C	2.57	0.43
25:DD:167:ASN:O	25:DD:168:GLU:HB3	2.18	0.43
31:DJ:94:ALA:O	31:DJ:95:ARG:C	2.57	0.43
32:DK:113:MET:HA	32:DK:116:ILE:HG12	2.01	0.43
36:DO:11:ALA:O	36:DO:13:ARG:N	2.52	0.43
37:DP:79:PRO:O	37:DP:80:VAL:C	2.57	0.43
37:DP:100:LEU:HD22	37:DP:108:ALA:HB1	2.00	0.43
42:DU:71:ALA:HB3	42:DU:80:ALA:HB1	1.99	0.43
46:DY:20:ASN:HB3	46:DY:50:VAL:CG2	2.49	0.43
1:AA:65:A:C4	1:AA:381:C:C5	3.06	0.43
1:AA:104:G:N2	1:AA:105:G:C4	2.87	0.43
1:AA:259:G:C2	1:AA:268:U:O2	2.71	0.43
1:AA:625:U:H5''	16:AP:16:PHE:CD1	2.53	0.43
1:AA:1160:G:O6	1:AA:1181:G:C5	2.71	0.43
1:AA:1178:G:C8	9:AI:99:ARG:NH2	2.87	0.43
1:AA:1296:C:H4'	1:AA:1302:C:N4	2.34	0.43
2:AB:23:TRP:CZ3	2:AB:25:PRO:HA	2.54	0.43
4:AD:13:ARG:HD2	4:AD:34:ILE:HA	2.01	0.43
12:AL:57:LEU:O	12:AL:59:ASN:N	2.52	0.43
15:AO:87:LEU:N	15:AO:87:LEU:CD2	2.82	0.43
16:AP:67:ILE:HG23	16:AP:71:VAL:CG1	2.49	0.43
18:AR:67:LEU:O	18:AR:68:LEU:HG	2.19	0.43
20:AT:58:VAL:O	20:AT:59:ASP:C	2.58	0.43
22:BA:27:G:N2	22:BA:512:G:H1'	2.34	0.43
22:BA:319:G:C4	22:BA:333:G:N2	2.86	0.43
22:BA:1062:G:OP1	22:BA:1070:A:H4'	2.19	0.43
22:BA:1736:U:N3	22:BA:1737:G:C4	2.87	0.43
22:BA:1980:G:C4	22:BA:1982:U:C4	3.07	0.43
27:BF:146:VAL:HG23	27:BF:146:VAL:O	2.19	0.43
30:BI:28:LEU:HG	30:BI:35:ILE:HD12	2.00	0.43
32:BK:92:GLU:HG3	32:BK:111:LYS:NZ	2.33	0.43
34:BM:42:THR:O	34:BM:45:GLN:HB2	2.18	0.43
36:BO:28:VAL:HG11	36:BO:92:PHE:CZ	2.54	0.43
38:BQ:86:ALA:O	38:BQ:87:SER:CB	2.66	0.43
39:BR:49:ILE:HB	39:BR:52:PRO:O	2.19	0.43
40:BS:28:LYS:O	40:BS:30:SER:N	2.51	0.43
41:BT:69:ARG:HB3	41:BT:74:ILE:HG22	2.01	0.43
49:B1:6:ARG:HD3	49:B1:24:THR:OG1	2.19	0.43
53:B5:59:VAL:HG23	53:B5:167:ASP:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:40:C:H2'	1:CA:41:G:O4'	2.18	0.43
1:CA:451:A:H4'	1:CA:452:A:O4'	2.19	0.43
1:CA:560:A:N7	1:CA:566:G:C4	2.87	0.43
1:CA:706:A:H4'	11:CK:31:ILE:HD11	2.01	0.43
1:CA:755:G:C2	1:CA:756:C:C6	3.07	0.43
1:CA:783:C:C2	1:CA:784:A:C8	3.07	0.43
1:CA:847:G:C2	1:CA:848:C:C2	3.07	0.43
1:CA:1362:A:OP1	1:CA:1362:A:H4'	2.17	0.43
2:CB:21:ARG:O	2:CB:22:TYR:C	2.57	0.43
2:CB:140:GLU:O	2:CB:141:LEU:C	2.57	0.43
7:CG:12:ILE:HD12	7:CG:24:ALA:C	2.39	0.43
7:CG:40:GLU:O	7:CG:44:TYR:CD2	2.72	0.43
8:CH:51:VAL:O	8:CH:51:VAL:HG22	2.19	0.43
10:CJ:33:GLY:HA3	10:CJ:83:THR:HB	2.00	0.43
12:CL:87:VAL:HG11	12:CL:90:LEU:HD23	2.00	0.43
12:CL:111:LYS:O	12:CL:114:ARG:HG3	2.19	0.43
13:CM:40:ALA:O	13:CM:41:GLU:C	2.58	0.43
14:CN:31:ILE:HG22	14:CN:32:SER:N	2.34	0.43
22:DA:447:A:H5'	22:DA:449:A:C5	2.53	0.43
22:DA:483:A:H4'	42:DU:47:LYS:HA	2.00	0.43
22:DA:546:U:O2	22:DA:546:U:C2'	2.67	0.43
22:DA:609:A:H2'	22:DA:610:C:O4'	2.19	0.43
22:DA:629:G:O4'	22:DA:638:G:N2	2.52	0.43
22:DA:687:C:C2	22:DA:788:A:H5'	2.54	0.43
22:DA:704:G:H1'	22:DA:726:G:N2	2.34	0.43
22:DA:776:G:C8	22:DA:793:A:C2	3.07	0.43
22:DA:980:A:N6	22:DA:981:A:N1	2.67	0.43
22:DA:1431:A:C6	22:DA:1432:G:C5	3.07	0.43
22:DA:1537:G:H3'	22:DA:1537:G:N3	2.34	0.43
22:DA:2067:G:C4	22:DA:2444:G:N2	2.87	0.43
22:DA:2199:A:C1'	29:DH:28:ASN:ND2	2.81	0.43
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.53	0.43
22:DA:2756:U:H1'	22:DA:2757:A:H5''	2.01	0.43
22:DA:2803:G:C2	22:DA:2804:U:C4	3.07	0.43
23:DB:40:U:C2	23:DB:44:G:OP2	2.70	0.43
24:DC:129:THR:CG2	24:DC:130:LEU:N	2.82	0.43
27:DF:9:LYS:O	27:DF:13:VAL:HG23	2.19	0.43
27:DF:110:ARG:CZ	27:DF:110:ARG:HB3	2.49	0.43
27:DF:169:LEU:HG	27:DF:169:LEU:O	2.18	0.43
30:DI:59:ILE:CG2	30:DI:60:THR:N	2.81	0.43
31:DJ:17:VAL:HG22	31:DJ:55:ILE:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:99:ILE:CG2	32:DK:119:ALA:HB2	2.49	0.43
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	2.01	0.43
34:DM:62:LYS:HD3	34:DM:64:TRP:CZ2	2.54	0.43
37:DP:60:THR:HA	37:DP:73:VAL:HA	2.01	0.43
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.19	0.43
41:DT:38:ALA:O	41:DT:39:THR:HB	2.18	0.43
1:AA:33:A:H2'	1:AA:34:C:C6	2.54	0.42
1:AA:408:A:C2	1:AA:435:A:C2	3.07	0.42
1:AA:457:G:C6	1:AA:458:U:C2	3.07	0.42
1:AA:580:C:H2'	1:AA:581:G:O4'	2.19	0.42
1:AA:776:G:HO2'	1:AA:777:A:H8	1.64	0.42
1:AA:827:U:H2'	1:AA:870:U:O4	2.19	0.42
1:AA:832:G:C2	1:AA:833:G:C8	3.06	0.42
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.42
1:AA:1202:U:C4	1:AA:1203:C:C5	3.08	0.42
1:AA:1368:A:OP2	9:AI:114:LYS:HD2	2.19	0.42
1:AA:1370:G:C5'	9:AI:111:VAL:HG21	2.49	0.42
1:AA:1392:G:C5	1:AA:1393:U:C5	3.07	0.42
1:AA:1419:G:C6	1:AA:1420:U:C4	3.07	0.42
2:AB:68:LEU:HD12	2:AB:154:MET:HE1	2.01	0.42
2:AB:131:LYS:HA	2:AB:131:LYS:HE2	2.01	0.42
4:AD:190:ASP:O	4:AD:191:LEU:O	2.37	0.42
7:AG:46:ALA:CB	7:AG:120:LEU:HD12	2.49	0.42
13:AM:15:ALA:O	13:AM:16:VAL:C	2.56	0.42
17:AQ:8:LEU:N	17:AQ:8:LEU:CD1	2.82	0.42
19:AS:37:ARG:O	19:AS:70:LYS:HD2	2.19	0.42
19:AS:40:ILE:CG1	19:AS:71:LEU:HD22	2.49	0.42
21:AU:12:PHE:CD1	21:AU:16:LEU:CD1	3.02	0.42
22:BA:123:G:H2'	22:BA:124:G:O4'	2.18	0.42
22:BA:973:A:H5'	22:BA:1188:U:C1'	2.48	0.42
22:BA:999:U:C5	22:BA:1154:G:C5	3.07	0.42
22:BA:1313:U:H2'	22:BA:1610:A:C2	2.55	0.42
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.34	0.42
22:BA:1925:C:C4'	22:BA:1926:U:OP1	2.66	0.42
22:BA:2166:U:O4	22:BA:2170:A:N7	2.52	0.42
22:BA:2275:C:O2	34:BM:84:LYS:CD	2.67	0.42
22:BA:2452:C:C4	22:BA:2453:A:C6	3.07	0.42
22:BA:2576:G:O2'	22:BA:2579:C:OP2	2.23	0.42
22:BA:2615:U:H2'	22:BA:2616:C:H5'	2.01	0.42
24:BC:257:THR:O	24:BC:258:ARG:C	2.56	0.42
27:BF:5:HIS:O	27:BF:8:TYR:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BF:55:ALA:HA	27:BF:58:ALA:HB3	2.00	0.42
28:BG:168:VAL:O	28:BG:168:VAL:HG13	2.19	0.42
29:BH:79:THR:CG2	29:BH:147:VAL:CG2	2.97	0.42
29:BH:97:ARG:NH1	1:CA:370:C:O4'	2.52	0.42
37:BP:93:ARG:O	37:BP:94:LYS:HB2	2.18	0.42
42:BU:7:ARG:O	42:BU:8:ASP:O	2.37	0.42
45:BX:7:VAL:HG23	45:BX:51:VAL:HG12	2.00	0.42
1:CA:75:G:N2	1:CA:96:U:H1'	2.34	0.42
2:CB:146:ASN:OD1	2:CB:147:SER:N	2.51	0.42
4:CD:119:SER:O	4:CD:131:ASN:OD1	2.36	0.42
6:CF:66:ALA:HB3	6:CF:71:ILE:HD11	2.00	0.42
11:CK:118:HIS:O	11:CK:119:ASN:HB2	2.19	0.42
22:DA:14:A:H5''	22:DA:15:G:OP2	2.18	0.42
22:DA:389:G:C2	22:DA:2413:G:H1'	2.54	0.42
22:DA:578:G:C5	22:DA:2018:G:H5'	2.54	0.42
22:DA:579:G:C2	22:DA:1262:A:C5	3.06	0.42
22:DA:847:U:O4	22:DA:932:U:C4	2.72	0.42
22:DA:1109:C:H3'	22:DA:1110:G:C8	2.54	0.42
22:DA:1384:A:O4'	22:DA:1405:U:O4'	2.35	0.42
22:DA:1415:U:O2'	22:DA:1416:G:H4'	2.18	0.42
22:DA:1434:A:H2'	22:DA:1435:G:C8	2.54	0.42
22:DA:1453:A:C2	35:DN:77:ALA:HB2	2.54	0.42
22:DA:1975:G:N2	22:DA:1976:U:H1'	2.34	0.42
22:DA:2235:G:C2	22:DA:2236:U:C2	3.07	0.42
22:DA:2297:A:C8	22:DA:2320:U:C4	3.06	0.42
22:DA:2840:C:H5''	35:DN:53:THR:OG1	2.19	0.42
24:DC:3:VAL:HG11	24:DC:202:LEU:HD23	2.00	0.42
28:DG:121:ILE:HD12	28:DG:141:ILE:HG22	2.00	0.42
30:DI:10:LYS:HB2	30:DI:56:PRO:HB2	2.01	0.42
32:DK:21:CYS:HA	32:DK:41:ILE:HG22	2.01	0.42
33:DL:29:LYS:O	33:DL:30:THR:HG23	2.19	0.42
47:DZ:3:LYS:O	47:DZ:4:THR:HG22	2.19	0.42
1:AA:78:A:C5	1:AA:79:G:H1'	2.55	0.42
1:AA:79:G:N2	1:AA:91:U:O4	2.52	0.42
1:AA:464:U:N3	1:AA:466:A:H5''	2.33	0.42
1:AA:549:C:C2	1:AA:550:G:C8	3.07	0.42
1:AA:1296:C:H4'	1:AA:1302:C:C5	2.54	0.42
1:AA:1452:C:O4'	1:AA:1453:G:N2	2.52	0.42
1:AA:1485:U:O2'	1:AA:1486:G:H5'	2.20	0.42
2:AB:50:PHE:CE2	2:AB:51:ASN:OD1	2.73	0.42
2:AB:83:ALA:O	2:AB:87:CYS:SG	2.77	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:25:ASN:O	3:AC:27:LYS:HG2	2.19	0.42
5:AE:56:VAL:O	5:AE:60:ILE:HG23	2.19	0.42
5:AE:115:LEU:HG	5:AE:120:VAL:HG21	2.01	0.42
9:AI:51:PRO:HG2	9:AI:83:ILE:HD13	2.02	0.42
10:AJ:52:LEU:CB	14:AN:81:ARG:HE	2.32	0.42
11:AK:35:THR:HA	11:AK:42:LEU:HG	2.01	0.42
13:AM:74:SER:O	13:AM:78:LYS:HG3	2.19	0.42
20:AT:35:VAL:CG1	20:AT:79:LEU:HD22	2.49	0.42
22:BA:83:A:C6	22:BA:101:A:C4	3.06	0.42
22:BA:195:A:C4	22:BA:198:C:N4	2.86	0.42
22:BA:419:U:H2'	22:BA:420:C:C6	2.54	0.42
22:BA:451:U:H4'	26:BE:47:LYS:NZ	2.34	0.42
22:BA:468:G:N7	50:B2:39:ARG:NH2	2.65	0.42
22:BA:915:C:C2'	22:BA:916:G:H5'	2.49	0.42
22:BA:996:A:N6	22:BA:1160:G:N1	2.67	0.42
22:BA:1194:A:H2'	22:BA:1195:G:O5'	2.19	0.42
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.19	0.42
22:BA:1635:A:C6	22:BA:1636:U:C2	3.08	0.42
22:BA:2060:A:O4'	22:BA:2502:G:H1'	2.18	0.42
22:BA:2271:G:H2'	22:BA:2272:U:O4'	2.20	0.42
22:BA:2552:U:C2	22:BA:2554:U:C5'	3.03	0.42
24:BC:141:VAL:HG13	24:BC:191:THR:O	2.19	0.42
25:BD:127:PHE:CZ	25:BD:160:LYS:HB2	2.54	0.42
26:BE:152:GLU:OE1	26:BE:152:GLU:HA	2.20	0.42
30:BI:101:ILE:HG22	30:BI:102:SER:N	2.34	0.42
32:BK:66:LYS:HA	32:BK:79:PHE:O	2.19	0.42
33:BL:62:PRO:HG2	51:B3:25:LYS:CD	2.48	0.42
34:BM:65:ILE:HG12	34:BM:103:TYR:CE2	2.54	0.42
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	2.02	0.42
1:CA:102:G:C2	1:CA:103:U:C5	3.07	0.42
1:CA:401:C:O2'	1:CA:402:G:H5'	2.18	0.42
1:CA:590:U:O2'	1:CA:591:U:H5'	2.18	0.42
1:CA:678:U:H2'	1:CA:679:C:O4'	2.20	0.42
1:CA:728:A:C6	1:CA:729:A:C6	3.08	0.42
1:CA:1175:G:O6	1:CA:1182:G:O6	2.37	0.42
1:CA:1424:U:H2'	1:CA:1425:U:O4'	2.17	0.42
1:CA:1426:G:C4	1:CA:1475:G:C2	3.07	0.42
2:CB:87:CYS:HB3	2:CB:222:ARG:HA	2.02	0.42
4:CD:168:PRO:HB2	4:CD:171:LEU:CD1	2.49	0.42
6:CF:38:ARG:CG	6:CF:63:ASN:CB	2.97	0.42
6:CF:45:ARG:HD2	6:CF:59:TYR:CD2	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:42:ILE:HG21	7:CG:116:MET:CG	2.49	0.42
7:CG:148:ASN:C	7:CG:150:ALA:N	2.72	0.42
8:CH:67:GLN:C	8:CH:69:LYS:N	2.72	0.42
10:CJ:17:LEU:HD21	10:CJ:96:VAL:HG22	2.01	0.42
13:CM:64:VAL:O	13:CM:69:LEU:HB2	2.18	0.42
21:CU:9:ASN:C	21:CU:10:GLU:HG3	2.39	0.42
21:CU:20:LYS:C	21:CU:22:SER:H	2.21	0.42
22:DA:268:C:O2'	22:DA:269:C:H5'	2.20	0.42
22:DA:280:U:O4	22:DA:361:G:N2	2.52	0.42
22:DA:905:A:H2'	22:DA:906:U:H5'	2.02	0.42
22:DA:1097:U:O2	30:DI:9:VAL:CG1	2.67	0.42
22:DA:1210:G:C8	22:DA:1212:G:C2	3.08	0.42
22:DA:1332:G:C6	22:DA:1609:A:C5	3.07	0.42
22:DA:1364:G:C4	22:DA:1368:G:N2	2.87	0.42
22:DA:1501:G:H2'	22:DA:1502:A:O4'	2.19	0.42
22:DA:1509:A:O2'	22:DA:1510:G:OP2	2.36	0.42
22:DA:1512:C:N3	22:DA:1513:U:C4	2.87	0.42
22:DA:1595:C:H2'	22:DA:1596:A:O4'	2.20	0.42
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.19	0.42
22:DA:2059:A:H2'	22:DA:2503:A:N1	2.34	0.42
22:DA:2201:G:C6	22:DA:2202:U:C4	3.07	0.42
22:DA:2331:G:N2	22:DA:2385:C:N1	2.68	0.42
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.20	0.42
22:DA:2699:C:O2	22:DA:2709:G:C2	2.72	0.42
22:DA:2740:A:N6	22:DA:2764:A:C8	2.87	0.42
22:DA:2886:A:N1	48:D0:29:SER:OG	2.49	0.42
23:DB:11:C:C5	23:DB:12:C:C5	3.07	0.42
26:DE:130:LYS:CB	26:DE:133:LEU:HB2	2.49	0.42
27:DF:69:LYS:HG3	27:DF:84:PRO:HA	2.00	0.42
27:DF:136:ILE:HA	27:DF:141:ILE:CG2	2.48	0.42
31:DJ:36:LEU:HD23	31:DJ:121:LYS:HB2	2.00	0.42
33:DL:41:ARG:O	33:DL:44:GLY:N	2.50	0.42
33:DL:111:ILE:HG22	33:DL:112:LEU:N	2.34	0.42
33:DL:135:ILE:O	33:DL:140:GLY:HA3	2.19	0.42
34:DM:49:ALA:CB	34:DM:124:LEU:HD21	2.49	0.42
34:DM:78:LEU:O	34:DM:79:ALA:HB3	2.19	0.42
40:DS:25:ARG:CZ	40:DS:25:ARG:HB2	2.49	0.42
41:DT:2:ILE:HG12	41:DT:7:LEU:HD12	1.99	0.42
41:DT:37:ASP:CG	41:DT:38:ALA:N	2.72	0.42
47:DZ:3:LYS:N	47:DZ:3:LYS:HD3	2.34	0.42
1:AA:38:G:C2	1:AA:397:A:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:55:A:C6	1:AA:56:U:C2	3.08	0.42
1:AA:96:U:O2'	1:AA:97:G:P	2.77	0.42
1:AA:457:G:C5	1:AA:458:U:C5	3.07	0.42
1:AA:692:U:O2	1:AA:694:A:C8	2.72	0.42
1:AA:722:G:H2'	1:AA:723:U:OP2	2.20	0.42
1:AA:1134:G:H2'	1:AA:1135:U:O4'	2.19	0.42
1:AA:1181:G:H4'	1:AA:1182:G:OP1	2.19	0.42
1:AA:1210:C:N4	1:AA:1211:U:O4	2.52	0.42
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.84	0.42
3:AC:132:ARG:O	3:AC:136:ARG:HG2	2.20	0.42
5:AE:84:PRO:HA	5:AE:98:PRO:HD3	2.01	0.42
9:AI:36:GLU:OE2	9:AI:36:GLU:CA	2.68	0.42
15:AO:81:LEU:CD1	15:AO:85:LEU:CD2	2.98	0.42
17:AQ:48:ASP:CG	17:AQ:52:GLU:OE1	2.58	0.42
22:BA:360:U:H3'	22:BA:361:G:C8	2.54	0.42
22:BA:391:A:C5	22:BA:392:U:C5	3.07	0.42
22:BA:1047:G:C2	22:BA:1110:G:C4	3.07	0.42
22:BA:1232:G:C4	22:BA:1233:C:C6	3.07	0.42
22:BA:1474:U:O4	22:BA:1475:G:N2	2.52	0.42
22:BA:1507:C:H2'	22:BA:1508:A:C4'	2.50	0.42
22:BA:1912:A:C2	22:BA:1919:A:C6	3.08	0.42
22:BA:1916:A:H2'	22:BA:1917:U:C2'	2.49	0.42
22:BA:1924:C:N3	22:BA:1926:U:O4	2.52	0.42
22:BA:2191:A:C2	22:BA:2192:U:N3	2.88	0.42
22:BA:2191:A:C2	22:BA:2192:U:O4	2.72	0.42
22:BA:2637:U:H2'	22:BA:2638:G:H5'	2.01	0.42
22:BA:2776:A:H4'	22:BA:2777:G:O5'	2.19	0.42
25:BD:30:GLU:O	25:BD:31:ALA:C	2.57	0.42
26:BE:134:LEU:HD23	26:BE:160:ALA:O	2.19	0.42
27:BF:69:LYS:N	27:BF:69:LYS:CD	2.83	0.42
32:BK:91:SER:O	32:BK:92:GLU:C	2.58	0.42
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.82	0.42
38:BQ:94:ILE:HG21	39:BR:4:VAL:HG11	2.01	0.42
39:BR:21:ARG:CZ	39:BR:93:PHE:CE1	3.02	0.42
39:BR:76:LYS:O	39:BR:84:ARG:HA	2.19	0.42
1:CA:130:A:C2	1:CA:264:C:N1	2.88	0.42
1:CA:156:C:C4	1:CA:157:U:C4	3.08	0.42
1:CA:302:G:O2'	1:CA:556:C:H5''	2.19	0.42
1:CA:455:G:C2	1:CA:478:A:N1	2.88	0.42
1:CA:938:A:C2	1:CA:1345:U:O4	2.73	0.42
1:CA:1068:G:C6	1:CA:1069:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1149:C:N4	1:CA:1150:A:N6	2.67	0.42
1:CA:1213:A:C8	1:CA:1215:G:C6	3.07	0.42
1:CA:1385:G:N7	58:CA:1873:HOH:O	2.37	0.42
2:CB:62:SER:C	2:CB:64:LYS:H	2.22	0.42
4:CD:48:LEU:HD23	4:CD:53:VAL:N	2.34	0.42
6:CF:86:ARG:CG	6:CF:86:ARG:NH1	2.78	0.42
15:CO:73:LYS:HA	15:CO:73:LYS:CE	2.49	0.42
16:CP:4:ILE:N	16:CP:4:ILE:HD12	2.34	0.42
18:CR:23:TYR:CB	18:CR:58:ALA:HB1	2.50	0.42
20:CT:67:ILE:O	20:CT:68:HIS:O	2.37	0.42
22:DA:35:G:H1'	22:DA:454:A:C4	2.55	0.42
22:DA:86:G:O2'	22:DA:104:A:H4'	2.19	0.42
22:DA:482:A:H1'	22:DA:498:G:N2	2.34	0.42
22:DA:607:U:O4	22:DA:619:G:H2'	2.18	0.42
22:DA:1049:C:C2'	22:DA:1050:A:H5'	2.49	0.42
22:DA:1084:A:C8	22:DA:1085:A:C8	3.07	0.42
22:DA:1120:G:C5	22:DA:1121:C:C5	3.07	0.42
22:DA:1355:G:C6	22:DA:1356:G:C8	3.08	0.42
22:DA:1500:G:N1	22:DA:1501:G:C5	2.87	0.42
22:DA:1606:C:O2'	22:DA:1607:C:P	2.77	0.42
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.54	0.42
22:DA:2010:G:C6	22:DA:2011:U:N3	2.87	0.42
22:DA:2024:G:C2	22:DA:2040:G:N3	2.87	0.42
22:DA:2044:C:N3	22:DA:2045:C:C5	2.88	0.42
22:DA:2234:G:C5	22:DA:2235:G:N7	2.87	0.42
22:DA:2323:G:C6	22:DA:2324:U:C4	3.07	0.42
22:DA:2341:G:C6	22:DA:2342:C:N3	2.87	0.42
22:DA:2370:G:C6	22:DA:2371:G:C6	3.08	0.42
22:DA:2793:C:H2'	22:DA:2794:C:C1'	2.50	0.42
26:DE:25:GLU:HA	26:DE:28:VAL:HB	1.99	0.42
26:DE:170:ARG:N	26:DE:170:ARG:HD3	2.34	0.42
28:DG:2:SER:OG	28:DG:3:ARG:N	2.50	0.42
42:DU:3:ALA:O	42:DU:6:ARG:NH1	2.53	0.42
42:DU:60:GLU:O	42:DU:60:GLU:CG	2.67	0.42
1:AA:174:A:C2'	1:AA:175:C:H5'	2.50	0.42
1:AA:322:C:O2'	20:AT:18:ARG:HG3	2.20	0.42
1:AA:451:A:H61	1:AA:481:G:H5'	1.84	0.42
1:AA:457:G:H2'	1:AA:457:G:N3	2.34	0.42
1:AA:616:G:O2'	1:AA:617:G:H5'	2.19	0.42
1:AA:842:U:H3'	1:AA:843:U:C5'	2.49	0.42
1:AA:891:U:H2'	1:AA:892:A:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1072:G:C5	1:AA:1073:U:C4	3.07	0.42
1:AA:1253:G:N3	1:AA:1254:A:C8	2.88	0.42
1:AA:1410:A:C4	1:AA:1491:G:N2	2.87	0.42
2:AB:132:LYS:HA	2:AB:132:LYS:HE3	2.00	0.42
5:AE:151:GLU:HG2	5:AE:152:MET:H	1.84	0.42
6:AF:12:PRO:O	6:AF:15:SER:N	2.50	0.42
6:AF:85:ILE:O	6:AF:86:ARG:HG2	2.19	0.42
8:AH:89:LYS:HG3	8:AH:90:ASP:H	1.84	0.42
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	2.32	0.42
16:AP:36:VAL:CG2	16:AP:57:ILE:HG13	2.49	0.42
19:AS:42:PRO:C	19:AS:44:MET:H	2.21	0.42
22:BA:517:C:P	48:B0:10:ARG:NH2	2.91	0.42
22:BA:863:A:O2'	22:BA:864:G:H5'	2.19	0.42
22:BA:969:G:C6	22:BA:970:U:C4	3.07	0.42
22:BA:1060:U:C1'	22:BA:1062:G:OP2	2.67	0.42
22:BA:1438:U:C5	22:BA:1552:A:C2	3.07	0.42
22:BA:1813:G:H1'	24:BC:50:THR:OG1	2.18	0.42
22:BA:1845:G:P	24:BC:256:LYS:HZ3	2.43	0.42
22:BA:2190:G:N2	22:BA:2191:A:H1'	2.34	0.42
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.68	0.42
22:BA:2683:C:H5''	37:BP:56:HIS:HB3	2.00	0.42
22:BA:2820:A:N1	25:BD:197:THR:HG22	2.34	0.42
22:BA:2838:G:C6	22:BA:2839:G:C5	3.08	0.42
22:BA:2885:G:H2'	22:BA:2886:A:H5'	2.02	0.42
30:BI:125:MET:HA	30:BI:128:SER:HB3	2.02	0.42
32:BK:64:ARG:HB2	32:BK:83:ALA:HB3	2.01	0.42
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.34	0.42
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.50	0.42
45:BX:41:GLU:OE2	45:BX:44:LYS:NZ	2.47	0.42
47:BZ:24:LEU:HD11	47:BZ:54:MET:CE	2.49	0.42
49:B1:17:THR:CG2	49:B1:43:VAL:HG13	2.49	0.42
1:CA:207:C:O2	1:CA:207:C:H2'	2.20	0.42
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.20	0.42
1:CA:780:A:H1'	1:CA:803:G:N2	2.34	0.42
1:CA:1049:U:H4'	1:CA:1050:G:O5'	2.19	0.42
2:CB:118:GLU:HA	2:CB:121:SER:OG	2.20	0.42
4:CD:130:VAL:HG11	4:CD:135:TYR:CG	2.55	0.42
11:CK:127:ARG:HB2	21:CU:34:ARG:NH1	2.34	0.42
15:CO:37:ASN:O	15:CO:40:GLN:CB	2.68	0.42
17:CQ:49:GLU:C	17:CQ:50:ASN:CG	2.77	0.42
19:CS:44:MET:O	19:CS:45:ILE:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:77:G:H2'	22:DA:78:U:O4'	2.19	0.42
22:DA:485:C:H2'	22:DA:486:C:O4'	2.18	0.42
22:DA:751:A:C6	22:DA:789:A:C5	3.08	0.42
22:DA:841:G:H2'	22:DA:842:U:O4'	2.20	0.42
22:DA:1003:G:O2'	22:DA:1010:A:N1	2.40	0.42
22:DA:1026:G:H1'	22:DA:1134:A:C2	2.53	0.42
22:DA:1085:A:H2'	22:DA:1086:A:C4	2.54	0.42
22:DA:1255:U:H2'	22:DA:1256:G:OP1	2.20	0.42
22:DA:1265:A:N1	22:DA:2013:A:H5''	2.34	0.42
22:DA:1386:C:H2'	22:DA:1387:A:C8	2.55	0.42
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.42
22:DA:1525:A:C6	22:DA:1526:C:C4	3.07	0.42
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.19	0.42
22:DA:1829:A:HO2'	24:DC:15:HIS:CD2	2.37	0.42
22:DA:2116:G:C6	22:DA:2171:A:N6	2.87	0.42
22:DA:2291:U:O2'	22:DA:2292:U:H5'	2.19	0.42
22:DA:2397:G:N3	22:DA:2397:G:H2'	2.35	0.42
22:DA:2480:C:N4	22:DA:2481:G:C6	2.87	0.42
23:DB:26:C:C5	23:DB:27:C:C4	3.08	0.42
24:DC:62:TYR:CD1	24:DC:63:ARG:N	2.86	0.42
26:DE:152:GLU:O	26:DE:154:ASP:N	2.52	0.42
27:DF:117:LEU:HG	27:DF:130:MET:SD	2.58	0.42
27:DF:131:GLY:HA2	27:DF:153:ASP:HA	2.00	0.42
30:DI:56:PRO:HD2	30:DI:75:PRO:HD3	2.01	0.42
32:DK:31:ARG:CB	32:DK:32:TYR:CE2	3.02	0.42
33:DL:77:ILE:HG23	33:DL:81:ASP:OD2	2.20	0.42
34:DM:17:ASN:O	34:DM:38:ARG:HD3	2.19	0.42
42:DU:33:LYS:HB3	42:DU:64:ALA:HB1	2.01	0.42
46:DY:27:ASN:O	46:DY:31:GLN:HB2	2.19	0.42
1:AA:200:G:N2	1:AA:218:U:C2	2.87	0.42
1:AA:666:G:C6	1:AA:741:G:C6	3.07	0.42
1:AA:925:G:C2	1:AA:927:G:C8	3.07	0.42
1:AA:1031:C:O2'	1:AA:1032:G:P	2.77	0.42
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.46	0.42
5:AE:115:LEU:CD2	5:AE:123:VAL:HG21	2.49	0.42
9:AI:30:ILE:HG22	9:AI:65:ILE:CD1	2.49	0.42
10:AJ:11:LYS:HA	10:AJ:70:HIS:O	2.20	0.42
10:AJ:17:LEU:HD21	10:AJ:96:VAL:HG22	2.01	0.42
12:AL:106:GLY:HA3	12:AL:118:GLY:O	2.19	0.42
22:BA:37:C:H4'	22:BA:451:U:OP1	2.19	0.42
22:BA:144:A:C6	22:BA:145:C:C4	3.06	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:555:G:HO2'	22:BA:556:A:P	2.38	0.42
22:BA:1059:G:C5	22:BA:1080:A:C2	3.07	0.42
22:BA:1075:C:H2'	22:BA:1076:C:N1	2.35	0.42
22:BA:1848:A:C2'	22:BA:1849:G:O5'	2.67	0.42
22:BA:2275:C:O2	34:BM:84:LYS:HD3	2.20	0.42
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.84	0.42
22:BA:2805:C:C4	22:BA:2806:C:C4	3.08	0.42
23:BB:17:C:H2'	23:BB:18:G:O4'	2.19	0.42
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.42
24:BC:21:ASN:C	24:BC:21:ASN:OD1	2.56	0.42
24:BC:174:LEU:N	24:BC:174:LEU:CD1	2.83	0.42
27:BF:28:VAL:O	27:BF:28:VAL:CG1	2.68	0.42
28:BG:11:VAL:O	28:BG:11:VAL:HG22	2.19	0.42
28:BG:40:ALA:CB	28:BG:58:TYR:HB3	2.49	0.42
28:BG:174:ALA:O	28:BG:175:LYS:HB2	2.20	0.42
29:BH:45:GLU:C	29:BH:47:PHE:N	2.72	0.42
30:BI:22:PRO:HB2	30:BI:23:PRO:HD3	2.01	0.42
42:BU:48:PRO:CB	42:BU:54:GLN:O	2.67	0.42
44:BW:40:GLN:OE1	44:BW:44:LYS:N	2.52	0.42
44:BW:41:ARG:HH11	44:BW:41:ARG:HG3	1.84	0.42
44:BW:75:LYS:O	44:BW:76:ASN:HB2	2.18	0.42
48:B0:10:ARG:HB2	48:B0:13:ARG:NH2	2.34	0.42
1:CA:64:G:H4'	1:CA:65:A:O5'	2.18	0.42
1:CA:428:G:OP2	4:CD:10:LYS:HE3	2.20	0.42
1:CA:1149:C:N4	1:CA:1150:A:C6	2.87	0.42
1:CA:1489:G:C5	1:CA:1490:U:C5	3.08	0.42
2:CB:25:PRO:O	2:CB:28:LYS:HB2	2.19	0.42
2:CB:55:ALA:O	2:CB:59:LYS:HB2	2.20	0.42
2:CB:71:GLY:O	2:CB:93:ASN:HA	2.19	0.42
4:CD:198:HIS:CE1	4:CD:199:LEU:HD21	2.54	0.42
6:CF:80:PHE:O	6:CF:80:PHE:CD2	2.72	0.42
7:CG:51:ALA:HB2	7:CG:58:GLU:HA	2.01	0.42
9:CI:49:ARG:NH2	9:CI:52:LEU:O	2.53	0.42
11:CK:25:ALA:O	11:CK:89:PRO:O	2.37	0.42
11:CK:60:PRO:HD3	11:CK:91:PRO:HB3	2.00	0.42
14:CN:93:ILE:HG21	14:CN:96:LEU:HD22	2.02	0.42
16:CP:21:VAL:HG23	16:CP:36:VAL:HG21	2.02	0.42
17:CQ:19:LYS:HD3	17:CQ:49:GLU:HA	2.01	0.42
19:CS:40:ILE:HG21	19:CS:66:MET:HB3	2.01	0.42
22:DA:7:G:H4'	31:DJ:15:TRP:HH2	1.85	0.42
22:DA:219:A:C6	22:DA:220:G:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:232:G:N2	22:DA:420:C:OP1	2.52	0.42
22:DA:322:A:O4'	22:DA:340:A:H1'	2.20	0.42
22:DA:675:A:N3	22:DA:2443:C:O2'	2.43	0.42
22:DA:695:G:C6	22:DA:768:G:C5	3.08	0.42
22:DA:705:A:C2	22:DA:727:A:O4'	2.72	0.42
22:DA:848:C:O2	22:DA:933:A:C2	2.72	0.42
22:DA:1036:G:C6	22:DA:1120:G:C5	3.08	0.42
22:DA:1154:G:OP1	38:DQ:58:ARG:HD3	2.20	0.42
22:DA:1248:G:C5	38:DQ:3:ARG:HB2	2.55	0.42
22:DA:1277:G:H2'	22:DA:1278:C:O4'	2.19	0.42
22:DA:1310:G:H1'	22:DA:1611:C:C5'	2.49	0.42
22:DA:1350:C:O2	22:DA:1382:G:N3	2.53	0.42
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.20	0.42
22:DA:2059:A:C2	54:D6:5:MHU:HD1	2.53	0.42
22:DA:2108:A:H2'	22:DA:2109:U:H5'	2.01	0.42
22:DA:2114:A:C4	22:DA:2167:U:H4'	2.54	0.42
22:DA:2410:G:C2	22:DA:2411:A:H1'	2.54	0.42
22:DA:2428:G:H5''	22:DA:2429:G:P	2.59	0.42
22:DA:2825:G:H2'	22:DA:2826:A:H5'	2.02	0.42
24:DC:130:LEU:HD11	24:DC:135:ILE:HG12	2.01	0.42
25:DD:60:VAL:HG13	25:DD:60:VAL:O	2.19	0.42
25:DD:107:VAL:HB	25:DD:204:LYS:O	2.18	0.42
26:DE:40:ARG:NH2	26:DE:92:HIS:CE1	2.87	0.42
31:DJ:25:LEU:HA	31:DJ:62:VAL:HG21	2.02	0.42
32:DK:56:ASP:OD2	32:DK:56:ASP:N	2.53	0.42
35:DN:95:THR:HG23	35:DN:96:ARG:N	2.34	0.42
42:DU:59:VAL:HG12	42:DU:61:LYS:HB2	2.00	0.42
1:AA:73:C:O2'	1:AA:74:A:P	2.77	0.42
1:AA:444:G:N1	1:AA:445:G:C5	2.87	0.42
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.42
1:AA:695:A:N1	1:AA:696:A:C2	2.87	0.42
1:AA:945:G:H2'	1:AA:945:G:N3	2.34	0.42
1:AA:986:U:C2	1:AA:987:G:C8	3.07	0.42
1:AA:1109:C:P	3:AC:176:HIS:CE1	3.13	0.42
1:AA:1141:C:C2	1:AA:1142:G:C8	3.07	0.42
1:AA:1157:A:C4	1:AA:1181:G:C6	3.08	0.42
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.35	0.42
1:AA:1375:A:C6	1:AA:1376:U:C4	3.08	0.42
2:AB:112:LYS:O	2:AB:116:ASP:HB2	2.20	0.42
2:AB:184:PHE:CE1	2:AB:198:PHE:CD2	3.07	0.42
4:AD:53:VAL:CG2	4:AD:54:GLN:N	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:58:LYS:HG2	4:AD:203:LEU:HD22	2.01	0.42
4:AD:147:GLU:O	4:AD:150:LYS:N	2.53	0.42
12:AL:46:ASN:ND2	12:AL:89:ASP:OD1	2.51	0.42
17:AQ:17:MET:HG2	17:AQ:20:SER:HB3	2.02	0.42
17:AQ:50:ASN:O	17:AQ:51:ASN:O	2.36	0.42
17:AQ:59:VAL:HG23	17:AQ:77:ARG:O	2.20	0.42
19:AS:64:ASP:HB3	27:BF:115:ARG:NH2	2.34	0.42
20:AT:8:LYS:O	20:AT:11:ALA:HB3	2.19	0.42
21:AU:53:VAL:O	21:AU:54:LYS:HB2	2.18	0.42
22:BA:872:U:H2'	22:BA:873:C:C6	2.54	0.42
22:BA:934:U:H2'	22:BA:935:C:H6	1.85	0.42
22:BA:1380:G:N2	22:BA:1570:A:N1	2.65	0.42
22:BA:1923:U:H2'	22:BA:1923:U:O2	2.19	0.42
22:BA:2602:A:H4'	22:BA:2603:G:OP2	2.18	0.42
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.50	0.42
23:BB:2:G:C6	23:BB:119:A:C2	3.08	0.42
23:BB:101:A:H2'	23:BB:102:G:O4'	2.20	0.42
24:BC:142:HIS:CD2	24:BC:142:HIS:C	2.93	0.42
27:BF:134:GLU:HG2	27:BF:136:ILE:HD12	2.00	0.42
29:BH:114:GLU:CB	29:BH:133:GLN:O	2.66	0.42
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	2.38	0.42
38:BQ:62:ILE:HG23	38:BQ:76:TYR:CE1	2.54	0.42
45:BX:71:LEU:HB3	45:BX:76:GLU:O	2.19	0.42
48:B0:25:VAL:HG13	48:B0:26:THR:N	2.34	0.42
53:B5:67:HIS:CD2	53:B5:69:LEU:HD23	2.54	0.42
1:CA:209:U:O2	1:CA:209:U:H2'	2.18	0.42
1:CA:784:A:C2	1:CA:785:G:C4	3.07	0.42
1:CA:853:C:H2'	1:CA:854:U:O4'	2.20	0.42
1:CA:1321:U:C4	1:CA:1322:C:H5	2.37	0.42
1:CA:1459:G:H2'	1:CA:1460:C:O4'	2.20	0.42
2:CB:32:PHE:N	2:CB:40:ILE:O	2.45	0.42
4:CD:5:LEU:CD1	4:CD:5:LEU:N	2.82	0.42
4:CD:30:THR:O	4:CD:31:LYS:HD3	2.19	0.42
4:CD:42:GLY:C	4:CD:44:ARG:H	2.23	0.42
7:CG:43:VAL:HG12	7:CG:44:TYR:CD1	2.54	0.42
7:CG:51:ALA:HB1	7:CG:57:SER:O	2.20	0.42
8:CH:83:LEU:HD22	8:CH:83:LEU:C	2.40	0.42
8:CH:105:SER:O	8:CH:123:GLY:HA3	2.20	0.42
9:CI:114:LYS:HG3	9:CI:120:LYS:HA	2.01	0.42
9:CI:116:VAL:CG2	10:CJ:60:ASP:O	2.68	0.42
10:CJ:83:THR:O	10:CJ:83:THR:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:107:ILE:HG23	11:CK:107:ILE:O	2.18	0.42
13:CM:37:ALA:CB	13:CM:56:LEU:HG	2.48	0.42
21:CU:36:GLU:O	21:CU:37:PHE:HB2	2.19	0.42
22:DA:24:G:C6	22:DA:25:U:C4	3.07	0.42
22:DA:237:C:N4	22:DA:238:C:C5	2.88	0.42
22:DA:298:G:N2	22:DA:341:C:C4	2.87	0.42
22:DA:450:G:H2'	22:DA:451:U:H5''	2.02	0.42
22:DA:1043:C:C5	22:DA:1044:C:C5	3.07	0.42
22:DA:1163:G:C2	22:DA:1164:C:C5	3.08	0.42
22:DA:1262:A:C6	22:DA:1263:U:C2	3.07	0.42
22:DA:1358:G:O6	22:DA:1371:G:C8	2.72	0.42
22:DA:2079:U:C2'	22:DA:2080:A:O4'	2.66	0.42
22:DA:2191:A:C6	22:DA:2192:U:C4	3.07	0.42
22:DA:2511:U:C5	22:DA:2512:C:C5	3.08	0.42
22:DA:2722:G:H4'	35:DN:4:ARG:HB2	2.00	0.42
22:DA:2834:G:O6	22:DA:2879:A:C2'	2.66	0.42
25:DD:15:PHE:CE2	37:DP:78:SER:HA	2.55	0.42
25:DD:122:VAL:HG21	25:DD:141:ARG:HB3	2.01	0.42
25:DD:177:VAL:CG2	25:DD:187:LEU:HD11	2.49	0.42
26:DE:8:ALA:HB2	26:DE:122:GLU:CG	2.49	0.42
26:DE:112:LEU:HD11	26:DE:180:LEU:O	2.20	0.42
26:DE:170:ARG:NH2	26:DE:176:ASP:OD1	2.52	0.42
27:DF:17:MET:SD	27:DF:22:TYR:HB2	2.60	0.42
29:DH:31:VAL:HG12	29:DH:32:PRO:HD3	2.02	0.42
29:DH:69:ALA:HB2	29:DH:138:VAL:HG12	2.02	0.42
29:DH:72:ILE:O	29:DH:72:ILE:CG2	2.67	0.42
30:DI:8:TYR:HB2	30:DI:59:ILE:H	1.85	0.42
39:DR:39:LEU:O	39:DR:49:ILE:HG23	2.19	0.42
40:DS:29:VAL:CG1	40:DS:55:ILE:HD11	2.49	0.42
42:DU:96:PHE:CE1	42:DU:103:ILE:HG13	2.54	0.42
44:DW:67:VAL:HG12	44:DW:68:LYS:N	2.35	0.42
1:AA:639:G:N3	1:AA:639:G:H2'	2.34	0.42
1:AA:955:U:O4'	1:AA:1227:A:N6	2.51	0.42
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.55	0.42
1:AA:1216:A:H2'	1:AA:1217:C:C6	2.54	0.42
1:AA:1269:A:N1	1:AA:1313:U:O4'	2.53	0.42
2:AB:222:ARG:HB3	2:AB:222:ARG:NH1	2.35	0.42
4:AD:121:LYS:HB3	4:AD:129:VAL:HG21	2.02	0.42
4:AD:190:ASP:O	4:AD:191:LEU:HD12	2.18	0.42
17:AQ:26:GLU:OE2	17:AQ:39:LYS:HD3	2.20	0.42
22:BA:477:A:H2'	22:BA:478:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:532:A:N3	22:BA:532:A:H2'	2.35	0.42
22:BA:536:G:C2	22:BA:537:G:H1'	2.55	0.42
22:BA:598:U:O2'	22:BA:599:A:H5'	2.20	0.42
22:BA:670:A:H4'	22:BA:671:C:O5'	2.20	0.42
22:BA:874:G:OP1	34:BM:62:LYS:NZ	2.53	0.42
22:BA:1071:G:O4'	22:BA:1089:A:N7	2.52	0.42
22:BA:1458:U:H5'	22:BA:1459:G:N3	2.35	0.42
22:BA:2187:U:H2'	22:BA:2188:U:H1'	2.00	0.42
22:BA:2371:G:C2	22:BA:2372:U:C6	3.07	0.42
22:BA:2543:G:H2'	22:BA:2544:G:O4'	2.20	0.42
56:BA:3001:DOL:C37	56:BA:3001:DOL:C29	2.98	0.42
25:BD:177:VAL:O	25:BD:177:VAL:CG2	2.67	0.42
26:BE:79:ARG:CG	26:BE:79:ARG:NH1	2.83	0.42
32:BK:107:LEU:C	32:BK:109:SER:N	2.72	0.42
34:BM:132:THR:HG22	34:BM:133:LYS:O	2.20	0.42
35:BN:24:MET:HG2	35:BN:44:LEU:HD13	2.01	0.42
39:BR:79:ARG:O	39:BR:80:ARG:HB3	2.20	0.42
41:BT:47:VAL:CG1	41:BT:55:VAL:CG2	2.98	0.42
41:BT:88:LYS:O	41:BT:89:GLU:CG	2.68	0.42
41:BT:91:GLN:HG3	41:BT:91:GLN:O	2.19	0.42
1:CA:68:G:C5	1:CA:69:G:H1'	2.55	0.42
1:CA:754:C:OP1	15:CO:72:ARG:NH2	2.53	0.42
1:CA:756:C:C2	1:CA:757:U:C6	3.07	0.42
1:CA:1107:C:C4	1:CA:1108:G:N7	2.87	0.42
1:CA:1124:G:C2'	1:CA:1145:A:H62	2.32	0.42
4:CD:192:SER:HB2	4:CD:195:ILE:HG12	2.00	0.42
6:CF:64:VAL:HG12	6:CF:65:GLU:H	1.84	0.42
6:CF:97:THR:O	6:CF:98:GLU:CG	2.68	0.42
8:CH:95:VAL:O	8:CH:99:LEU:O	2.38	0.42
9:CI:49:ARG:C	9:CI:51:PRO:HD2	2.39	0.42
9:CI:88:MET:HA	9:CI:92:GLU:OE2	2.19	0.42
10:CJ:5:ARG:O	10:CJ:102:LEU:CD1	2.68	0.42
11:CK:124:PRO:O	21:CU:35:ARG:N	2.48	0.42
13:CM:3:ARG:HA	13:CM:8:ASN:O	2.19	0.42
13:CM:20:THR:HG23	13:CM:26:GLY:O	2.19	0.42
14:CN:67:THR:HG23	14:CN:83:LYS:CE	2.50	0.42
22:DA:42:A:C2	22:DA:438:G:C2	3.07	0.42
22:DA:80:G:O2'	22:DA:346:A:C8	2.67	0.42
22:DA:192:C:P	58:DA:3739:HOH:O	2.75	0.42
22:DA:479:A:N3	22:DA:481:G:H5''	2.35	0.42
22:DA:481:G:C2	22:DA:507:A:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:669:G:C2	22:DA:801:G:C6	3.08	0.42
22:DA:669:G:N3	22:DA:801:G:C2	2.88	0.42
22:DA:826:U:H2'	22:DA:828:U:O4'	2.18	0.42
22:DA:1428:C:C5	22:DA:1569:A:C5'	3.03	0.42
22:DA:1439:A:C8	22:DA:1440:U:C5	3.08	0.42
22:DA:1601:G:C5	22:DA:1602:U:C4	3.08	0.42
22:DA:1668:A:N3	22:DA:1670:C:C4	2.88	0.42
22:DA:1833:C:N3	22:DA:1834:U:C4	2.87	0.42
22:DA:1867:G:O6	22:DA:1875:G:N2	2.52	0.42
22:DA:2093:G:N7	22:DA:2225:A:H2'	2.35	0.42
22:DA:2217:G:C6	22:DA:2218:G:C5	3.08	0.42
22:DA:2583:G:H2'	22:DA:2584:U:O4'	2.19	0.42
22:DA:2599:G:C8	24:DC:236:GLU:HB2	2.55	0.42
22:DA:2807:U:H1'	22:DA:2892:G:N2	2.34	0.42
22:DA:2837:A:H2'	22:DA:2838:G:O4'	2.20	0.42
22:DA:2883:A:P	48:D0:49:TYR:HH	2.41	0.42
23:DB:92:C:H2'	23:DB:93:C:C6	2.54	0.42
25:DD:62:LYS:N	25:DD:63:PRO:CD	2.82	0.42
25:DD:186:LEU:HD11	37:DP:8:LEU:HD12	2.02	0.42
28:DG:52:PHE:CE2	28:DG:69:ARG:HA	2.54	0.42
29:DH:41:LYS:HE2	29:DH:44:ILE:CD1	2.50	0.42
31:DJ:41:LYS:HD2	31:DJ:50:THR:O	2.19	0.42
33:DL:29:LYS:O	33:DL:30:THR:CB	2.67	0.42
33:DL:77:ILE:HG22	33:DL:78:ARG:N	2.34	0.42
33:DL:90:VAL:O	33:DL:123:ARG:N	2.50	0.42
35:DN:51:LEU:N	35:DN:51:LEU:HD23	2.34	0.42
42:DU:49:VAL:HG13	42:DU:53:ASN:O	2.20	0.42
44:DW:37:ILE:HG22	44:DW:38:VAL:CG2	2.49	0.42
45:DX:54:LYS:CA	45:DX:57:ARG:HB2	2.50	0.42
50:D2:10:LEU:HD11	50:D2:14:ARG:NH1	2.35	0.42
1:AA:79:G:N2	1:AA:91:U:C4	2.88	0.42
1:AA:695:A:H2'	1:AA:696:A:O4'	2.20	0.42
1:AA:1081:A:OP1	5:AE:21:VAL:HG23	2.19	0.42
1:AA:1173:U:H2'	1:AA:1174:G:C8	2.55	0.42
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.85	0.42
1:AA:1370:G:C2	1:AA:1371:G:C8	3.08	0.42
2:AB:41:ILE:N	2:AB:41:ILE:CD1	2.83	0.42
3:AC:112:ASP:O	3:AC:116:VAL:HG23	2.20	0.42
4:AD:17:THR:HG22	4:AD:18:ASP:N	2.32	0.42
4:AD:171:LEU:C	4:AD:171:LEU:HD12	2.40	0.42
8:AH:78:VAL:HG11	8:AH:125:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:128:ARG:HG2	11:AK:128:ARG:NH1	2.32	0.42
12:AL:50:ARG:HG3	12:AL:90:LEU:HD11	2.02	0.42
14:AN:46:LEU:HG	14:AN:47:LYS:N	2.34	0.42
14:AN:50:THR:O	14:AN:50:THR:OG1	2.34	0.42
17:AQ:81:LYS:N	17:AQ:81:LYS:CD	2.82	0.42
20:AT:54:MET:CE	20:AT:58:VAL:CG2	2.98	0.42
22:BA:226:A:N6	22:BA:227:A:C6	2.88	0.42
22:BA:475:C:C5	22:BA:481:G:O6	2.73	0.42
22:BA:784:G:H5'	24:BC:226:ASN:OD1	2.19	0.42
22:BA:859:G:O2'	22:BA:860:U:P	2.78	0.42
22:BA:1071:G:C4	22:BA:1089:A:C5	3.08	0.42
22:BA:1754:A:N6	22:BA:1755:A:N6	2.67	0.42
22:BA:1998:A:O3'	22:BA:2724:U:H4'	2.19	0.42
22:BA:2459:A:C5	22:BA:2460:U:C5	3.07	0.42
22:BA:2725:A:C4	22:BA:2727:A:C8	3.08	0.42
26:BE:149:ILE:HD12	26:BE:150:THR:O	2.20	0.42
29:BH:89:LYS:O	29:BH:90:LEU:C	2.58	0.42
29:BH:116:ARG:HB3	29:BH:131:SER:O	2.20	0.42
29:BH:118:PRO:O	29:BH:119:ASN:CB	2.68	0.42
31:BJ:62:VAL:HG22	31:BJ:63:ALA:N	2.35	0.42
32:BK:21:CYS:HA	32:BK:41:ILE:HG22	2.02	0.42
32:BK:108:ARG:O	32:BK:109:SER:C	2.57	0.42
33:BL:101:ILE:HG13	33:BL:102:GLY:N	2.35	0.42
34:BM:11:LYS:HE2	34:BM:87:GLY:O	2.19	0.42
38:BQ:83:LEU:HD22	38:BQ:88:VAL:HG11	2.02	0.42
1:CA:32:A:C2	1:CA:33:A:C6	3.07	0.42
1:CA:104:G:H4'	1:CA:174:A:O4'	2.19	0.42
1:CA:260:G:C6	1:CA:261:U:C4	3.08	0.42
1:CA:406:G:C2	1:CA:407:U:C5	3.08	0.42
1:CA:431:A:H2'	1:CA:432:A:O4'	2.20	0.42
1:CA:463:U:H5'	1:CA:464:U:OP2	2.20	0.42
1:CA:632:U:H2'	1:CA:633:G:OP1	2.20	0.42
1:CA:723:U:C5	21:CU:49:LYS:HB3	2.55	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
1:CA:993:G:H2'	1:CA:995:C:N4	2.35	0.42
1:CA:1060:U:H5''	10:CJ:53:ILE:CG2	2.50	0.42
1:CA:1225:A:OP1	13:CM:101:ARG:HA	2.19	0.42
1:CA:1493:A:H4'	22:DA:1913:A:N1	2.35	0.42
3:CC:71:ALA:O	3:CC:73:PRO:HD3	2.19	0.42
7:CG:37:SER:OG	9:CI:43:THR:HG23	2.20	0.42
7:CG:57:SER:O	7:CG:61:ALA:HB2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:126:LYS:C	21:CU:34:ARG:NH2	2.73	0.42
15:CO:89:ARG:NH1	22:DA:716:A:OP1	2.53	0.42
22:DA:110:G:H2'	22:DA:110:G:N3	2.34	0.42
22:DA:135:U:H2'	22:DA:136:G:C8	2.55	0.42
22:DA:447:A:C2	22:DA:454:A:H2'	2.55	0.42
22:DA:972:A:N1	22:DA:973:A:C6	2.87	0.42
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.73	0.42
22:DA:1855:U:C6	22:DA:1856:U:C5	3.08	0.42
22:DA:1869:G:C2	22:DA:1873:G:C6	3.07	0.42
22:DA:2012:G:P	40:DS:98:LYS:HZ2	2.42	0.42
22:DA:2204:G:C4	22:DA:2205:A:C8	3.08	0.42
22:DA:2345:G:C8	22:DA:2381:A:C2	3.08	0.42
22:DA:2347:C:C2	22:DA:2371:G:N2	2.87	0.42
22:DA:2357:G:H5'	22:DA:2358:A:OP2	2.20	0.42
22:DA:2603:G:C5	22:DA:2604:U:C5	3.08	0.42
22:DA:2722:G:H2'	22:DA:2723:C:O4'	2.20	0.42
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.19	0.42
24:DC:18:LYS:O	24:DC:19:VAL:HB	2.19	0.42
24:DC:25:HIS:HB2	24:DC:80:ARG:HG3	2.00	0.42
25:DD:114:LYS:HE2	25:DD:196:ALA:CB	2.50	0.42
28:DG:9:VAL:O	28:DG:49:THR:HA	2.20	0.42
30:DI:21:SER:HB3	30:DI:22:PRO:HD3	2.00	0.42
32:DK:113:MET:O	32:DK:116:ILE:CG1	2.68	0.42
36:DO:111:ARG:NH2	36:DO:117:PHE:OXT	2.52	0.42
38:DQ:11:ARG:O	38:DQ:11:ARG:HG3	2.20	0.42
41:DT:65:GLY:O	41:DT:66:LYS:C	2.58	0.42
46:DY:16:THR:O	46:DY:19:LEU:HB2	2.20	0.42
51:D3:31:HIS:CE1	51:D3:32:ILE:HD12	2.54	0.42
1:AA:22:G:C5	1:AA:23:C:C5	3.07	0.42
1:AA:137:U:H1'	1:AA:227:G:N2	2.35	0.42
1:AA:760:G:C8	1:AA:761:G:C8	3.07	0.42
1:AA:1053:G:N7	1:AA:1200:C:H5''	2.35	0.42
1:AA:1119:C:OP1	9:AI:85:ARG:NH2	2.53	0.42
6:AF:55:HIS:O	6:AF:56:LYS:HB2	2.19	0.42
6:AF:99:ALA:O	6:AF:100:SER:HB2	2.20	0.42
9:AI:50:GLN:OE1	9:AI:80:ARG:NH1	2.53	0.42
11:AK:112:ASP:CB	21:AU:20:LYS:HD2	2.49	0.42
15:AO:17:ARG:HB3	15:AO:18:ASP:H	1.71	0.42
18:AR:71:THR:OG1	18:AR:73:ARG:HB2	2.19	0.42
22:BA:150:U:H2'	22:BA:151:C:C6	2.55	0.42
22:BA:195:A:C5	22:BA:198:C:C5	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:340:A:H2'	22:BA:341:C:O4'	2.20	0.42
22:BA:983:A:C6	22:BA:984:A:N1	2.87	0.42
22:BA:1027:A:C5	22:BA:1126:A:C2	3.07	0.42
22:BA:1176:U:H3'	22:BA:1177:G:C8	2.55	0.42
22:BA:1179:G:O6	22:BA:1180:U:C2	2.73	0.42
22:BA:1380:G:N3	22:BA:1380:G:H2'	2.35	0.42
22:BA:1839:G:C4	22:BA:1840:G:C8	3.08	0.42
22:BA:1922:G:C6	22:BA:1923:U:C5	3.08	0.42
22:BA:2352:A:H2'	22:BA:2353:G:H5'	2.02	0.42
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.54	0.42
24:BC:14:ARG:HG2	24:BC:15:HIS:ND1	2.34	0.42
30:BI:99:GLY:C	30:BI:100:LYS:HG2	2.40	0.42
31:BJ:98:GLU:CD	31:BJ:126:ALA:HB2	2.39	0.42
32:BK:86:LEU:N	32:BK:86:LEU:HD23	2.34	0.42
33:BL:82:LEU:HD21	33:BL:120:VAL:HG11	2.02	0.42
43:BV:92:VAL:O	43:BV:92:VAL:HG12	2.20	0.42
45:BX:45:ARG:HG2	45:BX:46:PHE:N	2.34	0.42
53:B5:64:SER:O	53:B5:65:LEU:CB	2.68	0.42
1:CA:6:G:O6	5:CE:100:SER:N	2.52	0.42
1:CA:47:C:H4'	1:CA:48:C:OP1	2.18	0.42
1:CA:49:U:O4	1:CA:362:G:N2	2.52	0.42
1:CA:112:G:H5'	1:CA:389:A:O2'	2.19	0.42
1:CA:182:A:C4	1:CA:184:G:C8	3.08	0.42
1:CA:213:G:C5	1:CA:214:C:C2	3.08	0.42
1:CA:268:U:H2'	1:CA:269:C:H6	1.83	0.42
1:CA:411:A:C5	1:CA:429:U:C5	3.08	0.42
1:CA:518:C:H4'	1:CA:519:C:O5'	2.20	0.42
1:CA:716:A:N3	11:CK:120:GLY:HA2	2.35	0.42
1:CA:1012:A:C2	1:CA:1018:G:N2	2.88	0.42
1:CA:1055:A:C5	1:CA:1206:G:C6	3.08	0.42
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.67	0.42
1:CA:1259:C:C5	1:CA:1260:G:C8	3.08	0.42
3:CC:167:TRP:C	3:CC:167:TRP:HE3	2.23	0.42
4:CD:188:ARG:HD2	4:CD:191:LEU:HD11	2.01	0.42
7:CG:14:PRO:O	7:CG:15:ASP:C	2.58	0.42
7:CG:136:LYS:O	7:CG:136:LYS:CG	2.68	0.42
7:CG:145:ALA:O	7:CG:146:GLU:HB2	2.18	0.42
8:CH:11:LEU:HD22	8:CH:75:ILE:HD11	2.02	0.42
11:CK:97:ILE:HG13	11:CK:98:ARG:N	2.33	0.42
12:CL:64:THR:HG23	12:CL:93:VAL:HA	2.02	0.42
21:CU:15:ALA:O	21:CU:17:ARG:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:9:G:C6	22:DA:2629:U:C6	3.07	0.42
22:DA:483:A:C1'	42:DU:45:HIS:HB2	2.50	0.42
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.19	0.42
22:DA:600:G:H2'	22:DA:601:C:C6	2.55	0.42
22:DA:892:A:N3	22:DA:892:A:C2'	2.82	0.42
22:DA:1511:G:O2'	22:DA:1512:C:H5'	2.19	0.42
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.20	0.42
22:DA:1607:C:O2	22:DA:1621:U:C5	2.72	0.42
22:DA:1989:G:H2'	22:DA:1990:C:H5'	2.02	0.42
22:DA:2127:G:O2'	22:DA:2173:A:C4	2.72	0.42
22:DA:2230:G:C5	22:DA:2231:U:C4	3.08	0.42
22:DA:2333:A:C8	22:DA:2335:A:C4	3.07	0.42
22:DA:2691:C:N3	22:DA:2718:G:O6	2.53	0.42
23:DB:109:A:C6	23:DB:110:C:N3	2.88	0.42
25:DD:146:ILE:O	25:DD:146:ILE:HG13	2.20	0.42
28:DG:174:ALA:O	28:DG:175:LYS:O	2.37	0.42
29:DH:121:VAL:O	29:DH:122:LEU:CB	2.67	0.42
29:DH:127:GLU:HA	29:DH:144:VAL:O	2.19	0.42
33:DL:135:ILE:HG22	33:DL:140:GLY:CA	2.49	0.42
35:DN:71:ARG:HH21	35:DN:71:ARG:HG2	1.82	0.42
39:DR:11:GLN:NE2	39:DR:39:LEU:CD2	2.82	0.42
40:DS:66:ILE:O	40:DS:69:LEU:HB2	2.20	0.42
41:DT:93:LEU:N	41:DT:93:LEU:HD22	2.34	0.42
43:DV:51:GLN:HB3	43:DV:56:PHE:CD2	2.55	0.42
45:DX:40:VAL:CG1	45:DX:68:LEU:CD1	2.97	0.42
45:DX:71:LEU:HA	45:DX:74:ARG:CG	2.50	0.42
47:DZ:52:SER:O	47:DZ:55:VAL:N	2.52	0.42
49:D1:11:LEU:HB2	49:D1:21:TYR:HB2	2.02	0.42
1:AA:223:A:C6	1:AA:224:U:O4	2.72	0.42
1:AA:230:G:C5	1:AA:231:U:C5	3.08	0.42
1:AA:614:C:C2'	1:AA:615:G:O5'	2.67	0.42
1:AA:657:U:O2	15:AO:22:THR:HG22	2.19	0.42
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.35	0.42
1:AA:1139:G:N2	1:AA:1141:C:C5	2.88	0.42
1:AA:1141:C:HO2'	1:AA:1142:G:P	2.43	0.42
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.55	0.42
2:AB:118:GLU:O	2:AB:121:SER:CB	2.67	0.42
3:AC:155:GLY:N	3:AC:164:ARG:O	2.51	0.42
4:AD:34:ILE:O	4:AD:34:ILE:HD13	2.20	0.42
4:AD:98:LEU:O	4:AD:101:VAL:N	2.53	0.42
10:AJ:33:GLY:HA3	10:AJ:83:THR:OG1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:65:VAL:O	11:AK:65:VAL:HG23	2.20	0.42
11:AK:112:ASP:OD1	11:AK:114:THR:HG23	2.19	0.42
12:AL:3:THR:HG22	12:AL:4:VAL:N	2.35	0.42
14:AN:25:ALA:C	14:AN:27:LEU:N	2.73	0.42
14:AN:84:VAL:HG12	14:AN:85:ARG:N	2.34	0.42
17:AQ:16:LYS:C	17:AQ:17:MET:CE	2.88	0.42
17:AQ:82:ALA:O	17:AQ:83:VAL:C	2.58	0.42
19:AS:15:LEU:HD12	19:AS:33:THR:HG21	2.02	0.42
20:AT:24:ARG:O	20:AT:25:ARG:C	2.58	0.42
21:AU:10:GLU:OE2	3:CC:72:ARG:NH2	2.53	0.42
22:BA:189:G:H2'	22:BA:205:G:N2	2.35	0.42
22:BA:451:U:C2	22:BA:453:A:N7	2.87	0.42
22:BA:481:G:N3	22:BA:507:A:C2	2.88	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.42
