



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 06:12 AM UTC

PDB ID : 3JAJ / pdb_00003jaj
EMDB ID : EMD-3037
Title : Structure of the engaged state of the mammalian SRP-ribosome complex
Authors : Voorhees, R.M.; Hegde, R.S.
Deposited on : 2015-06-16
Resolution : 3.75 Å (reported)
Based on initial models : 1QB2, 3J7P, 3J7O, 4P3E, 1WGW, 1E8S, 1E80

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev132
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

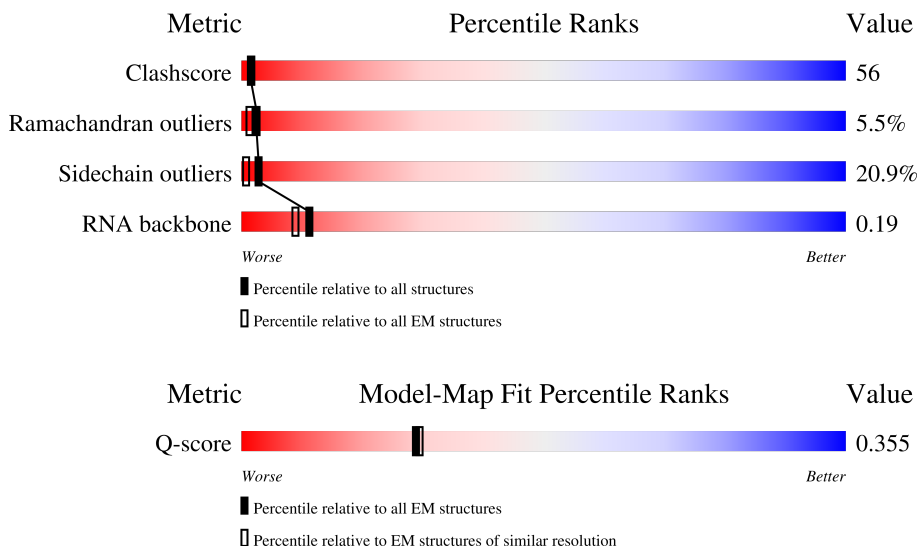
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.75 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.



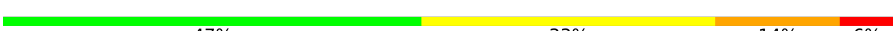
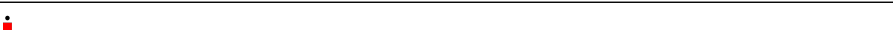
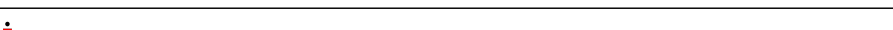
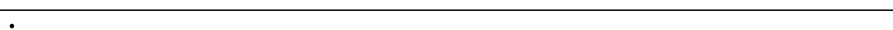
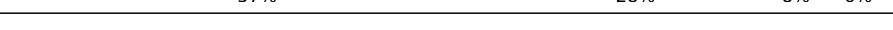
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	10301 (3.25 - 4.25)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	244	
2	D	292	
3	G	238	

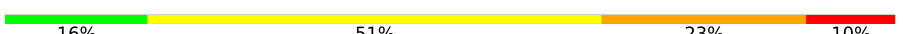
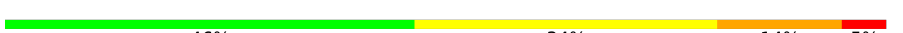
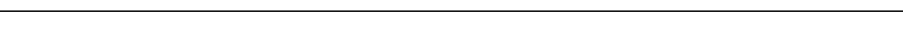
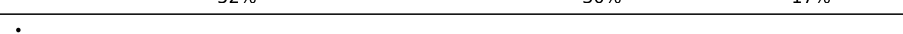
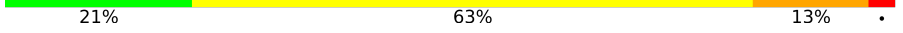
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Mol	Chain	Length	Quality of chain
4	H	190	
5	J	170	
6	L	210	
7	M	138	
8	N	203	
9	O	201	
10	Q	187	
11	R	180	
12	S	175	
13	T	159	
14	U	99	
15	V	131	
16	X	119	
17	Y	134	
18	Z	135	
19	a	147	
20	b	75	
21	c	94	
22	d	107	
23	e	128	
24	f	109	
25	g	114	
26	h	122	
27	i	102	
28	k	69	

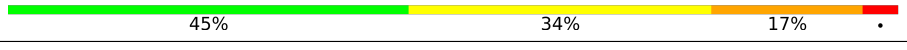
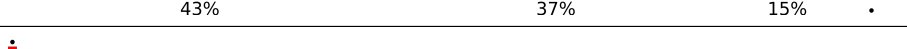
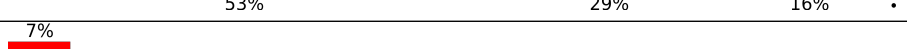
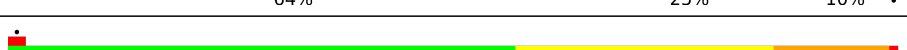
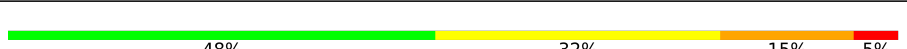
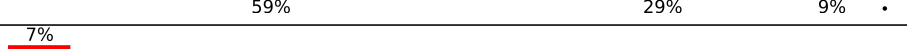
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Mol	Chain	Length	Quality of chain
29	l	50	
30	m	52	
31	o	104	
32	5	3658	
33	7	120	
34	8	156	
35	B	394	
36	C	367	
37	E	236	
38	F	225	
39	I	213	
40	P	153	
41	W	63	
42	j	86	
43	n	23	
44	p	91	
45	r	125	
46	K	163	
47	q	202	
48	z	426	
49	2	31	
50	3	76	
51	4	206	
52	9	105	
53	6	179	

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Mol	Chain	Length	Quality of chain
54	S2	1742	
55	SA	208	
56	SB	213	
57	SC	218	
58	SE	262	
59	SG	237	
60	SH	189	
61	SI	206	
62	SJ	185	
63	SL	152	
64	SN	149	
65	SO	136	
66	SV	82	
67	SW	129	
68	SX	141	
69	SY	126	
70	Sa	98	
71	Sb	83	
72	Se	57	
73	SD	227	
74	SF	191	
75	SK	98	
76	SM	124	
77	SP	96	
78	SQ	141	

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Mol	Chain	Length	Quality of chain
79	SR	129	
80	SS	137	
81	ST	141	
82	SU	104	
83	SZ	75	
84	Sc	64	
85	Sd	52	
86	Sf	71	
87	Sg	313	
88	S1	74	
89	S4	76	

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
91	ZN	Sa	101	-	-	X	-
91	ZN	o	201	-	-	X	-

2 Entry composition

There are 91 unique types of molecules in this entry. The entry contains 228197 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ribosomal protein uL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	244	Total	C	N	O	S	0	0
			1868	1171	382	309	6		

- Molecule 2 is a protein called Ribosomal protein uL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	D	292	Total	C	N	O	S	0	0
			2380	1508	434	426	12		

- Molecule 3 is a protein called Ribosomal protein eL8.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	G	238	Total	C	N	O	S	0	0
			1912	1218	368	322	4		

- Molecule 4 is a protein called Ribosomal protein uL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	H	190	Total	C	N	O	S	0	0
			1518	956	284	272	6		

- Molecule 5 is a protein called Ribosomal protein uL5.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	J	170	Total	C	N	O	S	0	0
			1359	856	256	241	6		

- Molecule 6 is a protein called Ribosomal protein eL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	L	210	Total	C	N	O	S	0	0
			1703	1064	354	280	5		

- Molecule 7 is a protein called Ribosomal protein eL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	M	138	Total	C	N	O	S	0	0
			1131	727	216	181	7		

- Molecule 8 is a protein called Ribosomal protein eL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	N	203	Total	C	N	O	S	0	0
			1701	1072	359	266	4		

- Molecule 9 is a protein called Ribosomal protein uL13.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	O	201	Total	C	N	O	S	0	0
			1651	1063	323	260	5		

- Molecule 10 is a protein called Ribosomal protein eL18.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	Q	187	Total	C	N	O	S	0	0
			1506	941	311	249	5		

- Molecule 11 is a protein called Ribosomal protein eL19.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	R	180	Total	C	N	O	S	0	0
			1508	933	328	238	9		

- Molecule 12 is a protein called Ribosomal protein eL20.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	S	175	Total	C	N	O	S	0	0
			1454	925	284	235	10		

- Molecule 13 is a protein called Ribosomal protein eL21.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	T	159	Total	C	N	O	S	0	0
			1298	823	252	217	6		

- Molecule 14 is a protein called Ribosomal protein eL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	U	99	Total	C	N	O	S	0	0
			808	518	141	147	2		

- Molecule 15 is a protein called Ribosomal protein uL14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	V	131	Total	C	N	O	S	0	0
			979	618	184	172	5		

- Molecule 16 is a protein called Ribosomal protein uL23.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	X	119	Total	C	N	O	S	0	0
			976	624	183	168	1		

- Molecule 17 is a protein called Ribosomal protein uL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	Y	134	Total	C	N	O	S	0	0
			1115	700	226	186	3		

- Molecule 18 is a protein called Ribosomal protein eL27.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	Z	135	Total	C	N	O	S	0	0
			1107	714	208	182	3		

- Molecule 19 is a protein called Ribosomal protein uL15.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	a	147	Total	C	N	O	S	0	0
			1163	735	239	185	4		

- Molecule 20 is a protein called Ribosomal protein eL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	b	75	Total	C	N	O	S	0	0
			610	378	130	99	3		

- Molecule 21 is a protein called Ribosomal protein eL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	c	94	Total	C	N	O	S	0	0
			732	465	130	131	6		

- Molecule 22 is a protein called Ribosomal protein eL31.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	d	107	Total	C	N	O	S	0	0
			888	560	171	155	2		

- Molecule 23 is a protein called Ribosomal protein eL32.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	e	128	Total	C	N	O	S	0	0
			1053	667	216	165	5		

- Molecule 24 is a protein called Ribosomal protein eL33.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	f	109	Total	C	N	O	S	0	0
			876	555	174	144	3		

- Molecule 25 is a protein called Ribosomal protein eL34.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	g	114	Total	C	N	O	S	0	0
			906	566	187	147	6		

- Molecule 26 is a protein called Ribosomal protein uL29.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	h	122	Total	C	N	O	S	0	0
			1015	642	205	167	1		

- Molecule 27 is a protein called Ribosomal protein eL36.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	i	102	Total	C	N	O	S	0	0
			832	521	177	129	5		

- Molecule 28 is a protein called Ribosomal protein eL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	k	69	Total	C	N	O	S	0	0
			569	366	103	99	1		

- Molecule 29 is a protein called Ribosomal protein eL39.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	l	50	Total	C	N	O	S	0	0
			444	281	98	64	1		

- Molecule 30 is a protein called Ribosomal protein eL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	m	52	Total	C	N	O	S	0	0
			429	266	90	67	6		

- Molecule 31 is a protein called Ribosomal protein eL42.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	o	104	Total	C	N	O	S	0	0
			851	533	174	138	6		

- Molecule 32 is a RNA chain called 28S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	5	3658	Total	C	N	O	P	0	0
			78406	34911	14352	25486	3657		

- Molecule 33 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	7	120	Total	C	N	O	P	0	0
			2558	1141	456	842	119		

- Molecule 34 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	8	156	Total	C	N	O	P	0	0
			3314	1480	585	1094	155		

- Molecule 35 is a protein called Ribosomal protein uL3.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	B	394	Total	C	N	O	S	0	0
			3147	2005	591	538	13		

- Molecule 36 is a protein called Ribosomal protein uL4.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	C	367	Total	C	N	O	S	0	0
			2919	1836	582	486	15		

- Molecule 37 is a protein called Ribosomal protein eL6.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	E	236	Total	C	N	O	S	0	0
			1904	1219	364	316	5		

- Molecule 38 is a protein called Ribosomal protein uL30.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	F	225	Total	C	N	O	S	0	0
			1870	1202	358	301	9		

- Molecule 39 is a protein called Ribosomal protein uL16.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	I	213	Total	C	N	O	S	0	0
			1713	1083	331	284	15		

- Molecule 40 is a protein called Ribosomal protein uL22.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	P	153	Total	C	N	O	S	0	0
			1242	776	241	216	9		

- Molecule 41 is a protein called Ribosomal protein eL24.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	W	63	Total	C	N	O	S	0	0
			528	337	103	85	3		

- Molecule 42 is a protein called Ribosomal protein eL37.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	j	86	Total	C	N	O	S	0	0
			706	436	155	110	5		

- Molecule 43 is a protein called Ribosomal protein eL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	n	23	Total	C	N	O	S	0	0
			222	134	61	25	2		

- Molecule 44 is a protein called Ribosomal protein eL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	p	91	Total	C	N	O	S	0	0
			708	445	136	120	7		

- Molecule 45 is a protein called Ribosomal protein eL28.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	r	125	Total	C	N	O	S	0	0
			1001	622	206	168	5		

- Molecule 46 is a protein called Ribosomal protein uL11.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	K	163	Total	C	N	O	S	0	0
			1238	773	230	230	5		

- Molecule 47 is a protein called Ribosomal protein uL10.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	q	202	Total	C	N	O	S	0	0
			1556	989	272	286	9		

- Molecule 48 is a protein called SRP54.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	z	426	Total	C	N	O	S	0	0
			3241	2047	555	615	24		

- Molecule 49 is a protein called Nascent chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	2	31	Total	C	N	O	S	0	0
			233	167	32	32	2		

- Molecule 50 is a RNA chain called Val tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	3	76	Total	C	N	O	P	0	0
			1616	723	290	528	75		

- Molecule 51 is a RNA chain called SRP 7S RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	4	206	Total	C	N	O	P	6	0
			4551	2026	836	1477	212		

- Molecule 52 is a protein called SRP19.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	9	105	Total	C	N	O	S	0	0
			844	534	152	152	6		

- Molecule 53 is a protein called SRP68.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	6	179	Total	C	N	O	S	0	0
			1497	939	280	271	7		

- Molecule 54 is a RNA chain called 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	S2	1742	Total	C	N	O	P	0	0
			36900	16458	6595	12106	1741		

- Molecule 55 is a protein called Ribosomal protein uS2.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	SA	208	Total	C	N	O	S	0	0
			1642	1045	289	300	8		

- Molecule 56 is a protein called Ribosomal protein eS1.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	SB	213	Total	C	N	O	S	0	0
			1725	1093	311	308	13		

- Molecule 57 is a protein called Ribosomal protein uS5.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	SC	218	Total	C	N	O	S	0	0
			1690	1094	289	297	10		

- Molecule 58 is a protein called Ribosomal protein eS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	SE	262	Total	C	N	O	S	0	0
			2076	1324	386	358	8		

- Molecule 59 is a protein called Ribosomal protein eS6.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	SG	237	Total	C	N	O	S	0	0
			1923	1200	387	329	7		

- Molecule 60 is a protein called Ribosomal protein eS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	SH	189	Total	C	N	O	S	0	0
			1521	969	280	271	1		

- Molecule 61 is a protein called Ribosomal protein eS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	SI	206	Total	C	N	O	S	0	0
			1686	1058	332	291	5		

- Molecule 62 is a protein called Ribosomal protein uS4.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	SJ	185	Total	C	N	O	S	0	0
			1525	969	306	248	2		

- Molecule 63 is a protein called Ribosomal protein uS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	SL	152	Total	C	N	O	S	0	0
			1238	788	232	212	6		

- Molecule 64 is a protein called Ribosomal protein uS15.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	SN	149	Total	C	N	O	S	0	0
			1202	770	228	203	1		

- Molecule 65 is a protein called Ribosomal protein uS11.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	SO	136	Total	C	N	O	S	0	0
			1016	621	199	190	6		

- Molecule 66 is a protein called Ribosomal protein eS21.

Mol	Chain	Residues	Atoms					AltConf	Trace
66	SV	82	Total	C	N	O	S	0	0
			625	384	116	120	5		

- Molecule 67 is a protein called Ribosomal protein uS8.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	SW	129	Total	C	N	O	S	0	0
			1034	659	193	176	6		

- Molecule 68 is a protein called Ribosomal protein uS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	SX	141	Total	C	N	O	S	0	0
			1099	694	220	182	3		

- Molecule 69 is a protein called Ribosomal protein eS24.

Mol	Chain	Residues	Atoms					AltConf	Trace
69	SY	126	Total	C	N	O	S	0	0
			1023	646	200	172	5		

- Molecule 70 is a protein called Ribosomal protein eS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
70	Sa	98	Total	C	N	O	S	0	0
			781	486	161	129	5		

- Molecule 71 is a protein called Ribosomal protein eS27.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	Sb	83	Total	C	N	O	S	0	0
			651	408	121	115	7		

- Molecule 72 is a protein called Ribosomal protein eS30.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	Se	57	Total	C	N	O	S	0	0
			452	279	99	73	1		

- Molecule 73 is a protein called Ribosomal protein uS3.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	SD	227	Total	C	N	O	S	0	0
			1765	1125	317	315	8		

- Molecule 74 is a protein called Ribosomal protein uS7.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	SF	191	Total	C	N	O	S	0	0
			1509	943	286	273	7		

- Molecule 75 is a protein called Ribosomal protein eS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	SK	98	Total	C	N	O	S	0	0
			827	539	148	134	6		

- Molecule 76 is a protein called Ribosomal protein eS12.

Mol	Chain	Residues	Atoms					AltConf	Trace
76	SM	124	Total	C	N	O	S	0	0
			960	600	171	181	8		

- Molecule 77 is a protein called Ribosomal protein uS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
77	SP	96	Total	C	N	O	S	0	0
			805	506	158	135	6		

- Molecule 78 is a protein called Ribosomal protein uS9.

Mol	Chain	Residues	Atoms					AltConf	Trace
78	SQ	141	Total	C	N	O	S	0	0
			1124	715	212	194	3		

- Molecule 79 is a protein called Ribosomal protein eS17.

Mol	Chain	Residues	Atoms					AltConf	Trace
79	SR	129	Total	C	N	O	S	0	0
			1047	658	193	191	5		

- Molecule 80 is a protein called Ribosomal protein uS13.

Mol	Chain	Residues	Atoms					AltConf	Trace
80	SS	137	Total	C	N	O	S	0	0
			1139	714	231	193	1		

- Molecule 81 is a protein called Ribosomal protein eS19.

Mol	Chain	Residues	Atoms					AltConf	Trace
81	ST	141	Total	C	N	O	S	0	0
			1101	690	212	196	3		

- Molecule 82 is a protein called Ribosomal protein uS10.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	SU	104	Total	C	N	O	S	0	0
			818	513	153	148	4		

- Molecule 83 is a protein called Ribosomal protein es25.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	SZ	75	Total	C	N	O	S	0	0
			598	382	111	104	1		

- Molecule 84 is a protein called Ribosomal protein eS28.

Mol	Chain	Residues	Atoms					AltConf	Trace
84	Sc	64	Total	C	N	O	S	0	0
			506	308	102	94	2		

- Molecule 85 is a protein called Ribosomal protein uS14.

Mol	Chain	Residues	Atoms					AltConf	Trace
85	Sd	52	Total	C	N	O	S	0	0
			434	273	87	69	5		

- Molecule 86 is a protein called Ribosomal protein eS31.

Mol	Chain	Residues	Atoms					AltConf	Trace
86	Sf	71	Total	C	N	O	S	0	0
			581	367	109	98	7		

- Molecule 87 is a protein called Ribosomal protein RACK1.

Mol	Chain	Residues	Atoms					AltConf	Trace
87	Sg	313	Total	C	N	O	S	0	0
			2436	1535	424	465	12		

- Molecule 88 is a protein called SRP9.

Mol	Chain	Residues	Atoms					AltConf	Trace
88	S1	74	Total	C	N	O	S	0	0
			608	388	105	110	5		

- Molecule 89 is a protein called SRP14.

Mol	Chain	Residues	Atoms					AltConf	Trace
89	S4	76	Total	C	N	O	S	0	0
			604	382	105	113	4		

- Molecule 90 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
90	D	1	Total	Mg	0
			1	1	
90	V	1	Total	Mg	0
			1	1	
90	g	1	Total	Mg	0
			1	1	

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Mol	Chain	Residues	Atoms		AltConf
90	5	116	Total 116	Mg 116	0
90	7	5	Total 5	Mg 5	0
90	8	6	Total 6	Mg 6	0
90	S2	36	Total 36	Mg 36	0

- Molecule 91 is ZINC ION (CCD ID: ZN) (formula: Zn).

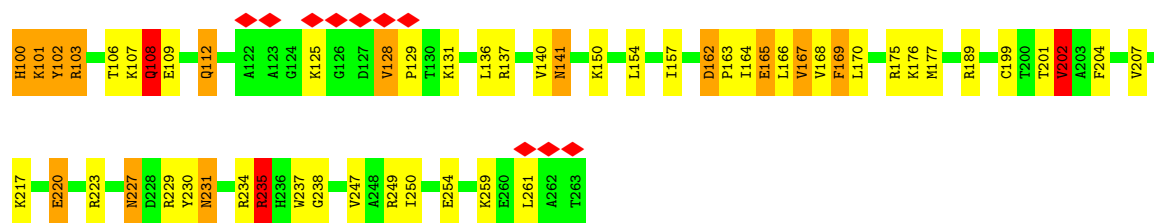
Mol	Chain	Residues	Atoms		AltConf
91	m	1	Total 1	Zn 1	0
91	o	1	Total 1	Zn 1	0
91	j	1	Total 1	Zn 1	0
91	Sa	1	Total 1	Zn 1	0

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

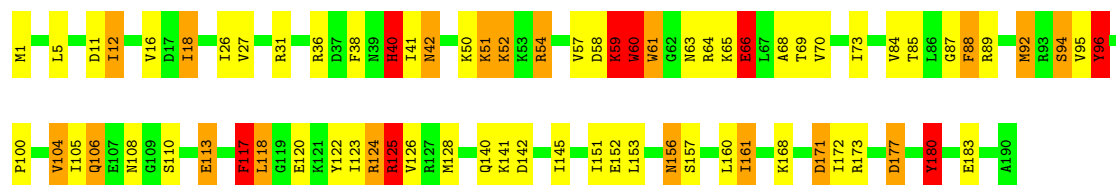
• Molecule 1: Ribosomal protein uL2





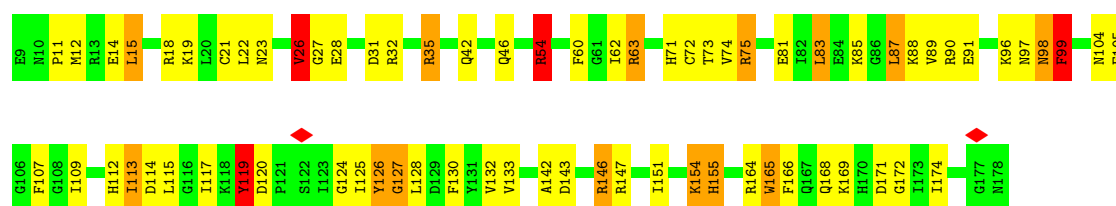
• Molecule 4: Ribosomal protein uL6

Chain H: 61% 25% 10% .



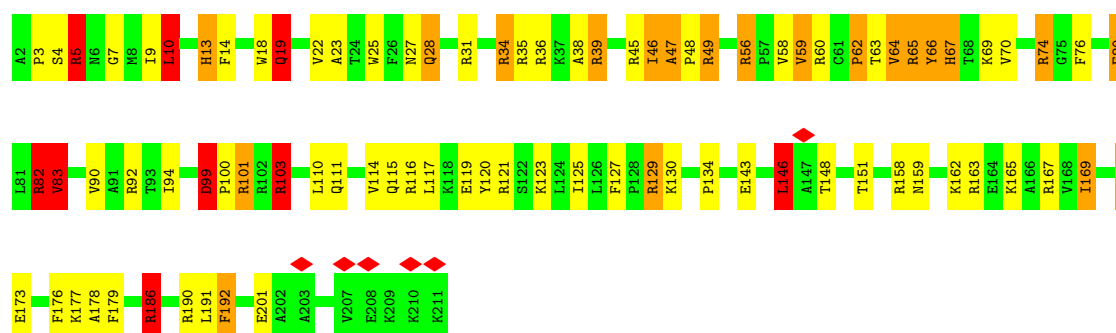
• Molecule 5: Ribosomal protein uL5

Chain J: 58% 32% 8% .



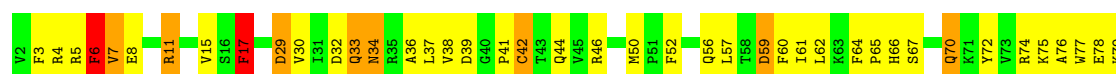
• Molecule 6: Ribosomal protein eL13

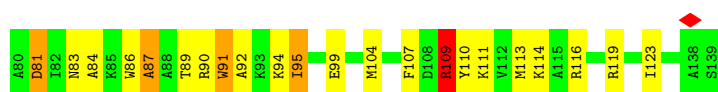
Chain L: 59% 27% 10% .



• Molecule 7: Ribosomal protein eL14

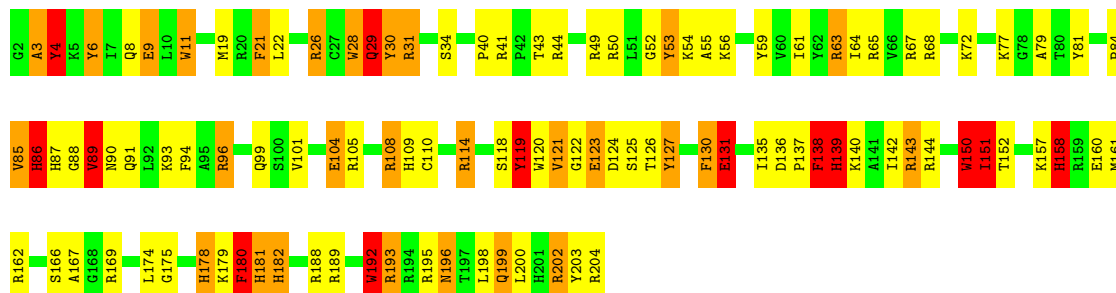
Chain M: 54% 36% 9% .