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.68	0.42
22:BA:1737:G:C6	22:BA:1738:G:C2	3.08	0.42
22:BA:1829:A:O2'	24:BC:15:HIS:CD2	2.73	0.42
22:BA:1922:G:N1	22:BA:1923:U:C6	2.88	0.42
22:BA:2021:C:P	48:B0:9:THR:HG21	2.60	0.42
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.54	0.42
22:BA:2680:U:C2	22:BA:2681:C:C5	3.08	0.42
22:BA:2861:U:O2	22:BA:2862:G:C8	2.72	0.42
22:BA:2896:C:H2'	22:BA:2897:U:H6	1.85	0.42
24:BC:72:ASP:HA	24:BC:118:SER:O	2.20	0.42
25:BD:106:LYS:HA	25:BD:175:LEU:O	2.20	0.42
31:BJ:124:VAL:O	31:BJ:124:VAL:HG22	2.20	0.42
37:BP:73:VAL:O	37:BP:73:VAL:CG2	2.67	0.42
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.20	0.42
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.98	0.42
41:BT:2:ILE:HG12	41:BT:7:LEU:HD11	2.02	0.42
45:BX:11:ARG:HB2	45:BX:12:PRO:CD	2.50	0.42
46:BY:22:LEU:O	46:BY:23:ARG:C	2.59	0.42
1:CA:33:A:H2'	1:CA:34:C:C6	2.55	0.42
1:CA:73:C:C2	1:CA:74:A:H8	2.37	0.42
1:CA:147:G:C2	1:CA:148:G:C6	3.08	0.42
1:CA:291:U:O2	1:CA:291:U:H2'	2.19	0.42
1:CA:407:U:H2'	1:CA:408:A:H8	1.84	0.42
1:CA:445:G:N1	1:CA:446:G:C5	2.88	0.42
1:CA:604:G:C2	1:CA:635:A:C2	3.08	0.42
1:CA:701:U:H4'	1:CA:703:G:C8	2.55	0.42
1:CA:707:U:H4'	11:CK:22:HIS:ND1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:938:A:N6	1:CA:939:G:C5	2.88	0.42
1:CA:1004:A:H2'	1:CA:1005:A:C8	2.54	0.42
1:CA:1126:U:O4	10:CJ:73:LEU:CD1	2.68	0.42
1:CA:1280:A:OP1	1:CA:1281:C:C5	2.73	0.42
1:CA:1314:C:N3	1:CA:1315:U:C4	2.88	0.42
2:CB:15:HIS:CD2	2:CB:209:ALA:HB2	2.55	0.42
2:CB:16:PHE:CZ	2:CB:18:HIS:NE2	2.88	0.42
2:CB:222:ARG:HE	2:CB:223:GLU:N	2.17	0.42
3:CC:169:ARG:HD2	3:CC:169:ARG:C	2.40	0.42
5:CE:90:THR:HG22	5:CE:91:GLY:N	2.35	0.42
5:CE:104:GLY:O	5:CE:105:ILE:HG23	2.19	0.42
5:CE:104:GLY:HA3	5:CE:122:ASN:HA	2.01	0.42
15:CO:73:LYS:HA	15:CO:73:LYS:HE2	2.02	0.42
22:DA:162:U:H4'	22:DA:163:C:OP1	2.20	0.42
22:DA:294:A:N6	22:DA:345:A:N9	2.68	0.42
22:DA:389:G:N9	22:DA:2413:G:H4'	2.34	0.42
22:DA:602:A:H2'	22:DA:602:A:N3	2.34	0.42
22:DA:611:C:N3	22:DA:618:G:C2	2.87	0.42
22:DA:752:A:N3	22:DA:752:A:H2'	2.35	0.42
22:DA:845:A:H5'	22:DA:846:U:OP2	2.19	0.42
22:DA:957:C:C4	22:DA:2459:A:C1'	3.02	0.42
22:DA:965:C:C4'	22:DA:2273:A:H1'	2.49	0.42
22:DA:1073:A:H2'	22:DA:1074:G:H5'	2.02	0.42
22:DA:1257:C:N4	22:DA:1258:U:O4	2.52	0.42
22:DA:1282:U:C4	22:DA:1283:G:C6	3.07	0.42
22:DA:1310:G:N2	22:DA:1605:C:C2	2.87	0.42
22:DA:1359:A:N1	22:DA:1360:G:H1'	2.35	0.42
22:DA:1394:U:H4'	22:DA:1603:A:H4'	2.02	0.42
22:DA:1480:C:C4	22:DA:1481:U:C4	3.08	0.42
22:DA:1754:A:N6	22:DA:1755:A:N6	2.68	0.42
22:DA:1863:G:H2'	22:DA:1864:U:O4'	2.19	0.42
22:DA:2013:A:N1	22:DA:2014:A:C2	2.87	0.42
22:DA:2016:U:O2	48:D0:4:GLN:NE2	2.52	0.42
22:DA:2186:G:C5	22:DA:2187:U:C5	3.08	0.42
22:DA:2262:U:N3	22:DA:2279:G:C2	2.88	0.42
22:DA:2305:U:C5	22:DA:2306:C:C5	3.07	0.42
22:DA:2351:G:H1'	22:DA:2367:G:N2	2.35	0.42
22:DA:2440:C:N3	22:DA:2441:U:H1'	2.35	0.42
22:DA:2683:C:C5	22:DA:2684:U:C5	3.08	0.42
23:DB:90:C:H5'	34:DM:18:ARG:HG2	2.02	0.42
27:DF:117:LEU:O	27:DF:118:SER:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:DH:31:VAL:HB	29:DH:32:PRO:HD2	2.00	0.42
32:DK:121:GLU:HG2	32:DK:122:VAL:HG23	2.01	0.42
33:DL:78:ARG:CZ	33:DL:113:ALA:HB1	2.50	0.42
33:DL:78:ARG:CB	33:DL:113:ALA:CB	2.98	0.42
41:DT:65:GLY:O	41:DT:66:LYS:O	2.38	0.42
42:DU:40:ASN:O	42:DU:41:LEU:C	2.58	0.42
43:DV:30:ILE:O	43:DV:37:PRO:HA	2.20	0.42
45:DX:40:VAL:CG2	45:DX:45:ARG:O	2.68	0.42
1:AA:22:G:H2'	1:AA:23:C:H6	1.85	0.41
1:AA:243:A:C2	1:AA:246:A:C8	3.08	0.41
1:AA:325:A:H2'	1:AA:326:G:O4'	2.20	0.41
1:AA:375:U:C2	1:AA:376:G:C8	3.08	0.41
1:AA:402:G:C5	1:AA:403:C:C5	3.08	0.41
1:AA:466:A:H5'	1:AA:467:U:OP2	2.20	0.41
1:AA:468:A:N1	1:AA:469:C:C4	2.88	0.41
1:AA:748:G:N1	1:AA:749:A:C5	2.88	0.41
1:AA:757:U:O2'	1:AA:879:C:O2	2.33	0.41
1:AA:781:A:C4	1:AA:802:A:C2	3.08	0.41
1:AA:1264:U:O2	1:AA:1272:G:N2	2.53	0.41
1:AA:1346:A:C8	7:AG:10:ARG:NH2	2.88	0.41
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.34	0.41
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.55	0.41
2:AB:24:ASN:HA	2:AB:25:PRO:HD2	1.79	0.41
2:AB:186:ILE:HG22	2:AB:200:ILE:HB	2.02	0.41
4:AD:19:LEU:HD22	4:AD:64:ILE:CG1	2.49	0.41
11:AK:53:ARG:O	11:AK:56:ARG:HG3	2.20	0.41
14:AN:73:PHE:CZ	14:AN:78:GLY:HA2	2.55	0.41
19:AS:29:LYS:HG2	19:AS:30:PRO:HD2	2.02	0.41
20:AT:34:LYS:HD3	20:AT:34:LYS:HA	1.84	0.41
22:BA:468:G:O6	22:BA:469:G:C2	2.73	0.41
22:BA:483:A:H1'	42:BU:58:ILE:HD12	2.02	0.41
22:BA:574:A:C6	22:BA:2033:A:H5'	2.55	0.41
22:BA:586:A:C2	22:BA:1254:A:C2	3.08	0.41
22:BA:1513:U:H2'	22:BA:1514:G:O4'	2.20	0.41
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.82	0.41
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.53	0.41
22:BA:2190:G:C5	22:BA:2191:A:C5	3.08	0.41
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.55	0.41
22:BA:2418:A:C6	22:BA:2419:U:C4	3.08	0.41
22:BA:2469:A:H4'	34:BM:55:ARG:HH12	1.86	0.41
22:BA:2517:C:O2'	22:BA:2542:A:N7	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2540:C:H2'	22:BA:2541:A:O4'	2.20	0.41
22:BA:2592:G:C5	22:BA:2593:U:C4	3.08	0.41
22:BA:2673:G:C2	22:BA:2674:G:C8	3.08	0.41
22:BA:2845:U:H5''	37:BP:52:ASN:O	2.18	0.41
24:BC:141:VAL:CG1	24:BC:142:HIS:N	2.83	0.41
25:BD:1:MET:HG3	25:BD:205:PRO:HG2	2.01	0.41
25:BD:125:TRP:CE3	25:BD:160:LYS:HD2	2.55	0.41
28:BG:125:CYS:HB3	28:BG:127:THR:O	2.20	0.41
29:BH:82:SER:HG	29:BH:90:LEU:HG	1.85	0.41
29:BH:104:THR:CG2	29:BH:110:VAL:O	2.68	0.41
29:BH:139:PHE:O	29:BH:140:ALA:HB3	2.20	0.41
30:BI:116:ASP:O	30:BI:117:MET:CG	2.68	0.41
31:BJ:76:HIS:CE1	31:BJ:85:LYS:HB2	2.55	0.41
32:BK:63:VAL:HG12	32:BK:107:LEU:HD11	2.02	0.41
34:BM:62:LYS:HG2	34:BM:63:ILE:N	2.35	0.41
36:BO:83:LEU:HD22	36:BO:88:LYS:HB2	2.02	0.41
43:BV:89:ILE:HG21	43:BV:91:PHE:CZ	2.55	0.41
53:B5:36:ALA:O	53:B5:37:LYS:HB2	2.19	0.41
1:CA:208:U:H2'	1:CA:210:C:O4'	2.21	0.41
1:CA:504:C:H1'	1:CA:510:A:C4	2.54	0.41
1:CA:583:A:C6	1:CA:759:A:N7	2.88	0.41
1:CA:793:U:HO2'	1:CA:1516:G:C1'	2.33	0.41
1:CA:999:C:H2'	1:CA:1000:A:C8	2.55	0.41
1:CA:1240:U:OP2	7:CG:116:MET:HB3	2.19	0.41
1:CA:1379:G:C6	1:CA:1380:U:O4	2.73	0.41
1:CA:1380:U:C4	7:CG:3:ARG:HA	2.54	0.41
4:CD:9:LEU:HD22	4:CD:22:LYS:HD2	2.01	0.41
4:CD:116:GLN:CG	4:CD:120:HIS:CE1	3.02	0.41
6:CF:9:MET:HE2	6:CF:59:TYR:CD1	2.55	0.41
7:CG:133:THR:HA	7:CG:136:LYS:HB3	2.02	0.41
10:CJ:15:HIS:HB3	10:CJ:70:HIS:NE2	2.35	0.41
10:CJ:37:ARG:O	10:CJ:38:GLY:O	2.38	0.41
10:CJ:47:GLU:O	10:CJ:66:GLU:HA	2.19	0.41
13:CM:18:ALA:HB2	13:CM:45:ILE:HD11	2.01	0.41
14:CN:34:VAL:HG12	14:CN:34:VAL:O	2.20	0.41
15:CO:41:GLY:O	15:CO:42:HIS:C	2.57	0.41
22:DA:46:G:C2	22:DA:47:C:C4	3.08	0.41
22:DA:253:C:C2'	22:DA:254:G:H5'	2.50	0.41
22:DA:554:U:O4	22:DA:555:G:C6	2.73	0.41
22:DA:620:G:H2'	22:DA:620:G:N3	2.34	0.41
22:DA:629:G:H4'	22:DA:650:C:O2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1051:G:H4'	22:DA:2752:C:O2'	2.20	0.41
22:DA:1140:C:C2'	22:DA:1141:U:H5'	2.50	0.41
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.19	0.41
22:DA:1337:G:C2	22:DA:1338:G:H1'	2.55	0.41
22:DA:1379:U:OP1	22:DA:1379:U:C6	2.73	0.41
22:DA:1453:A:N3	35:DN:77:ALA:HB2	2.35	0.41
22:DA:1737:G:C6	22:DA:1738:G:C6	3.08	0.41
22:DA:1810:A:H5''	22:DA:1811:G:OP2	2.19	0.41
22:DA:1851:U:H2'	22:DA:1852:U:O4'	2.20	0.41
22:DA:2127:G:H4'	22:DA:2128:G:OP1	2.20	0.41
22:DA:2305:U:O4'	27:DF:131:GLY:HA3	2.19	0.41
22:DA:2451:A:N3	56:DA:3001:DOL:HC12	2.34	0.41
22:DA:2454:G:N2	22:DA:2499:C:C2	2.88	0.41
22:DA:2560:A:H2'	22:DA:2561:U:O4'	2.20	0.41
22:DA:2884:U:O2	22:DA:2884:U:O4'	2.38	0.41
22:DA:2887:A:C2	22:DA:2888:C:H1'	2.55	0.41
23:DB:39:A:H2'	23:DB:40:U:H6	1.85	0.41
25:DD:2:ILE:HG23	25:DD:88:GLU:OE2	2.19	0.41
25:DD:48:ILE:HG23	25:DD:84:LEU:HD11	2.02	0.41
27:DF:9:LYS:O	27:DF:13:VAL:CG2	2.67	0.41
27:DF:77:PHE:C	27:DF:78:LYS:HG3	2.41	0.41
30:DI:29:GLY:HA2	30:DI:33:VAL:HB	2.02	0.41
33:DL:100:ILE:O	33:DL:100:ILE:HG13	2.14	0.41
35:DN:72:ASP:O	35:DN:75:ILE:N	2.52	0.41
39:DR:49:ILE:HD12	39:DR:52:PRO:HA	2.02	0.41
41:DT:2:ILE:HG12	41:DT:7:LEU:CD1	2.50	0.41
41:DT:7:LEU:HD21	41:DT:45:ALA:CB	2.50	0.41
41:DT:21:SER:O	41:DT:24:MET:N	2.53	0.41
41:DT:24:MET:CG	41:DT:29:THR:O	2.68	0.41
42:DU:45:HIS:HB3	42:DU:58:ILE:HG12	2.02	0.41
42:DU:74:ASN:O	42:DU:75:ALA:HB3	2.20	0.41
42:DU:83:VAL:HG11	42:DU:94:ARG:HD2	2.01	0.41
50:D2:26:ASN:O	50:D2:30:VAL:HG23	2.20	0.41
1:AA:78:A:H2'	1:AA:79:G:O4'	2.18	0.41
1:AA:340:U:C2	1:AA:341:C:C5	3.08	0.41
1:AA:390:U:H2'	1:AA:391:G:H8	1.82	0.41
1:AA:787:A:C5	1:AA:788:U:C5	3.08	0.41
1:AA:1118:U:O4'	1:AA:1179:A:H1'	2.20	0.41
1:AA:1368:A:OP2	9:AI:114:LYS:CD	2.69	0.41
1:AA:1377:A:C5	7:AG:7:ILE:CD1	3.03	0.41
2:AB:164:ILE:HG12	2:AB:165:ASP:N	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:136:VAL:O	5:AE:140:THR:HG23	2.20	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:HD11	2.01	0.41
9:AI:26:GLY:CA	9:AI:59:GLU:HA	2.50	0.41
12:AL:108:LYS:O	12:AL:109:ASP:HB2	2.19	0.41
17:AQ:45:HIS:CG	17:AQ:70:THR:HG22	2.55	0.41
17:AQ:46:VAL:HG21	17:AQ:61:ILE:HG12	2.02	0.41
19:AS:58:VAL:HG11	19:AS:75:ALA:HA	2.03	0.41
21:AU:12:PHE:N	21:AU:12:PHE:HD2	2.16	0.41
22:BA:71:A:OP2	22:BA:71:A:H3'	2.20	0.41
22:BA:785:G:C6	22:BA:786:C:C4	3.08	0.41
22:BA:1006:C:C2	22:BA:1138:G:N2	2.87	0.41
22:BA:1820:U:O2	24:BC:200:HIS:HB3	2.20	0.41
22:BA:1921:G:N2	22:BA:1922:G:C8	2.88	0.41
22:BA:1999:C:H2'	22:BA:2000:C:O4'	2.20	0.41
22:BA:2190:G:C2'	22:BA:2191:A:H5'	2.50	0.41
22:BA:2504:U:C5	56:BA:3001:DOL:H161	2.54	0.41
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.20	0.41
23:BB:37:C:C6	23:BB:38:C:C5	3.08	0.41
28:BG:94:TYR:C	28:BG:95:ARG:HG2	2.40	0.41
30:BI:18:ALA:O	30:BI:19:ASN:CB	2.66	0.41
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.55	0.41
36:BO:2:ASP:OD1	36:BO:3:LYS:N	2.53	0.41
39:BR:64:VAL:CG2	39:BR:65:ALA:N	2.83	0.41
41:BT:51:PHE:O	41:BT:52:GLU:C	2.57	0.41
46:BY:13:GLU:HG3	46:BY:53:VAL:HG13	2.01	0.41
1:CA:376:G:H5'	16:CP:5:ARG:CB	2.46	0.41
1:CA:399:G:C6	1:CA:400:C:C4	3.08	0.41
1:CA:456:A:C6	1:CA:457:G:C5	3.07	0.41
1:CA:734:G:C4	1:CA:735:C:C6	3.08	0.41
1:CA:862:C:N3	1:CA:863:U:C5	2.88	0.41
1:CA:1239:A:N7	1:CA:1298:U:H5	2.17	0.41
1:CA:1251:A:H2'	1:CA:1252:A:O4'	2.20	0.41
2:CB:41:ILE:C	2:CB:41:ILE:HD12	2.41	0.41
3:CC:42:TYR:CZ	3:CC:90:VAL:HG21	2.54	0.41
7:CG:69:VAL:HG21	7:CG:104:ILE:HD11	2.01	0.41
7:CG:92:ARG:CZ	7:CG:93:PRO:HD3	2.51	0.41
12:CL:90:LEU:HB2	12:CL:93:VAL:CG2	2.49	0.41
16:CP:23:ASP:O	16:CP:25:ARG:N	2.52	0.41
18:CR:58:ALA:O	18:CR:59:ILE:C	2.58	0.41
21:CU:36:GLU:O	21:CU:37:PHE:CB	2.67	0.41
22:DA:141:G:H3'	22:DA:142:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:379:G:C4	22:DA:396:G:C2	3.08	0.41
22:DA:627:A:C6	22:DA:637:A:C8	3.08	0.41
22:DA:770:G:C4	22:DA:771:G:C8	3.09	0.41
22:DA:871:U:H5''	34:DM:68:PHE:CZ	2.56	0.41
22:DA:1218:G:H2'	22:DA:1219:U:O4'	2.20	0.41
22:DA:1413:A:C2	22:DA:1590:A:C2	3.08	0.41
22:DA:1613:G:O2'	50:D2:3:ARG:HD2	2.20	0.41
22:DA:2115:G:N3	22:DA:2117:A:N7	2.68	0.41
22:DA:2146:C:OP2	22:DA:2146:C:O4'	2.39	0.41
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.55	0.41
22:DA:2345:G:H4'	22:DA:2346:A:H5''	2.02	0.41
23:DB:20:G:N2	23:DB:64:G:C4	2.88	0.41
24:DC:131:PRO:HB2	24:DC:133:ARG:HG2	2.02	0.41
25:DD:115:GLY:O	35:DN:3:HIS:CE1	2.74	0.41
29:DH:40:THR:OG1	29:DH:43:ASN:ND2	2.53	0.41
31:DJ:35:ARG:HB3	31:DJ:54:ILE:HD11	2.02	0.41
34:DM:63:ILE:HG22	34:DM:64:TRP:N	2.34	0.41
34:DM:110:GLU:O	34:DM:114:ARG:HG3	2.19	0.41
36:DO:27:VAL:HG21	36:DO:40:ILE:HD12	2.02	0.41
36:DO:28:VAL:CG1	36:DO:94:ARG:HA	2.50	0.41
37:DP:110:ILE:HD13	37:DP:110:ILE:N	2.35	0.41
37:DP:113:ARG:C	37:DP:114:LEU:HD23	2.40	0.41
39:DR:21:ARG:NE	39:DR:93:PHE:CE1	2.87	0.41
41:DT:15:HIS:CD2	41:DT:17:SER:OG	2.74	0.41
41:DT:49:LYS:HD3	41:DT:49:LYS:N	2.35	0.41
45:DX:39:TRP:CE3	45:DX:45:ARG:O	2.73	0.41
45:DX:40:VAL:HG11	45:DX:68:LEU:CD1	2.50	0.41
48:D0:31:ASP:OD1	48:D0:48:TYR:HB3	2.20	0.41
1:AA:104:G:C2	1:AA:105:G:N7	2.88	0.41
1:AA:113:G:C6	1:AA:315:A:N6	2.88	0.41
1:AA:393:A:C2	1:AA:394:G:C8	3.09	0.41
1:AA:455:G:C2	1:AA:478:A:N1	2.88	0.41
1:AA:459:A:H2'	1:AA:460:A:C8	2.55	0.41
1:AA:478:A:H2'	1:AA:479:U:C5'	2.50	0.41
1:AA:570:G:H1'	1:AA:820:U:C4	2.55	0.41
1:AA:1154:G:C2	1:AA:1155:A:C5	3.08	0.41
2:AB:65:GLY:C	2:AB:66:LYS:HD3	2.40	0.41
3:AC:23:PHE:CD2	3:AC:24:ALA:N	2.88	0.41
3:AC:53:SER:HB2	3:AC:112:ASP:OD2	2.20	0.41
3:AC:120:ILE:O	3:AC:124:LEU:HG	2.20	0.41
4:AD:58:LYS:CE	4:AD:69:GLU:OE2	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:41:ASP:OD1	5:AE:42:GLY:N	2.53	0.41
6:AF:63:ASN:OD1	6:AF:96:VAL:CG2	2.69	0.41
7:AG:74:GLU:HG2	7:AG:91:VAL:HB	2.01	0.41
8:AH:25:VAL:O	8:AH:25:VAL:CG1	2.67	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:HG13	2.19	0.41
10:AJ:66:GLU:HG3	10:AJ:67:ILE:N	2.34	0.41
12:AL:107:VAL:CG2	12:AL:117:TYR:HB3	2.50	0.41
15:AO:55:GLY:O	15:AO:58:ARG:HB3	2.20	0.41
22:BA:616:A:H2'	22:BA:617:G:O4'	2.20	0.41
22:BA:668:A:C2'	22:BA:669:G:OP1	2.67	0.41
22:BA:684:G:C6	22:BA:774:G:C4	3.09	0.41
22:BA:1414:C:C5	22:BA:1415:U:C5	3.08	0.41
22:BA:1496:A:C2	22:BA:1498:C:O2	2.73	0.41
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.55	0.41
23:BB:42:C:C6	27:BF:66:LEU:HD13	2.55	0.41
25:BD:172:VAL:HG21	25:BD:194:PRO:HD3	2.01	0.41
27:BF:44:ILE:HG21	27:BF:79:ILE:HG22	2.02	0.41
27:BF:53:ALA:O	27:BF:56:ASP:HB2	2.21	0.41
27:BF:122:PHE:HB3	27:BF:163:ASP:OD2	2.19	0.41
28:BG:55:ARG:HG2	28:BG:58:TYR:CD1	2.54	0.41
32:BK:53:LYS:NZ	32:BK:56:ASP:OD2	2.46	0.41
37:BP:43:PHE:CE2	37:BP:63:LYS:HD3	2.56	0.41
37:BP:53:ARG:HG3	37:BP:53:ARG:NH1	2.36	0.41
38:BQ:41:LYS:O	38:BQ:41:LYS:HG3	2.19	0.41
44:BW:64:ASP:OD2	44:BW:64:ASP:N	2.52	0.41
46:BY:7:ARG:O	46:BY:7:ARG:HG3	2.19	0.41
46:BY:9:LYS:HB3	46:BY:12:GLU:HG2	2.02	0.41
51:B3:15:LYS:HD3	51:B3:23:LYS:CE	2.51	0.41
53:B5:207:GLY:O	53:B5:208:THR:C	2.59	0.41
1:CA:112:G:C2'	1:CA:113:G:H5'	2.50	0.41
1:CA:135:C:O2	16:CP:1:MET:CB	2.69	0.41
1:CA:198:G:H2'	1:CA:199:A:C5'	2.49	0.41
1:CA:302:G:C6	1:CA:303:A:C6	3.08	0.41
1:CA:445:G:N3	1:CA:445:G:H2'	2.34	0.41
1:CA:821:G:C4	1:CA:822:U:C5	3.08	0.41
2:CB:161:LEU:CD2	2:CB:176:ALA:HB2	2.50	0.41
2:CB:207:ILE:HG12	2:CB:208:ARG:N	2.35	0.41
4:CD:73:ARG:O	4:CD:76:TYR:N	2.53	0.41
4:CD:203:LEU:HD12	4:CD:203:LEU:O	2.19	0.41
11:CK:25:ALA:N	11:CK:87:LYS:O	2.49	0.41
13:CM:22:ILE:HG22	13:CM:23:TYR:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:CM:106:ALA:O	13:CM:110:LYS:HB3	2.20	0.41
17:CQ:29:VAL:O	17:CQ:29:VAL:CG2	2.68	0.41
20:CT:33:LYS:HA	20:CT:36:TYR:HD2	1.85	0.41
21:CU:26:ALA:O	21:CU:27:GLY:C	2.57	0.41
22:DA:117:G:N1	22:DA:119:A:N6	2.68	0.41
22:DA:226:A:H4'	22:DA:258:G:OP1	2.20	0.41
22:DA:487:C:N4	22:DA:488:G:N1	2.68	0.41
22:DA:594:U:H2'	22:DA:595:C:C6	2.55	0.41
22:DA:609:A:C6	22:DA:610:C:O2	2.72	0.41
22:DA:715:A:N1	22:DA:716:A:C2	2.89	0.41
22:DA:756:A:H2'	22:DA:757:G:O4'	2.19	0.41
22:DA:870:U:OP1	34:DM:6:ARG:CD	2.68	0.41
22:DA:1063:G:O4'	30:DI:77:ALA:HB1	2.19	0.41
22:DA:1274:A:N3	22:DA:1297:C:H1'	2.35	0.41
22:DA:1298:C:N4	22:DA:1299:G:C6	2.88	0.41
22:DA:1302:A:H5'	22:DA:1608:A:OP1	2.21	0.41
22:DA:1317:G:C6	22:DA:1318:U:N3	2.89	0.41
22:DA:1469:A:C2'	22:DA:1470:A:C8	2.98	0.41
22:DA:1483:G:C6	22:DA:1484:U:C4	3.08	0.41
22:DA:1553:A:N7	22:DA:1555:G:C5	2.88	0.41
22:DA:1809:A:C5	22:DA:1810:A:C5	3.09	0.41
22:DA:2372:U:H2'	22:DA:2373:G:H8	1.86	0.41
22:DA:2412:A:H3'	22:DA:2413:G:H8	1.82	0.41
22:DA:2457:U:C4	22:DA:2458:G:C6	3.08	0.41
22:DA:2610:C:C6	54:D6:7:004:HD2	2.55	0.41
22:DA:2799:A:C2	22:DA:2801:G:H1'	2.55	0.41
22:DA:2870:C:H5''	35:DN:65:LEU:CD2	2.49	0.41
40:DS:28:LYS:O	40:DS:31:GLN:N	2.50	0.41
45:DX:54:LYS:HA	45:DX:57:ARG:CG	2.50	0.41
1:AA:262:A:H2'	1:AA:263:A:C8	2.54	0.41
1:AA:269:C:N4	1:AA:270:A:N6	2.67	0.41
1:AA:460:A:H2'	1:AA:461:A:O4'	2.20	0.41
1:AA:704:A:N6	1:AA:705:G:C6	2.89	0.41
1:AA:834:U:C4	1:AA:835:U:C4	3.09	0.41
1:AA:909:A:H2'	1:AA:910:C:O5'	2.19	0.41
1:AA:1225:A:N3	1:AA:1225:A:C2'	2.83	0.41
1:AA:1277:C:O2'	1:AA:1279:G:H8	2.01	0.41
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.20	0.41
1:AA:1381:U:C5	1:AA:1382:C:C5	3.09	0.41
1:AA:1401:G:N2	1:AA:1402:C:H1'	2.34	0.41
5:AE:126:LYS:CD	5:AE:128:TYR:HE2	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:44:ALA:O	9:AI:47:VAL:HG22	2.20	0.41
9:AI:58:VAL:O	9:AI:59:GLU:HB2	2.18	0.41
9:AI:61:LEU:HD23	9:AI:61:LEU:H	1.85	0.41
10:AJ:34:ALA:O	10:AJ:35:GLN:HB2	2.20	0.41
10:AJ:35:GLN:HG3	10:AJ:77:VAL:HB	2.01	0.41
10:AJ:91:ASP:O	10:AJ:92:LEU:HD12	2.20	0.41
12:AL:57:LEU:C	12:AL:59:ASN:N	2.74	0.41
12:AL:59:ASN:OD1	12:AL:59:ASN:C	2.56	0.41
15:AO:24:SER:O	15:AO:25:THR:C	2.58	0.41
18:AR:63:ARG:HB3	18:AR:70:TYR:CZ	2.56	0.41
22:BA:818:G:H2'	22:BA:819:A:OP2	2.20	0.41
22:BA:1856:U:O4	22:BA:1857:G:C6	2.73	0.41
22:BA:1899:A:O2'	22:BA:1900:A:H5''	2.21	0.41
22:BA:1915:U:H2'	22:BA:1916:A:H8	1.85	0.41
22:BA:1932:A:H2	22:BA:1969:A:C2	2.38	0.41
22:BA:2075:U:C4	22:BA:2238:G:C6	3.09	0.41
22:BA:2190:G:C6	22:BA:2191:A:C4	3.08	0.41
22:BA:2192:U:H2'	22:BA:2193:G:C5'	2.46	0.41
22:BA:2280:G:O6	44:BW:14:ARG:HD2	2.20	0.41
22:BA:2311:A:H1'	27:BF:85:ILE:HD11	2.01	0.41
22:BA:2331:G:C6	22:BA:2332:C:N3	2.88	0.41
22:BA:2380:C:P	36:BO:17:LYS:NZ	2.93	0.41
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.68	0.41
22:BA:2564:A:C6	22:BA:2565:A:N1	2.89	0.41
22:BA:2650:U:C2'	22:BA:2651:C:H5'	2.50	0.41
22:BA:2885:G:H2'	22:BA:2886:A:C5'	2.49	0.41
25:BD:13:ARG:O	25:BD:14:ILE:HD12	2.20	0.41
29:BH:33:GLN:O	29:BH:35:LYS:N	2.53	0.41
31:BJ:5:THR:HG22	31:BJ:6:ALA:O	2.20	0.41
32:BK:64:ARG:O	32:BK:82:ASN:HA	2.20	0.41
32:BK:66:LYS:HE3	32:BK:66:LYS:O	2.21	0.41
32:BK:107:LEU:O	32:BK:108:ARG:C	2.59	0.41
34:BM:20:LEU:HD12	43:BV:81:PRO:CG	2.51	0.41
37:BP:53:ARG:CG	37:BP:53:ARG:NH1	2.72	0.41
53:B5:43:GLU:HA	53:B5:178:LYS:HA	2.02	0.41
1:CA:182:A:C4	1:CA:184:G:N7	2.89	0.41
1:CA:568:G:O2'	1:CA:574:A:N1	2.46	0.41
1:CA:784:A:H2'	1:CA:785:G:C8	2.55	0.41
1:CA:932:C:H2'	1:CA:933:G:C8	2.55	0.41
1:CA:968:A:C8	1:CA:1062:U:H4'	2.55	0.41
1:CA:1015:G:O2'	1:CA:1016:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1216:A:OP1	14:CN:5:SER:CB	2.69	0.41
1:CA:1286:U:O2	1:CA:1286:U:H2'	2.19	0.41
1:CA:1310:G:N2	1:CA:1328:C:O2	2.53	0.41
2:CB:68:LEU:HD12	2:CB:158:PRO:CG	2.51	0.41
2:CB:141:LEU:O	2:CB:143:LYS:N	2.53	0.41
2:CB:187:VAL:O	2:CB:187:VAL:HG22	2.21	0.41
10:CJ:31:ARG:HG2	10:CJ:31:ARG:O	2.20	0.41
11:CK:82:LEU:HD23	11:CK:82:LEU:O	2.21	0.41
13:CM:85:CYS:HB3	19:CS:74:PHE:CZ	2.56	0.41
18:CR:62:ALA:HB1	18:CR:67:LEU:HB2	2.02	0.41
22:DA:543:G:N2	22:DA:551:G:C4	2.87	0.41
22:DA:590:A:H2'	22:DA:591:U:O4'	2.21	0.41
22:DA:681:G:N3	22:DA:682:G:C8	2.88	0.41
22:DA:830:G:C6	22:DA:2448:A:C8	3.09	0.41
22:DA:972:A:C2	22:DA:973:A:N6	2.88	0.41
22:DA:1436:G:C2	22:DA:1437:C:H1'	2.55	0.41
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.69	0.41
22:DA:2094:A:C2	22:DA:2196:C:O2	2.73	0.41
22:DA:2361:G:H2'	22:DA:2362:C:O4'	2.20	0.41
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.55	0.41
22:DA:2665:A:N3	22:DA:2665:A:H2'	2.35	0.41
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.56	0.41
23:DB:64:G:H2'	23:DB:65:U:O4'	2.20	0.41
24:DC:64:ILE:O	24:DC:103:TYR:HB2	2.20	0.41
25:DD:47:ALA:HB2	25:DD:83:ARG:HA	2.02	0.41
26:DE:170:ARG:CZ	26:DE:176:ASP:OD1	2.68	0.41
27:DF:122:PHE:CE1	27:DF:166:GLY:C	2.94	0.41
29:DH:135:HIS:CG	29:DH:136:SER:N	2.89	0.41
30:DI:19:ASN:OD1	30:DI:35:ILE:HG22	2.20	0.41
30:DI:54:PRO:HB2	30:DI:78:VAL:HG21	2.03	0.41
35:DN:2:ARG:O	35:DN:3:HIS:C	2.59	0.41
35:DN:38:LEU:HD11	35:DN:42:LYS:HE3	2.02	0.41
38:DQ:10:ALA:C	38:DQ:12:ALA:N	2.71	0.41
40:DS:19:LEU:HD13	40:DS:19:LEU:N	2.35	0.41
40:DS:41:LYS:O	40:DS:42:LYS:C	2.59	0.41
49:D1:26:ASN:O	49:D1:28:ARG:N	2.53	0.41
1:AA:212:G:N1	1:AA:213:G:C5	2.89	0.41
1:AA:411:A:C6	1:AA:429:U:C4	3.07	0.41
1:AA:422:C:H1'	1:AA:423:G:N2	2.35	0.41
1:AA:495:A:N3	1:AA:496:A:C6	2.88	0.41
1:AA:678:U:H2'	1:AA:679:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:791:G:C5	1:AA:792:A:N7	2.88	0.41
1:AA:927:G:C2	1:AA:1391:U:O2	2.73	0.41
1:AA:974:A:H4'	1:AA:975:A:O5'	2.20	0.41
1:AA:1005:A:H3'	1:AA:1006:G:C8	2.55	0.41
1:AA:1130:A:N3	1:AA:1146:A:C4	2.89	0.41
2:AB:81:LYS:HG2	2:AB:85:LEU:HD22	2.03	0.41
2:AB:91:PHE:CE2	2:AB:150:GLY:HA2	2.55	0.41
4:AD:62:ARG:NH1	4:AD:69:GLU:HG2	2.36	0.41
9:AI:50:GLN:N	9:AI:51:PRO:HD2	2.35	0.41
9:AI:86:ALA:C	9:AI:88:MET:N	2.73	0.41
9:AI:115:LYS:O	9:AI:116:VAL:C	2.59	0.41
13:AM:114:LYS:HB3	13:AM:115:PRO:HD3	2.02	0.41
16:AP:30:GLY:O	16:AP:31:ARG:C	2.59	0.41
22:BA:185:G:H4'	22:BA:218:A:H4'	2.02	0.41
22:BA:257:C:H3'	22:BA:258:G:H8	1.86	0.41
22:BA:345:A:N3	22:BA:346:A:N6	2.67	0.41
22:BA:769:U:N3	22:BA:770:G:N7	2.69	0.41
22:BA:1169:A:N1	22:BA:1180:U:O4	2.53	0.41
22:BA:1333:G:C2	22:BA:1334:G:C8	3.09	0.41
22:BA:1366:A:C6	22:BA:1367:A:C4	3.09	0.41
22:BA:1540:G:H2'	22:BA:1541:C:O4'	2.21	0.41
22:BA:1613:G:O2'	50:B2:3:ARG:HD3	2.21	0.41
22:BA:1857:G:N2	22:BA:1884:G:H1'	2.35	0.41
22:BA:1900:A:C2	22:BA:1970:A:C4	3.08	0.41
22:BA:1917:U:C5	22:BA:1918:A:C6	3.08	0.41
22:BA:2085:U:O2	22:BA:2235:G:C2	2.74	0.41
22:BA:2302:U:O2'	22:BA:2303:G:H5'	2.20	0.41
22:BA:2379:G:O3'	36:BO:17:LYS:NZ	2.53	0.41
23:BB:97:C:H2'	23:BB:98:G:H5'	2.03	0.41
25:BD:25:THR:HG22	25:BD:27:ILE:HG13	2.01	0.41
29:BH:90:LEU:HD13	29:BH:125:THR:HA	2.03	0.41
32:BK:47:ILE:HB	32:BK:48:PRO:CD	2.50	0.41
34:BM:135:VAL:CG2	43:BV:57:TYR:CD1	3.04	0.41
35:BN:70:THR:OG1	35:BN:71:ARG:N	2.53	0.41
40:BS:69:LEU:HG	40:BS:107:VAL:HG22	2.02	0.41
51:B3:15:LYS:O	51:B3:22:PHE:HA	2.20	0.41
53:B5:28:ARG:O	53:B5:28:ARG:CG	2.69	0.41
53:B5:28:ARG:O	53:B5:28:ARG:HG3	2.20	0.41
53:B5:212:SER:CB	53:B5:221:PRO:CB	2.98	0.41
1:CA:18:C:C4	1:CA:19:A:N7	2.88	0.41
1:CA:29:U:H4'	1:CA:295:C:O3'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:312:C:H2'	1:CA:313:A:O4'	2.21	0.41
1:CA:552:U:N3	1:CA:553:A:C8	2.88	0.41
1:CA:686:U:C2	1:CA:687:A:N7	2.89	0.41
1:CA:803:G:N7	1:CA:804:U:C4	2.89	0.41
1:CA:1014:A:C8	1:CA:1015:G:C5	3.09	0.41
1:CA:1061:G:C2	1:CA:1197:A:C2	3.09	0.41
1:CA:1351:U:H2'	1:CA:1352:C:C6	2.54	0.41
2:CB:80:VAL:O	2:CB:84:ALA:HB3	2.20	0.41
3:CC:111:LEU:N	3:CC:111:LEU:CD2	2.84	0.41
3:CC:173:VAL:O	3:CC:173:VAL:HG12	2.20	0.41
5:CE:121:HIS:O	5:CE:122:ASN:HB3	2.21	0.41
17:CQ:48:ASP:O	17:CQ:49:GLU:C	2.57	0.41
22:DA:84:A:C2	22:DA:103:A:C6	3.07	0.41
22:DA:426:C:H2'	22:DA:427:U:O4'	2.20	0.41
22:DA:489:G:C2	22:DA:491:G:H1'	2.55	0.41
22:DA:870:U:OP1	34:DM:6:ARG:HD2	2.21	0.41
22:DA:892:A:N3	22:DA:892:A:H2'	2.35	0.41
22:DA:1215:G:H2'	22:DA:1216:G:O4'	2.21	0.41
22:DA:1257:C:C4	22:DA:1258:U:O4	2.74	0.41
22:DA:1567:G:N7	24:DC:83:TYR:CE1	2.88	0.41
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.55	0.41
22:DA:1830:C:H5'	24:DC:15:HIS:NE2	2.36	0.41
22:DA:1835:G:N3	22:DA:1836:C:C6	2.88	0.41
22:DA:1847:A:O2'	22:DA:1848:A:P	2.78	0.41
22:DA:2261:C:C2	22:DA:2280:G:C2	3.08	0.41
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.86	0.41
22:DA:2553:G:H2'	22:DA:2554:U:H4'	2.02	0.41
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.21	0.41
22:DA:2864:G:C2'	22:DA:2865:U:H5'	2.51	0.41
23:DB:44:G:N2	23:DB:48:U:O2	2.53	0.41
23:DB:71:C:O2	23:DB:106:G:C2	2.74	0.41
25:DD:25:THR:HG22	25:DD:27:ILE:HG13	2.01	0.41
26:DE:94:GLN:O	26:DE:95:LYS:C	2.59	0.41
26:DE:108:ILE:HD11	26:DE:180:LEU:HB3	2.01	0.41
26:DE:131:THR:HG22	26:DE:160:ALA:HA	2.02	0.41
27:DF:13:VAL:O	27:DF:17:MET:HG2	2.21	0.41
30:DI:54:PRO:O	30:DI:75:PRO:HD2	2.21	0.41
32:DK:36:GLY:HA2	32:DK:62:VAL:O	2.20	0.41
33:DL:29:LYS:C	33:DL:30:THR:HG23	2.41	0.41
38:DQ:47:TYR:C	38:DQ:47:TYR:CD2	2.93	0.41
41:DT:11:LEU:HG	41:DT:46:ALA:HB1	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DV:44:HIS:O	43:DV:45:ASP:C	2.58	0.41
45:DX:13:VAL:HG23	45:DX:29:PHE:HB2	2.03	0.41
49:D1:21:TYR:CE1	49:D1:38:LYS:HD2	2.56	0.41
49:D1:38:LYS:HB2	49:D1:49:TYR:CD2	2.56	0.41
52:D4:30:GLU:HG3	52:D4:32:LYS:HB2	2.01	0.41
1:AA:142:G:H5'	1:AA:143:A:OP2	2.20	0.41
1:AA:719:C:O2'	18:AR:39:ILE:O	2.27	0.41
1:AA:864:A:H3'	1:AA:865:A:C8	2.56	0.41
1:AA:923:A:H2'	1:AA:924:C:C6	2.55	0.41
1:AA:956:U:C5	1:AA:957:U:C5	3.09	0.41
1:AA:1008:U:H5''	1:AA:1009:U:OP1	2.21	0.41
1:AA:1157:A:C6	1:AA:1180:A:C5	3.09	0.41
1:AA:1213:A:C5	1:AA:1215:G:C4	3.08	0.41
1:AA:1234:C:O2'	1:AA:1235:U:H5'	2.21	0.41
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.55	0.41
2:AB:50:PHE:CA	2:AB:213:TYR:OH	2.65	0.41
2:AB:182:PRO:O	2:AB:183:VAL:HB	2.20	0.41
4:AD:112:ALA:O	4:AD:115:ARG:N	2.53	0.41
6:AF:42:TRP:CZ2	6:AF:61:LEU:HB2	2.56	0.41
7:AG:9:GLN:HG3	7:AG:9:GLN:O	2.21	0.41
7:AG:69:VAL:HG21	7:AG:104:ILE:CD1	2.49	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.20	0.41
11:AK:111:THR:HA	21:AU:4:ILE:O	2.21	0.41
15:AO:32:LEU:O	15:AO:33:THR:C	2.59	0.41
22:BA:242:G:N7	51:B3:5:LYS:HD3	2.35	0.41
22:BA:807:U:OP2	33:BL:41:ARG:NH1	2.54	0.41
22:BA:1428:C:C5	22:BA:1569:A:H5''	2.56	0.41
22:BA:2201:G:C4	22:BA:2223:G:N2	2.89	0.41
22:BA:2311:A:C5	27:BF:77:PHE:HB3	2.56	0.41
22:BA:2592:G:C5	22:BA:2593:U:C5	3.09	0.41
22:BA:2831:G:P	25:BD:56:LYS:NZ	2.93	0.41
26:BE:79:ARG:O	26:BE:80:SER:CB	2.68	0.41
26:BE:108:ILE:CD1	26:BE:180:LEU:HB3	2.49	0.41
27:BF:8:TYR:CD2	27:BF:12:VAL:HB	2.56	0.41
30:BI:57:VAL:HG23	30:BI:71:THR:HA	2.02	0.41
31:BJ:17:VAL:HG23	31:BJ:137:PRO:CB	2.51	0.41
34:BM:65:ILE:HG12	34:BM:103:TYR:CD2	2.56	0.41
35:BN:101:GLY:C	35:BN:102:PHE:CD2	2.94	0.41
41:BT:29:THR:HG23	41:BT:86:THR:CA	2.50	0.41
41:BT:71:GLY:O	41:BT:73:ARG:N	2.47	0.41
46:BY:35:GLY:O	46:BY:36:GLN:O	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BY:42:LEU:O	46:BY:45:GLN:O	2.38	0.41
53:B5:45:HIS:CD2	53:B5:176:VAL:HA	2.56	0.41
1:CA:34:C:H2'	1:CA:35:G:C8	2.56	0.41
1:CA:53:A:H2'	1:CA:54:C:O4'	2.21	0.41
1:CA:116:A:C8	1:CA:116:A:OP2	2.73	0.41
1:CA:282:A:C8	1:CA:283:U:C5	3.09	0.41
1:CA:296:U:C2	1:CA:297:G:C8	3.09	0.41
1:CA:413:G:O6	4:CD:32:CYS:N	2.53	0.41
1:CA:445:G:C2	1:CA:446:G:C4	3.08	0.41
1:CA:554:A:H2'	1:CA:555:U:H6	1.86	0.41
1:CA:630:A:H2'	1:CA:631:C:C6	2.56	0.41
1:CA:977:A:O2'	1:CA:1223:C:N4	2.53	0.41
1:CA:1144:G:N2	1:CA:1145:A:C2	2.88	0.41
1:CA:1291:U:OP1	7:CG:37:SER:HB3	2.20	0.41
1:CA:1315:U:C5	1:CA:1316:G:C5	3.09	0.41
8:CH:21:ASN:O	8:CH:22:LYS:C	2.59	0.41
11:CK:51:GLY:O	11:CK:52:PHE:CD2	2.74	0.41
13:CM:18:ALA:CB	13:CM:45:ILE:HD11	2.50	0.41
18:CR:20:GLU:O	18:CR:21:ILE:C	2.58	0.41
21:CU:29:LEU:O	21:CU:30:ALA:C	2.59	0.41
22:DA:149:A:C2'	22:DA:150:U:H5'	2.51	0.41
22:DA:311:A:OP1	22:DA:332:A:C2	2.73	0.41
22:DA:321:U:H4'	26:DE:159:LEU:O	2.20	0.41
22:DA:677:A:C2	22:DA:802:A:C2	3.09	0.41
22:DA:1178:C:H2'	22:DA:1179:G:C8	2.55	0.41
22:DA:1265:A:C8	22:DA:1267:U:N3	2.89	0.41
22:DA:1276:A:N1	22:DA:1295:C:C2	2.88	0.41
22:DA:1358:G:N1	22:DA:1372:U:OP2	2.50	0.41
22:DA:1555:G:C2	22:DA:1556:C:C2	3.09	0.41
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.21	0.41
22:DA:1722:A:C2	22:DA:1739:A:H1'	2.55	0.41
22:DA:1854:A:H2'	22:DA:1855:U:H5'	2.03	0.41
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.55	0.41
22:DA:2061:G:C6	56:DA:3001:DOL:H162	2.55	0.41
22:DA:2133:G:C6	22:DA:2157:G:C6	3.08	0.41
22:DA:2262:U:O2'	22:DA:2263:C:H5'	2.21	0.41
22:DA:2308:G:H5'	22:DA:2309:A:OP2	2.21	0.41
22:DA:2447:G:C2	22:DA:2501:C:N4	2.89	0.41
22:DA:2725:A:C4	22:DA:2727:A:N7	2.87	0.41
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.36	0.41
22:DA:2820:A:C6	25:DD:197:THR:HB	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:2836:U:H2'	22:DA:2837:A:C8	2.54	0.41
22:DA:2889:C:C4	22:DA:2890:G:C6	3.08	0.41
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.35	0.41
25:DD:37:VAL:CG1	25:DD:38:LYS:N	2.83	0.41
25:DD:179:ARG:HD2	25:DD:188:LEU:CD1	2.51	0.41
27:DF:174:ASP:O	27:DF:175:PHE:O	2.39	0.41
28:DG:80:THR:HG22	28:DG:81:GLU:N	2.35	0.41
29:DH:130:VAL:CG1	29:DH:131:SER:N	2.82	0.41
30:DI:84:ALA:HA	30:DI:101:ILE:HD12	2.01	0.41
31:DJ:4:PHE:CD2	38:DQ:100:VAL:HG11	2.56	0.41
31:DJ:135:GLN:O	31:DJ:136:GLN:C	2.58	0.41
32:DK:7:MET:C	32:DK:8:LEU:HD12	2.41	0.41
35:DN:63:ARG:HG3	35:DN:80:PHE:CE2	2.56	0.41
41:DT:20:ALA:HA	41:DT:31:VAL:HG21	2.02	0.41
42:DU:13:VAL:CG2	42:DU:39:ILE:HG21	2.51	0.41
51:D3:32:ILE:HG22	51:D3:35:LYS:HD2	2.02	0.41
52:D4:3:VAL:HG23	52:D4:37:GLN:CD	2.41	0.41
1:AA:102:G:C2	1:AA:103:U:C6	3.09	0.41
1:AA:397:A:C5	1:AA:548:G:N7	2.89	0.41
1:AA:504:C:H1'	1:AA:510:A:C4	2.56	0.41
1:AA:604:G:C2	1:AA:635:A:N3	2.89	0.41
1:AA:604:G:C6	1:AA:635:A:N1	2.89	0.41
1:AA:707:U:H4'	11:AK:22:HIS:CD2	2.56	0.41
1:AA:885:G:C2	1:AA:913:A:N1	2.89	0.41
1:AA:890:G:O2'	1:AA:906:A:N6	2.54	0.41
1:AA:1068:G:N7	1:AA:1094:G:H2'	2.35	0.41
1:AA:1151:A:O2'	1:AA:1152:A:P	2.78	0.41
1:AA:1438:G:OP1	20:AT:29:ARG:HD3	2.20	0.41
2:AB:24:ASN:O	2:AB:25:PRO:C	2.58	0.41
2:AB:210:VAL:O	2:AB:211:THR:C	2.59	0.41
3:AC:23:PHE:CD2	3:AC:23:PHE:C	2.93	0.41
3:AC:77:ILE:HA	3:AC:84:VAL:CG2	2.51	0.41
4:AD:173:VAL:HG22	4:AD:174:ASP:H	1.85	0.41
8:AH:64:LYS:HB3	8:AH:64:LYS:HE2	1.93	0.41
10:AJ:5:ARG:HG2	10:AJ:79:PRO:HG3	2.01	0.41
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.38	0.41
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB3	2.01	0.41
11:AK:56:ARG:HA	11:AK:56:ARG:HE	1.85	0.41
17:AQ:7:THR:HG22	17:AQ:61:ILE:O	2.20	0.41
17:AQ:14:SER:HB3	17:AQ:22:VAL:HG11	2.03	0.41
20:AT:74:ARG:O	20:AT:78:ASN:OD1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:54:G:C5	22:BA:55:G:C8	3.09	0.41
22:BA:108:G:C2'	22:BA:109:C:H5'	2.50	0.41
22:BA:493:G:H2'	22:BA:494:G:O4'	2.21	0.41
22:BA:528:A:C2	22:BA:2042:A:H2'	2.56	0.41
22:BA:934:U:H2'	22:BA:935:C:C6	2.56	0.41
22:BA:948:C:O2	22:BA:984:A:O2'	2.34	0.41
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.50	0.41
22:BA:1496:A:N3	22:BA:1577:C:O2'	2.46	0.41
22:BA:1808:A:N1	45:BX:28:ARG:HD2	2.35	0.41
22:BA:1850:G:C6	22:BA:1851:U:C4	3.08	0.41
22:BA:1924:C:O2	22:BA:1926:U:C5	2.73	0.41
22:BA:1941:C:C4	22:BA:1942:C:C4	3.07	0.41
22:BA:2564:A:C6	22:BA:2565:A:C6	3.09	0.41
22:BA:2819:G:H2'	22:BA:2821:A:N7	2.36	0.41
22:BA:2838:G:O3'	35:BN:46:ARG:HD3	2.21	0.41
24:BC:7:LYS:HB3	24:BC:8:PRO:HD2	2.02	0.41
24:BC:30:PHE:CZ	24:BC:32:PRO:HG2	2.55	0.41
24:BC:31:ALA:N	24:BC:32:PRO:CD	2.83	0.41
25:BD:61:THR:CB	25:BD:63:PRO:HD2	2.50	0.41
26:BE:43:THR:O	26:BE:44:ARG:HB3	2.21	0.41
28:BG:74:SER:HA	28:BG:77:ILE:HG12	2.02	0.41
29:BH:82:SER:HB3	29:BH:146:VAL:HG12	2.03	0.41
29:BH:95:GLY:HA2	29:BH:117:LEU:CD2	2.51	0.41
29:BH:100:ALA:HB2	29:BH:115:VAL:CG2	2.50	0.41
30:BI:92:LYS:HB3	30:BI:95:LYS:HG2	2.03	0.41
33:BL:74:THR:HA	33:BL:107:PHE:O	2.21	0.41
34:BM:106:ASP:OD2	34:BM:106:ASP:C	2.59	0.41
39:BR:66:HIS:ND1	39:BR:94:THR:CG2	2.82	0.41
40:BS:36:LEU:CD1	40:BS:47:VAL:HG12	2.51	0.41
41:BT:1:MET:C	41:BT:2:ILE:HD12	2.41	0.41
43:BV:56:PHE:O	43:BV:61:LEU:HD11	2.19	0.41
1:CA:6:G:H4'	1:CA:298:A:H4'	2.03	0.41
1:CA:177:G:C6	1:CA:178:C:N4	2.89	0.41
1:CA:270:A:H2'	1:CA:271:C:C6	2.56	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.89	0.41
1:CA:435:A:C2'	1:CA:436:C:O5'	2.69	0.41
1:CA:554:A:H2'	1:CA:555:U:C6	2.55	0.41
1:CA:661:G:C5	1:CA:662:U:C5	3.08	0.41
1:CA:764:C:C5	1:CA:765:G:N7	2.89	0.41
1:CA:771:G:C2	1:CA:809:G:C2	3.08	0.41
1:CA:994:A:N3	1:CA:994:A:C2'	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1056:U:H5'	3:CC:163:ALA:HB3	2.02	0.41
1:CA:1138:G:C2	1:CA:1140:C:C4	3.09	0.41
1:CA:1361:G:C2'	1:CA:1362:A:H5''	2.51	0.41
1:CA:1434:A:N6	1:CA:1435:G:N1	2.68	0.41
2:CB:72:THR:HG22	2:CB:95:ARG:NH1	2.36	0.41
3:CC:47:LEU:HD22	3:CC:76:VAL:HG22	2.03	0.41
4:CD:129:VAL:O	4:CD:129:VAL:HG13	2.19	0.41
5:CE:77:ASN:O	5:CE:80:THR:HG22	2.20	0.41
5:CE:150:PRO:HA	8:CH:99:LEU:HD21	2.02	0.41
6:CF:38:ARG:CG	6:CF:63:ASN:HB2	2.50	0.41
6:CF:47:LEU:CD2	6:CF:59:TYR:OH	2.69	0.41
9:CI:15:SER:OG	9:CI:70:GLY:HA3	2.19	0.41
9:CI:49:ARG:NH2	9:CI:53:GLU:HA	2.35	0.41
13:CM:25:VAL:HG13	13:CM:25:VAL:O	2.20	0.41
17:CQ:15:ASP:HA	17:CQ:21:ILE:HD12	2.02	0.41
22:DA:158:U:C5	22:DA:159:G:N7	2.88	0.41
22:DA:195:A:C5	22:DA:198:C:C5	3.08	0.41
22:DA:503:A:C2	22:DA:506:G:C5	3.09	0.41
22:DA:520:G:H2'	22:DA:521:U:C6	2.56	0.41
22:DA:527:C:OP2	22:DA:2779:U:N3	2.54	0.41
22:DA:543:G:N1	22:DA:551:G:C6	2.88	0.41
22:DA:1221:C:H2'	22:DA:1222:U:O4'	2.21	0.41
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.20	0.41
22:DA:1417:C:N3	22:DA:1581:G:O6	2.54	0.41
22:DA:1876:A:N7	22:DA:1877:A:C5	2.88	0.41
22:DA:2127:G:H1'	22:DA:2162:G:N7	2.36	0.41
22:DA:2409:G:C6	22:DA:2410:G:C5	3.08	0.41
22:DA:2513:A:C4	22:DA:2514:U:C5	3.08	0.41
22:DA:2718:G:C2	22:DA:2719:G:C1'	3.03	0.41
22:DA:2746:U:H2'	22:DA:2747:G:O4'	2.20	0.41
22:DA:2748:A:N1	22:DA:2749:A:C2	2.89	0.41
22:DA:2847:U:H2'	22:DA:2848:G:H5'	2.02	0.41
22:DA:2892:G:H5''	22:DA:2894:G:N2	2.36	0.41
25:DD:5:VAL:HG21	25:DD:80:TRP:CG	2.56	0.41
25:DD:104:VAL:HG23	25:DD:105:LYS:N	2.36	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
33:DL:78:ARG:CB	33:DL:113:ALA:HB3	2.50	0.41
36:DO:18:LEU:CD1	36:DO:23:ALA:HB3	2.51	0.41
41:DT:64:LYS:HA	41:DT:79:ASP:OD1	2.21	0.41
48:D0:7:LYS:HE2	48:D0:8:PRO:O	2.21	0.41
50:D2:46:LYS:C	50:D2:46:LYS:HD3	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:131:A:C2	1:AA:132:C:N3	2.89	0.41
1:AA:148:G:C2'	1:AA:149:A:O5'	2.69	0.41
1:AA:255:G:H4'	17:AQ:19:LYS:HD3	2.03	0.41
1:AA:399:G:H2'	1:AA:400:C:C6	2.56	0.41
1:AA:472:U:C4	1:AA:473:U:C4	3.09	0.41
1:AA:502:A:C2	1:AA:544:G:C2	3.09	0.41
1:AA:1501:C:C5	1:AA:1504:G:C8	3.09	0.41
2:AB:144:LEU:O	2:AB:145:GLU:C	2.59	0.41
2:AB:167:ASP:O	2:AB:170:HIS:CE1	2.74	0.41
2:AB:186:ILE:HD11	2:AB:204:ASP:HA	2.02	0.41
6:AF:38:ARG:CZ	6:AF:61:LEU:HD21	2.50	0.41
8:AH:49:PHE:HB3	8:AH:61:LEU:CD2	2.50	0.41
8:AH:49:PHE:CB	8:AH:61:LEU:HD23	2.51	0.41
11:AK:56:ARG:HA	11:AK:56:ARG:NE	2.35	0.41
13:AM:90:ARG:NH1	13:AM:95:LEU:HB3	2.36	0.41
15:AO:46:HIS:O	15:AO:47:LYS:HB2	2.21	0.41
16:AP:45:GLU:O	16:AP:46:LYS:C	2.59	0.41
16:AP:78:VAL:O	16:AP:78:VAL:CG1	2.68	0.41
18:AR:25:ASP:O	18:AR:27:ALA:N	2.54	0.41
19:AS:18:LYS:HE3	19:AS:33:THR:CG2	2.51	0.41
20:AT:67:ILE:CD1	20:AT:71:LYS:HG2	2.51	0.41
21:AU:53:VAL:O	21:AU:54:LYS:CB	2.69	0.41
22:BA:247:G:H4'	22:BA:386:G:C5	2.55	0.41
22:BA:477:A:C6	22:BA:478:A:C6	3.08	0.41
22:BA:524:G:O2'	22:BA:525:U:H5'	2.21	0.41
22:BA:673:C:OP1	26:BE:49:ARG:NH2	2.53	0.41
22:BA:674:G:O2'	26:BE:69:ARG:HB3	2.21	0.41
22:BA:996:A:C5	22:BA:1160:G:C2	3.09	0.41
22:BA:1045:C:H3'	22:BA:1046:A:H5'	2.01	0.41
22:BA:1073:A:H2'	22:BA:1074:G:H5''	2.02	0.41
22:BA:1171:G:C5	22:BA:1172:C:C4	3.08	0.41
22:BA:1195:G:O2'	22:BA:1196:C:H5'	2.20	0.41
22:BA:1869:G:C2	22:BA:1873:G:C6	3.08	0.41
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.55	0.41
24:BC:157:SER:O	24:BC:158:ALA:C	2.59	0.41
26:BE:149:ILE:CD1	26:BE:172:ALA:N	2.84	0.41
27:BF:107:ALA:C	27:BF:109:PRO:HD2	2.41	0.41
28:BG:146:ALA:O	28:BG:149:ARG:HB3	2.20	0.41
29:BH:30:LEU:C	29:BH:32:PRO:HD2	2.41	0.41
30:BI:18:ALA:O	30:BI:19:ASN:HB2	2.21	0.41
30:BI:29:GLY:C	30:BI:30:GLN:HG3	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BK:71:ARG:O	32:BK:73:ASP:N	2.53	0.41
36:BO:78:VAL:HG23	36:BO:79:ALA:N	2.36	0.41
37:BP:27:GLU:O	37:BP:27:GLU:HG3	2.21	0.41
39:BR:14:VAL:CG1	39:BR:15:SER:N	2.83	0.41
44:BW:47:ALA:HB1	44:BW:51:VAL:O	2.21	0.41
45:BX:4:VAL:HG22	45:BX:11:ARG:HB3	2.03	0.41
1:CA:280:C:H4'	1:CA:281:G:OP2	2.21	0.41
1:CA:386:C:C4	1:CA:387:U:C5	3.09	0.41
1:CA:1074:G:H4'	2:CB:102:THR:O	2.21	0.41
1:CA:1243:C:H2'	1:CA:1244:G:C8	2.56	0.41
1:CA:1260:G:OP1	1:CA:1284:C:O2'	2.25	0.41
1:CA:1386:G:N3	1:CA:1387:G:C8	2.88	0.41
1:CA:1423:G:C6	1:CA:1424:U:C4	3.09	0.41
2:CB:94:HIS:CG	2:CB:95:ARG:NH2	2.89	0.41
2:CB:116:ASP:O	2:CB:120:GLN:HB3	2.21	0.41
2:CB:170:HIS:CE1	2:CB:171:ILE:HG13	2.56	0.41
4:CD:33:LYS:NZ	4:CD:33:LYS:HB2	2.35	0.41
4:CD:58:LYS:CB	4:CD:200:ILE:HB	2.50	0.41
4:CD:126:ASN:HA	4:CD:142:VAL:HG23	2.01	0.41
5:CE:154:ALA:O	5:CE:156:LYS:N	2.54	0.41
5:CE:156:LYS:CD	8:CH:71:VAL:HG13	2.51	0.41
6:CF:9:MET:HG3	6:CF:86:ARG:HB2	2.02	0.41
6:CF:68:GLN:O	6:CF:72:ASP:HB2	2.21	0.41
8:CH:95:VAL:CG2	8:CH:128:TYR:HB3	2.51	0.41
9:CI:13:LYS:O	9:CI:14:SER:CB	2.69	0.41
16:CP:38:PHE:CZ	16:CP:51:ARG:HB3	2.55	0.41
19:CS:36:ARG:NH1	19:CS:72:GLY:HA3	2.36	0.41
20:CT:11:ALA:O	20:CT:14:SER:OG	2.33	0.41
22:DA:126:A:P	50:D2:19:ARG:HG3	2.60	0.41
22:DA:201:C:C5	22:DA:202:U:C5	3.08	0.41
22:DA:235:U:C4	22:DA:430:A:C2	3.08	0.41
22:DA:319:G:OP2	26:DE:132:LYS:HE3	2.21	0.41
22:DA:319:G:C5	22:DA:333:G:C2	3.09	0.41
22:DA:492:A:H2'	22:DA:493:G:O4'	2.20	0.41
22:DA:612:G:O2'	22:DA:613:A:C8	2.73	0.41
22:DA:1032:A:H4'	52:D4:16:ILE:HD12	2.03	0.41
22:DA:1158:C:H5''	47:DZ:31:ARG:HG3	2.03	0.41
22:DA:1502:A:C2	22:DA:1503:A:C5	3.09	0.41
22:DA:1602:U:O4	58:DA:3711:HOH:O	2.20	0.41
22:DA:1654:A:OP1	35:DN:1:MET:HA	2.21	0.41
22:DA:1973:G:C4	22:DA:1974:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1999:C:O2	22:DA:2687:U:O2'	2.34	0.41
22:DA:2093:G:C2	22:DA:2094:A:N7	2.89	0.41
22:DA:2134:A:C8	22:DA:2158:A:C2	3.08	0.41
22:DA:2303:G:N1	22:DA:2314:A:C6	2.89	0.41
22:DA:2345:G:C4	22:DA:2347:C:C5	3.09	0.41
22:DA:2393:U:H2'	22:DA:2394:C:O4'	2.21	0.41
22:DA:2648:G:C4	22:DA:2673:G:C2	3.09	0.41
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.41
22:DA:2784:U:H2'	22:DA:2785:C:C6	2.56	0.41
56:DA:3001:DOL:N9	56:DA:3001:DOL:HC41	2.36	0.41
23:DB:7:G:O2'	36:DO:38:GLN:OE1	2.35	0.41
29:DH:2:GLN:O	29:DH:3:VAL:O	2.38	0.41
31:DJ:39:LYS:HD3	31:DJ:39:LYS:HA	1.91	0.41
31:DJ:84:ILE:O	31:DJ:85:LYS:C	2.59	0.41
32:DK:21:CYS:SG	32:DK:39:ILE:HB	2.60	0.41
32:DK:66:LYS:NZ	32:DK:79:PHE:O	2.43	0.41
32:DK:92:GLU:HB3	32:DK:93:GLN:H	1.70	0.41
33:DL:23:ILE:HD12	39:DR:84:ARG:HG2	2.02	0.41
34:DM:19:GLY:C	34:DM:20:LEU:HD22	2.41	0.41
41:DT:34:VAL:HG11	41:DT:43:ILE:HD13	2.02	0.41
42:DU:13:VAL:HB	42:DU:18:ASP:O	2.20	0.41
42:DU:86:ARG:NH2	42:DU:95:PHE:HB3	2.36	0.41
43:DV:32:GLY:O	43:DV:93:ARG:HB2	2.21	0.41
45:DX:40:VAL:CG1	45:DX:68:LEU:HD11	2.50	0.41
46:DY:20:ASN:HB3	46:DY:50:VAL:HG22	2.02	0.41
1:AA:76:G:N2	1:AA:95:C:C2	2.89	0.41
1:AA:113:G:H2'	1:AA:114:U:H6	1.85	0.41
1:AA:263:A:H2'	1:AA:264:C:C5	2.56	0.41
1:AA:515:G:N2	1:AA:537:G:C4	2.89	0.41
1:AA:592:G:C6	1:AA:593:U:N3	2.89	0.41
1:AA:597:G:C8	1:AA:598:U:C5	3.08	0.41
1:AA:644:U:O2'	1:AA:645:G:H5'	2.20	0.41
1:AA:686:U:O4	1:AA:703:G:O2'	2.26	0.41
1:AA:741:G:H2'	1:AA:742:G:O4'	2.21	0.41
1:AA:747:A:C6	1:AA:748:G:C6	3.09	0.41
1:AA:990:C:N3	1:AA:991:U:C4	2.88	0.41
1:AA:1032:G:H3'	1:AA:1033:G:O4'	2.21	0.41
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.86	0.41
1:AA:1323:G:O2'	1:AA:1324:A:H5'	2.21	0.41
1:AA:1402:C:H2'	1:AA:1403:C:O4'	2.21	0.41
2:AB:101:LEU:HD13	2:AB:101:LEU:HA	1.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:151:ILE:O	2:AB:153:ASP:N	2.53	0.41
2:AB:157:LEU:HA	2:AB:158:PRO:HD3	1.98	0.41
3:AC:22:TRP:CB	3:AC:59:ARG:HG2	2.49	0.41
3:AC:113:ALA:HB1	3:AC:200:VAL:CG2	2.51	0.41
4:AD:123:ILE:N	4:AD:123:ILE:CD1	2.82	0.41
5:AE:80:THR:HB	5:AE:122:ASN:OD1	2.20	0.41
5:AE:141:ILE:HG22	5:AE:142:ASP:N	2.36	0.41
5:AE:151:GLU:O	5:AE:153:VAL:N	2.54	0.41
6:AF:3:HIS:CE1	6:AF:65:GLU:CD	2.94	0.41
7:AG:42:ILE:HG21	7:AG:116:MET:HB3	2.02	0.41
9:AI:17:ALA:CB	9:AI:67:VAL:HB	2.51	0.41
9:AI:57:MET:C	9:AI:59:GLU:N	2.74	0.41
9:AI:105:THR:CG2	9:AI:106:ARG:N	2.84	0.41
9:AI:127:PHE:CD2	9:AI:127:PHE:C	2.92	0.41
10:AJ:29:ALA:O	10:AJ:32:THR:HG23	2.21	0.41
11:AK:36:ASP:OD2	11:AK:38:GLN:C	2.59	0.41
11:AK:65:VAL:O	11:AK:65:VAL:CG2	2.68	0.41
12:AL:24:LEU:HB2	12:AL:59:ASN:HD22	1.84	0.41
12:AL:67:ILE:HG21	12:AL:72:HIS:CD2	2.56	0.41
14:AN:73:PHE:CD1	14:AN:74:LEU:N	2.89	0.41
15:AO:22:THR:HG22	15:AO:23:GLY:N	2.35	0.41
16:AP:14:ARG:N	16:AP:15:PRO:CD	2.84	0.41
16:AP:22:ALA:HA	16:AP:33:ILE:CG1	2.49	0.41
16:AP:49:GLY:O	16:AP:50:THR:OG1	2.31	0.41
16:AP:78:VAL:O	16:AP:78:VAL:HG13	2.20	0.41
19:AS:36:ARG:NE	19:AS:52:HIS:O	2.52	0.41
20:AT:67:ILE:HG13	20:AT:71:LYS:CG	2.48	0.41
20:AT:73:ALA:O	20:AT:74:ARG:C	2.60	0.41
22:BA:158:U:O2	22:BA:158:U:H2'	2.21	0.41
22:BA:359:G:H2'	22:BA:360:U:O4'	2.21	0.41
22:BA:416:U:C4	22:BA:417:C:C4	3.08	0.41
22:BA:548:G:O2'	22:BA:549:G:C2	2.72	0.41
22:BA:593:U:H2'	22:BA:594:U:C6	2.56	0.41
22:BA:669:G:C6	22:BA:801:G:O6	2.73	0.41
22:BA:910:A:N3	22:BA:2264:C:O2'	2.42	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.56	0.41
22:BA:975:A:C2	22:BA:990:A:C8	3.09	0.41
22:BA:982:C:H5''	22:BA:983:A:P	2.60	0.41
22:BA:1011:G:H1'	22:BA:1013:C:O4'	2.21	0.41
22:BA:1026:G:C5	22:BA:1134:A:C5	3.08	0.41
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.36	0.41
22:BA:1301:A:C2	22:BA:1303:G:C6	3.08	0.41
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.20	0.41
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.21	0.41
22:BA:1537:G:H3'	22:BA:1537:G:N3	2.36	0.41
22:BA:1638:C:H4'	22:BA:2710:C:O2	2.21	0.41
22:BA:1707:G:H2'	22:BA:1708:C:O4'	2.21	0.41
22:BA:1734:G:C4	22:BA:1735:A:C8	3.08	0.41
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.55	0.41
22:BA:1792:G:OP1	24:BC:204:VAL:O	2.38	0.41
22:BA:2189:U:C2'	22:BA:2190:G:C1'	2.95	0.41
22:BA:2308:G:C5	27:BF:77:PHE:CE2	3.09	0.41
22:BA:2379:G:H4'	36:BO:21:LEU:HD11	2.03	0.41
22:BA:2458:G:N3	22:BA:2490:G:N2	2.69	0.41
22:BA:2592:G:C2'	22:BA:2593:U:H5'	2.51	0.41
22:BA:2680:U:H2'	22:BA:2681:C:C6	2.56	0.41
22:BA:2740:A:C6	22:BA:2764:A:C8	3.08	0.41
22:BA:2771:C:H2'	22:BA:2772:C:C6	2.55	0.41
23:BB:116:G:H4'	36:BO:54:VAL:CG1	2.50	0.41
24:BC:77:VAL:HA	24:BC:114:ASP:O	2.21	0.41
24:BC:77:VAL:HG22	24:BC:78:VAL:N	2.35	0.41
24:BC:159:GLY:HA2	24:BC:198:ALA:HB2	2.02	0.41
25:BD:113:SER:O	25:BD:167:ASN:N	2.52	0.41
26:BE:61:ARG:NH2	26:BE:64:GLY:HA3	2.36	0.41
26:BE:171:ASP:OD1	26:BE:171:ASP:C	2.59	0.41
29:BH:90:LEU:HG	29:BH:92:GLY:C	2.42	0.41
29:BH:129:GLU:C	29:BH:130:VAL:HG23	2.41	0.41
29:BH:132:PHE:CE2	29:BH:142:VAL:CG2	3.04	0.41
30:BI:24:VAL:CG2	30:BI:28:LEU:CD2	2.99	0.41
30:BI:44:ALA:O	30:BI:45:LYS:CG	2.67	0.41
30:BI:115:ALA:O	30:BI:116:ASP:HB2	2.20	0.41
31:BJ:120:ARG:O	31:BJ:123:LYS:HE2	2.21	0.41
33:BL:57:LEU:HG	51:B3:14:PHE:HZ	1.86	0.41
34:BM:17:ASN:O	34:BM:38:ARG:HD3	2.21	0.41
36:BO:17:LYS:HA	36:BO:17:LYS:HD3	1.82	0.41
37:BP:51:ARG:O	37:BP:57:SER:HA	2.21	0.41
37:BP:103:ARG:CG	37:BP:103:ARG:NH1	2.75	0.41
37:BP:113:ARG:O	37:BP:114:LEU:HG	2.21	0.41
40:BS:51:LEU:O	40:BS:54:ALA:HB3	2.21	0.41
42:BU:85:PHE:CD1	42:BU:85:PHE:N	2.89	0.41
49:B1:52:ALA:O	49:B1:53:LYS:OXT	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B5:21:TYR:O	53:B5:22:THR:HG23	2.20	0.41
53:B5:61:GLY:O	53:B5:62:THR:C	2.59	0.41
1:CA:4:U:O2	1:CA:4:U:C2'	2.68	0.41
1:CA:144:G:C6	1:CA:145:G:C5	3.09	0.41
1:CA:197:A:C5	1:CA:221:C:H4'	2.55	0.41
1:CA:260:G:C6	1:CA:261:U:O4	2.74	0.41
1:CA:505:G:C2	1:CA:506:G:C5	3.09	0.41
1:CA:786:G:C2	1:CA:787:A:H1'	2.55	0.41
1:CA:801:U:N3	1:CA:802:A:N7	2.69	0.41
1:CA:825:A:H2'	1:CA:826:C:H6	1.86	0.41
1:CA:833:G:C5	1:CA:834:U:C5	3.09	0.41
1:CA:951:G:C5	1:CA:952:U:C4	3.09	0.41
1:CA:977:A:N6	1:CA:1224:U:O4'	2.54	0.41
1:CA:992:U:O4	1:CA:1044:A:C8	2.74	0.41
1:CA:1044:A:N7	1:CA:1045:C:H1'	2.36	0.41
1:CA:1126:U:N1	1:CA:1281:C:C5	2.89	0.41
1:CA:1211:U:HO2'	1:CA:1212:U:P	2.36	0.41
1:CA:1243:C:N4	1:CA:1244:G:O6	2.54	0.41
1:CA:1245:C:C2	1:CA:1246:A:C8	3.09	0.41
1:CA:1248:A:N3	9:CI:72:ILE:HD11	2.35	0.41
1:CA:1255:G:N1	1:CA:1279:G:N7	2.68	0.41
1:CA:1277:C:HO2'	1:CA:1279:G:C1'	2.34	0.41
1:CA:1298:U:H4'	1:CA:1299:A:C4	2.55	0.41
1:CA:1346:A:O3'	1:CA:1347:G:H4'	2.20	0.41
2:CB:71:GLY:HA3	2:CB:164:ILE:HG21	2.03	0.41
3:CC:23:PHE:CD2	10:CJ:97:ASP:HB2	2.56	0.41
3:CC:43:LEU:HD21	3:CC:68:ILE:HD11	2.02	0.41
4:CD:35:GLU:O	4:CD:37:ALA:N	2.49	0.41
4:CD:58:LYS:HE2	4:CD:69:GLU:OE1	2.21	0.41
4:CD:90:LEU:CD2	4:CD:200:ILE:HD11	2.50	0.41
5:CE:100:SER:O	5:CE:102:GLY:N	2.54	0.41
7:CG:57:SER:HB3	7:CG:60:GLU:HB2	2.03	0.41
8:CH:95:VAL:HG12	8:CH:96:MET:N	2.36	0.41
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	2.02	0.41
10:CJ:71:LEU:O	10:CJ:72:ARG:HD3	2.21	0.41
10:CJ:78:GLU:HG3	10:CJ:80:THR:OG1	2.20	0.41
11:CK:50:SER:HB3	11:CK:65:VAL:CG2	2.51	0.41
11:CK:82:LEU:CD2	11:CK:105:PHE:HB3	2.51	0.41
12:CL:36:ARG:O	12:CL:54:ARG:N	2.53	0.41
12:CL:47:SER:O	12:CL:48:ALA:HB3	2.19	0.41
15:CO:58:ARG:O	15:CO:62:GLN:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:21:VAL:HG23	16:CP:36:VAL:CG2	2.51	0.41
17:CQ:24:ALA:HA	17:CQ:43:LYS:HA	2.01	0.41
17:CQ:46:VAL:HG12	17:CQ:47:HIS:N	2.36	0.41
17:CQ:49:GLU:O	17:CQ:50:ASN:CG	2.59	0.41
20:CT:37:ALA:HA	20:CT:40:GLU:HB3	2.03	0.41
20:CT:79:LEU:O	20:CT:83:ILE:HG23	2.20	0.41
21:CU:41:PRO:O	21:CU:42:THR:C	2.59	0.41
22:DA:80:G:O2'	22:DA:346:A:N7	2.52	0.41
22:DA:116:C:H4'	22:DA:127:A:H5'	2.03	0.41
22:DA:120:U:O4	22:DA:177:G:C8	2.74	0.41
22:DA:236:C:H2'	22:DA:237:C:H6	1.85	0.41
22:DA:320:A:H4'	22:DA:322:A:N7	2.36	0.41
22:DA:371:A:N3	45:DX:61:LYS:NZ	2.67	0.41
22:DA:532:A:H3'	38:DQ:28:ARG:CZ	2.51	0.41
22:DA:542:C:N4	22:DA:543:G:O6	2.53	0.41
22:DA:561:G:O2'	38:DQ:45:TYR:OH	2.28	0.41
22:DA:562:U:H2'	22:DA:572:A:O4'	2.21	0.41
22:DA:580:U:H2'	22:DA:581:C:O4'	2.21	0.41
22:DA:616:A:C2	22:DA:617:G:C1'	3.04	0.41
22:DA:616:A:N3	22:DA:616:A:H2'	2.36	0.41
22:DA:667:U:C4	22:DA:668:A:C5	3.08	0.41
22:DA:961:C:C6	22:DA:2031:A:C2	3.09	0.41
22:DA:971:G:C2	22:DA:972:A:H1'	2.56	0.41
22:DA:1068:G:H2'	22:DA:1096:A:H5'	2.03	0.41
22:DA:1361:G:C4	22:DA:1362:C:C5	3.08	0.41
22:DA:1370:C:N3	22:DA:1371:G:C5	2.89	0.41
22:DA:1409:U:H2'	22:DA:1410:G:C8	2.56	0.41
22:DA:1652:A:C2	22:DA:2006:C:N3	2.89	0.41
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.21	0.41
22:DA:2128:G:C4	22:DA:2173:A:O2'	2.72	0.41
22:DA:2290:G:H2'	22:DA:2291:U:O4'	2.20	0.41
22:DA:2416:C:H2'	22:DA:2417:C:C6	2.56	0.41
22:DA:2468:A:C2	22:DA:2481:G:C2	3.09	0.41
22:DA:2624:G:H1'	48:D0:19:HIS:HE1	1.86	0.41
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.20	0.41
23:DB:34:A:C6	23:DB:44:G:C4	3.09	0.41
23:DB:77:U:C2'	23:DB:78:A:H5'	2.51	0.41
24:DC:145:GLU:HG2	24:DC:152:GLY:N	2.36	0.41
24:DC:267:ILE:O	24:DC:267:ILE:CG2	2.69	0.41
25:DD:35:THR:O	25:DD:36:GLN:HB2	2.21	0.41
26:DE:148:ILE:HB	26:DE:169:VAL:HG13	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DE:149:ILE:CG2	26:DE:188:MET:HG2	2.51	0.41
27:DF:6:ASP:HA	27:DF:9:LYS:CD	2.51	0.41
27:DF:141:ILE:O	27:DF:141:ILE:HG22	2.21	0.41
28:DG:141:ILE:O	28:DG:145:ALA:N	2.53	0.41
28:DG:144:VAL:O	28:DG:144:VAL:CG1	2.69	0.41
29:DH:1:MET:HB3	29:DH:21:VAL:O	2.20	0.41
30:DI:22:PRO:CB	30:DI:23:PRO:HD3	2.51	0.41
31:DJ:6:ALA:O	31:DJ:7:LYS:CB	2.68	0.41
31:DJ:34:ARG:CZ	31:DJ:39:LYS:HG3	2.50	0.41
32:DK:2:ILE:N	32:DK:33:ALA:O	2.52	0.41
32:DK:64:ARG:HD3	32:DK:102:PRO:O	2.21	0.41
32:DK:78:ARG:NH2	37:DP:73:VAL:CG1	2.84	0.41
33:DL:90:VAL:CG1	33:DL:125:LEU:HD22	2.51	0.41
34:DM:95:LEU:O	34:DM:97:GLN:NE2	2.54	0.41
34:DM:135:VAL:O	34:DM:136:MET:HB3	2.21	0.41
36:DO:99:TYR:CZ	36:DO:104:GLN:HG3	2.55	0.41
37:DP:63:LYS:O	37:DP:63:LYS:CG	2.69	0.41
38:DQ:58:ARG:NH2	38:DQ:92:ARG:CZ	2.84	0.41
39:DR:1:MET:HA	39:DR:42:ALA:O	2.21	0.41
39:DR:85:LYS:HG2	39:DR:86:GLN:N	2.35	0.41
40:DS:32:ALA:O	40:DS:35:ILE:HB	2.21	0.41
41:DT:44:LYS:O	41:DT:48:GLN:HG2	2.20	0.41
43:DV:63:ILE:CD1	43:DV:72:VAL:HG21	2.51	0.41
50:D2:44:VAL:O	50:D2:45:SER:CB	2.69	0.41
1:AA:596:A:C5	1:AA:645:G:C2	3.09	0.41
1:AA:628:G:H2'	1:AA:629:A:O4'	2.21	0.41
1:AA:655:A:N1	1:AA:656:G:C5	2.89	0.41
1:AA:947:G:C5	1:AA:948:C:C4	3.08	0.41
1:AA:1069:C:H2'	1:AA:1070:U:O5'	2.21	0.41
1:AA:1360:A:C8	14:AN:58:SER:HB3	2.56	0.41
1:AA:1476:A:H2'	1:AA:1477:U:O4'	2.20	0.41
2:AB:78:GLU:C	2:AB:80:VAL:H	2.24	0.41
2:AB:151:ILE:CG2	2:AB:152:LYS:N	2.84	0.41
4:AD:122:ALA:C	4:AD:123:ILE:HG23	2.41	0.41
4:AD:159:LEU:HD13	4:AD:175:ALA:HA	2.02	0.41
5:AE:109:GLY:HA2	5:AE:112:ARG:HB3	2.03	0.41
8:AH:25:VAL:CG1	8:AH:61:LEU:HB2	2.50	0.41
10:AJ:29:ALA:HA	10:AJ:32:THR:CG2	2.51	0.41
13:AM:40:ALA:HB3	13:AM:43:VAL:CG1	2.51	0.41
13:AM:109:ARG:HG3	13:AM:109:ARG:O	2.20	0.41
14:AN:66:GLN:HG3	14:AN:79:LEU:HD21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AT:58:VAL:HG13	20:AT:72:ALA:CB	2.51	0.41
21:AU:14:VAL:HG13	21:AU:16:LEU:HD11	2.03	0.41
22:BA:22:C:H2'	22:BA:23:G:O5'	2.21	0.41
22:BA:784:G:O2'	22:BA:785:G:H5''	2.21	0.41
22:BA:864:G:O2'	22:BA:865:C:H5'	2.20	0.41
22:BA:988:A:OP2	47:BZ:12:SER:HB3	2.21	0.41
22:BA:1353:A:C2'	22:BA:1354:A:H5'	2.51	0.41
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.21	0.41
22:BA:1607:C:C4	22:BA:1622:G:N7	2.88	0.41
22:BA:1789:A:H5''	24:BC:219:THR:O	2.20	0.41
22:BA:2313:C:H5''	27:BF:88:LYS:HD3	2.03	0.41
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.35	0.41
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.69	0.41
26:BE:149:ILE:CD1	26:BE:172:ALA:CA	2.96	0.41
29:BH:129:GLU:C	29:BH:130:VAL:CG2	2.90	0.41
30:BI:101:ILE:HD11	30:BI:138:LEU:HD13	2.03	0.41
37:BP:65:SER:O	37:BP:66:ASN:C	2.59	0.41
38:BQ:50:ARG:NH2	39:BR:74:ILE:HD12	2.36	0.41
39:BR:74:ILE:N	39:BR:74:ILE:HD13	2.35	0.41
53:B5:76:LEU:O	53:B5:122:GLY:N	2.54	0.41
53:B5:191:ARG:O	53:B5:195:ARG:N	2.54	0.41
1:CA:173:U:H1'	1:CA:197:A:C5	2.56	0.41
1:CA:189:A:N6	1:CA:190:A:N1	2.69	0.41
1:CA:204:G:H2'	1:CA:205:A:O4'	2.21	0.41
1:CA:206:C:H2'	1:CA:207:C:C4'	2.51	0.41
1:CA:295:C:C4	1:CA:296:U:C4	3.09	0.41
1:CA:462:G:N2	1:CA:471:U:C2	2.89	0.41
1:CA:511:C:C2	1:CA:512:U:C6	3.09	0.41
1:CA:604:G:C6	1:CA:605:U:C4	3.09	0.41
1:CA:784:A:H2'	1:CA:785:G:O4'	2.20	0.41
1:CA:844:G:OP2	1:CA:844:G:N9	2.54	0.41
1:CA:994:A:C2	1:CA:995:C:C1'	3.04	0.41
1:CA:1126:U:C5	1:CA:1281:C:N4	2.88	0.41
1:CA:1262:C:N4	1:CA:1263:C:C4	2.89	0.41
1:CA:1271:A:H5'	1:CA:1314:C:OP1	2.20	0.41
1:CA:1388:C:C2	1:CA:1389:C:C5	3.09	0.41
1:CA:1462:C:H2'	1:CA:1463:U:C6	2.56	0.41
1:CA:1527:U:H2'	1:CA:1528:U:C6	2.56	0.41
2:CB:221:VAL:O	2:CB:221:VAL:CG1	2.69	0.41
3:CC:40:ARG:NH1	3:CC:55:ILE:HG13	2.36	0.41
5:CE:16:ILE:CD1	5:CE:38:VAL:HG23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:CG:75:VAL:CG2	7:CG:144:MET:HG2	2.51	0.41
7:CG:88:PRO:HD2	7:CG:151:PHE:O	2.21	0.41
7:CG:130:ASN:HA	7:CG:135:VAL:HG11	2.02	0.41
9:CI:21:ILE:O	9:CI:21:ILE:HG22	2.20	0.41
17:CQ:12:VAL:CG1	17:CQ:21:ILE:HD11	2.51	0.41
18:CR:25:ASP:O	18:CR:27:ALA:N	2.53	0.41
22:DA:184:C:H2'	22:DA:185:G:C8	2.56	0.41
22:DA:218:A:C6	22:DA:219:A:C5	3.08	0.41
22:DA:222:A:N1	22:DA:233:A:H5''	2.35	0.41
22:DA:349:U:H2'	22:DA:350:G:H8	1.86	0.41
22:DA:362:A:N7	22:DA:363:G:N7	2.69	0.41
22:DA:420:C:C2	22:DA:421:C:C5	3.09	0.41
22:DA:543:G:C2	22:DA:551:G:C6	3.09	0.41
22:DA:586:A:OP2	22:DA:586:A:C8	2.74	0.41
22:DA:630:G:C5'	22:DA:631:A:OP2	2.69	0.41
22:DA:642:U:H1'	22:DA:644:A:N7	2.36	0.41
22:DA:647:G:C4	22:DA:648:G:C8	3.09	0.41
22:DA:822:G:O6	22:DA:943:A:H2	2.04	0.41
22:DA:1203:U:C4	22:DA:1204:A:C5	3.09	0.41
22:DA:1334:G:C6	22:DA:1335:C:N3	2.89	0.41
22:DA:1352:U:H5	22:DA:1377:G:C6	2.39	0.41
22:DA:1437:C:N3	22:DA:1438:U:C4	2.89	0.41
22:DA:1567:G:N7	24:DC:83:TYR:CD1	2.89	0.41
22:DA:1751:U:O4'	22:DA:2860:A:C2	2.74	0.41
22:DA:1866:A:C2	22:DA:1876:A:C5	3.09	0.41
22:DA:1926:U:H2'	22:DA:1928:A:C8	2.55	0.41
22:DA:2050:C:C4	22:DA:2051:A:C6	3.08	0.41
22:DA:2083:G:N7	22:DA:2084:C:C5	2.89	0.41
22:DA:2177:C:H2'	22:DA:2178:C:C6	2.56	0.41
22:DA:2267:A:H5''	22:DA:2268:A:C5'	2.51	0.41
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.56	0.41
22:DA:2327:A:H2'	22:DA:2328:A:C8	2.55	0.41
22:DA:2366:A:H2'	22:DA:2367:G:H5'	2.02	0.41
22:DA:2516:A:C2'	22:DA:2517:C:O5'	2.69	0.41
22:DA:2659:G:C4	22:DA:2661:G:OP2	2.74	0.41
22:DA:2741:A:C2'	22:DA:2742:G:H5'	2.51	0.41
22:DA:2831:G:N7	25:DD:59:ARG:NH1	2.67	0.41
22:DA:2893:A:O4'	22:DA:2894:G:C2	2.74	0.41
24:DC:24:LEU:HD11	24:DC:90:ASN:HD21	1.86	0.41
24:DC:145:GLU:HA	24:DC:152:GLY:HA2	2.03	0.41
24:DC:175:ARG:O	24:DC:175:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DD:56:LYS:C	25:DD:58:ASN:N	2.75	0.41
30:DI:57:VAL:HG22	30:DI:58:VAL:N	2.36	0.41
31:DJ:102:GLU:O	31:DJ:106:LYS:HB2	2.21	0.41
41:DT:11:LEU:CD2	41:DT:34:VAL:HG12	2.51	0.41
41:DT:30:ILE:HD13	41:DT:32:LEU:HG	2.02	0.41
41:DT:30:ILE:HG23	41:DT:32:LEU:HG	2.03	0.41
1:AA:257:G:C2	1:AA:258:G:C5	3.09	0.40
1:AA:508:U:H1'	1:AA:509:A:N7	2.36	0.40
1:AA:972:C:H4'	10:AJ:59:LYS:HE3	2.02	0.40
1:AA:1143:G:C5	1:AA:1144:G:N7	2.89	0.40
1:AA:1190:G:P	3:AC:5:VAL:HG12	2.61	0.40
1:AA:1191:A:OP1	3:AC:4:LYS:HD3	2.21	0.40
1:AA:1322:C:O2'	1:AA:1323:G:P	2.79	0.40
1:AA:1501:C:C4	1:AA:1504:G:C5	3.09	0.40
3:AC:16:LYS:HG3	3:AC:17:PRO:HD2	2.02	0.40
3:AC:85:GLU:C	3:AC:87:LEU:N	2.72	0.40
5:AE:50:TYR:O	5:AE:63:ALA:CB	2.69	0.40
5:AE:98:PRO:O	5:AE:99:ALA:HB3	2.20	0.40
6:AF:54:LEU:O	6:AF:54:LEU:HD13	2.21	0.40
6:AF:64:VAL:CG1	6:AF:65:GLU:N	2.84	0.40
8:AH:46:ILE:HG22	8:AH:63:LEU:HA	2.02	0.40
10:AJ:36:VAL:HA	10:AJ:75:ASP:O	2.21	0.40
11:AK:70:CYS:O	11:AK:74:VAL:HG22	2.21	0.40
16:AP:51:ARG:HH11	16:AP:51:ARG:HB3	1.86	0.40
16:AP:61:VAL:HG22	16:AP:67:ILE:HD11	2.02	0.40
21:AU:25:LYS:O	21:AU:27:GLY:N	2.54	0.40
22:BA:63:A:C2	22:BA:64:A:C8	3.09	0.40
22:BA:404:A:C2'	22:BA:405:U:OP2	2.69	0.40
22:BA:499:U:C4	22:BA:500:G:C6	3.10	0.40
22:BA:528:A:C2	22:BA:2043:C:C4'	3.01	0.40
22:BA:585:G:H5''	22:BA:586:A:P	2.61	0.40
22:BA:725:G:C6	22:BA:726:G:N1	2.88	0.40
22:BA:1179:G:C8	22:BA:1180:U:O4'	2.74	0.40
22:BA:1196:C:H1'	22:BA:1226:A:C4	2.57	0.40
22:BA:1378:A:C2'	58:BA:3753:HOH:O	2.69	0.40
22:BA:1414:C:C5	22:BA:1415:U:H5	2.39	0.40
22:BA:1478:G:H1	22:BA:1513:U:H3	1.69	0.40
22:BA:1846:G:C2	22:BA:1895:C:C2	3.09	0.40
22:BA:1851:U:O2'	22:BA:1852:U:H5'	2.21	0.40
22:BA:1900:A:O2'	22:BA:1901:A:OP1	2.29	0.40
22:BA:1913:A:OP2	22:BA:1913:A:H2'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2694:G:C5	22:BA:2695:U:C4	3.09	0.40
25:BD:113:SER:O	25:BD:167:ASN:HA	2.22	0.40
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.51	0.40
29:BH:1:MET:HE3	29:BH:26:ALA:HB3	2.02	0.40
29:BH:88:GLY:C	29:BH:125:THR:OG1	2.59	0.40
29:BH:97:ARG:NH1	1:CA:369:G:C2'	2.84	0.40
36:BO:117:PHE:CD1	36:BO:117:PHE:O	2.74	0.40
42:BU:26:LYS:HA	42:BU:26:LYS:CE	2.51	0.40
42:BU:39:ILE:O	42:BU:40:ASN:C	2.58	0.40
43:BV:26:PHE:CZ	43:BV:42:LEU:HD12	2.57	0.40
46:BY:54:LYS:HA	46:BY:57:LEU:HD23	2.02	0.40
53:B5:94:TYR:O	53:B5:95:VAL:HG23	2.20	0.40
1:CA:246:A:N3	1:CA:279:A:N6	2.68	0.40
1:CA:249:U:C2	1:CA:276:G:N1	2.89	0.40
1:CA:407:U:C2	1:CA:408:A:C8	3.09	0.40
1:CA:552:U:H4'	12:CL:83:ARG:CG	2.51	0.40
1:CA:603:U:H2'	1:CA:604:G:C8	2.56	0.40
1:CA:811:C:C5	1:CA:812:G:C5	3.10	0.40
1:CA:875:U:O3'	8:CH:15:ARG:NH1	2.53	0.40
1:CA:1014:A:N3	19:CS:34:TRP:CZ2	2.89	0.40
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.21	0.40
1:CA:1126:U:C6	1:CA:1281:C:C4	3.08	0.40
1:CA:1262:C:N4	1:CA:1263:C:N4	2.68	0.40
2:CB:47:VAL:HB	2:CB:48:PRO:CD	2.51	0.40
5:CE:102:GLY:C	5:CE:104:GLY:N	2.72	0.40
5:CE:155:ALA:C	5:CE:156:LYS:HG3	2.41	0.40
6:CF:29:ILE:HG21	6:CF:64:VAL:CG1	2.51	0.40
9:CI:83:ILE:O	9:CI:87:LEU:N	2.53	0.40
13:CM:71:ARG:HA	13:CM:74:SER:HB3	2.02	0.40
19:CS:64:ASP:O	19:CS:67:VAL:HG23	2.21	0.40
22:DA:225:C:H2'	22:DA:226:A:O4'	2.20	0.40
22:DA:416:U:H2'	22:DA:417:C:C6	2.56	0.40
22:DA:443:A:C8	26:DE:40:ARG:CG	3.04	0.40
22:DA:444:C:OP2	22:DA:444:C:H4'	2.22	0.40
22:DA:567:U:H4'	22:DA:808:G:OP1	2.22	0.40
22:DA:585:G:C6	22:DA:1251:C:C5	3.09	0.40
22:DA:638:G:O6	22:DA:650:C:N3	2.54	0.40
22:DA:783:A:C4	22:DA:785:G:H1'	2.56	0.40
22:DA:919:U:C4	22:DA:920:A:C5	3.10	0.40
22:DA:1205:A:C2	26:DE:165:HIS:HB2	2.56	0.40
22:DA:1401:G:C5	22:DA:1402:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:1401:G:C6	22:DA:1402:U:C4	3.09	0.40
22:DA:1468:U:H2'	22:DA:1522:A:N6	2.36	0.40
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.21	0.40
22:DA:1676:A:N6	22:DA:1677:A:C6	2.89	0.40
22:DA:1773:A:C2	22:DA:1978:A:C2	3.09	0.40
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.20	0.40
22:DA:2093:G:C2	22:DA:2094:A:C8	3.08	0.40
22:DA:2145:C:H5''	22:DA:2146:C:OP1	2.21	0.40
22:DA:2250:G:C8	22:DA:2250:G:O5'	2.74	0.40
22:DA:2262:U:H4'	22:DA:2328:A:C2	2.56	0.40
22:DA:2326:C:H1'	22:DA:2327:A:OP1	2.21	0.40
22:DA:2702:G:C5	22:DA:2703:C:C5	3.09	0.40
22:DA:2825:G:C2'	22:DA:2826:A:H5'	2.50	0.40
23:DB:55:U:H4'	27:DF:25:VAL:HG12	2.03	0.40
24:DC:45:ASN:C	24:DC:47:GLY:H	2.25	0.40
25:DD:33:ARG:NH2	25:DD:74:GLU:O	2.54	0.40
27:DF:73:SER:HB2	27:DF:81:GLN:HB2	2.03	0.40
30:DI:28:LEU:HD13	30:DI:38:PHE:CE2	2.56	0.40
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.21	0.40
32:DK:9:ASN:O	32:DK:83:ALA:HA	2.20	0.40
34:DM:63:ILE:CG2	34:DM:64:TRP:N	2.84	0.40
35:DN:103:ARG:HB2	35:DN:110:MET:HE3	2.03	0.40
36:DO:79:ALA:CB	36:DO:113:ALA:HB3	2.50	0.40
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.84	0.40
44:DW:47:ALA:HB2	44:DW:59:LEU:HD22	2.04	0.40
1:AA:126:G:H2'	1:AA:127:G:O4'	2.22	0.40
1:AA:246:A:H4'	1:AA:247:G:OP1	2.21	0.40
1:AA:451:A:C5'	16:AP:70:ARG:HH22	2.34	0.40
1:AA:606:G:H1'	1:AA:633:G:C2	2.56	0.40
1:AA:751:U:H4'	15:AO:24:SER:HA	2.01	0.40
1:AA:1008:U:H2'	1:AA:1009:U:C6	2.56	0.40
1:AA:1256:A:N6	1:AA:1277:C:C2	2.90	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.57	0.40
2:AB:118:GLU:HB3	2:AB:141:LEU:HD11	2.02	0.40
2:AB:148:LEU:HD22	2:AB:148:LEU:HA	1.92	0.40
4:AD:28:ILE:O	4:AD:29:ASP:C	2.60	0.40
4:AD:60:LYS:NZ	4:AD:194:ASP:O	2.54	0.40
5:AE:50:TYR:CE2	5:AE:134:ILE:HD11	2.56	0.40
5:AE:105:ILE:HG13	5:AE:105:ILE:O	2.21	0.40
6:AF:76:THR:O	6:AF:79:ARG:N	2.51	0.40
6:AF:98:GLU:O	6:AF:99:ALA:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:52:LEU:HA	9:AI:55:VAL:HG23	2.03	0.40
12:AL:110:ARG:NH1	12:AL:113:ALA:HB3	2.36	0.40
17:AQ:8:LEU:N	17:AQ:8:LEU:HD13	2.36	0.40
17:AQ:81:LYS:N	17:AQ:81:LYS:HE2	2.36	0.40
19:AS:52:HIS:CD2	19:AS:54:GLY:N	2.89	0.40
21:AU:25:LYS:C	21:AU:27:GLY:N	2.75	0.40
22:BA:467:G:H2'	22:BA:468:G:O4'	2.22	0.40
22:BA:531:C:C5	22:BA:2035:G:C2	3.10	0.40
22:BA:792:A:N3	22:BA:2072:C:O2'	2.35	0.40
22:BA:1330:C:O2'	22:BA:1331:G:H5'	2.20	0.40
22:BA:1334:G:C6	22:BA:1335:C:C4	3.10	0.40
22:BA:1356:G:C2	22:BA:1357:C:C2	3.09	0.40
22:BA:1922:G:C2	22:BA:1923:U:C6	3.09	0.40
22:BA:2030:A:C2	22:BA:2499:C:H5''	2.56	0.40
22:BA:2247:A:C2'	22:BA:2248:C:O5'	2.70	0.40
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.20	0.40
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.87	0.40
22:BA:2665:A:C2	22:BA:2666:C:C2	3.09	0.40
24:BC:24:LEU:HD12	24:BC:24:LEU:HA	1.85	0.40
24:BC:53:HIS:CD2	24:BC:219:THR:HA	2.56	0.40
24:BC:141:VAL:HG13	24:BC:191:THR:C	2.42	0.40
24:BC:199:GLU:O	24:BC:200:HIS:C	2.59	0.40
26:BE:37:ALA:O	26:BE:40:ARG:HB2	2.21	0.40
26:BE:61:ARG:HD2	26:BE:63:LYS:O	2.22	0.40
30:BI:100:LYS:HD2	30:BI:139:VAL:HG21	2.02	0.40
30:BI:133:ALA:O	30:BI:138:LEU:HD12	2.21	0.40
31:BJ:37:ARG:O	31:BJ:37:ARG:HG3	2.20	0.40
32:BK:122:VAL:OXT	32:BK:122:VAL:HG12	2.22	0.40
42:BU:22:ARG:CZ	42:BU:73:PHE:CE2	3.04	0.40
47:BZ:56:LYS:HE3	47:BZ:58:GLU:OE1	2.21	0.40
49:B1:38:LYS:HB2	49:B1:49:TYR:CD2	2.56	0.40
53:B5:23:ILE:O	53:B5:23:ILE:HG22	2.22	0.40
53:B5:74:ARG:HB3	53:B5:93:ASP:OD1	2.22	0.40
1:CA:68:G:C6	1:CA:69:G:H1'	2.56	0.40
1:CA:173:U:H3'	1:CA:174:A:H5'	2.01	0.40
1:CA:542:G:C2	1:CA:543:U:C5	3.10	0.40
1:CA:583:A:C8	1:CA:584:G:C8	3.09	0.40
1:CA:1092:A:N6	1:CA:1093:A:N1	2.70	0.40
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.55	0.40
1:CA:1192:C:C5	1:CA:1193:G:C8	3.09	0.40
1:CA:1261:A:H2'	1:CA:1262:C:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CB:57:LEU:HD21	2:CB:67:ILE:HD11	2.03	0.40
3:CC:20:SER:HB2	14:CN:92:GLU:O	2.20	0.40
3:CC:71:ALA:HA	3:CC:106:VAL:HB	2.02	0.40
5:CE:20:ARG:O	5:CE:20:ARG:HG2	2.21	0.40
5:CE:41:ASP:OD2	5:CE:45:ARG:HB2	2.21	0.40
6:CF:38:ARG:HG2	6:CF:63:ASN:CB	2.50	0.40
10:CJ:6:ILE:HB	10:CJ:76:ILE:O	2.22	0.40
11:CK:124:PRO:HB2	11:CK:126:LYS:HE3	2.04	0.40
13:CM:27:LYS:CD	13:CM:27:LYS:O	2.69	0.40
13:CM:109:ARG:HG3	13:CM:109:ARG:O	2.20	0.40
16:CP:3:THR:CG2	16:CP:5:ARG:HG2	2.52	0.40
19:CS:36:ARG:NE	19:CS:52:HIS:O	2.49	0.40
19:CS:40:ILE:HG22	19:CS:67:VAL:HA	2.02	0.40
19:CS:63:THR:HG22	19:CS:64:ASP:H	1.86	0.40
19:CS:67:VAL:O	19:CS:67:VAL:CG1	2.69	0.40
20:CT:27:MET:HG3	20:CT:28:MET:N	2.36	0.40
22:DA:30:G:C5	22:DA:31:C:C4	3.10	0.40
22:DA:120:U:H1'	22:DA:149:A:N7	2.36	0.40
22:DA:662:G:C2	22:DA:663:G:C8	3.10	0.40
22:DA:843:G:H2'	22:DA:844:A:C8	2.56	0.40
22:DA:962:G:C5	22:DA:963:U:C5	3.09	0.40
22:DA:1000:A:C6	22:DA:1001:A:C6	3.09	0.40
22:DA:1063:G:C8	22:DA:1064:C:C6	3.09	0.40
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.36	0.40
22:DA:1317:G:N7	22:DA:1318:U:C4	2.89	0.40
22:DA:1354:A:C8	22:DA:1355:G:C8	3.09	0.40
22:DA:1355:G:C6	22:DA:1356:G:N7	2.89	0.40
22:DA:1357:C:O2'	22:DA:1358:G:H5'	2.22	0.40
22:DA:1567:G:O2'	24:DC:63:ARG:NH1	2.54	0.40
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.21	0.40
22:DA:1959:G:H2'	22:DA:1960:A:O4'	2.21	0.40
22:DA:2013:A:N6	22:DA:2014:A:N1	2.69	0.40
22:DA:2282:G:C5	22:DA:2425:A:N1	2.90	0.40
22:DA:2662:A:C4	22:DA:2663:G:H1'	2.56	0.40
22:DA:2786:U:H4'	25:DD:67:HIS:HA	2.04	0.40
23:DB:7:G:C5'	36:DO:29:HIS:CE1	3.04	0.40
23:DB:8:C:O2'	36:DO:40:ILE:HD13	2.22	0.40
25:DD:34:VAL:HG22	25:DD:50:VAL:HG12	2.02	0.40
28:DG:95:ARG:HG3	28:DG:106:SER:HB2	2.03	0.40
29:DH:96:THR:O	29:DH:98:ASP:N	2.54	0.40
30:DI:24:VAL:CG1	30:DI:28:LEU:HB3	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DI:103:ARG:O	30:DI:107:GLN:N	2.53	0.40
31:DJ:56:VAL:HB	31:DJ:124:VAL:HG12	2.02	0.40
31:DJ:102:GLU:HG3	31:DJ:124:VAL:HG21	2.04	0.40
32:DK:39:ILE:O	32:DK:39:ILE:HG13	2.21	0.40
32:DK:91:SER:O	32:DK:92:GLU:O	2.39	0.40
33:DL:77:ILE:CG2	33:DL:81:ASP:OD2	2.69	0.40
35:DN:47:VAL:O	35:DN:47:VAL:HG12	2.22	0.40
36:DO:64:TYR:O	36:DO:67:ASN:ND2	2.45	0.40
40:DS:20:VAL:HG23	40:DS:39:THR:HG21	2.02	0.40
41:DT:4:GLU:O	41:DT:8:LEU:N	2.54	0.40
44:DW:37:ILE:HG22	44:DW:38:VAL:HG23	2.03	0.40
1:AA:110:C:C4	1:AA:111:G:C5	3.09	0.40
1:AA:141:G:C2	1:AA:142:G:H1'	2.56	0.40
1:AA:346:G:P	32:BK:105:ARG:HH12	2.44	0.40
1:AA:849:G:N3	1:AA:849:G:H2'	2.35	0.40
1:AA:924:C:H2'	1:AA:925:G:H8	1.86	0.40
1:AA:1076:U:C2	1:AA:1082:A:C2	3.09	0.40
1:AA:1112:C:O2'	3:AC:179:ARG:HG3	2.21	0.40
1:AA:1141:C:O2'	1:AA:1142:G:P	2.79	0.40
1:AA:1538:C:C2'	1:AA:1539:C:H5'	2.51	0.40
2:AB:68:LEU:C	2:AB:68:LEU:CD2	2.89	0.40
4:AD:170:TRP:HB2	4:AD:184:ARG:O	2.22	0.40
16:AP:36:VAL:O	16:AP:36:VAL:HG13	2.21	0.40
16:AP:52:LEU:O	16:AP:54:LEU:N	2.53	0.40
18:AR:55:LEU:HD22	18:AR:55:LEU:HA	1.94	0.40
21:AU:47:ARG:HA	21:AU:47:ARG:HE	1.86	0.40
22:BA:27:G:C2	22:BA:512:G:N3	2.89	0.40
22:BA:146:A:H2'	22:BA:147:C:C6	2.56	0.40
22:BA:221:A:C4	22:BA:266:G:N7	2.89	0.40
22:BA:253:C:OP2	51:B3:5:LYS:CE	2.68	0.40
22:BA:372:G:N2	22:BA:400:G:H2'	2.36	0.40
22:BA:489:G:O4'	22:BA:1284:A:C8	2.74	0.40
22:BA:974:G:C8	22:BA:989:G:C2	3.09	0.40
22:BA:1018:U:O3'	22:BA:1120:G:N2	2.53	0.40
22:BA:1046:A:H3'	22:BA:1047:G:H5'	2.03	0.40
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.36	0.40
22:BA:1142:A:C4	22:BA:1144:A:C8	3.09	0.40
22:BA:1438:U:C4	22:BA:1552:A:C2	3.10	0.40
22:BA:1735:A:H2'	22:BA:1736:U:H5'	2.03	0.40
22:BA:1927:A:N1	22:BA:1928:A:C2	2.89	0.40
22:BA:1959:G:H2'	22:BA:1960:A:O5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:BA:2001:C:N3	22:BA:2002:G:C8	2.90	0.40
22:BA:2720:U:C2	22:BA:2872:A:C6	3.10	0.40
24:BC:107:PRO:HB3	24:BC:142:HIS:CE1	2.57	0.40
24:BC:172:VAL:HG23	24:BC:174:LEU:CD1	2.50	0.40
27:BF:134:GLU:HG2	27:BF:136:ILE:CD1	2.51	0.40
27:BF:136:ILE:HD11	27:BF:149:VAL:HG12	2.04	0.40
30:BI:24:VAL:HG22	30:BI:25:GLY:N	2.37	0.40
38:BQ:50:ARG:O	38:BQ:54:LYS:HE3	2.21	0.40
39:BR:86:GLN:CG	39:BR:87:GLN:N	2.84	0.40
39:BR:98:ILE:HG21	39:BR:101:ILE:HD11	2.02	0.40
40:BS:38:TYR:CD1	48:B0:28:LEU:HD11	2.56	0.40
42:BU:18:ASP:O	42:BU:20:GLY:N	2.54	0.40
42:BU:54:GLN:N	42:BU:55:PRO:HD2	2.37	0.40
44:BW:23:VAL:HG22	44:BW:38:VAL:CG1	2.51	0.40
44:BW:28:GLY:O	44:BW:66:LYS:HG2	2.20	0.40
44:BW:51:VAL:CG2	44:BW:81:SER:HA	2.51	0.40
48:B0:55:ILE:HG22	48:B0:56:ALA:H	1.86	0.40
51:B3:32:ILE:O	51:B3:32:ILE:HG22	2.21	0.40
1:CA:41:G:H2'	1:CA:42:G:C8	2.57	0.40
1:CA:72:A:N6	1:CA:99:C:H1'	2.36	0.40
1:CA:149:A:C2	1:CA:150:U:C2	3.10	0.40
1:CA:155:A:C2	1:CA:167:A:C4	3.09	0.40
1:CA:484:G:C8	1:CA:486:U:O4'	2.75	0.40
1:CA:541:G:C4	1:CA:542:G:C8	3.09	0.40
1:CA:780:A:C2	1:CA:803:G:N1	2.89	0.40
1:CA:1007:U:C3'	1:CA:1008:U:H5'	2.51	0.40
1:CA:1216:A:H2'	1:CA:1217:C:C6	2.56	0.40
1:CA:1250:A:N3	1:CA:1287:A:C6	2.89	0.40
2:CB:23:TRP:CZ2	2:CB:25:PRO:HA	2.57	0.40
2:CB:72:THR:HA	2:CB:93:ASN:O	2.21	0.40
2:CB:72:THR:CG2	2:CB:95:ARG:NH1	2.84	0.40
3:CC:9:GLY:HA2	3:CC:12:LEU:HG	2.02	0.40
4:CD:22:LYS:O	4:CD:24:GLY:N	2.55	0.40
6:CF:93:LYS:N	6:CF:93:LYS:HD3	2.37	0.40
10:CJ:84:VAL:HA	10:CJ:87:LEU:HD12	2.04	0.40
15:CO:67:LEU:O	15:CO:68:ASP:C	2.60	0.40
15:CO:89:ARG:NH1	22:DA:714:U:C5	2.89	0.40
19:CS:6:LYS:HB2	19:CS:7:LYS:HE2	2.02	0.40
22:DA:372:G:P	45:DX:62:LYS:HZ2	2.45	0.40
22:DA:465:G:C6	22:DA:466:A:N6	2.89	0.40
22:DA:498:G:C2	22:DA:499:U:C5	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:517:C:O2'	40:DS:18:ARG:NH1	2.55	0.40
22:DA:634:C:P	33:DL:70:LYS:HE2	2.61	0.40
22:DA:647:G:C6	22:DA:648:G:C5	3.09	0.40
22:DA:711:G:C2	22:DA:721:A:C2	3.09	0.40
22:DA:927:A:H2'	22:DA:928:A:O4'	2.21	0.40
22:DA:959:A:H2'	22:DA:960:A:C8	2.56	0.40
22:DA:978:G:C2	22:DA:986:C:C2	3.09	0.40
22:DA:1121:C:H2'	22:DA:1122:G:O5'	2.22	0.40
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.21	0.40
22:DA:1373:A:N6	22:DA:1374:G:N3	2.69	0.40
22:DA:1607:C:O2	22:DA:1621:U:N3	2.53	0.40
22:DA:1668:A:N3	22:DA:1674:G:C8	2.89	0.40
22:DA:1800:C:OP1	24:DC:258:ARG:NH2	2.54	0.40
22:DA:1809:A:N6	22:DA:1810:A:C6	2.89	0.40
22:DA:1914:C:O2	22:DA:1914:C:O4'	2.37	0.40
22:DA:2201:G:C6	22:DA:2223:G:C2	3.09	0.40
22:DA:2323:G:H2'	22:DA:2324:U:O4'	2.21	0.40
22:DA:2345:G:OP2	49:D1:46:HIS:NE2	2.51	0.40
22:DA:2439:A:H4'	22:DA:2440:C:H5''	2.03	0.40
22:DA:2574:G:N2	22:DA:2575:C:H1'	2.36	0.40
22:DA:2785:C:H2'	22:DA:2786:U:O4'	2.21	0.40
22:DA:2854:G:N2	22:DA:2864:G:C4	2.89	0.40
22:DA:2885:G:O6	48:D0:29:SER:HB3	2.21	0.40
26:DE:24:ASN:O	26:DE:28:VAL:HG23	2.21	0.40
26:DE:47:LYS:O	26:DE:83:VAL:CB	2.70	0.40
27:DF:36:LEU:HD23	27:DF:57:LEU:HD22	2.03	0.40
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	2.20	0.40
31:DJ:74:TYR:CD1	31:DJ:92:MET:HG3	2.56	0.40
37:DP:103:ARG:HB3	37:DP:108:ALA:CB	2.50	0.40
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.41	0.40
41:DT:67:VAL:HG12	41:DT:68:LYS:N	2.37	0.40
43:DV:75:GLN:CB	43:DV:92:VAL:HG23	2.52	0.40
1:AA:69:G:C3'	1:AA:70:U:H6	2.35	0.40
1:AA:110:C:C4	1:AA:111:G:C6	3.10	0.40
1:AA:126:G:O2'	1:AA:635:A:H4'	2.22	0.40
1:AA:295:C:H2'	1:AA:296:U:O4'	2.22	0.40
1:AA:300:A:H1'	1:AA:565:U:O2	2.21	0.40
1:AA:374:A:C5	1:AA:375:U:C5	3.09	0.40
1:AA:457:G:H5'	1:AA:458:U:OP2	2.21	0.40
1:AA:1080:A:O3'	5:AE:21:VAL:HG21	2.21	0.40
1:AA:1081:A:OP1	5:AE:21:VAL:CG2	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1102:A:H2'	1:AA:1103:C:C6	2.56	0.40
1:AA:1154:G:H2'	1:AA:1154:G:N3	2.36	0.40
1:AA:1213:A:C5	1:AA:1215:G:C5	3.10	0.40
1:AA:1272:G:H2'	1:AA:1273:C:O4'	2.22	0.40
1:AA:1379:G:N1	1:AA:1380:U:C4	2.89	0.40
3:AC:26:THR:O	3:AC:27:LYS:C	2.60	0.40
8:AH:7:ILE:N	8:AH:7:ILE:CD1	2.85	0.40
8:AH:15:ARG:HB2	8:AH:75:ILE:CG2	2.51	0.40
10:AJ:52:LEU:HD23	10:AJ:62:ARG:HG2	2.03	0.40
11:AK:72:ASP:O	11:AK:73:ALA:HB2	2.22	0.40
15:AO:87:LEU:N	15:AO:87:LEU:HD23	2.36	0.40
19:AS:3:ARG:O	19:AS:4:SER:CB	2.69	0.40
22:BA:26:G:C2'	22:BA:27:G:O5'	2.70	0.40
22:BA:364:C:H2'	22:BA:365:U:C6	2.57	0.40
22:BA:372:G:H5''	45:BX:61:LYS:HD2	2.03	0.40
22:BA:511:U:O4	22:BA:512:G:N1	2.55	0.40
22:BA:743:A:O3'	58:BA:3654:HOH:O	2.22	0.40
22:BA:1003:G:C2	22:BA:1004:U:C4	3.08	0.40
22:BA:1046:A:OP2	22:BA:1046:A:H4'	2.21	0.40
22:BA:1139:G:O3'	31:BJ:26:GLY:HA3	2.22	0.40
22:BA:1180:U:H2'	22:BA:1181:U:H5'	2.02	0.40
22:BA:1482:G:N3	22:BA:1483:G:C8	2.89	0.40
22:BA:1502:A:C2	22:BA:1503:A:C4	3.09	0.40
22:BA:1647:U:H3'	22:BA:1647:U:P	2.62	0.40
22:BA:1801:A:OP2	24:BC:150:LYS:NZ	2.54	0.40
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.03	0.40
22:BA:2137:U:C5	22:BA:2138:G:N7	2.89	0.40
22:BA:2393:U:O3'	33:BL:62:PRO:HA	2.22	0.40
22:BA:2533:U:C2'	22:BA:2534:A:H5'	2.51	0.40
22:BA:2560:A:C6	22:BA:2561:U:C4	3.09	0.40
24:BC:36:LYS:O	24:BC:37:ASN:HB3	2.22	0.40
26:BE:136:GLN:O	26:BE:137:LYS:C	2.60	0.40
30:BI:28:LEU:HG	30:BI:35:ILE:CD1	2.51	0.40
31:BJ:20:ALA:O	31:BJ:23:LYS:HG2	2.21	0.40
32:BK:25:LEU:HD12	32:BK:38:ILE:HG22	2.02	0.40
35:BN:1:MET:O	35:BN:2:ARG:HB2	2.21	0.40
42:BU:94:ARG:HB3	42:BU:103:ILE:HD12	2.04	0.40
53:B5:76:LEU:O	53:B5:121:MET:HA	2.22	0.40
1:CA:228:A:H2'	1:CA:229:U:O4'	2.21	0.40
1:CA:666:G:C6	1:CA:741:G:C5	3.10	0.40
1:CA:815:A:C2	1:CA:1529:G:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:1220:G:H1'	19:CS:52:HIS:CD2	2.56	0.40
1:CA:1299:A:O2'	1:CA:1301:U:O4'	2.39	0.40
1:CA:1522:U:O2'	1:CA:1523:G:H5'	2.21	0.40
2:CB:57:LEU:CD2	2:CB:67:ILE:HD11	2.51	0.40
2:CB:221:VAL:O	2:CB:221:VAL:HG12	2.20	0.40
4:CD:59:GLN:OE1	4:CD:59:GLN:CA	2.65	0.40
4:CD:148:LYS:H	4:CD:148:LYS:CE	2.34	0.40
5:CE:23:LYS:O	5:CE:24:THR:CB	2.69	0.40
5:CE:80:THR:OG1	5:CE:81:LEU:N	2.54	0.40
6:CF:36:ILE:O	6:CF:36:ILE:CG1	2.69	0.40
6:CF:86:ARG:HD3	18:CR:64:TYR:CE1	2.56	0.40
9:CI:51:PRO:HG2	9:CI:83:ILE:HD12	2.04	0.40
9:CI:57:MET:HA	9:CI:60:LYS:HB3	2.04	0.40
21:CU:41:PRO:O	21:CU:44:GLU:N	2.54	0.40
22:DA:83:A:H2	22:DA:103:A:N7	2.18	0.40
22:DA:192:C:C4	22:DA:193:U:C2	3.09	0.40
22:DA:207:A:C2	22:DA:208:C:C1'	3.04	0.40
22:DA:582:A:C6	22:DA:583:G:C6	3.09	0.40
22:DA:637:A:P	33:DL:112:LEU:HB3	2.60	0.40
22:DA:773:U:C5'	22:DA:774:G:OP2	2.69	0.40
22:DA:927:A:H2'	22:DA:928:A:C8	2.56	0.40
22:DA:1372:U:H2'	22:DA:1373:A:C8	2.57	0.40
22:DA:1601:G:C5	22:DA:1602:U:C5	3.10	0.40
22:DA:1649:G:C6	22:DA:2009:A:N6	2.89	0.40
22:DA:1670:C:C4	22:DA:1671:U:N3	2.90	0.40
22:DA:1693:U:O4	22:DA:1976:U:O2'	2.39	0.40
22:DA:2010:G:H5''	40:DS:42:LYS:HB2	2.01	0.40
22:DA:2067:G:C6	22:DA:2444:G:N1	2.90	0.40
22:DA:2285:C:C5	49:D1:6:ARG:NH1	2.89	0.40
22:DA:2320:U:H5'	22:DA:2321:U:C5	2.57	0.40
22:DA:2679:A:H2'	22:DA:2680:U:O4'	2.22	0.40
23:DB:14:U:O2	23:DB:14:U:H2'	2.21	0.40
23:DB:110:C:H2'	23:DB:111:U:O4'	2.21	0.40
24:DC:121:ASP:O	24:DC:122:ALA:C	2.60	0.40
28:DG:91:GLY:O	28:DG:94:TYR:CG	2.74	0.40
28:DG:123:ALA:HB2	28:DG:133:LEU:HA	2.03	0.40
30:DI:73:THR:HG21	30:DI:113:LYS:HE3	2.02	0.40
31:DJ:80:HIS:C	31:DJ:82:GLY:N	2.74	0.40
35:DN:44:LEU:O	35:DN:48:VAL:HG23	2.21	0.40
38:DQ:76:TYR:OH	38:DQ:92:ARG:NH1	2.55	0.40
42:DU:7:ARG:HG3	42:DU:8:ASP:H	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:DY:28:LEU:CD1	46:DY:46:VAL:HG21	2.51	0.40
1:AA:34:C:H2'	1:AA:35:G:C8	2.56	0.40
1:AA:345:C:O2'	32:BK:116:ILE:CD1	2.67	0.40
1:AA:451:A:H4'	1:AA:452:A:O5'	2.22	0.40
1:AA:582:C:N3	1:AA:583:A:C8	2.90	0.40
1:AA:599:C:C2	1:AA:600:A:C8	3.09	0.40
1:AA:669:G:O2'	1:AA:670:G:H5'	2.21	0.40
1:AA:836:G:C5	1:AA:851:G:C6	3.10	0.40
1:AA:1124:G:P	10:AJ:38:GLY:HA3	2.62	0.40
1:AA:1253:G:N1	1:AA:1285:A:N6	2.69	0.40
1:AA:1304:G:C6	1:AA:1305:G:C2	3.09	0.40
1:AA:1493:A:O2'	1:AA:1494:G:P	2.79	0.40
1:AA:1539:C:O3'	21:AU:18:ARG:HB3	2.21	0.40
2:AB:66:LYS:HB2	2:AB:159:ASP:OD2	2.21	0.40
2:AB:84:ALA:O	2:AB:89:GLN:OE1	2.40	0.40
2:AB:118:GLU:O	2:AB:120:GLN:N	2.55	0.40
4:AD:99:ASP:OD2	4:AD:115:ARG:CZ	2.68	0.40
5:AE:116:GLU:HG2	5:AE:117:VAL:N	2.37	0.40
6:AF:3:HIS:CE1	6:AF:65:GLU:OE2	2.74	0.40
7:AG:66:LEU:O	7:AG:70:ARG:HD3	2.22	0.40
16:AP:39:PHE:CD1	16:AP:39:PHE:C	2.95	0.40
17:AQ:48:ASP:OD2	17:AQ:48:ASP:O	2.39	0.40
20:AT:54:MET:HG3	20:AT:55:GLN:N	2.36	0.40
22:BA:162:U:H4'	22:BA:163:C:OP1	2.21	0.40
22:BA:184:C:H2'	22:BA:185:G:C8	2.55	0.40
22:BA:565:C:H4'	22:BA:1253:A:N6	2.37	0.40
22:BA:567:U:C2'	22:BA:568:U:O5'	2.70	0.40
22:BA:582:A:H2'	22:BA:583:G:C8	2.57	0.40
22:BA:988:A:H4'	22:BA:1155:A:N1	2.37	0.40
22:BA:1000:A:C6	22:BA:1001:A:C6	3.10	0.40
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.22	0.40
22:BA:1070:A:N1	22:BA:1097:U:O2'	2.47	0.40
22:BA:1075:C:N3	22:BA:1076:C:N4	2.70	0.40
22:BA:1177:G:H2'	22:BA:1178:C:O4'	2.22	0.40
22:BA:1482:G:C2	22:BA:1483:G:C8	3.10	0.40
22:BA:1829:A:H2'	22:BA:1830:C:O4'	2.21	0.40
22:BA:1883:U:O4	22:BA:1884:G:C6	2.75	0.40
22:BA:1920:C:O2	22:BA:1920:C:H2'	2.20	0.40
22:BA:2564:A:C5	22:BA:2565:A:C6	3.10	0.40
22:BA:2580:U:C5	22:BA:2581:G:C6	3.09	0.40
23:BB:65:U:O4	23:BB:108:A:H1'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:BC:221:ARG:NH2	58:BC:403:HOH:O	2.54	0.40
24:BC:245:VAL:HA	24:BC:250:VAL:O	2.21	0.40
25:BD:2:ILE:HG23	25:BD:88:GLU:OE1	2.21	0.40
25:BD:186:LEU:HD21	37:BP:4:ILE:HG21	2.03	0.40
27:BF:48:LYS:HA	27:BF:51:ASP:HB2	2.03	0.40
27:BF:49:LEU:HD21	27:BF:148:ARG:NH2	2.37	0.40
28:BG:19:ILE:CD1	28:BG:45:HIS:HB2	2.51	0.40
29:BH:66:ASN:OD1	29:BH:138:VAL:HG11	2.21	0.40
29:BH:120:GLY:HA2	29:BH:122:LEU:HA	2.04	0.40
30:BI:115:ALA:O	30:BI:116:ASP:CB	2.69	0.40
31:BJ:44:TYR:CD2	31:BJ:44:TYR:C	2.94	0.40
35:BN:72:ASP:O	35:BN:76:VAL:HG12	2.21	0.40
36:BO:87:ILE:O	36:BO:88:LYS:O	2.40	0.40
39:BR:20:VAL:HG21	39:BR:22:LEU:HD21	2.04	0.40
43:BV:14:LYS:HD2	43:BV:18:ARG:NH1	2.37	0.40
46:BY:57:LEU:O	46:BY:57:LEU:CG	2.69	0.40
1:CA:9:G:OP2	5:CE:126:LYS:CE	2.70	0.40
1:CA:17:U:H4'	1:CA:1080:A:O4'	2.21	0.40
1:CA:59:A:N3	1:CA:59:A:H2'	2.37	0.40
1:CA:299:G:C6	1:CA:300:A:C6	3.10	0.40
1:CA:582:C:O2'	1:CA:583:A:H5'	2.21	0.40
1:CA:613:C:H2'	1:CA:614:C:C6	2.56	0.40
1:CA:840:C:H3'	1:CA:841:C:C5'	2.50	0.40
1:CA:1000:A:C5	1:CA:1001:C:C2	3.09	0.40
1:CA:1082:A:OP1	5:CE:23:LYS:NZ	2.54	0.40
1:CA:1126:U:C6	1:CA:1281:C:C5	3.10	0.40
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.21	0.40
3:CC:77:ILE:HA	3:CC:84:VAL:HG22	2.01	0.40
4:CD:125:VAL:HG23	4:CD:130:VAL:CG2	2.51	0.40
4:CD:145:ILE:HD13	4:CD:178:MET:HB3	2.03	0.40
4:CD:162:ALA:HA	4:CD:165:ARG:HG3	2.03	0.40
5:CE:42:GLY:O	5:CE:119:GLY:HA3	2.22	0.40
5:CE:80:THR:HG1	5:CE:122:ASN:ND2	2.16	0.40
6:CF:3:HIS:O	6:CF:92:THR:HA	2.22	0.40
6:CF:4:TYR:CE2	6:CF:71:ILE:HG12	2.57	0.40
6:CF:71:ILE:CD1	6:CF:71:ILE:N	2.85	0.40
8:CH:18:GLN:HG2	8:CH:63:LEU:HD13	2.03	0.40
9:CI:129:LYS:O	9:CI:130:ARG:CD	2.70	0.40
13:CM:90:ARG:HD2	13:CM:97:VAL:HA	2.03	0.40
17:CQ:55:ILE:HD13	17:CQ:55:ILE:C	2.42	0.40
22:DA:77:G:C2	22:DA:78:U:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:DA:118:A:O4'	22:DA:178:G:O2'	2.38	0.40
22:DA:119:A:H5'	58:DA:3218:HOH:O	2.21	0.40
22:DA:269:C:O2	22:DA:269:C:C2'	2.69	0.40
22:DA:312:G:C2	22:DA:313:G:C8	3.09	0.40
22:DA:432:A:H2'	22:DA:433:C:O4'	2.21	0.40
22:DA:505:A:O2'	22:DA:509:C:O2'	2.23	0.40
22:DA:753:A:H2'	22:DA:754:U:H6	1.84	0.40
22:DA:909:A:N6	22:DA:912:C:O2	2.54	0.40
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.21	0.40
22:DA:1213:A:N3	22:DA:1238:G:O2'	2.39	0.40
22:DA:1343:G:N3	22:DA:1597:A:N1	2.69	0.40
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.56	0.40
22:DA:1429:G:H1'	22:DA:1568:G:N3	2.37	0.40
22:DA:1802:A:N1	22:DA:1803:A:C2	2.90	0.40
22:DA:2115:G:N3	22:DA:2117:A:C8	2.89	0.40
22:DA:2125:G:H5'	22:DA:2126:A:OP2	2.21	0.40
22:DA:2245:U:O2'	22:DA:2435:A:H3'	2.22	0.40
22:DA:2449:U:H4'	22:DA:2450:A:OP1	2.22	0.40
22:DA:2452:C:C4'	56:DA:3001:DOL:H461	2.52	0.40
22:DA:2553:G:H2'	22:DA:2554:U:C4'	2.52	0.40
22:DA:2842:G:C6	22:DA:2876:G:C6	3.10	0.40
23:DB:27:C:C5	23:DB:28:C:C5	3.10	0.40
23:DB:29:A:N3	23:DB:56:G:C2	2.89	0.40
23:DB:90:C:H5'	34:DM:18:ARG:HA	2.04	0.40
26:DE:58:LYS:CD	26:DE:60:TRP:O	2.70	0.40
26:DE:91:ASP:O	26:DE:91:ASP:CG	2.59	0.40
28:DG:155:GLU:OE1	28:DG:158:LYS:HG3	2.21	0.40
30:DI:12:GLN:NE2	30:DI:55:ILE:O	2.54	0.40
30:DI:57:VAL:HG23	30:DI:71:THR:CA	2.52	0.40
39:DR:39:LEU:C	39:DR:49:ILE:HG23	2.42	0.40
39:DR:96:VAL:O	39:DR:96:VAL:HG23	2.21	0.40
40:DS:14:ALA:HB1	40:DS:18:ARG:CZ	2.52	0.40
40:DS:47:VAL:HB	40:DS:103:ILE:HG21	2.03	0.40
42:DU:96:PHE:CZ	42:DU:103:ILE:CG1	3.03	0.40
45:DX:5:CYS:O	45:DX:9:GLY:HA2	2.22	0.40
49:D1:10:LYS:O	49:D1:51:GLU:HG2	2.22	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CA:204:G:OP1	22:DA:289:G:O2'[3_545]	2.12	0.08