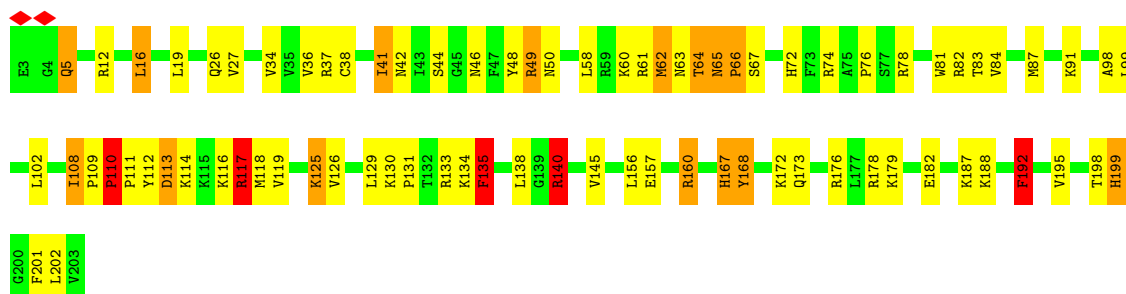
• Molecule 8: Ribosomal protein eL15

Chain N: 47% 33% 14% 6%



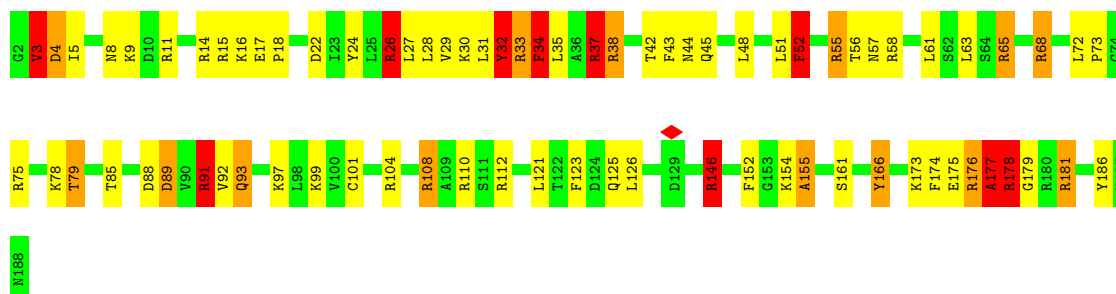
• Molecule 9: Ribosomal protein uL13

Chain O: 60% 30% 7%



• Molecule 10: Ribosomal protein eL18

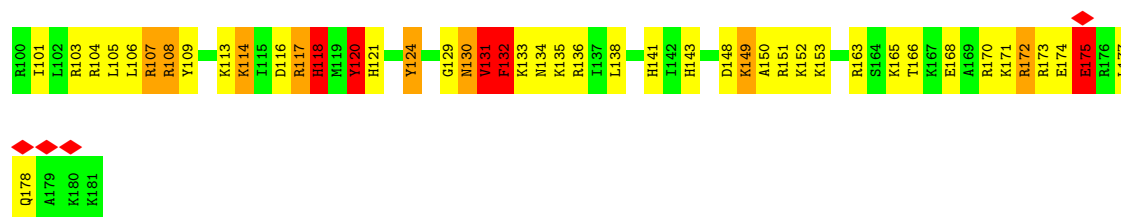
Chain Q: 59% 28% 7% 5%



• Molecule 11: Ribosomal protein eL19

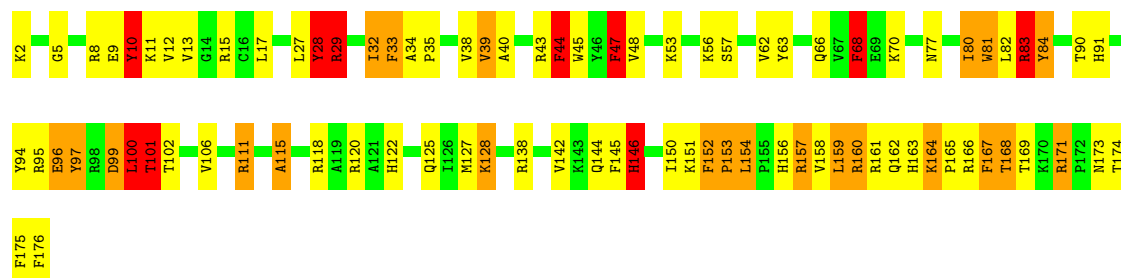
Chain R: 52% 32% 12%





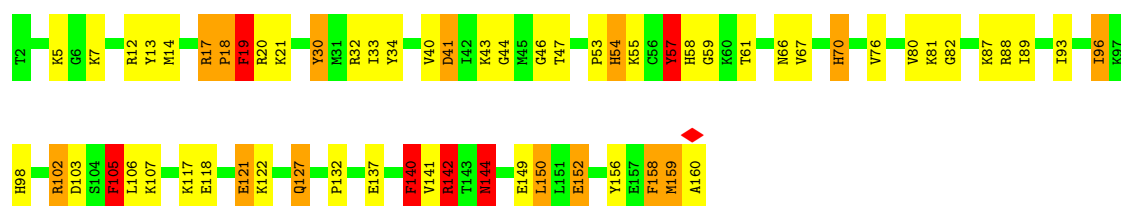
• Molecule 12: Ribosomal protein eL20

Chain S: 50% 31% 13% 6%



• Molecule 13: Ribosomal protein eL21

Chain T: 60% 27% 9%



• Molecule 14: Ribosomal protein eL22

Chain U: 69% 21% 8%



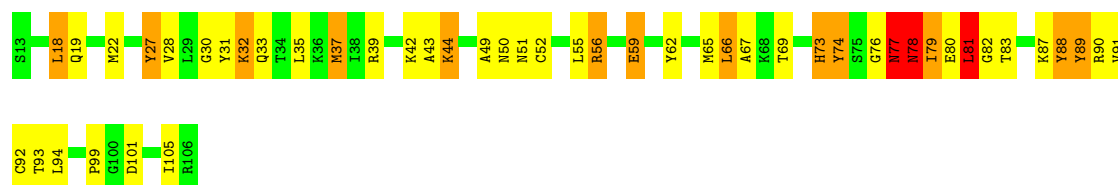
• Molecule 15: Ribosomal protein uL14

Chain V: 63% 24% 8%



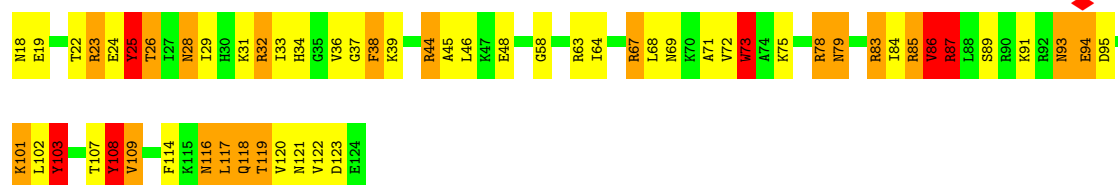
• Molecule 16: Ribosomal protein uL23

Chain c: 



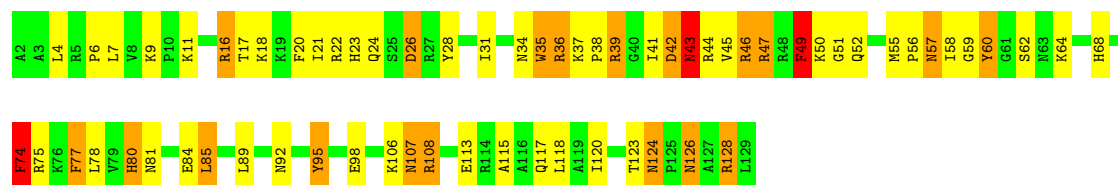
• Molecule 22: Ribosomal protein eL31

Chain d: 



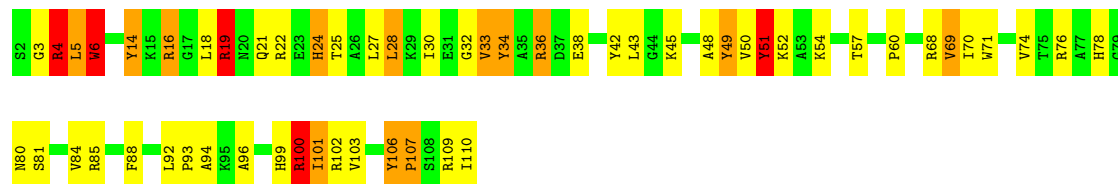
• Molecule 23: Ribosomal protein eL32

Chain e: 



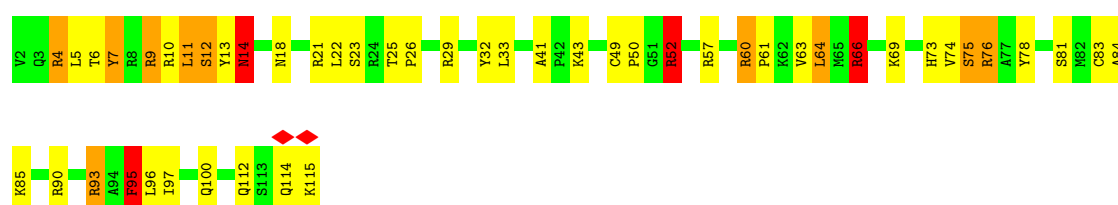
• Molecule 24: Ribosomal protein eL33

Chain f: 

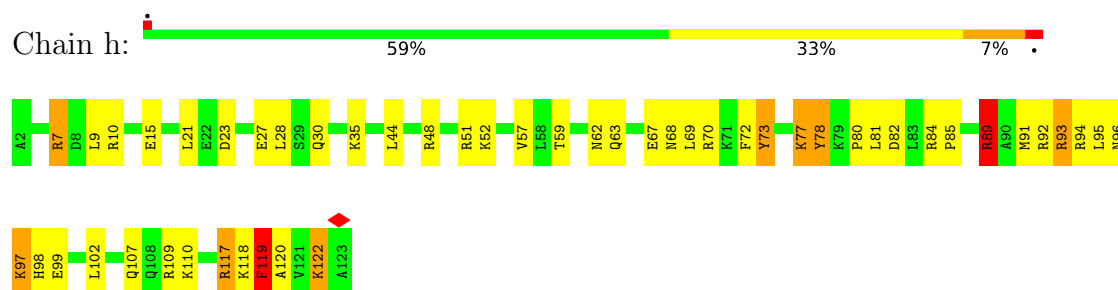


• Molecule 25: Ribosomal protein eL34

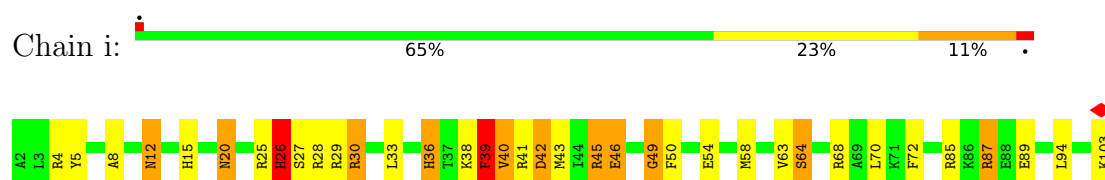
Chain g: 



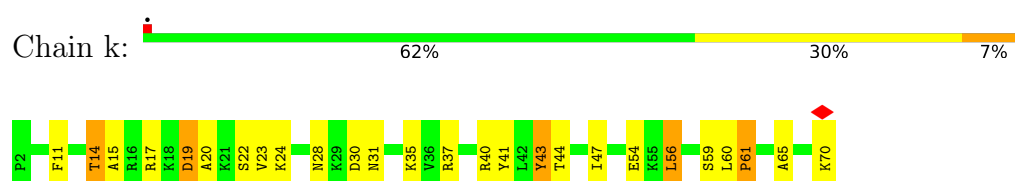
- Molecule 26: Ribosomal protein uL29



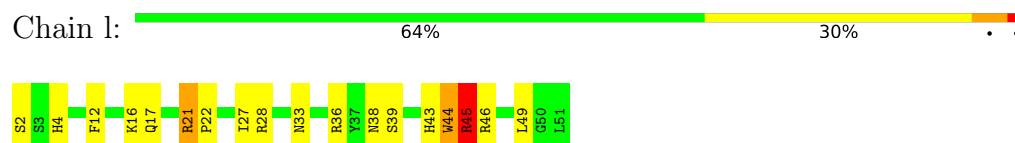
- Molecule 27: Ribosomal protein eL36



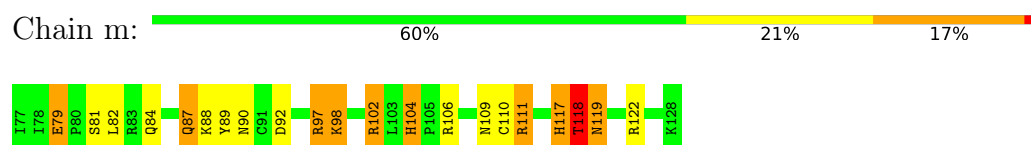
- Molecule 28: Ribosomal protein eL38



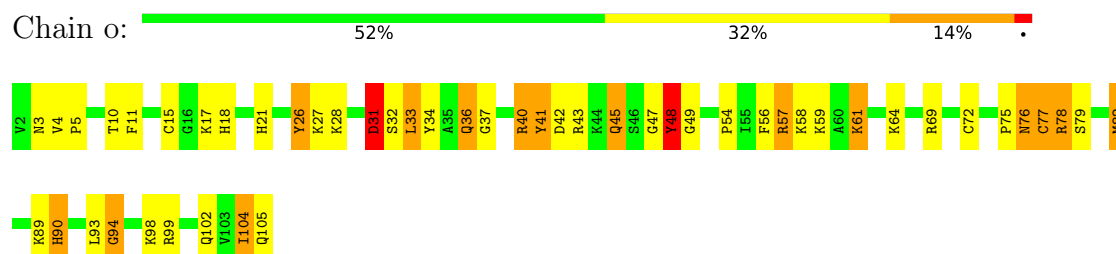
- Molecule 29: Ribosomal protein eL39



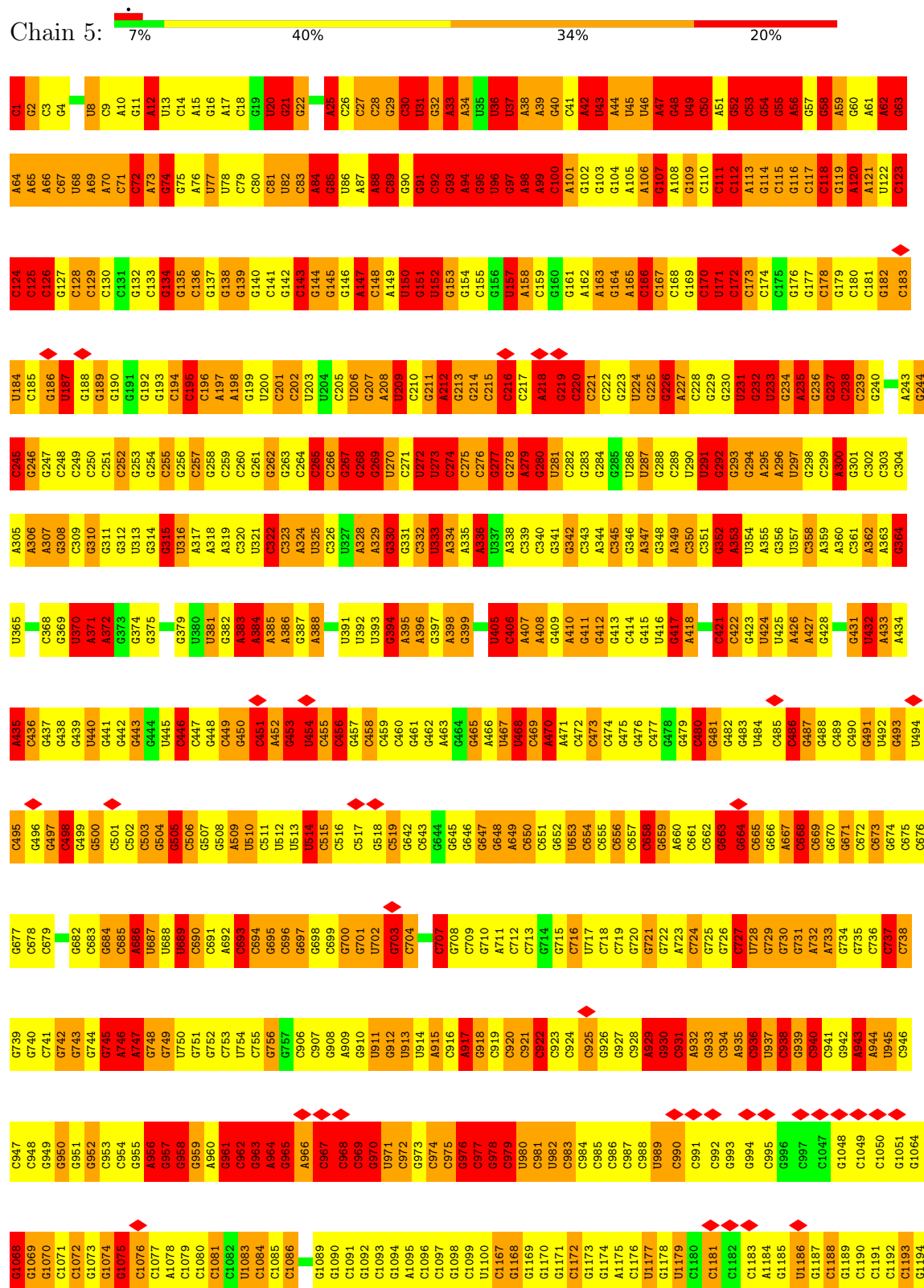
- Molecule 30: Ribosomal protein eL40



- Molecule 31: Ribosomal protein eL42



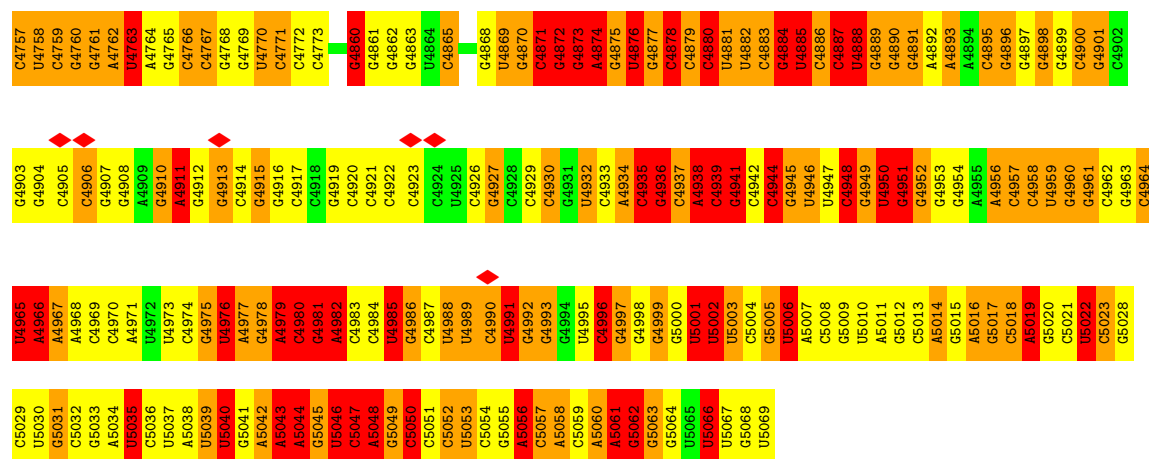
• Molecule 32: 28S ribosomal RNA





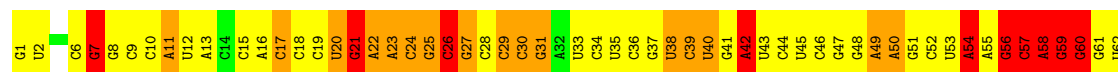
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C4686	U4683	U4561	U4438	C4318	A4256	A4192	C4130	G3949	C3895	C3835	U3771
A4687	G4684	C4562	U4439	G4319	U4257	C4193	C4131	A3949	C3896	A3836	C3772
U4688	U4685	U4563	G4440	G4320	C4258	U4194	C4132	G4074	G3897	U3773	U3773
G4689	C4686	A4564	U4441	U4321	C4259	C4195	C4133	U4075	G3898	A3774	A3774
U4690	A4687	U4565	U4442	G4322	U4260	G4196	C4134	G4076	G3899	G3839	A3775
A4691	U4688	U4566	C4443	A4323	C4261	C4197	G4135	A4077	G3900	U3840	G3776
C4692	U4689	G4567	U4444	A4324	G4261	G4198	C4136	C4078	A3901	C3841	G3777
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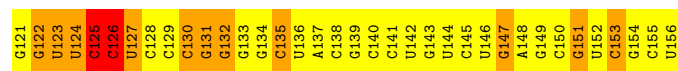
• Molecule 33: 5S ribosomal RNA

Chain 7: 16% 51% 23% 10%



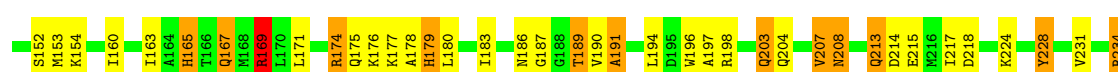
• Molecule 34: 5.8S ribosomal RNA

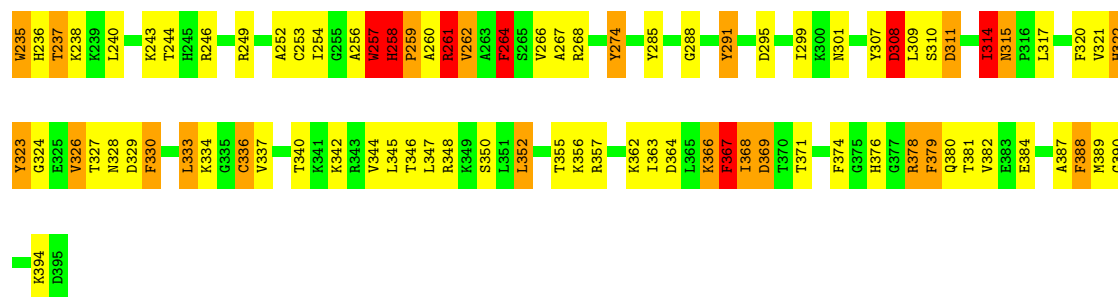
Chain 8: 45% 34% 19%



• Molecule 35: Ribosomal protein uL3

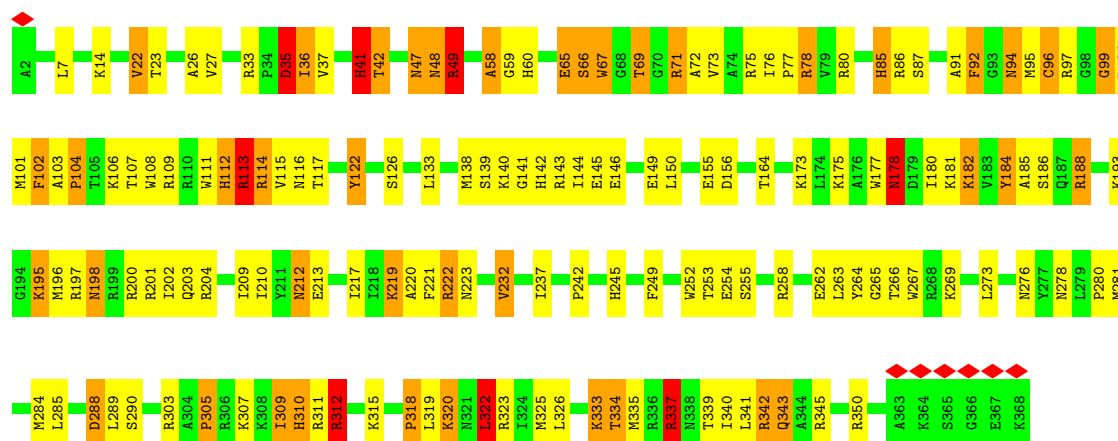
Chain B: 46% 34% 14% 5%





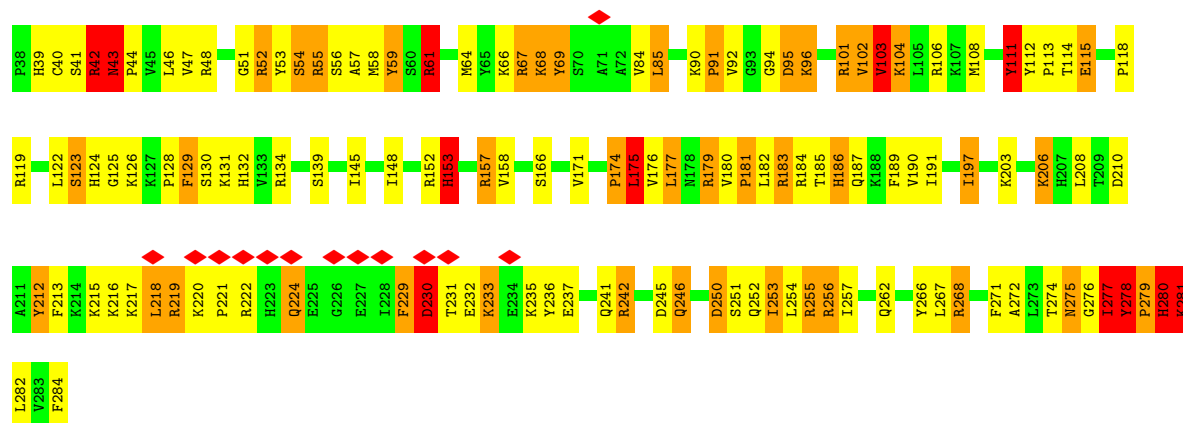
• Molecule 36: Ribosomal protein uL4

Chain C: 57% 29% 11%



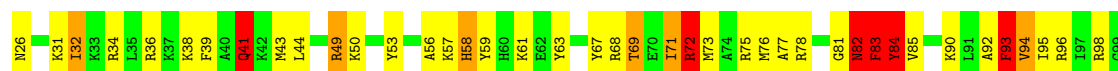
• Molecule 37: Ribosomal protein eL6

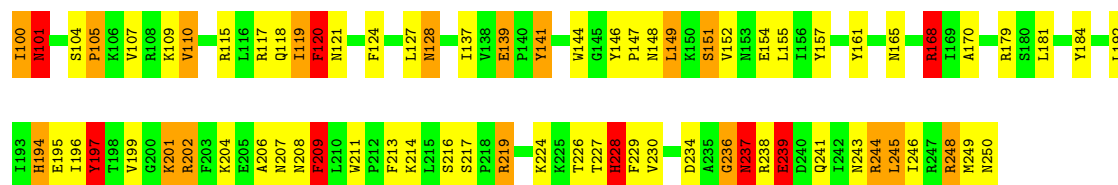
Chain E: 6% 44% 34% 17% 5%



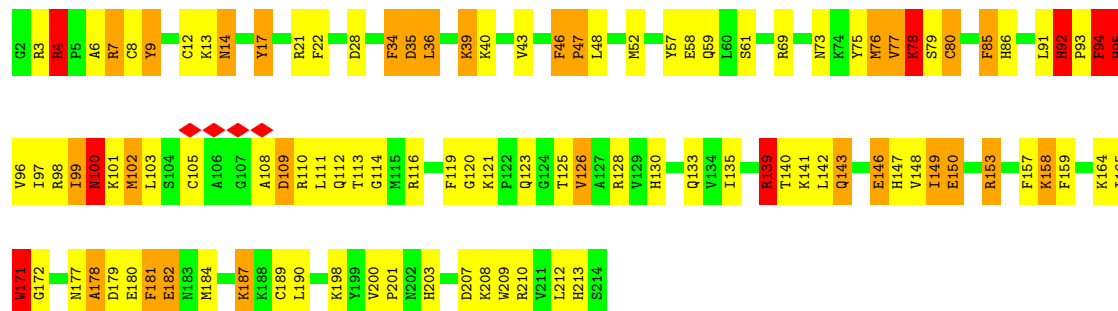
• Molecule 38: Ribosomal protein uL30

Chain F: 49% 35% 10% 6%

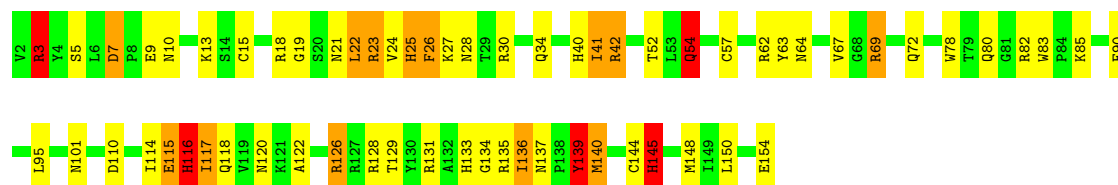




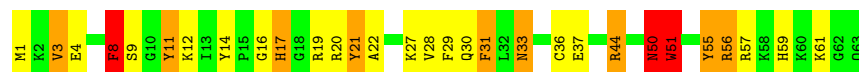
• Molecule 39: Ribosomal protein uL16



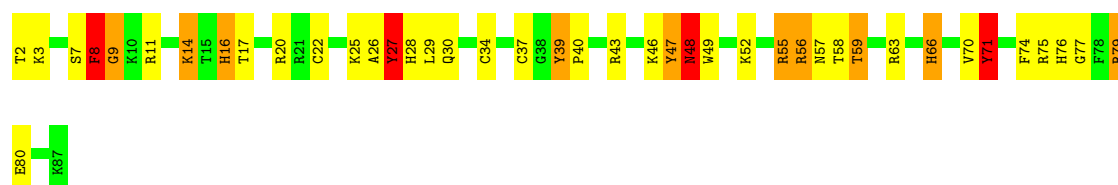
• Molecule 40: Ribosomal protein uL22



• Molecule 41: Ribosomal protein eL24

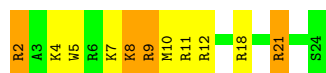


• Molecule 42: Ribosomal protein eL37



• Molecule 43: Ribosomal protein eL41

Chain n: 



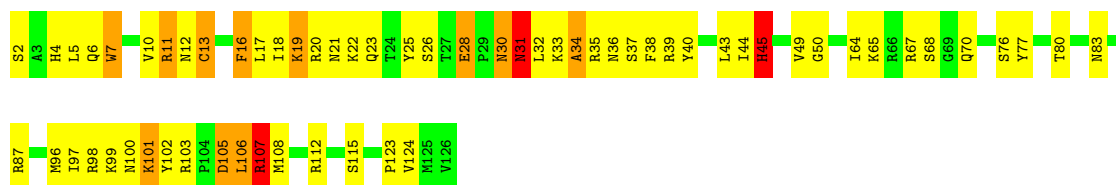
• Molecule 44: Ribosomal protein eL43

Chain p: 



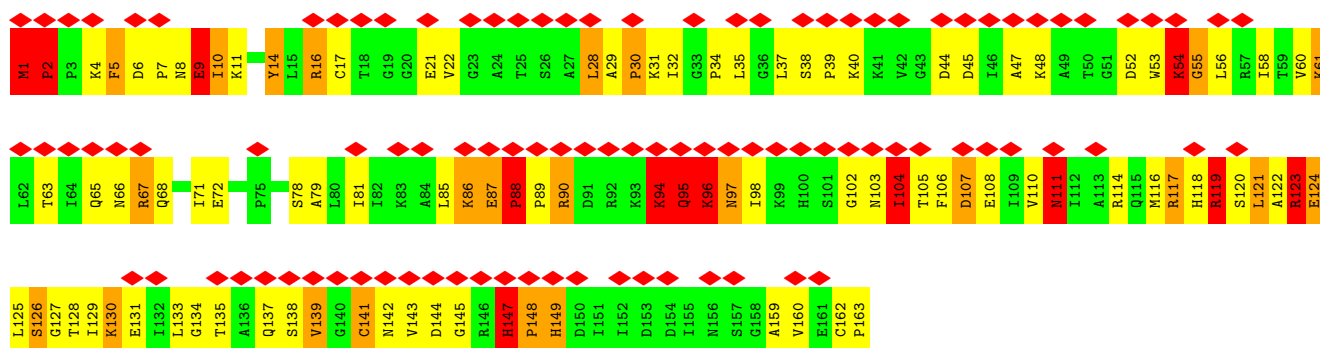
• Molecule 45: Ribosomal protein eL28

Chain r: 



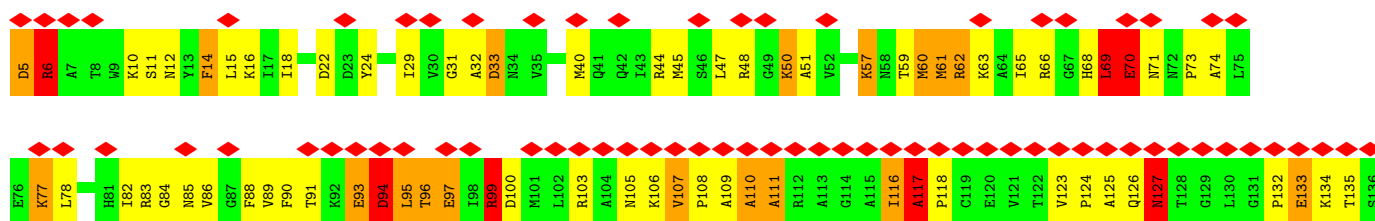
• Molecule 46: Ribosomal protein uL11

Chain K: 



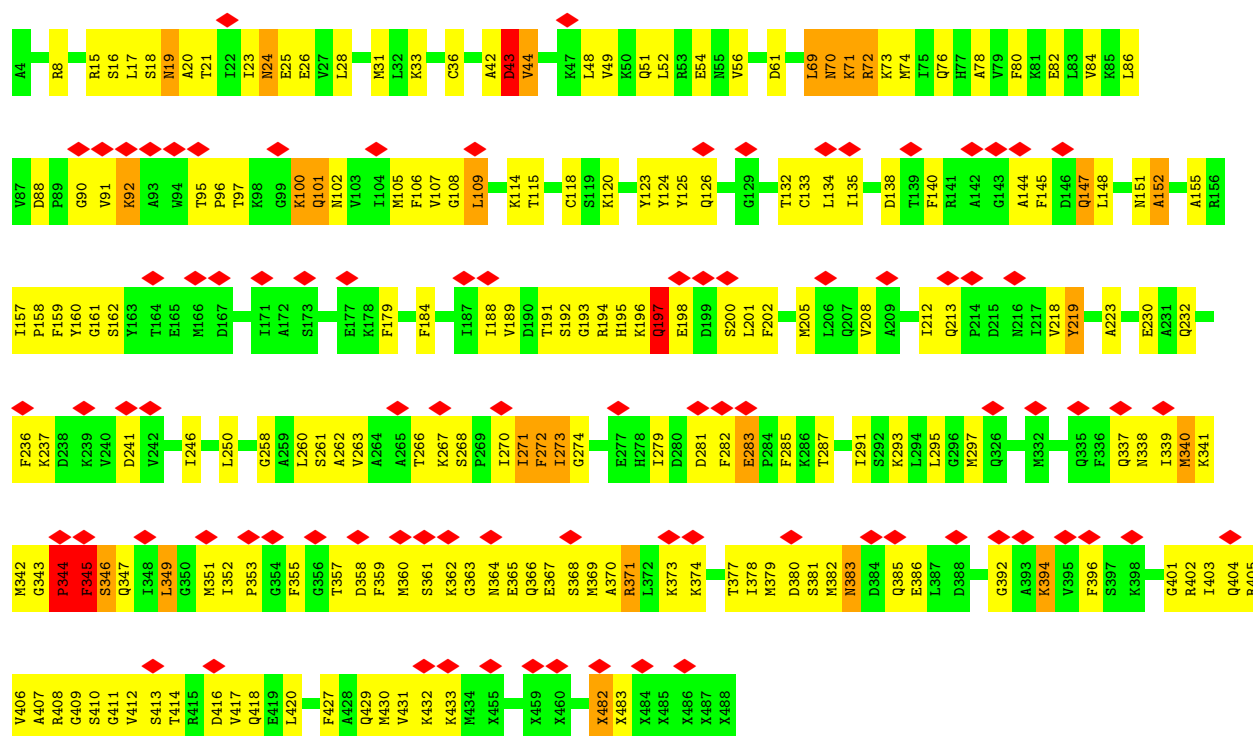
• Molecule 47: Ribosomal protein uL10

Chain q: 





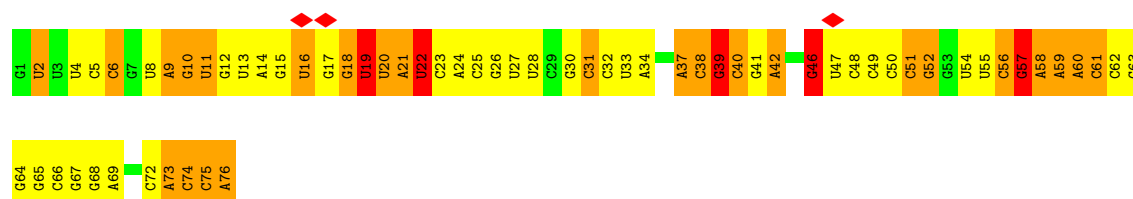
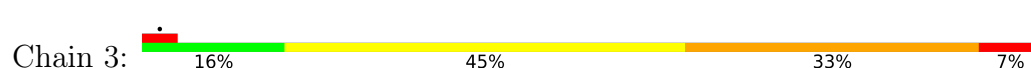
• Molecule 48: SRP54



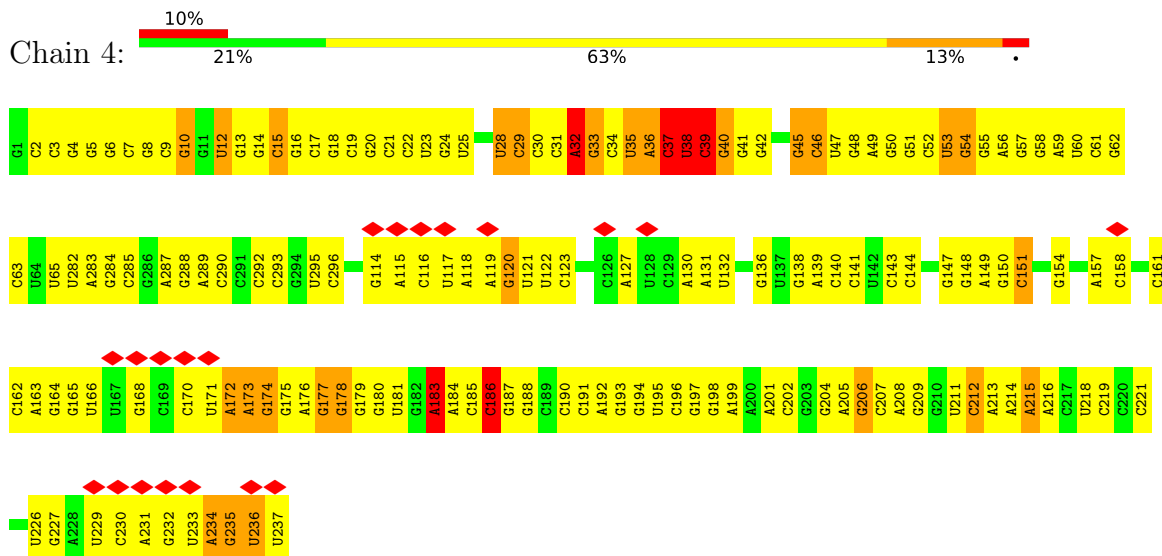
• Molecule 49: Nascent chain



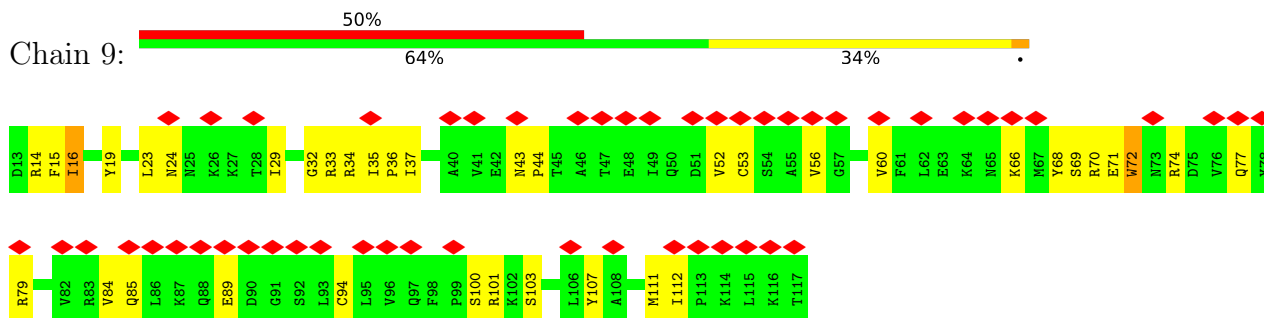
• Molecule 50: Val tRNA



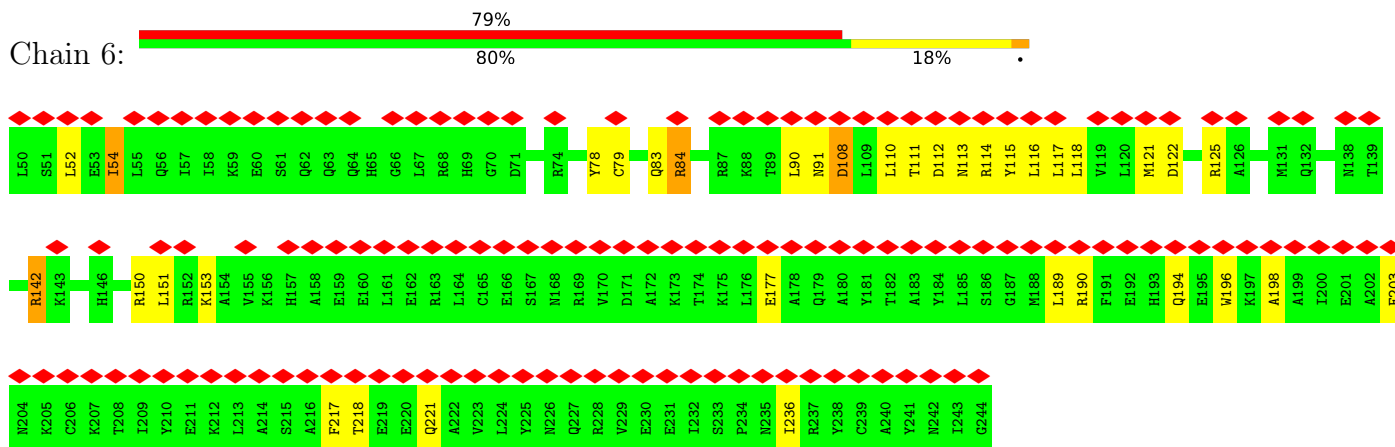
- Molecule 51: SRP 7S RNA



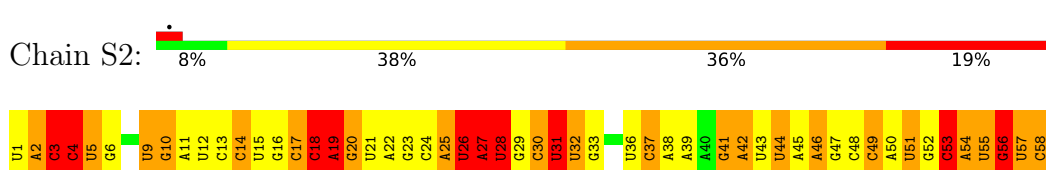
- Molecule 52: SRP19



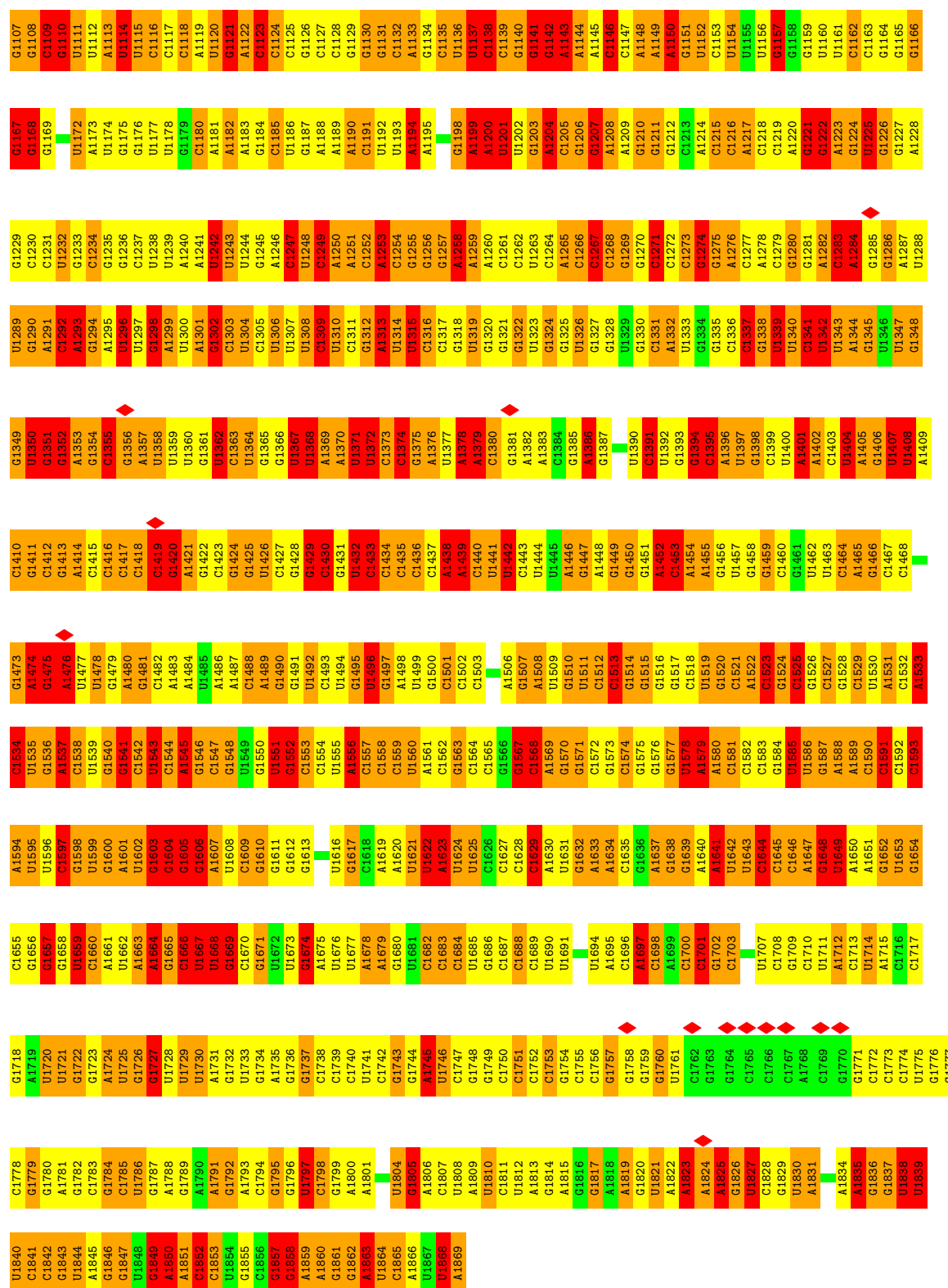
- Molecule 53: SRP68



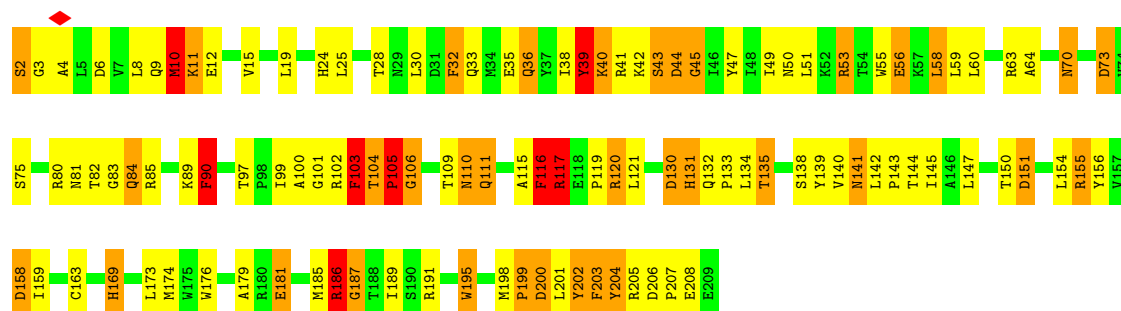
- Molecule 54: 18S ribosomal RNA



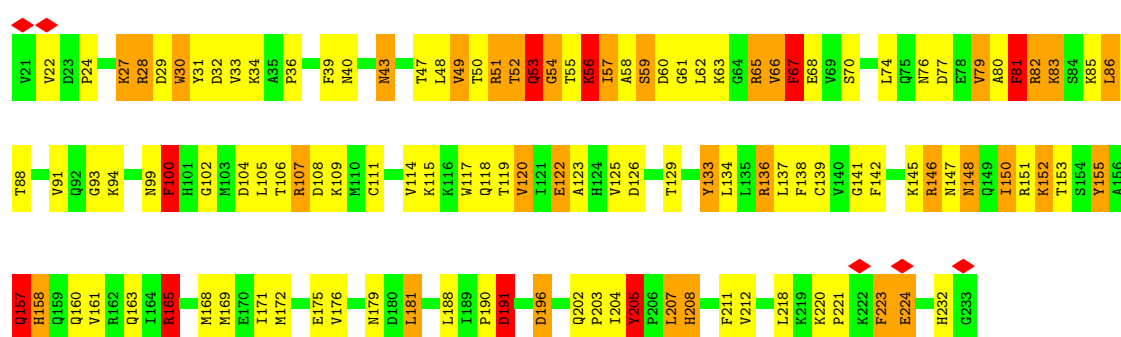
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U556	C557	G558	A559	C560	G561	A562	C563	G564	A565	C566	G567	A568	C569	G570	A571	C572	G573	A574	C575	G576	A577	C578	G579	A580	C581	G582	A583	C584	G585	A586	C587	G588	A589	C590	G591	A592	C593	G594	A595	C596	G597	A598	C599	G600	A601	C602	G603	A604	C605	G606	A607	C608	G609	A610	C611	G612	A613	C614	G615	A616	C617	G618	A619	C620	G621	A622	C623	G624	A625	C626	G627	A628	C629	G630	A631	C632	G633	A634	C635	G636	A637	C638	G639	A639	C640	G641	A642	C643	G644	A645	C646	G647	A648	C649	G650	A651	C652	G653	A654	C655	A656	G657	C658	A659	C660	G661	A662	C663	G664	A665	C666	G667	A668	C669	G670	A671	C672	G673	A674	C675	G676	A677	C678	G679	A680	C681	G682	A683	C684	G685	A686	C687	G688	A689	C690	G691	A692	C693	G694	A695	C696	G697	A698	C699	G700	A701	C702	G703	A704	C705	G706	A707	C708	G709	A710	C711	G712	A713	C714	G715	A716	C717	G718	A719	C720	G721	A722	C723	G724	A725	C726	G727	A728	C729	G730	A731	C732	G733	A734	C735	G736	A737	C738	G739	A740	C741	G742	A743	C744	G745	A746	C747	G748	A749	C750	G751	A752	C753	G754	A755	C756	G757	A758	C759	G760	A761	C762	G763	A764	C765	A766	G767	C768	A769	C770	G771	A772	C773	G774	A775	C776	G777	A778	C779	G780	A781	C782	G783	A784	C785	A786	G787	C788	A789	C790	G791	A792	C793	G794	A795	C796	G797	A798	C799	G800	A801	C802	G803	A804	C805	G806	A807	C808	G809	A810	C811	G812	A813	C814	G815	A816	C817	G818	A819	C820	G821	A822	C823	G824	A825	C826	G827	A828	C829	G830	A831	C832	G833	A834	C835	G836	A837	C838	G839	A840	C841	G842	A843	C844	G845	A846	C847	G848	A849	C850	G851	A852	C853	G854	A855	C856	G857	A858	C859	G860	A861	C862	G863	A864	C865	A866	G867	C868	A869	C870	G871	A872	C873	G874	A875	C876	G877	A878	C879	G880	A881	C882	G883	A884	C885	A886	G887	C888	A889	C890	G891	A892	C893	G894	A895	C896	G897	A898	C899	G900	A901	C902	G903	A904	C905	G906	A907	C908	G909	A910	C911	G912	A913	C914	G915	A916	C917	G918	A919	C920	G921	A922	C923	G924																																																												
U495	C496	G497	A498	C499	G500	A501	C502	G503	A504	C505	G506	A507	C508	G509	A510	C511	G512	A513	C514	G515	A516	C517	G518	A519	C520	G521	A522	C523	G524	A525	C526	G527	A528	C529	G530	A531	C532	G533	A534	C535	G536	A537	C538	G539	A540	C541	G542	A543	C544	G545	A546	C547	G548	A549	C550	G551	A552	C553	G554	A555	C556	G557	A558	C559	G560	A561	C562	G563	A564	C565	A566	G567	C568	A569	C570	G571	A572	C573	G574	A575	C576	G577	A578	C579	G580	A581	C582	G583	A584	C585	A586	G587	C588	A589	C590	G591	A592	C593	G594	A595	C596	G597	A598	C599	G600	A601	C602	G603	A604	C605	G606	A607	C608	G609	A610	C611	G612	A613	C614	G615	A616	C617	G618	A619	C620	G621	A622	C623	G624	A625	C626	G627	A628	C629	G630	A631	C632	G633	A634	C635	G636	A637	C638	G639	A640	C641	G642	A643	C644	G645	A646	C647	G648	A649	C650	G651	A652	C653	G654	A655	C656	G657	A658	C659	G660	A661	C662	G663	A664	C665	A666	G667	C668	A669	C670	G671	A672	C673	G674	A675	C676	G677	A678	C679	G680	A681	C682	G683	A684	C685	A686	G687	C688	A689	C690	G691	A692	C693	G694	A695	C696	G697	A698	C699	G700	A701	C702	G703	A704	C705	G706	A707	C708	G709	A710	C711	G712	A713	C714	G715	A716	C717	G718	A719	C720	G721	A722	C723	G724	A725	C726	G727	A728	C729	G730	A731	C732	G733	A734	C735	G736	A737	C738	G739	A740	C741	G742	A743	C744	G745	A746	C747	G748	A749	C750	G751	A752	C753	G754	A755	C756	G757	A758	C759	G760	A761	C762	G763	A764	C765	A766	G767	C768	A769	C770	G771	A772	C773	G774	A775	C776	G777	A778	C779	G780	A781	C782	G783	A784	C785	A786	G787	C788	A789	C790	G791	A792	C793	G794	A795	C796	G797	A798	C799	G800	A801	C802	G803	A804	C805	G806	A807	C808	G809	A810	C811	G812	A813	C814	G815	A816	C817	G818	A819	C820	G821	A822	C823	G824	A825	C826	G827	A828	C829	G830	A831	C832	G833	A834	C835	G836	A837	C838	G839	A840	C841	G842	A843	C844	G845	A846	C847	G848	A849	C850	G851	A852	C853	G854	A855	C856	G857	A858	C859	G860	A861	C862	G863	A864	C865	A866	G867	C868	A869	C870	G871	A872	C873	G874	A875	C876	G877	A878	C879	G880	A881	C882	G883	A884	C885	A886	G887	C888	A889	C890	G891	A892	C893	G894	A895	C896	G897	A898	C899	G900	A901	C902	G903	A904	C905	G906	A907	C908	G909	A910	C911	G912	A913	C914	G915	A916	C917	G918	A919	C920	G921	A922	C923	G924
U312	C313	A314	G315	C316	A317	G318	C319	A320	G321	C322	A323	G324	C325	A326	G327	A328	C329	G330	A331	C332	G333	A334	C335	A336	G337	C338	A339	G340	C341	A342	G343	A344	C345																																																																																																																																																																																																																																																																																																																																																																																																												



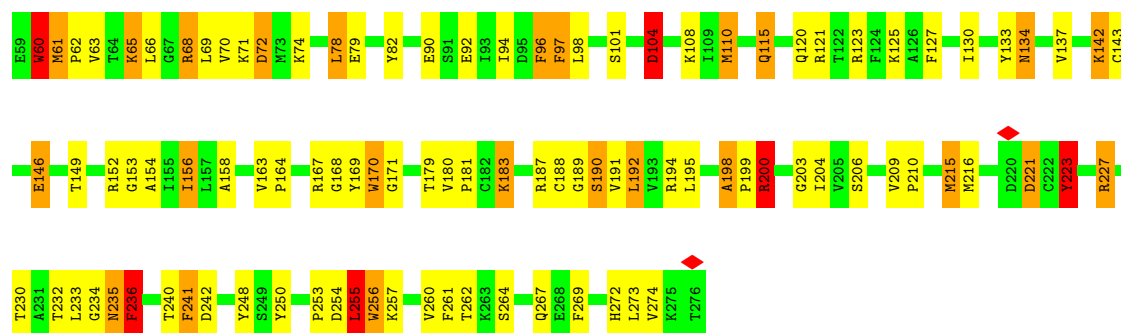
• Molecule 55: Ribosomal protein uS2



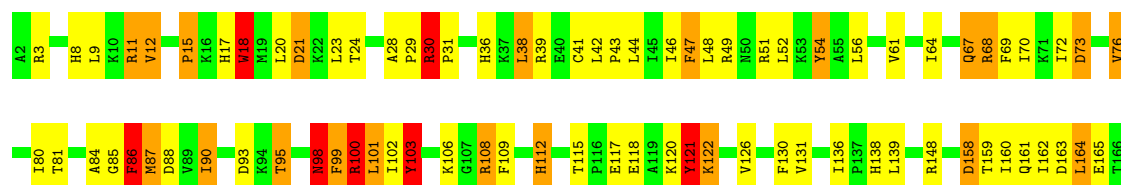
• Molecule 56: Ribosomal protein eS1

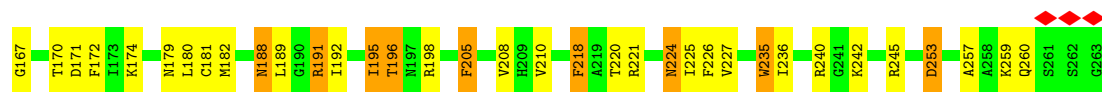


• Molecule 57: Ribosomal protein uS5

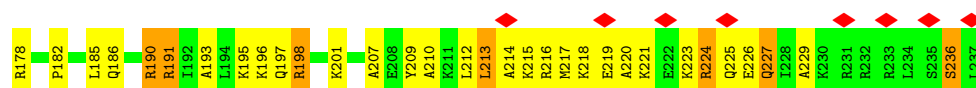
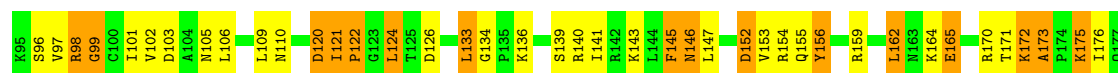
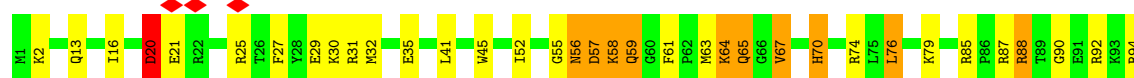


• Molecule 58: Ribosomal protein eS4

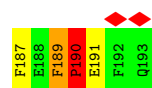
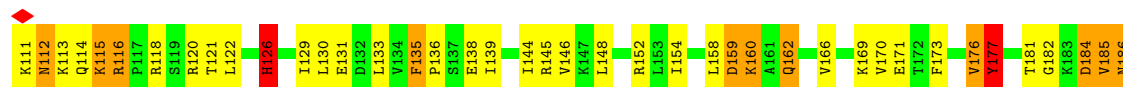
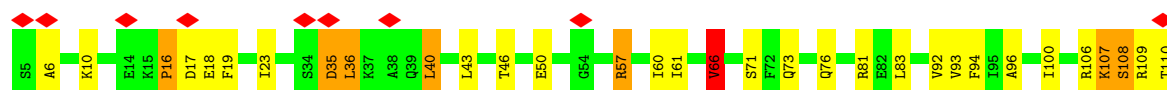




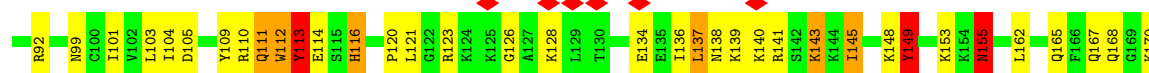
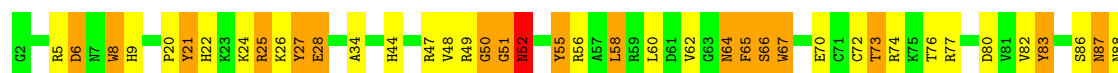
- Molecule 59: Ribosomal protein eS6



- Molecule 60: Ribosomal protein eS7

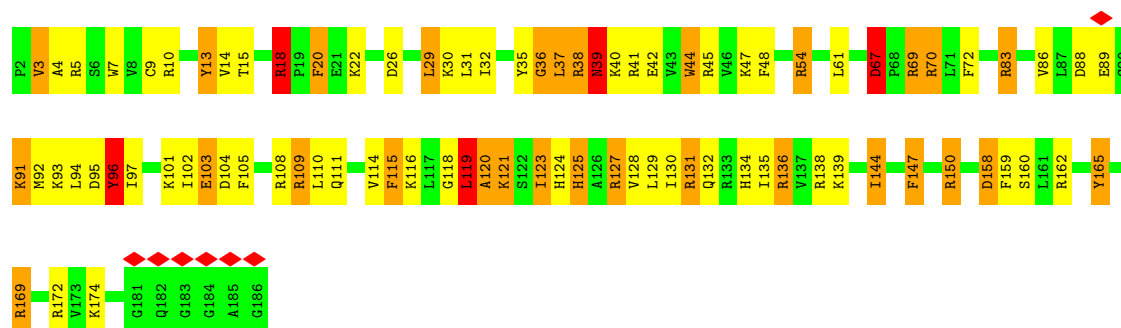


- Molecule 61: Ribosomal protein eS8

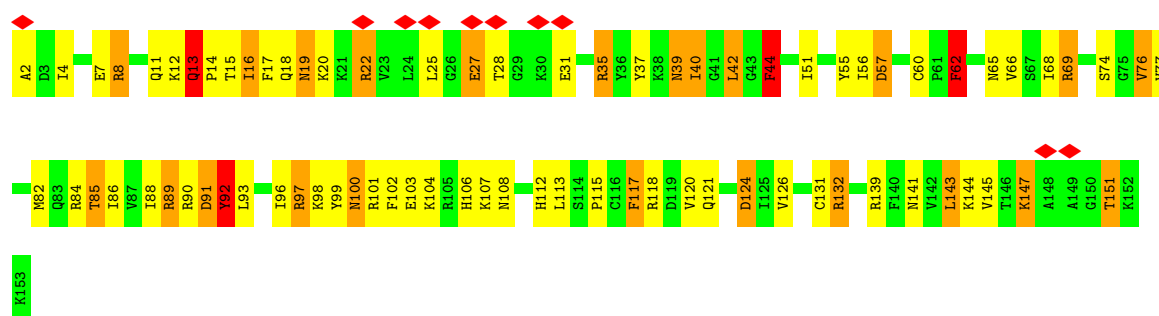


- Molecule 62: Ribosomal protein uS4

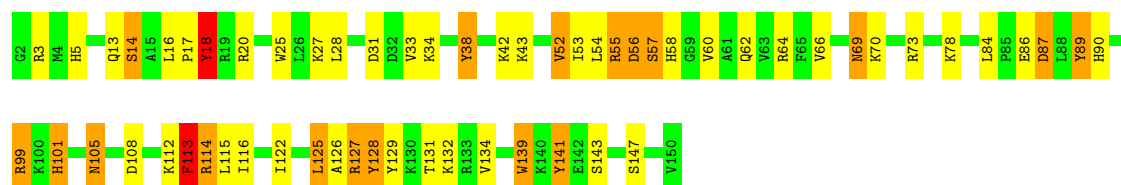




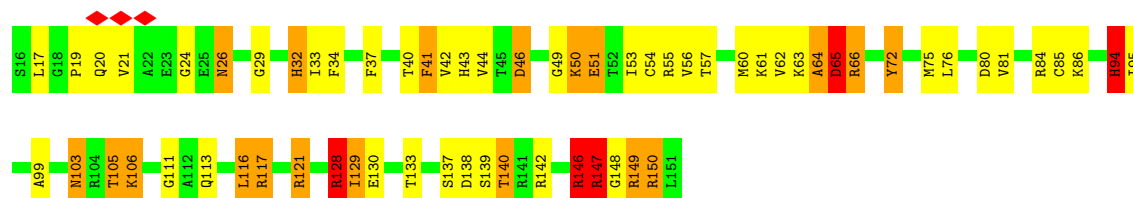
• Molecule 63: Ribosomal protein uS17



• Molecule 64: Ribosomal protein uS15



• Molecule 65: Ribosomal protein uS11



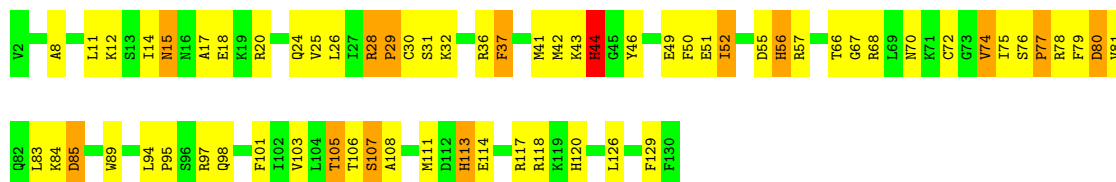
• Molecule 66: Ribosomal protein eS21





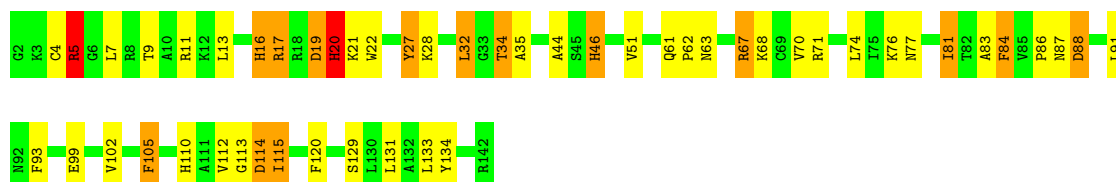
• Molecule 67: Ribosomal protein uS8

Chain SW: 50% 40% 10% .