### 5.3 Torsion angles [i](#)

#### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/218 (99%)	126 (58%)	45 (21%)	45 (21%)	0	0
2	CB	216/218 (99%)	140 (65%)	51 (24%)	25 (12%)	0	1
3	AC	204/206 (99%)	148 (72%)	35 (17%)	21 (10%)	0	1
3	CC	204/206 (99%)	154 (76%)	39 (19%)	11 (5%)	2	5
4	AD	203/205 (99%)	137 (68%)	39 (19%)	27 (13%)	0	0
4	CD	203/205 (99%)	152 (75%)	32 (16%)	19 (9%)	0	1
5	AE	148/150 (99%)	102 (69%)	27 (18%)	19 (13%)	0	1
5	CE	148/150 (99%)	100 (68%)	33 (22%)	15 (10%)	0	1
6	AF	98/100 (98%)	73 (74%)	15 (15%)	10 (10%)	0	1
6	CF	98/100 (98%)	68 (69%)	15 (15%)	15 (15%)	0	0
7	AG	149/151 (99%)	107 (72%)	29 (20%)	13 (9%)	1	1
7	CG	149/151 (99%)	119 (80%)	22 (15%)	8 (5%)	2	5
8	AH	127/129 (98%)	90 (71%)	28 (22%)	9 (7%)	1	2
8	CH	127/129 (98%)	98 (77%)	19 (15%)	10 (8%)	1	2
9	AI	125/127 (98%)	87 (70%)	24 (19%)	14 (11%)	0	1
9	CI	125/127 (98%)	89 (71%)	18 (14%)	18 (14%)	0	0
10	AJ	96/98 (98%)	64 (67%)	11 (12%)	21 (22%)	0	0
10	CJ	96/98 (98%)	73 (76%)	11 (12%)	12 (12%)	0	1
11	AK	115/117 (98%)	81 (70%)	17 (15%)	17 (15%)	0	0
11	CK	115/117 (98%)	82 (71%)	24 (21%)	9 (8%)	1	2
12	AL	121/123 (98%)	91 (75%)	21 (17%)	9 (7%)	1	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	CL	121/123 (98%)	92 (76%)	18 (15%)	11 (9%)	1	1
13	AM	112/114 (98%)	81 (72%)	21 (19%)	10 (9%)	1	1
13	CM	112/114 (98%)	80 (71%)	18 (16%)	14 (12%)	0	1
14	AN	92/100 (92%)	61 (66%)	21 (23%)	10 (11%)	0	1
14	CN	92/100 (92%)	58 (63%)	20 (22%)	14 (15%)	0	0
15	AO	86/88 (98%)	65 (76%)	14 (16%)	7 (8%)	1	2
15	CO	86/88 (98%)	64 (74%)	17 (20%)	5 (6%)	1	4
16	AP	80/82 (98%)	55 (69%)	15 (19%)	10 (12%)	0	1
16	CP	80/82 (98%)	59 (74%)	13 (16%)	8 (10%)	0	1
17	AQ	78/80 (98%)	53 (68%)	18 (23%)	7 (9%)	1	1
17	CQ	78/80 (98%)	56 (72%)	15 (19%)	7 (9%)	1	1
18	AR	53/55 (96%)	42 (79%)	11 (21%)	0	100	100
18	CR	53/55 (96%)	37 (70%)	12 (23%)	4 (8%)	1	2
19	AS	77/79 (98%)	57 (74%)	11 (14%)	9 (12%)	0	1
19	CS	77/79 (98%)	55 (71%)	11 (14%)	11 (14%)	0	0
20	AT	83/85 (98%)	59 (71%)	19 (23%)	5 (6%)	1	4
20	CT	83/85 (98%)	62 (75%)	12 (14%)	9 (11%)	0	1
21	AU	49/51 (96%)	26 (53%)	8 (16%)	15 (31%)	0	0
21	CU	49/51 (96%)	21 (43%)	16 (33%)	12 (24%)	0	0
24	BC	269/271 (99%)	218 (81%)	39 (14%)	12 (4%)	2	8
24	DC	269/271 (99%)	196 (73%)	48 (18%)	25 (9%)	0	1
25	BD	207/209 (99%)	180 (87%)	21 (10%)	6 (3%)	4	15
25	DD	207/209 (99%)	153 (74%)	43 (21%)	11 (5%)	2	6
26	BE	199/201 (99%)	165 (83%)	30 (15%)	4 (2%)	7	24
26	DE	199/201 (99%)	154 (77%)	27 (14%)	18 (9%)	1	1
27	BF	175/177 (99%)	142 (81%)	24 (14%)	9 (5%)	2	6
27	DF	175/177 (99%)	135 (77%)	27 (15%)	13 (7%)	1	2
28	BG	174/176 (99%)	148 (85%)	16 (9%)	10 (6%)	1	5
28	DG	174/176 (99%)	127 (73%)	36 (21%)	11 (6%)	1	3
29	BH	147/149 (99%)	89 (60%)	37 (25%)	21 (14%)	0	0
29	DH	147/149 (99%)	100 (68%)	32 (22%)	15 (10%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
30	BI	139/141 (99%)	78 (56%)	37 (27%)	24 (17%)	0	0
30	DI	139/141 (99%)	82 (59%)	38 (27%)	19 (14%)	0	0
31	BJ	140/142 (99%)	125 (89%)	14 (10%)	1 (1%)	22	53
31	DJ	140/142 (99%)	104 (74%)	23 (16%)	13 (9%)	0	1
32	BK	120/122 (98%)	97 (81%)	14 (12%)	9 (8%)	1	2
32	DK	120/122 (98%)	95 (79%)	15 (12%)	10 (8%)	1	2
33	BL	141/143 (99%)	112 (79%)	21 (15%)	8 (6%)	1	5
33	DL	141/143 (99%)	98 (70%)	31 (22%)	12 (8%)	1	1
34	BM	134/136 (98%)	120 (90%)	11 (8%)	3 (2%)	6	22
34	DM	134/136 (98%)	112 (84%)	17 (13%)	5 (4%)	3	11
35	BN	118/120 (98%)	95 (80%)	21 (18%)	2 (2%)	9	29
35	DN	118/120 (98%)	90 (76%)	18 (15%)	10 (8%)	1	1
36	BO	114/116 (98%)	96 (84%)	14 (12%)	4 (4%)	3	12
36	DO	114/116 (98%)	82 (72%)	24 (21%)	8 (7%)	1	3
37	BP	112/114 (98%)	99 (88%)	8 (7%)	5 (4%)	2	8
37	DP	112/114 (98%)	88 (79%)	18 (16%)	6 (5%)	2	5
38	BQ	115/117 (98%)	102 (89%)	12 (10%)	1 (1%)	17	46
38	DQ	115/117 (98%)	92 (80%)	22 (19%)	1 (1%)	17	46
39	BR	101/103 (98%)	81 (80%)	10 (10%)	10 (10%)	0	1
39	DR	101/103 (98%)	72 (71%)	23 (23%)	6 (6%)	1	4
40	BS	108/110 (98%)	94 (87%)	10 (9%)	4 (4%)	3	11
40	DS	108/110 (98%)	83 (77%)	17 (16%)	8 (7%)	1	2
41	BT	91/93 (98%)	74 (81%)	9 (10%)	8 (9%)	1	1
41	DT	91/93 (98%)	53 (58%)	28 (31%)	10 (11%)	0	1
42	BU	100/102 (98%)	77 (77%)	19 (19%)	4 (4%)	3	9
42	DU	100/102 (98%)	69 (69%)	19 (19%)	12 (12%)	0	1
43	BV	92/94 (98%)	84 (91%)	7 (8%)	1 (1%)	14	41
43	DV	92/94 (98%)	76 (83%)	14 (15%)	2 (2%)	6	22
44	BW	74/76 (97%)	68 (92%)	4 (5%)	2 (3%)	5	17
44	DW	73/76 (96%)	61 (84%)	12 (16%)	0	100	100
45	BX	75/77 (97%)	68 (91%)	6 (8%)	1 (1%)	12	36

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
45	DX	75/77 (97%)	58 (77%)	12 (16%)	5 (7%)	1	3
46	BY	61/63 (97%)	43 (70%)	10 (16%)	8 (13%)	0	1
46	DY	61/63 (97%)	44 (72%)	12 (20%)	5 (8%)	1	2
47	BZ	56/58 (97%)	54 (96%)	2 (4%)	0	100	100
47	DZ	56/58 (97%)	41 (73%)	10 (18%)	5 (9%)	1	1
48	B0	54/56 (96%)	46 (85%)	4 (7%)	4 (7%)	1	2
48	D0	54/56 (96%)	37 (68%)	12 (22%)	5 (9%)	0	1
49	B1	48/50 (96%)	40 (83%)	4 (8%)	4 (8%)	1	2
49	D1	48/50 (96%)	36 (75%)	8 (17%)	4 (8%)	1	2
50	B2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	2	8
50	D2	44/46 (96%)	34 (77%)	6 (14%)	4 (9%)	1	1
51	B3	62/64 (97%)	56 (90%)	5 (8%)	1 (2%)	9	31
51	D3	62/64 (97%)	52 (84%)	6 (10%)	4 (6%)	1	3
52	B4	36/38 (95%)	31 (86%)	4 (11%)	1 (3%)	5	17
52	D4	36/38 (95%)	32 (89%)	2 (6%)	2 (6%)	2	5
53	B5	183/228 (80%)	87 (48%)	53 (29%)	43 (24%)	0	0
54	B6	2/8 (25%)	2 (100%)	0	0	100	100
54	D6	2/8 (25%)	0	2 (100%)	0	100	100
All	All	11422/11688 (98%)	8528 (75%)	1918 (17%)	976 (8%)	1	1

All (976) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	16	PHE
2	AB	20	THR
2	AB	22	TYR
2	AB	25	PRO
2	AB	34	ALA
2	AB	43	LEU
2	AB	64	LYS
2	AB	73	LYS
2	AB	74	ARG
2	AB	75	ALA
2	AB	76	ALA
2	AB	88	ASP
2	AB	107	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	AB	120	GLN
2	AB	126	PHE
2	AB	134	ALA
2	AB	148	LEU
2	AB	152	LYS
2	AB	155	GLY
2	AB	182	PRO
2	AB	193	PRO
2	AB	194	ASP
2	AB	201	PRO
3	AC	12	LEU
3	AC	18	TRP
3	AC	26	THR
3	AC	80	LYS
3	AC	127	ARG
3	AC	140	ASN
3	AC	141	ALA
3	AC	146	ALA
3	AC	166	GLU
4	AD	23	SER
4	AD	25	VAL
4	AD	29	ASP
4	AD	33	LYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	47	ARG
4	AD	85	ASN
4	AD	126	ASN
4	AD	153	SER
4	AD	168	PRO
4	AD	192	SER
5	AE	69	ARG
5	AE	70	ASN
5	AE	100	SER
5	AE	137	VAL
5	AE	158	GLY
6	AF	91	ARG
6	AF	92	THR
6	AF	99	ALA
7	AG	9	GLN
7	AG	14	PRO
7	AG	15	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	AG	56	LYS
7	AG	57	SER
7	AG	81	GLY
8	AH	67	GLN
9	AI	41	ARG
9	AI	44	ALA
9	AI	58	VAL
9	AI	59	GLU
9	AI	116	VAL
10	AJ	34	ALA
10	AJ	35	GLN
10	AJ	57	VAL
10	AJ	74	VAL
10	AJ	93	ALA
10	AJ	101	SER
11	AK	27	PHE
11	AK	39	GLY
11	AK	41	ALA
11	AK	52	PHE
11	AK	55	SER
11	AK	56	ARG
11	AK	73	ALA
11	AK	103	ALA
11	AK	126	LYS
12	AL	24	LEU
12	AL	26	ALA
12	AL	44	LYS
12	AL	89	ASP
13	AM	5	ALA
13	AM	12	HIS
13	AM	107	ARG
13	AM	114	LYS
14	AN	34	VAL
14	AN	42	TRP
14	AN	47	LYS
14	AN	52	PRO
14	AN	62	ASN
14	AN	92	GLU
15	AO	3	LEU
15	AO	17	ARG
16	AP	43	ALA
16	AP	46	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
16	AP	80	LYS
17	AQ	13	VAL
17	AQ	18	GLU
17	AQ	51	ASN
17	AQ	82	ALA
19	AS	23	VAL
19	AS	65	GLU
20	AT	4	ILE
20	AT	5	LYS
20	AT	6	SER
21	AU	9	ASN
21	AU	12	PHE
21	AU	23	CYS
21	AU	24	GLU
21	AU	35	ARG
21	AU	36	GLU
21	AU	37	PHE
21	AU	40	LYS
24	BC	71	LYS
24	BC	122	ALA
24	BC	168	ASP
24	BC	196	GLY
24	BC	253	LYS
25	BD	104	VAL
25	BD	152	PRO
26	BE	11	ALA
26	BE	86	ALA
27	BF	3	LYS
27	BF	41	GLY
27	BF	175	PHE
28	BG	39	ASP
28	BG	110	SER
28	BG	119	ALA
28	BG	175	LYS
29	BH	10	ALA
29	BH	34	GLY
29	BH	53	GLU
29	BH	87	GLU
29	BH	90	LEU
29	BH	118	PRO
29	BH	121	VAL
29	BH	140	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	BI	19	ASN
30	BI	45	LYS
30	BI	63	ALA
30	BI	75	PRO
30	BI	83	ALA
30	BI	86	ILE
30	BI	113	LYS
30	BI	117	MET
32	BK	35	VAL
33	BL	15	ALA
33	BL	69	ARG
33	BL	94	THR
34	BM	69	PRO
37	BP	94	LYS
37	BP	114	LEU
38	BQ	25	TYR
39	BR	49	ILE
39	BR	51	VAL
39	BR	53	PHE
39	BR	55	ASP
40	BS	64	ALA
41	BT	2	ILE
41	BT	89	GLU
45	BX	3	ARG
46	BY	22	LEU
46	BY	24	GLU
46	BY	35	GLY
46	BY	36	GLN
46	BY	58	ASN
46	BY	62	GLY
48	B0	56	ALA
49	B1	17	THR
50	B2	44	VAL
53	B5	53	ARG
53	B5	60	ARG
53	B5	86	GLU
53	B5	126	SER
53	B5	134	PRO
53	B5	141	PRO
53	B5	167	ASP
53	B5	173	HIS
53	B5	175	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	B5	183	PRO
53	B5	184	GLU
53	B5	185	LYS
53	B5	203	GLU
53	B5	214	TYR
53	B5	215	VAL
53	B5	221	PRO
2	CB	16	PHE
2	CB	35	ARG
2	CB	36	ASN
2	CB	74	ARG
2	CB	87	CYS
2	CB	88	ASP
2	CB	120	GLN
2	CB	126	PHE
2	CB	141	LEU
2	CB	168	HIS
2	CB	193	PRO
2	CB	194	ASP
2	CB	207	ILE
2	CB	220	THR
3	CC	66	VAL
3	CC	82	GLU
3	CC	127	ARG
3	CC	146	ALA
4	CD	28	ILE
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	35	GLU
4	CD	42	GLY
5	CE	51	GLY
5	CE	100	SER
5	CE	101	GLU
5	CE	102	GLY
5	CE	103	THR
5	CE	123	VAL
5	CE	158	GLY
6	CF	33	GLU
6	CF	55	HIS
6	CF	56	LYS
6	CF	65	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	CF	92	THR
6	CF	93	LYS
6	CF	98	GLU
6	CF	99	ALA
7	CG	3	ARG
7	CG	56	LYS
7	CG	130	ASN
7	CG	146	GLU
9	CI	26	GLY
9	CI	41	ARG
9	CI	53	GLU
9	CI	72	ILE
9	CI	91	ASP
9	CI	120	LYS
10	CJ	91	ASP
11	CK	52	PHE
11	CK	93	ARG
11	CK	127	ARG
12	CL	4	VAL
12	CL	43	LYS
12	CL	44	LYS
12	CL	48	ALA
12	CL	58	THR
12	CL	89	ASP
13	CM	7	ILE
13	CM	11	ASP
13	CM	41	GLU
13	CM	99	GLY
14	CN	29	ALA
14	CN	52	PRO
14	CN	53	ARG
14	CN	59	ARG
14	CN	81	ARG
14	CN	92	GLU
15	CO	14	GLU
15	CO	18	ASP
17	CQ	51	ASN
17	CQ	70	THR
17	CQ	76	VAL
18	CR	21	ILE
19	CS	5	LEU
20	CT	4	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	CT	6	SER
20	CT	68	HIS
21	CU	12	PHE
21	CU	13	ASP
21	CU	24	GLU
21	CU	36	GLU
21	CU	37	PHE
21	CU	40	LYS
21	CU	52	ALA
24	DC	10	SER
24	DC	19	VAL
24	DC	29	PRO
24	DC	35	GLU
24	DC	58	HIS
24	DC	71	LYS
24	DC	238	ARG
24	DC	239	ASN
24	DC	251	GLN
25	DD	36	GLN
25	DD	57	ALA
25	DD	98	VAL
25	DD	105	LYS
25	DD	151	THR
25	DD	152	PRO
26	DE	6	LYS
26	DE	62	GLN
26	DE	145	ASP
27	DF	9	LYS
27	DF	122	PHE
27	DF	123	ASP
27	DF	175	PHE
28	DG	92	VAL
28	DG	119	ALA
28	DG	127	THR
28	DG	159	GLY
28	DG	175	LYS
29	DH	3	VAL
29	DH	10	ALA
29	DH	33	GLN
29	DH	35	LYS
29	DH	41	LYS
29	DH	53	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	DH	54	LEU
29	DH	83	LYS
29	DH	109	GLU
30	DI	3	LYS
30	DI	7	ALA
30	DI	19	ASN
30	DI	101	ILE
30	DI	102	SER
30	DI	115	ALA
31	DJ	6	ALA
31	DJ	11	VAL
31	DJ	42	ALA
31	DJ	81	ILE
31	DJ	94	ALA
32	DK	35	VAL
32	DK	92	GLU
32	DK	108	ARG
32	DK	120	PRO
33	DL	39	LYS
33	DL	40	SER
33	DL	111	ILE
35	DN	70	THR
35	DN	88	ALA
35	DN	107	ASN
36	DO	12	THR
36	DO	34	HIS
36	DO	57	ALA
36	DO	115	LEU
37	DP	66	ASN
39	DR	102	SER
40	DS	29	VAL
40	DS	62	ASP
40	DS	66	ILE
40	DS	67	ASP
40	DS	72	THR
41	DT	21	SER
41	DT	22	THR
41	DT	28	ASN
41	DT	39	THR
41	DT	66	LYS
41	DT	78	SER
42	DU	37	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	DU	89	ASP
43	DV	24	ASN
45	DX	62	LYS
47	DZ	4	THR
47	DZ	52	SER
47	DZ	53	PHE
48	D0	56	ALA
49	D1	16	GLY
50	D2	44	VAL
50	D2	45	SER
52	D4	23	ILE
2	AB	35	ARG
2	AB	41	ILE
2	AB	68	LEU
2	AB	80	VAL
2	AB	83	ALA
2	AB	119	THR
2	AB	137	ARG
2	AB	150	GLY
2	AB	156	GLY
2	AB	188	ASP
2	AB	202	GLY
2	AB	210	VAL
2	AB	212	LEU
2	AB	220	THR
3	AC	15	VAL
3	AC	17	PRO
3	AC	30	ALA
3	AC	61	ALA
3	AC	88	ARG
3	AC	160	ALA
3	AC	168	TYR
4	AD	17	THR
4	AD	24	GLY
4	AD	121	LYS
4	AD	191	LEU
5	AE	12	GLN
5	AE	45	ARG
5	AE	101	GLU
5	AE	109	GLY
5	AE	110	ALA
5	AE	122	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	AE	138	ARG
7	AG	77	SER
7	AG	100	ALA
7	AG	130	ASN
8	AH	88	ARG
9	AI	13	LYS
9	AI	120	LYS
10	AJ	17	LEU
10	AJ	32	THR
10	AJ	36	VAL
10	AJ	38	GLY
10	AJ	41	PRO
10	AJ	81	GLU
10	AJ	91	ASP
11	AK	17	SER
11	AK	36	ASP
11	AK	108	THR
12	AL	25	GLU
12	AL	58	THR
12	AL	118	GLY
13	AM	4	ILE
13	AM	65	VAL
14	AN	23	LYS
14	AN	28	LYS
15	AO	88	ARG
16	AP	11	ALA
17	AQ	70	THR
19	AS	6	LYS
19	AS	64	ASP
21	AU	27	GLY
21	AU	38	TYR
21	AU	39	GLU
24	BC	271	ARG
25	BD	86	GLU
25	BD	102	ALA
25	BD	105	LYS
26	BE	49	ARG
27	BF	42	GLU
27	BF	172	ALA
27	BF	176	PRO
28	BG	38	ASN
28	BG	100	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	BH	3	VAL
29	BH	11	ASN
29	BH	14	SER
29	BH	15	LEU
29	BH	66	ASN
29	BH	119	ASN
30	BI	10	LYS
30	BI	39	CYS
30	BI	58	VAL
30	BI	102	SER
30	BI	116	ASP
30	BI	138	LEU
32	BK	108	ARG
32	BK	110	GLU
33	BL	88	GLY
35	BN	70	THR
35	BN	118	ARG
36	BO	87	ILE
36	BO	88	LYS
37	BP	16	ASP
37	BP	35	GLY
37	BP	105	GLY
39	BR	29	THR
39	BR	57	GLY
40	BS	63	GLY
41	BT	17	SER
41	BT	52	GLU
41	BT	71	GLY
41	BT	72	GLN
42	BU	8	ASP
42	BU	19	LYS
42	BU	52	LEU
43	BV	66	ASP
46	BY	23	ARG
49	B1	5	ILE
49	B1	52	ALA
51	B3	28	ASN
53	B5	37	LYS
53	B5	41	THR
53	B5	62	THR
53	B5	69	LEU
53	B5	90	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	B5	136	GLY
53	B5	209	PHE
53	B5	213	VAL
53	B5	216	THR
53	B5	217	THR
53	B5	223	VAL
2	CB	22	TYR
2	CB	124	GLY
3	CC	140	ASN
3	CC	141	ALA
4	CD	29	ASP
4	CD	36	GLN
4	CD	153	SER
4	CD	174	ASP
4	CD	175	ALA
5	CE	122	ASN
6	CF	91	ARG
6	CF	94	HIS
7	CG	84	THR
7	CG	114	LYS
8	CH	22	LYS
8	CH	54	ASP
9	CI	57	MET
9	CI	123	ARG
10	CJ	38	GLY
10	CJ	41	PRO
10	CJ	57	VAL
10	CJ	90	LEU
10	CJ	93	ALA
11	CK	78	GLY
11	CK	126	LYS
12	CL	22	PRO
12	CL	26	ALA
12	CL	76	GLU
13	CM	44	LYS
13	CM	94	GLY
14	CN	22	ALA
14	CN	32	SER
15	CO	21	ASP
16	CP	77	GLU
17	CQ	18	GLU
17	CQ	80	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
18	CR	25	ASP
18	CR	47	THR
19	CS	6	LYS
19	CS	32	ARG
19	CS	45	ILE
19	CS	67	VAL
21	CU	9	ASN
21	CU	10	GLU
24	DC	25	HIS
24	DC	122	ALA
24	DC	205	LEU
24	DC	218	PRO
24	DC	240	PHE
24	DC	255	LYS
25	DD	40	LEU
26	DE	18	THR
26	DE	48	THR
26	DE	82	GLY
26	DE	86	ALA
26	DE	122	GLU
26	DE	126	VAL
26	DE	129	PRO
27	DF	148	ARG
28	DG	20	ASN
28	DG	28	GLY
29	DH	31	VAL
29	DH	77	THR
29	DH	118	PRO
30	DI	9	VAL
30	DI	93	PRO
30	DI	106	LEU
30	DI	134	ARG
31	DJ	25	LEU
31	DJ	127	GLY
33	DL	16	GLY
33	DL	36	LYS
33	DL	42	SER
34	DM	23	GLY
35	DN	104	ALA
36	DO	116	GLN
37	DP	36	SER
37	DP	94	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	DQ	87	SER
39	DR	53	PHE
41	DT	18	GLU
41	DT	90	GLY
42	DU	53	ASN
42	DU	57	GLY
42	DU	98	SER
42	DU	99	ASN
45	DX	7	VAL
46	DY	57	LEU
48	D0	55	ILE
51	D3	26	HIS
2	AB	203	ASN
3	AC	54	ARG
3	AC	86	LYS
4	AD	32	CYS
4	AD	167	LYS
4	AD	169	THR
5	AE	88	VAL
5	AE	147	MET
6	AF	6	ILE
6	AF	42	TRP
6	AF	68	GLN
6	AF	69	GLU
7	AG	59	LEU
7	AG	85	TYR
8	AH	21	ASN
8	AH	50	LYS
9	AI	67	VAL
9	AI	88	MET
10	AJ	58	ASN
10	AJ	61	ALA
10	AJ	92	LEU
11	AK	128	ARG
12	AL	102	LEU
13	AM	10	PRO
13	AM	67	GLY
15	AO	73	LYS
16	AP	10	GLY
16	AP	49	GLY
16	AP	50	THR
16	AP	57	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	AQ	12	VAL
20	AT	68	HIS
20	AT	69	LYS
21	AU	8	GLU
24	BC	29	PRO
26	BE	44	ARG
29	BH	9	VAL
29	BH	30	LEU
29	BH	85	GLY
29	BH	93	SER
29	BH	105	ALA
30	BI	4	LYS
30	BI	8	TYR
30	BI	20	PRO
30	BI	60	THR
30	BI	101	ILE
32	BK	109	SER
32	BK	119	ALA
34	BM	6	ARG
39	BR	31	GLU
39	BR	50	GLY
48	B0	55	ILE
52	B4	37	GLN
53	B5	27	ALA
53	B5	79	ALA
53	B5	133	GLY
53	B5	208	THR
53	B5	219	MET
2	CB	19	GLN
2	CB	130	THR
3	CC	37	PHE
3	CC	156	ARG
3	CC	174	PRO
4	CD	4	TYR
4	CD	10	LYS
4	CD	154	ARG
4	CD	168	PRO
5	CE	12	GLN
5	CE	45	ARG
5	CE	138	ARG
5	CE	143	GLY
5	CE	155	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	CF	85	ILE
7	CG	126	ASP
7	CG	140	ASP
8	CH	3	MET
8	CH	66	PHE
8	CH	96	MET
8	CH	114	ARG
9	CI	12	ARG
10	CJ	79	PRO
11	CK	120	GLY
12	CL	23	ALA
13	CM	12	HIS
13	CM	82	ASP
13	CM	114	LYS
14	CN	11	VAL
14	CN	21	PHE
14	CN	62	ASN
15	CO	46	HIS
16	CP	24	SER
16	CP	31	ARG
17	CQ	20	SER
19	CS	66	MET
19	CS	73	GLU
20	CT	7	ALA
21	CU	35	ARG
24	DC	26	LYS
24	DC	143	ASN
25	DD	102	ALA
26	DE	61	ARG
26	DE	149	ILE
28	DG	8	PRO
29	DH	16	GLY
29	DH	40	THR
31	DJ	8	PRO
31	DJ	10	THR
32	DK	105	ARG
33	DL	9	ALA
33	DL	53	GLY
33	DL	69	ARG
34	DM	3	GLN
34	DM	57	VAL
34	DM	58	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DM	69	PRO
35	DN	86	ARG
35	DN	118	ARG
36	DO	3	LYS
36	DO	63	LYS
37	DP	80	VAL
40	DS	40	ASN
42	DU	41	LEU
42	DU	58	ILE
45	DX	26	LYS
46	DY	37	LEU
47	DZ	29	LEU
47	DZ	30	ARG
48	D0	52	ARG
49	D1	27	LYS
52	D4	20	ASP
4	AD	26	ARG
4	AD	28	ILE
4	AD	36	GLN
4	AD	160	GLU
4	AD	193	ALA
5	AE	24	THR
5	AE	26	LYS
6	AF	62	MET
7	AG	5	ARG
8	AH	66	PHE
9	AI	9	THR
10	AJ	42	LEU
10	AJ	75	ASP
11	AK	14	LYS
11	AK	119	ASN
13	AM	64	VAL
14	AN	44	ALA
15	AO	20	ASN
15	AO	46	HIS
16	AP	53	ASP
16	AP	79	ASN
17	AQ	16	LYS
19	AS	4	SER
19	AS	29	LYS
19	AS	43	ASN
21	AU	10	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	AU	26	ALA
24	BC	121	ASP
24	BC	124	ILE
24	BC	265	LYS
27	BF	10	ASP
28	BG	12	PRO
28	BG	80	THR
29	BH	83	LYS
30	BI	9	VAL
30	BI	84	ALA
30	BI	98	VAL
31	BJ	81	ILE
33	BL	68	SER
36	BO	50	ALA
39	BR	43	ASN
39	BR	52	PRO
41	BT	18	GLU
42	BU	100	SER
44	BW	11	ARG
46	BY	46	VAL
49	B1	51	GLU
53	B5	65	LEU
53	B5	66	PRO
53	B5	106	ASP
2	CB	108	ARG
2	CB	136	MET
2	CB	142	GLU
2	CB	149	GLY
4	CD	47	ARG
4	CD	192	SER
5	CE	150	PRO
9	CI	9	THR
10	CJ	35	GLN
10	CJ	36	VAL
10	CJ	92	LEU
10	CJ	95	GLY
12	CL	24	LEU
13	CM	14	HIS
14	CN	23	LYS
14	CN	31	ILE
16	CP	44	SER
19	CS	31	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	CS	69	HIS
20	CT	67	ILE
21	CU	11	PRO
24	DC	121	ASP
24	DC	203	ARG
25	DD	70	LYS
25	DD	194	PRO
26	DE	125	SER
26	DE	127	GLU
26	DE	153	LEU
27	DF	174	ASP
28	DG	46	ALA
29	DH	9	VAL
30	DI	10	LYS
30	DI	65	ARG
30	DI	84	ALA
32	DK	93	GLN
33	DL	29	LYS
33	DL	30	THR
35	DN	59	SER
35	DN	61	ALA
35	DN	85	PRO
37	DP	114	LEU
39	DR	7	SER
39	DR	82	HIS
40	DS	63	GLY
40	DS	64	ALA
42	DU	7	ARG
42	DU	52	LEU
43	DV	84	PRO
50	D2	8	SER
51	D3	7	VAL
2	AB	13	GLY
2	AB	161	LEU
3	AC	66	VAL
3	AC	159	GLY
4	AD	151	LYS
5	AE	78	ASN
6	AF	54	LEU
6	AF	98	GLU
8	AH	57	PRO
10	AJ	16	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
10	AJ	33	GLY
11	AK	16	VAL
15	AO	49	ASP
19	AS	9	PRO
21	AU	52	ALA
27	BF	177	PHE
28	BG	14	GLY
32	BK	91	SER
32	BK	93	GLN
33	BL	29	LYS
33	BL	86	GLU
33	BL	92	LEU
41	BT	25	GLU
44	BW	57	HIS
48	B0	34	SER
50	B2	42	LEU
53	B5	148	PHE
53	B5	171	ALA
53	B5	180	SER
53	B5	201	LYS
53	B5	210	LEU
2	CB	166	ALA
2	CB	203	ASN
3	CC	160	ALA
4	CD	34	ILE
6	CF	39	LEU
8	CH	21	ASN
8	CH	57	PRO
8	CH	67	GLN
8	CH	97	ALA
9	CI	14	SER
9	CI	55	VAL
9	CI	58	VAL
9	CI	128	SER
11	CK	15	GLN
13	CM	37	ALA
13	CM	66	GLU
16	CP	46	LYS
17	CQ	5	ILE
20	CT	5	LYS
20	CT	20	HIS
20	CT	56	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	CU	16	LEU
24	DC	34	LEU
24	DC	46	ASN
24	DC	85	PRO
24	DC	247	PRO
24	DC	260	ASN
25	DD	195	GLY
26	DE	80	SER
27	DF	27	GLN
27	DF	79	ILE
27	DF	118	SER
27	DF	176	PRO
30	DI	20	PRO
30	DI	22	PRO
31	DJ	95	ARG
32	DK	110	GLU
35	DN	3	HIS
41	DT	77	ARG
48	D0	24	ALA
48	D0	43	ILE
49	D1	51	GLU
2	AB	21	ARG
2	AB	48	PRO
2	AB	183	VAL
3	AC	147	LYS
4	AD	198	HIS
8	AH	14	ILE
8	AH	96	MET
9	AI	43	THR
9	AI	51	PRO
11	AK	89	PRO
12	AL	22	PRO
19	AS	76	PRO
24	BC	97	LYS
24	BC	234	GLY
25	BD	40	LEU
29	BH	120	GLY
30	BI	7	ALA
30	BI	23	PRO
32	BK	118	LEU
36	BO	61	GLN
40	BS	29	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	B5	36	ALA
53	B5	218	THR
2	CB	68	LEU
5	CE	24	THR
6	CF	13	ASP
6	CF	18	VAL
9	CI	32	GLN
9	CI	129	LYS
10	CJ	75	ASP
13	CM	96	PRO
18	CR	71	THR
26	DE	161	ALA
28	DG	12	PRO
30	DI	61	VAL
36	DO	90	VAL
45	DX	44	LYS
49	D1	5	ILE
51	D3	47	LYS
4	AD	173	VAL
5	AE	105	ILE
5	AE	149	SER
8	AH	25	VAL
10	AJ	43	PRO
28	BG	79	VAL
32	BK	72	PRO
48	B0	54	VAL
53	B5	51	ASP
9	CI	50	GLN
13	CM	25	VAL
14	CN	34	VAL
15	CO	36	ILE
30	DI	13	VAL
30	DI	52	GLY
31	DJ	82	GLY
32	DK	72	PRO
42	DU	54	GLN
50	D2	38	GLY
2	AB	124	GLY
9	AI	24	GLY
13	AM	16	VAL
19	CS	30	PRO
19	CS	76	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	DC	228	VAL
27	DF	85	ILE
28	DG	17	VAL
32	DK	48	PRO
33	DL	87	GLY
45	DX	51	VAL
46	DY	11	VAL
9	AI	72	ILE
14	AN	91	GLY
27	BF	85	ILE
40	BS	66	ILE
6	CF	64	VAL
11	CK	92	GLY
16	CP	14	ARG
16	CP	42	ILE
20	CT	65	GLY
31	DJ	64	VAL
37	DP	84	ILE
42	DU	25	VAL
2	AB	224	GLY
7	AG	80	VAL
34	BM	26	VAL
4	CD	167	LYS
9	CI	104	VAL
11	CK	89	PRO
26	DE	83	VAL
27	DF	31	VAL
27	DF	44	ILE
30	DI	98	VAL
32	DK	119	ALA
39	DR	101	ILE
41	DT	47	VAL
46	DY	46	VAL
51	D3	32	ILE
3	CC	64	ILE
16	CP	15	PRO
31	DJ	136	GLN
39	DR	30	GLY
46	DY	35	GLY

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/180 (100%)	132 (73%)	48 (27%)	0	1
2	CB	180/180 (100%)	130 (72%)	50 (28%)	0	1
3	AC	170/170 (100%)	135 (79%)	35 (21%)	1	3
3	CC	170/170 (100%)	144 (85%)	26 (15%)	2	8
4	AD	172/172 (100%)	139 (81%)	33 (19%)	1	4
4	CD	172/172 (100%)	143 (83%)	29 (17%)	2	6
5	AE	113/113 (100%)	84 (74%)	29 (26%)	0	1
5	CE	113/113 (100%)	86 (76%)	27 (24%)	0	2
6	AF	87/87 (100%)	69 (79%)	18 (21%)	1	3
6	CF	87/87 (100%)	61 (70%)	26 (30%)	0	1
7	AG	124/124 (100%)	101 (82%)	23 (18%)	1	5
7	CG	124/124 (100%)	99 (80%)	25 (20%)	1	4
8	AH	104/104 (100%)	84 (81%)	20 (19%)	1	4
8	CH	104/104 (100%)	82 (79%)	22 (21%)	1	3
9	AI	105/105 (100%)	77 (73%)	28 (27%)	0	1
9	CI	105/105 (100%)	88 (84%)	17 (16%)	2	7
10	AJ	86/86 (100%)	67 (78%)	19 (22%)	1	3
10	CJ	86/86 (100%)	68 (79%)	18 (21%)	1	3
11	AK	90/90 (100%)	76 (84%)	14 (16%)	2	8
11	CK	90/90 (100%)	71 (79%)	19 (21%)	1	3
12	AL	103/103 (100%)	89 (86%)	14 (14%)	3	11
12	CL	103/103 (100%)	82 (80%)	21 (20%)	1	4
13	AM	92/92 (100%)	74 (80%)	18 (20%)	1	4
13	CM	92/92 (100%)	75 (82%)	17 (18%)	1	5
14	AN	79/83 (95%)	64 (81%)	15 (19%)	1	4
14	CN	79/83 (95%)	70 (89%)	9 (11%)	5	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	AO	75/76 (99%)	63 (84%)	12 (16%)	2	7
15	CO	75/76 (99%)	65 (87%)	10 (13%)	4	12
16	AP	65/65 (100%)	50 (77%)	15 (23%)	1	2
16	CP	65/65 (100%)	54 (83%)	11 (17%)	2	6
17	AQ	74/74 (100%)	50 (68%)	24 (32%)	0	0
17	CQ	74/74 (100%)	51 (69%)	23 (31%)	0	0
18	AR	48/48 (100%)	38 (79%)	10 (21%)	1	3
18	CR	48/48 (100%)	38 (79%)	10 (21%)	1	3
19	AS	70/70 (100%)	55 (79%)	15 (21%)	1	3
19	CS	70/70 (100%)	58 (83%)	12 (17%)	2	6
20	AT	65/65 (100%)	51 (78%)	14 (22%)	1	3
20	CT	65/65 (100%)	57 (88%)	8 (12%)	4	15
21	AU	44/44 (100%)	29 (66%)	15 (34%)	0	0
21	CU	44/44 (100%)	29 (66%)	15 (34%)	0	0
24	BC	216/216 (100%)	189 (88%)	27 (12%)	4	14
24	DC	216/216 (100%)	197 (91%)	19 (9%)	10	29
25	BD	164/164 (100%)	148 (90%)	16 (10%)	8	24
25	DD	164/164 (100%)	145 (88%)	19 (12%)	5	17
26	BE	165/165 (100%)	136 (82%)	29 (18%)	2	5
26	DE	165/165 (100%)	137 (83%)	28 (17%)	2	6
27	BF	148/148 (100%)	116 (78%)	32 (22%)	1	3
27	DF	148/148 (100%)	119 (80%)	29 (20%)	1	4
28	BG	137/137 (100%)	118 (86%)	19 (14%)	3	11
28	DG	137/137 (100%)	114 (83%)	23 (17%)	2	6
29	BH	114/114 (100%)	88 (77%)	26 (23%)	1	2
29	DH	114/114 (100%)	88 (77%)	26 (23%)	1	2
30	BI	109/109 (100%)	82 (75%)	27 (25%)	0	2
30	DI	109/109 (100%)	80 (73%)	29 (27%)	0	1
31	BJ	116/116 (100%)	105 (90%)	11 (10%)	8	25
31	DJ	116/116 (100%)	94 (81%)	22 (19%)	1	4
32	BK	103/103 (100%)	89 (86%)	14 (14%)	3	11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DK	103/103 (100%)	90 (87%)	13 (13%)	4	14
33	BL	102/102 (100%)	91 (89%)	11 (11%)	6	19
33	DL	102/102 (100%)	86 (84%)	16 (16%)	2	8
34	BM	109/109 (100%)	99 (91%)	10 (9%)	9	27
34	DM	109/109 (100%)	95 (87%)	14 (13%)	4	13
35	BN	100/100 (100%)	94 (94%)	6 (6%)	19	48
35	DN	100/100 (100%)	76 (76%)	24 (24%)	0	2
36	BO	86/86 (100%)	65 (76%)	21 (24%)	0	2
36	DO	86/86 (100%)	70 (81%)	16 (19%)	1	5
37	BP	99/99 (100%)	81 (82%)	18 (18%)	1	5
37	DP	99/99 (100%)	90 (91%)	9 (9%)	9	27
38	BQ	89/89 (100%)	78 (88%)	11 (12%)	4	14
38	DQ	89/89 (100%)	78 (88%)	11 (12%)	4	14
39	BR	84/84 (100%)	74 (88%)	10 (12%)	5	16
39	DR	84/84 (100%)	76 (90%)	8 (10%)	8	25
40	BS	93/93 (100%)	76 (82%)	17 (18%)	1	5
40	DS	93/93 (100%)	83 (89%)	10 (11%)	6	19
41	BT	80/80 (100%)	68 (85%)	12 (15%)	3	9
41	DT	80/80 (100%)	66 (82%)	14 (18%)	2	6
42	BU	83/83 (100%)	72 (87%)	11 (13%)	4	12
42	DU	83/83 (100%)	68 (82%)	15 (18%)	1	5
43	BV	78/78 (100%)	63 (81%)	15 (19%)	1	4
43	DV	78/78 (100%)	65 (83%)	13 (17%)	2	6
44	BW	57/58 (98%)	47 (82%)	10 (18%)	2	6
44	DW	56/58 (97%)	50 (89%)	6 (11%)	6	20
45	BX	67/67 (100%)	61 (91%)	6 (9%)	9	28
45	DX	67/67 (100%)	58 (87%)	9 (13%)	4	12
46	BY	55/55 (100%)	50 (91%)	5 (9%)	9	27
46	DY	55/55 (100%)	43 (78%)	12 (22%)	1	3
47	BZ	48/48 (100%)	41 (85%)	7 (15%)	3	9
47	DZ	48/48 (100%)	38 (79%)	10 (21%)	1	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B0	47/47 (100%)	42 (89%)	5 (11%)	6	20
48	D0	47/47 (100%)	43 (92%)	4 (8%)	10	31
49	B1	45/45 (100%)	42 (93%)	3 (7%)	16	43
49	D1	45/45 (100%)	39 (87%)	6 (13%)	4	12
50	B2	38/38 (100%)	34 (90%)	4 (10%)	7	20
50	D2	38/38 (100%)	31 (82%)	7 (18%)	1	5
51	B3	51/51 (100%)	45 (88%)	6 (12%)	5	16
51	D3	51/51 (100%)	46 (90%)	5 (10%)	8	24
52	B4	34/34 (100%)	32 (94%)	2 (6%)	19	49
52	D4	34/34 (100%)	26 (76%)	8 (24%)	1	2
53	B5	61/180 (34%)	48 (79%)	13 (21%)	1	3
54	B6	2/2 (100%)	2 (100%)	0	100	100
54	D6	2/2 (100%)	2 (100%)	0	100	100
All	All	9390/9522 (99%)	7747 (82%)	1643 (18%)	2	6