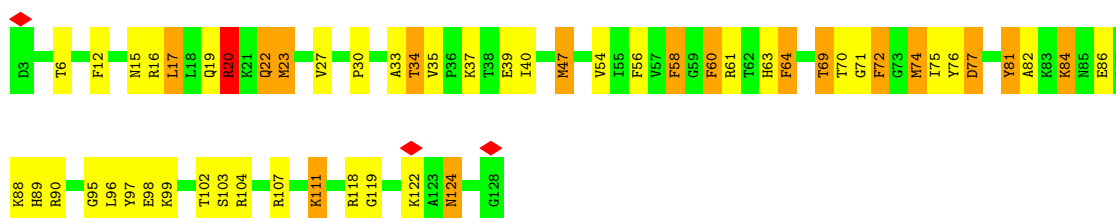
• Molecule 68: Ribosomal protein uS12

Chain SX: 64% 25% 10% .



• Molecule 69: Ribosomal protein eS24

Chain SY: 57% 29% 13% .



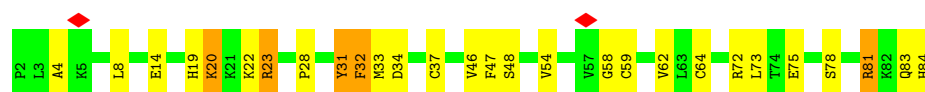
• Molecule 70: Ribosomal protein eS26

Chain Sa: 48% 32% 15% 5%



• Molecule 71: Ribosomal protein eS27

Chain Sb: 66% 28% 6%



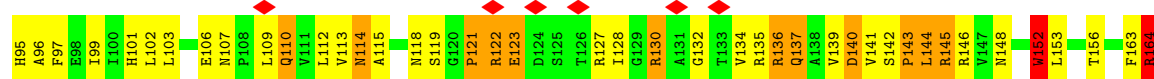
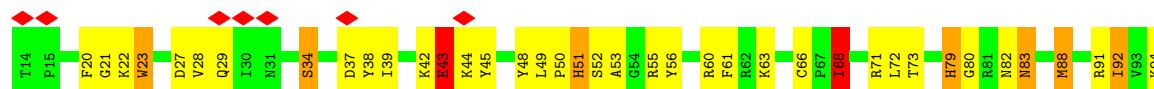
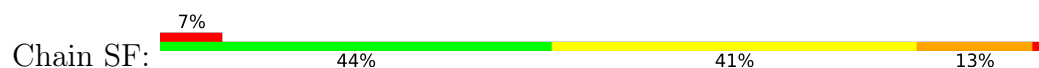
• Molecule 72: Ribosomal protein eS30



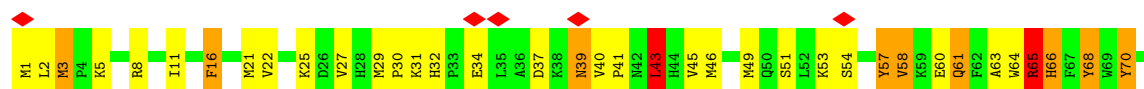
• Molecule 73: Ribosomal protein uS3



• Molecule 74: Ribosomal protein uS7

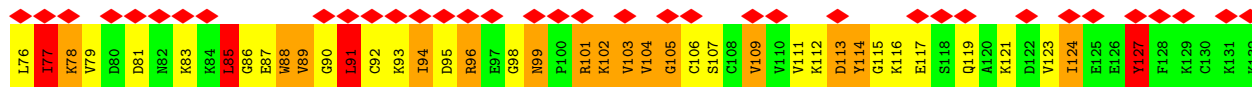
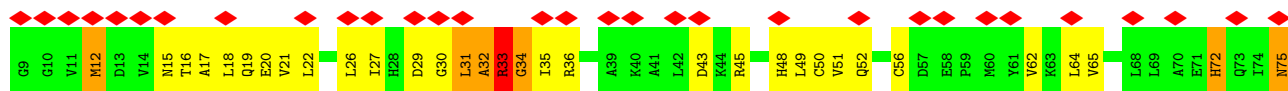


• Molecule 75: Ribosomal protein eS10

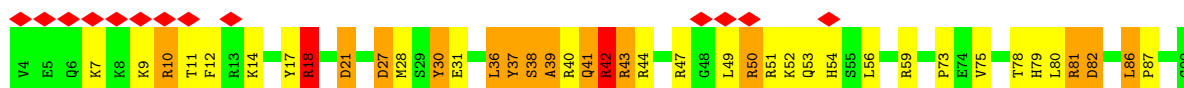




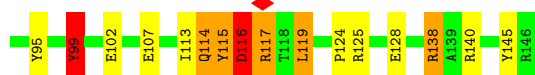
• Molecule 76: Ribosomal protein eS12



• Molecule 77: Ribosomal protein uS19



• Molecule 78: Ribosomal protein uS9

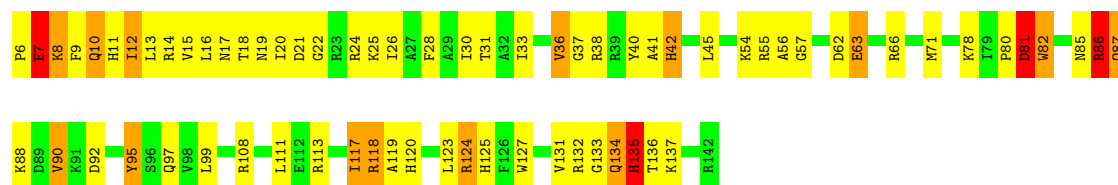


• Molecule 79: Ribosomal protein eS17

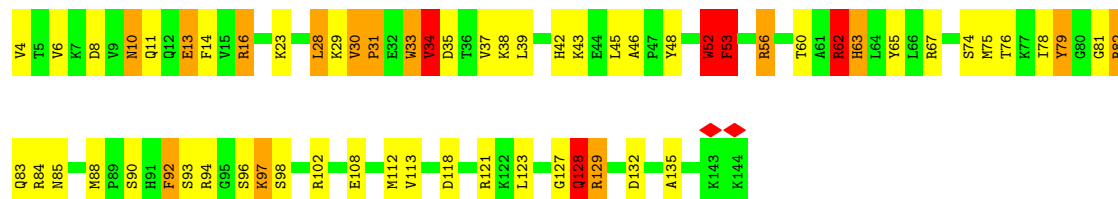


• Molecule 80: Ribosomal protein uS13





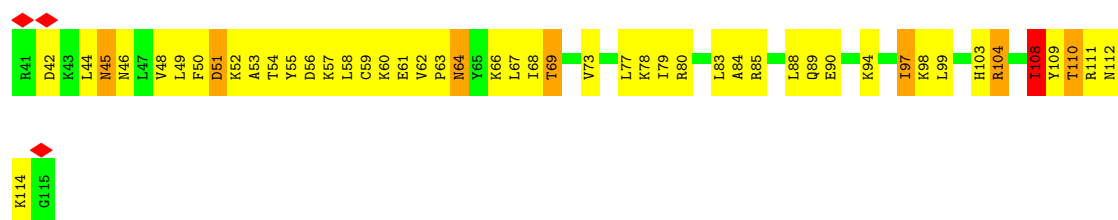
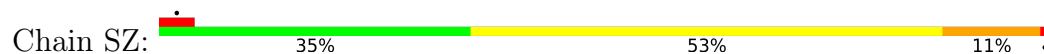
• Molecule 81: Ribosomal protein eS19



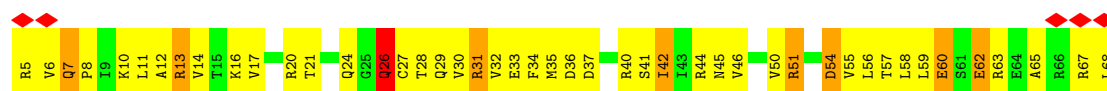
• Molecule 82: Ribosomal protein uS10



• Molecule 83: Ribosomal protein es25

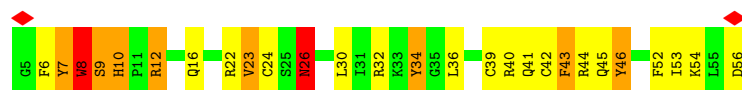


• Molecule 84: Ribosomal protein eS28

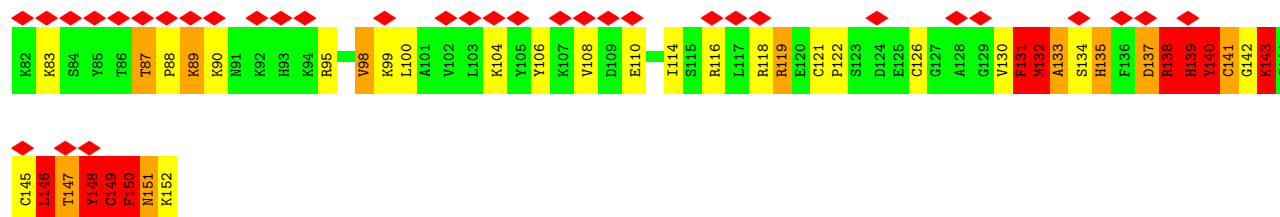
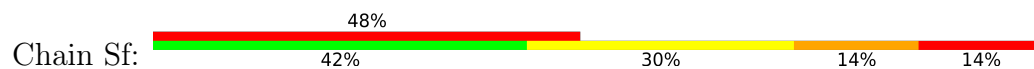


• Molecule 85: Ribosomal protein uS14

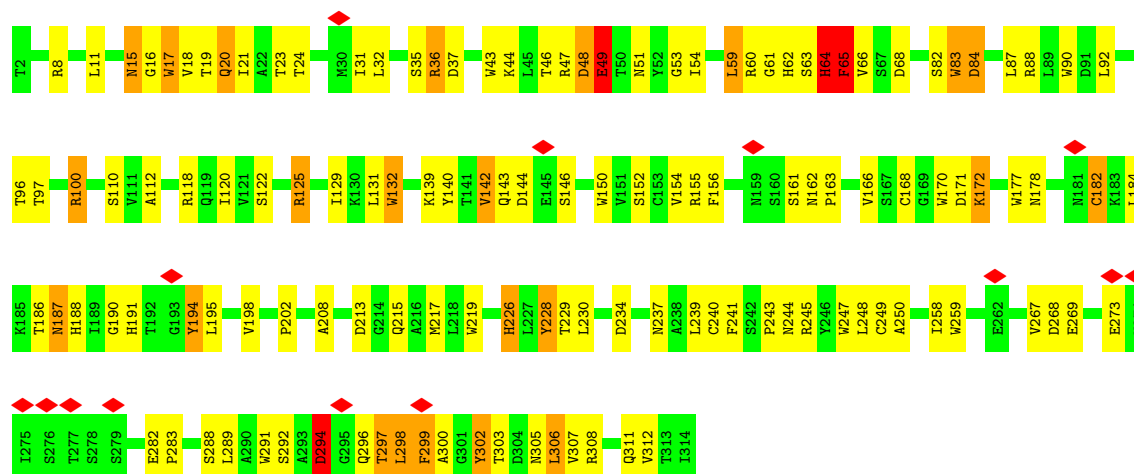




• Molecule 86: Ribosomal protein eS31



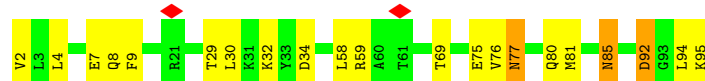
• Molecule 87: Ribosomal protein RACK1



• Molecule 88: SRP9



• Molecule 89: SRP14



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	52061	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Each particle	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	27	Depositor
Minimum defocus (nm)	1000	Depositor
Maximum defocus (nm)	3500	Depositor
Magnification	59000	Depositor
Image detector	FEI FALCON II (4k x 4k)	Depositor
Maximum map value	0.638	Depositor
Minimum map value	-0.471	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.021	Depositor
Recommended contour level	0.05	Depositor
Map size ($\text{\AA}$)	562.8, 562.8, 562.8	wwPDB
Map dimensions	420, 420, 420	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.3399999, 1.3399999, 1.3399999	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.99	7/1906 (0.4%)	1.42	29/2556 (1.1%)
2	D	0.91	9/2426 (0.4%)	1.37	30/3252 (0.9%)
3	G	0.96	9/1944 (0.5%)	1.24	16/2618 (0.6%)
4	H	0.83	3/1537 (0.2%)	1.21	10/2066 (0.5%)
5	J	0.79	2/1382 (0.1%)	1.12	8/1849 (0.4%)
6	L	0.81	2/1734 (0.1%)	1.19	7/2318 (0.3%)
7	M	0.80	1/1152 (0.1%)	1.22	8/1539 (0.5%)
8	N	0.93	3/1746 (0.2%)	1.43	25/2338 (1.1%)
9	O	0.83	2/1684 (0.1%)	1.30	15/2251 (0.7%)
10	Q	0.89	6/1530 (0.4%)	1.37	19/2041 (0.9%)
11	R	1.14	3/1524 (0.2%)	1.41	13/2013 (0.6%)
12	S	1.21	10/1493 (0.7%)	1.50	25/2002 (1.2%)
13	T	0.78	2/1326 (0.2%)	1.14	8/1770 (0.5%)
14	U	0.88	3/822 (0.4%)	1.11	2/1103 (0.2%)
15	V	0.78	0/993	1.16	3/1332 (0.2%)
16	X	0.80	0/993	1.15	4/1334 (0.3%)
17	Y	0.87	3/1132 (0.3%)	1.30	16/1504 (1.1%)
18	Z	0.89	3/1130 (0.3%)	1.27	9/1507 (0.6%)
19	a	0.92	7/1192 (0.6%)	1.38	14/1591 (0.9%)
20	b	0.94	1/620 (0.2%)	1.43	8/819 (1.0%)
21	c	0.83	1/742 (0.1%)	1.30	9/996 (0.9%)
22	d	0.92	3/903 (0.3%)	1.32	12/1216 (1.0%)
23	e	0.91	3/1071 (0.3%)	1.31	15/1429 (1.0%)
24	f	1.01	5/895 (0.6%)	1.37	6/1198 (0.5%)
25	g	0.81	0/916	1.25	10/1220 (0.8%)
26	h	0.74	1/1023 (0.1%)	1.22	8/1350 (0.6%)
27	i	0.84	3/843 (0.4%)	1.26	7/1115 (0.6%)
28	k	0.68	0/575	1.07	1/761 (0.1%)
29	l	0.74	0/454	1.21	4/599 (0.7%)
30	m	0.67	0/435	1.13	1/575 (0.2%)
31	o	0.81	2/864 (0.2%)	1.33	12/1140 (1.1%)
32	5	0.58	12/87703 (0.0%)	1.26	1305/136805 (1.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
33	7	0.53	0/2858	1.13	22/4455 (0.5%)
34	8	0.59	1/3701 (0.0%)	1.27	62/5766 (1.1%)
35	B	0.93	10/3214 (0.3%)	1.26	28/4308 (0.6%)
36	C	0.88	4/2973 (0.1%)	1.23	17/3990 (0.4%)
37	E	0.95	5/1941 (0.3%)	1.35	24/2601 (0.9%)
38	F	0.89	0/1905	1.41	30/2539 (1.2%)
39	I	0.77	2/1753 (0.1%)	1.25	17/2343 (0.7%)
40	P	0.99	4/1268 (0.3%)	1.31	15/1701 (0.9%)
41	W	0.92	1/541 (0.2%)	1.30	3/720 (0.4%)
42	j	0.94	1/721 (0.1%)	1.43	15/953 (1.6%)
43	n	0.97	0/223	1.20	0/284
44	p	0.74	1/718 (0.1%)	1.18	3/953 (0.3%)
45	r	0.79	1/1017 (0.1%)	1.24	9/1365 (0.7%)
46	K	1.22	3/1256 (0.2%)	1.59	19/1694 (1.1%)
47	q	0.97	1/1580 (0.1%)	1.16	8/2133 (0.4%)
48	z	1.25	9/3171 (0.3%)	1.41	12/4257 (0.3%)
49	2	0.74	0/234	1.31	5/317 (1.6%)
50	3	1.29	2/1804 (0.1%)	1.18	11/2805 (0.4%)
51	4	0.61	1/5090 (0.0%)	0.76	6/7936 (0.1%)
52	9	0.45	0/858	0.90	0/1156
53	6	0.38	0/1521	0.80	2/2039 (0.1%)
54	S2	0.59	11/41241 (0.0%)	1.26	597/64249 (0.9%)
55	SA	0.86	2/1679 (0.1%)	1.25	14/2283 (0.6%)
56	SB	0.92	5/1753 (0.3%)	1.30	17/2350 (0.7%)
57	SC	0.84	3/1726 (0.2%)	1.23	15/2332 (0.6%)
58	SE	0.85	5/2118 (0.2%)	1.26	15/2849 (0.5%)
59	SG	0.81	1/1946 (0.1%)	1.17	10/2590 (0.4%)
60	SH	0.70	0/1544	1.13	4/2068 (0.2%)
61	SI	0.97	5/1715 (0.3%)	1.29	14/2287 (0.6%)
62	SJ	0.80	0/1550	1.27	9/2069 (0.4%)
63	SL	0.84	2/1259 (0.2%)	1.25	13/1684 (0.8%)
64	SN	0.82	3/1226 (0.2%)	1.23	11/1649 (0.7%)
65	SO	0.84	0/1029	1.32	7/1380 (0.5%)
66	SV	0.72	0/631	1.08	2/844 (0.2%)
67	SW	0.82	0/1051	1.21	6/1406 (0.4%)
68	SX	0.86	3/1118 (0.3%)	1.18	6/1493 (0.4%)
69	SY	0.75	1/1040 (0.1%)	1.12	5/1382 (0.4%)
70	Sa	0.93	2/794 (0.3%)	1.37	9/1065 (0.8%)
71	Sb	0.70	0/665	1.05	2/891 (0.2%)
72	Se	0.66	0/458	1.05	2/602 (0.3%)
73	SD	0.84	0/1793	1.19	11/2414 (0.5%)
74	SF	0.82	2/1531 (0.1%)	1.24	9/2059 (0.4%)
75	SK	0.83	0/851	1.21	7/1147 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
76	SM	1.09	1/970 (0.1%)	1.27	7/1300 (0.5%)
77	SP	1.15	3/816 (0.4%)	1.21	5/1084 (0.5%)
78	SQ	0.71	0/1142	1.13	6/1528 (0.4%)
79	SR	0.69	0/1060	1.04	4/1421 (0.3%)
80	SS	0.65	0/1157	1.16	5/1548 (0.3%)
81	ST	0.81	2/1119 (0.2%)	1.29	11/1499 (0.7%)
82	SU	0.76	0/828	1.06	2/1112 (0.2%)
83	SZ	0.71	0/604	1.06	0/810
84	Sc	0.75	2/507 (0.4%)	1.01	2/677 (0.3%)
85	Sd	0.87	1/445 (0.2%)	1.20	3/589 (0.5%)
86	Sf	1.39	8/593 (1.3%)	1.68	14/786 (1.8%)
87	Sg	0.76	1/2493 (0.0%)	1.02	9/3394 (0.3%)
88	S1	1.15	5/619 (0.8%)	1.16	5/832 (0.6%)
89	S4	0.78	2/608 (0.3%)	1.00	0/809
All	All	0.73	222/244716 (0.1%)	1.25	2825/359004 (0.8%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	8
2	D	0	9
3	G	0	4
4	H	0	2
5	J	0	2
6	L	0	4
7	M	0	3
8	N	0	9
9	O	0	4
10	Q	0	5
11	R	0	7
12	S	0	8
13	T	0	2
15	V	0	3
16	X	0	2
17	Y	0	3
18	Z	0	1
19	a	0	6
20	b	0	2
21	c	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
22	d	0	5
23	e	0	1
24	f	0	2
25	g	0	2
26	h	0	1
27	i	0	3
28	k	0	1
30	m	0	1
31	o	0	3
32	5	0	175
33	7	0	2
34	8	0	11
35	B	0	12
36	C	0	4
37	E	0	16
38	F	0	8
39	I	0	3
40	P	0	4
41	W	0	1
42	j	0	4
44	p	0	2
45	r	0	3
46	K	0	10
47	q	0	8
48	z	0	7
49	2	0	1
54	S2	0	59
55	SA	0	5
56	SB	0	7
57	SC	0	7
58	SE	0	6
59	SG	0	1
60	SH	0	2
61	SI	0	9
62	SJ	0	3
63	SL	0	3
64	SN	0	5
65	SO	0	1
66	SV	0	3
67	SW	0	3
68	SX	0	2
69	SY	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
70	Sa	0	3
71	Sb	0	1
73	SD	0	3
74	SF	0	4
75	SK	0	1
76	SM	0	2
77	SP	0	3
78	SQ	0	1
80	SS	0	1
81	ST	0	2
82	SU	0	1
83	SZ	0	1
85	Sd	0	3
86	Sf	0	4
87	Sg	0	3
88	S1	0	4
All	All	0	529