All (1643) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	MET
2	AB	14	VAL
2	AB	15	HIS
2	AB	20	THR
2	AB	21	ARG
2	AB	22	TYR
2	AB	27	MET
2	AB	31	ILE
2	AB	32	PHE
2	AB	39	HIS
2	AB	41	ILE
2	AB	43	LEU
2	AB	46	THR
2	AB	50	PHE
2	AB	64	LYS
2	AB	66	LYS
2	AB	68	LEU
2	AB	85	LEU
2	AB	87	CYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	AB	88	ASP
2	AB	95	ARG
2	AB	100	MET
2	AB	101	LEU
2	AB	102	THR
2	AB	107	VAL
2	AB	108	ARG
2	AB	114	LEU
2	AB	122	GLN
2	AB	123	ASP
2	AB	126	PHE
2	AB	129	LEU
2	AB	130	THR
2	AB	132	LYS
2	AB	135	LEU
2	AB	148	LEU
2	AB	153	ASP
2	AB	157	LEU
2	AB	161	LEU
2	AB	164	ILE
2	AB	182	PRO
2	AB	188	ASP
2	AB	197	ASP
2	AB	207	ILE
2	AB	208	ARG
2	AB	210	VAL
2	AB	213	TYR
2	AB	220	THR
2	AB	225	ARG
3	AC	3	GLN
3	AC	14	ILE
3	AC	15	VAL
3	AC	18	TRP
3	AC	19	ASN
3	AC	21	THR
3	AC	27	LYS
3	AC	28	GLU
3	AC	29	PHE
3	AC	33	LEU
3	AC	37	PHE
3	AC	38	LYS
3	AC	43	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
3	AC	52	VAL
3	AC	53	SER
3	AC	55	ILE
3	AC	57	ILE
3	AC	59	ARG
3	AC	64	ILE
3	AC	75	ILE
3	AC	86	LYS
3	AC	103	ILE
3	AC	107	ARG
3	AC	127	ARG
3	AC	131	ARG
3	AC	144	LEU
3	AC	167	TRP
3	AC	168	TYR
3	AC	185	ASN
3	AC	186	THR
3	AC	192	THR
3	AC	193	TYR
3	AC	196	ILE
3	AC	200	VAL
3	AC	207	ILE
4	AD	5	LEU
4	AD	13	ARG
4	AD	23	SER
4	AD	31	LYS
4	AD	32	CYS
4	AD	33	LYS
4	AD	34	ILE
4	AD	35	GLU
4	AD	44	ARG
4	AD	45	LYS
4	AD	56	ARG
4	AD	58	LYS
4	AD	63	ARG
4	AD	73	ARG
4	AD	83	LYS
4	AD	90	LEU
4	AD	93	LEU
4	AD	94	LEU
4	AD	104	ARG
4	AD	111	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	AD	121	LYS
4	AD	123	ILE
4	AD	132	ILE
4	AD	153	SER
4	AD	161	LEU
4	AD	163	GLU
4	AD	171	LEU
4	AD	173	VAL
4	AD	190	ASP
4	AD	195	ILE
4	AD	198	HIS
4	AD	205	SER
4	AD	206	LYS
5	AE	10	GLU
5	AE	14	LYS
5	AE	15	LEU
5	AE	16	ILE
5	AE	18	VAL
5	AE	21	VAL
5	AE	25	VAL
5	AE	32	SER
5	AE	36	LEU
5	AE	37	THR
5	AE	38	VAL
5	AE	60	ILE
5	AE	68	ARG
5	AE	78	ASN
5	AE	81	LEU
5	AE	83	HIS
5	AE	85	VAL
5	AE	94	VAL
5	AE	115	LEU
5	AE	120	VAL
5	AE	124	LEU
5	AE	134	ILE
5	AE	136	VAL
5	AE	137	VAL
5	AE	140	THR
5	AE	142	ASP
5	AE	149	SER
5	AE	153	VAL
5	AE	159	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	AF	7	VAL
6	AF	9	MET
6	AF	14	GLN
6	AF	15	SER
6	AF	17	GLN
6	AF	24	ARG
6	AF	36	ILE
6	AF	51	ILE
6	AF	54	LEU
6	AF	55	HIS
6	AF	68	GLN
6	AF	69	GLU
6	AF	73	GLU
6	AF	75	GLU
6	AF	84	VAL
6	AF	86	ARG
6	AF	96	VAL
6	AF	98	GLU
7	AG	4	ARG
7	AG	7	ILE
7	AG	22	LEU
7	AG	23	LEU
7	AG	32	VAL
7	AG	36	LYS
7	AG	37	SER
7	AG	38	THR
7	AG	40	GLU
7	AG	48	GLU
7	AG	50	LEU
7	AG	52	GLN
7	AG	58	GLU
7	AG	59	LEU
7	AG	63	GLU
7	AG	70	ARG
7	AG	78	ARG
7	AG	90	GLU
7	AG	106	GLU
7	AG	115	SER
7	AG	135	VAL
7	AG	136	LYS
7	AG	143	ARG
8	AH	2	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	AH	3	MET
8	AH	22	LYS
8	AH	25	VAL
8	AH	26	THR
8	AH	32	LEU
8	AH	36	ILE
8	AH	38	ASN
8	AH	39	VAL
8	AH	42	GLU
8	AH	47	GLU
8	AH	59	LEU
8	AH	77	ARG
8	AH	83	LEU
8	AH	87	LYS
8	AH	104	VAL
8	AH	108	LYS
8	AH	117	ARG
8	AH	121	LEU
8	AH	129	VAL
9	AI	12	ARG
9	AI	30	ILE
9	AI	33	ARG
9	AI	36	GLU
9	AI	43	THR
9	AI	46	MET
9	AI	48	VAL
9	AI	49	ARG
9	AI	55	VAL
9	AI	56	ASP
9	AI	57	MET
9	AI	60	LYS
9	AI	61	LEU
9	AI	63	LEU
9	AI	65	ILE
9	AI	68	LYS
9	AI	85	ARG
9	AI	88	MET
9	AI	89	GLU
9	AI	90	TYR
9	AI	91	ASP
9	AI	94	LEU
9	AI	100	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
9	AI	106	ARG
9	AI	115	LYS
9	AI	127	PHE
9	AI	129	LYS
9	AI	130	ARG
10	AJ	5	ARG
10	AJ	6	ILE
10	AJ	8	ILE
10	AJ	27	GLU
10	AJ	30	LYS
10	AJ	40	ILE
10	AJ	42	LEU
10	AJ	45	ARG
10	AJ	48	ARG
10	AJ	49	PHE
10	AJ	50	THR
10	AJ	52	LEU
10	AJ	59	LYS
10	AJ	66	GLU
10	AJ	73	LEU
10	AJ	84	VAL
10	AJ	87	LEU
10	AJ	91	ASP
10	AJ	98	VAL
11	AK	31	ILE
11	AK	33	THR
11	AK	34	ILE
11	AK	52	PHE
11	AK	56	ARG
11	AK	58	SER
11	AK	65	VAL
11	AK	81	ASN
11	AK	96	THR
11	AK	100	LEU
11	AK	101	ASN
11	AK	107	ILE
11	AK	126	LYS
11	AK	128	ARG
12	AL	7	LEU
12	AL	10	LYS
12	AL	29	GLN
12	AL	33	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	AL	36	ARG
12	AL	44	LYS
12	AL	58	THR
12	AL	62	GLU
12	AL	74	LEU
12	AL	89	ASP
12	AL	102	LEU
12	AL	105	SER
12	AL	115	SER
12	AL	121	ARG
13	AM	4	ILE
13	AM	7	ILE
13	AM	11	ASP
13	AM	13	LYS
13	AM	16	VAL
13	AM	25	VAL
13	AM	27	LYS
13	AM	44	LYS
13	AM	50	GLU
13	AM	59	GLU
13	AM	71	ARG
13	AM	72	GLU
13	AM	80	LEU
13	AM	82	ASP
13	AM	87	ARG
13	AM	91	HIS
13	AM	104	THR
13	AM	108	THR
14	AN	5	SER
14	AN	7	LYS
14	AN	12	LYS
14	AN	14	VAL
14	AN	26	GLU
14	AN	28	LYS
14	AN	46	LEU
14	AN	49	GLN
14	AN	50	THR
14	AN	51	LEU
14	AN	59	ARG
14	AN	84	VAL
14	AN	85	ARG
14	AN	97	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	AN	98	LYS
15	AO	8	THR
15	AO	13	SER
15	AO	17	ARG
15	AO	22	THR
15	AO	35	GLN
15	AO	39	LEU
15	AO	40	GLN
15	AO	59	MET
15	AO	67	LEU
15	AO	85	LEU
15	AO	87	LEU
15	AO	88	ARG
16	AP	1	MET
16	AP	2	VAL
16	AP	3	THR
16	AP	5	ARG
16	AP	8	ARG
16	AP	19	VAL
16	AP	29	ASN
16	AP	33	ILE
16	AP	46	LYS
16	AP	51	ARG
16	AP	55	ASP
16	AP	56	ARG
16	AP	66	THR
16	AP	76	LYS
16	AP	80	LYS
17	AQ	4	LYS
17	AQ	6	ARG
17	AQ	7	THR
17	AQ	8	LEU
17	AQ	13	VAL
17	AQ	14	SER
17	AQ	16	LYS
17	AQ	17	MET
17	AQ	21	ILE
17	AQ	29	VAL
17	AQ	30	LYS
17	AQ	33	ILE
17	AQ	38	ILE
17	AQ	48	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	AQ	52	GLU
17	AQ	55	ILE
17	AQ	61	ILE
17	AQ	69	LYS
17	AQ	74	THR
17	AQ	75	LEU
17	AQ	76	VAL
17	AQ	77	ARG
17	AQ	81	LYS
17	AQ	83	VAL
18	AR	21	ILE
18	AR	29	LEU
18	AR	30	LYS
18	AR	31	ASN
18	AR	33	ILE
18	AR	34	THR
18	AR	43	ARG
18	AR	55	LEU
18	AR	57	ARG
18	AR	71	THR
19	AS	6	LYS
19	AS	7	LYS
19	AS	21	LYS
19	AS	24	GLU
19	AS	27	ASP
19	AS	29	LYS
19	AS	32	ARG
19	AS	37	ARG
19	AS	41	PHE
19	AS	45	ILE
19	AS	55	ARG
19	AS	56	GLN
19	AS	58	VAL
19	AS	63	THR
19	AS	65	GLU
20	AT	3	ASN
20	AT	5	LYS
20	AT	6	SER
20	AT	10	ARG
20	AT	12	ILE
20	AT	24	ARG
20	AT	34	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	AT	36	TYR
20	AT	54	MET
20	AT	66	LEU
20	AT	67	ILE
20	AT	69	LYS
20	AT	70	ASN
20	AT	74	ARG
21	AU	5	LYS
21	AU	10	GLU
21	AU	12	PHE
21	AU	18	ARG
21	AU	20	LYS
21	AU	23	CYS
21	AU	25	LYS
21	AU	28	VAL
21	AU	34	ARG
21	AU	37	PHE
21	AU	42	THR
21	AU	46	LYS
21	AU	47	ARG
21	AU	49	LYS
21	AU	54	LYS
24	BC	18	LYS
24	BC	20	VAL
24	BC	23	GLU
24	BC	24	LEU
24	BC	51	THR
24	BC	64	ILE
24	BC	86	ASN
24	BC	90	ASN
24	BC	97	LYS
24	BC	105	LEU
24	BC	111	LYS
24	BC	117	GLN
24	BC	121	ASP
24	BC	140	THR
24	BC	156	ARG
24	BC	162	VAL
24	BC	164	ILE
24	BC	174	LEU
24	BC	177	ARG
24	BC	197	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	BC	213	TRP
24	BC	216	VAL
24	BC	220	VAL
24	BC	228	VAL
24	BC	242	LYS
24	BC	245	VAL
24	BC	265	LYS
25	BD	1	MET
25	BD	4	LEU
25	BD	14	ILE
25	BD	18	ASP
25	BD	25	THR
25	BD	42	ASN
25	BD	83	ARG
25	BD	95	SER
25	BD	97	SER
25	BD	121	THR
25	BD	129	THR
25	BD	133	THR
25	BD	145	SER
25	BD	174	SER
25	BD	186	LEU
25	BD	197	THR
26	BE	4	VAL
26	BE	5	LEU
26	BE	12	LEU
26	BE	16	GLU
26	BE	30	GLN
26	BE	40	ARG
26	BE	44	ARG
26	BE	55	SER
26	BE	63	LYS
26	BE	74	LYS
26	BE	77	ILE
26	BE	79	ARG
26	BE	93	SER
26	BE	108	ILE
26	BE	111	GLU
26	BE	116	ASP
26	BE	120	VAL
26	BE	122	GLU
26	BE	131	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	BE	136	GLN
26	BE	146	VAL
26	BE	149	ILE
26	BE	170	ARG
26	BE	171	ASP
26	BE	176	ASP
26	BE	178	VAL
26	BE	197	GLU
26	BE	198	GLU
26	BE	200	LEU
27	BF	14	LYS
27	BF	17	MET
27	BF	18	THR
27	BF	21	ASN
27	BF	25	VAL
27	BF	34	ILE
27	BF	35	THR
27	BF	36	LEU
27	BF	37	ASN
27	BF	40	VAL
27	BF	42	GLU
27	BF	44	ILE
27	BF	48	LYS
27	BF	49	LEU
27	BF	51	ASP
27	BF	78	LYS
27	BF	81	GLN
27	BF	83	TYR
27	BF	85	ILE
27	BF	104	ILE
27	BF	108	VAL
27	BF	120	LYS
27	BF	125	ARG
27	BF	132	VAL
27	BF	133	ARG
27	BF	134	GLU
27	BF	147	ASP
27	BF	152	LEU
27	BF	155	THR
27	BF	158	THR
27	BF	174	ASP
27	BF	178	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	BG	2	SER
28	BG	11	VAL
28	BG	33	LEU
28	BG	39	ASP
28	BG	55	ARG
28	BG	56	ASP
28	BG	67	THR
28	BG	69	ARG
28	BG	77	ILE
28	BG	84	THR
28	BG	87	LEU
28	BG	88	GLN
28	BG	99	LYS
28	BG	124	GLU
28	BG	133	LEU
28	BG	139	GLN
28	BG	152	ARG
28	BG	155	GLU
28	BG	172	LYS
29	BH	1	MET
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	15	LEU
29	BH	27	ARG
29	BH	50	ARG
29	BH	60	GLU
29	BH	62	LEU
29	BH	66	ASN
29	BH	75	LEU
29	BH	77	THR
29	BH	79	THR
29	BH	86	ASP
29	BH	91	PHE
29	BH	112	LYS
29	BH	119	ASN
29	BH	122	LEU
29	BH	123	ARG
29	BH	125	THR
29	BH	129	GLU
29	BH	131	SER
29	BH	137	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	BH	142	VAL
29	BH	145	ASN
29	BH	146	VAL
30	BI	3	LYS
30	BI	9	VAL
30	BI	13	VAL
30	BI	17	MET
30	BI	19	ASN
30	BI	31	GLN
30	BI	34	ASN
30	BI	38	PHE
30	BI	45	LYS
30	BI	47	ASP
30	BI	50	GLU
30	BI	51	LYS
30	BI	62	TYR
30	BI	69	PHE
30	BI	72	LYS
30	BI	82	LYS
30	BI	86	ILE
30	BI	87	LYS
30	BI	90	SER
30	BI	94	ASN
30	BI	96	ASP
30	BI	103	ARG
30	BI	107	GLN
30	BI	125	MET
30	BI	128	SER
30	BI	134	ARG
30	BI	136	MET
31	BJ	30	THR
31	BJ	37	ARG
31	BJ	40	HIS
31	BJ	43	GLU
31	BJ	47	HIS
31	BJ	61	LYS
31	BJ	64	VAL
31	BJ	86	GLN
31	BJ	114	LEU
31	BJ	124	VAL
31	BJ	142	ILE
32	BK	1	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	BK	40	LYS
32	BK	49	ARG
32	BK	51	LYS
32	BK	58	LEU
32	BK	66	LYS
32	BK	91	SER
32	BK	92	GLU
32	BK	105	ARG
32	BK	106	GLU
32	BK	110	GLU
32	BK	116	ILE
32	BK	117	SER
32	BK	121	GLU
33	BL	19	LEU
33	BL	40	SER
33	BL	60	ARG
33	BL	69	ARG
33	BL	82	LEU
33	BL	86	GLU
33	BL	94	THR
33	BL	100	ILE
33	BL	111	ILE
33	BL	115	GLU
33	BL	125	LEU
34	BM	20	LEU
34	BM	24	THR
34	BM	45	GLN
34	BM	55	ARG
34	BM	70	ASP
34	BM	80	VAL
34	BM	100	LYS
34	BM	112	LEU
34	BM	115	GLU
34	BM	126	ILE
35	BN	2	ARG
35	BN	33	ILE
35	BN	69	ARG
35	BN	90	ARG
35	BN	95	THR
35	BN	116	VAL
36	BO	3	LYS
36	BO	4	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	BO	5	SER
36	BO	9	ARG
36	BO	17	LYS
36	BO	18	LEU
36	BO	24	THR
36	BO	27	VAL
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	49	VAL
36	BO	54	VAL
36	BO	55	GLU
36	BO	60	GLU
36	BO	61	GLN
36	BO	65	THR
36	BO	87	ILE
36	BO	89	ASP
37	BP	6	LYS
37	BP	7	GLN
37	BP	12	GLN
37	BP	19	SER
37	BP	26	VAL
37	BP	27	GLU
37	BP	38	LYS
37	BP	53	ARG
37	BP	57	SER
37	BP	63	LYS
37	BP	64	ILE
37	BP	68	GLU
37	BP	88	ARG
37	BP	93	ARG
37	BP	96	LYS
37	BP	103	ARG
37	BP	109	ARG
37	BP	110	ILE
38	BQ	5	LYS
38	BQ	18	LEU
38	BQ	30	ARG
38	BQ	51	ARG
38	BQ	58	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	BQ	78	LYS
38	BQ	85	LYS
38	BQ	87	SER
38	BQ	92	ARG
38	BQ	103	LYS
38	BQ	117	LEU
39	BR	10	LYS
39	BR	16	GLU
39	BR	20	VAL
39	BR	38	VAL
39	BR	46	GLU
39	BR	47	VAL
39	BR	48	LYS
39	BR	74	ILE
39	BR	85	LYS
39	BR	86	GLN
40	BS	6	LYS
40	BS	7	HIS
40	BS	8	ARG
40	BS	19	LEU
40	BS	25	ARG
40	BS	28	LYS
40	BS	30	SER
40	BS	47	VAL
40	BS	59	GLU
40	BS	69	LEU
40	BS	70	LYS
40	BS	81	SER
40	BS	82	MET
40	BS	90	LYS
40	BS	97	LEU
40	BS	101	SER
40	BS	109	ASP
41	BT	5	GLU
41	BT	12	ARG
41	BT	18	GLU
41	BT	27	SER
41	BT	30	ILE
41	BT	49	LYS
41	BT	68	LYS
41	BT	70	HIS
41	BT	73	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	BT	79	ASP
41	BT	86	THR
41	BT	93	LEU
42	BU	5	ILE
42	BU	9	ASP
42	BU	26	LYS
42	BU	28	VAL
42	BU	29	LEU
42	BU	52	LEU
42	BU	68	SER
42	BU	72	ILE
42	BU	77	THR
42	BU	86	ARG
42	BU	99	ASN
43	BV	1	MET
43	BV	10	LYS
43	BV	14	LYS
43	BV	17	SER
43	BV	18	ARG
43	BV	29	ILE
43	BV	34	LYS
43	BV	41	GLU
43	BV	43	ASP
43	BV	61	LEU
43	BV	65	VAL
43	BV	66	ASP
43	BV	85	LYS
43	BV	92	VAL
43	BV	93	ARG
44	BW	20	ARG
44	BW	29	GLU
44	BW	38	VAL
44	BW	39	ARG
44	BW	41	ARG
44	BW	56	ASP
44	BW	64	ASP
44	BW	72	LYS
44	BW	81	SER
44	BW	85	GLU
45	BX	14	THR
45	BX	25	THR
45	BX	26	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	BX	48	THR
45	BX	66	THR
45	BX	76	GLU
46	BY	5	GLU
46	BY	6	LEU
46	BY	16	THR
46	BY	22	LEU
46	BY	57	LEU
47	BZ	3	LYS
47	BZ	10	THR
47	BZ	19	LYS
47	BZ	31	ARG
47	BZ	36	VAL
47	BZ	57	VAL
47	BZ	58	GLU
48	B0	18	SER
48	B0	20	ASP
48	B0	26	THR
48	B0	36	GLU
48	B0	40	ARG
49	B1	46	HIS
49	B1	47	VAL
49	B1	51	GLU
50	B2	4	THR
50	B2	21	ARG
50	B2	43	THR
50	B2	45	SER
51	B3	5	LYS
51	B3	16	LYS
51	B3	30	ARG
51	B3	31	HIS
51	B3	47	LYS
51	B3	55	LEU
52	B4	6	SER
52	B4	18	LYS
53	B5	21	TYR
53	B5	23	ILE
53	B5	38	PHE
53	B5	47	LYS
53	B5	48	LEU
53	B5	64	SER
53	B5	73	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	B5	76	LEU
53	B5	78	ILE
53	B5	86	GLU
53	B5	93	ASP
53	B5	94	TYR
53	B5	100	ILE
2	CB	15	HIS
2	CB	16	PHE
2	CB	20	THR
2	CB	21	ARG
2	CB	22	TYR
2	CB	23	TRP
2	CB	26	LYS
2	CB	27	MET
2	CB	32	PHE
2	CB	35	ARG
2	CB	40	ILE
2	CB	43	LEU
2	CB	49	MET
2	CB	50	PHE
2	CB	56	GLU
2	CB	66	LYS
2	CB	67	ILE
2	CB	68	LEU
2	CB	73	LYS
2	CB	74	ARG
2	CB	77	SER
2	CB	80	VAL
2	CB	85	LEU
2	CB	87	CYS
2	CB	88	ASP
2	CB	94	HIS
2	CB	95	ARG
2	CB	96	TRP
2	CB	101	LEU
2	CB	106	THR
2	CB	111	ILE
2	CB	126	PHE
2	CB	127	ASP
2	CB	130	THR
2	CB	136	MET
2	CB	148	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
2	CB	163	VAL
2	CB	164	ILE
2	CB	168	HIS
2	CB	171	ILE
2	CB	174	LYS
2	CB	175	GLU
2	CB	179	LEU
2	CB	205	ASP
2	CB	207	ILE
2	CB	208	ARG
2	CB	210	VAL
2	CB	213	TYR
2	CB	222	ARG
2	CB	225	ARG
3	CC	3	GLN
3	CC	8	ASN
3	CC	16	LYS
3	CC	27	LYS
3	CC	37	PHE
3	CC	38	LYS
3	CC	43	LEU
3	CC	70	THR
3	CC	75	ILE
3	CC	80	LYS
3	CC	103	ILE
3	CC	107	ARG
3	CC	110	GLU
3	CC	121	THR
3	CC	131	ARG
3	CC	140	ASN
3	CC	153	VAL
3	CC	157	LEU
3	CC	167	TRP
3	CC	168	TYR
3	CC	175	LEU
3	CC	179	ARG
3	CC	185	ASN
3	CC	186	THR
3	CC	193	TYR
3	CC	200	VAL
4	CD	5	LEU
4	CD	8	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
4	CD	9	LEU
4	CD	10	LYS
4	CD	23	SER
4	CD	30	THR
4	CD	32	CYS
4	CD	33	LYS
4	CD	44	ARG
4	CD	48	LEU
4	CD	50	ASP
4	CD	54	GLN
4	CD	55	LEU
4	CD	56	ARG
4	CD	58	LYS
4	CD	59	GLN
4	CD	81	ARG
4	CD	142	VAL
4	CD	148	LYS
4	CD	152	GLN
4	CD	155	VAL
4	CD	159	LEU
4	CD	161	LEU
4	CD	166	GLU
4	CD	169	THR
4	CD	191	LEU
4	CD	192	SER
4	CD	200	ILE
4	CD	206	LYS
5	CE	10	GLU
5	CE	15	LEU
5	CE	18	VAL
5	CE	24	THR
5	CE	25	VAL
5	CE	26	LYS
5	CE	32	SER
5	CE	45	ARG
5	CE	52	LYS
5	CE	70	ASN
5	CE	76	LEU
5	CE	81	LEU
5	CE	88	VAL
5	CE	93	ARG
5	CE	94	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	CE	100	SER
5	CE	105	ILE
5	CE	114	VAL
5	CE	115	LEU
5	CE	126	LYS
5	CE	136	VAL
5	CE	140	THR
5	CE	146	ASN
5	CE	149	SER
5	CE	151	GLU
5	CE	153	VAL
5	CE	156	LYS
6	CF	1	MET
6	CF	8	PHE
6	CF	16	GLU
6	CF	23	GLU
6	CF	24	ARG
6	CF	26	THR
6	CF	30	THR
6	CF	33	GLU
6	CF	35	LYS
6	CF	36	ILE
6	CF	38	ARG
6	CF	51	ILE
6	CF	53	LYS
6	CF	54	LEU
6	CF	55	HIS
6	CF	63	ASN
6	CF	64	VAL
6	CF	69	GLU
6	CF	71	ILE
6	CF	74	LEU
6	CF	75	GLU
6	CF	80	PHE
6	CF	85	ILE
6	CF	87	SER
6	CF	93	LYS
6	CF	97	THR
7	CG	4	ARG
7	CG	5	ARG
7	CG	6	VAL
7	CG	7	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
7	CG	12	ILE
7	CG	22	LEU
7	CG	43	VAL
7	CG	48	GLU
7	CG	59	LEU
7	CG	62	PHE
7	CG	64	VAL
7	CG	66	LEU
7	CG	67	GLU
7	CG	72	THR
7	CG	73	VAL
7	CG	78	ARG
7	CG	92	ARG
7	CG	94	VAL
7	CG	120	LEU
7	CG	123	GLU
7	CG	126	ASP
7	CG	129	GLU
7	CG	138	ARG
7	CG	140	ASP
7	CG	142	HIS
8	CH	13	ARG
8	CH	15	ARG
8	CH	26	THR
8	CH	32	LEU
8	CH	39	VAL
8	CH	42	GLU
8	CH	43	GLU
8	CH	45	PHE
8	CH	48	ASP
8	CH	52	GLU
8	CH	54	ASP
8	CH	67	GLN
8	CH	73	GLU
8	CH	74	SER
8	CH	75	ILE
8	CH	77	ARG
8	CH	83	LEU
8	CH	87	LYS
8	CH	99	LEU
8	CH	112	THR
8	CH	121	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
8	CH	125	ILE
9	CI	9	THR
9	CI	21	ILE
9	CI	28	ILE
9	CI	33	ARG
9	CI	36	GLU
9	CI	38	TYR
9	CI	49	ARG
9	CI	50	GLN
9	CI	55	VAL
9	CI	61	LEU
9	CI	62	ASP
9	CI	88	MET
9	CI	89	GLU
9	CI	94	LEU
9	CI	111	VAL
9	CI	127	PHE
9	CI	129	LYS
10	CJ	9	ARG
10	CJ	16	ARG
10	CJ	17	LEU
10	CJ	22	THR
10	CJ	25	ILE
10	CJ	30	LYS
10	CJ	51	VAL
10	CJ	53	ILE
10	CJ	59	LYS
10	CJ	71	LEU
10	CJ	80	THR
10	CJ	83	THR
10	CJ	87	LEU
10	CJ	88	MET
10	CJ	90	LEU
10	CJ	91	ASP
10	CJ	100	ILE
10	CJ	102	LEU
11	CK	14	LYS
11	CK	15	GLN
11	CK	26	SER
11	CK	33	THR
11	CK	64	GLN
11	CK	81	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
11	CK	82	LEU
11	CK	83	GLU
11	CK	86	VAL
11	CK	93	ARG
11	CK	96	THR
11	CK	98	ARG
11	CK	106	ARG
11	CK	107	ILE
11	CK	108	THR
11	CK	109	ASN
11	CK	126	LYS
11	CK	127	ARG
11	CK	128	ARG
12	CL	3	THR
12	CL	4	VAL
12	CL	10	LYS
12	CL	18	LYS
12	CL	19	SER
12	CL	20	ASN
12	CL	29	GLN
12	CL	38	TYR
12	CL	44	LYS
12	CL	59	ASN
12	CL	63	VAL
12	CL	82	ILE
12	CL	86	ARG
12	CL	89	ASP
12	CL	93	VAL
12	CL	94	ARG
12	CL	97	THR
12	CL	107	VAL
12	CL	110	ARG
12	CL	111	LYS
12	CL	121	ARG
13	CM	8	ASN
13	CM	13	LYS
13	CM	14	HIS
13	CM	19	LEU
13	CM	29	ARG
13	CM	31	LYS
13	CM	41	GLU
13	CM	48	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
13	CM	58	ASP
13	CM	59	GLU
13	CM	60	VAL
13	CM	63	PHE
13	CM	66	GLU
13	CM	90	ARG
13	CM	91	HIS
13	CM	101	ARG
13	CM	113	ARG
14	CN	10	GLU
14	CN	18	ASP
14	CN	23	LYS
14	CN	26	GLU
14	CN	28	LYS
14	CN	75	ARG
14	CN	77	PHE
14	CN	83	LYS
14	CN	100	SER
15	CO	17	ARG
15	CO	18	ASP
15	CO	26	GLU
15	CO	27	VAL
15	CO	38	HIS
15	CO	64	ARG
15	CO	70	LEU
15	CO	84	ARG
15	CO	87	LEU
15	CO	88	ARG
16	CP	1	MET
16	CP	5	ARG
16	CP	18	GLN
16	CP	20	VAL
16	CP	31	ARG
16	CP	46	LYS
16	CP	51	ARG
16	CP	55	ASP
16	CP	63	GLN
16	CP	74	LEU
16	CP	80	LYS
17	CQ	5	ILE
17	CQ	9	GLN
17	CQ	14	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
17	CQ	17	MET
17	CQ	18	GLU
17	CQ	25	ILE
17	CQ	28	PHE
17	CQ	40	ARG
17	CQ	41	THR
17	CQ	48	ASP
17	CQ	50	ASN
17	CQ	52	GLU
17	CQ	55	ILE
17	CQ	61	ILE
17	CQ	62	ARG
17	CQ	63	GLU
17	CQ	65	ARG
17	CQ	70	THR
17	CQ	75	LEU
17	CQ	76	VAL
17	CQ	79	VAL
17	CQ	80	GLU
17	CQ	81	LYS
18	CR	21	ILE
18	CR	25	ASP
18	CR	33	ILE
18	CR	43	ARG
18	CR	45	THR
18	CR	47	THR
18	CR	54	GLN
18	CR	57	ARG
18	CR	59	ILE
18	CR	66	SER
19	CS	5	LEU
19	CS	6	LYS
19	CS	11	ILE
19	CS	13	LEU
19	CS	21	LYS
19	CS	23	VAL
19	CS	27	ASP
19	CS	31	LEU
19	CS	36	ARG
19	CS	43	ASN
19	CS	49	ILE
19	CS	58	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
20	CT	3	ASN
20	CT	6	SER
20	CT	8	LYS
20	CT	30	THR
20	CT	36	TYR
20	CT	59	ASP
20	CT	64	LYS
20	CT	69	LYS
21	CU	5	LYS
21	CU	12	PHE
21	CU	16	LEU
21	CU	18	ARG
21	CU	19	PHE
21	CU	24	GLU
21	CU	25	LYS
21	CU	28	VAL
21	CU	34	ARG
21	CU	37	PHE
21	CU	38	TYR
21	CU	42	THR
21	CU	47	ARG
21	CU	53	VAL
21	CU	54	LYS
24	DC	30	PHE
24	DC	63	ARG
24	DC	80	ARG
24	DC	103	TYR
24	DC	111	LYS
24	DC	116	ILE
24	DC	130	LEU
24	DC	153	GLN
24	DC	156	ARG
24	DC	157	SER
24	DC	167	ARG
24	DC	175	ARG
24	DC	195	VAL
24	DC	202	LEU
24	DC	203	ARG
24	DC	250	VAL
24	DC	259	SER
24	DC	262	ARG
24	DC	267	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	DD	4	LEU
25	DD	12	THR
25	DD	21	SER
25	DD	25	THR
25	DD	33	ARG
25	DD	55	LYS
25	DD	73	VAL
25	DD	77	ARG
25	DD	86	GLU
25	DD	95	SER
25	DD	103	ASP
25	DD	118	PHE
25	DD	129	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	146	ILE
25	DD	168	GLU
25	DD	170	VAL
25	DD	189	VAL
26	DE	9	GLN
26	DE	22	ASP
26	DE	40	ARG
26	DE	41	GLN
26	DE	57	LYS
26	DE	58	LYS
26	DE	69	ARG
26	DE	77	ILE
26	DE	78	TRP
26	DE	84	THR
26	DE	90	GLN
26	DE	91	ASP
26	DE	105	LEU
26	DE	107	SER
26	DE	108	ILE
26	DE	118	LEU
26	DE	126	VAL
26	DE	127	GLU
26	DE	131	THR
26	DE	137	LYS
26	DE	149	ILE
26	DE	150	THR
26	DE	163	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	DE	164	LEU
26	DE	170	ARG
26	DE	173	THR
26	DE	187	VAL
26	DE	188	MET
27	DF	6	ASP
27	DF	7	TYR
27	DF	8	TYR
27	DF	14	LYS
27	DF	18	THR
27	DF	26	MET
27	DF	35	THR
27	DF	36	LEU
27	DF	38	MET
27	DF	44	ILE
27	DF	48	LYS
27	DF	52	ASN
27	DF	56	ASP
27	DF	64	LYS
27	DF	67	ILE
27	DF	74	VAL
27	DF	78	LYS
27	DF	110	ARG
27	DF	117	LEU
27	DF	121	SER
27	DF	125	ARG
27	DF	132	VAL
27	DF	140	GLU
27	DF	141	ILE
27	DF	143	TYR
27	DF	147	ASP
27	DF	150	ARG
27	DF	174	ASP
27	DF	177	PHE
28	DG	11	VAL
28	DG	24	ILE
28	DG	29	LYS
28	DG	30	ASN
28	DG	42	GLU
28	DG	45	HIS
28	DG	49	THR
28	DG	56	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	DG	62	TRP
28	DG	69	ARG
28	DG	89	LEU
28	DG	90	VAL
28	DG	92	VAL
28	DG	98	VAL
28	DG	117	LEU
28	DG	124	GLU
28	DG	127	THR
28	DG	139	GLN
28	DG	149	ARG
28	DG	151	TYR
28	DG	155	GLU
28	DG	158	LYS
28	DG	166	ASP
29	DH	7	ASP
29	DH	12	LEU
29	DH	41	LYS
29	DH	42	LYS
29	DH	48	GLU
29	DH	50	ARG
29	DH	53	GLU
29	DH	54	LEU
29	DH	57	LYS
29	DH	62	LEU
29	DH	77	THR
29	DH	78	VAL
29	DH	87	GLU
29	DH	89	LYS
29	DH	94	ILE
29	DH	109	GLU
29	DH	114	GLU
29	DH	116	ARG
29	DH	117	LEU
29	DH	119	ASN
29	DH	121	VAL
29	DH	124	THR
29	DH	125	THR
29	DH	129	GLU
29	DH	142	VAL
29	DH	149	GLU
30	DI	3	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	DI	4	LYS
30	DI	8	TYR
30	DI	10	LYS
30	DI	11	LEU
30	DI	12	GLN
30	DI	24	VAL
30	DI	38	PHE
30	DI	40	LYS
30	DI	62	TYR
30	DI	68	THR
30	DI	69	PHE
30	DI	72	LYS
30	DI	79	LEU
30	DI	82	LYS
30	DI	86	ILE
30	DI	87	LYS
30	DI	88	SER
30	DI	92	LYS
30	DI	97	LYS
30	DI	98	VAL
30	DI	103	ARG
30	DI	105	GLN
30	DI	106	LEU
30	DI	112	THR
30	DI	117	MET
30	DI	122	ILE
30	DI	125	MET
30	DI	127	ARG
31	DJ	9	GLU
31	DJ	28	LEU
31	DJ	34	ARG
31	DJ	39	LYS
31	DJ	40	HIS
31	DJ	43	GLU
31	DJ	44	TYR
31	DJ	50	THR
31	DJ	62	VAL
31	DJ	65	THR
31	DJ	72	LYS
31	DJ	76	HIS
31	DJ	81	ILE
31	DJ	84	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DJ	85	LYS
31	DJ	96	ARG
31	DJ	101	ILE
31	DJ	103	ILE
31	DJ	109	LEU
31	DJ	118	MET
31	DJ	129	GLU
31	DJ	138	GLN
32	DK	25	LEU
32	DK	47	ILE
32	DK	49	ARG
32	DK	53	LYS
32	DK	56	ASP
32	DK	66	LYS
32	DK	70	ARG
32	DK	87	LEU
32	DK	92	GLU
32	DK	95	ILE
32	DK	104	THR
32	DK	110	GLU
32	DK	114	LYS
33	DL	2	ARG
33	DL	21	ARG
33	DL	25	SER
33	DL	29	LYS
33	DL	48	ARG
33	DL	59	ARG
33	DL	69	ARG
33	DL	78	ARG
33	DL	82	LEU
33	DL	86	GLU
33	DL	94	THR
33	DL	100	ILE
33	DL	104	GLN
33	DL	118	THR
33	DL	126	ARG
33	DL	136	GLU
34	DM	6	ARG
34	DM	14	LYS
34	DM	31	PHE
34	DM	47	GLU
34	DM	54	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	DM	59	ARG
34	DM	60	GLN
34	DM	70	ASP
34	DM	100	LYS
34	DM	108	VAL
34	DM	115	GLU
34	DM	119	LEU
34	DM	124	LEU
34	DM	128	THR
35	DN	1	MET
35	DN	2	ARG
35	DN	8	ARG
35	DN	10	LEU
35	DN	12	ARG
35	DN	14	SER
35	DN	20	MET
35	DN	33	ILE
35	DN	35	LYS
35	DN	51	LEU
35	DN	53	THR
35	DN	59	SER
35	DN	69	ARG
35	DN	70	THR
35	DN	71	ARG
35	DN	82	GLU
35	DN	83	LEU
35	DN	90	ARG
35	DN	95	THR
35	DN	100	CYS
35	DN	114	GLU
35	DN	115	LEU
35	DN	116	VAL
35	DN	118	ARG
36	DO	5	SER
36	DO	9	ARG
36	DO	18	LEU
36	DO	26	LEU
36	DO	31	THR
36	DO	35	ILE
36	DO	36	TYR
36	DO	46	GLU
36	DO	47	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	DO	48	LEU
36	DO	56	LYS
36	DO	61	GLN
36	DO	78	VAL
36	DO	88	LYS
36	DO	93	ASP
36	DO	103	VAL
37	DP	4	ILE
37	DP	26	VAL
37	DP	34	GLU
37	DP	68	GLU
37	DP	73	VAL
37	DP	93	ARG
37	DP	109	ARG
37	DP	110	ILE
37	DP	112	GLU
38	DQ	6	ARG
38	DQ	9	ILE
38	DQ	11	ARG
38	DQ	25	TYR
38	DQ	41	LYS
38	DQ	51	ARG
38	DQ	52	GLN
38	DQ	60	LEU
38	DQ	97	ASP
38	DQ	104	VAL
38	DQ	117	LEU
39	DR	25	LEU
39	DR	33	VAL
39	DR	41	ILE
39	DR	46	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	82	HIS
39	DR	90	ARG
40	DS	1	MET
40	DS	19	LEU
40	DS	20	VAL
40	DS	22	ASP
40	DS	23	LEU
40	DS	47	VAL
40	DS	67	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	DS	70	LYS
40	DS	72	THR
40	DS	96	ILE
41	DT	3	ARG
41	DT	18	GLU
41	DT	22	THR
41	DT	30	ILE
41	DT	32	LEU
41	DT	44	LYS
41	DT	49	LYS
41	DT	50	LEU
41	DT	68	LYS
41	DT	69	ARG
41	DT	72	GLN
41	DT	74	ILE
41	DT	77	ARG
41	DT	79	ASP
42	DU	11	VAL
42	DU	18	ASP
42	DU	24	LYS
42	DU	34	VAL
42	DU	35	ILE
42	DU	45	HIS
42	DU	46	GLN
42	DU	49	VAL
42	DU	54	GLN
42	DU	67	VAL
42	DU	70	VAL
42	DU	81	ASP
42	DU	85	PHE
42	DU	91	LYS
42	DU	99	ASN
43	DV	2	PHE
43	DV	3	THR
43	DV	26	PHE
43	DV	29	ILE
43	DV	30	ILE
43	DV	42	LEU
43	DV	43	ASP
43	DV	45	ASP
43	DV	50	MET
43	DV	51	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
43	DV	53	LYS
43	DV	65	VAL
43	DV	68	LYS
44	DW	20	ARG
44	DW	39	ARG
44	DW	41	ARG
44	DW	50	ASN
44	DW	56	ASP
44	DW	72	LYS
45	DX	4	VAL
45	DX	13	VAL
45	DX	46	PHE
45	DX	47	VAL
45	DX	50	ARG
45	DX	58	VAL
45	DX	64	ILE
45	DX	71	LEU
45	DX	74	ARG
46	DY	11	VAL
46	DY	13	GLU
46	DY	16	THR
46	DY	38	GLN
46	DY	39	GLN
46	DY	41	HIS
46	DY	45	GLN
46	DY	47	ARG
46	DY	49	ASP
46	DY	55	THR
46	DY	57	LEU
46	DY	58	ASN
47	DZ	3	LYS
47	DZ	6	LYS
47	DZ	10	THR
47	DZ	12	SER
47	DZ	17	LEU
47	DZ	25	LEU
47	DZ	31	ARG
47	DZ	36	VAL
47	DZ	52	SER
47	DZ	57	VAL
48	D0	3	VAL
48	D0	20	ASP

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	D0	22	LEU
48	D0	28	LEU
49	D1	5	ILE
49	D1	12	VAL
49	D1	26	ASN
49	D1	42	VAL
49	D1	46	HIS
49	D1	47	VAL
50	D2	4	THR
50	D2	10	LEU
50	D2	24	THR
50	D2	41	ARG
50	D2	42	LEU
50	D2	43	THR
50	D2	44	VAL
51	D3	6	THR
51	D3	30	ARG
51	D3	31	HIS
51	D3	47	LYS
51	D3	49	MET
52	D4	2	LYS
52	D4	3	VAL
52	D4	12	ARG
52	D4	13	ASN
52	D4	20	ASP
52	D4	26	ILE
52	D4	32	LYS
52	D4	37	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (48) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
5	AE	82	GLN
8	AH	18	GLN
9	AI	126	GLN
11	AK	22	HIS
11	AK	40	ASN
11	AK	109	ASN
15	AO	40	GLN
15	AO	50	HIS
17	AQ	45	HIS
19	AS	14	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	AS	52	HIS
24	BC	239	ASN
29	BH	119	ASN
29	BH	135	HIS
31	BJ	47	HIS
31	BJ	77	HIS
43	BV	87	GLN
44	BW	46	HIS
53	B5	45	HIS
53	B5	67	HIS
3	CC	176	HIS
5	CE	122	ASN
7	CG	97	ASN
9	CI	25	ASN
15	CO	42	HIS
15	CO	46	HIS
17	CQ	31	HIS
20	CT	61	GLN
24	DC	251	GLN
25	DD	140	HIS
28	DG	115	HIS
29	DH	28	ASN
29	DH	128	HIS
38	DQ	37	GLN
39	DR	66	HIS
39	DR	89	HIS
41	DT	15	HIS
42	DU	74	ASN
44	DW	46	HIS
45	DX	34	HIS
46	DY	41	HIS
46	DY	45	GLN
48	D0	19	HIS
49	D1	19	HIS
49	D1	26	ASN
51	D3	26	HIS
51	D3	31	HIS
52	D4	37	GLN

### 5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1537/1539 (99%)	324 (21%)	11 (0%)
1	CA	1538/1539 (99%)	342 (22%)	10 (0%)
22	BA	2895/2903 (99%)	579 (20%)	24 (0%)
22	DA	2895/2903 (99%)	704 (24%)	32 (1%)
23	BB	118/119 (99%)	16 (13%)	0
23	DB	117/119 (98%)	20 (17%)	0
All	All	9100/9122 (99%)	1985 (21%)	77 (0%)