All (222) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
50	3	31	C	O3'-P	-49.79	0.86	1.61
48	z	340	MET	C-N	41.63	1.86	1.33
51	4	183	A	O3'-P	-35.33	1.08	1.61
48	z	345	PHE	C-N	-29.97	0.91	1.33
32	5	1823	G	O3'-P	28.48	2.03	1.61
11	R	149	LYS	C-N	25.27	1.67	1.33
12	S	81	TRP	CA-CB	17.02	1.74	1.53
77	SP	21	ASP	CG-OD1	16.61	1.56	1.25
46	K	9	GLU	C-N	-16.54	1.11	1.33
46	K	2	PRO	CA-C	14.58	1.65	1.52
88	S1	44	ASP	CG-OD2	13.86	1.51	1.25
61	SI	99	ASN	CG-OD1	12.55	1.47	1.23
3	G	54	PHE	N-CA	12.19	1.60	1.46
40	P	139	TYR	CA-CB	12.18	1.70	1.52
50	3	39	G	O3'-P	-12.03	1.43	1.61
36	C	35	ASP	CG-OD1	10.97	1.46	1.25
4	H	66	GLU	CD-OE1	10.80	1.45	1.25
61	SI	99	ASN	CG-ND2	10.79	1.55	1.33
3	G	54	PHE	CA-CB	10.71	1.68	1.53
77	SP	21	ASP	CG-OD2	10.53	1.45	1.25
37	E	278	TYR	CA-CB	10.40	1.69	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	S	96	GLU	CD-OE1	10.34	1.45	1.25
3	G	53	ARG	CA-C	10.11	1.66	1.52
48	z	25	GLU	CD-OE2	9.82	1.44	1.25
58	SE	18	TRP	CA-CB	9.45	1.66	1.53
88	S1	44	ASP	CG-OD1	9.36	1.43	1.25
86	Sf	148	TYR	CA-C	8.98	1.64	1.52
3	G	54	PHE	CB-CG	-8.94	1.30	1.50
89	S4	75	GLU	CD-OE1	8.87	1.42	1.25
86	Sf	149	CYS	N-CA	8.79	1.56	1.46
48	z	25	GLU	CD-OE1	8.67	1.41	1.25
10	Q	34	PHE	CA-CB	8.61	1.68	1.53
8	N	119	TYR	CA-CB	8.58	1.66	1.53
12	S	10	TYR	CA-CB	8.38	1.67	1.53
1	A	209	HIS	CA-C	8.32	1.62	1.52
85	Sd	46	TYR	CA-CB	8.28	1.64	1.52
35	B	257	TRP	CA-CB	8.25	1.67	1.53
74	SF	127	ARG	CZ-NH1	8.12	1.44	1.32
81	ST	33	TRP	CA-CB	8.11	1.66	1.53
3	G	46	GLN	CD-NE2	8.07	1.50	1.33
35	B	59	GLU	CD-OE2	8.07	1.40	1.25
59	SG	35	GLU	CD-OE1	8.06	1.40	1.25
54	S2	1292	C	O3'-P	8.05	1.73	1.61
12	S	96	GLU	CD-OE2	8.05	1.40	1.25
84	Sc	26	GLN	CD-OE1	8.01	1.38	1.23
88	S1	8	GLU	CD-OE1	8.00	1.40	1.25
2	D	44	TYR	CA-CB	7.97	1.67	1.53
1	A	40	TYR	CA-CB	7.79	1.61	1.53
2	D	95	TYR	CA-CB	7.50	1.65	1.53
39	I	171	TRP	CA-CB	7.44	1.61	1.52
1	A	34	PHE	N-CA	7.42	1.54	1.46
47	q	93	GLU	CD-OE1	7.38	1.39	1.25
48	z	344	PRO	C-N	7.32	1.44	1.33
58	SE	86	PHE	CA-CB	7.31	1.65	1.53
12	S	29	ARG	CA-CB	7.31	1.65	1.53
2	D	21	ARG	N-CA	7.25	1.55	1.46
58	SE	121	TYR	CA-C	7.24	1.62	1.52
40	P	139	TYR	CA-C	7.22	1.61	1.53
54	S2	1309	C	O3'-P	7.18	1.72	1.61
54	S2	1290	G	O3'-P	7.16	1.71	1.61
5	J	14	GLU	CD-OE1	7.11	1.38	1.25
54	S2	427	U	O5'-C5'	7.06	1.53	1.42
22	d	87	ARG	CA-CB	7.03	1.62	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	b	16	TRP	CA-CB	7.01	1.65	1.53
36	C	35	ASP	CB-CG	6.94	1.69	1.52
27	i	39	PHE	CA-CB	6.94	1.64	1.53
6	L	119	GLU	CD-OE1	6.93	1.38	1.25
70	Sa	97	PRO	CA-C	6.92	1.58	1.52
23	e	74	PHE	CA-CB	6.91	1.62	1.53
35	B	119	TYR	CA-CB	6.90	1.61	1.53
19	a	108	TYR	CA-C	6.87	1.60	1.53
56	SB	157	GLN	CD-OE1	6.85	1.36	1.23
4	H	61	TRP	N-CA	6.84	1.55	1.46
35	B	55	HIS	CA-CB	6.83	1.62	1.53
31	o	48	TYR	CA-CB	6.81	1.61	1.52
74	SF	51	HIS	CA-CB	6.78	1.64	1.53
12	S	81	TRP	CB-CG	-6.76	1.29	1.50
48	z	272	PHE	N-CA	6.75	1.54	1.46
64	SN	18	TYR	CA-CB	6.73	1.64	1.53
11	R	95	TRP	CA-C	-6.71	1.46	1.53
68	SX	22	TRP	CA-CB	6.71	1.64	1.53
1	A	211	PHE	CA-CB	6.67	1.63	1.53
54	S2	1293	A	O5'-C5'	6.64	1.52	1.42
22	d	25	TYR	CA-CB	6.63	1.64	1.53
84	Sc	26	GLN	CD-NE2	6.61	1.47	1.33
19	a	79	TRP	CA-CB	6.58	1.64	1.53
57	SC	236	PHE	CA-CB	6.58	1.63	1.53
56	SB	81	PHE	CA-CB	6.55	1.62	1.53
24	f	6	TRP	CA-CB	6.53	1.64	1.53
2	D	16	TYR	CA-CB	6.52	1.63	1.53
5	J	99	PHE	CA-CB	6.51	1.60	1.52
2	D	145	TYR	CA-CB	6.50	1.61	1.53
12	S	28	TYR	CA-C	6.43	1.59	1.53
57	SC	90	GLU	CD-OE1	6.43	1.37	1.25
14	U	99	TRP	CA-C	6.41	1.60	1.52
68	SX	16	HIS	CA-CB	6.39	1.63	1.53
54	S2	1291	A	O3'-P	6.37	1.70	1.61
35	B	54	THR	CA-C	6.36	1.60	1.52
4	H	66	GLU	CD-OE2	6.34	1.37	1.25
24	f	19	ARG	CA-CB	6.34	1.63	1.53
56	SB	205	TYR	CA-CB	6.33	1.63	1.53
9	O	173	GLN	CD-OE1	6.32	1.35	1.23
89	S4	75	GLU	CD-OE2	6.30	1.37	1.25
86	Sf	151	ASN	CA-C	6.30	1.62	1.53
35	B	367	PHE	CA-C	6.20	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
48	z	198	GLU	CD-OE2	6.20	1.37	1.25
86	Sf	149	CYS	CA-C	6.19	1.60	1.52
19	a	62	HIS	CA-CB	6.14	1.63	1.53
18	Z	38	TYR	CA-CB	6.14	1.62	1.53
8	N	180	PHE	CA-CB	6.08	1.62	1.53
37	E	250	ASP	CG-OD2	6.07	1.36	1.25
2	D	29	ASP	CA-C	-6.06	1.45	1.52
42	j	66	HIS	CA-CB	6.03	1.63	1.53
35	B	274	TYR	CA-CB	6.02	1.63	1.53
40	P	140	MET	N-CA	6.01	1.53	1.45
7	M	6	PHE	CA-CB	6.01	1.62	1.53
35	B	61	ASP	CG-OD2	5.98	1.36	1.25
3	G	53	ARG	CA-CB	5.97	1.63	1.53
3	G	57	TRP	CA-CB	5.96	1.62	1.53
57	SC	170	TRP	CA-CB	5.93	1.62	1.53
88	S1	8	GLU	CD-OE2	5.89	1.36	1.25
54	S2	1310	U	O5'-C5'	5.89	1.51	1.42
41	W	21	TYR	CA-CB	5.84	1.62	1.53
36	C	178	ASN	CG-OD1	5.83	1.34	1.23
32	5	4390	A	O3'-P	-5.82	1.52	1.61
32	5	964	A	O3'-P	5.81	1.69	1.61
17	Y	6	PHE	CA-CB	5.80	1.63	1.53
32	5	4497	U	O3'-P	5.79	1.69	1.61
48	z	198	GLU	CD-OE1	5.78	1.36	1.25
8	N	119	TYR	N-CA	5.76	1.52	1.45
11	R	95	TRP	CB-CG	-5.75	1.32	1.50
56	SB	100	PHE	CA-CB	5.73	1.63	1.53
19	a	110	LYS	N-CA	5.72	1.53	1.46
40	P	139	TYR	CB-CG	-5.69	1.39	1.51
13	T	19	PHE	CA-C	-5.68	1.45	1.52
32	5	514	U	O3'-P	5.68	1.69	1.61
58	SE	18	TRP	CA-C	5.68	1.60	1.52
48	z	281	ASP	CG-OD2	5.67	1.36	1.25
54	S2	1292	C	O5'-C5'	5.65	1.50	1.42
64	SN	113	PHE	CA-C	-5.65	1.46	1.53
13	T	144	ASN	CG-ND2	5.65	1.45	1.33
24	f	6	TRP	CB-CG	-5.65	1.32	1.50
68	SX	22	TRP	N-CA	5.62	1.54	1.46
10	Q	176	ARG	CA-CB	5.62	1.59	1.53
32	5	1887	G	O3'-P	5.59	1.69	1.61
24	f	4	ARG	CA-CB	5.58	1.62	1.53
37	E	280	HIS	CA-C	5.58	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	Sf	140	TYR	CA-CB	5.57	1.61	1.53
46	K	147	HIS	CA-C	5.57	1.58	1.52
22	d	26	THR	N-CA	5.56	1.53	1.46
14	U	99	TRP	CA-CB	5.55	1.61	1.53
35	B	215	GLU	CD-OE1	5.54	1.35	1.25
19	a	40	HIS	CA-CB	-5.53	1.48	1.54
1	A	209	HIS	CA-CB	5.52	1.64	1.53
2	D	210	TYR	CA-CB	5.52	1.62	1.53
2	D	119	TYR	CA-CB	5.51	1.61	1.53
58	SE	121	TYR	CA-CB	5.49	1.62	1.53
1	A	186	TYR	CA-CB	5.49	1.61	1.53
3	G	46	GLN	CD-OE1	5.46	1.33	1.23
23	e	60	TYR	N-CA	-5.46	1.38	1.46
56	SB	224	GLU	CD-OE2	5.46	1.35	1.25
81	ST	34	VAL	N-CA	5.43	1.53	1.46
87	Sg	83	TRP	CA-CB	5.40	1.61	1.53
26	h	78	TYR	CA-CB	5.37	1.59	1.52
54	S2	1838	U	O3'-P	5.37	1.69	1.61
10	Q	181	ARG	CA-CB	5.36	1.60	1.53
70	Sa	17	HIS	CA-CB	5.35	1.62	1.53
2	D	20	PHE	CA-CB	5.34	1.62	1.53
61	SI	149	TYR	CA-CB	5.34	1.60	1.53
12	S	151	LYS	CA-C	5.33	1.58	1.52
54	S2	409	C	O3'-P	5.32	1.69	1.61
36	C	41	HIS	CA-CB	5.32	1.61	1.53
21	c	78	ASN	CA-C	5.32	1.59	1.52
69	SY	64	PHE	N-CA	5.32	1.53	1.46
1	A	186	TYR	N-CA	5.31	1.52	1.46
54	S2	662	G	O3'-P	5.31	1.69	1.61
24	f	6	TRP	CA-C	5.30	1.59	1.52
45	r	100	ASN	N-CA	-5.29	1.41	1.46
55	SA	90	PHE	CA-CB	5.29	1.61	1.53
88	S1	48	CYS	N-CA	5.28	1.52	1.46
23	e	35	TRP	CA-C	5.27	1.59	1.52
6	L	103	ARG	CA-CB	5.24	1.59	1.52
86	Sf	146	LEU	CB-CG	5.24	1.64	1.53
39	I	95	HIS	CA-C	5.23	1.59	1.52
12	S	81	TRP	N-CA	5.22	1.53	1.46
76	SM	105	GLY	N-CA	5.21	1.50	1.45
17	Y	19	PHE	CA-CB	5.20	1.59	1.53
32	5	2362	U	O3'-P	5.20	1.69	1.61
64	SN	25	TRP	N-CA	5.19	1.52	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	5	964	A	O5'-C5'	5.18	1.50	1.42
37	E	94	GLY	N-CA	5.18	1.49	1.44
44	p	34	HIS	CA-CB	5.18	1.60	1.53
3	G	109	GLU	CD-OE2	5.18	1.35	1.25
32	5	1669	A	O3'-P	-5.18	1.53	1.61
19	a	63	LEU	N-CA	5.17	1.52	1.46
19	a	62	HIS	N-CA	5.17	1.52	1.46
31	o	41	TYR	CA-CB	5.17	1.61	1.53
10	Q	34	PHE	N-CA	5.16	1.52	1.46
9	O	173	GLN	CD-NE2	5.16	1.44	1.33
32	5	1365	C	O3'-P	5.16	1.68	1.61
61	SI	67	TRP	CA-CB	5.14	1.61	1.53
86	Sf	134	SER	CA-C	5.14	1.58	1.52
12	S	33	PHE	N-CA	-5.13	1.40	1.47
37	E	278	TYR	CB-CG	-5.13	1.40	1.51
55	SA	151	ASP	CB-CG	5.13	1.64	1.52
86	Sf	132	MET	N-CA	5.11	1.52	1.46
10	Q	38	ARG	CA-C	-5.10	1.47	1.53
27	i	26	HIS	CA-C	5.09	1.59	1.52
32	5	1364	U	O3'-P	5.08	1.68	1.61
63	SL	107	LYS	N-CA	-5.08	1.40	1.46
18	Z	39	SER	N-CA	5.07	1.52	1.46
77	SP	39	ALA	N-CA	5.07	1.52	1.46
32	5	171	U	O3'-P	-5.07	1.53	1.61
27	i	39	PHE	CA-C	5.06	1.59	1.52
17	Y	61	HIS	CA-CB	5.06	1.61	1.53
34	8	86	U	O5'-C5'	5.05	1.50	1.42
63	SL	27	GLU	CD-OE2	5.04	1.34	1.25
61	SI	67	TRP	N-CA	5.02	1.52	1.45
35	B	137	TRP	CA-CB	5.02	1.61	1.53
10	Q	177	ALA	N-CA	5.02	1.52	1.46
18	Z	38	TYR	CA-C	5.02	1.58	1.52
14	U	100	LEU	N-CA	5.01	1.51	1.46

All (2825) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
48	z	340	MET	CA-C-N	-30.44	75.16	120.82
48	z	340	MET	C-N-CA	-30.44	75.16	120.82
48	z	340	MET	O-C-N	29.41	153.86	122.09
50	3	31	C	O3'-P-O5'	-23.73	68.40	104.00
46	K	1	MET	CA-C-N	-18.14	101.70	120.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
46	K	1	MET	C-N-CA	-18.14	101.70	120.38
9	O	135	PHE	N-CA-C	17.98	136.30	108.79
50	3	38	C	P-O3'-C3'	-16.84	94.95	120.20
32	5	1676	C	C1'-C2'-O2'	-15.60	88.40	111.80
48	z	345	PHE	CA-C-N	15.27	150.71	121.54
48	z	345	PHE	C-N-CA	15.27	150.71	121.54
51	4	186	C	O3'-P-O5'	-14.25	82.62	104.00
54	S2	1063	C	C1'-C2'-O2'	13.98	129.36	108.40
34	8	34	U	C4'-C3'-O3'	-13.79	92.31	113.00
32	5	1501	C	N1-C1'-C2'	13.65	132.48	112.00
54	S2	3	C	N1-C1'-C2'	13.62	134.44	114.00
32	5	4163	U	C4'-C3'-O3'	13.50	133.25	113.00
10	Q	33	ARG	N-CA-C	-13.45	96.68	111.07
11	R	149	LYS	CA-C-N	-13.16	102.54	120.44
11	R	149	LYS	C-N-CA	-13.16	102.54	120.44
86	Sf	133	ALA	N-CA-C	13.09	125.49	108.34
32	5	1479	G	C1'-C2'-O2'	-12.95	92.37	111.80
32	5	2511	A	C4'-C3'-O3'	-12.91	90.04	109.40
11	R	132	PHE	CB-CA-C	12.90	131.72	111.73
61	SI	197	PHE	N-CA-C	-12.75	96.87	111.03
54	S2	1838	U	N1-C1'-C2'	12.68	133.02	114.00
32	5	1642	A	C4'-C3'-O3'	-12.68	93.98	113.00
12	S	81	TRP	CB-CA-C	12.64	129.89	110.67
32	5	2389	A	C2'-C3'-O3'	12.52	132.49	113.70
1	A	67	TYR	CA-CB-CG	12.43	136.27	113.90
32	5	2398	U	C2'-C3'-O3'	12.35	128.02	109.50
54	S2	60	A	C1'-C2'-O2'	-12.18	93.54	111.80
54	S2	92	A	N9-C1'-C2'	12.09	132.13	114.00
61	SI	197	PHE	N-CA-CB	12.09	127.51	109.98
32	5	1481	C	C2'-C3'-O3'	12.05	127.58	109.50
32	5	1358	G	C4'-C3'-O3'	12.01	131.02	113.00
54	S2	367	U	C1'-C2'-O2'	11.96	126.34	108.40
34	8	85	U	C2'-C3'-O3'	11.93	131.59	113.70
11	R	132	PHE	N-CA-C	-11.93	86.26	107.73
54	S2	1292	C	C4'-C3'-O3'	11.88	130.81	113.00
54	S2	1552	G	C2'-C3'-O3'	11.86	131.49	113.70
32	5	3912	U	C1'-C2'-O2'	-11.83	90.65	108.40
32	5	1279	A	C2'-C3'-O3'	11.70	127.06	109.50
32	5	3735	G	C2'-C3'-O3'	11.68	127.01	109.50
32	5	4528	G	C2'-C3'-O3'	11.62	131.13	113.70
32	5	1474	C	C2'-C3'-O3'	11.54	131.01	113.70
46	K	9	GLU	O-C-N	-11.44	107.37	122.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	833	C	C2'-C3'-O3'	11.44	130.85	113.70
37	E	278	TYR	CA-CB-CG	-11.42	93.34	113.90
32	5	5040	U	C4'-C3'-O3'	-11.41	92.28	109.40
20	b	16	TRP	N-CA-C	-11.38	99.35	113.01
8	N	180	PHE	CB-CA-C	11.35	127.28	111.74
81	ST	33	TRP	N-CA-C	-11.30	98.00	112.23
32	5	5043	A	C1'-C2'-O2'	-11.21	94.99	111.80
58	SE	18	TRP	N-CA-C	-11.17	98.96	112.59
54	S2	841	G	C1'-C2'-O2'	11.11	125.06	108.40
54	S2	919	A	C4'-C3'-O3'	11.06	125.99	109.40
32	5	1697	G	N9-C1'-C2'	10.96	130.45	114.00
54	S2	294	U	N1-C1'-C2'	10.92	130.38	114.00
32	5	964	A	C4'-C3'-O3'	10.90	129.35	113.00
32	5	383	A	C1'-C2'-O2'	-10.89	95.46	111.80
25	g	14	ASN	N-CA-C	-10.81	94.34	110.24
32	5	1211	G	C2'-C3'-O3'	10.79	129.89	113.70
46	K	2	PRO	CB-CA-C	10.74	124.02	110.92
32	5	974	C	C2'-C3'-O3'	10.72	129.78	113.70
10	Q	34	PHE	N-CA-CB	10.69	128.56	110.49
16	X	73	HIS	N-CA-C	-10.66	99.80	112.92
18	Z	38	TYR	N-CA-C	-10.61	92.00	109.07
32	5	1359	G	C4'-C3'-O3'	-10.59	97.12	113.00
54	S2	1452	A	C2'-C3'-O3'	10.57	125.36	109.50
46	K	9	GLU	CA-C-N	10.52	140.90	121.97
46	K	9	GLU	C-N-CA	10.52	140.90	121.97
86	Sf	146	LEU	CA-CB-CG	10.49	153.01	116.30
32	5	2511	A	C2'-C3'-O3'	10.48	125.23	109.50
32	5	3735	G	C4'-C3'-O3'	-10.48	93.68	109.40
32	5	2396	A	N9-C1'-C2'	10.46	129.69	114.00
48	z	197	GLN	N-CA-C	10.43	125.90	112.34
32	5	5046	U	C2'-C3'-O3'	10.43	129.34	113.70
54	S2	596	U	C1'-C2'-O2'	-10.43	96.16	111.80
50	3	2	U	C1'-C2'-O2'	10.42	124.03	108.40
42	j	66	HIS	N-CA-CB	10.41	128.09	110.49
54	S2	1429	G	C2'-C3'-O3'	10.41	129.31	113.70
32	5	2695	A	C2'-C3'-O3'	10.38	125.07	109.50
46	K	2	PRO	N-CA-C	10.33	123.30	110.70
22	d	25	TYR	CA-CB-CG	-10.31	95.35	113.90
32	5	5061	A	C2'-C3'-O3'	10.29	124.93	109.50
33	7	56	G	N9-C1'-C2'	10.28	127.42	112.00
32	5	48	G	C2'-C3'-O3'	10.24	124.87	109.50
54	S2	428	U	N1-C1'-C2'	10.24	129.36	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1835	A	N9-C1'-C2'	10.20	129.29	114.00
12	S	81	TRP	CA-CB-CG	-10.19	94.24	113.60
32	5	2465	C	N1-C1'-C2'	10.17	127.26	112.00
34	8	94	G	C2'-C3'-O3'	10.15	124.73	109.50
61	SI	197	PHE	CB-CA-C	-10.15	95.22	110.95
32	5	747	A	C2'-C3'-O3'	10.14	124.71	109.50
54	S2	964	A	C1'-C2'-O2'	-10.12	96.62	111.80
32	5	30	C	N1-C1'-C2'	10.12	127.17	112.00
54	S2	421	G	N9-C1'-C2'	10.10	127.15	112.00
32	5	215	C	C4'-C3'-O3'	-10.10	97.86	113.00
32	5	2513	A	N9-C1'-C2'	10.09	129.13	114.00
32	5	1	C	N1-C1'-C2'	10.06	129.09	114.00
32	5	930	G	C4'-C3'-O3'	10.03	124.45	109.40
54	S2	1419	C	C2'-C3'-O3'	10.03	128.75	113.70
34	8	14	U	N1-C1'-C2'	10.01	127.02	112.00
32	5	171	U	C4'-C3'-O3'	-10.00	94.40	109.40
8	N	131	GLU	CA-CB-CG	9.98	134.07	114.10
58	SE	86	PHE	N-CA-CB	9.95	124.90	109.48
54	S2	1433	C	C4'-C3'-O3'	9.91	127.87	113.00
54	S2	1408	U	N1-C1'-C2'	9.90	126.84	112.00
32	5	209	U	C4'-C3'-O3'	9.89	127.84	113.00
54	S2	1282	A	C2'-C3'-O3'	-9.86	98.91	113.70
3	G	54	PHE	CA-CB-CG	-9.86	103.94	113.80
54	S2	1452	A	N9-C1'-C2'	9.85	128.78	114.00
37	E	278	TYR	CB-CA-C	9.82	129.51	110.17
54	S2	747	U	C2'-C3'-O3'	9.78	128.37	113.70
30	m	118	THR	N-CA-C	9.78	121.63	110.97
32	5	279	A	C4'-C3'-O3'	-9.78	94.74	109.40
32	5	5040	U	N1-C1'-C2'	9.73	128.59	114.00
19	a	79	TRP	CA-CB-CG	-9.72	95.14	113.60
54	S2	1162	C	C1'-C2'-O2'	9.71	122.97	108.40
32	5	4693	C	N1-C1'-C2'	9.70	126.54	112.00
54	S2	1623	A	C2'-C3'-O3'	9.66	128.19	113.70
27	i	39	PHE	N-CA-CB	9.66	124.55	110.06
32	5	1853	G	C1'-C2'-O2'	9.66	122.88	108.40
37	E	103	VAL	N-CA-C	9.65	120.31	108.53
32	5	2116	C	C2'-C3'-O3'	9.65	123.97	109.50
32	5	1696	C	C2'-C3'-O3'	9.65	123.97	109.50
32	5	1500	A	C4'-C3'-O3'	9.63	127.44	113.00
12	S	81	TRP	N-CA-C	-9.62	95.29	109.15
1	A	186	TYR	N-CA-C	-9.62	100.77	111.07
32	5	2509	C	C1'-C2'-O2'	-9.62	93.97	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	61	A	C4'-C3'-O3'	-9.61	98.58	113.00
32	5	118	C	C2'-C3'-O3'	9.60	128.10	113.70
54	S2	367	U	N1-C1'-C2'	-9.60	97.60	112.00
32	5	4464	A	C2'-C3'-O3'	9.59	128.08	113.70
32	5	2446	C	N1-C1'-C2'	9.59	126.38	112.00
74	SF	51	HIS	N-CA-CB	9.59	124.06	109.97
16	X	73	HIS	CB-CA-C	9.57	126.74	110.56
32	5	1370	G	N9-C1'-C2'	9.57	128.36	114.00
32	5	4234	A	N9-C1'-C2'	9.56	128.34	114.00
32	5	31	U	N1-C1'-C2'	9.56	126.34	112.00
32	5	2268	A	N9-C1'-C2'	9.55	128.33	114.00
54	S2	1247	C	N1-C1'-C2'	9.54	128.31	114.00
11	R	132	PHE	CA-CB-CG	-9.53	104.27	113.80
88	S1	7	TRP	N-CA-C	9.50	123.58	109.24
54	S2	666	U	N1-C1'-C2'	9.48	126.22	112.00
70	Sa	98	PRO	N-CA-C	9.47	122.25	110.70
32	5	4280	A	C2'-C3'-O3'	9.46	127.89	113.70
32	5	1329	G	C2'-C3'-O3'	9.43	127.85	113.70
54	S2	1823	A	N9-C1'-C2'	9.43	128.15	114.00
32	5	1938	C	N1-C1'-C2'	9.42	128.13	114.00
54	S2	349	A	C4'-C3'-O3'	-9.41	98.89	113.00
48	z	271	ILE	N-CA-C	9.40	119.64	111.56
32	5	4119	C	C2'-C3'-O3'	9.37	127.76	113.70
19	a	62	HIS	N-CA-CB	9.37	126.32	110.49
32	5	668	C	C2'-C3'-O3'	9.36	127.75	113.70
38	F	58	HIS	CB-CA-C	-9.37	96.18	110.88
54	S2	604	A	C2'-C3'-O3'	9.35	127.72	113.70
54	S2	1293	A	C4'-C3'-O3'	9.35	127.02	113.00
58	SE	172	PHE	N-CA-C	9.35	122.35	108.14
65	SO	147	ARG	CA-CB-CG	9.35	132.79	114.10
32	5	2586	G	N9-C1'-C2'	9.34	128.01	114.00
21	c	89	TYR	N-CA-C	9.34	122.77	107.73
32	5	1356	U	C2'-C3'-O3'	9.34	127.71	113.70
32	5	1439	C	C4'-C3'-O3'	-9.34	98.99	113.00
32	5	2546	G	C4'-C3'-O3'	9.33	127.00	113.00
32	5	151	G	C1'-C2'-O2'	9.33	122.39	108.40
32	5	977	C	C2'-C3'-O3'	9.31	127.67	113.70
62	SJ	144	ILE	N-CA-C	9.29	118.18	107.77
64	SN	18	TYR	N-CA-CB	9.29	126.19	110.49
32	5	961	G	C4'-C3'-O3'	9.27	123.30	109.40
32	5	2272	C	C1'-C2'-O2'	-9.25	94.52	108.40
54	S2	603	C	C4'-C3'-O3'	9.24	123.26	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
7	M	95	ILE	N-CA-C	-9.23	99.98	110.05
32	5	2124	G	C2'-C3'-O3'	9.22	127.53	113.70
54	S2	160	U	C2'-C3'-O3'	9.22	123.33	109.50
32	5	2436	U	N1-C1'-C2'	9.21	127.81	114.00
32	5	3914	U	C2'-C3'-O3'	-9.20	99.89	113.70
32	5	4885	U	C2'-C3'-O3'	9.18	127.48	113.70
32	5	4373	G	N9-C1'-C2'	9.18	127.77	114.00
32	5	1631	A	C4'-C3'-O3'	-9.17	95.65	109.40
58	SE	103	TYR	CA-CB-CG	9.16	130.39	113.90
36	C	41	HIS	N-CA-CB	9.15	123.28	109.91
32	5	4084	G	C2'-C3'-O3'	9.14	123.22	109.50
32	5	1235	G	C2'-C3'-O3'	-9.14	99.99	113.70
54	S2	1352	G	C2'-C3'-O3'	9.11	127.36	113.70
32	5	231	U	C4'-C3'-O3'	-9.10	99.35	113.00
8	N	131	GLU	CB-CA-C	9.10	124.76	109.48
54	S2	127	C	C4'-C3'-O3'	9.10	123.05	109.40
32	5	2347	A	C1'-C2'-O2'	9.09	125.44	111.80
85	Sd	46	TYR	CB-CA-C	9.09	122.40	111.22
32	5	88	A	C1'-C2'-O2'	-9.09	94.77	108.40
32	5	4871	C	N1-C1'-C2'	9.09	127.63	114.00
24	f	24	HIS	N-CA-C	-9.06	100.97	111.03
32	5	62	A	N9-C1'-C2'	9.05	125.58	112.00
32	5	2510	G	C4'-C3'-O3'	-9.04	99.43	113.00
42	j	66	HIS	CA-CB-CG	-9.04	104.75	113.80
32	5	2394	G	N9-C1'-C2'	-9.03	100.46	114.00
65	SO	29	GLY	N-CA-C	-9.03	101.96	112.79
32	5	2745	A	C1'-C2'-O2'	-9.01	94.88	108.40
32	5	1390	G	C1'-C2'-O2'	9.01	121.91	108.40
39	I	171	TRP	N-CA-CB	9.00	124.10	109.88
32	5	3905	A	C2'-C3'-O3'	9.00	127.20	113.70
54	S2	453	C	C1'-C2'-O2'	-9.00	98.30	111.80
32	5	187	U	C2'-C3'-O3'	8.99	127.19	113.70
3	G	57	TRP	CA-CB-CG	-8.98	96.53	113.60
34	8	86	U	O4'-C1'-C2'	-8.98	98.62	107.60
32	5	2588	C	C4'-C3'-O3'	8.98	126.47	113.00
32	5	2553	A	N9-C1'-C2'	8.96	127.44	114.00
32	5	3653	A	C1'-C2'-O2'	8.96	121.83	108.40
32	5	1668	A	N9-C1'-C2'	8.95	125.43	112.00
38	F	209	PHE	N-CA-C	-8.94	100.70	111.69
32	5	2328	G	C1'-C2'-O2'	-8.93	95.01	108.40
68	SX	27	TYR	CA-CB-CG	8.92	129.96	113.90
32	5	4448	G	C4'-C3'-O3'	8.92	122.78	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	798	A	C2'-C3'-O3'	8.92	127.08	113.70
54	S2	841	G	O4'-C1'-C2'	-8.90	98.69	107.60
32	5	4162	C	N1-C1'-C2'	8.90	127.35	114.00
4	H	156	ASN	N-CA-C	-8.89	101.56	111.07
56	SB	205	TYR	CA-CB-CG	-8.88	97.92	113.90
54	S2	305	U	C2'-C3'-O3'	8.86	122.79	109.50
32	5	4693	C	C2'-C3'-O3'	8.85	126.98	113.70
54	S2	1088	U	N1-C1'-C2'	8.85	127.27	114.00
19	a	79	TRP	CB-CA-C	8.82	126.67	110.36
54	S2	1407	U	C4'-C3'-O3'	-8.82	99.77	113.00
6	L	99	ASP	N-CA-C	-8.81	97.38	110.24
32	5	3676	G	C2'-C3'-O3'	-8.79	100.51	113.70
54	S2	495	U	C1'-C2'-O2'	-8.78	98.63	111.80
32	5	4498	U	C1'-C2'-O2'	8.78	121.57	108.40
19	a	40	HIS	N-CA-CB	-8.78	104.17	114.17
8	N	139	HIS	N-CA-CB	8.77	124.17	109.87
32	5	53	C	C2'-C3'-O3'	8.77	126.86	113.70
32	5	1916	G	N9-C1'-C2'	8.76	125.14	112.00
58	SE	18	TRP	CB-CA-C	8.76	125.12	111.02
32	5	3727	A	C1'-C2'-O2'	-8.76	95.27	108.40
54	S2	1394	G	C2'-C3'-O3'	8.75	126.82	113.70
64	SN	18	TYR	CA-CB-CG	-8.74	98.16	113.90
32	5	3938	G	N9-C1'-C2'	8.74	127.11	114.00
32	5	4880	C	N1-C1'-C2'	8.74	125.11	112.00
54	S2	437	G	N9-C1'-C2'	8.73	127.09	114.00
32	5	1359	G	C2'-C3'-O3'	8.71	126.77	113.70
87	Sg	228	TYR	N-CA-C	8.71	122.12	108.79
4	H	96	TYR	N-CA-C	8.71	122.12	108.79
32	5	707	C	C1'-C2'-O2'	8.71	121.47	108.40
32	5	3739	C	O4'-C1'-C2'	-8.71	98.89	107.60
12	S	10	TYR	CA-CB-CG	-8.68	98.28	113.90
57	SC	241	PHE	N-CA-CB	8.67	122.56	109.98
16	X	73	HIS	CA-CB-CG	-8.67	105.13	113.80
68	SX	20	HIS	CB-CA-C	8.66	126.05	110.72
86	Sf	148	TYR	CA-C-N	8.66	134.95	123.00
86	Sf	148	TYR	C-N-CA	8.66	134.95	123.00
44	p	34	HIS	N-CA-C	-8.66	102.85	112.72
20	b	17	HIS	N-CA-C	8.65	123.96	113.41
32	5	978	G	C2'-C3'-O3'	8.64	126.67	113.70
54	S2	292	A	C2'-C3'-O3'	8.63	122.45	109.50
19	a	62	HIS	CA-CB-CG	-8.63	105.17	113.80
32	5	5001	U	N1-C1'-C2'	8.63	124.94	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5044	A	C1'-C2'-O2'	-8.63	95.46	108.40
32	5	2361	G	N9-C1'-C2'	-8.62	99.06	112.00
63	SL	62	PHE	CB-CA-C	8.62	124.65	109.65
32	5	2804	C	C1'-C2'-O2'	8.61	121.32	108.40
32	5	1484	G	O4'-C4'-C3'	-8.59	97.51	106.10
35	B	258	HIS	CA-C-N	-8.59	109.10	119.84
35	B	258	HIS	C-N-CA	-8.59	109.10	119.84
54	S2	1063	C	N1-C1'-C2'	-8.59	99.11	112.00
32	5	106	A	C1'-C2'-O2'	8.59	121.28	108.40
54	S2	1309	C	C4'-C3'-O3'	8.58	125.88	113.00
10	Q	34	PHE	CA-CB-CG	-8.57	105.23	113.80
32	5	3625	G	C2'-C3'-O3'	8.57	126.55	113.70
32	5	4125	C	C4'-C3'-O3'	-8.55	100.17	113.00
32	5	2046	G	C2'-C3'-O3'	8.55	126.52	113.70
54	S2	426	A	C4'-C3'-O3'	8.55	125.82	113.00
32	5	1455	G	C2'-C3'-O3'	8.54	126.52	113.70
32	5	2833	A	C1'-C2'-O2'	-8.53	99.01	111.80
33	7	72	U	C2'-C3'-O3'	8.53	126.49	113.70
54	S2	956	G	N9-C1'-C2'	8.53	124.79	112.00
54	S2	968	U	C4'-C3'-O3'	8.53	125.79	113.00
54	S2	110	U	C2'-C3'-O3'	8.52	126.48	113.70
32	5	2251	G	C4'-C3'-O3'	8.52	122.18	109.40
32	5	2280	G	N9-C1'-C2'	8.52	124.78	112.00
32	5	943	A	C4'-C3'-O3'	8.52	122.17	109.40
32	5	1398	A	N9-C1'-C2'	8.50	126.75	114.00
39	I	171	TRP	CA-CB-CG	-8.49	97.46	113.60
54	S2	452	G	C1'-C2'-O2'	-8.49	95.66	108.40
2	D	31	TYR	N-CA-C	-8.48	96.52	110.17
32	5	4644	G	C1'-C2'-O2'	8.48	121.12	108.40
2	D	210	TYR	N-CA-CB	8.47	122.27	109.91
32	5	157	U	C3'-C2'-O2'	8.47	123.40	110.70
32	5	4228	G	C1'-C2'-O2'	8.47	121.10	108.40
32	5	1671	U	O4'-C1'-C2'	-8.45	99.15	107.60
32	5	2118	G	C4'-C3'-O3'	8.45	125.67	113.00
32	5	4693	C	C4'-C3'-O3'	-8.44	100.33	113.00
19	a	61	TYR	CB-CA-C	8.43	124.80	109.37
32	5	4234	A	C2'-C3'-O3'	8.43	122.14	109.50
32	5	5043	A	N9-C1'-C2'	8.43	126.64	114.00
48	z	371	ARG	N-CA-C	8.42	120.46	111.28
70	Sa	10	ARG	N-CA-C	-8.42	92.87	110.80
35	B	54	THR	N-CA-C	8.42	120.94	108.14
54	S2	1167	G	N9-C1'-C2'	8.41	124.62	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	a	34	ASN	CB-CA-C	8.40	125.52	112.00
25	g	14	ASN	N-CA-CB	8.40	122.50	109.48
32	5	45	U	C2'-C3'-O3'	-8.40	101.10	113.70
1	A	83	HIS	N-CA-C	-8.39	98.04	110.46
32	5	151	G	N9-C1'-C2'	-8.39	99.41	112.00
32	5	1685	G	N9-C1'-C2'	8.39	124.59	112.00
32	5	1211	G	C4'-C3'-O3'	8.38	125.58	113.00
54	S2	1537	A	C3'-C2'-O2'	8.38	123.28	110.70
68	SX	16	HIS	N-CA-CB	8.39	122.15	109.91
54	S2	291	G	C4'-C3'-O3'	-8.38	96.83	109.40
57	SC	236	PHE	N-CA-CB	8.37	122.20	110.07
32	5	2271	C	N1-C1'-C2'	8.36	124.54	112.00
54	S2	631	U	C2'-C3'-O3'	8.33	122.00	109.50
32	5	2246	C	C2'-C3'-O3'	8.31	126.17	113.70
32	5	4464	A	N9-C1'-C2'	8.31	124.46	112.00
32	5	958	G	C2'-C3'-O3'	8.31	126.16	113.70
54	S2	1395	C	C2'-C3'-O3'	8.30	126.15	113.70
54	S2	1823	A	C2'-C3'-O3'	8.29	121.93	109.50
55	SA	90	PHE	N-CA-C	-8.29	102.19	111.14
32	5	93	G	N9-C1'-C2'	8.28	126.42	114.00
54	S2	957	A	C2'-C3'-O3'	8.28	121.92	109.50
32	5	2046	G	C3'-C2'-O2'	8.27	123.11	110.70
58	SE	86	PHE	CA-CB-CG	-8.27	105.53	113.80
32	5	4536	C	C1'-C2'-O2'	8.27	120.80	108.40
32	5	1214	C	C3'-C2'-O2'	-8.26	102.20	114.60
32	5	1974	U	N1-C1'-C2'	8.26	126.39	114.00
61	SI	113	TYR	N-CA-C	-8.26	102.23	111.07
56	SB	100	PHE	N-CA-C	-8.26	98.42	110.64
54	S2	968	U	C3'-C2'-O2'	8.25	123.07	110.70
54	S2	1394	G	O4'-C1'-C2'	-8.25	99.35	107.60
54	S2	1372	U	C1'-C2'-O2'	-8.24	99.44	111.80
61	SI	66	SER	N-CA-C	8.23	122.27	109.52
1	A	211	PHE	CB-CA-C	8.23	124.51	110.94
32	5	88	A	N9-C1'-C2'	8.23	124.34	112.00
32	5	2406	G	C1'-C2'-O2'	8.22	120.73	108.40
54	S2	164	A	C3'-C2'-O2'	8.22	123.03	110.70
32	5	2851	G	C1'-C2'-O2'	8.21	120.72	108.40
51	4	37	C	C2'-C3'-O3'	8.21	126.01	113.70
32	5	2264	C	C2'-C3'-O3'	8.20	121.80	109.50
32	5	4169	G	N9-C1'-C2'	8.20	124.30	112.00
40	P	7	ASP	CA-C-N	8.20	128.69	119.92
40	P	7	ASP	C-N-CA	8.20	128.69	119.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	d	25	TYR	CB-CA-C	8.20	126.73	110.42
32	5	1292	C	C2'-C3'-O3'	8.20	125.99	113.70
32	5	5066	U	N1-C1'-C2'	8.19	124.28	112.00
32	5	454	U	C2'-C3'-O3'	8.18	125.97	113.70
32	5	2438	A	N9-C1'-C2'	-8.18	99.74	112.00
32	5	1724	G	O4'-C4'-C3'	-8.17	97.93	106.10
54	S2	1475	G	C4'-C3'-O3'	8.16	121.64	109.40
75	SK	68	TYR	CA-CB-CG	-8.15	99.22	113.90
11	R	95	TRP	N-CA-CB	8.15	122.94	110.39
17	Y	75	ARG	CG-CD-NE	8.15	129.93	112.00
34	8	35	C	N1-C1'-C2'	8.15	124.22	112.00
60	SH	177	TYR	N-CA-CB	8.15	122.77	110.22
32	5	1357	C	C3'-C2'-O2'	8.14	122.92	110.70
32	5	3734	U	C1'-C2'-O2'	-8.14	99.58	111.80
32	5	1815	G	N9-C1'-C2'	8.14	126.21	114.00
32	5	119	G	O4'-C4'-C3'	-8.13	97.97	106.10
32	5	2282	A	N9-C1'-C2'	8.13	124.20	112.00
54	S2	1682	C	C4'-C3'-O3'	8.11	121.57	109.40
32	5	29	G	N9-C1'-C2'	8.10	124.16	112.00
32	5	292	G	O4'-C4'-C3'	-8.10	98.00	106.10
54	S2	1378	A	O4'-C4'-C3'	-8.09	98.01	106.10
32	5	2470	C	O4'-C1'-C2'	-8.07	99.53	107.60
46	K	2	PRO	CA-C-N	-8.07	109.76	119.84
46	K	2	PRO	C-N-CA	-8.07	109.76	119.84
32	5	2661	U	C2'-C3'-O3'	8.06	121.59	109.50
32	5	3938	G	C4'-C3'-O3'	-8.06	97.31	109.40
54	S2	1668	U	N1-C1'-C2'	8.06	124.09	112.00
46	K	95	GLN	N-CA-C	-8.06	93.64	110.80
32	5	4265	U	N1-C1'-C2'	8.05	126.08	114.00
32	5	350	C	N1-C1'-C2'	8.04	124.06	112.00
19	a	79	TRP	N-CA-C	-8.03	103.59	113.15
54	S2	1407	U	N1-C1'-C2'	8.02	124.03	112.00
32	5	4169	G	C4'-C3'-O3'	-8.02	100.97	113.00
54	S2	1123	C	O4'-C1'-C2'	-8.00	99.60	107.60
54	S2	1168	G	N9-C1'-C2'	8.00	124.00	112.00
54	S2	26	U	O4'-C1'-C2'	-7.99	99.61	107.60
47	q	203	VAL	N-CA-C	7.98	119.36	107.15
34	8	72	A	C1'-C2'-O2'	7.97	120.36	108.40
54	S2	631	U	N1-C1'-C2'	7.97	125.95	114.00
1	A	13	GLY	N-CA-C	-7.96	104.34	111.67
32	5	2325	C	O4'-C1'-C2'	-7.96	99.64	107.60
10	Q	52	PHE	N-CA-C	7.96	127.76	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3790	U	N1-C1'-C2'	7.96	125.94	114.00
32	5	5056	A	N9-C1'-C2'	7.96	123.94	112.00
63	SL	13	GLN	CA-C-N	-7.96	112.64	120.52
63	SL	13	GLN	C-N-CA	-7.96	112.64	120.52
54	S2	1542	C	C1'-C2'-O2'	-7.96	99.86	111.80
82	SU	72	GLU	N-CA-C	7.95	121.85	109.52
32	5	3880	G	C1'-C2'-O2'	-7.95	99.87	111.80
54	S2	496	C	C3'-C2'-O2'	7.95	122.62	110.70
54	S2	825	A	N9-C1'-C2'	7.95	123.92	112.00
56	SB	81	PHE	N-CA-C	-7.95	100.67	111.87
32	5	1636	U	C2'-C3'-O3'	-7.94	101.79	113.70
32	5	4737	G	N9-C1'-C2'	7.94	123.91	112.00
32	5	2082	G	N9-C1'-C2'	7.94	123.91	112.00
32	5	2858	A	C2'-C3'-O3'	7.93	121.40	109.50
54	S2	1492	U	C1'-C2'-O2'	7.93	120.29	108.40
37	E	59	TYR	N-CA-C	-7.92	93.93	110.80
32	5	33	A	N9-C1'-C2'	7.90	123.84	112.00
1	A	209	HIS	CA-CB-CG	-7.89	105.91	113.80
54	S2	1842	C	N1-C1'-C2'	7.88	123.83	112.00
61	SI	55	TYR	CA-CB-CG	-7.87	99.73	113.90
18	Z	54	THR	N-CA-C	7.87	122.45	112.86
32	5	2806	A	N9-C1'-C2'	-7.86	100.21	112.00
32	5	3596	A	C3'-C2'-O2'	7.86	122.49	110.70
32	5	54	G	C2'-C3'-O3'	7.86	125.48	113.70
32	5	1364	U	C2'-C3'-O3'	7.85	125.48	113.70
76	SM	127	TYR	CA-CB-CG	7.85	128.03	113.90
32	5	4199	C	O4'-C1'-C2'	-7.85	99.75	107.60
32	5	94	A	N9-C1'-C2'	7.84	123.77	112.00
32	5	3938	G	C2'-C3'-O3'	7.84	121.27	109.50
3	G	77	PRO	N-CA-C	7.84	120.27	110.70
54	S2	746	C	C2'-C3'-O3'	7.84	125.47	113.70
32	5	2806	A	C1'-C2'-O2'	7.84	120.16	108.40
32	5	4888	U	C4'-C3'-O3'	7.84	121.16	109.40
32	5	4557	U	C4'-C3'-O3'	-7.84	101.24	113.00
32	5	2263	A	C2'-C3'-O3'	7.83	121.24	109.50
3	G	53	ARG	CA-CB-CG	7.82	129.75	114.10
54	S2	532	C	C2'-C3'-O3'	7.82	125.43	113.70
54	S2	675	U	C1'-C2'-O2'	7.82	120.13	108.40
32	5	965	G	C4'-C3'-O3'	7.82	121.12	109.40
32	5	2093	A	C2'-C3'-O3'	7.81	121.21	109.50
32	5	1377	G	C2'-C3'-O3'	7.80	125.40	113.70
23	e	80	HIS	CB-CA-C	7.79	119.64	109.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2546	G	C3'-C2'-O2'	7.79	122.38	110.70
32	5	147	A	N9-C1'-C2'	7.78	123.67	112.00
32	5	1324	A	N9-C1'-C2'	7.78	125.67	114.00
32	5	1214	C	N1-C1'-C2'	7.78	125.66	114.00
26	h	78	TYR	CA-CB-CG	-7.77	99.92	113.90
1	A	211	PHE	CA-CB-CG	-7.76	106.04	113.80
32	5	2782	U	C4'-C3'-O3'	7.76	124.64	113.00
32	5	2517	A	N9-C1'-C2'	7.76	123.64	112.00
32	5	332	C	N1-C1'-C2'	7.76	123.64	112.00
32	5	3882	C	N1-C1'-C2'	7.76	123.63	112.00
32	5	4951	G	C2'-C3'-O3'	7.75	121.12	109.50
68	SX	20	HIS	CA-CB-CG	-7.74	106.06	113.80
32	5	316	U	C4'-C3'-O3'	-7.74	101.39	113.00
32	5	406	C	C2'-C3'-O3'	7.74	125.31	113.70
39	I	4	ARG	CG-CD-NE	-7.74	94.98	112.00
1	A	209	HIS	CA-C-N	7.73	129.50	119.84
1	A	209	HIS	C-N-CA	7.73	129.50	119.84
54	S2	1221	G	N9-C1'-C2'	7.72	123.58	112.00
54	S2	31	U	N1-C1'-C2'	7.72	123.58	112.00
12	S	146	HIS	N-CA-C	7.71	127.23	110.80
25	g	9	ARG	CG-CD-NE	-7.71	95.03	112.00
32	5	2827	G	O4'-C4'-C3'	-7.71	98.39	106.10
32	5	4589	A	C2'-C3'-O3'	7.71	121.07	109.50
54	S2	30	C	N1-C1'-C2'	7.71	123.56	112.00
54	S2	92	A	C2'-C3'-O3'	7.71	121.06	109.50
32	5	1267	C	C2'-C3'-O3'	7.69	121.04	109.50
32	5	125	C	C2'-C3'-O3'	7.69	125.24	113.70
48	z	344	PRO	O-C-N	-7.69	112.26	122.64
34	8	70	G	N9-C1'-C2'	-7.68	100.47	112.00
54	S2	644	G	C3'-C2'-O2'	7.68	122.23	110.70
54	S2	1368	U	C4'-C3'-O3'	7.68	124.53	113.00
32	5	2858	A	C4'-C3'-O3'	-7.68	97.88	109.40
32	5	4275	G	N9-C1'-C2'	-7.68	100.47	112.00
32	5	1894	C	N1-C1'-C2'	7.68	123.51	112.00
63	SL	92	TYR	N-CA-C	7.68	118.70	107.88
32	5	1650	A	O4'-C4'-C3'	-7.67	98.43	106.10
32	5	2328	G	C3'-C2'-O2'	7.67	122.20	110.70
32	5	1577	G	C1'-C2'-O2'	7.66	119.90	108.40
32	5	2125	C	C1'-C2'-O2'	-7.66	100.31	111.80
34	8	74	U	O4'-C1'-C2'	-7.65	99.95	107.60
54	S2	1664	A	C2'-C3'-O3'	7.65	125.18	113.70
32	5	4745	G	C4'-C3'-O3'	-7.65	101.52	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1838	U	O4'-C4'-C3'	-7.65	98.45	106.10
32	5	277	G	C2'-C3'-O3'	7.64	120.97	109.50
32	5	514	U	C2'-C3'-O3'	7.64	125.16	113.70
32	5	4528	G	O4'-C1'-C2'	-7.64	99.96	107.60
54	S2	91	A	C2'-C3'-O3'	7.64	125.16	113.70
32	5	52	G	C2'-C3'-O3'	7.64	125.16	113.70
38	F	237	ASN	N-CA-CB	7.64	121.38	109.69
36	C	41	HIS	N-CA-C	-7.64	102.65	110.97
54	S2	1313	A	N9-C1'-C2'	7.64	125.45	114.00
5	J	99	PHE	CB-CA-C	7.63	123.09	110.88
32	5	3677	U	N1-C1'-C2'	7.63	123.45	112.00
38	F	197	TYR	N-CA-CB	7.62	120.92	110.10
54	S2	327	G	C2'-C3'-O3'	7.62	120.93	109.50
40	P	139	TYR	CA-CB-CG	-7.62	100.19	113.90
32	5	2107	C	C2'-C3'-O3'	7.61	120.92	109.50
59	SG	61	PHE	CB-CA-C	7.61	117.28	110.44
32	5	265	C	C4'-C3'-O3'	7.60	120.80	109.40
32	5	686	A	C4'-C3'-O3'	7.59	120.79	109.40
32	5	1264	C	C3'-C2'-O2'	7.58	122.07	110.70
54	S2	1059	G	N9-C1'-C2'	7.58	123.37	112.00
32	5	2597	G	N9-C1'-C2'	7.58	123.37	112.00
54	S2	647	U	O4'-C1'-C2'	-7.58	100.02	107.60
34	8	35	C	C1'-C2'-O2'	-7.58	97.03	108.40
32	5	3868	G	N9-C1'-C2'	-7.58	102.64	114.00
61	SI	67	TRP	N-CA-CB	7.58	121.08	110.17
54	S2	980	A	C2'-C3'-O3'	7.57	125.05	113.70
32	5	1067	G	C2'-C3'-O3'	7.57	125.05	113.70
32	5	2844	A	C4'-C3'-O3'	-7.56	101.66	113.00
12	S	77	ASN	CB-CA-C	7.56	123.29	111.72
54	S2	448	A	N9-C1'-C2'	-7.56	102.66	114.00
32	5	4872	G	C2'-C3'-O3'	7.56	120.84	109.50
54	S2	349	A	C2'-C3'-O3'	7.55	125.03	113.70
7	M	6	PHE	CA-CB-CG	-7.55	106.25	113.80
32	5	4165	C	O4'-C1'-C2'	-7.55	100.05	107.60
8	N	139	HIS	CA-CB-CG	-7.55	106.25	113.80
7	M	66	HIS	N-CA-C	7.55	122.13	113.15
32	5	267	G	C2'-C3'-O3'	7.54	125.01	113.70
1	A	193	ARG	CG-CD-NE	-7.54	95.41	112.00
32	5	3683	C	N1-C1'-C2'	7.54	125.30	114.00
35	B	102	PHE	CB-CA-C	-7.54	99.27	110.95
32	5	5048	A	C4'-C3'-O3'	-7.53	101.70	113.00
32	5	3908	A	N9-C1'-C2'	7.53	125.29	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1674	G	C1'-C2'-O2'	7.53	119.69	108.40
32	5	2859	G	C2'-C3'-O3'	7.52	120.78	109.50
32	5	957	G	C2'-C3'-O3'	7.52	120.78	109.50
8	N	151	ILE	CB-CA-C	-7.51	102.47	111.94
32	5	88	A	C2'-C3'-O3'	-7.51	102.44	113.70
32	5	964	A	O4'-C1'-C2'	-7.51	100.09	107.60
32	5	1893	C	N1-C1'-C2'	7.50	123.25	112.00
54	S2	141	A	C4'-C3'-O3'	7.50	120.65	109.40
32	5	31	U	C4'-C3'-O3'	-7.50	101.75	113.00
27	i	39	PHE	CA-CB-CG	-7.50	106.30	113.80
54	S2	1082	A	N9-C1'-C2'	7.49	123.23	112.00
54	S2	449	A	C2'-C3'-O3'	-7.49	102.47	113.70
32	5	4115	G	C4'-C3'-O3'	7.49	120.63	109.40
32	5	2395	A	C3'-C2'-O2'	7.48	121.93	110.70
32	5	4979	A	N9-C1'-C2'	7.48	123.22	112.00
1	A	34	PHE	N-CA-CB	7.48	122.43	109.72
54	S2	427	U	N1-C1'-C2'	7.48	123.21	112.00
32	5	3692	A	C2'-C3'-O3'	7.47	124.91	113.70
32	5	2769	U	C1'-C2'-O2'	7.47	119.61	108.40
32	5	4966	A	N9-C1'-C2'	7.47	123.21	112.00
32	5	3883	U	N1-C1'-C2'	7.47	123.20	112.00
1	A	189	TYR	CA-CB-CG	7.46	127.34	113.90
32	5	4476	C	C4'-C3'-O3'	-7.46	101.81	113.00
2	D	44	TYR	CB-CA-C	7.46	125.26	110.42
32	5	3729	U	C2'-C3'-O3'	7.45	124.88	113.70
32	5	4497	U	C2'-C3'-O3'	7.45	124.88	113.70
31	o	31	ASP	N-CA-C	7.45	120.87	108.73
32	5	3663	A	O4'-C4'-C3'	-7.44	98.66	106.10
46	K	90	ARG	N-CA-C	-7.44	100.51	110.55
19	a	41	HIS	N-CA-C	-7.43	103.78	112.92
76	SM	72	HIS	N-CA-C	-7.42	100.75	110.33
55	SA	103	PHE	N-CA-CB	7.42	123.03	110.49
37	E	111	TYR	N-CA-CB	7.42	121.26	110.06
54	S2	1350	U	C2'-C3'-O3'	7.42	124.83	113.70
59	SG	156	TYR	CA-CB-CG	-7.42	100.55	113.90
29	l	21	ARG	CA-C-N	7.41	129.11	119.84
29	l	21	ARG	C-N-CA	7.41	129.11	119.84
54	S2	1157	G	C2'-C3'-O3'	-7.41	102.59	113.70
32	5	3667	C	C2'-C3'-O3'	7.41	124.81	113.70
32	5	170	C	C2'-C3'-O3'	7.40	120.61	109.50
32	5	4874	A	O4'-C1'-C2'	-7.40	100.20	107.60
32	5	2443	G	N9-C1'-C2'	7.40	123.10	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1284	A	C3'-C2'-O2'	-7.40	103.50	114.60
32	5	2632	U	N1-C1'-C2'	7.39	123.08	112.00
32	5	1397	A	C3'-C2'-O2'	7.38	121.78	110.70
54	S2	845	G	N9-C1'-C2'	7.38	123.08	112.00
54	S2	957	A	C4'-C3'-O3'	-7.38	98.33	109.40
32	5	292	G	C2'-C3'-O3'	7.38	120.58	109.50
2	D	54	ARG	CG-CD-NE	-7.38	95.76	112.00
54	S2	958	G	C2'-C3'-O3'	7.38	120.57	109.50
54	S2	1529	C	N1-C1'-C2'	7.38	123.07	112.00
12	S	28	TYR	N-CA-C	7.38	119.55	107.23
32	5	4464	A	C4'-C3'-O3'	-7.38	101.94	113.00
32	5	2581	A	N9-C1'-C2'	7.37	123.06	112.00
32	5	292	G	N9-C1'-C2'	7.37	125.05	114.00
32	5	962	C	N1-C1'-C2'	7.37	125.05	114.00
56	SB	82	ARG	CG-CD-NE	-7.36	95.80	112.00
32	5	4986	G	N9-C1'-C2'	7.36	123.04	112.00
32	5	2081	C	C2'-C3'-O3'	-7.36	102.66	113.70
32	5	1650	A	C2'-C3'-O3'	7.36	120.54	109.50
57	SC	170	TRP	N-CA-CB	7.36	120.65	109.91
80	SS	42	HIS	N-CA-CB	7.36	121.59	110.19
37	E	217	LYS	N-CA-C	7.35	121.53	110.14
54	S2	139	C	C3'-C2'-O2'	7.35	121.72	110.70
32	5	2370	A	C1'-C2'-O2'	-7.35	100.78	111.80
54	S2	595	U	C2'-C3'-O3'	7.35	120.52	109.50
32	5	4283	G	O4'-C1'-C2'	-7.35	100.25	107.60
4	H	60	TRP	CB-CA-C	7.34	125.03	110.42
9	O	65	ASN	CA-C-N	7.34	126.86	118.85
9	O	65	ASN	C-N-CA	7.34	126.86	118.85
5	J	119	TYR	CA-CB-CG	7.34	127.11	113.90
32	5	1355	G	N9-C1'-C2'	7.33	123.00	112.00
32	5	2319	C	N1-C1'-C2'	7.33	123.00	112.00
54	S2	1442	U	O4'-C1'-C2'	-7.33	100.27	107.60
32	5	2463	G	N9-C1'-C2'	7.33	122.99	112.00
32	5	4981	G	C1'-C2'-O2'	7.32	119.38	108.40
32	5	1937	C	N1-C1'-C2'	7.31	122.97	112.00
27	i	26	HIS	CA-CB-CG	-7.31	106.49	113.80
32	5	2852	U	C4'-C3'-O3'	7.31	123.96	113.00
54	S2	840	C	C2'-C3'-O3'	-7.31	102.74	113.70
57	SC	170	TRP	CA-CB-CG	-7.30	99.72	113.60
32	5	2796	G	N9-C1'-C2'	7.30	124.95	114.00
26	h	117	ARG	CG-CD-NE	-7.29	95.96	112.00
32	5	4199	C	C4'-C3'-O3'	7.29	123.94	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	F	209	PHE	N-CA-CB	7.29	121.06	110.20
2	D	210	TYR	N-CA-C	-7.29	103.02	110.97
32	5	979	C	C2'-C3'-O3'	7.29	124.63	113.70
54	S2	441	C	C4'-C3'-O3'	-7.28	102.08	113.00
32	5	3635	A	C1'-C2'-O2'	7.28	119.32	108.40
32	5	4713	G	C4'-C3'-O3'	-7.28	102.09	113.00
54	S2	596	U	N1-C1'-C2'	7.28	124.91	114.00
11	R	118	HIS	N-CA-C	-7.27	103.97	112.92
32	5	1325	C	N1-C1'-C2'	7.27	124.91	114.00
32	5	1394	G	C1'-C2'-O2'	-7.27	97.50	108.40
32	5	4589	A	O4'-C4'-C3'	-7.26	98.84	106.10
32	5	1319	U	C1'-C2'-O2'	7.26	119.29	108.40
32	5	4395	U	C4'-C3'-O3'	-7.26	102.11	113.00
54	S2	1578	U	N1-C1'-C2'	7.26	124.88	114.00
32	5	3879	G	O4'-C1'-C2'	-7.25	100.34	107.60
54	S2	1114	U	N1-C1'-C2'	7.25	124.88	114.00
34	8	79	G	N9-C1'-C2'	7.25	122.88	112.00
32	5	486	C	C2'-C3'-O3'	7.25	124.58	113.70
54	S2	1257	G	C2'-C3'-O3'	7.25	120.38	109.50
74	SF	51	HIS	CA-CB-CG	-7.25	106.55	113.80
38	F	120	PHE	CB-CA-C	7.24	124.84	110.42
47	q	99	ARG	CG-CD-NE	7.24	127.93	112.00
45	r	45	HIS	N-CA-CB	-7.24	98.25	110.49
32	5	113	A	C1'-C2'-O2'	7.24	119.25	108.40
34	8	66	A	N9-C1'-C2'	7.24	122.85	112.00
70	Sa	17	HIS	N-CA-CB	7.23	120.76	109.69
2	D	175	HIS	N-CA-C	-7.23	97.16	109.24
54	S2	1045	U	O4'-C1'-C2'	-7.23	100.37	107.60
32	5	100	C	C2'-C3'-O3'	7.23	124.55	113.70
32	5	2109	G	C3'-C2'-O2'	7.23	121.55	110.70
32	5	2270	G	N9-C1'-C2'	7.23	122.84	112.00
54	S2	1137	U	C2'-C3'-O3'	7.23	120.34	109.50
32	5	2081	C	N1-C1'-C2'	7.22	122.84	112.00
32	5	2521	G	C3'-C2'-O2'	7.22	121.54	110.70
20	b	7	HIS	CB-CA-C	-7.22	96.05	110.42
31	o	31	ASP	CB-CA-C	7.22	121.89	110.19
39	I	35	ASP	N-CA-C	7.22	120.25	108.55
32	5	2083	C	C4'-C3'-O3'	7.22	120.23	109.40
38	F	58	HIS	N-CA-CB	7.22	120.48	110.01
67	SW	44	HIS	CB-CA-C	7.22	123.01	110.01
41	W	8	PHE	CB-CA-C	7.21	120.52	109.34
32	5	1439	C	O4'-C1'-C2'	-7.21	100.39	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	965	U	N1-C1'-C2'	7.20	122.80	112.00
32	5	2307	A	N9-C1'-C2'	7.20	122.80	112.00
54	S2	28	U	C4'-C3'-O3'	7.20	123.80	113.00
32	5	1616	U	O4'-C1'-C2'	-7.20	100.40	107.60
8	N	21	PHE	N-CA-CB	7.20	120.66	109.94
32	5	663	G	C4'-C3'-O3'	7.20	123.79	113.00
32	5	4451	G	C4'-C3'-O3'	7.20	123.79	113.00
58	SE	121	TYR	CA-CB-CG	-7.20	100.95	113.90
59	SG	67	VAL	N-CA-C	7.19	120.04	111.05
54	S2	1850	A	N9-C1'-C2'	7.19	122.78	112.00
10	Q	33	ARG	CA-CB-CG	7.19	128.47	114.10
54	S2	1302	G	C1'-C2'-O2'	-7.19	101.02	111.80
12	S	29	ARG	CA-CB-CG	7.18	128.46	114.10
32	5	1614	C	C2'-C3'-O3'	7.18	124.47	113.70
57	SC	241	PHE	CA-CB-CG	-7.17	106.63	113.80
20	b	6	ASN	CB-CA-C	7.17	122.37	111.18
9	O	110	PRO	CA-C-N	7.17	128.80	119.84
9	O	110	PRO	C-N-CA	7.17	128.80	119.84
27	i	40	VAL	CB-CA-C	-7.16	102.86	111.81
33	7	42	A	O4'-C1'-C2'	-7.16	100.44	107.60
54	S2	1401	A	C2'-C3'-O3'	7.16	124.44	113.70
17	Y	78	TYR	CB-CA-C	7.16	124.66	110.42
32	5	3775	A	N9-C1'-C2'	7.16	122.74	112.00
38	F	244	ARG	N-CA-C	-7.16	103.41	111.07
54	S2	1293	A	N9-C1'-C2'	7.15	122.73	112.00
32	5	4238	G	C2'-C3'-O3'	7.15	124.42	113.70
32	5	2447	U	C2'-C3'-O3'	7.15	120.22	109.50
32	5	2761	U	C4'-C3'-O3'	7.15	120.12	109.40
18	Z	75	TYR	CA-CB-CG	7.14	126.76	113.90
32	5	1789	C	N1-C1'-C2'	7.14	122.71	112.00
54	S2	996	A	C1'-C2'-O2'	-7.14	101.09	111.80
32	5	4404	U	N1-C1'-C2'	-7.13	101.31	112.00
32	5	4510	A	C2'-C3'-O3'	7.13	120.19	109.50
54	S2	1533	A	C2'-C3'-O3'	-7.13	103.01	113.70
38	F	71	ILE	N-CA-C	-7.12	103.72	110.42
24	f	4	ARG	CA-CB-CG	7.12	128.34	114.10
54	S2	140	C	C2'-C3'-O3'	7.12	120.18	109.50
36	C	22	VAL	N-CA-C	7.12	118.07	111.45
32	5	3692	A	C1'-C2'-O2'	7.12	119.08	108.40
34	8	13	G	N9-C1'-C2'	7.12	122.68	112.00
50	3	38	C	O3'-P-O5'	-7.12	93.33	104.00
32	5	2689	C	O4'-C1'-C2'	-7.11	100.49	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5006	U	N1-C1'-C2'	-7.11	103.33	114.00
81	ST	34	VAL	N-CA-C	7.11	124.13	109.34
32	5	1586	G	N9-C1'-C2'	7.10	122.65	112.00
32	5	3799	A	N9-C1'-C2'	7.10	122.65	112.00
32	5	3938	G	O4'-C4'-C3'	-7.10	99.00	106.10
32	5	1440	U	C2'-C3'-O3'	7.10	124.34	113.70
32	5	84	A	O4'-C4'-C3'	-7.09	99.01	106.10
32	5	2649	G	N9-C1'-C2'	7.09	122.64	112.00
32	5	1211	G	O4'-C1'-C2'	-7.09	100.51	107.60
32	5	1564	A	N9-C1'-C2'	7.09	122.64	112.00
32	5	2468	U	C4'-C3'-O3'	7.09	120.04	109.40
38	F	41	GLN	N-CA-C	7.09	120.05	111.40
32	5	3656	A	C4'-C3'-O3'	-7.09	102.37	113.00
32	5	3717	A	C1'-C2'-O2'	-7.09	101.17	111.80
54	S2	1404	U	C4'-C3'-O3'	-7.09	98.77	109.40
51	4	38	U	C2'-C3'-O3'	7.08	120.12	109.50
54	S2	1198	G	C4'-C3'-O3'	-7.08	102.38	113.00
32	5	2266	C	C2'-C3'-O3'	7.08	120.12	109.50
32	5	291	U	N1-C1'-C2'	7.08	122.62	112.00
32	5	89	C	N1-C1'-C2'	7.08	122.62	112.00
54	S2	594	A	C4'-C3'-O3'	7.08	120.02	109.40
32	5	292	G	C4'-C3'-O3'	-7.08	98.78	109.40
74	SF	165	ASN	N-CA-CB	7.07	121.94	110.41
26	h	78	TYR	CB-CA-C	7.07	123.56	111.68
46	K	104	ILE	N-CA-C	7.07	124.05	109.34
32	5	1835	G	C4'-C3'-O3'	7.07	120.00	109.40
32	5	1921	C	C4'-C3'-O3'	7.07	120.00	109.40
32	5	1867	A	N9-C1'-C2'	7.07	122.60	112.00
38	F	83	PHE	N-CA-C	7.06	119.90	107.61
32	5	2263	A	C3'-C2'-O2'	-7.06	104.02	114.60
39	I	96	VAL	CB-CA-C	-7.06	102.16	110.91
54	S2	1849	G	C1'-C2'-O2'	-7.06	101.22	111.80
18	Z	40	HIS	N-CA-C	7.05	119.58	108.79
32	5	3843	C	C2'-C3'-O3'	7.05	120.08	109.50
33	7	58	A	C2'-C3'-O3'	7.05	124.28	113.70
32	5	5044	A	N9-C1'-C2'	7.05	122.57	112.00
32	5	1805	A	N9-C1'-C2'	7.05	124.57	114.00
32	5	42	A	C1'-C2'-O2'	-7.04	101.23	111.80
54	S2	1591	C	C2'-C3'-O3'	7.04	124.27	113.70
57	SC	96	PHE	N-CA-CB	7.04	120.19	109.91
34	8	68	G	N9-C1'-C2'	7.04	122.56	112.00
32	5	3611	A	N9-C1'-C2'	7.04	122.55	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4341	C	C1'-C2'-O2'	7.04	118.95	108.40
32	5	1881	C	N1-C1'-C2'	7.03	124.55	114.00
32	5	936	C	C4'-C3'-O3'	7.03	119.95	109.40
54	S2	1190	A	N9-C1'-C2'	7.03	122.55	112.00
54	S2	445	A	C2'-C3'-O3'	-7.03	103.16	113.70
57	SC	236	PHE	CA-CB-CG	-7.03	106.77	113.80
54	S2	1453	C	C4'-C3'-O3'	7.03	123.54	113.00
32	5	1522	G	C1'-C2'-O2'	7.02	118.94	108.40
32	5	4232	U	C2'-C3'-O3'	7.02	120.03	109.50
54	S2	41	G	N9-C1'-C2'	-7.02	103.47	114.00
54	S2	556	U	C2'-C3'-O3'	7.02	120.03	109.50
32	5	384	A	N9-C1'-C2'	7.02	122.53	112.00
54	S2	1395	C	O4'-C1'-C2'	-7.02	100.58	107.60
23	e	60	TYR	CB-CA-C	7.01	122.87	112.07
32	5	2317	C	N1-C1'-C2'	7.01	122.52	112.00
32	5	4718	G	N9-C1'-C2'	-7.01	103.49	114.00
32	5	1573	G	N9-C1'-C2'	7.01	122.51	112.00
32	5	1519	C	C3'-C2'-O2'	7.00	121.20	110.70
40	P	116	HIS	CA-CB-CG	-7.00	106.80	113.80
32	5	2666	U	N1-C1'-C2'	-6.99	101.51	112.00
73	SD	79	PHE	CB-CA-C	6.99	119.43	110.34
63	SL	13	GLN	CB-CG-CD	-6.99	100.72	112.60
32	5	336	A	C1'-O4'-C4'	-6.99	102.91	109.90
26	h	119	PHE	CB-CA-C	-6.99	96.52	110.42
54	S2	613	G	C2'-C3'-O3'	6.99	119.98	109.50
54	S2	1519	U	N1-C1'-C2'	6.98	124.48	114.00
32	5	3851	U	C1'-C2'-O2'	6.98	118.87	108.40
54	S2	1791	A	C1'-C2'-O2'	6.98	118.87	108.40
32	5	1554	A	C1'-C2'-O2'	6.98	118.87	108.40
57	SC	170	TRP	N-CA-C	-6.98	103.36	110.97
32	5	1378	C	N1-C1'-C2'	6.97	122.46	112.00
32	5	2281	U	C4'-C3'-O3'	-6.97	102.54	113.00
54	S2	850	C	N1-C1'-C2'	6.97	122.46	112.00
54	S2	454	U	N1-C1'-C2'	6.97	122.46	112.00
54	S2	73	C	N1-C1'-C2'	6.97	124.46	114.00
54	S2	102	A	C2'-C3'-O3'	6.97	119.95	109.50
32	5	1365	C	N1-C1'-C2'	6.96	124.45	114.00
32	5	4120	U	C2'-C3'-O3'	-6.96	103.25	113.70
54	S2	1201	U	C1'-C2'-O2'	6.96	118.85	108.40
32	5	4424	A	C1'-C2'-O2'	6.96	118.84	108.40
32	5	2812	A	C1'-C2'-O2'	-6.96	101.36	111.80
59	SG	134	GLY	CA-C-N	6.96	128.54	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	SG	134	GLY	C-N-CA	6.96	128.54	119.84
32	5	219	G	O4'-C1'-C2'	-6.96	100.64	107.60
54	S2	917	U	C4'-C3'-O3'	-6.96	102.56	113.00
54	S2	1453	C	C1'-C2'-O2'	6.96	118.84	108.40
56	SB	100	PHE	N-CA-CB	6.95	119.90	109.19
32	5	4326	G	N9-C1'-C2'	6.95	122.42	112.00
32	5	353	A	N9-C1'-C2'	-6.95	103.58	114.00
32	5	4978	G	N9-C1'-C2'	6.95	122.42	112.00
32	5	1398	A	C2'-C3'-O3'	6.95	119.92	109.50
32	5	1658	G	N9-C1'-C2'	6.95	122.42	112.00
32	5	4229	U	O4'-C1'-C2'	-6.95	100.65	107.60
86	Sf	143	LYS	CD-CE-NZ	6.95	134.12	111.90
11	R	95	TRP	N-CA-C	-6.94	97.09	110.56
20	b	6	ASN	CA-CB-CG	-6.94	105.66	112.60
32	5	38	A	C4'-C3'-O3'	-6.94	102.59	113.00
32	5	1885	G	C4'-C3'-O3'	6.94	123.41	113.00
32	5	2087	C	N1-C1'-C2'	-6.94	101.59	112.00
32	5	2818	C	C1'-C2'-O2'	6.94	118.81	108.40
32	5	89	C	C1'-C2'-O2'	-6.94	97.99	108.40
54	S2	166	A	C4'-C3'-O3'	-6.94	102.59	113.00
32	5	1932	A	N9-C1'-C2'	6.94	122.40	112.00
54	S2	732	U	C2'-C3'-O3'	6.94	124.10	113.70
32	5	3871	A	N9-C1'-C2'	6.93	122.40	112.00
32	5	3676	G	C1'-C2'-O2'	-6.93	98.00	108.40
32	5	4887	C	C2'-C3'-O3'	6.93	124.10	113.70
32	5	93	G	C4'-C3'-O3'	-6.92	99.02	109.40
37	E	42	ARG	N-CA-C	6.92	125.54	110.80
7	M	17	PHE	N-CA-C	6.92	117.72	108.38
38	F	197	TYR	CB-CA-C	-6.92	100.39	111.39
54	S2	304	C	C2'-C3'-O3'	6.92	119.88	109.50
54	S2	1374	C	N1-C1'-C2'	6.92	122.37	112.00
63	SL	62	PHE	CA-CB-CG	-6.92	106.89	113.80
22	d	108	TYR	CA-CB-CG	-6.91	101.45	113.90
32	5	1638	A	C2'-C3'-O3'	6.91	119.87	109.50
32	5	4884	G	O4'-C1'-C2'	-6.91	100.69	107.60
32	5	371	A	C1'-C2'-O2'	-6.91	98.03	108.40
32	5	2396	A	O4'-C4'-C3'	-6.91	99.19	106.10
10	Q	33	ARG	N-CA-CB	6.91	120.03	110.01
19	a	108	TYR	N-CA-C	6.91	118.77	107.23
32	5	50	C	N1-C1'-C2'	6.91	122.37	112.00
32	5	2790	U	N1-C1'-C2'	6.91	124.36	114.00
1	A	209	HIS	N-CA-CB	6.91	121.27	110.01