All (1985) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	3	A
1	AA	4	U
1	AA	5	U
1	AA	6	G
1	AA	9	G
1	AA	13	U
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	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	80	A
1	AA	81	A
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	95	C
1	AA	97	G
1	AA	108	G
1	AA	111	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	116	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	136	C
1	AA	137	U
1	AA	138	G
1	AA	140	U
1	AA	143	A
1	AA	144	G
1	AA	163	C
1	AA	168	G
1	AA	174	A
1	AA	177	G
1	AA	180	U
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	188	C
1	AA	195	A
1	AA	197	A
1	AA	205	A
1	AA	206	C
1	AA	210	C
1	AA	211	G
1	AA	217	C
1	AA	226	G
1	AA	240	G
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	262	A
1	AA	263	A
1	AA	266	G
1	AA	267	C
1	AA	281	G
1	AA	285	C
1	AA	289	G
1	AA	320	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	321	A
1	AA	327	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	367	U
1	AA	372	C
1	AA	373	A
1	AA	376	G
1	AA	384	G
1	AA	392	C
1	AA	406	G
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	421	U
1	AA	422	C
1	AA	429	U
1	AA	430	A
1	AA	435	A
1	AA	436	C
1	AA	445	G
1	AA	454	G
1	AA	457	G
1	AA	458	U
1	AA	462	G
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	476	U
1	AA	479	U
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	486	U
1	AA	495	A
1	AA	498	A
1	AA	501	C
1	AA	505	G
1	AA	511	C
1	AA	518	C
1	AA	521	G
1	AA	524	G
1	AA	527	G
1	AA	530	G
1	AA	532	A
1	AA	533	A
1	AA	541	G
1	AA	547	A
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	565	U
1	AA	566	G
1	AA	570	G
1	AA	573	A
1	AA	576	C
1	AA	588	G
1	AA	591	U
1	AA	615	G
1	AA	631	C
1	AA	632	U
1	AA	651	C
1	AA	652	U
1	AA	653	U
1	AA	661	G
1	AA	665	A
1	AA	671	G
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	723	U
1	AA	724	G
1	AA	731	G
1	AA	734	G
1	AA	748	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	750	C
1	AA	753	A
1	AA	755	G
1	AA	773	G
1	AA	777	A
1	AA	792	A
1	AA	793	U
1	AA	794	A
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	828	U
1	AA	832	G
1	AA	836	G
1	AA	841	C
1	AA	842	U
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	849	G
1	AA	851	G
1	AA	854	U
1	AA	859	G
1	AA	888	G
1	AA	892	A
1	AA	902	G
1	AA	910	C
1	AA	914	A
1	AA	921	U
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	958	A
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	973	G
1	AA	975	A
1	AA	976	G
1	AA	977	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	986	U
1	AA	987	G
1	AA	992	U
1	AA	993	G
1	AA	1004	A
1	AA	1009	U
1	AA	1019	A
1	AA	1021	A
1	AA	1025	U
1	AA	1026	G
1	AA	1028	C
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1036	A
1	AA	1037	C
1	AA	1043	G
1	AA	1044	A
1	AA	1046	A
1	AA	1050	G
1	AA	1065	U
1	AA	1066	C
1	AA	1070	U
1	AA	1084	G
1	AA	1086	U
1	AA	1090	U
1	AA	1091	U
1	AA	1092	A
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1098	C
1	AA	1101	A
1	AA	1124	G
1	AA	1125	U
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1141	C
1	AA	1142	G
1	AA	1143	G
1	AA	1145	A
1	AA	1146	A
1	AA	1152	A
1	AA	1154	G
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1167	A
1	AA	1168	U
1	AA	1171	A
1	AA	1181	G
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1227	A
1	AA	1228	C
1	AA	1233	G
1	AA	1238	A
1	AA	1239	A
1	AA	1240	U
1	AA	1250	A
1	AA	1256	A
1	AA	1258	G
1	AA	1280	A
1	AA	1286	U
1	AA	1287	A
1	AA	1293	C
1	AA	1299	A
1	AA	1300	G
1	AA	1302	C
1	AA	1304	G
1	AA	1305	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	1312	G
1	AA	1317	C
1	AA	1320	C
1	AA	1321	U
1	AA	1323	G
1	AA	1325	C
1	AA	1328	C
1	AA	1329	A
1	AA	1335	U
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1353	G
1	AA	1363	A
1	AA	1364	U
1	AA	1378	C
1	AA	1379	G
1	AA	1396	A
1	AA	1398	A
1	AA	1400	C
1	AA	1419	G
1	AA	1429	A
1	AA	1441	A
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1455	G
1	AA	1486	G
1	AA	1493	A
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1535	C
1	AA	1538	C
22	BA	10	A
22	BA	13	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	15	G
22	BA	27	G
22	BA	34	U
22	BA	35	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	80	G
22	BA	103	A
22	BA	106	C
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	131	A
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	180	G
22	BA	181	A
22	BA	196	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	248	G
22	BA	255	A
22	BA	257	C
22	BA	265	A
22	BA	266	G
22	BA	271	G
22	BA	272	A
22	BA	276	U
22	BA	277	G
22	BA	279	A
22	BA	299	A
22	BA	302	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	340	A
22	BA	343	C
22	BA	353	C
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	386	G
22	BA	389	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	420	C
22	BA	424	G
22	BA	441	U
22	BA	450	G
22	BA	451	U
22	BA	456	C
22	BA	457	A
22	BA	468	G
22	BA	481	G
22	BA	482	A
22	BA	483	A
22	BA	491	G
22	BA	501	A
22	BA	504	A
22	BA	505	A
22	BA	508	A
22	BA	528	A
22	BA	531	C
22	BA	532	A
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	585	G
22	BA	586	A
22	BA	603	A
22	BA	613	A
22	BA	615	U
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	637	A
22	BA	644	A
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	653	U
22	BA	654	A
22	BA	655	A
22	BA	664	G
22	BA	669	G
22	BA	670	A
22	BA	686	U
22	BA	702	U
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	759	G
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	783	A
22	BA	784	G
22	BA	785	G
22	BA	790	U
22	BA	791	C
22	BA	792	A
22	BA	801	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	805	G
22	BA	812	C
22	BA	814	C
22	BA	816	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	858	G
22	BA	859	G
22	BA	866	A
22	BA	878	A
22	BA	879	G
22	BA	882	G
22	BA	885	C
22	BA	893	C
22	BA	896	A
22	BA	897	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	932	U
22	BA	934	U
22	BA	941	A
22	BA	942	G
22	BA	946	C
22	BA	961	C
22	BA	974	G
22	BA	978	G
22	BA	982	C
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	990	A
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	999	U
22	BA	1005	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1012	U
22	BA	1013	C
22	BA	1022	G
22	BA	1026	G
22	BA	1033	U
22	BA	1040	A
22	BA	1046	A
22	BA	1047	G
22	BA	1058	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1065	U
22	BA	1066	U
22	BA	1067	A
22	BA	1068	G
22	BA	1069	A
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	1077	A
22	BA	1079	C
22	BA	1080	A
22	BA	1081	U
22	BA	1082	U
22	BA	1087	G
22	BA	1088	A
22	BA	1089	A
22	BA	1092	C
22	BA	1093	G
22	BA	1095	A
22	BA	1097	U
22	BA	1098	A
22	BA	1099	G
22	BA	1100	C
22	BA	1101	U
22	BA	1103	A
22	BA	1104	C
22	BA	1112	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	1168	G
22	BA	1170	C
22	BA	1171	G
22	BA	1172	C
22	BA	1174	U
22	BA	1175	A
22	BA	1176	U
22	BA	1178	C
22	BA	1179	G
22	BA	1180	U
22	BA	1186	G
22	BA	1189	A
22	BA	1218	G
22	BA	1230	A
22	BA	1238	G
22	BA	1252	G
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1275	A
22	BA	1294	U
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1320	C
22	BA	1325	U
22	BA	1332	G
22	BA	1345	C
22	BA	1348	C
22	BA	1352	U
22	BA	1355	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1357	C
22	BA	1359	A
22	BA	1365	A
22	BA	1374	G
22	BA	1377	G
22	BA	1378	A
22	BA	1379	U
22	BA	1383	A
22	BA	1384	A
22	BA	1386	C
22	BA	1406	U
22	BA	1407	G
22	BA	1411	U
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1428	C
22	BA	1435	G
22	BA	1437	C
22	BA	1452	G
22	BA	1453	A
22	BA	1458	U
22	BA	1461	C
22	BA	1467	U
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1494	A
22	BA	1495	A
22	BA	1504	A
22	BA	1508	A
22	BA	1510	G
22	BA	1515	A
22	BA	1530	G
22	BA	1532	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1547	C
22	BA	1548	A
22	BA	1554	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1555	G
22	BA	1560	G
22	BA	1569	A
22	BA	1578	U
22	BA	1579	A
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1593	A
22	BA	1597	A
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1632	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1653	G
22	BA	1674	G
22	BA	1685	C
22	BA	1688	U
22	BA	1689	A
22	BA	1714	U
22	BA	1715	G
22	BA	1718	G
22	BA	1729	U
22	BA	1730	C
22	BA	1736	U
22	BA	1738	G
22	BA	1744	A
22	BA	1758	U
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1782	U
22	BA	1786	A
22	BA	1795	C
22	BA	1800	C
22	BA	1801	A
22	BA	1808	A
22	BA	1813	G
22	BA	1816	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1828	G
22	BA	1829	A
22	BA	1835	G
22	BA	1840	G
22	BA	1841	U
22	BA	1842	G
22	BA	1847	A
22	BA	1849	G
22	BA	1853	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1880	U
22	BA	1885	A
22	BA	1888	G
22	BA	1890	A
22	BA	1900	A
22	BA	1906	G
22	BA	1909	C
22	BA	1912	A
22	BA	1913	A
22	BA	1914	C
22	BA	1915	U
22	BA	1916	A
22	BA	1917	U
22	BA	1919	A
22	BA	1920	C
22	BA	1923	U
22	BA	1924	C
22	BA	1925	C
22	BA	1926	U
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1938	A
22	BA	1955	U
22	BA	1959	G
22	BA	1964	G
22	BA	1965	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	1967	C
22	BA	1970	A
22	BA	1972	G
22	BA	1975	G
22	BA	1986	C
22	BA	1991	U
22	BA	1992	G
22	BA	1993	U
22	BA	1995	U
22	BA	1997	C
22	BA	2009	A
22	BA	2022	U
22	BA	2023	C
22	BA	2031	A
22	BA	2033	A
22	BA	2043	C
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2064	C
22	BA	2069	G
22	BA	2072	C
22	BA	2092	U
22	BA	2093	G
22	BA	2097	A
22	BA	2098	U
22	BA	2099	U
22	BA	2100	G
22	BA	2102	G
22	BA	2103	C
22	BA	2106	U
22	BA	2110	G
22	BA	2111	U
22	BA	2112	G
22	BA	2113	U
22	BA	2115	G
22	BA	2116	G
22	BA	2117	A
22	BA	2118	U
22	BA	2119	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	2122	U
22	BA	2126	A
22	BA	2127	G
22	BA	2128	G
22	BA	2129	C
22	BA	2132	U
22	BA	2133	G
22	BA	2134	A
22	BA	2136	G
22	BA	2138	G
22	BA	2139	U
22	BA	2145	C
22	BA	2147	A
22	BA	2148	G
22	BA	2162	G
22	BA	2163	A
22	BA	2164	C
22	BA	2165	C
22	BA	2166	U
22	BA	2167	U
22	BA	2169	A
22	BA	2170	A
22	BA	2171	A
22	BA	2172	U
22	BA	2173	A
22	BA	2174	C
22	BA	2178	C
22	BA	2179	C
22	BA	2181	U
22	BA	2182	U
22	BA	2187	U
22	BA	2190	G
22	BA	2197	U
22	BA	2198	A
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	2220	U
22	BA	2225	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	2238	G
22	BA	2239	G
22	BA	2248	C
22	BA	2250	G
22	BA	2268	A
22	BA	2272	U
22	BA	2278	A
22	BA	2283	C
22	BA	2286	G
22	BA	2287	A
22	BA	2296	U
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2309	A
22	BA	2311	A
22	BA	2322	A
22	BA	2325	G
22	BA	2327	A
22	BA	2331	G
22	BA	2335	A
22	BA	2345	G
22	BA	2346	A
22	BA	2347	C
22	BA	2361	G
22	BA	2383	G
22	BA	2385	C
22	BA	2389	G
22	BA	2394	C
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2412	A
22	BA	2420	C
22	BA	2422	C
22	BA	2424	C
22	BA	2425	A
22	BA	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	2441	U
22	BA	2448	A
22	BA	2465	C
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2484	G
22	BA	2487	G
22	BA	2490	G
22	BA	2491	U
22	BA	2497	A
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2508	G
22	BA	2515	C
22	BA	2518	A
22	BA	2529	G
22	BA	2535	G
22	BA	2554	U
22	BA	2555	U
22	BA	2566	A
22	BA	2567	G
22	BA	2573	C
22	BA	2576	G
22	BA	2578	G
22	BA	2594	C
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2615	U
22	BA	2629	U
22	BA	2652	C
22	BA	2662	A
22	BA	2688	G
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2726	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2765	A
22	BA	2778	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2803	G
22	BA	2811	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2827	C
22	BA	2835	A
22	BA	2862	G
22	BA	2867	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	2885	G
22	BA	2887	A
22	BA	2903	U
23	BB	2	G
23	BB	9	G
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	56	G
23	BB	66	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	109	A
23	BB	119	A
1	CA	3	A
1	CA	5	U
1	CA	6	G
1	CA	9	G
1	CA	21	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	52	C
1	CA	55	A
1	CA	65	A
1	CA	67	C
1	CA	68	G
1	CA	70	U
1	CA	71	A
1	CA	73	C
1	CA	74	A
1	CA	75	G
1	CA	79	G
1	CA	80	A
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	91	U
1	CA	93	U
1	CA	94	G
1	CA	116	A
1	CA	117	G
1	CA	120	A
1	CA	121	U
1	CA	122	G
1	CA	129	A
1	CA	130	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	131	A
1	CA	135	C
1	CA	137	U
1	CA	142	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	156	C
1	CA	159	G
1	CA	173	U
1	CA	174	A
1	CA	176	C
1	CA	181	A
1	CA	182	A
1	CA	183	C
1	CA	184	G
1	CA	185	U
1	CA	186	C
1	CA	191	G
1	CA	197	A
1	CA	200	G
1	CA	201	G
1	CA	204	G
1	CA	207	C
1	CA	208	U
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	214	C
1	CA	240	G
1	CA	241	G
1	CA	244	U
1	CA	245	U
1	CA	247	G
1	CA	250	A
1	CA	251	G
1	CA	253	A
1	CA	254	G
1	CA	259	G
1	CA	266	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	267	C
1	CA	268	U
1	CA	269	C
1	CA	280	C
1	CA	289	G
1	CA	294	U
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	332	G
1	CA	345	C
1	CA	347	G
1	CA	352	C
1	CA	354	G
1	CA	367	U
1	CA	372	C
1	CA	376	G
1	CA	378	G
1	CA	384	G
1	CA	389	A
1	CA	390	U
1	CA	398	U
1	CA	404	G
1	CA	406	G
1	CA	409	U
1	CA	411	A
1	CA	412	A
1	CA	413	G
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	427	U
1	CA	429	U
1	CA	430	A
1	CA	439	U
1	CA	440	C
1	CA	446	G
1	CA	459	A
1	CA	463	U
1	CA	467	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	468	A
1	CA	473	U
1	CA	474	G
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	498	A
1	CA	505	G
1	CA	509	A
1	CA	511	C
1	CA	518	C
1	CA	519	C
1	CA	524	G
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	545	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	564	C
1	CA	568	G
1	CA	570	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	582	C
1	CA	615	G
1	CA	619	U
1	CA	622	A
1	CA	628	G
1	CA	636	U
1	CA	650	G
1	CA	653	U
1	CA	654	G
1	CA	665	A
1	CA	687	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	695	A
1	CA	702	A
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	747	A
1	CA	755	G
1	CA	765	G
1	CA	777	A
1	CA	785	G
1	CA	787	A
1	CA	793	U
1	CA	794	A
1	CA	802	A
1	CA	812	G
1	CA	815	A
1	CA	817	C
1	CA	828	U
1	CA	832	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	849	G
1	CA	874	G
1	CA	876	C
1	CA	880	C
1	CA	906	A
1	CA	914	A
1	CA	922	G
1	CA	926	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	964	A
1	CA	969	A
1	CA	971	G
1	CA	975	A
1	CA	976	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	977	A
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	994	A
1	CA	995	C
1	CA	996	A
1	CA	1004	A
1	CA	1008	U
1	CA	1018	G
1	CA	1020	G
1	CA	1022	A
1	CA	1025	U
1	CA	1026	G
1	CA	1027	C
1	CA	1028	C
1	CA	1030	U
1	CA	1031	C
1	CA	1032	G
1	CA	1033	G
1	CA	1034	G
1	CA	1037	C
1	CA	1039	G
1	CA	1042	A
1	CA	1043	G
1	CA	1044	A
1	CA	1047	G
1	CA	1050	G
1	CA	1052	U
1	CA	1054	C
1	CA	1055	A
1	CA	1065	U
1	CA	1070	U
1	CA	1072	G
1	CA	1073	U
1	CA	1086	U
1	CA	1089	G
1	CA	1094	G
1	CA	1095	U
1	CA	1096	C
1	CA	1101	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	1104	G
1	CA	1124	G
1	CA	1125	U
1	CA	1129	C
1	CA	1133	G
1	CA	1134	G
1	CA	1136	C
1	CA	1137	C
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1145	A
1	CA	1154	G
1	CA	1157	A
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1168	U
1	CA	1181	G
1	CA	1184	G
1	CA	1187	G
1	CA	1196	A
1	CA	1197	A
1	CA	1198	G
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1222	G
1	CA	1227	A
1	CA	1228	C
1	CA	1230	C
1	CA	1236	A
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1253	G
1	CA	1256	A
1	CA	1257	A
1	CA	1259	C
1	CA	1260	G
1	CA	1275	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	1280	A
1	CA	1285	A
1	CA	1286	U
1	CA	1287	A
1	CA	1297	G
1	CA	1299	A
1	CA	1301	U
1	CA	1305	G
1	CA	1312	G
1	CA	1317	C
1	CA	1318	A
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1324	A
1	CA	1332	A
1	CA	1336	C
1	CA	1337	G
1	CA	1338	G
1	CA	1346	A
1	CA	1353	G
1	CA	1362	A
1	CA	1363	A
1	CA	1368	A
1	CA	1379	G
1	CA	1381	U
1	CA	1382	C
1	CA	1418	A
1	CA	1441	A
1	CA	1442	G
1	CA	1446	A
1	CA	1451	U
1	CA	1452	C
1	CA	1454	G
1	CA	1475	G
1	CA	1477	U
1	CA	1491	G
1	CA	1492	A
1	CA	1497	G
1	CA	1499	A
1	CA	1503	A
1	CA	1505	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	CA	1506	U
1	CA	1507	A
1	CA	1509	C
1	CA	1517	G
1	CA	1519	A
1	CA	1529	G
1	CA	1530	G
1	CA	1533	C
1	CA	1534	A
1	CA	1535	C
1	CA	1536	C
22	DA	10	A
22	DA	15	G
22	DA	32	C
22	DA	34	U
22	DA	39	G
22	DA	42	A
22	DA	43	G
22	DA	46	G
22	DA	57	C
22	DA	61	C
22	DA	64	A
22	DA	66	C
22	DA	70	G
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	80	G
22	DA	81	G
22	DA	82	U
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	87	U
22	DA	91	A
22	DA	96	C
22	DA	97	C
22	DA	98	G
22	DA	101	A
22	DA	103	A
22	DA	104	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	111	A
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	128	C
22	DA	137	U
22	DA	138	U
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	143	C
22	DA	145	C
22	DA	150	U
22	DA	155	A
22	DA	158	U
22	DA	159	G
22	DA	162	U
22	DA	166	U
22	DA	178	G
22	DA	180	G
22	DA	184	C
22	DA	185	G
22	DA	196	A
22	DA	198	C
22	DA	202	U
22	DA	206	U
22	DA	216	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	225	C
22	DA	228	C
22	DA	233	A
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	251	A
22	DA	258	G
22	DA	262	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	276	U
22	DA	279	A
22	DA	281	C
22	DA	285	G
22	DA	291	G
22	DA	294	A
22	DA	311	A
22	DA	321	U
22	DA	329	G
22	DA	330	A
22	DA	335	C
22	DA	346	A
22	DA	348	A
22	DA	350	G
22	DA	359	G
22	DA	361	G
22	DA	362	A
22	DA	367	G
22	DA	370	G
22	DA	371	A
22	DA	372	G
22	DA	380	G
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	392	U
22	DA	396	G
22	DA	401	A
22	DA	405	U
22	DA	411	G
22	DA	412	A
22	DA	417	C
22	DA	420	C
22	DA	421	C
22	DA	424	G
22	DA	426	C
22	DA	430	A
22	DA	435	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	444	C
22	DA	446	G
22	DA	448	U
22	DA	451	U
22	DA	455	C
22	DA	461	C
22	DA	462	C
22	DA	478	A
22	DA	480	A
22	DA	481	G
22	DA	490	C
22	DA	491	G
22	DA	496	G
22	DA	504	A
22	DA	505	A
22	DA	508	A
22	DA	509	C
22	DA	510	C
22	DA	511	U
22	DA	528	A
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	542	C
22	DA	543	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	563	A
22	DA	564	C
22	DA	568	U
22	DA	569	U
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	586	A
22	DA	588	U
22	DA	603	A
22	DA	613	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	614	A
22	DA	615	U
22	DA	622	G
22	DA	627	A
22	DA	628	G
22	DA	631	A
22	DA	637	A
22	DA	642	U
22	DA	645	C
22	DA	646	U
22	DA	647	G
22	DA	648	G
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	657	U
22	DA	662	G
22	DA	664	G
22	DA	672	C
22	DA	682	G
22	DA	684	G
22	DA	685	A
22	DA	686	U
22	DA	694	U
22	DA	695	G
22	DA	701	G
22	DA	702	U
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
22	DA	747	U
22	DA	748	G
22	DA	752	A
22	DA	757	G
22	DA	758	C
22	DA	771	G
22	DA	773	U
22	DA	775	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	790	U
22	DA	792	A
22	DA	793	A
22	DA	798	G
22	DA	800	A
22	DA	801	G
22	DA	802	A
22	DA	805	G
22	DA	812	C
22	DA	814	C
22	DA	815	C
22	DA	819	A
22	DA	826	U
22	DA	827	U
22	DA	828	U
22	DA	829	A
22	DA	830	G
22	DA	844	A
22	DA	845	A
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	878	A
22	DA	881	G
22	DA	882	G
22	DA	885	C
22	DA	896	A
22	DA	897	C
22	DA	907	G
22	DA	910	A
22	DA	914	G
22	DA	915	C
22	DA	931	U
22	DA	932	U
22	DA	933	A
22	DA	941	A
22	DA	946	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	951	C
22	DA	953	G
22	DA	958	U
22	DA	959	A
22	DA	961	C
22	DA	974	G
22	DA	983	A
22	DA	995	C
22	DA	996	A
22	DA	1012	U
22	DA	1013	C
22	DA	1022	G
22	DA	1023	U
22	DA	1025	G
22	DA	1026	G
22	DA	1033	U
22	DA	1046	A
22	DA	1047	G
22	DA	1051	G
22	DA	1057	A
22	DA	1058	U
22	DA	1061	U
22	DA	1062	G
22	DA	1065	U
22	DA	1066	U
22	DA	1068	G
22	DA	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1074	G
22	DA	1075	C
22	DA	1077	A
22	DA	1088	A
22	DA	1089	A
22	DA	1092	C
22	DA	1094	U
22	DA	1096	A
22	DA	1097	U
22	DA	1100	C
22	DA	1101	U
22	DA	1104	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1110	G
22	DA	1112	G
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
22	DA	1122	G
22	DA	1128	G
22	DA	1132	U
22	DA	1135	C
22	DA	1136	G
22	DA	1139	G
22	DA	1142	A
22	DA	1153	C
22	DA	1155	A
22	DA	1171	G
22	DA	1172	C
22	DA	1175	A
22	DA	1176	U
22	DA	1178	C
22	DA	1179	G
22	DA	1180	U
22	DA	1183	U
22	DA	1186	G
22	DA	1199	U
22	DA	1204	A
22	DA	1205	A
22	DA	1212	G
22	DA	1227	G
22	DA	1230	A
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1238	G
22	DA	1242	U
22	DA	1243	C
22	DA	1244	A
22	DA	1247	A
22	DA	1248	G
22	DA	1250	G
22	DA	1253	A
22	DA	1256	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1266	G
22	DA	1268	A
22	DA	1272	A
22	DA	1276	A
22	DA	1282	U
22	DA	1288	G
22	DA	1289	C
22	DA	1293	C
22	DA	1294	U
22	DA	1300	G
22	DA	1301	A
22	DA	1321	A
22	DA	1330	C
22	DA	1339	G
22	DA	1344	U
22	DA	1345	C
22	DA	1352	U
22	DA	1355	G
22	DA	1359	A
22	DA	1365	A
22	DA	1374	G
22	DA	1376	C
22	DA	1378	A
22	DA	1379	U
22	DA	1380	G
22	DA	1383	A
22	DA	1384	A
22	DA	1391	U
22	DA	1393	A
22	DA	1395	A
22	DA	1411	U
22	DA	1416	G
22	DA	1418	G
22	DA	1419	A
22	DA	1420	A
22	DA	1428	C
22	DA	1434	A
22	DA	1446	C
22	DA	1452	G
22	DA	1453	A
22	DA	1454	C
22	DA	1456	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1458	U
22	DA	1462	C
22	DA	1465	G
22	DA	1468	U
22	DA	1471	G
22	DA	1476	U
22	DA	1482	G
22	DA	1493	C
22	DA	1503	A
22	DA	1504	A
22	DA	1509	A
22	DA	1510	G
22	DA	1515	A
22	DA	1523	U
22	DA	1524	G
22	DA	1527	G
22	DA	1530	G
22	DA	1531	C
22	DA	1533	C
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1540	G
22	DA	1555	G
22	DA	1560	G
22	DA	1566	A
22	DA	1569	A
22	DA	1576	U
22	DA	1578	U
22	DA	1581	G
22	DA	1582	C
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1587	G
22	DA	1592	C
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1610	A
22	DA	1613	G
22	DA	1616	A
22	DA	1626	A
22	DA	1634	A
22	DA	1645	G
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1651	G
22	DA	1652	A
22	DA	1660	G
22	DA	1663	G
22	DA	1664	A
22	DA	1674	G
22	DA	1715	G
22	DA	1729	U
22	DA	1730	C
22	DA	1732	C
22	DA	1738	G
22	DA	1740	G
22	DA	1744	A
22	DA	1750	G
22	DA	1758	U
22	DA	1759	A
22	DA	1764	C
22	DA	1767	G
22	DA	1773	A
22	DA	1781	U
22	DA	1782	U
22	DA	1791	A
22	DA	1793	C
22	DA	1800	C
22	DA	1801	A
22	DA	1802	A
22	DA	1808	A
22	DA	1810	A
22	DA	1812	U
22	DA	1816	C
22	DA	1817	G
22	DA	1828	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	1829	A
22	DA	1833	C
22	DA	1848	A
22	DA	1858	A
22	DA	1870	C
22	DA	1871	A
22	DA	1872	A
22	DA	1873	G
22	DA	1876	A
22	DA	1878	G
22	DA	1880	U
22	DA	1882	U
22	DA	1889	A
22	DA	1903	G
22	DA	1906	G
22	DA	1914	C
22	DA	1920	C
22	DA	1926	U
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1937	A
22	DA	1938	A
22	DA	1945	G
22	DA	1955	U
22	DA	1965	C
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1981	A
22	DA	1987	A
22	DA	1991	U
22	DA	1992	G
22	DA	1993	U
22	DA	1997	C
22	DA	2004	G
22	DA	2007	U
22	DA	2018	G
22	DA	2020	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2030	A
22	DA	2031	A
22	DA	2033	A
22	DA	2043	C
22	DA	2049	G
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2064	C
22	DA	2069	G
22	DA	2072	C
22	DA	2075	U
22	DA	2080	A
22	DA	2087	G
22	DA	2092	U
22	DA	2093	G
22	DA	2108	A
22	DA	2109	U
22	DA	2110	G
22	DA	2111	U
22	DA	2112	G
22	DA	2113	U
22	DA	2115	G
22	DA	2116	G
22	DA	2117	A
22	DA	2118	U
22	DA	2119	A
22	DA	2120	G
22	DA	2125	G
22	DA	2126	A
22	DA	2127	G
22	DA	2128	G
22	DA	2131	U
22	DA	2132	U
22	DA	2133	G
22	DA	2135	A
22	DA	2137	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2143	C
22	DA	2146	C
22	DA	2147	A
22	DA	2149	U
22	DA	2158	A
22	DA	2162	G
22	DA	2163	A
22	DA	2164	C
22	DA	2165	C
22	DA	2166	U
22	DA	2169	A
22	DA	2170	A
22	DA	2171	A
22	DA	2172	U
22	DA	2189	U
22	DA	2190	G
22	DA	2194	U
22	DA	2198	A
22	DA	2203	U
22	DA	2204	G
22	DA	2207	C
22	DA	2211	A
22	DA	2212	A
22	DA	2215	C
22	DA	2225	A
22	DA	2226	C
22	DA	2230	G
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2243	U
22	DA	2245	U
22	DA	2246	G
22	DA	2250	G
22	DA	2268	A
22	DA	2273	A
22	DA	2279	G
22	DA	2280	G
22	DA	2283	C
22	DA	2285	C
22	DA	2287	A
22	DA	2289	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2305	U
22	DA	2307	G
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2313	C
22	DA	2321	U
22	DA	2322	A
22	DA	2325	G
22	DA	2327	A
22	DA	2333	A
22	DA	2345	G
22	DA	2347	C
22	DA	2350	C
22	DA	2354	C
22	DA	2356	U
22	DA	2357	G
22	DA	2361	G
22	DA	2383	G
22	DA	2385	C
22	DA	2397	G
22	DA	2402	U
22	DA	2406	A
22	DA	2407	A
22	DA	2409	G
22	DA	2410	G
22	DA	2412	A
22	DA	2417	C
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
22	DA	2426	A
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2440	C
22	DA	2441	U
22	DA	2446	G
22	DA	2447	G
22	DA	2448	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2449	U
22	DA	2465	C
22	DA	2470	G
22	DA	2476	A
22	DA	2491	U
22	DA	2502	G
22	DA	2503	A
22	DA	2505	G
22	DA	2517	C
22	DA	2518	A
22	DA	2525	G
22	DA	2529	G
22	DA	2535	G
22	DA	2547	A
22	DA	2550	G
22	DA	2554	U
22	DA	2556	C
22	DA	2559	C
22	DA	2563	U
22	DA	2566	A
22	DA	2567	G
22	DA	2578	G
22	DA	2585	U
22	DA	2586	U
22	DA	2600	A
22	DA	2602	A
22	DA	2603	G
22	DA	2609	U
22	DA	2613	U
22	DA	2615	U
22	DA	2619	C
22	DA	2624	G
22	DA	2629	U
22	DA	2630	G
22	DA	2644	G
22	DA	2646	C
22	DA	2648	G
22	DA	2656	U
22	DA	2661	G
22	DA	2663	G
22	DA	2665	A
22	DA	2689	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2690	U
22	DA	2691	C
22	DA	2714	G
22	DA	2716	C
22	DA	2718	G
22	DA	2719	G
22	DA	2726	A
22	DA	2727	A
22	DA	2729	G
22	DA	2739	U
22	DA	2741	A
22	DA	2748	A
22	DA	2751	G
22	DA	2757	A
22	DA	2778	A
22	DA	2791	G
22	DA	2794	C
22	DA	2799	A
22	DA	2803	G
22	DA	2807	U
22	DA	2809	A
22	DA	2812	G
22	DA	2818	U
22	DA	2820	A
22	DA	2821	A
22	DA	2823	A
22	DA	2826	A
22	DA	2833	U
22	DA	2834	G
22	DA	2835	A
22	DA	2843	G
22	DA	2850	A
22	DA	2852	G
22	DA	2855	C
22	DA	2861	U
22	DA	2867	G
22	DA	2871	U
22	DA	2872	A
22	DA	2879	A
22	DA	2880	C
22	DA	2883	A
22	DA	2891	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	DA	2897	U
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	24	G
23	DB	35	C
23	DB	36	C
23	DB	44	G
23	DB	51	G
23	DB	54	G
23	DB	56	G
23	DB	61	G
23	DB	66	A
23	DB	87	U
23	DB	88	C
23	DB	89	U
23	DB	90	C
23	DB	99	A
23	DB	109	A
23	DB	110	C
23	DB	111	U

All (77) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	AA	209	U
1	AA	351	G
1	AA	429	U
1	AA	484	G
1	AA	722	G
1	AA	1031	C
1	AA	1049	U
1	AA	1145	A
1	AA	1201	A
1	AA	1211	U
1	AA	1505	G
22	BA	70	G
22	BA	199	A
22	BA	271	G
22	BA	404	A
22	BA	455	C
22	BA	764	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	BA	784	G
22	BA	800	A
22	BA	960	A
22	BA	984	A
22	BA	995	C
22	BA	1344	U
22	BA	1378	A
22	BA	1494	A
22	BA	1554	U
22	BA	1583	A
22	BA	1606	C
22	BA	1757	A
22	BA	1875	G
22	BA	2127	G
22	BA	2211	A
22	BA	2286	G
22	BA	2326	C
22	BA	2873	A
1	CA	85	U
1	CA	115	G
1	CA	209	U
1	CA	429	U
1	CA	484	G
1	CA	1049	U
1	CA	1201	A
1	CA	1211	U
1	CA	1279	G
1	CA	1317	C
22	DA	271	G
22	DA	404	A
22	DA	479	A
22	DA	613	A
22	DA	800	A
22	DA	846	U
22	DA	877	A
22	DA	1237	A
22	DA	1275	A
22	DA	1344	U
22	DA	1378	A
22	DA	1475	G
22	DA	1514	G
22	DA	1606	C

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Mol	Chain	Res	Type
22	DA	1847	A
22	DA	1875	G
22	DA	2109	U
22	DA	2127	G
22	DA	2145	C
22	DA	2146	C
22	DA	2157	G
22	DA	2162	G
22	DA	2211	A
22	DA	2225	A
22	DA	2286	G
22	DA	2308	G
22	DA	2326	C
22	DA	2425	A
22	DA	2602	A
22	DA	2655	G
22	DA	2756	U
22	DA	2820	A

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

10 non-standard protein/DNA/RNA residues are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
54	DBB	D6	3	54	4,5,6	1.18	0	1,5,7	1.37	0
54	MHV	B6	6	54	7,9,10	1.59	1 (14%)	7,11,13	3.44	4 (57%)
54	DBB	B6	3	54	4,5,6	1.31	0	1,5,7	2.61	1 (100%)
54	MHW	B6	1	54	9,9,10	1.64	1 (11%)	10,11,13	2.86	4 (40%)
54	MHU	D6	5	54	14,15,16	1.63	3 (21%)	18,19,21	1.15	2 (11%)
54	MHW	D6	1	54	9,9,10	1.95	1 (11%)	10,11,13	3.07	4 (40%)
54	MHU	B6	5	54	14,15,16	1.80	3 (21%)	18,19,21	1.27	3 (16%)
54	004	B6	7	54	9,10,11	1.52	1 (11%)	9,12,14	2.03	3 (33%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
54	004	D6	7	54	9,10,11	0.78	0	9,12,14	0.60	0
54	MHV	D6	6	54	7,9,10	1.19	0	7,11,13	3.21	4 (57%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	DBB	D6	3	54	-	0/3/4/6	-
54	MHV	B6	6	54	-	0/1/12/14	0/1/1/1
54	DBB	B6	3	54	-	1/3/4/6	-
54	MHW	B6	1	54	-	0/2/2/4	0/1/1/1
54	MHU	D6	5	54	-	0/9/12/14	0/1/1/1
54	MHW	D6	1	54	-	0/2/2/4	0/1/1/1
54	MHU	B6	5	54	-	0/9/12/14	0/1/1/1
54	004	B6	7	54	-	1/4/6/8	0/1/1/1
54	004	D6	7	54	-	2/4/6/8	0/1/1/1
54	MHV	D6	6	54	-	0/1/12/14	0/1/1/1

All (10) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	D6	1	MHW	CA-C	5.22	1.54	1.48
54	B6	5	MHU	CZ-NZ	5.22	1.49	1.37
54	D6	5	MHU	CZ-NZ	4.69	1.48	1.37
54	B6	7	004	CB-CA	-4.30	1.48	1.52
54	B6	1	MHW	CA-C	3.99	1.52	1.48
54	B6	6	MHV	CB-CG	-2.97	1.45	1.50
54	B6	5	MHU	CD2-CE2	2.18	1.42	1.38
54	B6	5	MHU	CB-CG	2.15	1.56	1.51
54	D6	5	MHU	CB-CG	2.10	1.56	1.51
54	D6	5	MHU	CD2-CE2	2.00	1.42	1.38

All (25) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	D6	1	MHW	CD-CE-N	6.55	134.13	123.43
54	B6	1	MHW	CD-CE-N	5.89	133.04	123.43
54	B6	6	MHV	CD2-CG-CB	5.52	124.11	115.89
54	D6	6	MHV	CD2-CE-N	-5.22	98.62	110.03
54	D6	6	MHV	CD2-CG-CB	5.13	123.53	115.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	D6	1	MHW	CG2-CD-CE	-4.90	111.66	118.91
54	B6	6	MHV	CD2-CE-N	-4.80	99.55	110.03
54	B6	6	MHV	OD1-CG-CB	-4.49	116.26	121.96
54	D6	1	MHW	O-C-CA	-4.12	120.32	124.22
54	B6	7	004	CB-CA-N	-4.10	102.59	112.40
54	B6	1	MHW	O-C-CA	-4.02	120.42	124.22
54	B6	1	MHW	CG2-CD-CE	-3.89	113.14	118.91
54	B6	7	004	CG2-CB-CG1	3.23	122.32	118.29
54	B6	1	MHW	C-CA-N	2.96	120.20	115.41
54	D6	6	MHV	OD1-CG-CD2	-2.84	117.19	122.05
54	D6	1	MHW	C-CA-N	2.71	119.80	115.41
54	B6	3	DBB	CG-CB-CA	-2.61	107.44	113.42
54	D6	5	MHU	O-C-CA	-2.57	118.03	124.78
54	D6	5	MHU	CE2-CZ-NZ	-2.45	118.31	121.63
54	B6	5	MHU	CB-CA-C	-2.35	107.20	111.65
54	B6	5	MHU	CE2-CZ-NZ	-2.30	118.52	121.63
54	B6	5	MHU	CB-CA-N	2.24	114.13	110.65
54	D6	6	MHV	OD1-CG-CB	-2.11	119.28	121.96
54	B6	6	MHV	CB-CA-N	-2.10	108.17	112.50
54	B6	7	004	CD1-CG1-CB	-2.09	118.06	120.65

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
54	B6	3	DBB	N-CA-CB-CG
54	D6	7	004	C-CA-CB-CG1
54	D6	7	004	C-CA-CB-CG2
54	B6	7	004	C-CA-CB-CG1

There are no ring outliers.

6 monomers are involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
54	D6	3	DBB	1	0
54	D6	5	MHU	3	0
54	D6	1	MHW	2	0
54	B6	7	004	1	0
54	D6	7	004	4	0
54	D6	6	MHV	1	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 502 ligands modelled in this entry, 500 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
56	DOL	BA	3001	-	43,50,50	2.86	13 (30%)	51,70,70	2.88	14 (27%)
56	DOL	DA	3001	-	43,50,50	2.90	13 (30%)	51,70,70	2.81	13 (25%)

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
56	DOL	BA	3001	-	-	18/58/77/77	0/2/3/3
56	DOL	DA	3001	-	-	10/58/77/77	0/2/3/3

All (26) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	DA	3001	DOL	O15-C14	9.27	1.37	1.21
56	BA	3001	DOL	O15-C14	8.90	1.36	1.21
56	DA	3001	DOL	C22-C23	8.04	1.53	1.32
56	BA	3001	DOL	C22-C23	7.76	1.52	1.32
56	DA	3001	DOL	O38-C37	6.42	1.37	1.21
56	BA	3001	DOL	O38-C37	6.18	1.36	1.21
56	BA	3001	DOL	C26-N25	5.92	1.47	1.34
56	DA	3001	DOL	C26-N25	5.90	1.47	1.34
56	DA	3001	DOL	C19-C20	5.25	1.51	1.34
56	DA	3001	DOL	C6-N5	5.09	1.46	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	BA	3001	DOL	C19-C20	4.99	1.50	1.34
56	BA	3001	DOL	C6-N5	4.46	1.44	1.34
56	BA	3001	DOL	O36-C32	-3.60	1.39	1.44
56	DA	3001	DOL	C28-C29	3.54	1.40	1.32
56	BA	3001	DOL	C28-C29	3.53	1.40	1.32
56	BA	3001	DOL	C16-C17	-3.46	1.49	1.54
56	DA	3001	DOL	C16-C17	-3.39	1.49	1.54
56	DA	3001	DOL	O18-C17	-3.09	1.38	1.43
56	BA	3001	DOL	O36-C37	-2.99	1.27	1.34
56	DA	3001	DOL	C22-C20	2.86	1.52	1.45
56	BA	3001	DOL	O18-C17	-2.78	1.38	1.43
56	BA	3001	DOL	C22-C20	2.76	1.51	1.45
56	DA	3001	DOL	O36-C32	-2.59	1.40	1.44
56	DA	3001	DOL	O36-C37	-2.28	1.29	1.34
56	BA	3001	DOL	C3-C4	2.22	1.57	1.52
56	DA	3001	DOL	C3-C4	2.06	1.56	1.52

All (27) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	DA	3001	DOL	O40-S39-O41	-15.45	100.57	118.19
56	BA	3001	DOL	O40-S39-O41	-14.66	101.47	118.19
56	BA	3001	DOL	C8-C6-N5	6.55	127.31	119.76
56	BA	3001	DOL	C29-C28-C26	-5.90	107.93	122.69
56	DA	3001	DOL	C4-N5-C1	-5.06	106.22	112.45
56	BA	3001	DOL	C23-C22-C20	-4.62	118.91	125.89
56	DA	3001	DOL	C29-C28-C26	-4.25	112.07	122.69
56	DA	3001	DOL	O36-C37-C1	4.17	120.04	111.52
56	BA	3001	DOL	O7-C6-N5	-3.97	115.16	121.59
56	DA	3001	DOL	C30-C29-C28	-3.80	116.08	126.44
56	DA	3001	DOL	C23-C22-C20	-3.72	120.27	125.89
56	DA	3001	DOL	C3-C2-C1	3.57	109.05	103.13
56	BA	3001	DOL	C4-N5-C1	-3.27	108.42	112.45
56	BA	3001	DOL	C28-C26-N25	2.98	120.59	114.97
56	BA	3001	DOL	C30-C29-C28	-2.95	118.37	126.44
56	DA	3001	DOL	O36-C32-C30	2.70	111.60	107.09
56	DA	3001	DOL	C32-O36-C37	2.61	122.27	117.78
56	DA	3001	DOL	O38-C37-C1	-2.59	119.52	124.53
56	BA	3001	DOL	O36-C37-C1	2.56	116.76	111.52
56	DA	3001	DOL	C31-C30-C32	2.49	115.71	111.11
56	BA	3001	DOL	C12-C8-C6	-2.31	120.33	128.43
56	BA	3001	DOL	C24-N25-C26	-2.28	118.35	122.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	BA	3001	DOL	C16-C17-C19	-2.22	106.93	111.10
56	BA	3001	DOL	C31-C30-C32	2.13	115.04	111.11
56	DA	3001	DOL	C28-C26-N25	2.08	118.89	114.97
56	DA	3001	DOL	C1-N5-C6	2.04	128.31	120.88
56	BA	3001	DOL	C32-O36-C37	2.02	121.25	117.78

There are no chirality outliers.

All (28) torsion outliers are listed below:

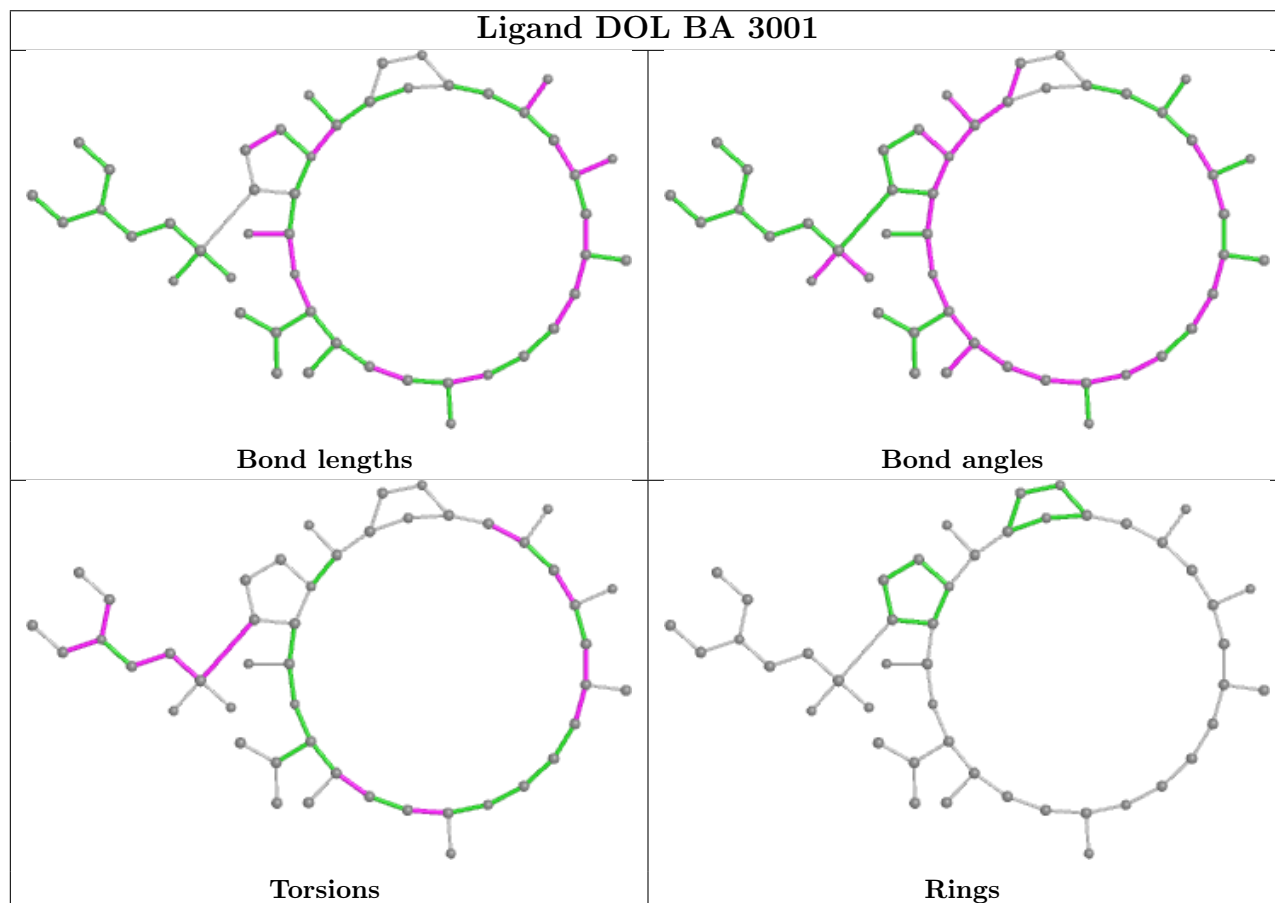
Mol	Chain	Res	Type	Atoms
56	BA	3001	DOL	C1-C2-S39-O40
56	BA	3001	DOL	C1-C2-S39-C42
56	BA	3001	DOL	S39-C42-C43-N44
56	BA	3001	DOL	C14-C16-C17-O18
56	BA	3001	DOL	C17-C19-C20-C22
56	BA	3001	DOL	C21-C20-C22-C23
56	DA	3001	DOL	C1-C2-S39-C42
56	DA	3001	DOL	N25-C26-C28-C29
56	BA	3001	DOL	C19-C20-C22-C23
56	DA	3001	DOL	O27-C26-C28-C29
56	DA	3001	DOL	C46-C45-N44-C47
56	DA	3001	DOL	C28-C29-C30-C31
56	DA	3001	DOL	C46-C45-N44-C43
56	BA	3001	DOL	C46-C45-N44-C47
56	BA	3001	DOL	C46-C45-N44-C43
56	BA	3001	DOL	C48-C47-N44-C45
56	DA	3001	DOL	C3-C2-S39-O40
56	BA	3001	DOL	C14-C16-C17-C19
56	BA	3001	DOL	C43-C42-S39-C2
56	BA	3001	DOL	N25-C26-C28-C29
56	BA	3001	DOL	C10-C13-C14-O15
56	DA	3001	DOL	C10-C13-C14-O15
56	BA	3001	DOL	C10-C13-C14-C16
56	DA	3001	DOL	C10-C13-C14-C16
56	BA	3001	DOL	C28-C29-C30-C31
56	BA	3001	DOL	O27-C26-C28-C29
56	BA	3001	DOL	C3-C2-S39-O40
56	DA	3001	DOL	C42-C43-N44-C45

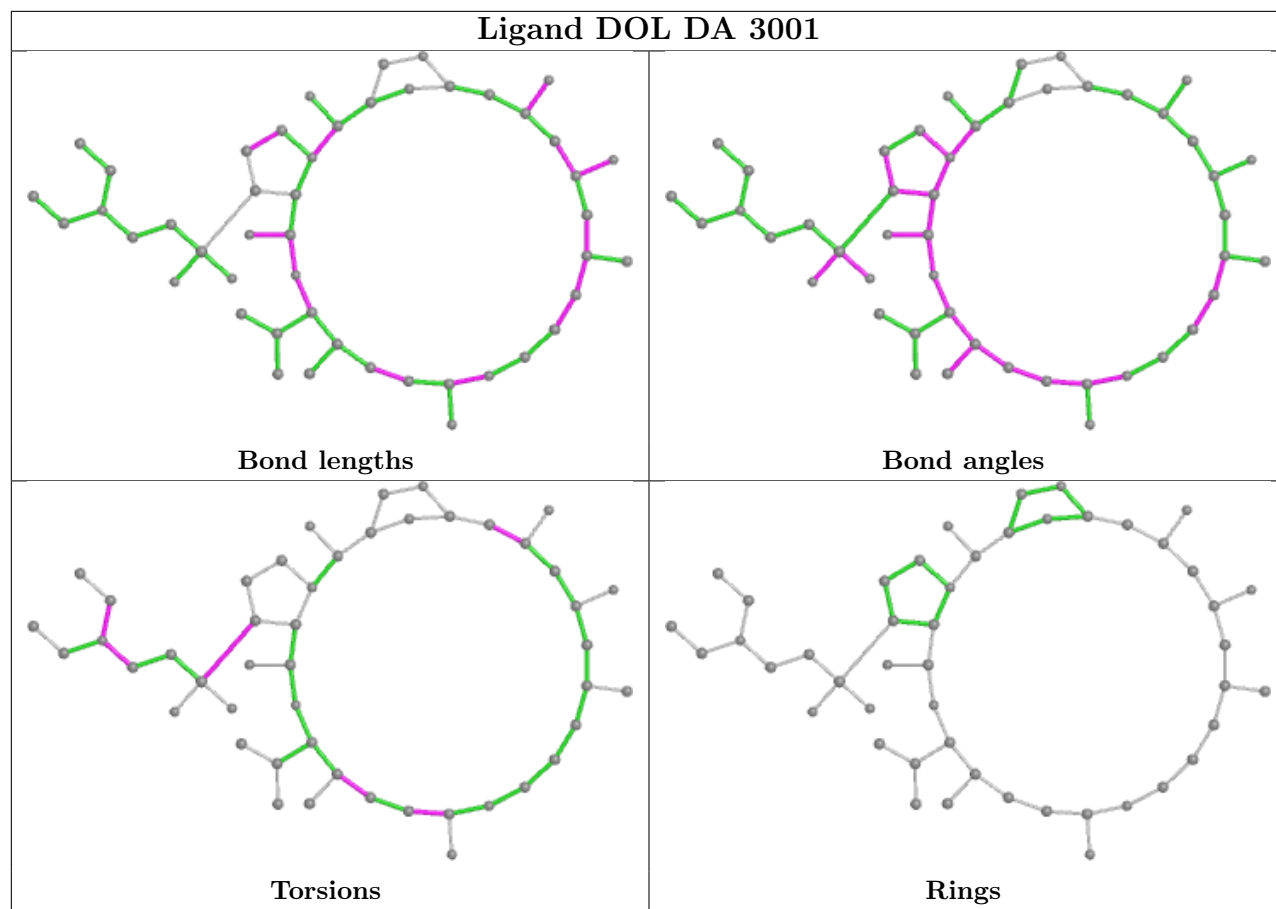
There are no ring outliers.

2 monomers are involved in 40 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	BA	3001	DOL	15	0
56	DA	3001	DOL	25	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 [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	AA	1538/1539 (99%)	-0.16	22 (1%) 75 70	10, 49, 132, 182	0
1	CA	1539/1539 (100%)	0.16	55 (3%) 42 32	22, 70, 146, 178	0
2	AB	218/218 (100%)	0.80	29 (13%) 3 2	36, 73, 100, 117	0
2	CB	218/218 (100%)	1.05	45 (20%) 1 0	57, 86, 108, 121	0
3	AC	206/206 (100%)	0.15	10 (4%) 29 20	33, 57, 78, 95	0
3	CC	206/206 (100%)	1.19	50 (24%) 0 0	55, 80, 96, 107	0
4	AD	205/205 (100%)	0.36	8 (3%) 39 29	31, 56, 79, 99	0
4	CD	205/205 (100%)	-0.03	5 (2%) 59 49	13, 35, 60, 82	0
5	AE	150/150 (100%)	0.10	2 (1%) 77 72	26, 47, 78, 93	0
5	CE	150/150 (100%)	0.18	1 (0%) 87 84	25, 52, 84, 104	0
6	AF	100/100 (100%)	-0.18	1 (1%) 82 77	32, 54, 73, 77	0
6	CF	100/100 (100%)	0.53	10 (10%) 7 4	41, 74, 92, 103	0
7	AG	151/151 (100%)	0.26	3 (1%) 65 56	51, 75, 92, 100	0
7	CG	151/151 (100%)	2.56	85 (56%) 0 0	82, 106, 114, 118	0
8	AH	129/129 (100%)	0.18	2 (1%) 72 66	29, 46, 67, 79	0
8	CH	129/129 (100%)	0.45	10 (7%) 13 7	46, 64, 80, 94	0
9	AI	127/127 (100%)	0.93	22 (17%) 1 1	40, 74, 98, 107	0
9	CI	127/127 (100%)	1.84	45 (35%) 0 0	79, 96, 112, 121	0
10	AJ	98/98 (100%)	0.64	7 (7%) 16 9	38, 66, 86, 116	0
10	CJ	98/98 (100%)	2.70	59 (60%) 0 0	72, 97, 115, 123	0
11	AK	117/117 (100%)	0.49	10 (8%) 10 5	25, 60, 89, 119	0
11	CK	117/117 (100%)	0.23	2 (1%) 70 63	35, 68, 79, 90	0
12	AL	123/123 (100%)	0.15	6 (4%) 29 20	20, 34, 65, 97	0
12	CL	123/123 (100%)	0.32	3 (2%) 59 49	30, 50, 74, 95	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/114 (100%)	0.42	10 (8%) 10 5	47, 69, 91, 103	0
13	CM	114/114 (100%)	3.11	76 (66%) 0 0	93, 113, 122, 125	0
14	AN	96/100 (96%)	0.67	11 (11%) 4 2	36, 60, 96, 105	0
14	CN	96/100 (96%)	2.16	44 (45%) 0 0	70, 96, 115, 122	0
15	AO	88/88 (100%)	0.35	3 (3%) 45 35	29, 47, 64, 91	0
15	CO	88/88 (100%)	0.32	3 (3%) 45 35	36, 64, 80, 102	0
16	AP	82/82 (100%)	0.69	6 (7%) 15 8	34, 47, 83, 109	0
16	CP	82/82 (100%)	0.98	11 (13%) 3 1	45, 62, 91, 112	0
17	AQ	80/80 (100%)	0.26	3 (3%) 40 30	27, 48, 75, 111	0
17	CQ	80/80 (100%)	1.14	19 (23%) 0 0	42, 77, 97, 99	0
18	AR	55/55 (100%)	0.22	3 (5%) 25 16	40, 52, 77, 102	0
18	CR	55/55 (100%)	0.28	4 (7%) 15 8	36, 54, 78, 108	0
19	AS	79/79 (100%)	0.70	13 (16%) 1 1	54, 70, 88, 97	0
19	CS	79/79 (100%)	3.96	58 (73%) 0 0	95, 114, 122, 128	0
20	AT	85/85 (100%)	0.43	4 (4%) 31 22	35, 48, 68, 96	0
20	CT	85/85 (100%)	1.81	33 (38%) 0 0	53, 78, 96, 101	0
21	AU	51/51 (100%)	1.26	12 (23%) 0 0	41, 74, 95, 105	0
21	CU	51/51 (100%)	0.68	6 (11%) 4 2	42, 69, 98, 102	0
22	BA	2897/2903 (99%)	0.14	106 (3%) 41 31	0, 14, 129, 195	0
22	DA	2897/2903 (99%)	0.40	129 (4%) 33 23	41, 85, 148, 181	0
23	BB	119/119 (100%)	-0.36	0 100 100	2, 23, 46, 81	0
23	DB	118/119 (99%)	0.19	4 (3%) 45 35	69, 115, 134, 142	0
24	BC	271/271 (100%)	-0.18	1 (0%) 92 91	2, 18, 35, 55	0
24	DC	271/271 (100%)	0.73	32 (11%) 4 2	46, 64, 77, 95	0
25	BD	209/209 (100%)	-0.25	0 100 100	0, 9, 34, 65	0
25	DD	209/209 (100%)	1.16	44 (21%) 1 0	53, 72, 87, 97	0
26	BE	201/201 (100%)	-0.30	0 100 100	1, 23, 54, 88	0
26	DE	201/201 (100%)	1.86	80 (39%) 0 0	52, 89, 105, 113	0
27	BF	177/177 (100%)	0.19	4 (2%) 60 51	21, 40, 74, 88	0
27	DF	177/177 (100%)	3.27	128 (72%) 0 0	94, 113, 124, 131	0
28	BG	176/176 (100%)	0.04	3 (1%) 70 63	15, 35, 58, 72	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/176 (100%)	2.22	89 (50%) 0 0	78, 96, 110, 121	0
29	BH	149/149 (100%)	3.01	73 (48%) 0 0	25, 102, 121, 129	0
29	DH	149/149 (100%)	1.18	30 (20%) 1 0	25, 92, 107, 115	0
30	BI	141/141 (100%)	3.56	100 (70%) 0 0	89, 116, 126, 134	0
30	DI	141/141 (100%)	4.83	120 (85%) 0 0	105, 124, 135, 142	0
31	BJ	142/142 (100%)	-0.27	0 100 100	1, 6, 26, 35	0
31	DJ	142/142 (100%)	0.84	16 (11%) 5 3	49, 69, 83, 91	0
32	BK	122/122 (100%)	-0.34	0 100 100	3, 11, 28, 60	0
32	DK	122/122 (100%)	1.12	29 (23%) 0 0	48, 66, 84, 95	0
33	BL	143/143 (100%)	-0.13	0 100 100	1, 18, 42, 65	0
33	DL	143/143 (100%)	1.95	62 (43%) 0 0	43, 87, 98, 115	0
34	BM	136/136 (100%)	-0.38	0 100 100	1, 10, 24, 85	0
34	DM	136/136 (100%)	1.01	26 (19%) 1 1	44, 70, 85, 99	0
35	BN	120/120 (100%)	-0.25	0 100 100	2, 7, 17, 65	0
35	DN	120/120 (100%)	1.29	28 (23%) 0 0	58, 78, 92, 112	0
36	BO	116/116 (100%)	-0.21	0 100 100	14, 24, 42, 54	0
36	DO	116/116 (100%)	2.77	75 (64%) 0 0	85, 99, 110, 117	0
37	BP	114/114 (100%)	-0.22	1 (0%) 84 80	6, 16, 41, 71	0
37	DP	114/114 (100%)	1.07	27 (23%) 0 0	61, 74, 86, 94	0
38	BQ	117/117 (100%)	-0.31	0 100 100	0, 3, 12, 30	0
38	DQ	117/117 (100%)	1.15	25 (21%) 0 0	55, 70, 81, 89	0
39	BR	103/103 (100%)	-0.29	0 100 100	0, 11, 31, 56	0
39	DR	103/103 (100%)	1.66	35 (33%) 0 0	57, 80, 92, 103	0
40	BS	110/110 (100%)	-0.22	0 100 100	1, 4, 21, 68	0
40	DS	110/110 (100%)	2.12	53 (48%) 0 0	60, 79, 94, 105	0
41	BT	93/93 (100%)	0.19	3 (3%) 47 37	10, 24, 68, 98	0
41	DT	93/93 (100%)	2.71	57 (61%) 0 0	73, 91, 106, 115	0
42	BU	102/102 (100%)	-0.22	2 (1%) 65 56	10, 25, 58, 77	0
42	DU	102/102 (100%)	3.20	65 (63%) 0 0	77, 95, 109, 120	0
43	BV	94/94 (100%)	-0.27	0 100 100	4, 18, 39, 52	0
43	DV	94/94 (100%)	1.14	21 (22%) 0 0	72, 86, 98, 105	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	76/76 (100%)	-0.15	2 (2%) 56 46	4, 11, 27, 57	0
44	DW	75/76 (98%)	2.04	39 (52%) 0 0	58, 83, 93, 104	0
45	BX	77/77 (100%)	-0.24	0 100 100	8, 22, 48, 68	0
45	DX	77/77 (100%)	1.11	15 (19%) 1 0	47, 72, 87, 91	0
46	BY	63/63 (100%)	0.23	3 (4%) 30 21	18, 38, 71, 94	0
46	DY	63/63 (100%)	1.95	30 (47%) 0 0	81, 99, 106, 109	0
47	BZ	58/58 (100%)	-0.22	0 100 100	2, 6, 25, 34	0
47	DZ	58/58 (100%)	0.83	7 (12%) 4 2	60, 73, 85, 103	0
48	B0	56/56 (100%)	-0.30	0 100 100	0, 7, 33, 60	0
48	D0	56/56 (100%)	1.49	17 (30%) 0 0	51, 82, 95, 103	0
49	B1	50/50 (100%)	-0.23	1 (2%) 65 56	13, 25, 49, 57	0
49	D1	50/50 (100%)	1.73	15 (30%) 0 0	73, 89, 94, 106	0
50	B2	46/46 (100%)	-0.14	1 (2%) 62 52	4, 8, 15, 79	0
50	D2	46/46 (100%)	1.94	19 (41%) 0 0	58, 72, 86, 101	0
51	B3	64/64 (100%)	-0.18	0 100 100	4, 9, 17, 29	0
51	D3	64/64 (100%)	1.69	26 (40%) 0 0	60, 75, 84, 94	0
52	B4	38/38 (100%)	-0.13	0 100 100	5, 15, 29, 52	0
52	D4	38/38 (100%)	2.23	18 (47%) 0 0	62, 77, 88, 98	0
53	B5	191/228 (83%)	6.24	186 (97%) 0 0	100, 121, 133, 141	0
54	B6	2/8 (25%)	0.45	0 100 100	1, 1, 1, 1	0
54	D6	2/8 (25%)	-0.02	0 100 100	46, 46, 46, 51	0
All	All	20738/20810 (99%)	0.62	2658 (12%) 3 2	0, 63, 124, 195	0

All (2658) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
30	BI	53	LEU	25.2
53	B5	55	SER	19.9
22	BA	2101	A	17.4
22	BA	2184	A	17.4
53	B5	207	GLY	16.3
22	BA	2185	U	16.2
10	AJ	102	LEU	16.0
29	BH	130	VAL	14.7
30	DI	6	GLN	14.5