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
65	SO	147	ARG	CG-CD-NE	-6.91	96.80	112.00
54	S2	26	U	C2'-C3'-O3'	6.91	124.06	113.70
2	D	210	TYR	CA-CB-CG	-6.91	101.47	113.90
32	5	1521	C	C2'-C3'-O3'	6.91	124.06	113.70
32	5	4394	A	C1'-C2'-O2'	-6.91	101.44	111.80
12	S	29	ARG	CG-CD-NE	-6.90	96.82	112.00
32	5	216	C	C2'-C3'-O3'	6.90	124.05	113.70
32	5	3880	G	N9-C1'-C2'	6.90	124.35	114.00
32	5	4463	U	O4'-C1'-C2'	-6.90	100.70	107.60
42	j	27	TYR	CA-CB-CG	-6.89	101.50	113.90
32	5	4221	C	N1-C1'-C2'	-6.88	101.67	112.00
32	5	3740	G	O4'-C1'-C2'	-6.88	100.72	107.60
32	5	1324	A	C1'-C2'-O2'	-6.88	101.48	111.80
32	5	2382	A	C2'-C3'-O3'	-6.88	103.38	113.70
32	5	3909	C	C1'-C2'-O2'	6.88	118.72	108.40
12	S	44	PHE	N-CA-CB	6.87	120.33	110.16
85	Sd	46	TYR	CA-CB-CG	-6.87	101.53	113.90
54	S2	1246	A	C1'-C2'-O2'	6.87	118.70	108.40
85	Sd	12	ARG	N-CA-C	-6.87	104.81	112.57
32	5	1244	G	C4'-C3'-O3'	6.87	119.70	109.40
54	S2	181	A	C4'-C3'-O3'	6.86	119.69	109.40
40	P	144	CYS	N-CA-C	6.86	119.60	109.24
32	5	1280	C	C4'-C3'-O3'	-6.86	102.71	113.00
54	S2	662	G	N9-C1'-C2'	6.86	124.29	114.00
54	S2	1292	C	P-O5'-C5'	6.86	131.19	120.90
32	5	1238	A	C2'-C3'-O3'	6.85	119.78	109.50
32	5	1356	U	C4'-C3'-O3'	-6.85	102.72	113.00
32	5	1	C	C5'-C4'-C3'	6.85	125.48	115.20
64	SN	113	PHE	N-CA-CB	6.85	120.83	110.14
32	5	1624	G	C4'-C3'-O3'	6.84	119.66	109.40
32	5	2714	G	C4'-C3'-O3'	-6.84	102.74	113.00
54	S2	399	C	C2'-C3'-O3'	-6.84	103.44	113.70
32	5	46	U	N1-C1'-C2'	6.84	122.26	112.00
32	5	1723	A	C4'-C3'-O3'	-6.84	102.75	113.00
40	P	54	GLN	CA-CB-CG	6.84	127.77	114.10
32	5	1573	G	C4'-C3'-O3'	-6.83	102.75	113.00
54	S2	1543	U	C4'-C3'-O3'	6.83	119.64	109.40
32	5	21	G	C4'-C3'-O3'	6.83	123.24	113.00
32	5	1947	U	C4'-C3'-O3'	6.83	123.24	113.00
32	5	1379	C	N1-C1'-C2'	6.83	124.24	114.00
17	Y	61	HIS	N-CA-CB	6.82	120.15	110.12
32	5	2460	A	C1'-C2'-O2'	6.82	118.63	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	19	A	C2'-C3'-O3'	6.82	123.93	113.70
32	5	3726	A	C1'-C2'-O2'	-6.82	101.57	111.80
8	N	180	PHE	N-CA-C	-6.82	102.06	110.65
32	5	2851	G	N9-C1'-C2'	-6.82	101.77	112.00
32	5	4939	C	O4'-C1'-C2'	-6.82	100.78	107.60
64	SN	113	PHE	CB-CA-C	-6.82	98.28	111.03
32	5	514	U	C4'-C3'-O3'	6.81	123.21	113.00
32	5	245	C	C2'-C3'-O3'	6.80	123.91	113.70
32	5	2122	G	C2'-C3'-O3'	6.80	119.71	109.50
54	S2	1667	U	N1-C1'-C2'	6.80	122.21	112.00
32	5	3698	G	C4'-C3'-O3'	-6.80	102.80	113.00
54	S2	1621	U	C2'-C3'-O3'	6.80	119.70	109.50
54	S2	1221	G	C1'-C2'-O2'	-6.80	98.20	108.40
54	S2	1249	C	N1-C1'-C2'	-6.80	101.80	112.00
32	5	4666	G	C4'-C3'-O3'	-6.79	102.81	113.00
32	5	1271	G	C4'-C3'-O3'	6.79	123.18	113.00
32	5	2257	C	C2'-C3'-O3'	6.79	119.68	109.50
32	5	2874	U	C2'-C3'-O3'	6.79	119.68	109.50
27	i	26	HIS	N-CA-CB	6.78	120.66	110.22
31	o	48	TYR	CB-CA-C	6.78	122.29	112.12
32	5	1930	U	N1-C1'-C2'	6.78	124.17	114.00
59	SG	156	TYR	CB-CA-C	6.78	122.60	112.03
54	S2	1513	C	C1'-C2'-O2'	-6.78	98.24	108.40
2	D	198	HIS	CB-CA-C	6.77	123.16	110.63
32	5	1358	G	O4'-C1'-C2'	-6.77	100.83	107.60
32	5	4589	A	C4'-C3'-O3'	-6.77	99.24	109.40
34	8	70	G	C1'-C2'-O2'	6.77	118.56	108.40
32	5	2797	C	N1-C1'-C2'	-6.77	103.84	114.00
32	5	3839	G	O4'-C4'-C3'	-6.77	99.33	106.10
54	S2	912	C	C4'-C3'-O3'	-6.77	102.85	113.00
54	S2	190	G	C4'-C3'-O3'	6.77	119.55	109.40
54	S2	1838	U	C2'-C3'-O3'	6.76	119.64	109.50
44	p	34	HIS	CB-CA-C	6.76	122.09	110.94
49	2	123	PHE	CB-CA-C	-6.76	101.05	111.66
54	S2	1559	C	C1'-C2'-O2'	6.76	118.54	108.40
31	o	42	ASP	N-CA-CB	6.75	119.77	109.91
54	S2	829	C	N1-C1'-C2'	-6.75	103.87	114.00
32	5	4535	A	C1'-C2'-O2'	6.75	118.53	108.40
32	5	2577	C	O4'-C1'-C2'	-6.75	100.85	107.60
32	5	1631	A	C2'-C3'-O3'	6.74	119.61	109.50
12	S	157	ARG	CG-CD-NE	6.73	126.81	112.00
3	G	57	TRP	CB-CA-C	6.73	123.43	110.17