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Mol	Chain	Res	Type	RSRZ
53	B5	223	VAL	14.3
53	B5	48	LEU	14.1
7	CG	62	PHE	14.1
29	BH	97	ARG	13.9
22	BA	2100	G	13.6
22	BA	2102	G	13.4
30	DI	68	THR	13.2
22	BA	2159	G	13.1
22	BA	2135	A	12.8
1	CA	1536	C	12.6
30	DI	67	PHE	12.6
22	BA	2183	A	12.6
29	BH	102	ALA	12.5
53	B5	111	PHE	12.4
22	BA	2103	C	12.3
29	BH	96	THR	12.2
1	AA	1535	C	12.1
53	B5	208	THR	12.1
20	CT	4	ILE	12.1
22	BA	2148	G	11.9
2	AB	157	LEU	11.9
53	B5	218	THR	11.8
22	BA	2147	A	11.8
22	BA	2139	U	11.6
53	B5	157	ILE	11.6
53	B5	66	PRO	11.6
29	BH	113	SER	11.4
22	BA	2104	C	11.3
22	BA	2160	C	11.3
30	DI	66	SER	11.2
53	B5	173	HIS	11.2
53	B5	140	ASN	11.2
30	DI	58	VAL	11.1
53	B5	122	GLY	11.1
42	DU	36	VAL	11.0
53	B5	62	THR	11.0
53	B5	183	PRO	10.9
22	BA	2138	G	10.8
30	BI	2	ALA	10.8
22	BA	2158	A	10.7
22	BA	2140	G	10.7
36	DO	40	ILE	10.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	224	ARG	10.7
53	B5	108	TRP	10.7
30	BI	3	LYS	10.7
53	B5	52	PRO	10.5
53	B5	131	ILE	10.5
19	CS	66	MET	10.4
53	B5	67	HIS	10.4
53	B5	50	ILE	10.3
53	B5	206	LYS	10.2
53	B5	198	GLU	10.2
22	BA	2165	C	10.2
22	BA	2143	C	10.2
30	DI	59	ILE	10.1
42	DU	26	LYS	10.1
53	B5	217	THR	10.1
22	BA	2174	C	10.1
22	BA	2136	G	10.0
53	B5	59	VAL	10.0
27	DF	156	ILE	10.0
30	DI	4	LYS	10.0
30	DI	69	PHE	9.9
22	DA	1175	A	9.9
22	BA	2156	G	9.9
22	BA	2145	C	9.8
30	DI	3	LYS	9.8
29	BH	146	VAL	9.8
53	B5	182	PRO	9.8
19	CS	37	ARG	9.8
29	BH	69	ALA	9.6
13	CM	84	GLY	9.6
19	CS	24	GLU	9.6
22	BA	2117	A	9.6
4	CD	25	VAL	9.5
27	DF	130	MET	9.5
30	BI	79	LEU	9.4
22	BA	2144	G	9.4
19	CS	74	PHE	9.4
53	B5	106	ASP	9.3
27	DF	129	SER	9.2
53	B5	181	PHE	9.1
30	BI	67	PHE	9.1
29	BH	136	SER	9.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	DL	92	LEU	9.1
30	BI	13	VAL	9.1
22	BA	2142	A	9.1
27	DF	128	TYR	9.1
42	DU	60	GLU	9.0
22	BA	2182	U	9.0
9	CI	128	SER	9.0
22	BA	2177	C	9.0
29	BH	112	LYS	9.0
1	CA	1539	C	9.0
30	BI	68	THR	9.0
36	DO	24	THR	9.0
53	B5	199	ALA	8.9
30	BI	12	GLN	8.9
22	BA	2099	U	8.9
1	AA	1536	C	8.9
53	B5	134	PRO	8.8
22	BA	2178	C	8.8
22	BA	2155	U	8.7
22	BA	2157	G	8.7
19	CS	67	VAL	8.7
41	DT	34	VAL	8.7
53	B5	107	GLY	8.7
30	BI	4	LYS	8.7
30	DI	2	ALA	8.7
22	BA	2161	C	8.7
53	B5	53	ARG	8.7
22	BA	2141	G	8.7
1	CA	1535	C	8.6
53	B5	156	GLU	8.6
53	B5	20	VAL	8.6
27	DF	155	THR	8.6
53	B5	147	GLY	8.6
30	DI	53	LEU	8.6
41	DT	15	HIS	8.6
29	BH	105	ALA	8.5
30	DI	42	PHE	8.5
30	DI	11	LEU	8.5
53	B5	68	GLY	8.4
53	B5	174	ALA	8.4
2	AB	156	GLY	8.4
42	DU	78	GLY	8.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CJ	77	VAL	8.4
30	BI	5	VAL	8.4
29	BH	106	ALA	8.4
30	DI	60	THR	8.4
22	BA	2115	G	8.3
53	B5	96	GLY	8.3
53	B5	95	VAL	8.3
22	BA	2127	G	8.3
19	CS	30	PRO	8.2
53	B5	45	HIS	8.2
22	BA	2162	G	8.2
7	CG	66	LEU	8.2
41	DT	43	ILE	8.2
29	BH	98	ASP	8.2
22	BA	2150	C	8.2
19	CS	60	VAL	8.2
42	DU	52	LEU	8.2
30	BI	41	ALA	8.1
30	BI	11	LEU	8.1
53	B5	70	GLY	8.1
42	DU	25	VAL	8.1
30	BI	69	PHE	8.1
30	DI	85	GLY	8.0
10	CJ	74	VAL	8.0
19	CS	39	THR	8.0
22	BA	2123	G	8.0
22	BA	2175	C	8.0
53	B5	143	ALA	8.0
14	CN	36	ALA	8.0
29	BH	115	VAL	8.0
53	B5	219	MET	8.0
16	AP	81	ALA	7.9
53	B5	194	ILE	7.9
53	B5	76	LEU	7.9
29	BH	68	ARG	7.9
52	D4	10	LEU	7.9
30	DI	46	THR	7.9
53	B5	180	SER	7.9
30	DI	80	LEU	7.8
27	DF	35	THR	7.8
7	CG	18	PHE	7.8
29	BH	148	ALA	7.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	CS	44	MET	7.8
1	CA	1537	U	7.8
22	BA	2124	G	7.8
30	DI	13	VAL	7.8
29	BH	144	VAL	7.8
30	BI	54	PRO	7.8
53	B5	109	MET	7.7
29	BH	120	GLY	7.7
40	DS	92	ARG	7.7
9	CI	43	THR	7.7
53	B5	158	LYS	7.7
42	DU	51	ALA	7.7
16	CP	47	GLU	7.7
53	B5	200	HIS	7.7
53	B5	221	PRO	7.6
9	CI	130	ARG	7.6
22	BA	2179	C	7.6
53	B5	61	GLY	7.6
7	CG	39	ALA	7.6
33	DL	144	GLU	7.6
22	BA	2116	G	7.6
30	DI	7	ALA	7.5
22	BA	2163	A	7.5
22	BA	2176	A	7.5
53	B5	77	ALA	7.5
53	B5	203	GLU	7.5
50	D2	42	LEU	7.5
19	CS	43	ASN	7.5
53	B5	214	TYR	7.5
27	DF	67	ILE	7.5
53	B5	212	SER	7.5
28	DG	43	VAL	7.5
47	DZ	2	ALA	7.5
30	DI	52	GLY	7.4
53	B5	73	VAL	7.4
30	BI	87	LYS	7.4
53	B5	148	PHE	7.4
41	DT	2	ILE	7.4
53	B5	132	LEU	7.4
30	DI	34	ASN	7.4
22	BA	2121	G	7.4
22	BA	2169	A	7.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DI	48	SER	7.3
22	BA	2166	U	7.3
30	DI	70	VAL	7.3
30	DI	22	PRO	7.3
22	DA	1537	G	7.3
53	B5	225	ILE	7.3
9	AI	130	ARG	7.3
22	BA	2113	U	7.3
42	DU	39	ILE	7.3
22	BA	2149	U	7.3
22	BA	2172	U	7.3
53	B5	196	ALA	7.3
13	CM	63	PHE	7.2
19	CS	71	LEU	7.2
13	CM	96	PRO	7.2
22	BA	2173	A	7.2
30	DI	120	ALA	7.2
35	DN	28	LEU	7.2
42	DU	89	ASP	7.2
30	DI	63	ALA	7.1
53	B5	84	ILE	7.1
29	BH	91	PHE	7.1
15	AO	89	ARG	7.1
33	DL	121	THR	7.1
53	B5	205	ALA	7.1
53	B5	141	PRO	7.1
13	CM	86	TYR	7.1
53	B5	169	THR	7.1
53	B5	165	ARG	7.0
46	BY	63	ALA	7.0
53	B5	170	GLY	7.0
53	B5	171	ALA	7.0
48	D0	27	SER	7.0
33	DL	101	ILE	7.0
53	B5	87	ALA	7.0
29	BH	110	VAL	7.0
22	BA	2120	G	7.0
22	BA	2152	G	6.9
53	B5	27	ALA	6.9
16	AP	80	LYS	6.9
7	CG	15	ASP	6.9
7	CG	43	VAL	6.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	BH	55	GLU	6.9
45	DX	49	LEU	6.9
41	DT	55	VAL	6.8
44	DW	38	VAL	6.8
7	CG	59	LEU	6.8
53	B5	64	SER	6.8
53	B5	97	GLY	6.8
30	DI	54	PRO	6.8
27	DF	39	GLY	6.8
42	DU	77	THR	6.8
30	DI	76	ALA	6.8
29	BH	101	ASP	6.8
30	DI	24	VAL	6.8
53	B5	100	ILE	6.8
27	DF	91	LEU	6.7
22	BA	2153	C	6.7
22	BA	2112	G	6.7
53	B5	72	GLN	6.7
30	DI	61	VAL	6.7
27	DF	66	LEU	6.7
29	BH	54	LEU	6.7
53	B5	161	ARG	6.6
42	DU	35	ILE	6.6
9	CI	129	LYS	6.6
53	B5	94	TYR	6.6
28	DG	103	ILE	6.6
36	DO	26	LEU	6.6
10	CJ	45	ARG	6.6
33	DL	73	ILE	6.6
19	CS	42	PRO	6.5
1	CA	209	U	6.5
53	B5	86	GLU	6.5
27	DF	65	PRO	6.5
30	DI	47	ASP	6.5
42	DU	12	ILE	6.5
53	B5	167	ASP	6.5
53	B5	78	ILE	6.5
2	CB	161	LEU	6.5
53	B5	142	LYS	6.5
19	CS	63	THR	6.5
1	AA	1538	C	6.4
42	DU	62	GLU	6.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
42	DU	31	SER	6.4
19	CS	49	ILE	6.4
7	CG	75	VAL	6.4
22	BA	2111	U	6.4
53	B5	69	LEU	6.4
53	B5	179	ALA	6.4
13	CM	98	ARG	6.4
27	DF	170	LEU	6.4
41	DT	10	VAL	6.4
30	DI	78	VAL	6.4
30	BI	22	PRO	6.4
10	CJ	87	LEU	6.4
22	BA	2110	G	6.4
27	DF	86	GLY	6.4
4	AD	36	GLN	6.4
29	BH	87	GLU	6.4
9	AI	129	LYS	6.3
41	DT	8	LEU	6.3
30	BI	101	ILE	6.3
19	CS	15	LEU	6.3
22	BA	2105	U	6.3
27	DF	122	PHE	6.3
1	CA	1032	G	6.3
22	BA	2107	G	6.3
30	DI	32	GLY	6.3
30	BI	114	ALA	6.3
30	BI	55	ILE	6.3
27	DF	21	ASN	6.3
22	BA	2114	A	6.3
26	DE	119	ILE	6.3
53	B5	166	ASN	6.3
36	DO	51	ALA	6.3
14	CN	47	LYS	6.3
30	BI	17	MET	6.2
30	DI	18	ALA	6.2
22	BA	2130	U	6.2
50	B2	46	LYS	6.2
53	B5	110	ASP	6.2
22	DA	1536	C	6.2
30	DI	82	LYS	6.2
53	B5	197	LEU	6.2
53	B5	204	GLY	6.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
26	DE	175	ILE	6.2
30	DI	55	ILE	6.2
22	BA	2125	G	6.1
30	DI	8	TYR	6.1
8	AH	2	SER	6.1
53	B5	162	ILE	6.1
28	DG	9	VAL	6.1
30	DI	20	PRO	6.1
30	BI	66	SER	6.1
29	BH	67	ALA	6.1
36	DO	25	ARG	6.1
19	CS	40	ILE	6.1
27	DF	85	ILE	6.1
53	B5	85	LYS	6.1
22	BA	2137	U	6.1
13	CM	95	LEU	6.1
26	DE	143	LEU	6.1
28	DG	32	GLU	6.1
53	B5	149	ASN	6.1
21	CU	38	TYR	6.1
30	DI	41	ALA	6.1
30	DI	139	VAL	6.1
53	B5	155	ARG	6.1
29	DH	136	SER	6.1
53	B5	160	GLY	6.1
28	DG	45	HIS	6.1
14	CN	2	ALA	6.1
53	B5	46	ALA	6.1
53	B5	195	ARG	6.1
2	CB	67	ILE	6.1
1	CA	94	G	6.1
22	BA	2168	G	6.1
7	AG	5	ARG	6.0
13	CM	45	ILE	6.0
27	DF	117	LEU	6.0
49	D1	36	LEU	6.0
40	DS	40	ASN	6.0
50	D2	33	ARG	6.0
27	DF	23	ASN	6.0
27	DF	54	ALA	6.0
27	DF	154	ILE	6.0
29	BH	109	GLU	6.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	213	VAL	6.0
29	BH	85	GLY	6.0
29	DH	142	VAL	6.0
30	DI	15	ALA	6.0
22	BA	2118	U	6.0
29	BH	72	ILE	6.0
29	BH	121	VAL	6.0
28	DG	2	SER	6.0
7	CG	17	LYS	5.9
29	BH	86	ASP	5.9
10	CJ	10	LEU	5.9
13	CM	85	CYS	5.9
22	BA	2154	A	5.9
53	B5	146	VAL	5.9
20	CT	81	ALA	5.9
19	CS	47	LEU	5.9
30	BI	71	THR	5.9
1	AA	1539	C	5.9
13	CM	47	GLU	5.9
16	CP	80	LYS	5.9
19	CS	29	LYS	5.9
7	CG	53	ARG	5.9
22	BA	2134	A	5.8
27	DF	93	GLY	5.9
13	CM	69	LEU	5.8
53	B5	145	THR	5.8
27	DF	89	VAL	5.8
9	AI	43	THR	5.8
28	DG	33	LEU	5.8
53	B5	65	LEU	5.8
42	DU	63	ALA	5.8
30	DI	130	GLU	5.8
16	CP	39	PHE	5.8
29	BH	123	ARG	5.8
42	DU	87	PHE	5.8
53	B5	58	ASN	5.8
1	CA	1534	A	5.8
7	CG	151	PHE	5.8
30	DI	121	ASP	5.8
22	BA	2164	C	5.8
40	DS	3	THR	5.8
41	DT	76	ARG	5.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
49	D1	53	LYS	5.8
53	B5	54	ARG	5.8
30	DI	39	CYS	5.8
41	DT	42	GLU	5.8
46	DY	59	GLU	5.7
36	DO	107	ALA	5.7
10	CJ	73	LEU	5.7
30	DI	21	SER	5.7
53	B5	81	GLY	5.7
53	B5	42	VAL	5.7
13	CM	103	LYS	5.7
19	CS	31	LEU	5.7
27	DF	113	ASP	5.7
30	DI	35	ILE	5.7
1	CA	1538	C	5.7
28	DG	102	VAL	5.7
53	B5	130	ARG	5.7
7	CG	16	PRO	5.7
1	CA	1030	U	5.7
29	DH	12	LEU	5.7
48	D0	26	THR	5.7
30	DI	5	VAL	5.7
30	DI	75	PRO	5.7
44	DW	63	ALA	5.6
53	B5	209	PHE	5.6
12	AL	124	ALA	5.6
22	BA	2126	A	5.6
40	DS	84	ARG	5.6
28	DG	105	LEU	5.6
21	AU	38	TYR	5.6
30	BI	8	TYR	5.6
29	DH	47	PHE	5.6
33	DL	89	VAL	5.6
30	DI	31	GLN	5.6
6	CF	91	ARG	5.6
53	B5	123	ALA	5.6
13	CM	83	LEU	5.6
42	DU	32	GLY	5.6
42	DU	20	GLY	5.6
53	B5	98	GLU	5.6
30	BI	52	GLY	5.6
53	B5	104	ILE	5.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
41	DT	71	GLY	5.6
27	DF	32	GLU	5.6
30	DI	98	VAL	5.5
29	DH	6	LEU	5.5
19	CS	12	ASP	5.5
33	DL	70	LYS	5.5
19	CS	41	PHE	5.5
27	DF	152	LEU	5.5
9	CI	68	LYS	5.5
30	BI	135	SER	5.5
42	DU	50	PRO	5.5
32	DK	68	GLY	5.5
30	DI	62	TYR	5.5
21	CU	35	ARG	5.5
36	DO	117	PHE	5.5
30	DI	83	ALA	5.5
49	D1	47	VAL	5.5
22	BA	138	U	5.5
1	AA	1030	U	5.5
29	BH	119	ASN	5.4
14	AN	30	ILE	5.4
14	CN	51	LEU	5.4
26	DE	13	THR	5.4
26	DE	128	ALA	5.4
13	CM	70	ARG	5.4
30	BI	38	PHE	5.4
53	B5	121	MET	5.4
41	DT	81	LYS	5.4
14	AN	21	PHE	5.4
53	B5	210	LEU	5.4
44	DW	25	ARG	5.4
30	DI	79	LEU	5.4
36	DO	41	ALA	5.4
53	B5	39	ASP	5.4
29	BH	58	LEU	5.4
28	DG	92	VAL	5.4
30	BI	58	VAL	5.4
1	AA	78	A	5.4
13	CM	12	HIS	5.4
22	BA	2181	U	5.4
25	DD	60	VAL	5.4
40	DS	36	LEU	5.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	D4	25	VAL	5.3
50	D2	46	LYS	5.3
10	CJ	100	ILE	5.3
53	B5	164	PHE	5.3
30	DI	64	ASP	5.3
28	DG	62	TRP	5.3
42	DU	21	LYS	5.3
42	DU	80	ALA	5.3
53	B5	192	ALA	5.3
8	CH	2	SER	5.3
13	CM	39	ILE	5.3
10	CJ	76	ILE	5.3
13	CM	46	SER	5.3
30	BI	142	ASP	5.3
42	DU	90	GLY	5.3
40	DS	4	ILE	5.3
12	CL	124	ALA	5.3
35	DN	111	ALA	5.3
3	CC	193	TYR	5.3
13	CM	58	ASP	5.3
30	DI	77	ALA	5.3
14	CN	20	TYR	5.2
27	DF	114	PHE	5.2
22	BA	2131	U	5.2
9	CI	58	VAL	5.2
51	D3	14	PHE	5.2
7	CG	57	SER	5.2
30	DI	140	VAL	5.2
19	CS	28	LYS	5.2
30	DI	44	ALA	5.2
36	DO	60	GLU	5.2
1	CA	1540	U	5.2
27	DF	87	CYS	5.2
30	BI	39	CYS	5.2
51	D3	61	CYS	5.2
9	CI	38	TYR	5.2
26	DE	131	THR	5.2
53	B5	47	LYS	5.2
39	DR	37	GLU	5.2
40	DS	68	ASP	5.2
31	DJ	47	HIS	5.2
53	B5	202	PRO	5.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DI	118	THR	5.2
53	B5	150	ILE	5.2
14	CN	24	ARG	5.2
10	CJ	8	ILE	5.1
22	BA	546	U	5.1
30	BI	14	ALA	5.1
53	B5	63	VAL	5.1
42	DU	28	VAL	5.1
19	CS	65	GLU	5.1
53	B5	89	GLU	5.1
13	CM	79	ARG	5.1
29	DH	15	LEU	5.1
7	CG	52	GLN	5.1
27	DF	26	MET	5.1
53	B5	103	LYS	5.1
1	AA	1537	U	5.1
53	B5	159	ALA	5.1
30	BI	99	GLY	5.1
10	CJ	66	GLU	5.1
42	DU	71	ALA	5.1
30	DI	43	ASN	5.1
9	CI	20	PHE	5.1
53	B5	41	THR	5.1
46	DY	21	LEU	5.1
1	CA	1031	C	5.1
53	B5	57	GLN	5.1
53	B5	216	THR	5.1
30	DI	57	VAL	5.0
53	B5	220	GLY	5.0
27	DF	38	MET	5.0
53	B5	154	ILE	5.0
7	CG	23	LEU	5.0
19	AS	3	ARG	5.0
30	DI	17	MET	5.0
42	DU	37	GLU	5.0
26	DE	164	LEU	5.0
34	DM	124	LEU	5.0
26	DE	158	PHE	5.0
33	DL	3	LEU	5.0
53	B5	105	LEU	5.0
53	B5	93	ASP	5.0
30	BI	40	LYS	5.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
42	DU	48	PRO	5.0
14	CN	43	ASN	5.0
25	DD	25	THR	5.0
19	CS	80	TYR	5.0
43	DV	57	TYR	5.0
10	CJ	72	ARG	5.0
21	AU	4	ILE	5.0
53	B5	222	SER	4.9
42	DU	79	LYS	4.9
19	CS	25	SER	4.9
36	DO	13	ARG	4.9
30	DI	49	ILE	4.9
26	DE	127	GLU	4.9
53	B5	71	LYS	4.9
25	DD	27	ILE	4.9
39	DR	27	ILE	4.9
35	DN	76	VAL	4.9
30	DI	36	MET	4.9
53	B5	152	GLU	4.9
22	BA	2180	U	4.9
27	DF	36	LEU	4.9
30	BI	43	ASN	4.9
41	DT	80	TRP	4.9
28	DG	52	PHE	4.9
31	DJ	142	ILE	4.9
26	DE	199	MET	4.9
36	DO	90	VAL	4.9
13	CM	94	GLY	4.9
41	DT	6	ARG	4.9
2	CB	164	ILE	4.9
6	CF	39	LEU	4.9
53	B5	43	GLU	4.8
53	B5	184	GLU	4.8
27	DF	102	ARG	4.8
53	B5	49	GLY	4.8
22	DA	546	U	4.8
53	B5	151	GLY	4.8
36	DO	64	TYR	4.8
1	AA	86	G	4.8
7	CG	134	ALA	4.8
30	BI	83	ALA	4.8
19	CS	61	PHE	4.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	51	ASP	4.8
19	CS	22	ALA	4.8
22	BA	2186	G	4.8
37	DP	84	ILE	4.8
28	DG	20	ASN	4.8
10	CJ	98	VAL	4.8
29	DH	13	GLY	4.8
30	BI	23	PRO	4.8
30	BI	100	LYS	4.8
27	DF	164	GLU	4.8
22	BA	2171	A	4.8
19	CS	11	ILE	4.8
25	DD	186	LEU	4.8
36	DO	58	ILE	4.8
53	B5	56	ASP	4.8
13	CM	51	GLY	4.8
42	DU	27	ASN	4.8
7	CG	80	VAL	4.8
9	CI	41	ARG	4.8
33	DL	71	ALA	4.8
27	DF	106	ILE	4.8
30	BI	80	LEU	4.7
13	CM	109	ARG	4.7
30	DI	112	THR	4.7
2	CB	32	PHE	4.7
10	CJ	71	LEU	4.7
22	BA	2170	A	4.7
53	B5	215	VAL	4.7
20	CT	38	ALA	4.7
26	DE	172	ALA	4.7
30	BI	133	ALA	4.7
46	DY	13	GLU	4.7
30	DI	45	LYS	4.7
2	CB	34	ALA	4.7
12	CL	25	GLU	4.7
30	DI	56	PRO	4.7
40	DS	41	LYS	4.7
2	CB	135	LEU	4.7
13	CM	40	ALA	4.7
30	DI	133	ALA	4.7
27	DF	37	ASN	4.7
13	CM	111	GLY	4.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
26	DE	55	SER	4.7
26	DE	186	VAL	4.7
14	CN	27	LEU	4.7
29	BH	124	THR	4.7
44	DW	43	THR	4.7
22	BA	2146	C	4.7
22	BA	2122	U	4.7
9	CI	39	PHE	4.7
17	AQ	83	VAL	4.7
36	DO	106	LEU	4.7
28	DG	166	ASP	4.7
45	DX	35	SER	4.7
41	DT	85	VAL	4.6
20	CT	39	ILE	4.6
53	B5	153	ILE	4.6
2	CB	9	MET	4.6
19	CS	13	LEU	4.6
14	CN	44	ALA	4.6
30	DI	129	ILE	4.6
42	DU	5	ILE	4.6
26	DE	124	PHE	4.6
10	CJ	94	ALA	4.6
30	DI	99	GLY	4.6
18	AR	20	GLU	4.6
22	BA	2132	U	4.6
30	DI	12	GLN	4.6
22	DA	1870	C	4.6
44	DW	52	GLY	4.6
36	DO	99	TYR	4.6
53	B5	88	GLU	4.6
22	BA	2108	A	4.6
45	DX	11	ARG	4.6
45	DX	22	LEU	4.6
24	DC	49	ILE	4.6
19	CS	17	LYS	4.6
10	AJ	89	ARG	4.6
27	DF	112	ARG	4.6
22	BA	2109	U	4.6
40	DS	19	LEU	4.6
40	DS	47	VAL	4.6
10	CJ	15	HIS	4.6
14	AN	22	ALA	4.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	DF	79	ILE	4.6
30	DI	38	PHE	4.6
27	DF	68	THR	4.5
29	BH	137	GLU	4.5
29	BH	149	GLU	4.5
30	DI	50	GLU	4.5
36	DO	61	GLN	4.5
14	CN	45	VAL	4.5
28	DG	80	THR	4.5
30	DI	73	THR	4.5
26	DE	104	ALA	4.5
33	DL	106	GLU	4.5
53	B5	188	ASP	4.5
2	CB	74	ARG	4.5
13	CM	64	VAL	4.5
19	CS	48	THR	4.5
30	BI	59	ILE	4.5
30	DI	114	ALA	4.5
3	CC	37	PHE	4.5
22	BA	2167	U	4.5
39	DR	75	VAL	4.5
1	AA	1534	A	4.5
19	CS	38	SER	4.5
30	BI	62	TYR	4.5
27	DF	57	LEU	4.5
53	B5	172	ILE	4.5
30	DI	96	ASP	4.5
7	CG	50	LEU	4.5
17	CQ	23	VAL	4.5
26	DE	118	LEU	4.5
49	D1	52	ALA	4.5
33	DL	57	LEU	4.5
22	DA	2126	A	4.5
53	B5	75	VAL	4.5
29	BH	64	ALA	4.5
53	B5	38	PHE	4.5
16	CP	45	GLU	4.5
29	DH	79	THR	4.5
20	AT	68	HIS	4.5
30	DI	90	SER	4.5
42	DU	88	GLU	4.4
28	DG	10	VAL	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	176	VAL	4.4
2	CB	213	TYR	4.4
40	DS	5	ALA	4.4
24	DC	26	LYS	4.4
9	CI	48	VAL	4.4
41	DT	53	VAL	4.4
4	AD	28	ILE	4.4
14	CN	29	ALA	4.4
36	DO	14	ALA	4.4
20	CT	3	ASN	4.4
26	DE	180	LEU	4.4
7	CG	70	ARG	4.4
30	DI	28	LEU	4.4
40	DS	46	LEU	4.4
42	DU	58	ILE	4.4
27	DF	116	GLY	4.4
33	DL	49	GLY	4.4
27	DF	176	PRO	4.4
13	CM	89	LEU	4.4
29	DH	130	VAL	4.4
25	DD	55	LYS	4.4
30	BI	97	LYS	4.4
39	DR	20	VAL	4.4
22	BA	139	U	4.4
22	DA	139	U	4.4
34	DM	96	ILE	4.4
46	DY	36	GLN	4.4
7	CG	45	SER	4.4
32	DK	14	SER	4.4
13	CM	71	ARG	4.4
51	D3	28	ASN	4.4
7	CG	86	GLN	4.4
14	CN	21	PHE	4.4
21	CU	45	ARG	4.4
27	DF	153	ASP	4.4
50	D2	18	PHE	4.3
53	B5	90	ALA	4.3
53	B5	191	ARG	4.3
26	DE	17	THR	4.3
50	D2	43	THR	4.3
14	CN	34	VAL	4.3
52	D4	8	LYS	4.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	DL	124	GLY	4.3
29	BH	132	PHE	4.3
10	CJ	70	HIS	4.3
3	CC	144	LEU	4.3
28	DG	167	GLU	4.3
30	DI	110	ALA	4.3
26	DE	191	ASP	4.3
53	B5	185	LYS	4.3
27	DF	4	LEU	4.3
27	DF	158	THR	4.3
2	CB	132	LYS	4.3
53	B5	79	ALA	4.3
2	CB	129	LEU	4.3
7	CG	85	TYR	4.3
25	DD	6	GLY	4.3
30	DI	25	GLY	4.3
13	CM	52	GLN	4.3
29	BH	59	ALA	4.3
20	CT	79	LEU	4.3
35	DN	63	ARG	4.3
27	DF	31	VAL	4.3
48	D0	3	VAL	4.3
32	DK	89	ASN	4.3
30	BI	96	ASP	4.3
15	CO	25	THR	4.3
46	DY	33	ALA	4.3
17	CQ	8	LEU	4.3
1	CA	211	G	4.3
25	DD	180	VAL	4.3
41	DT	16	VAL	4.3
26	DE	148	ILE	4.3
53	B5	22	THR	4.3
9	CI	108	ALA	4.3
36	DO	66	GLY	4.3
40	DS	85	ILE	4.3
15	CO	89	ARG	4.3
13	CM	106	ALA	4.2
13	CM	105	ASN	4.2
26	DE	153	LEU	4.2
49	D1	18	GLY	4.2
10	CJ	49	PHE	4.2
33	DL	122	VAL	4.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
41	DT	1	MET	4.2
27	DF	118	SER	4.2
53	B5	186	LEU	4.2
28	DG	104	ASN	4.2
30	BI	81	LYS	4.2
7	CG	88	PRO	4.2
28	DG	58	TYR	4.2
30	DI	37	GLU	4.2
40	DS	39	THR	4.2
14	CN	4	GLN	4.2
27	DF	28	VAL	4.2
27	DF	40	VAL	4.2
44	DW	53	CYS	4.2
30	DI	23	PRO	4.2
32	DK	2	ILE	4.2
46	DY	10	SER	4.2
7	CG	49	THR	4.2
11	AK	111	THR	4.2
7	CG	73	VAL	4.2
14	CN	57	PRO	4.2
22	DA	1093	G	4.2
22	DA	138	U	4.2
53	B5	92	ALA	4.2
13	CM	48	LEU	4.2
10	CJ	63	ASP	4.2
14	CN	32	SER	4.2
22	BA	2119	A	4.2
36	DO	19	GLN	4.2
9	AI	17	ALA	4.2
22	DA	2402	U	4.2
26	DE	190	ALA	4.2
28	DG	86	LYS	4.2
14	CN	11	VAL	4.2
36	DO	78	VAL	4.2
13	CM	75	MET	4.2
30	DI	127	ARG	4.2
19	CS	72	GLY	4.2
29	BH	122	LEU	4.2
29	BH	129	GLU	4.2
27	DF	120	LYS	4.2
42	DU	3	ALA	4.1
51	D3	37	ALA	4.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	DO	39	VAL	4.1
16	CP	76	LYS	4.1
1	AA	1492	A	4.1
41	DT	35	ALA	4.1
33	DL	107	PHE	4.1
20	CT	85	LYS	4.1
13	AM	5	ALA	4.1
7	CG	87	VAL	4.1
19	CS	68	GLY	4.1
10	CJ	16	ARG	4.1
10	CJ	86	ALA	4.1
14	CN	99	ALA	4.1
13	CM	23	TYR	4.1
43	DV	56	PHE	4.1
27	DF	132	VAL	4.1
39	DR	50	GLY	4.1
30	DI	19	ASN	4.1
13	CM	62	LYS	4.1
14	CN	46	LEU	4.1
22	DA	1172	C	4.1
29	BH	116	ARG	4.1
13	CM	10	PRO	4.1
13	CM	113	ARG	4.1
53	B5	44	VAL	4.1
7	CG	143	ARG	4.1
7	CG	83	SER	4.1
19	CS	16	LEU	4.1
28	DG	50	LEU	4.1
30	DI	106	LEU	4.1
36	DO	62	LEU	4.1
27	DF	172	ALA	4.1
26	DE	126	VAL	4.1
53	B5	101	ILE	4.1
39	DR	39	LEU	4.1
50	D2	22	MET	4.1
29	BH	89	LYS	4.1
9	CI	30	ILE	4.0
13	CM	77	ILE	4.0
25	DD	14	ILE	4.0
7	CG	51	ALA	4.0
14	CN	26	GLU	4.0
41	DT	73	ARG	4.0

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Mol	Chain	Res	Type	RSRZ
1	AA	87	C	4.0
27	DF	83	TYR	4.0
30	BI	49	ILE	4.0
33	DL	100	ILE	4.0
20	CT	71	LYS	4.0
30	DI	138	LEU	4.0
38	DQ	38	ALA	4.0
53	B5	24	ASP	4.0
10	CJ	82	LYS	4.0
19	CS	51	VAL	4.0
24	DC	242	LYS	4.0
7	CG	72	THR	4.0
22	DA	2174	C	4.0
27	DF	95	ARG	4.0
32	DK	107	LEU	4.0
30	DI	14	ALA	4.0
30	BI	47	ASP	4.0
27	DF	22	TYR	4.0
30	BI	6	GLN	4.0
36	DO	57	ALA	4.0
22	BA	2106	U	4.0
30	BI	34	ASN	4.0
28	DG	41	VAL	4.0
39	DR	47	VAL	4.0
2	CB	133	GLU	4.0
33	DL	19	LEU	4.0
28	DG	84	THR	4.0
30	DI	126	THR	4.0
36	DO	63	LYS	4.0
36	DO	92	PHE	4.0
10	CJ	12	ALA	4.0
53	B5	144	GLY	4.0
13	CM	115	PRO	4.0
4	AD	25	VAL	4.0
19	CS	23	VAL	4.0
36	DO	52	SER	4.0
4	AD	151	LYS	4.0
33	DL	125	LEU	4.0
52	D4	9	LYS	4.0
2	CB	139	ARG	4.0
28	DG	174	ALA	4.0
53	B5	133	GLY	4.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
53	B5	82	GLU	4.0
9	CI	4	ASN	4.0
27	DF	34	ILE	4.0
43	DV	58	SER	4.0
7	CG	103	TRP	4.0
28	DG	133	LEU	4.0
20	CT	72	ALA	4.0
22	DA	1535	A	4.0
30	BI	120	ALA	4.0
44	DW	85	GLU	4.0
10	CJ	19	ASP	4.0
48	D0	54	VAL	4.0
53	B5	201	LYS	4.0
19	AS	49	ILE	4.0
17	AQ	20	SER	4.0
39	DR	43	ASN	4.0
29	BH	95	GLY	4.0
52	D4	1	MET	4.0
22	BA	1925	C	3.9
19	CS	76	PRO	3.9
44	DW	71	VAL	3.9
35	DN	62	ASN	3.9
29	BH	139	PHE	3.9
8	CH	123	GLY	3.9
30	DI	119	GLY	3.9
28	DG	40	ALA	3.9
29	BH	39	ALA	3.9
22	DA	1174	U	3.9
13	CM	55	THR	3.9
44	DW	55	ARG	3.9
18	AR	68	LEU	3.9
13	CM	72	GLU	3.9
29	BH	83	LYS	3.9
40	DS	16	LYS	3.9
26	DE	147	LEU	3.9
31	DJ	74	TYR	3.9
22	DA	1171	G	3.9
53	B5	211	ARG	3.9
11	CK	126	LYS	3.9
13	AM	115	PRO	3.9
29	BH	44	ILE	3.9
52	D4	16	ILE	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
19	CS	64	ASP	3.9
25	DD	96	ILE	3.9
30	BI	98	VAL	3.9
39	DR	52	PRO	3.9
27	DF	173	PHE	3.9
16	CP	17	TYR	3.9
40	DS	94	ASP	3.9
49	D1	24	THR	3.9
30	BI	115	ALA	3.9
22	DA	613	A	3.9
2	AB	221	VAL	3.9
30	DI	101	ILE	3.9
2	AB	74	ARG	3.9
41	DT	50	LEU	3.9
52	D4	15	LYS	3.9
44	DW	78	LYS	3.9
14	AN	36	ALA	3.9
27	DF	55	ALA	3.9
52	D4	6	SER	3.9
27	DF	13	VAL	3.8
27	DF	149	VAL	3.8
40	DS	48	LYS	3.8
44	DW	59	LEU	3.8
41	DT	41	ALA	3.8
22	DA	2172	U	3.8
27	BF	116	GLY	3.8
28	DG	131	ILE	3.8
29	BH	90	LEU	3.8
19	CS	59	PRO	3.8
10	CJ	11	LYS	3.8
30	DI	65	ARG	3.8
33	DL	132	ARG	3.8
1	CA	1302	C	3.8
19	CS	46	GLY	3.8
51	D3	57	LEU	3.8
14	CN	53	ARG	3.8
7	CG	8	GLY	3.8
27	DF	157	THR	3.8
28	DG	48	ASN	3.8
30	DI	30	GLN	3.8
20	CT	34	LYS	3.8
21	AU	24	GLU	3.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
32	DK	98	ARG	3.8
46	DY	29	ARG	3.8
25	DD	31	ALA	3.8
26	DE	201	ALA	3.8
27	DF	171	ALA	3.8
43	DV	6	ALA	3.8
30	DI	16	GLY	3.8
30	DI	71	THR	3.8
33	DL	87	GLY	3.8
42	DU	40	ASN	3.8
44	BW	10	THR	3.8
51	D3	58	VAL	3.8
46	DY	56	LEU	3.8
1	CA	1271	A	3.8
17	CQ	21	ILE	3.8
36	DO	46	GLU	3.8
36	DO	65	THR	3.8
10	CJ	89	ARG	3.8
48	D0	39	LEU	3.8
52	D4	12	ARG	3.8
30	BI	92	LYS	3.8
3	CC	120	ILE	3.8
13	CM	43	VAL	3.8
20	CT	24	ARG	3.8
22	BA	2151	U	3.8
28	DG	26	ILE	3.8
46	DY	24	GLU	3.8
26	DE	157	LEU	3.8
40	DS	37	THR	3.8
41	DT	49	LYS	3.8
42	DU	38	GLY	3.8
35	DN	20	MET	3.8
22	DA	2125	G	3.8
36	DO	85	LYS	3.8
9	AI	41	ARG	3.8
27	DF	115	ARG	3.8
43	DV	74	ALA	3.8
29	BH	61	VAL	3.8
27	DF	69	LYS	3.7
7	CG	148	ASN	3.7
17	CQ	53	CYS	3.7
30	DI	33	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
38	DQ	88	VAL	3.7
14	CN	33	ASP	3.7
42	DU	44	LYS	3.7
35	DN	102	PHE	3.7
41	DT	87	LEU	3.7
9	CI	112	GLU	3.7
14	CN	58	SER	3.7
53	B5	175	PRO	3.7
22	DA	1046	A	3.7
32	DK	112	PHE	3.7
53	B5	124	VAL	3.7
30	DI	72	LYS	3.7
30	BI	16	GLY	3.7
52	D4	38	GLY	3.7
33	DL	15	ALA	3.7
32	DK	69	VAL	3.7
3	CC	107	ARG	3.7
1	CA	82	G	3.7
22	DA	1407	G	3.7
27	DF	76	GLY	3.7
35	DN	73	ASN	3.7
30	BI	20	PRO	3.7
9	CI	61	LEU	3.7
19	AS	15	LEU	3.7
26	DE	12	LEU	3.7
22	DA	1067	A	3.7
53	B5	91	GLY	3.7
48	D0	38	HIS	3.7
30	DI	51	LYS	3.7
33	DL	108	ALA	3.7
13	CM	108	THR	3.7
26	DE	14	VAL	3.7
27	DF	24	SER	3.7
28	DG	148	LEU	3.7
29	BH	4	ILE	3.7
30	BI	48	SER	3.7
33	DL	77	ILE	3.7
35	DN	119	SER	3.7
2	CB	65	GLY	3.7
28	DG	51	THR	3.7
29	BH	5	LEU	3.7
30	BI	91	GLY	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CJ	99	GLN	3.7
9	CI	103	PHE	3.7
36	DO	59	ALA	3.7
9	AI	90	TYR	3.7
10	CJ	41	PRO	3.7
10	AJ	74	VAL	3.7
7	CG	133	THR	3.7
22	DA	2124	G	3.7
2	CB	152	LYS	3.6
35	DN	46	ARG	3.6
53	B5	135	ARG	3.6
42	DU	75	ALA	3.6
13	CM	80	LEU	3.6
36	DO	54	VAL	3.6
42	DU	13	VAL	3.6
32	DK	111	LYS	3.6
10	CJ	91	ASP	3.6
53	B5	129	GLY	3.6
53	B5	136	GLY	3.6
36	DO	23	ALA	3.6
53	B5	125	GLY	3.6
53	B5	40	GLU	3.6
27	DF	100	PHE	3.6
40	DS	90	LYS	3.6
29	BH	73	ASN	3.6
3	CC	42	TYR	3.6
13	CM	60	VAL	3.6
51	D3	64	TYR	3.6
42	DU	98	SER	3.6
1	CA	1305	G	3.6
43	DV	94	ALA	3.6
53	B5	74	ARG	3.6
13	CM	33	ILE	3.6
27	DF	60	ILE	3.6
39	DR	96	VAL	3.6
40	DS	9	HIS	3.6
27	DF	51	ASP	3.6
7	CG	26	PHE	3.6
39	DR	19	THR	3.6
46	DY	16	THR	3.6
30	BI	76	ALA	3.6
1	CA	1314	C	3.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	CN	48	LEU	3.6
27	DF	41	GLY	3.6
10	AJ	75	ASP	3.6
27	DF	174	ASP	3.6
53	B5	168	LYS	3.6
36	DO	109	ALA	3.6
20	CT	9	LYS	3.6
36	DO	103	VAL	3.6
21	AU	21	ARG	3.6
26	DE	88	ARG	3.6
9	AI	20	PHE	3.6
26	DE	179	SER	3.6
53	B5	126	SER	3.6
27	DF	107	ALA	3.6
3	CC	206	GLU	3.6
7	CG	118	LEU	3.6
29	BH	142	VAL	3.6
9	CI	11	ARG	3.6
31	DJ	13	ARG	3.6
27	DF	147	ASP	3.6
30	BI	82	LYS	3.5
27	DF	103	LEU	3.5
7	CG	109	ARG	3.5
27	DF	105	THR	3.5
34	DM	80	VAL	3.5
2	AB	88	ASP	3.5
20	CT	43	ASP	3.5
29	DH	135	HIS	3.5
9	CI	7	TYR	3.5
2	CB	136	MET	3.5
26	DE	1	MET	3.5
13	CM	22	ILE	3.5
35	DN	29	VAL	3.5
47	DZ	48	ILE	3.5
7	CG	137	LYS	3.5
14	CN	60	GLN	3.5
12	AL	25	GLU	3.5
22	DA	2903	U	3.5
7	CG	144	MET	3.5
25	DD	1	MET	3.5
9	CI	44	ALA	3.5
10	AJ	87	LEU	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
36	DO	115	LEU	3.5
36	DO	87	ILE	3.5
19	CS	18	LYS	3.5
7	CG	41	SER	3.5
30	BI	88	SER	3.5
41	DT	72	GLN	3.5
26	DE	173	THR	3.5
32	DK	37	ASP	3.5
32	DK	65	THR	3.5
36	DO	20	GLU	3.5
47	DZ	8	THR	3.5
46	DY	7	ARG	3.5
24	DC	249	GLY	3.5
39	DR	88	GLY	3.5
49	D1	21	TYR	3.5
51	D3	21	GLY	3.5
53	B5	128	LEU	3.5
19	CS	62	VAL	3.5
41	DT	58	VAL	3.5
29	BH	66	ASN	3.5
9	AI	63	LEU	3.5
22	DA	2112	G	3.5
13	CM	101	ARG	3.5
38	DQ	22	LYS	3.5
53	B5	60	ARG	3.5
27	DF	175	PHE	3.5
52	D4	33	HIS	3.5
2	AB	135	LEU	3.5
13	CM	73	ILE	3.5
38	DQ	21	ALA	3.5
36	DO	56	LYS	3.5
42	DU	83	VAL	3.5
19	AS	21	LYS	3.5
25	DD	201	LEU	3.5
26	DE	200	LEU	3.5
28	DG	6	LYS	3.5
7	CG	141	VAL	3.5
10	CJ	6	ILE	3.5
24	DC	64	ILE	3.5
37	DP	95	ALA	3.5
40	DS	44	ALA	3.5
10	CJ	75	ASP	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	DQ	29	SER	3.4
19	CS	21	LYS	3.4
9	AI	89	GLU	3.4
27	DF	90	THR	3.4
40	DS	95	ARG	3.4
22	DA	2313	C	3.4
7	CG	54	SER	3.4
7	CG	139	GLU	3.4
20	AT	36	TYR	3.4
27	DF	64	LYS	3.4
30	BI	95	LYS	3.4
14	CN	54	ASP	3.4
22	DA	1045	C	3.4
38	DQ	89	GLU	3.4
9	CI	51	PRO	3.4
28	DG	106	SER	3.4
2	CB	186	ILE	3.4
26	DE	150	THR	3.4
27	DF	43	ALA	3.4
28	DG	132	VAL	3.4
28	DG	28	GLY	3.4
30	BI	25	GLY	3.4
17	CQ	78	VAL	3.4
27	DF	143	TYR	3.4
27	DF	20	PHE	3.4
9	CI	37	GLN	3.4
14	CN	31	ILE	3.4
51	D3	49	MET	3.4
32	DK	35	VAL	3.4
1	CA	1020	G	3.4
1	CA	1312	G	3.4
19	CS	6	LYS	3.4
46	DY	54	LYS	3.4
48	D0	37	LYS	3.4
2	CB	182	PRO	3.4
13	CM	56	LEU	3.4
22	DA	228	C	3.4
19	CS	50	ALA	3.4
34	DM	6	ARG	3.4
7	CG	38	THR	3.4
22	DA	896	A	3.4
29	DH	40	THR	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
10	CJ	102	LEU	3.4
25	DD	84	LEU	3.4
41	DT	74	ILE	3.4
3	CC	79	LYS	3.4
24	DC	27	GLY	3.4
28	DG	57	GLY	3.4
7	CG	44	TYR	3.4
38	DQ	45	TYR	3.4
2	CB	130	THR	3.4
2	CB	138	THR	3.4
22	DA	1095	A	3.4
7	CG	79	ARG	3.4
4	AD	37	ALA	3.4
26	DE	28	VAL	3.4
44	DW	23	VAL	3.4
10	CJ	22	THR	3.4
25	DD	59	ARG	3.3
33	DL	78	ARG	3.3
38	DQ	37	GLN	3.3
28	DG	4	VAL	3.3
48	D0	25	VAL	3.3
36	DO	9	ARG	3.3
26	DE	144	GLU	3.3
34	DM	129	THR	3.3
22	DA	1073	A	3.3
9	AI	21	ILE	3.3
2	AB	9	MET	3.3
2	AB	90	PHE	3.3
13	CM	97	VAL	3.3
22	DA	343	C	3.3
8	CH	59	LEU	3.3
10	CJ	20	GLN	3.3
22	DA	1065	U	3.3
27	DF	99	PHE	3.3
42	DU	76	ALA	3.3
40	DS	6	LYS	3.3
41	DT	36	LYS	3.3
10	CJ	81	GLU	3.3
27	DF	52	ASN	3.3
36	DO	108	ASP	3.3
46	DY	14	LEU	3.3
2	CB	37	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
27	DF	133	ARG	3.3
28	DG	168	VAL	3.3
34	DM	136	MET	3.3
35	DN	24	MET	3.3
2	CB	148	LEU	3.3
4	CD	24	GLY	3.3
26	DE	183	PHE	3.3
50	D2	1	MET	3.3
1	AA	412	A	3.3
22	DA	2165	C	3.3
13	CM	87	ARG	3.3
2	AB	67	ILE	3.3
16	CP	57	ILE	3.3
19	CS	75	ALA	3.3
41	DT	83	ALA	3.3
53	B5	193	PHE	3.3
30	BI	125	MET	3.3
53	B5	80	LYS	3.3
3	CC	127	ARG	3.3
35	DN	38	LEU	3.3
22	DA	2797	U	3.3
10	CJ	51	VAL	3.3
1	CA	79	G	3.3
9	AI	27	LYS	3.3
22	DA	88	G	3.3
26	DE	155	GLU	3.3
35	DN	113	ILE	3.3
25	DD	5	VAL	3.3
30	BI	7	ALA	3.3
7	CG	35	LYS	3.3
41	DT	33	LYS	3.3
2	AB	136	MET	3.3
26	DE	21	ARG	3.3
41	DT	12	ARG	3.3
7	CG	13	LEU	3.3
16	CP	60	TRP	3.3
27	DF	10	ASP	3.3
26	DE	103	GLY	3.3
8	CH	75	ILE	3.2
27	DF	78	LYS	3.2
34	DM	36	VAL	3.2
35	DN	25	ALA	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
37	DP	12	GLN	3.2
33	DL	45	GLY	3.2
50	D2	37	LYS	3.2
5	AE	31	PHE	3.2
22	BA	1065	U	3.2
33	DL	66	PHE	3.2
13	CM	18	ALA	3.2
27	DF	25	VAL	3.2
30	BI	78	VAL	3.2
30	DI	84	ALA	3.2
10	CJ	30	LYS	3.2
13	CM	38	GLY	3.2
20	CT	86	LEU	3.2
25	DD	105	LYS	3.2
27	DF	50	LEU	3.2
46	BY	6	LEU	3.2
49	B1	4	GLY	3.2
53	B5	99	GLU	3.2
7	CG	111	ARG	3.2
30	BI	21	SER	3.2
22	DA	2168	G	3.2
38	DQ	23	GLY	3.2
19	CS	14	HIS	3.2
33	DL	50	PHE	3.2
42	DU	95	PHE	3.2
2	CB	36	ASN	3.2
30	BI	70	VAL	3.2
33	DL	85	VAL	3.2
2	AB	27	MET	3.2
27	DF	142	ASP	3.2
53	B5	137	LEU	3.2
20	CT	67	ILE	3.2
41	DT	70	HIS	3.2
51	D3	43	HIS	3.2
46	DY	35	GLY	3.2
22	DA	2157	G	3.2
28	DG	127	THR	3.2
44	DW	60	PHE	3.2
3	CC	62	LYS	3.2
44	DW	72	LYS	3.2
9	AI	104	VAL	3.2
11	AK	53	ARG	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	DW	32	LEU	3.2
3	CC	192	THR	3.2
31	DJ	5	THR	3.2
7	CG	69	VAL	3.2
13	CM	32	ALA	3.2
32	DK	60	ALA	3.2
39	DR	103	ALA	3.2
21	AU	35	ARG	3.2
25	DD	185	ASN	3.2
29	DH	18	GLN	3.2
3	CC	109	PRO	3.2
31	DJ	118	MET	3.2
42	DU	14	LEU	3.2
22	DA	2300	C	3.2
7	CG	123	GLU	3.2
35	DN	97	ILE	3.2
22	DA	1078	U	3.2
1	CA	1022	A	3.2
3	CC	91	VAL	3.2
11	AK	21	ALA	3.2
27	DF	12	VAL	3.2
7	CG	77	SER	3.2
10	CJ	101	SER	3.2
25	DD	97	SER	3.2
7	CG	71	PRO	3.2
14	CN	6	MET	3.2
3	CC	29	PHE	3.2
26	DE	122	GLU	3.2
10	CJ	32	THR	3.1
25	DD	104	VAL	3.1
47	DZ	3	LYS	3.1
48	D0	24	ALA	3.1
34	DM	88	ASN	3.1
27	DF	136	ILE	3.1
30	BI	109	ILE	3.1
30	BI	122	ILE	3.1
51	D3	16	LYS	3.1
22	DA	2109	U	3.1
30	BI	84	ALA	3.1
20	CT	42	GLY	3.1
27	DF	63	GLN	3.1
22	BA	1175	A	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	CG	116	MET	3.1
9	CI	57	MET	3.1
28	DG	72	LEU	3.1
42	DU	29	LEU	3.1
30	BI	26	PRO	3.1
36	DO	93	ASP	3.1
39	DR	101	ILE	3.1
30	BI	104	ALA	3.1
38	DQ	2	ALA	3.1
2	AB	85	LEU	3.1
26	DE	24	ASN	3.1
1	CA	1044	A	3.1
6	CF	8	PHE	3.1
13	CM	114	LYS	3.1
22	DA	2147	A	3.1
38	DQ	101	PHE	3.1
51	D3	22	PHE	3.1
1	CA	1320	C	3.1
24	DC	18	LYS	3.1
46	DY	37	LEU	3.1
31	DJ	119	PHE	3.1
2	CB	151	ILE	3.1
20	CT	45	ALA	3.1
22	DA	2150	C	3.1
16	CP	3	THR	3.1
27	DF	169	LEU	3.1
28	DG	73	ASN	3.1
1	CA	1021	A	3.1
11	AK	126	LYS	3.1
28	DG	78	GLY	3.1
7	CG	30	LEU	3.1
22	BA	885	C	3.1
24	DC	105	LEU	3.1
19	CS	10	PHE	3.1
49	D1	23	THR	3.1
45	DX	17	ASN	3.1
13	AM	4	ILE	3.1
28	DG	134	LYS	3.1
10	CJ	26	VAL	3.1
22	DA	1094	U	3.1
29	BH	84	ALA	3.1
40	DS	2	GLU	3.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	CT	8	LYS	3.1
25	DD	133	THR	3.1
40	DS	82	MET	3.1
7	CG	14	PRO	3.1
9	CI	31	ASN	3.1
13	CM	92	ARG	3.1
20	AT	4	ILE	3.1
41	BT	2	ILE	3.1
1	CA	999	C	3.1
26	DE	102	ARG	3.1
30	BI	103	ARG	3.1
10	CJ	67	ILE	3.1
14	CN	52	PRO	3.1
29	BH	118	PRO	3.1
36	DO	12	THR	3.1
7	CG	125	SER	3.0
13	CM	65	VAL	3.0
19	CS	19	VAL	3.0
30	BI	61	VAL	3.0
27	BF	72	LYS	3.0
53	B5	37	LYS	3.0
10	CJ	90	LEU	3.0
44	DW	79	PHE	3.0
40	DS	110	ARG	3.0
45	DX	74	ARG	3.0
27	DF	131	GLY	3.0
30	DI	109	ILE	3.0
14	CN	50	THR	3.0
1	AA	844	G	3.0
32	DK	67	LYS	3.0
36	DO	73	ALA	3.0
36	DO	88	LYS	3.0
9	AI	54	LEU	3.0
21	CU	47	ARG	3.0
29	BH	62	LEU	3.0
2	CB	145	GLU	3.0
30	BI	121	ASP	3.0
36	DO	2	ASP	3.0
44	DW	42	GLY	3.0
51	D3	24	HIS	3.0
10	CJ	40	ILE	3.0
12	AL	15	LYS	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	DG	12	PRO	3.0
36	DO	3	LYS	3.0
24	DC	92	ALA	3.0
27	DF	159	THR	3.0
26	DE	125	SER	3.0
29	BH	63	ALA	3.0
42	DU	30	SER	3.0
3	CC	157	LEU	3.0
20	CT	66	LEU	3.0
41	DT	51	PHE	3.0
43	DV	91	PHE	3.0
26	DE	171	ASP	3.0
2	CB	40	ILE	3.0
26	DE	188	MET	3.0
30	DI	10	LYS	3.0
30	DI	86	ILE	3.0
38	DQ	74	ILE	3.0
40	DS	31	GLN	3.0
25	DD	26	VAL	3.0
36	DO	53	THR	3.0
37	DP	74	PHE	3.0
3	CC	197	GLY	3.0
30	DI	89	GLY	3.0
30	DI	91	GLY	3.0
39	DR	66	HIS	3.0
27	DF	8	TYR	3.0
7	CG	65	ALA	3.0
17	CQ	50	ASN	3.0
20	CT	41	ALA	3.0
22	DA	544	C	3.0
22	DA	1176	U	3.0
13	AM	114	LYS	3.0
37	DP	85	SER	3.0
22	BA	2128	G	3.0
26	DE	98	LYS	3.0
36	DO	50	ALA	3.0
43	DV	23	ALA	3.0
46	DY	17	GLU	3.0
1	CA	1362	A	3.0
10	AJ	90	LEU	3.0
22	DA	101	A	3.0
29	DH	54	LEU	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
4	CD	36	GLN	3.0
27	DF	80	ARG	3.0
30	BI	36	MET	3.0
37	DP	13	MET	3.0
1	AA	79	G	3.0
22	DA	277	G	3.0
27	DF	7	TYR	3.0
29	DH	139	PHE	3.0
32	DK	82	ASN	3.0
25	DD	154	LYS	3.0
41	DT	40	LYS	3.0
42	DU	47	LYS	3.0
22	DA	2106	U	3.0
33	DL	18	ARG	3.0
44	DW	75	LYS	3.0
46	DY	40	SER	3.0
17	CQ	5	ILE	3.0
26	DE	129	PRO	2.9
46	DY	32	ALA	2.9
9	CI	64	TYR	2.9
33	DL	6	LEU	2.9
28	DG	53	GLY	2.9
32	DK	104	THR	2.9
36	DO	74	VAL	2.9
20	CT	64	LYS	2.9
36	DO	21	LEU	2.9
33	DL	58	TYR	2.9
42	DU	99	ASN	2.9
1	CA	90	C	2.9
3	CC	196	ILE	2.9
28	DG	49	THR	2.9
41	DT	30	ILE	2.9
27	BF	80	ARG	2.9
2	CB	117	LEU	2.9
3	CC	124	LEU	2.9
7	CG	152	ALA	2.9
28	DG	150	ALA	2.9
25	DD	10	GLY	2.9
2	AB	213	TYR	2.9
41	DT	92	ASN	2.9
6	CF	79	ARG	2.9
17	CQ	11	ARG	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	DG	25	THR	2.9
31	DJ	95	ARG	2.9
46	DY	60	LYS	2.9
9	CI	67	VAL	2.9
40	DS	106	VAL	2.9
22	DA	549	G	2.9
26	DE	23	PHE	2.9
27	DF	77	PHE	2.9
36	DO	105	ALA	2.9
18	CR	20	GLU	2.9
22	DA	280	U	2.9
41	DT	59	ASN	2.9
25	DD	38	LYS	2.9
36	DO	76	LYS	2.9
51	D3	52	LYS	2.9
44	DW	80	ILE	2.9
26	DE	72	SER	2.9
34	DM	105	MET	2.9
42	DU	49	VAL	2.9
29	BH	76	GLU	2.9
22	DA	2169	A	2.9
44	DW	24	LYS	2.9
47	DZ	56	LYS	2.9
41	BT	69	ARG	2.9
33	DL	81	ASP	2.9
41	DT	37	ASP	2.9
26	DE	15	SER	2.9
39	DR	51	VAL	2.9
9	CI	89	GLU	2.9
33	DL	28	GLY	2.9
33	DL	82	LEU	2.9
13	CM	13	LYS	2.9
30	BI	72	LYS	2.9
9	CI	90	TYR	2.9
53	B5	102	GLN	2.9
22	DA	1530	G	2.9
25	DD	200	ASP	2.9
10	CJ	46	LYS	2.9
13	CM	78	LYS	2.9
41	DT	88	LYS	2.9
19	CS	69	HIS	2.9
27	DF	150	ARG	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
46	DY	45	GLN	2.9
22	DA	2116	G	2.9
17	CQ	46	VAL	2.9
30	BI	140	VAL	2.9
30	DI	87	LYS	2.9
38	DQ	39	VAL	2.9
51	D3	15	LYS	2.9
41	DT	75	GLY	2.9
2	CB	35	ARG	2.9
34	DM	35	ALA	2.9
9	CI	9	THR	2.9
9	CI	111	VAL	2.9
36	DO	114	GLY	2.9
37	DP	35	GLY	2.9
40	DS	45	VAL	2.9
25	DD	95	SER	2.8
22	DA	1044	C	2.8
27	DF	135	GLN	2.8
33	DL	30	THR	2.8
36	DO	29	HIS	2.8
17	AQ	5	ILE	2.8
27	DF	19	GLU	2.8
30	BI	119	GLY	2.8
44	DW	73	GLY	2.8
13	CM	19	LEU	2.8
25	DD	75	ALA	2.8
27	DF	17	MET	2.8
29	DH	100	ALA	2.8
30	BI	106	LEU	2.8
36	DO	18	LEU	2.8
40	DS	54	ALA	2.8
40	DS	93	ALA	2.8
12	AL	123	LYS	2.8
27	DF	29	PRO	2.8
14	CN	42	TRP	2.8
44	DW	46	HIS	2.8
45	DX	20	HIS	2.8
11	AK	110	ILE	2.8
14	CN	41	ARG	2.8
29	BH	94	ILE	2.8
32	DK	81	GLY	2.8
1	CA	4	U	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	DF	121	SER	2.8
28	BG	111	HIS	2.8
33	DL	142	ILE	2.8
43	DV	89	ILE	2.8
14	CN	98	LYS	2.8
40	DS	20	VAL	2.8
33	DL	79	LEU	2.8
37	DP	8	LEU	2.8
16	AP	22	ALA	2.8
34	DM	79	ALA	2.8
22	DA	2118	U	2.8
22	DA	2173	A	2.8
27	DF	178	ARG	2.8
30	DI	88	SER	2.8
3	CC	207	ILE	2.8
34	DM	126	ILE	2.8
2	CB	90	PHE	2.8
2	CB	162	PHE	2.8
11	AK	14	LYS	2.8
22	DA	2110	G	2.8
37	DP	20	PHE	2.8
6	CF	10	VAL	2.8
21	AU	23	CYS	2.8
13	CM	76	SER	2.8
1	CA	1492	A	2.8
26	DE	29	HIS	2.8
33	DL	5	THR	2.8
7	CG	91	VAL	2.8
24	DC	94	VAL	2.8
7	CG	48	GLU	2.8
28	DG	101	ASN	2.8
30	DI	104	ALA	2.8
46	DY	58	ASN	2.8
22	DA	1173	U	2.8
22	DA	1224	U	2.8
13	CM	4	ILE	2.8
14	CN	30	ILE	2.8
35	DN	27	SER	2.8
48	D0	42	HIS	2.8
1	CA	206	C	2.8
22	DA	2164	C	2.8
14	CN	19	LYS	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	DQ	112	LYS	2.8
39	DR	87	GLN	2.8
44	DW	61	ALA	2.8
24	DC	235	GLY	2.8
19	AS	74	PHE	2.8
40	DS	108	SER	2.8
10	CJ	97	ASP	2.8
3	CC	138	VAL	2.8
13	CM	29	ARG	2.8
39	DR	54	VAL	2.8
22	DA	846	U	2.8
22	DA	882	G	2.8
27	DF	165	GLU	2.8
33	DL	13	LYS	2.8
10	CJ	42	LEU	2.8
39	DR	22	LEU	2.8
19	AS	39	THR	2.8
1	CA	207	C	2.8
2	CB	206	ALA	2.8
2	CB	100	MET	2.7
34	DM	17	ASN	2.7
40	DS	86	MET	2.7
46	DY	30	MET	2.7
7	CG	78	ARG	2.7
26	DE	47	LYS	2.7
41	DT	82	LYS	2.7
17	CQ	76	VAL	2.7
21	AU	32	VAL	2.7
46	DY	28	LEU	2.7
20	CT	47	ALA	2.7
38	DQ	113	ALA	2.7
39	DR	29	THR	2.7
41	DT	60	THR	2.7
14	CN	95	GLY	2.7
22	DA	1085	A	2.7
28	DG	149	ARG	2.7
36	DO	43	ASN	2.7
7	CG	27	VAL	2.7
26	DE	138	LEU	2.7
37	BP	2	SER	2.7
39	DR	38	VAL	2.7
3	CC	180	ALA	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
50	D2	36	ALA	2.7
27	DF	9	LYS	2.7
27	DF	88	LYS	2.7
31	DJ	92	MET	2.7
22	DA	1058	U	2.7
50	D2	13	ASN	2.7
9	CI	72	ILE	2.7
14	AN	52	PRO	2.7
40	DS	7	HIS	2.7
25	DD	41	ALA	2.7
51	D3	47	LYS	2.7
36	DO	84	GLU	2.7
2	AB	69	PHE	2.7
13	CM	9	ILE	2.7
2	CB	217	VAL	2.7
3	CC	108	LYS	2.7
26	DE	32	VAL	2.7
40	DS	105	VAL	2.7
41	DT	47	VAL	2.7
30	BI	15	ALA	2.7
11	AK	19	GLY	2.7
13	AM	47	GLU	2.7
28	BG	24	ILE	2.7
3	CC	33	LEU	2.7
9	CI	32	GLN	2.7
13	CM	57	ARG	2.7
14	CN	63	ARG	2.7
20	CT	25	ARG	2.7
2	CB	83	ALA	2.7
3	CC	155	GLY	2.7
9	CI	86	ALA	2.7
32	DK	110	GLU	2.7
1	CA	1321	U	2.7
19	AS	41	PHE	2.7
16	AP	4	ILE	2.7
40	DS	103	ILE	2.7
44	DW	44	LYS	2.7
2	AB	139	ARG	2.7
19	CS	58	VAL	2.7
29	BH	65	ALA	2.7
33	DL	83	ALA	2.7
13	CM	81	MET	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	DA	1066	U	2.7
45	DX	50	ARG	2.7
13	CM	16	VAL	2.7
22	DA	1170	C	2.7
26	DE	178	VAL	2.7
30	BI	30	GLN	2.7
30	BI	33	VAL	2.7
35	DN	120	GLU	2.7
41	DT	31	VAL	2.7
22	DA	1057	A	2.7
28	DG	130	GLU	2.7
36	DO	80	GLU	2.7
44	DW	83	GLU	2.7
4	CD	151	LYS	2.7
40	DS	73	LYS	2.7
42	DU	93	VAL	2.7
50	D2	2	LYS	2.7
28	DG	61	GLY	2.7
3	CC	71	ALA	2.7
2	CB	18	HIS	2.7
34	DM	40	ARG	2.7
14	AN	55	SER	2.6
25	DD	188	LEU	2.6
33	DL	14	LYS	2.6
27	DF	56	ASP	2.6
42	BU	52	LEU	2.6
28	DG	7	ALA	2.6
41	DT	77	ARG	2.6
45	DX	18	ARG	2.6
31	DJ	15	TRP	2.6
48	D0	34	SER	2.6
34	DM	103	TYR	2.6
52	D4	26	ILE	2.6
1	AA	81	A	2.6
13	AM	19	LEU	2.6
19	AS	71	LEU	2.6
20	CT	82	GLN	2.6
22	DA	1048	A	2.6
10	CJ	80	THR	2.6
10	AJ	34	ALA	2.6
22	DA	1606	C	2.6
24	DC	106	ALA	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	DD	101	PHE	2.6
7	CG	60	GLU	2.6
30	DI	100	LYS	2.6
53	B5	163	GLU	2.6
44	DW	82	ILE	2.6
26	DE	41	GLN	2.6
33	DL	27	LEU	2.6
40	DS	69	LEU	2.6
49	D1	34	LEU	2.6
1	CA	80	A	2.6
1	CA	1441	A	2.6
2	AB	187	VAL	2.6
3	CC	158	GLY	2.6
22	DA	344	A	2.6
25	DD	9	VAL	2.6
28	DG	56	ASP	2.6
35	DN	26	GLY	2.6
29	DH	149	GLU	2.6
6	CF	36	ILE	2.6
9	CI	79	ILE	2.6
33	DL	103	ILE	2.6
1	CA	1025	U	2.6
38	DQ	44	GLN	2.6
2	AB	35	ARG	2.6
37	DP	31	TRP	2.6
3	CC	85	GLU	2.6
7	CG	63	GLU	2.6
27	DF	160	ALA	2.6
40	DS	43	ALA	2.6
14	CN	49	GLN	2.6
27	DF	111	ILE	2.6
36	DO	16	ARG	2.6
36	DO	38	GLN	2.6
44	DW	57	HIS	2.6
9	CI	98	LEU	2.6
26	DE	20	GLY	2.6
29	DH	147	VAL	2.6
38	DQ	15	LYS	2.6
42	DU	81	ASP	2.6
45	DX	4	VAL	2.6
48	D0	57	LYS	2.6
3	CC	146	ALA	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	DD	23	PRO	2.6
36	DO	113	ALA	2.6
22	DA	2120	G	2.6
22	DA	2127	G	2.6
28	DG	129	THR	2.6
19	CS	3	ARG	2.6
28	DG	77	ILE	2.6
28	DG	141	ILE	2.6
52	D4	24	ARG	2.6
22	DA	183	C	2.6
1	AA	842	U	2.6
3	AC	175	LEU	2.6
22	DA	653	U	2.6
29	BH	13	GLY	2.6
30	BI	138	LEU	2.6
41	DT	93	LEU	2.6
53	B5	83	LYS	2.6
2	AB	196	VAL	2.6
41	DT	78	SER	2.6
4	CD	27	ALA	2.6
53	B5	187	ALA	2.6
28	DG	153	ARG	2.6
36	DO	81	ARG	2.6
42	DU	6	ARG	2.6
46	BY	23	ARG	2.6
22	DA	1084	A	2.6
22	DA	1103	A	2.6
3	AC	55	ILE	2.6
27	DF	27	GLN	2.6
2	AB	18	HIS	2.6
7	CG	90	GLU	2.6
8	CH	25	VAL	2.6
26	DE	169	VAL	2.6
33	DL	143	GLU	2.6
35	DN	60	VAL	2.6
35	DN	21	PHE	2.6
37	DP	115	ASN	2.6
44	DW	47	ALA	2.6
25	DD	8	LYS	2.6
3	CC	70	THR	2.6
27	DF	44	ILE	2.6
10	CJ	92	LEU	2.6

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
24	DC	205	LEU	2.6
51	D3	62	LEU	2.6
17	CQ	59	VAL	2.6
14	AN	20	TYR	2.6
25	DD	77	ARG	2.6
49	D1	14	SER	2.6
27	DF	53	ALA	2.6
29	DH	74	ALA	2.6
30	DI	95	LYS	2.6
37	DP	38	LYS	2.6
9	AI	4	ASN	2.6
26	DE	89	PRO	2.6
52	D4	37	GLN	2.5
22	DA	2181	U	2.5
46	DY	22	LEU	2.5
22	DA	2309	A	2.5
26	DE	187	VAL	2.5
1	CA	1454	G	2.5
28	DG	74	SER	2.5
26	DE	161	ALA	2.5
28	DG	5	ALA	2.5
29	BH	111	ALA	2.5
41	DT	45	ALA	2.5
20	CT	84	ASN	2.5
42	BU	53	ASN	2.5
28	DG	66	GLY	2.5
36	DO	22	GLY	2.5
10	CJ	7	ARG	2.5
40	DS	98	LYS	2.5
53	B5	19	LYS	2.5
30	DI	142	ASP	2.5
31	DJ	48	VAL	2.5
33	DL	90	VAL	2.5
39	DR	63	VAL	2.5
22	DA	2129	C	2.5
22	DA	2163	A	2.5
40	DS	34	ASP	2.5
39	DR	35	PHE	2.5
22	BA	2133	G	2.5
25	DD	125	TRP	2.5
30	DI	81	LYS	2.5
44	DW	68	LYS	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
14	AN	24	ARG	2.5
19	AS	24	GLU	2.5
19	CS	9	PRO	2.5
19	CS	70	LYS	2.5
42	DU	33	LYS	2.5
33	DL	4	ASN	2.5
15	AO	57	LEU	2.5
16	CP	52	LEU	2.5
48	D0	28	LEU	2.5
1	CA	1224	U	2.5
22	DA	2167	U	2.5
13	CM	61	ALA	2.5
37	DP	9	GLU	2.5
41	DT	13	ALA	2.5
44	BW	85	GLU	2.5
22	BA	1847	A	2.5
22	DA	866	A	2.5
9	CI	83	ILE	2.5
29	DH	119	ASN	2.5
32	DK	38	ILE	2.5
50	D2	7	PRO	2.5
3	CC	173	VAL	2.5
7	CG	11	LYS	2.5
41	DT	79	ASP	2.5
13	CM	37	ALA	2.5
28	DG	170	ARG	2.5
42	DU	72	ILE	2.5
29	BH	145	ASN	2.5
47	DZ	29	LEU	2.5
53	B5	189	ASN	2.5
3	CC	153	VAL	2.5
5	CE	152	MET	2.5
10	CJ	27	GLU	2.5
23	DB	117	G	2.5
44	DW	26	PHE	2.5
18	AR	74	HIS	2.5
27	DF	110	ARG	2.5
13	CM	2	ALA	2.5
32	DK	83	ALA	2.5
44	DW	34	GLY	2.5
28	DG	112	PRO	2.5
33	DL	8	PRO	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	CT	19	LYS	2.5
43	DV	38	LEU	2.5
22	DA	2111	U	2.5
37	DP	17	VAL	2.5
39	DR	90	ARG	2.5
49	D1	19	HIS	2.5
1	AA	82	G	2.5
35	DN	101	GLY	2.5
46	DY	25	GLN	2.5
7	CG	110	LYS	2.5
24	DC	93	LEU	2.5
30	BI	86	ILE	2.5
29	DH	123	ARG	2.5
35	DN	45	ARG	2.5
36	DO	102	ARG	2.5
41	DT	89	GLU	2.5
4	AD	177	LYS	2.5
27	DF	33	LYS	2.5
28	DG	29	LYS	2.5
28	DG	97	ALA	2.5
39	DR	24	LYS	2.5
14	AN	26	GLU	2.4
22	BA	1926	U	2.4
29	BH	11	ASN	2.4
30	BI	42	PHE	2.4
50	D2	30	VAL	2.4
3	CC	150	LYS	2.4
26	DE	168	ASP	2.4
7	CG	81	GLY	2.4
22	DA	2158	A	2.4
43	DV	34	LYS	2.4
28	DG	128	GLN	2.4
9	CI	84	THR	2.4
10	CJ	31	ARG	2.4
33	DL	126	ARG	2.4
22	DA	883	G	2.4
22	DA	1068	G	2.4
23	DB	18	G	2.4
37	DP	19	SER	2.4
21	AU	25	LYS	2.4
22	BA	1094	U	2.4
27	DF	96	MET	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	DF	151	GLY	2.4
25	DD	132	ALA	2.4
22	BA	613	A	2.4
11	AK	13	ARG	2.4
29	BH	125	THR	2.4
39	DR	49	ILE	2.4
29	DH	35	LYS	2.4
22	BA	1100	C	2.4
22	BA	2402	U	2.4
22	DA	2175	C	2.4
44	DW	64	ASP	2.4
29	DH	140	ALA	2.4
30	BI	63	ALA	2.4
17	CQ	63	GLU	2.4
34	DM	78	LEU	2.4
45	DX	71	LEU	2.4
28	DG	157	TYR	2.4
30	BI	56	PRO	2.4
29	BH	147	VAL	2.4
2	AB	226	SER	2.4
7	CG	37	SER	2.4
22	BA	2192	U	2.4
22	DA	2796	U	2.4
30	DI	128	SER	2.4
9	CI	62	ASP	2.4
9	CI	17	ALA	2.4
36	DO	82	ALA	2.4
36	DO	4	LYS	2.4
28	BG	26	ILE	2.4
29	DH	58	LEU	2.4
22	DA	279	A	2.4
32	DK	10	VAL	2.4
1	AA	85	U	2.4
1	CA	208	U	2.4
18	CR	43	ARG	2.4
22	DA	931	U	2.4
29	BH	17	ASP	2.4
30	BI	64	ASP	2.4
30	DI	117	MET	2.4
14	AN	23	LYS	2.4
28	DG	42	GLU	2.4
48	D0	53	LYS	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
3	CC	77	ILE	2.4
7	CG	47	LEU	2.4
11	AK	42	LEU	2.4
26	DE	133	LEU	2.4
19	AS	32	ARG	2.4
26	DE	121	VAL	2.4
34	DM	130	PHE	2.4
38	DQ	106	PHE	2.4
53	B5	21	TYR	2.4
1	CA	1313	U	2.4
26	DE	2	GLU	2.4
42	DU	9	ASP	2.4
53	B5	25	GLU	2.4
7	CG	130	ASN	2.4
7	CG	46	ALA	2.4
20	CT	87	ALA	2.4
28	DG	136	ALA	2.4
1	CA	1317	C	2.4
2	CB	22	TYR	2.4
3	CC	195	VAL	2.4
9	AI	19	VAL	2.4
24	DC	103	TYR	2.4
42	DU	43	LYS	2.4
33	DL	31	GLY	2.4
22	DA	2119	A	2.4
11	CK	42	LEU	2.4
38	DQ	83	LEU	2.4
42	DU	41	LEU	2.4
3	CC	172	ARG	2.4
30	DI	40	LYS	2.4
7	AG	151	PHE	2.4
13	CM	112	PRO	2.4
29	DH	108	VAL	2.4
30	BI	89	GLY	2.4
32	DK	103	VAL	2.4
36	DO	49	VAL	2.4
1	CA	1043	G	2.4
1	CA	1235	U	2.4
19	CS	27	ASP	2.4
30	BI	117	MET	2.4
30	DI	125	MET	2.4
31	DJ	14	ASP	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	DG	46	ALA	2.4
25	DD	56	LYS	2.4
40	DS	83	LYS	2.4
50	D2	21	ARG	2.4
51	D3	44	LEU	2.4
22	DA	275	C	2.4
18	CR	74	HIS	2.3
29	DH	132	PHE	2.3
3	AC	39	VAL	2.3
29	DH	21	VAL	2.3
39	DR	33	VAL	2.3
43	DV	60	VAL	2.3
33	DL	62	PRO	2.3
33	DL	104	GLN	2.3
25	DD	176	ASP	2.3
26	DE	154	ASP	2.3
2	AB	134	ALA	2.3
2	AB	152	LYS	2.3
28	DG	27	LYS	2.3
48	D0	23	THR	2.3
36	DO	37	ALA	2.3
3	CC	14	ILE	2.3
3	CC	94	ILE	2.3
9	CI	35	LEU	2.3
13	AM	80	LEU	2.3
30	BI	102	SER	2.3
22	DA	345	A	2.3
3	CC	78	GLY	2.3
41	DT	67	VAL	2.3
42	DU	4	LYS	2.3
51	D3	23	LYS	2.3
2	CB	225	ARG	2.3
24	DC	48	ARG	2.3
26	DE	170	ARG	2.3
33	DL	69	ARG	2.3
37	DP	91	ALA	2.3
6	AF	61	LEU	2.3
9	AI	128	SER	2.3
22	DA	1408	G	2.3
41	BT	92	ASN	2.3
33	DL	114	GLY	2.3
1	AA	1031	C	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	DA	1100	C	2.3
30	DI	9	VAL	2.3
53	B5	178	LYS	2.3
1	CA	121	U	2.3
17	CQ	66	PRO	2.3
42	DU	86	ARG	2.3
3	AC	168	TYR	2.3
35	DN	112	TYR	2.3
43	DV	22	ALA	2.3
9	CI	53	GLU	2.3
25	DD	4	LEU	2.3
31	DJ	54	ILE	2.3
34	DM	102	LEU	2.3
2	CB	215	GLY	2.3
28	DG	31	GLY	2.3
22	BA	2885	G	2.3
22	DA	356	G	2.3
2	CB	210	VAL	2.3
16	AP	14	ARG	2.3
24	DC	172	VAL	2.3
28	DG	17	VAL	2.3
32	DK	61	VAL	2.3
44	DW	51	VAL	2.3
50	D2	41	ARG	2.3
40	DS	38	TYR	2.3
43	DV	43	ASP	2.3
41	DT	56	GLU	2.3
43	DV	1	MET	2.3
3	AC	157	LEU	2.3
4	AD	21	LEU	2.3
40	DS	33	LEU	2.3
20	CT	51	PHE	2.3
45	DX	75	GLY	2.3
26	DE	120	VAL	2.3
52	D4	35	GLN	2.3
1	CA	81	A	2.3
28	DG	54	PRO	2.3
3	CC	43	LEU	2.3
3	CC	111	LEU	2.3
17	CQ	82	ALA	2.3
51	D3	48	ALA	2.3
7	CG	84	THR	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
33	DL	20	GLY	2.3
28	DG	11	VAL	2.3
7	CG	56	LYS	2.3
22	DA	1460	U	2.3
30	DI	141	GLU	2.3
9	AI	6	TYR	2.3
10	CJ	52	LEU	2.3
17	CQ	24	ALA	2.3
26	DE	11	ALA	2.3
26	DE	141	MET	2.3
12	AL	14	ARG	2.3
29	BH	99	ILE	2.3
34	DM	99	GLY	2.3
30	BI	112	THR	2.3
30	DI	105	GLN	2.3
33	DL	93	ASN	2.3
36	DO	116	GLN	2.3
42	DU	70	VAL	2.3
7	CG	40	GLU	2.3
29	DH	137	GLU	2.3
30	DI	113	LYS	2.3
42	DU	17	LYS	2.3
46	DY	4	LYS	2.3
1	CA	1228	C	2.3
5	AE	115	LEU	2.3
6	CF	54	LEU	2.3
24	DC	101	ARG	2.3
29	BH	12	LEU	2.3
36	DO	11	ALA	2.3
2	AB	151	ILE	2.3
28	DG	24	ILE	2.3
22	DA	117	G	2.3
22	DA	1529	G	2.3
22	DA	2128	G	2.3
53	B5	177	GLY	2.3
9	CI	110	GLN	2.3
6	CF	96	VAL	2.3
14	CN	35	ASN	2.3
49	D1	22	THR	2.3
7	CG	5	ARG	2.3
17	CQ	65	ARG	2.3
20	CT	68	HIS	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	BA	846	U	2.3
4	AD	27	ALA	2.3
30	BI	44	ALA	2.3
38	DQ	32	TYR	2.3
53	B5	23	ILE	2.3
30	BI	45	LYS	2.3
34	DM	8	LYS	2.3
2	CB	122	GLN	2.3
11	AK	113	VAL	2.2
21	AU	9	ASN	2.2
24	DC	216	VAL	2.2
29	DH	110	VAL	2.2
22	DA	2833	U	2.2
30	BI	116	ASP	2.2
10	CJ	23	ALA	2.2
14	CN	16	LEU	2.2
14	CN	94	PRO	2.2
24	DC	99	GLY	2.2
27	DF	75	ALA	2.2
28	DG	8	PRO	2.2
28	DG	44	LYS	2.2
37	DP	63	LYS	2.2
1	CA	1325	C	2.2
34	DM	9	PHE	2.2
21	AU	36	GLU	2.2
3	CC	39	VAL	2.2
35	DN	17	ARG	2.2
49	D1	13	SER	2.2
44	DW	56	ASP	2.2
26	DE	34	ALA	2.2
27	DF	109	PRO	2.2
6	CF	80	PHE	2.2
15	CO	15	PHE	2.2
39	DR	45	GLU	2.2
47	DZ	39	GLU	2.2
22	DA	1064	C	2.2
32	DK	3	GLN	2.2
27	DF	108	VAL	2.2
50	D2	34	ARG	2.2
30	BI	94	ASN	2.2
30	BI	73	THR	2.2
46	DY	55	THR	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1455	G	2.2
2	AB	57	LEU	2.2
24	DC	232	HIS	2.2
41	DT	90	GLY	2.2
51	D3	26	HIS	2.2
3	AC	64	ILE	2.2
29	DH	4	ILE	2.2
27	DF	161	LYS	2.2
43	DV	92	VAL	2.2
37	DP	3	ASN	2.2
7	CG	61	ALA	2.2
21	CU	37	PHE	2.2
44	DW	36	ILE	2.2
44	DW	69	PHE	2.2
22	BA	549	G	2.2
22	DA	1107	G	2.2
40	DS	49	LYS	2.2
23	DB	118	C	2.2
24	DC	220	VAL	2.2
22	DA	2180	U	2.2
27	DF	6	ASP	2.2
39	DR	25	LEU	2.2
42	DU	18	ASP	2.2
43	DV	32	GLY	2.2
3	CC	149	ILE	2.2
8	CH	36	ILE	2.2
30	DI	122	ILE	2.2
35	DN	52	ILE	2.2
53	B5	26	ALA	2.2
44	DW	62	LYS	2.2
1	CA	1018	G	2.2
28	DG	164	TYR	2.2
24	DC	47	GLY	2.2
9	AI	39	PHE	2.2
17	CQ	4	LYS	2.2
17	CQ	6	ARG	2.2
42	DU	53	ASN	2.2
2	CB	69	PHE	2.2
20	CT	62	ALA	2.2
46	DY	9	LYS	2.2
26	DE	73	ILE	2.2
29	BH	82	SER	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
39	DR	7	SER	2.2
40	DS	74	ILE	2.2
48	D0	55	ILE	2.2
26	DE	30	GLN	2.2
51	D3	6	THR	2.2
1	CA	1242	G	2.2
2	AB	222	ARG	2.2
2	CB	137	ARG	2.2
14	CN	61	ARG	2.2
22	DA	143	C	2.2
33	DL	91	ASP	2.2
7	CG	12	ILE	2.2
10	CJ	25	ILE	2.2
27	DF	104	ILE	2.2
30	BI	27	ALA	2.2
22	DA	1614	A	2.2
24	DC	28	LYS	2.2
28	DG	169	VAL	2.2
33	DL	140	GLY	2.2
34	DM	29	GLY	2.2
3	CC	87	LEU	2.2
9	CI	63	LEU	2.2
22	DA	2107	G	2.2
51	D3	55	LEU	2.2
10	CJ	34	ALA	2.2
25	DD	22	ILE	2.2
13	AM	85	CYS	2.2
13	CM	30	SER	2.2
20	AT	20	HIS	2.2
20	CT	80	THR	2.2
24	DC	51	THR	2.2
33	DL	117	THR	2.2
14	CN	23	LYS	2.2
26	DE	113	VAL	2.2
27	BF	83	TYR	2.2
32	DK	101	GLY	2.1
2	AB	30	PHE	2.1
1	CA	210	C	2.1
19	AS	56	GLN	2.1
32	DK	33	ALA	2.1
51	D3	41	LYS	2.1
13	AM	92	ARG	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
25	DD	128	ARG	2.1
37	DP	102	GLU	2.1
41	DT	4	GLU	2.1
52	D4	36	ARG	2.1
26	DE	193	VAL	2.1
3	CC	36	ASP	2.1
28	DG	60	ASP	2.1
33	DL	61	LEU	2.1
7	CG	117	ALA	2.1
33	DL	38	GLN	2.1
34	DM	100	LYS	2.1
38	DQ	118	ALA	2.1
13	CM	3	ARG	2.1
22	DA	1043	C	2.1
43	DV	48	MET	2.1
1	CA	86	G	2.1
22	DA	289	G	2.1
2	CB	149	GLY	2.1
9	AI	58	VAL	2.1
35	DN	116	VAL	2.1
37	DP	28	VAL	2.1
40	DS	17	VAL	2.1
40	DS	26	GLY	2.1
48	D0	30	VAL	2.1
12	AL	44	LYS	2.1
16	CP	54	LEU	2.1
24	DC	98	ASP	2.1
25	DD	116	LYS	2.1
39	DR	26	ASP	2.1
3	AC	101	ILE	2.1
19	AS	55	ARG	2.1
28	DG	116	GLN	2.1
32	DK	77	ILE	2.1
37	DP	110	ILE	2.1
50	D2	39	ARG	2.1
9	AI	48	VAL	2.1
38	DQ	31	VAL	2.1
9	AI	22	LYS	2.1
12	CL	123	LYS	2.1
22	DA	548	G	2.1
49	D1	38	LYS	2.1
8	CH	61	LEU	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	AO	31	LEU	2.1
18	CR	51	TYR	2.1
19	CS	32	ARG	2.1
8	CH	130	ALA	2.1
22	DA	12	U	2.1
22	DA	102	U	2.1
22	DA	1872	A	2.1
28	DG	13	ALA	2.1
28	DG	38	ASN	2.1
28	DG	126	PRO	2.1
3	CC	5	VAL	2.1
13	CM	14	HIS	2.1
34	DM	26	VAL	2.1
40	DS	71	VAL	2.1
9	CI	66	THR	2.1
2	AB	91	PHE	2.1
3	CC	203	PHE	2.1
8	CH	49	PHE	2.1
36	DO	111	ARG	2.1
50	D2	35	ARG	2.1
22	BA	1171	G	2.1
26	DE	152	GLU	2.1
43	DV	55	GLU	2.1
39	DR	18	GLN	2.1
1	CA	843	U	2.1
7	CG	24	ALA	2.1
51	D3	27	ALA	2.1
1	AA	1493	A	2.1
14	AN	12	LYS	2.1
23	DB	119	A	2.1
44	DW	50	ASN	2.1
29	DH	144	VAL	2.1
37	DP	92	VAL	2.1
53	B5	120	VAL	2.1
30	DI	134	ARG	2.1
19	AS	31	LEU	2.1
21	CU	44	GLU	2.1
37	DP	68	GLU	2.1
13	CM	82	ASP	2.1
52	D4	20	ASP	2.1
2	AB	131	LYS	2.1
20	CT	63	ALA	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	DA	1468	U	2.1
27	DF	137	ILE	2.1
51	D3	65	ALA	2.1
3	CC	142	MET	2.1
3	CC	126	ARG	2.1
32	DK	108	ARG	2.1
39	DR	58	VAL	2.1
42	DU	22	ARG	2.1
1	AA	841	C	2.1
24	BC	272	SER	2.1
28	DG	124	GLU	2.1
37	DP	43	PHE	2.1
41	DT	11	LEU	2.1
10	CJ	28	THR	2.1
13	CM	11	ASP	2.1
13	CM	54	ASP	2.1
30	BI	35	ILE	2.1
36	DO	89	ASP	2.1
38	DQ	71	GLN	2.1
1	CA	85	U	2.1
22	DA	884	U	2.1
2	AB	180	GLY	2.1
9	AI	40	GLY	2.1
10	CJ	38	GLY	2.1
6	CF	62	MET	2.1
10	CJ	96	VAL	2.1
21	AU	28	VAL	2.1
24	DC	225	MET	2.1
28	DG	76	VAL	2.1
49	D1	7	GLU	2.1
2	CB	104	TRP	2.1
3	AC	43	LEU	2.1
22	DA	1117	C	2.1
28	DG	87	LEU	2.1
30	DI	102	SER	2.1
34	DM	62	LYS	2.1
42	DU	96	PHE	2.1
3	CC	183	ASP	2.1
24	DC	246	THR	2.1
25	DD	54	ALA	2.1
25	DD	87	GLY	2.1
27	DF	82	GLY	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
52	D4	19	ARG	2.1
7	AG	80	VAL	2.1
7	CG	94	VAL	2.1
28	DG	79	VAL	2.1
38	DQ	100	VAL	2.1
41	DT	5	GLU	2.1
41	DT	54	GLU	2.1
10	CJ	13	PHE	2.1
22	DA	359	G	2.1
22	DA	1452	G	2.1
37	DP	97	LEU	2.0
27	DF	162	SER	2.0
33	DL	7	SER	2.0
31	DJ	16	TYR	2.0
31	DJ	37	ARG	2.0
33	DL	23	ILE	2.0
37	DP	109	ARG	2.0
45	DX	64	ILE	2.0
10	CJ	69	THR	2.0
22	BA	1729	U	2.0
22	DA	1729	U	2.0
27	DF	47	LYS	2.0
16	AP	36	VAL	2.0
24	DC	132	MET	2.0
31	DJ	97	PRO	2.0
3	AC	47	LEU	2.0
19	CS	5	LEU	2.0
35	DN	98	LEU	2.0
39	DR	53	PHE	2.0
40	DS	75	PHE	2.0
45	DX	30	LEU	2.0
46	DY	41	HIS	2.0
1	AA	1032	G	2.0
7	CG	20	SER	2.0
22	DA	1303	G	2.0
22	DA	1311	G	2.0
17	CQ	61	ILE	2.0
26	DE	40	ARG	2.0
29	BH	143	ILE	2.0
40	DS	67	ASP	2.0
3	CC	148	GLY	2.0
22	DA	2376	A	2.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
20	CT	76	LYS	2.0
22	DA	1083	U	2.0
44	DW	84	ALA	2.0
36	DO	112	GLU	2.0
43	DV	69	GLU	2.0
26	DE	33	VAL	2.0
34	DM	131	VAL	2.0
27	DF	177	PHE	2.0
43	DV	42	LEU	2.0
3	AC	107	ARG	2.0
24	DC	214	ARG	2.0
36	DO	30	ARG	2.0
9	CI	91	ASP	2.0
24	DC	36	LYS	2.0
36	DO	96	GLY	2.0
37	DP	65	SER	2.0
40	DS	66	ILE	2.0
1	CA	1024	G	2.0
22	DA	290	U	2.0
22	DA	795	C	2.0
26	DE	50	ALA	2.0
42	DU	100	SER	2.0
22	DA	1347	A	2.0
22	DA	2121	G	2.0
45	DX	7	VAL	2.0
8	AH	38	ASN	2.0
8	CH	63	LEU	2.0
21	AU	47	ARG	2.0
24	DC	238	ARG	2.0
46	DY	26	PHE	2.0
50	D2	5	PHE	2.0
7	CG	58	GLU	2.0
14	CN	10	GLU	2.0
32	DK	115	ILE	2.0
39	DR	59	ILE	2.0
42	DU	101	GLU	2.0
2	CB	191	SER	2.0
29	BH	131	SER	2.0
38	DQ	96	ALA	2.0
22	DA	2143	C	2.0
22	DA	141	G	2.0
30	BI	65	ARG	2.0

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Mol	Chain	Res	Type	RSRZ
30	BI	118	THR	2.0
7	CG	68	ASN	2.0
13	AM	8	ASN	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
54	MHW	D6	1	9/10	0.87	0.20	40,52,59,59	0
54	DBB	D6	3	6/7	0.91	0.30	36,38,47,51	0
54	MHU	D6	5	15/16	0.92	0.32	44,54,60,61	0
54	MHW	B6	1	9/10	0.94	0.18	0,0,2,9	0
54	MHV	D6	6	9/10	0.94	0.14	45,51,58,60	0
54	004	D6	7	10/11	0.94	0.21	42,47,58,59	0
54	MHU	B6	5	15/16	0.96	0.20	0,0,1,2	0
54	DBB	B6	3	6/7	0.96	0.19	0,1,1,2	0
54	004	B6	7	10/11	0.97	0.23	0,0,2,3	0
54	MHV	B6	6	9/10	0.97	0.16	0,0,1,1	0

## 6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95<sup>th</sup> percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
55	MG	DA	3111	1/1	0.18	0.32	107,107,107,107	0
55	MG	DA	3048	1/1	0.20	0.44	127,127,127,127	0
55	MG	DA	3135	1/1	0.24	0.32	101,101,101,101	0
55	MG	DA	3084	1/1	0.35	0.23	105,105,105,105	0
55	MG	DA	3100	1/1	0.36	0.20	77,77,77,77	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3041	1/1	0.38	0.42	68,68,68,68	0
55	MG	DA	3017	1/1	0.38	0.25	98,98,98,98	0
55	MG	DA	3026	1/1	0.43	0.48	101,101,101,101	0
55	MG	DA	3093	1/1	0.46	0.11	86,86,86,86	0
55	MG	BA	3134	1/1	0.46	0.42	54,54,54,54	0
55	MG	CA	1630	1/1	0.48	0.36	120,120,120,120	0
55	MG	AA	1619	1/1	0.50	0.31	73,73,73,73	0
55	MG	DA	3062	1/1	0.51	0.61	82,82,82,82	0
55	MG	CA	1636	1/1	0.51	0.14	126,126,126,126	0
55	MG	DA	3148	1/1	0.51	0.29	65,65,65,65	0
55	MG	DA	3113	1/1	0.52	0.29	66,66,66,66	0
55	MG	DA	3144	1/1	0.52	0.10	68,68,68,68	0
55	MG	DA	3133	1/1	0.52	0.78	100,100,100,100	0
55	MG	DA	3045	1/1	0.53	0.12	94,94,94,94	0
55	MG	DA	3042	1/1	0.54	0.19	87,87,87,87	0
55	MG	DA	3057	1/1	0.54	0.29	95,95,95,95	0
55	MG	CA	1635	1/1	0.54	0.13	124,124,124,124	0
55	MG	BA	3090	1/1	0.55	0.10	19,19,19,19	0
55	MG	DA	3099	1/1	0.57	0.38	86,86,86,86	0
55	MG	DA	3075	1/1	0.57	0.16	91,91,91,91	0
55	MG	DA	3067	1/1	0.59	0.13	58,58,58,58	0
55	MG	DA	3029	1/1	0.59	0.22	73,73,73,73	0
55	MG	BA	3100	1/1	0.60	0.28	52,52,52,52	0
55	MG	DA	3028	1/1	0.61	0.87	103,103,103,103	0
55	MG	CA	1627	1/1	0.61	0.20	89,89,89,89	0
55	MG	AA	1614	1/1	0.61	0.22	69,69,69,69	0
55	MG	CA	1608	1/1	0.61	0.22	84,84,84,84	0
55	MG	DA	3027	1/1	0.62	0.17	91,91,91,91	0
55	MG	DA	3071	1/1	0.63	0.49	92,92,92,92	0
55	MG	CA	1606	1/1	0.64	0.19	89,89,89,89	0
55	MG	DA	3002	1/1	0.64	0.10	78,78,78,78	0
55	MG	DA	3127	1/1	0.64	0.15	71,71,71,71	0
55	MG	DA	3131	1/1	0.64	1.04	99,99,99,99	0
55	MG	DA	3090	1/1	0.65	0.14	90,90,90,90	0
55	MG	DA	3070	1/1	0.65	0.17	108,108,108,108	0
55	MG	DA	3010	1/1	0.65	0.12	80,80,80,80	0
55	MG	D2	101	1/1	0.65	0.15	83,83,83,83	0
55	MG	CA	1629	1/1	0.66	0.12	91,91,91,91	0
55	MG	DA	3126	1/1	0.67	0.23	80,80,80,80	0
55	MG	AA	1658	1/1	0.67	0.35	62,62,62,62	0
55	MG	AA	1665	1/1	0.67	0.40	37,37,37,37	0
55	MG	AA	1639	1/1	0.67	0.07	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
55	MG	DA	3078	1/1	0.68	0.14	106,106,106,106	0
55	MG	CA	1632	1/1	0.69	0.12	73,73,73,73	0
55	MG	DA	3077	1/1	0.69	0.70	113,113,113,113	0
55	MG	DA	3019	1/1	0.69	0.18	107,107,107,107	0
55	MG	DA	3034	1/1	0.69	0.16	69,69,69,69	0
55	MG	DQ	201	1/1	0.69	0.30	45,45,45,45	0
55	MG	DA	3103	1/1	0.69	0.24	73,73,73,73	0
55	MG	DA	3044	1/1	0.70	0.40	112,112,112,112	0
55	MG	DA	3155	1/1	0.71	0.45	62,62,62,62	0
55	MG	CA	1602	1/1	0.72	0.11	88,88,88,88	0
55	MG	DA	3088	1/1	0.72	0.10	74,74,74,74	0
55	MG	DA	3060	1/1	0.72	0.31	77,77,77,77	0
55	MG	DA	3012	1/1	0.72	0.10	73,73,73,73	0
55	MG	DA	3098	1/1	0.72	0.16	66,66,66,66	0
55	MG	AA	1620	1/1	0.73	0.12	69,69,69,69	0
55	MG	DA	3134	1/1	0.73	0.14	58,58,58,58	0
55	MG	DB	201	1/1	0.73	0.06	116,116,116,116	0
55	MG	DA	3064	1/1	0.73	0.20	48,48,48,48	0
55	MG	DA	3013	1/1	0.73	0.16	44,44,44,44	0
55	MG	AA	1648	1/1	0.74	0.20	47,47,47,47	0
55	MG	CA	1631	1/1	0.74	0.13	95,95,95,95	0
55	MG	DA	3136	1/1	0.74	0.16	91,91,91,91	0
55	MG	BA	3050	1/1	0.74	0.07	27,27,27,27	0
55	MG	DA	3147	1/1	0.74	0.39	54,54,54,54	0
55	MG	DA	3005	1/1	0.75	0.43	102,102,102,102	0
55	MG	BA	3186	1/1	0.75	0.30	29,29,29,29	0
55	MG	CA	1617	1/1	0.76	0.12	39,39,39,39	0
55	MG	BA	3093	1/1	0.76	0.09	58,58,58,58	0
55	MG	DA	3037	1/1	0.76	0.08	93,93,93,93	0
55	MG	AA	1651	1/1	0.76	0.32	61,61,61,61	0
55	MG	CA	1605	1/1	0.76	0.19	86,86,86,86	0
55	MG	BA	3049	1/1	0.76	0.13	44,44,44,44	0
55	MG	BA	3153	1/1	0.76	0.23	31,31,31,31	0
55	MG	DA	3046	1/1	0.76	0.16	62,62,62,62	0
55	MG	DA	3072	1/1	0.76	0.52	90,90,90,90	0
55	MG	DA	3163	1/1	0.77	0.32	54,54,54,54	0
55	MG	DA	3125	1/1	0.77	0.22	62,62,62,62	0
55	MG	AA	1626	1/1	0.77	0.17	23,23,23,23	0
55	MG	BA	3038	1/1	0.77	0.16	42,42,42,42	0
55	MG	DA	3107	1/1	0.78	0.16	75,75,75,75	0
55	MG	BA	3167	1/1	0.78	0.18	25,25,25,25	0
55	MG	DA	3056	1/1	0.78	0.41	93,93,93,93	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
55	MG	DB	203	1/1	0.78	0.08	85,85,85,85	0
55	MG	DA	3121	1/1	0.78	0.10	52,52,52,52	0
55	MG	AA	1659	1/1	0.78	0.76	50,50,50,50	0
55	MG	AM	201	1/1	0.79	0.86	62,62,62,62	0
55	MG	AA	1652	1/1	0.79	0.19	49,49,49,49	0
55	MG	AA	1635	1/1	0.79	0.17	66,66,66,66	0
55	MG	AA	1667	1/1	0.79	0.19	49,49,49,49	0
55	MG	BA	3057	1/1	0.79	0.35	73,73,73,73	0
55	MG	BA	3058	1/1	0.79	0.29	15,15,15,15	0
55	MG	DA	3108	1/1	0.79	0.17	59,59,59,59	0
55	MG	DA	3003	1/1	0.79	0.47	99,99,99,99	0
55	MG	BA	3077	1/1	0.79	0.17	8,8,8,8	0
55	MG	AA	1657	1/1	0.80	0.63	64,64,64,64	0
55	MG	DA	3152	1/1	0.80	0.29	52,52,52,52	0
55	MG	CA	1621	1/1	0.80	0.09	64,64,64,64	0
55	MG	DA	3115	1/1	0.80	0.19	111,111,111,111	0
55	MG	DA	3006	1/1	0.80	0.13	93,93,93,93	0
55	MG	AA	1662	1/1	0.80	0.38	57,57,57,57	0
55	MG	BA	3059	1/1	0.80	0.25	38,38,38,38	0
55	MG	CA	1609	1/1	0.80	0.15	89,89,89,89	0
55	MG	DA	3073	1/1	0.81	0.11	60,60,60,60	0
55	MG	DA	3097	1/1	0.81	0.25	91,91,91,91	0
55	MG	CA	1638	1/1	0.81	0.10	76,76,76,76	0
55	MG	DA	3149	1/1	0.81	0.29	35,35,35,35	0
55	MG	DA	3009	1/1	0.81	0.37	90,90,90,90	0
55	MG	DA	3022	1/1	0.81	0.10	52,52,52,52	0
55	MG	BA	3137	1/1	0.81	0.42	49,49,49,49	0
55	MG	BA	3103	1/1	0.81	0.17	0,0,0,0	0
55	MG	DA	3089	1/1	0.81	0.33	83,83,83,83	0
55	MG	AA	1601	1/1	0.81	0.09	58,58,58,58	0
55	MG	DA	3092	1/1	0.81	0.58	113,113,113,113	0
55	MG	BA	3075	1/1	0.82	0.16	29,29,29,29	0
55	MG	CA	1646	1/1	0.82	0.24	92,92,92,92	0
55	MG	BA	3119	1/1	0.82	0.07	20,20,20,20	0
55	MG	BA	3180	1/1	0.82	0.19	32,32,32,32	0
55	MG	BA	3146	1/1	0.82	0.19	30,30,30,30	0
55	MG	BA	3189	1/1	0.82	0.24	45,45,45,45	0
55	MG	DA	3120	1/1	0.82	0.11	79,79,79,79	0
55	MG	BA	3151	1/1	0.82	0.27	12,12,12,12	0
55	MG	CA	1626	1/1	0.82	0.08	48,48,48,48	0
55	MG	DA	3033	1/1	0.83	0.10	71,71,71,71	0
55	MG	DA	3129	1/1	0.83	0.18	45,45,45,45	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	CA	1637	1/1	0.83	0.10	64,64,64,64	0
55	MG	DA	3114	1/1	0.83	0.14	65,65,65,65	0
55	MG	BA	3021	1/1	0.83	0.19	1,1,1,1	0
55	MG	DA	3038	1/1	0.83	0.13	63,63,63,63	0
55	MG	DA	3091	1/1	0.83	0.09	77,77,77,77	0
55	MG	DA	3040	1/1	0.83	0.18	83,83,83,83	0
55	MG	AA	1628	1/1	0.83	0.10	48,48,48,48	0
55	MG	BA	3054	1/1	0.84	0.09	9,9,9,9	0
55	MG	BA	3089	1/1	0.84	0.07	33,33,33,33	0
55	MG	CA	1655	1/1	0.84	0.10	44,44,44,44	0
55	MG	DA	3016	1/1	0.84	0.14	62,62,62,62	0
55	MG	DA	3153	1/1	0.84	0.26	53,53,53,53	0
55	MG	AA	1644	1/1	0.84	0.39	44,44,44,44	0
55	MG	BA	3046	1/1	0.84	0.09	17,17,17,17	0
55	MG	DA	3094	1/1	0.84	0.18	84,84,84,84	0
55	MG	AA	1638	1/1	0.84	0.10	87,87,87,87	0
55	MG	CA	1603	1/1	0.84	0.15	44,44,44,44	0
55	MG	AA	1623	1/1	0.84	0.05	46,46,46,46	0
55	MG	DA	3047	1/1	0.85	0.13	73,73,73,73	0
55	MG	BA	3170	1/1	0.85	0.35	38,38,38,38	0
55	MG	BA	3016	1/1	0.85	0.43	58,58,58,58	0
55	MG	DA	3145	1/1	0.85	0.17	71,71,71,71	0
55	MG	DA	3119	1/1	0.85	0.44	106,106,106,106	0
55	MG	AA	1631	1/1	0.85	0.10	46,46,46,46	0
55	MG	BA	3069	1/1	0.85	0.15	4,4,4,4	0
55	MG	DA	3151	1/1	0.85	0.52	59,59,59,59	0
55	MG	DA	3124	1/1	0.85	0.23	89,89,89,89	0
55	MG	DA	3080	1/1	0.85	0.15	95,95,95,95	0
55	MG	DA	3154	1/1	0.85	0.17	40,40,40,40	0
55	MG	CA	1601	1/1	0.85	0.09	39,39,39,39	0
55	MG	BA	3120	1/1	0.85	0.20	37,37,37,37	0
55	MG	DA	3104	1/1	0.85	0.08	79,79,79,79	0
55	MG	CA	1624	1/1	0.85	0.10	45,45,45,45	0
55	MG	BA	3027	1/1	0.85	0.34	46,46,46,46	0
55	MG	CA	1604	1/1	0.85	0.13	95,95,95,95	0
55	MG	CA	1654	1/1	0.86	0.36	56,56,56,56	0
55	MG	BA	3104	1/1	0.86	0.17	17,17,17,17	0
55	MG	BA	3178	1/1	0.86	0.68	30,30,30,30	0
55	MG	AA	1605	1/1	0.86	0.22	23,23,23,23	0
55	MG	CA	1615	1/1	0.86	0.30	58,58,58,58	0
55	MG	DA	3039	1/1	0.86	0.18	57,57,57,57	0
55	MG	BA	3154	1/1	0.86	0.33	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	DA	3157	1/1	0.86	0.30	58,58,58,58	0
55	MG	DA	3061	1/1	0.86	1.12	96,96,96,96	0
55	MG	DA	3143	1/1	0.86	0.24	60,60,60,60	0
55	MG	DA	3008	1/1	0.86	0.26	100,100,100,100	0
55	MG	AA	1612	1/1	0.86	0.10	47,47,47,47	0
55	MG	CA	1651	1/1	0.86	0.30	44,44,44,44	0
55	MG	DA	3024	1/1	0.87	0.17	46,46,46,46	0
55	MG	DA	3025	1/1	0.87	0.26	69,69,69,69	0
55	MG	BB	202	1/1	0.87	0.10	16,16,16,16	0
55	MG	AA	1661	1/1	0.87	0.29	29,29,29,29	0
55	MG	DA	3081	1/1	0.87	0.10	60,60,60,60	0
55	MG	CA	1656	1/1	0.87	0.37	54,54,54,54	0
55	MG	AA	1613	1/1	0.87	0.09	24,24,24,24	0
55	MG	DA	3165	1/1	0.87	0.22	42,42,42,42	0
55	MG	CA	1628	1/1	0.87	0.18	98,98,98,98	0
55	MG	DB	202	1/1	0.87	0.11	66,66,66,66	0
55	MG	BA	3125	1/1	0.87	0.54	37,37,37,37	0
55	MG	AA	1671	1/1	0.87	0.52	59,59,59,59	0
55	MG	AA	1664	1/1	0.87	0.14	49,49,49,49	0
55	MG	DA	3112	1/1	0.88	1.38	104,104,104,104	0
55	MG	AA	1650	1/1	0.88	0.32	36,36,36,36	0
55	MG	DA	3036	1/1	0.88	0.15	62,62,62,62	0
55	MG	AA	1670	1/1	0.88	0.29	33,33,33,33	0
55	MG	BA	3102	1/1	0.88	0.10	7,7,7,7	0
55	MG	AA	1634	1/1	0.88	0.13	35,35,35,35	0
55	MG	AA	1643	1/1	0.88	0.14	28,28,28,28	0
55	MG	BA	3004	1/1	0.88	0.11	26,26,26,26	0
55	MG	BA	3082	1/1	0.88	0.11	6,6,6,6	0
55	MG	BA	3179	1/1	0.88	0.33	26,26,26,26	0
55	MG	AA	1609	1/1	0.88	0.08	36,36,36,36	0
55	MG	AA	1632	1/1	0.88	0.10	55,55,55,55	0
55	MG	DA	3160	1/1	0.88	0.24	43,43,43,43	0
55	MG	BA	3092	1/1	0.88	0.10	19,19,19,19	0
55	MG	DA	3132	1/1	0.88	0.18	54,54,54,54	0
55	MG	DA	3031	1/1	0.88	0.08	69,69,69,69	0
55	MG	DA	3049	1/1	0.88	0.25	84,84,84,84	0
55	MG	DA	3052	1/1	0.88	0.07	56,56,56,56	0
55	MG	BA	3141	1/1	0.88	0.15	17,17,17,17	0
55	MG	DA	3138	1/1	0.88	0.35	40,40,40,40	0
56	DOL	DA	3001	48/48	0.88	0.26	26,45,58,63	0
55	MG	DA	3020	1/1	0.89	0.15	54,54,54,54	0
55	MG	DA	3117	1/1	0.89	0.09	67,67,67,67	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	AA	1630	1/1	0.89	0.18	73,73,73,73	0
55	MG	BA	3064	1/1	0.89	0.19	5,5,5,5	0
55	MG	BA	3114	1/1	0.89	0.17	0,0,0,0	0
55	MG	BA	3157	1/1	0.89	0.19	24,24,24,24	0
55	MG	AA	1637	1/1	0.89	0.10	15,15,15,15	0
55	MG	DA	3074	1/1	0.89	0.33	77,77,77,77	0
55	MG	BA	3191	1/1	0.89	0.23	12,12,12,12	0
55	MG	CA	1649	1/1	0.89	0.18	52,52,52,52	0
55	MG	DA	3011	1/1	0.89	0.08	75,75,75,75	0
55	MG	CA	1650	1/1	0.89	0.22	35,35,35,35	0
55	MG	BA	3040	1/1	0.89	0.15	0,0,0,0	0
55	MG	DA	3110	1/1	0.89	0.23	33,33,33,33	0
55	MG	DA	3014	1/1	0.89	0.14	73,73,73,73	0
55	MG	BB	204	1/1	0.89	0.37	16,16,16,16	0
55	MG	DA	3137	1/1	0.89	0.42	47,47,47,47	0
55	MG	CA	1610	1/1	0.89	0.10	63,63,63,63	0
55	MG	DA	3141	1/1	0.89	0.27	40,40,40,40	0
55	MG	CA	1613	1/1	0.89	0.14	19,19,19,19	0
55	MG	AA	1660	1/1	0.90	0.22	51,51,51,51	0
55	MG	BA	3002	1/1	0.90	0.06	18,18,18,18	0
55	MG	DA	3146	1/1	0.90	0.10	43,43,43,43	0
55	MG	BA	3169	1/1	0.90	0.16	35,35,35,35	0
55	MG	DA	3066	1/1	0.90	0.07	47,47,47,47	0
55	MG	BA	3112	1/1	0.90	0.08	20,20,20,20	0
55	MG	DA	3069	1/1	0.90	0.09	79,79,79,79	0
55	MG	DA	3096	1/1	0.90	0.08	57,57,57,57	0
55	MG	BA	3171	1/1	0.90	0.20	24,24,24,24	0
55	MG	BA	3076	1/1	0.90	0.07	14,14,14,14	0
55	MG	DA	3007	1/1	0.90	0.44	121,121,121,121	0
55	MG	CA	1640	1/1	0.90	0.14	26,26,26,26	0
55	MG	BA	3051	1/1	0.90	0.17	6,6,6,6	0
55	MG	CA	1647	1/1	0.90	0.11	41,41,41,41	0
55	MG	CA	1648	1/1	0.90	0.20	22,22,22,22	0
55	MG	AA	1602	1/1	0.90	0.13	46,46,46,46	0
55	MG	BA	3182	1/1	0.90	0.25	33,33,33,33	0
55	MG	BA	3087	1/1	0.90	0.13	4,4,4,4	0
55	MG	DA	3058	1/1	0.90	1.10	109,109,109,109	0
55	MG	DA	3085	1/1	0.90	0.12	67,67,67,67	0
55	MG	BA	3156	1/1	0.90	0.28	19,19,19,19	0
55	MG	BA	3116	1/1	0.91	0.26	34,34,34,34	0
55	MG	DA	3065	1/1	0.91	0.12	36,36,36,36	0
55	MG	CA	1616	1/1	0.91	0.10	37,37,37,37	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3193	1/1	0.91	0.15	38,38,38,38	0
55	MG	DA	3068	1/1	0.91	0.13	65,65,65,65	0
55	MG	BA	3195	1/1	0.91	0.56	23,23,23,23	0
55	MG	DA	3015	1/1	0.91	0.06	55,55,55,55	0
55	MG	DA	3105	1/1	0.91	0.18	80,80,80,80	0
55	MG	DA	3106	1/1	0.91	0.14	52,52,52,52	0
55	MG	BA	3006	1/1	0.91	0.14	50,50,50,50	0
55	MG	BA	3008	1/1	0.91	0.14	37,37,37,37	0
55	MG	BA	3168	1/1	0.91	0.12	35,35,35,35	0
55	MG	BA	3015	1/1	0.91	0.07	2,2,2,2	0
55	MG	DA	3021	1/1	0.91	0.18	63,63,63,63	0
55	MG	DA	3150	1/1	0.91	0.20	56,56,56,56	0
55	MG	BA	3132	1/1	0.91	0.09	23,23,23,23	0
55	MG	AA	1629	1/1	0.91	0.14	61,61,61,61	0
55	MG	BA	3003	1/1	0.91	0.06	17,17,17,17	0
55	MG	AA	1641	1/1	0.91	0.15	19,19,19,19	0
55	MG	DA	3050	1/1	0.91	0.10	56,56,56,56	0
55	MG	BA	3078	1/1	0.91	0.72	79,79,79,79	0
55	MG	DA	3159	1/1	0.91	0.30	43,43,43,43	0
55	MG	DA	3087	1/1	0.91	0.09	54,54,54,54	0
55	MG	DA	3123	1/1	0.91	0.12	57,57,57,57	0
55	MG	DA	3164	1/1	0.91	0.18	57,57,57,57	0
55	MG	DA	3054	1/1	0.91	0.10	55,55,55,55	0
55	MG	BA	3081	1/1	0.91	0.12	24,24,24,24	0
55	MG	BA	3033	1/1	0.91	0.12	11,11,11,11	0
55	MG	DA	3030	1/1	0.91	0.24	60,60,60,60	0
55	MG	BA	3005	1/1	0.91	0.07	34,34,34,34	0
55	MG	DA	3032	1/1	0.91	0.26	68,68,68,68	0
55	MG	CA	1614	1/1	0.91	0.08	50,50,50,50	0
55	MG	CA	1622	1/1	0.92	0.13	51,51,51,51	0
55	MG	DA	3004	1/1	0.92	0.11	76,76,76,76	0
55	MG	BA	3071	1/1	0.92	0.07	60,60,60,60	0
55	MG	BA	3098	1/1	0.92	0.12	2,2,2,2	0
55	MG	AA	1654	1/1	0.92	0.14	43,43,43,43	0
55	MG	AA	1625	1/1	0.92	0.07	47,47,47,47	0
55	MG	BA	3152	1/1	0.92	0.19	6,6,6,6	0
55	MG	AA	1606	1/1	0.92	0.11	44,44,44,44	0
55	MG	AA	1603	1/1	0.92	0.10	44,44,44,44	0
55	MG	BA	3042	1/1	0.92	0.38	0,0,0,0	0
55	MG	BA	3113	1/1	0.92	0.17	22,22,22,22	0
55	MG	AA	1666	1/1	0.92	0.19	46,46,46,46	0
55	MG	BA	3086	1/1	0.92	0.07	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3063	1/1	0.92	0.45	31,31,31,31	0
55	MG	CA	1639	1/1	0.92	0.10	43,43,43,43	0
55	MG	DA	3116	1/1	0.92	0.36	76,76,76,76	0
55	MG	DA	3082	1/1	0.92	0.13	60,60,60,60	0
55	MG	CA	1607	1/1	0.92	0.08	54,54,54,54	0
55	MG	BA	3047	1/1	0.92	0.10	4,4,4,4	0
55	MG	DA	3158	1/1	0.92	0.19	70,70,70,70	0
55	MG	BA	3066	1/1	0.92	0.15	0,0,0,0	0
55	MG	BA	3174	1/1	0.92	0.12	12,12,12,12	0
55	MG	DA	3023	1/1	0.92	0.05	69,69,69,69	0
55	MG	BA	3127	1/1	0.92	0.12	9,9,9,9	0
55	MG	BA	3131	1/1	0.92	0.18	1,1,1,1	0
55	MG	BA	3091	1/1	0.92	0.09	3,3,3,3	0
55	MG	BA	3133	1/1	0.92	0.10	32,32,32,32	0
55	MG	AA	1646	1/1	0.92	0.20	49,49,49,49	0
55	MG	DA	3095	1/1	0.92	0.41	91,91,91,91	0
55	MG	CA	1620	1/1	0.92	0.06	61,61,61,61	0
55	MG	BA	3187	1/1	0.92	0.06	33,33,33,33	0
55	MG	DA	3101	1/1	0.93	0.09	57,57,57,57	0
55	MG	BA	3155	1/1	0.93	0.21	20,20,20,20	0
55	MG	AA	1669	1/1	0.93	0.42	51,51,51,51	0
55	MG	DA	3140	1/1	0.93	0.43	43,43,43,43	0
55	MG	BA	3121	1/1	0.93	0.12	3,3,3,3	0
55	MG	DA	3142	1/1	0.93	0.26	33,33,33,33	0
55	MG	BA	3166	1/1	0.93	0.17	19,19,19,19	0
55	MG	CA	1633	1/1	0.93	0.32	64,64,64,64	0
55	MG	AA	1663	1/1	0.93	0.22	48,48,48,48	0
55	MG	BA	3126	1/1	0.93	0.12	6,6,6,6	0
55	MG	BA	3030	1/1	0.93	0.14	9,9,9,9	0
55	MG	BA	3031	1/1	0.93	0.07	14,14,14,14	0
55	MG	AA	1610	1/1	0.93	0.23	65,65,65,65	0
55	MG	BA	3173	1/1	0.93	0.14	27,27,27,27	0
55	MG	CA	1643	1/1	0.93	0.24	50,50,50,50	0
55	MG	BA	3056	1/1	0.93	0.08	5,5,5,5	0
55	MG	BA	3034	1/1	0.93	0.10	6,6,6,6	0
55	MG	BA	3136	1/1	0.93	0.12	21,21,21,21	0
55	MG	DA	3053	1/1	0.93	0.11	40,40,40,40	0
55	MG	BA	3079	1/1	0.93	0.09	22,22,22,22	0
55	MG	BA	3181	1/1	0.93	0.20	24,24,24,24	0
55	MG	AA	1617	1/1	0.93	0.12	52,52,52,52	0
55	MG	CA	1652	1/1	0.93	0.11	83,83,83,83	0
55	MG	DA	3161	1/1	0.93	0.11	57,57,57,57	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3185	1/1	0.93	0.30	16,16,16,16	0
55	MG	BA	3013	1/1	0.93	0.21	0,0,0,0	0
55	MG	BA	3149	1/1	0.93	0.12	38,38,38,38	0
55	MG	DA	3130	1/1	0.93	0.10	81,81,81,81	0
55	MG	BA	3085	1/1	0.93	0.22	27,27,27,27	0
55	MG	BA	3190	1/1	0.93	0.10	31,31,31,31	0
55	MG	AA	1627	1/1	0.93	0.09	37,37,37,37	0
55	MG	AA	1618	1/1	0.93	0.08	37,37,37,37	0
55	MG	BA	3065	1/1	0.93	0.14	0,0,0,0	0
55	MG	AA	1616	1/1	0.94	0.12	50,50,50,50	0
55	MG	BA	3140	1/1	0.94	0.39	0,0,0,0	0
55	MG	BA	3043	1/1	0.94	0.13	16,16,16,16	0
55	MG	DA	3079	1/1	0.94	0.13	96,96,96,96	0
55	MG	BA	3084	1/1	0.94	0.05	6,6,6,6	0
55	MG	CA	1625	1/1	0.94	0.15	22,22,22,22	0
55	MG	AA	1607	1/1	0.94	0.09	44,44,44,44	0
55	MG	CA	1653	1/1	0.94	0.09	52,52,52,52	0
55	MG	BA	3150	1/1	0.94	0.20	37,37,37,37	0
55	MG	BA	3025	1/1	0.94	0.10	2,2,2,2	0
55	MG	DA	3055	1/1	0.94	0.13	72,72,72,72	0
55	MG	AA	1649	1/1	0.94	0.14	32,32,32,32	0
55	MG	BA	3130	1/1	0.94	0.12	0,0,0,0	0
55	MG	BA	3039	1/1	0.94	0.27	0,0,0,0	0
55	MG	AA	1668	1/1	0.94	0.13	29,29,29,29	0
55	MG	BA	3053	1/1	0.94	0.14	2,2,2,2	0
55	MG	BA	3115	1/1	0.94	0.12	20,20,20,20	0
55	MG	BA	3159	1/1	0.94	0.22	14,14,14,14	0
55	MG	BA	3160	1/1	0.94	0.10	10,10,10,10	0
55	MG	DA	3035	1/1	0.94	0.09	79,79,79,79	0
55	MG	BA	3164	1/1	0.94	0.14	4,4,4,4	0
55	MG	BA	3165	1/1	0.94	0.30	43,43,43,43	0
55	MG	BA	3080	1/1	0.94	0.07	39,39,39,39	0
55	MG	DA	3167	1/1	0.94	0.29	100,100,100,100	0
55	MG	CA	1641	1/1	0.94	0.68	73,73,73,73	0
55	MG	DA	3102	1/1	0.94	0.22	62,62,62,62	0
55	MG	CA	1642	1/1	0.94	0.25	25,25,25,25	0
55	MG	BA	3192	1/1	0.94	0.21	22,22,22,22	0
55	MG	CA	1645	1/1	0.94	0.20	32,32,32,32	0
55	MG	CA	1619	1/1	0.94	0.10	33,33,33,33	0
55	MG	AA	1608	1/1	0.95	0.14	17,17,17,17	0
55	MG	AA	1653	1/1	0.95	0.17	28,28,28,28	0
55	MG	AA	1640	1/1	0.95	0.09	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3094	1/1	0.95	0.05	31,31,31,31	0
55	MG	BA	3045	1/1	0.95	0.08	9,9,9,9	0
55	MG	BA	3061	1/1	0.95	0.35	30,30,30,30	0
55	MG	DA	3118	1/1	0.95	0.08	60,60,60,60	0
55	MG	CA	1611	1/1	0.95	0.29	90,90,90,90	0
55	MG	BA	3062	1/1	0.95	0.36	50,50,50,50	0
55	MG	AA	1655	1/1	0.95	0.11	35,35,35,35	0
55	MG	AA	1624	1/1	0.95	0.04	41,41,41,41	0
55	MG	BA	3188	1/1	0.95	0.14	10,10,10,10	0
55	MG	BA	3017	1/1	0.95	0.06	2,2,2,2	0
55	MG	BA	3161	1/1	0.95	0.17	31,31,31,31	0
55	MG	BA	3035	1/1	0.95	0.18	0,0,0,0	0
55	MG	BA	3036	1/1	0.95	0.12	11,11,11,11	0
55	MG	DA	3043	1/1	0.95	0.13	66,66,66,66	0
55	MG	BA	3138	1/1	0.95	0.45	1,1,1,1	0
55	MG	BA	3088	1/1	0.95	0.23	2,2,2,2	0
55	MG	BA	3020	1/1	0.95	0.09	22,22,22,22	0
55	MG	BB	203	1/1	0.95	0.06	7,7,7,7	0
55	MG	DA	3166	1/1	0.95	0.09	41,41,41,41	0
55	MG	BA	3145	1/1	0.95	0.29	28,28,28,28	0
55	MG	BA	3118	1/1	0.95	0.12	1,1,1,1	0
55	MG	BA	3148	1/1	0.95	0.12	29,29,29,29	0
55	MG	DA	3051	1/1	0.95	0.09	28,28,28,28	0
55	MG	DA	3109	1/1	0.95	0.22	42,42,42,42	0
55	MG	BA	3172	1/1	0.95	0.17	31,31,31,31	0
55	MG	AA	1647	1/1	0.95	0.12	48,48,48,48	0
55	MG	CA	1612	1/1	0.96	0.05	40,40,40,40	0
55	MG	BA	3135	1/1	0.96	0.14	2,2,2,2	0
55	MG	BA	3023	1/1	0.96	0.14	1,1,1,1	0
55	MG	BA	3024	1/1	0.96	0.17	0,0,0,0	0
55	MG	BA	3012	1/1	0.96	0.05	14,14,14,14	0
55	MG	CA	1644	1/1	0.96	0.15	42,42,42,42	0
55	MG	DA	3018	1/1	0.96	0.12	60,60,60,60	0
55	MG	BA	3026	1/1	0.96	0.15	3,3,3,3	0
55	MG	CA	1618	1/1	0.96	0.11	37,37,37,37	0
55	MG	AA	1633	1/1	0.96	0.12	30,30,30,30	0
55	MG	DA	3083	1/1	0.96	0.10	69,69,69,69	0
55	MG	BA	3029	1/1	0.96	0.08	21,21,21,21	0
55	MG	BA	3095	1/1	0.96	0.09	21,21,21,21	0
55	MG	BB	201	1/1	0.96	0.10	20,20,20,20	0
55	MG	CA	1623	1/1	0.96	0.16	50,50,50,50	0
55	MG	BA	3147	1/1	0.96	0.31	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3014	1/1	0.96	0.18	0,0,0,0	0
55	MG	DA	3122	1/1	0.96	0.15	41,41,41,41	0
55	MG	BA	3122	1/1	0.96	0.04	18,18,18,18	0
55	MG	BA	3124	1/1	0.96	0.09	11,11,11,11	0
55	MG	DA	3059	1/1	0.96	0.10	51,51,51,51	0
55	MG	BA	3009	1/1	0.96	0.09	4,4,4,4	0
55	MG	BA	3175	1/1	0.96	0.11	27,27,27,27	0
55	MG	DA	3128	1/1	0.96	0.08	80,80,80,80	0
55	MG	BA	3176	1/1	0.96	0.10	20,20,20,20	0
55	MG	BA	3101	1/1	0.96	0.07	1,1,1,1	0
55	MG	BA	3070	1/1	0.96	0.21	0,0,0,0	0
55	MG	BA	3044	1/1	0.96	0.14	3,3,3,3	0
55	MG	CA	1634	1/1	0.96	0.13	49,49,49,49	0
55	MG	BA	3074	1/1	0.96	0.18	1,1,1,1	0
55	MG	BA	3108	1/1	0.96	0.24	0,0,0,0	0
55	MG	BA	3110	1/1	0.96	0.20	3,3,3,3	0
56	DOL	BA	3001	48/48	0.96	0.21	0,3,25,36	0
55	MG	BA	3022	1/1	0.96	0.08	2,2,2,2	0
55	MG	BA	3111	1/1	0.97	0.20	6,6,6,6	0
55	MG	DA	3086	1/1	0.97	0.10	76,76,76,76	0
55	MG	BA	3072	1/1	0.97	0.08	3,3,3,3	0
55	MG	BA	3183	1/1	0.97	0.21	12,12,12,12	0
55	MG	BA	3184	1/1	0.97	0.20	6,6,6,6	0
55	MG	BA	3158	1/1	0.97	0.12	19,19,19,19	0
55	MG	BA	3073	1/1	0.97	0.07	7,7,7,7	0
55	MG	DA	3063	1/1	0.97	0.22	54,54,54,54	0
55	MG	BA	3037	1/1	0.97	0.17	0,0,0,0	0
55	MG	BA	3060	1/1	0.97	0.06	15,15,15,15	0
55	MG	BA	3163	1/1	0.97	0.33	15,15,15,15	0
55	MG	AA	1615	1/1	0.97	0.06	47,47,47,47	0
55	MG	DA	3156	1/1	0.97	0.19	41,41,41,41	0
55	MG	BA	3117	1/1	0.97	0.17	1,1,1,1	0
55	MG	BA	3007	1/1	0.97	0.09	22,22,22,22	0
55	MG	AA	1611	1/1	0.97	0.09	21,21,21,21	0
55	MG	BA	3142	1/1	0.97	0.43	2,2,2,2	0
55	MG	BA	3052	1/1	0.97	0.06	11,11,11,11	0
55	MG	BA	3032	1/1	0.97	0.16	4,4,4,4	0
55	MG	AA	1604	1/1	0.97	0.06	48,48,48,48	0
55	MG	BA	3123	1/1	0.97	0.16	0,0,0,0	0
55	MG	DA	3076	1/1	0.97	0.12	69,69,69,69	0
55	MG	BQ	201	1/1	0.97	0.20	3,3,3,3	0
55	MG	BA	3067	1/1	0.97	0.17	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
55	MG	BA	3083	1/1	0.97	0.17	0,0,0,0	0
55	MG	BA	3068	1/1	0.97	0.17	0,0,0,0	0
55	MG	BA	3010	1/1	0.97	0.11	0,0,0,0	0
55	MG	BA	3129	1/1	0.97	0.19	4,4,4,4	0
55	MG	BA	3018	1/1	0.97	0.20	0,0,0,0	0
55	MG	AA	1642	1/1	0.97	0.15	23,23,23,23	0
55	MG	BA	3109	1/1	0.98	0.19	12,12,12,12	0
55	MG	AA	1636	1/1	0.98	0.08	27,27,27,27	0
55	MG	BA	3041	1/1	0.98	0.18	6,6,6,6	0
55	MG	BA	3128	1/1	0.98	0.10	0,0,0,0	0
55	MG	BA	3096	1/1	0.98	0.07	11,11,11,11	0
55	MG	BA	3097	1/1	0.98	0.07	4,4,4,4	0
55	MG	AA	1622	1/1	0.98	0.20	16,16,16,16	0
55	MG	BA	3099	1/1	0.98	0.12	4,4,4,4	0
55	MG	BA	3194	1/1	0.98	0.07	8,8,8,8	0
55	MG	BA	3028	1/1	0.98	0.08	5,5,5,5	0
55	MG	DA	3162	1/1	0.98	0.21	38,38,38,38	0
55	MG	AA	1656	1/1	0.98	0.15	43,43,43,43	0
55	MG	AA	1621	1/1	0.98	0.08	39,39,39,39	0
55	MG	BA	3055	1/1	0.98	0.17	0,0,0,0	0
55	MG	BA	3177	1/1	0.98	0.17	17,17,17,17	0
55	MG	AA	1645	1/1	0.98	0.12	42,42,42,42	0
55	MG	BA	3105	1/1	0.98	0.10	4,4,4,4	0
55	MG	BA	3139	1/1	0.98	0.37	0,0,0,0	0
55	MG	BA	3106	1/1	0.98	0.20	16,16,16,16	0
55	MG	BA	3107	1/1	0.98	0.19	0,0,0,0	0
55	MG	BA	3162	1/1	0.98	0.07	36,36,36,36	0
55	MG	BA	3019	1/1	0.98	0.12	11,11,11,11	0
55	MG	BA	3144	1/1	0.98	0.26	15,15,15,15	0
57	ZN	B4	101	1/1	0.98	0.10	33,33,33,33	0
57	ZN	D4	101	1/1	0.98	0.10	87,87,87,87	0
55	MG	BA	3143	1/1	0.99	0.36	12,12,12,12	0
55	MG	BA	3011	1/1	0.99	0.15	1,1,1,1	0
55	MG	DA	3139	1/1	0.99	0.33	30,30,30,30	0
55	MG	BA	3048	1/1	0.99	0.15	8,8,8,8	0

## 6.5 Other polymers

There are no such residues in this entry.