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3645	U	C4'-C3'-O3'	-6.73	102.91	113.00
32	5	2038	U	N1-C1'-C2'	6.73	122.09	112.00
54	S2	1142	G	C2'-C3'-O3'	6.73	123.79	113.70
55	SA	90	PHE	N-CA-CB	6.73	119.82	110.07
28	k	61	PRO	N-CA-C	6.73	118.91	110.70
54	S2	65	C	C2'-C3'-O3'	6.73	119.59	109.50
32	5	4170	A	C2'-C3'-O3'	6.72	119.59	109.50
76	SM	72	HIS	N-CA-CB	6.72	119.44	110.29
54	S2	9	U	C2'-C3'-O3'	6.72	123.78	113.70
32	5	4123	C	O4'-C1'-C2'	-6.72	100.88	107.60
32	5	1887	G	C2'-C3'-O3'	6.71	123.77	113.70
32	5	1853	G	N9-C1'-C2'	-6.71	101.93	112.00
38	F	237	ASN	CA-CB-CG	-6.71	105.89	112.60
32	5	1852	U	C1'-C2'-O2'	6.71	118.47	108.40
32	5	1239	C	C2'-C3'-O3'	6.71	119.56	109.50
8	N	143	ARG	CG-CD-NE	-6.71	97.24	112.00
32	5	1368	A	C1'-C2'-O2'	-6.71	101.74	111.80
8	N	118	SER	N-CA-C	6.71	120.22	108.75
32	5	2320	G	C2'-C3'-O3'	6.71	119.56	109.50
32	5	3727	A	N9-C1'-C2'	6.71	122.06	112.00
32	5	4122	G	C2'-C3'-O3'	6.71	123.76	113.70
74	SF	152	TRP	N-CA-CB	6.71	119.79	110.07
32	5	2075	G	C2'-C3'-O3'	6.70	123.75	113.70
67	SW	46	TYR	CA-CB-CG	-6.70	101.84	113.90
32	5	1075	G	C4'-C3'-O3'	-6.69	102.96	113.00
32	5	2123	C	C2'-C3'-O3'	6.69	119.54	109.50
54	S2	638	C	C1'-C2'-O2'	-6.69	98.37	108.40
86	Sf	148	TYR	CA-CB-CG	6.69	125.94	113.90
10	Q	33	ARG	CB-CG-CD	6.68	126.67	111.30
54	S2	340	C	C2'-C3'-O3'	6.68	123.73	113.70
88	S1	48	CYS	N-CA-C	6.68	118.36	108.60
54	S2	104	A	C2'-C3'-O3'	6.68	123.72	113.70
32	5	2089	G	C1'-C2'-O2'	-6.68	101.78	111.80
54	S2	1604	G	C4'-C3'-O3'	-6.68	102.98	113.00
34	8	41	A	C1'-C2'-O2'	6.68	118.42	108.40
32	5	4996	C	C1'-C2'-O2'	6.67	118.41	108.40
32	5	1733	G	C4'-C3'-O3'	6.67	123.00	113.00
32	5	4228	G	N9-C1'-C2'	-6.67	102.00	112.00
32	5	1575	A	N9-C1'-C2'	6.66	122.00	112.00
32	5	1649	U	N1-C1'-C2'	6.66	124.00	114.00
32	5	5022	U	C2'-C3'-O3'	6.66	123.70	113.70
19	a	34	ASN	CA-CB-CG	-6.66	105.94	112.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1216	C	C2'-C3'-O3'	6.66	123.69	113.70
34	8	63	U	O4'-C1'-C2'	-6.66	100.94	107.60
32	5	336	A	C8-N9-C1'	-6.66	107.73	127.70
32	5	93	G	O4'-C4'-C3'	-6.65	99.45	106.10
32	5	2587	A	C2'-C3'-O3'	-6.65	103.72	113.70
54	S2	1669	G	N9-C1'-C2'	6.65	121.98	112.00
72	Se	45	VAL	N-CA-C	-6.65	104.69	110.74
54	S2	72	C	C4'-C3'-O3'	6.64	119.37	109.40
54	S2	443	U	C1'-C2'-O2'	6.64	118.37	108.40
12	S	111	ARG	CB-CG-CD	6.64	126.57	111.30
32	5	3859	G	C4'-C3'-O3'	-6.64	103.04	113.00
32	5	40	G	N9-C1'-C2'	6.63	121.95	112.00
32	5	2683	C	C2'-C3'-O3'	6.63	123.65	113.70
32	5	5002	U	C2'-C3'-O3'	6.63	119.45	109.50
32	5	2403	A	N9-C1'-C2'	6.63	121.94	112.00
19	a	129	PHE	N-CA-C	6.63	119.58	110.24
33	7	59	G	C3'-C2'-O2'	6.63	120.64	110.70
56	SB	82	ARG	N-CA-C	6.63	124.92	110.80
32	5	938	C	N1-C1'-C2'	6.62	121.94	112.00
38	F	194	HIS	CB-CA-C	-6.62	100.70	110.95
68	SX	16	HIS	CA-CB-CG	-6.61	107.19	113.80
32	5	1359	G	N9-C1'-C2'	6.61	121.91	112.00
10	Q	37	ARG	NE-CZ-NH2	6.61	125.15	119.20
32	5	4745	G	N9-C1'-C2'	6.61	121.91	112.00
39	I	76	MET	N-CA-C	-6.60	100.51	110.28
12	S	77	ASN	CA-CB-CG	-6.60	106.00	112.60
32	5	1501	C	O4'-C1'-N1	6.60	118.40	108.50
54	S2	1577	G	N9-C1'-C2'	6.60	121.90	112.00
32	5	1382	G	N9-C1'-C2'	6.60	121.90	112.00
32	5	4215	C	O4'-C1'-C2'	-6.60	101.00	107.60
32	5	2395	A	C2'-C3'-O3'	6.59	123.59	113.70
32	5	3739	C	C2'-C3'-O3'	6.59	123.59	113.70
2	D	157	ASN	CB-CA-C	6.59	120.92	109.65
32	5	245	C	O4'-C1'-C2'	-6.59	101.01	107.60
54	S2	64	A	C2'-C3'-O3'	-6.59	103.81	113.70
54	S2	1603	G	O4'-C4'-C3'	-6.59	99.51	106.10
32	5	2312	U	O4'-C1'-C2'	-6.59	101.01	107.60
54	S2	798	A	C4'-C3'-O3'	6.58	122.87	113.00
67	SW	15	ASN	N-CA-C	-6.58	104.03	111.14
13	T	105	PHE	CB-CA-C	6.58	120.90	109.65
37	E	277	ILE	N-CA-C	6.58	118.29	107.24
32	5	703	G	C2'-C3'-O3'	-6.58	103.84	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
64	SN	139	TRP	CA-CB-CG	6.57	126.09	113.60
32	5	4279	A	N9-C1'-C2'	-6.57	104.14	114.00
54	S2	824	C	N1-C1'-C2'	6.57	121.86	112.00
9	O	49	ARG	CG-CD-NE	-6.57	97.55	112.00
32	5	505	G	C2'-C3'-O3'	6.57	123.55	113.70
32	5	27	C	C4'-C3'-O3'	-6.57	103.15	113.00
32	5	2265	G	C4'-C3'-O3'	6.57	119.25	109.40
54	S2	594	A	N9-C1'-C2'	-6.56	104.15	114.00
7	M	64	PHE	N-CA-C	-6.56	100.55	110.39
54	S2	1659	U	C4'-C3'-O3'	6.56	122.84	113.00
32	5	664	G	C4'-C3'-O3'	6.56	119.24	109.40
86	Sf	131	PHE	N-CA-C	6.56	120.19	109.24
32	5	4197	G	C1'-C2'-O2'	6.55	118.23	108.40
39	I	92	HIS	N-CA-C	-6.55	100.13	109.24
54	S2	680	G	N9-C1'-C2'	6.55	121.83	112.00
54	S2	444	G	O4'-C1'-C2'	-6.55	101.05	107.60
32	5	4392	G	C1'-C2'-O2'	6.55	118.22	108.40
54	S2	382	C	N1-C1'-C2'	6.54	121.82	112.00
46	K	123	ARG	N-CA-C	6.54	120.32	109.46
32	5	123	C	C2'-C3'-O3'	6.54	123.51	113.70
31	o	78	ARG	NE-CZ-NH2	6.54	125.09	119.20
38	F	228	HIS	N-CA-CB	6.54	119.70	109.69
32	5	226	G	N9-C1'-C2'	-6.54	104.19	114.00
32	5	274	C	C1'-C2'-O2'	-6.54	101.99	111.80
32	5	4519	C	C2'-C3'-O3'	6.54	123.51	113.70
32	5	3843	C	N1-C1'-C2'	6.54	123.81	114.00
38	F	58	HIS	N-CA-C	-6.54	104.08	111.07
54	S2	1450	G	C3'-C2'-O2'	6.54	120.50	110.70
1	A	186	TYR	N-CA-CB	6.53	119.48	110.01
32	5	58	G	N9-C1'-C2'	6.53	123.80	114.00
32	5	969	C	C3'-C2'-O2'	-6.53	104.80	114.60
32	5	4738	C	C4'-C3'-O3'	-6.53	103.20	113.00
54	S2	1585	U	O4'-C4'-C3'	-6.53	99.57	106.10
54	S2	1825	A	C2'-C3'-O3'	6.53	119.29	109.50
23	e	35	TRP	CA-CB-CG	-6.53	101.20	113.60
54	S2	1255	G	C4'-C3'-O3'	-6.53	103.21	113.00
32	5	47	A	C4'-C3'-O3'	6.52	119.18	109.40
37	E	231	THR	N-CA-C	-6.52	104.80	112.89
54	S2	551	U	C1'-C2'-O2'	6.52	118.18	108.40
8	N	150	TRP	CA-CB-CG	6.52	125.99	113.60
32	5	2529	A	C2'-C3'-O3'	-6.52	103.92	113.70
32	5	2053	C	C4'-C3'-O3'	-6.52	103.22	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1697	A	C3'-C2'-O2'	-6.52	104.82	114.60
32	5	3817	A	N9-C1'-C2'	6.51	123.77	114.00
32	5	4876	U	N1-C1'-C2'	6.51	123.77	114.00
32	5	72	C	C1'-O4'-C4'	-6.51	103.39	109.90
32	5	2046	G	C1'-O4'-C4'	-6.51	103.39	109.90
32	5	4481	U	N1-C1'-C2'	6.51	121.77	112.00
54	S2	417	C	C2'-C3'-O3'	6.51	123.47	113.70
32	5	235	A	O4'-C1'-C2'	-6.51	101.09	107.60
54	S2	1480	A	N9-C1'-C2'	6.51	121.76	112.00
32	5	4600	G	O4'-C1'-C2'	-6.50	101.09	107.60
32	5	4117	U	O4'-C1'-C2'	-6.50	101.10	107.60
32	5	215	C	C2'-C3'-O3'	6.50	123.45	113.70
32	5	1534	A	N9-C1'-C2'	6.50	123.75	114.00
54	S2	507	G	C2'-C3'-O3'	6.50	119.24	109.50
32	5	4239	A	C1'-C2'-O2'	6.50	118.14	108.40
32	5	4342	C	C2'-C3'-O3'	6.49	123.44	113.70
54	S2	146	G	C3'-C2'-O2'	6.49	120.44	110.70
32	5	3673	C	C4'-C3'-O3'	-6.49	103.26	113.00
54	S2	497	C	C3'-C2'-O2'	6.49	120.44	110.70
54	S2	1315	U	C3'-C2'-O2'	6.48	120.43	110.70
32	5	153	G	C4'-C3'-O3'	-6.48	103.28	113.00
32	5	4275	G	C1'-C2'-O2'	6.48	118.12	108.40
5	J	120	ASP	N-CA-C	-6.48	101.37	110.31
32	5	1650	A	C4'-C3'-O3'	-6.48	99.68	109.40
32	5	2321	G	N9-C1'-C2'	6.48	121.72	112.00
35	B	179	HIS	CA-CB-CG	-6.48	107.32	113.80
55	SA	103	PHE	CA-CB-CG	-6.47	107.33	113.80
32	5	2851	G	C2'-C3'-O3'	6.47	123.41	113.70
40	P	145	HIS	CA-CB-CG	-6.47	107.33	113.80
21	c	90	ARG	CA-CB-CG	6.47	127.03	114.10
54	S2	1114	U	C2'-C3'-O3'	6.47	119.20	109.50
76	SM	33	ARG	CG-CD-NE	6.47	126.22	112.00
54	S2	1109	C	N1-C1'-C2'	6.46	123.70	114.00
32	5	1296	G	C4'-C3'-O3'	6.46	119.09	109.40
54	S2	1603	G	N9-C1'-C2'	6.46	123.69	114.00
32	5	4747	C	C3'-C2'-O2'	6.46	120.39	110.70
34	8	135	C	N1-C1'-C2'	6.46	121.69	112.00
32	5	1353	G	C4'-C3'-O3'	-6.46	103.31	113.00
54	S2	123	G	C1'-C2'-O2'	6.45	118.08	108.40
54	S2	912	C	C2'-C3'-O3'	6.45	123.38	113.70
32	5	43	U	C1'-C2'-O2'	6.45	118.08	108.40
32	5	1292	C	N1-C1'-C2'	6.45	121.67	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
69	SY	20	ARG	N-CA-C	6.45	118.87	109.07
32	5	4518	A	C3'-C2'-O2'	-6.45	104.93	114.60
81	ST	85	ASN	N-CA-C	-6.45	105.17	113.16
13	T	13	TYR	N-CA-CB	-6.44	100.58	111.27
61	SI	51	GLY	N-CA-C	-6.44	97.92	113.18
34	8	38	U	C3'-C2'-O2'	6.44	120.36	110.70
35	B	258	HIS	N-CA-C	6.44	124.04	109.81
42	j	8	PHE	CA-CB-CG	-6.44	107.36	113.80
75	SK	57	TYR	CA-CB-CG	-6.44	102.31	113.90
32	5	514	U	N1-C1'-C2'	-6.43	102.35	112.00
32	5	1804	A	C4'-C3'-O3'	6.43	119.05	109.40
32	5	30	C	C1'-C2'-O2'	-6.43	98.76	108.40
57	SC	250	TYR	CA-CB-CG	-6.43	102.33	113.90
35	B	261	ARG	N-CA-C	-6.42	99.35	109.50
18	Z	38	TYR	CB-CA-C	6.42	120.83	109.72
38	F	141	TYR	CA-CB-CG	6.42	125.46	113.90
32	5	1887	G	N9-C1'-C2'	-6.42	102.37	112.00
32	5	2078	C	O4'-C1'-C2'	-6.42	101.18	107.60
32	5	2344	U	N1-C1'-C2'	6.42	121.63	112.00
32	5	2035	C	C1'-C2'-O2'	6.42	118.03	108.40
32	5	4074	C	C1'-C2'-O2'	-6.42	102.18	111.80
54	S2	822	U	N1-C1'-C2'	6.42	123.63	114.00
32	5	5062	G	P-O5'-C5'	6.41	130.52	120.90
54	S2	863	U	N1-C1'-C2'	6.41	121.62	112.00
32	5	1409	C	C4'-C3'-O3'	6.41	119.02	109.40
54	S2	161	U	N1-C1'-C2'	6.41	123.61	114.00
32	5	1268	G	C4'-C3'-O3'	6.41	119.01	109.40
32	5	1930	U	O4'-C4'-C3'	-6.41	99.69	106.10
32	5	2277	C	O4'-C1'-C2'	-6.41	101.19	107.60
54	S2	842	C	N1-C1'-C2'	6.41	121.61	112.00
34	8	118	C	O4'-C1'-C2'	-6.41	101.19	107.60
67	SW	44	HIS	N-CA-C	-6.41	105.22	113.16
40	P	117	ILE	N-CA-C	6.40	116.80	108.35
7	M	109	ARG	NE-CZ-NH2	6.40	124.96	119.20
32	5	62	A	C1'-C2'-O2'	-6.40	98.80	108.40
54	S2	501	C	O4'-C1'-C2'	-6.40	101.20	107.60
1	A	194	ASN	N-CA-C	6.40	119.65	108.52
22	d	86	VAL	N-CA-C	6.39	117.92	108.45
32	5	2879	A	O4'-C4'-C3'	-6.39	99.71	106.10
61	SI	28	GLU	N-CA-C	-6.39	97.18	110.80
1	A	194	ASN	N-CA-CB	6.39	119.78	110.58
32	5	1215	C	O4'-C1'-C2'	-6.39	101.21	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1379	A	C2'-C3'-O3'	-6.39	104.11	113.70
74	SF	44	LYS	N-CA-C	-6.39	105.52	113.38
32	5	85	G	C1'-C2'-O2'	6.39	121.39	111.80
24	f	4	ARG	N-CA-CB	6.39	121.29	110.49
54	S2	399	C	C4'-C3'-O3'	6.39	122.58	113.00
34	8	2	G	O4'-C1'-C2'	-6.39	101.21	107.60
32	5	2256	C	C2'-C3'-O3'	6.38	119.08	109.50
54	S2	870	A	C4'-C3'-O3'	6.38	118.98	109.40
54	S2	1309	C	C2'-C3'-O3'	-6.38	104.12	113.70
32	5	4337	C	C1'-C2'-O2'	-6.38	98.83	108.40
37	E	275	ASN	N-CA-CB	6.38	120.89	110.17
32	5	2464	C	C1'-C2'-O2'	-6.38	102.24	111.80
32	5	3906	A	N9-C1'-C2'	-6.38	102.44	112.00
54	S2	393	U	O4'-C1'-C2'	-6.38	99.42	105.80
54	S2	1293	A	C2'-C3'-O3'	-6.38	104.14	113.70
32	5	25	A	N9-C1'-C2'	6.37	121.56	112.00
32	5	2613	C	C2'-C3'-O3'	6.37	123.26	113.70
32	5	4355	G	C4'-C3'-O3'	-6.37	103.44	113.00
56	SB	205	TYR	CB-CA-C	6.37	117.47	110.15
54	S2	1436	C	C3'-C2'-O2'	6.37	120.25	110.70
73	SD	202	LYS	CA-C-N	-6.37	111.88	119.84
73	SD	202	LYS	C-N-CA	-6.37	111.88	119.84
54	S2	55	U	N1-C1'-C2'	6.36	123.55	114.00
23	e	60	TYR	N-CA-C	-6.36	99.97	109.83
32	5	4566	U	C4'-C3'-O3'	-6.36	103.46	113.00
32	5	4948	C	C2'-C3'-O3'	6.36	123.24	113.70
12	S	83	ARG	CG-CD-NE	6.36	125.99	112.00
54	S2	1331	C	C4'-C3'-O3'	-6.36	103.46	113.00
32	5	279	A	C2'-C3'-O3'	6.35	119.03	109.50
54	S2	1367	U	C2'-C3'-O3'	6.35	123.23	113.70
32	5	4677	U	C3'-C2'-O2'	6.35	120.22	110.70
38	F	228	HIS	CA-CB-CG	-6.35	107.45	113.80
32	5	3870	C	N1-C1'-C2'	6.35	121.52	112.00
54	S2	1099	G	O4'-C1'-C2'	-6.35	101.25	107.60
32	5	112	C	O4'-C1'-C2'	-6.34	101.26	107.60
32	5	74	G	N9-C1'-C2'	6.34	121.52	112.00
17	Y	6	PHE	CB-CA-C	6.34	123.04	110.42
2	D	96	ALA	N-CA-C	6.34	120.58	112.34
54	S2	1298	G	C1'-C2'-O2'	-6.34	102.29	111.80
32	5	4888	U	C1'-C2'-O2'	6.34	121.31	111.80
32	5	300	A	O4'-C1'-C2'	-6.34	101.26	107.60
32	5	4272	G	N9-C1'-C2'	6.33	123.50	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2046	G	O4'-C1'-C2'	-6.33	101.27	107.60
54	S2	1851	A	N9-C1'-C2'	6.33	121.50	112.00
2	D	16	TYR	N-CA-CB	6.33	119.51	109.51
8	N	192	TRP	CA-CB-CG	6.33	125.62	113.60
54	S2	377	G	O4'-C1'-C2'	-6.33	101.27	107.60
54	S2	646	G	O4'-C1'-C2'	-6.33	101.27	107.60
54	S2	1085	C	N1-C1'-C2'	6.33	123.49	114.00
32	5	470	A	O4'-C1'-C2'	-6.33	101.27	107.60
32	5	4282	A	N9-C1'-C2'	6.33	123.49	114.00
32	5	1820	C	C1'-C2'-O2'	-6.32	102.32	111.80
54	S2	14	C	N1-C1'-C2'	6.32	121.48	112.00
54	S2	402	C	C1'-C2'-O2'	6.32	117.88	108.40
54	S2	1319	U	N1-C1'-C2'	6.32	121.48	112.00
59	SG	172	LYS	N-CA-C	6.32	118.48	110.33
13	T	159	MET	N-CA-C	6.32	118.04	111.03
32	5	1822	U	N1-C1'-C2'	6.31	121.47	112.00
22	d	26	THR	N-CA-C	6.31	118.24	109.15
7	M	6	PHE	CB-CA-C	6.31	121.41	112.07
32	5	4328	G	C1'-C2'-O2'	6.31	117.86	108.40
23	e	43	ASN	CB-CA-C	6.30	119.97	109.89
72	Se	38	TYR	CA-CB-CG	6.30	125.25	113.90
32	5	1274	A	C2'-C3'-O3'	6.30	118.95	109.50
32	5	4911	A	C1'-O4'-C4'	-6.30	103.60	109.90
54	S2	399	C	N1-C1'-C2'	-6.30	102.55	112.00
32	5	1790	U	C2'-C3'-O3'	6.29	118.94	109.50
32	5	118	C	C4'-C3'-O3'	-6.29	103.56	113.00
32	5	1394	G	N9-C1'-C2'	6.29	121.44	112.00
54	S2	821	G	O4'-C1'-C2'	-6.29	101.31	107.60
32	5	968	C	C4'-C3'-O3'	6.29	118.83	109.40
32	5	451	C	C2'-C3'-O3'	6.29	118.93	109.50
62	SJ	123	ILE	CB-CA-C	-6.29	102.42	112.16
54	S2	1136	U	N1-C1'-C2'	6.28	121.42	112.00
54	S2	1371	U	O4'-C1'-C2'	-6.28	101.32	107.60
8	N	53	TYR	N-CA-CB	6.28	119.31	109.83
32	5	2311	C	C1'-C2'-O2'	6.28	117.82	108.40
32	5	2348	G	O4'-C4'-C3'	-6.28	99.82	106.10
57	SC	104	ASP	N-CA-C	6.28	119.01	108.02
32	5	2406	G	N9-C1'-C2'	-6.28	102.58	112.00
32	5	4900	C	C2'-C3'-O3'	6.28	118.92	109.50
32	5	1912	G	C4'-C3'-O3'	-6.28	103.58	113.00
6	L	64	VAL	N-CA-C	6.28	122.39	109.34
10	Q	174	PHE	CB-CA-C	6.28	121.32	111.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	405	U	C1'-C2'-O2'	6.28	117.81	108.40
32	5	1738	A	C3'-C2'-O2'	6.28	120.11	110.70
32	5	4301	U	C4'-C3'-O3'	-6.28	103.58	113.00
58	SE	167	GLY	N-CA-C	-6.27	103.82	111.35
2	D	145	TYR	CB-CA-C	6.27	120.82	110.78
32	5	5060	A	C4'-C3'-O3'	6.27	122.40	113.00
62	SJ	69	ARG	NE-CZ-NH2	6.27	124.84	119.20
32	5	2408	U	C4'-C3'-O3'	6.26	118.80	109.40
34	8	9	A	C1'-C2'-O2'	6.26	117.80	108.40
70	Sa	80	HIS	N-CA-CB	6.26	119.28	109.94
12	S	115	ALA	N-CA-C	6.26	117.90	111.14
54	S2	447	A	O4'-C1'-N9	6.26	117.59	108.20
36	C	267	TRP	CA-CB-CG	6.26	125.49	113.60
54	S2	1545	A	C4'-C3'-O3'	-6.26	100.02	109.40
32	5	1480	C	C2'-C3'-O3'	6.25	118.88	109.50
54	S2	18	C	C4'-C3'-O3'	-6.25	103.62	113.00
32	5	4314	C	O4'-C1'-C2'	-6.25	101.35	107.60
32	5	4318	C	C4'-C3'-O3'	-6.25	103.62	113.00
32	5	4377	G	C4'-C3'-O3'	-6.25	103.62	113.00
56	SB	67	PHE	N-CA-CB	-6.25	99.93	110.49
24	f	19	ARG	CA-CB-CG	6.25	126.60	114.10
32	5	291	U	C2'-C3'-O3'	-6.25	104.33	113.70
19	a	40	HIS	N-CA-C	6.25	123.09	113.28
22	d	73	TRP	N-CA-CB	-6.25	101.12	111.49
54	S2	798	A	C3'-C2'-O2'	6.25	120.07	110.70
32	5	1361	G	C2'-C3'-O3'	6.25	123.07	113.70
54	S2	669	A	C4'-C3'-O3'	-6.24	103.64	113.00
54	S2	28	U	N1-C1'-C2'	6.24	121.36	112.00
2	D	45	ASN	N-CA-C	6.24	119.02	111.40
54	S2	1292	C	O4'-C1'-C2'	-6.24	101.36	107.60
32	5	2324	C	C2'-C3'-O3'	6.24	123.06	113.70
32	5	2825	A	C4'-C3'-O3'	6.24	118.76	109.40
32	5	3615	G	C4'-C3'-O3'	6.23	118.75	109.40
32	5	1487	G	C2'-C3'-O3'	6.23	123.05	113.70
32	5	1742	A	O4'-C1'-C2'	-6.23	101.37	107.60
54	S2	1341	C	N1-C1'-C2'	6.23	123.35	114.00
50	3	22	U	N1-C1'-C2'	6.23	121.35	112.00
17	Y	19	PHE	CB-CA-C	6.23	118.94	111.22
17	Y	87	ARG	NE-CZ-NH2	6.23	124.81	119.20
24	f	42	TYR	CA-CB-CG	-6.23	102.69	113.90
32	5	84	A	C1'-C2'-O2'	-6.23	102.46	111.80
32	5	36	U	C2'-C3'-O3'	6.22	123.04	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	8	81	C	N1-C1'-C2'	6.22	121.34	112.00
32	5	4079	C	O4'-C1'-C2'	-6.22	101.38	107.60
54	S2	465	A	C4'-C3'-O3'	6.22	118.73	109.40
32	5	92	C	N1-C1'-C2'	-6.22	102.67	112.00
54	S2	1232	U	C1'-C2'-O2'	6.22	117.73	108.40
1	A	163	ARG	CB-CA-C	6.22	119.93	109.48
32	5	187	U	C4'-C3'-O3'	6.22	122.33	113.00
32	5	2077	C	O4'-C1'-C2'	-6.22	101.38	107.60
54	S2	1701	C	N1-C1'-C2'	6.22	123.33	114.00
54	S2	963	A	N9-C1'-C2'	6.22	121.33	112.00
54	S2	1429	G	C3'-C2'-O2'	6.22	120.03	110.70
54	S2	1545	A	C2'-C3'-O3'	6.22	118.82	109.50
32	5	443	G	N9-C1'-C2'	6.21	121.32	112.00
32	5	5062	G	O4'-C1'-C2'	-6.21	101.39	107.60
40	P	27	LYS	N-CA-C	6.21	120.12	112.54
24	f	51	TYR	CA-CB-CG	6.21	125.08	113.90
32	5	2407	G	C4'-C3'-O3'	-6.21	103.69	113.00
12	S	28	TYR	CA-CB-CG	6.21	125.07	113.90
54	S2	1438	A	N9-C1'-C2'	6.21	121.31	112.00
32	5	2745	A	N9-C1'-C2'	6.21	121.31	112.00
32	5	2323	C	C2'-C3'-O3'	6.20	123.00	113.70
32	5	1428	U	C2'-C3'-O3'	6.20	123.00	113.70
54	S2	4	C	C4'-C3'-O3'	-6.20	103.70	113.00
54	S2	413	G	N9-C1'-C2'	6.20	121.30	112.00
54	S2	27	A	O4'-C1'-C2'	-6.20	101.40	107.60
32	5	1637	A	N9-C1'-C2'	-6.20	102.70	112.00
54	S2	1143	A	C2'-C3'-O3'	-6.20	104.40	113.70
57	SC	200	ARG	NE-CZ-NH2	6.20	124.78	119.20
70	Sa	93	LYS	N-CA-C	6.20	118.03	111.28
2	D	197	LYS	N-CA-C	-6.20	104.45	111.14
11	R	120	TYR	N-CA-CB	6.20	119.23	110.12
32	5	236	G	N9-C1'-C2'	6.20	121.29	112.00
54	S2	1551	U	C2'-C3'-O3'	6.20	122.99	113.70
32	5	4451	G	N9-C1'-C2'	6.19	121.29	112.00
32	5	4499	G	C2'-C3'-O3'	-6.19	104.41	113.70
70	Sa	22	ARG	CG-CD-NE	-6.19	98.38	112.00
8	N	180	PHE	CA-CB-CG	-6.19	107.61	113.80
32	5	3644	U	C2'-C3'-O3'	-6.19	104.42	113.70
54	S2	1567	G	N9-C1'-C2'	6.19	121.29	112.00
9	O	168	TYR	N-CA-CB	6.19	119.16	109.94
9	O	192	PHE	N-CA-C	-6.19	104.70	112.93
32	5	2743	A	C4'-C3'-O3'	-6.19	103.72	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4976	U	O4'-C4'-C3'	-6.19	99.91	106.10
32	5	5048	A	C2'-C3'-O3'	6.19	122.98	113.70
65	SO	106	LYS	N-CA-C	6.19	119.95	111.54
54	S2	452	G	N9-C1'-C2'	6.19	121.28	112.00
67	SW	44	HIS	CA-CB-CG	-6.19	107.61	113.80
45	r	21	ASN	N-CA-CB	-6.18	103.07	112.47
54	S2	631	U	O4'-C4'-C3'	-6.18	99.92	106.10
1	A	87	PHE	N-CA-C	-6.18	99.58	109.96
22	d	87	ARG	N-CA-C	-6.17	97.81	108.56
32	5	2035	C	O4'-C1'-C2'	-6.17	101.42	107.60
38	F	110	VAL	CB-CA-C	-6.17	104.07	111.97
3	G	32	PHE	N-CA-CB	6.17	119.22	109.71
32	5	1236	C	C2'-C3'-O3'	6.17	122.95	113.70
32	5	2039	G	N9-C1'-C2'	6.17	121.25	112.00
40	P	139	TYR	CB-CA-C	6.17	121.70	111.83
32	5	99	A	C2'-C3'-O3'	6.16	122.94	113.70
54	S2	91	A	C1'-C2'-O2'	6.16	117.64	108.40
32	5	1521	C	C1'-C2'-O2'	6.16	117.64	108.40
32	5	2507	A	O4'-C1'-C2'	-6.16	101.44	107.60
34	8	82	A	O4'-C1'-C2'	-6.16	101.44	107.60
32	5	1572	U	N1-C1'-C2'	6.16	121.23	112.00
73	SD	159	HIS	CA-CB-CG	-6.16	107.64	113.80
32	5	3619	G	C4'-C3'-O3'	-6.15	103.77	113.00
5	J	119	TYR	CB-CA-C	6.15	119.68	109.53
32	5	417	G	O4'-C1'-C2'	-6.15	101.45	107.60
32	5	2673	G	O4'-C1'-C2'	-6.15	99.65	105.80
32	5	4464	A	C5'-C4'-O4'	6.15	119.02	109.80
32	5	1633	G	C2'-C3'-O3'	-6.15	104.48	113.70
32	5	4194	U	N1-C1'-C2'	-6.15	102.78	112.00
32	5	2263	A	C5'-C4'-O4'	6.14	118.32	109.10
32	5	3879	G	N9-C1'-C2'	-6.14	102.78	112.00
61	SI	55	TYR	CB-CA-C	6.14	121.94	111.68
40	P	54	GLN	N-CA-C	6.14	120.14	111.92
54	S2	91	A	N9-C1'-C2'	-6.13	102.80	112.00
32	5	2518	G	C4'-C3'-O3'	-6.13	103.80	113.00
32	5	4280	A	N9-C1'-C2'	-6.13	102.80	112.00
32	5	4656	A	C2'-C3'-O3'	6.13	118.70	109.50
54	S2	508	A	C1'-C2'-O2'	6.13	117.60	108.40
34	8	126	C	C4'-C3'-O3'	6.13	118.59	109.40
54	S2	1404	U	O4'-C4'-C3'	-6.13	99.97	106.10
32	5	2077	C	C2'-C3'-O3'	6.13	122.89	113.70
32	5	4938	A	C2'-C3'-O3'	-6.13	104.51	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	211	PHE	N-CA-C	-6.12	105.74	112.72
32	5	456	C	O4'-C1'-C2'	-6.12	101.47	107.60
87	Sg	15	ASN	N-CA-CB	-6.12	102.19	111.19
32	5	334	A	N9-C1'-C2'	6.12	121.18	112.00
32	5	1925	G	O4'-C1'-C2'	-6.12	101.48	107.60
32	5	1992	U	N1-C1'-C2'	6.12	123.19	114.00
32	5	514	U	C4'-C3'-C2'	-6.12	96.48	102.60
32	5	3912	U	C3'-C2'-O2'	6.12	119.88	110.70
59	SG	25	ARG	CG-CD-NE	-6.12	98.54	112.00
32	5	4719	G	C3'-C2'-O2'	6.12	119.88	110.70
54	S2	362	C	C2'-C3'-O3'	-6.12	104.52	113.70
54	S2	451	G	C2'-C3'-O3'	-6.12	104.52	113.70
32	5	1901	C	N1-C1'-C2'	6.12	121.17	112.00
32	5	1663	C	C3'-C2'-O2'	6.11	119.87	110.70
32	5	3814	U	N1-C1'-C2'	6.11	121.17	112.00
32	5	2076	G	C1'-C2'-O2'	6.11	117.56	108.40
54	S2	1474	A	C2'-C3'-O3'	6.11	118.66	109.50
32	5	4231	C	C2'-C3'-O3'	-6.10	104.55	113.70
42	j	27	TYR	N-CA-CB	6.10	120.81	110.49
54	S2	1141	G	C2'-C3'-O3'	6.10	122.86	113.70
78	SQ	99	TYR	CA-CB-CG	6.10	124.89	113.90
34	8	102	G	N9-C1'-C2'	6.10	121.15	112.00
32	5	4270	C	C1'-C2'-O2'	6.10	117.55	108.40
32	5	4270	C	C2'-C3'-O3'	6.10	122.84	113.70
12	S	47	PHE	N-CA-C	6.09	118.00	111.36
32	5	1440	U	O4'-C1'-C2'	-6.09	101.51	107.60
54	S2	1556	A	N9-C1'-C2'	6.09	123.14	114.00
34	8	14	U	C1'-C2'-O2'	-6.09	99.26	108.40
54	S2	303	C	N1-C1'-C2'	6.09	121.14	112.00
32	5	1894	C	C1'-C2'-O2'	-6.09	99.27	108.40
32	5	3827	G	N9-C1'-C2'	-6.09	104.87	114.00
36	C	41	HIS	CA-CB-CG	-6.09	107.71	113.80
54	S2	1315	U	C2'-C3'-O3'	6.09	122.83	113.70
32	5	4622	A	C1'-C2'-O2'	6.09	117.53	108.40
35	B	243	LYS	N-CA-C	6.09	118.88	111.82
34	8	117	C	O4'-C1'-C2'	-6.09	101.51	107.60
54	S2	957	A	N9-C1'-C2'	6.09	123.13	114.00
32	5	1238	A	C3'-C2'-O2'	6.08	123.73	114.60
33	7	26	C	C1'-C2'-O2'	6.08	117.53	108.40
10	Q	32	TYR	N-CA-C	6.08	119.95	111.56
31	o	41	TYR	N-CA-CB	6.08	119.06	110.12
54	S2	1648	G	C2'-C3'-O3'	-6.08	100.38	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1946	G	N9-C1'-C2'	-6.08	102.88	112.00
54	S2	645	C	N1-C1'-C2'	-6.08	102.88	112.00
54	S2	1375	G	C4'-C3'-O3'	-6.08	103.89	113.00
32	5	3645	U	N1-C1'-C2'	6.08	121.11	112.00
54	S2	618	C	C1'-C2'-O2'	6.07	117.51	108.40
32	5	126	C	O4'-C1'-C2'	-6.07	101.53	107.60
35	B	368	ILE	CB-CA-C	-6.07	102.09	110.96
33	7	21	G	N9-C1'-C2'	6.07	121.11	112.00
81	ST	62	ARG	NE-CZ-NH2	6.07	124.66	119.20
32	5	336	A	O4'-C1'-N9	6.07	117.60	108.50
32	5	1667	G	C2'-C3'-O3'	6.07	122.80	113.70
32	5	237	G	C2'-C3'-O3'	6.07	118.60	109.50
32	5	664	G	O4'-C1'-N9	6.07	117.30	108.20
32	5	307	A	N9-C1'-C2'	6.07	121.10	112.00
32	5	2118	G	O4'-C4'-C3'	-6.07	97.93	104.00
32	5	4346	U	N1-C1'-C2'	6.07	121.10	112.00
32	5	4670	C	O4'-C1'-C2'	-6.07	101.53	107.60
45	r	105	ASP	N-CA-C	-6.07	103.99	112.12
32	5	405	U	O4'-C1'-C2'	-6.06	101.54	107.60
32	5	2054	U	C4'-C3'-O3'	-6.06	100.31	109.40
32	5	4880	C	C1'-C2'-O2'	-6.06	99.31	108.40
42	j	71	TYR	CA-CB-CG	6.06	124.81	113.90
23	e	108	ARG	N-CA-C	-6.06	104.68	111.28
32	5	1624	G	C2'-C3'-O3'	-6.06	100.41	109.50
54	S2	1496	U	O4'-C1'-C2'	-6.06	101.54	107.60
66	SV	43	THR	N-CA-C	6.06	117.55	111.07
41	W	51	TRP	N-CA-CB	6.06	119.13	110.16
5	J	99	PHE	CA-CB-CG	-6.06	107.74	113.80
32	5	1241	C	C2'-C3'-O3'	6.06	122.78	113.70
37	E	278	TYR	N-CA-C	-6.05	96.43	109.81
32	5	372	A	C4'-C3'-O3'	-6.05	103.92	113.00
32	5	3691	G	N9-C1'-C2'	6.05	123.08	114.00
32	5	2260	C	C2'-C3'-O3'	6.05	118.57	109.50
31	o	31	ASP	CA-CB-CG	-6.05	106.55	112.60
32	5	4763	U	C2'-C3'-O3'	-6.04	104.64	113.70
54	S2	661	U	C1'-C2'-O2'	6.04	117.46	108.40
32	5	1998	A	N9-C1'-C2'	6.04	123.06	114.00
54	S2	1523	C	O4'-C1'-C2'	-6.04	101.56	107.60
54	S2	807	G	N9-C1'-C2'	6.04	121.06	112.00
32	5	134	G	O4'-C4'-C3'	-6.04	100.06	106.10
32	5	1588	U	N1-C1'-C2'	6.04	121.05	112.00
35	B	330	PHE	N-CA-C	-6.03	101.53	110.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	C	340	ILE	N-CA-C	-6.03	106.37	111.56
32	5	4175	G	C4'-C3'-O3'	-6.03	103.95	113.00
32	5	4276	G	C1'-C2'-O2'	6.03	117.44	108.40
32	5	2848	G	N9-C1'-C2'	-6.03	102.96	112.00
32	5	84	A	N9-C1'-C2'	6.03	123.04	114.00
54	S2	1198	G	C2'-C3'-O3'	6.03	122.74	113.70
25	g	76	ARG	N-CA-C	6.03	116.19	108.24
31	o	32	SER	N-CA-C	6.03	117.52	111.07
32	5	4599	A	N9-C1'-C2'	6.03	123.04	114.00
32	5	4951	G	C3'-C2'-O2'	6.03	123.64	114.60
11	R	32	ILE	N-CA-C	-6.02	103.40	110.21
56	SB	79	VAL	N-CA-C	6.02	121.87	109.34
31	o	42	ASP	CB-CA-C	-6.02	101.69	110.96
32	5	1395	U	N1-C1'-C2'	6.02	121.03	112.00
32	5	2262	G	C4'-C3'-O3'	6.02	118.44	109.40
32	5	4320	G	N9-C1'-C2'	6.02	121.03	112.00
32	5	745	G	N9-C1'-C2'	6.02	121.03	112.00
32	5	1522	G	N9-C1'-C2'	-6.02	102.97	112.00
32	5	2846	G	C1'-C2'-O2'	6.02	117.43	108.40
54	S2	468	A	C1'-C2'-O2'	6.02	117.43	108.40
32	5	1	C	C5'-C4'-O4'	6.02	118.13	109.10
32	5	432	U	C2'-C3'-O3'	-6.02	104.67	113.70
32	5	1890	G	N9-C1'-C2'	-6.02	102.97	112.00
32	5	4251	A	C1'-C2'-O2'	-6.02	99.38	108.40
54	S2	1459	G	C2'-C3'-O3'	6.02	122.73	113.70
32	5	1379	C	C1'-O4'-C4'	-6.02	103.68	109.70
32	5	2744	A	C1'-C2'-O2'	-6.01	99.38	108.40
32	5	4338	G	N9-C1'-C2'	-6.01	104.98	114.00
32	5	4557	U	N1-C1'-C2'	6.01	121.02	112.00
32	5	1628	C	O4'-C1'-C2'	-6.01	101.59	107.60
32	5	2511	A	O4'-C4'-C3'	-6.01	100.09	106.10
32	5	4325	A	N9-C1'-C2'	6.01	121.02	112.00
54	S2	182	C	C2'-C3'-O3'	6.01	122.71	113.70
9	O	66	PRO	N-CA-C	6.01	121.45	113.40
12	S	100	LEU	N-CA-C	6.01	119.78	111.55
32	5	238	C	N1-C1'-C2'	6.01	121.01	112.00
32	5	4544	A	C4'-C3'-O3'	-6.01	103.99	113.00
33	7	29	C	N1-C1'-C2'	6.01	121.01	112.00
37	E	250	ASP	N-CA-C	-6.00	102.78	110.53
81	ST	53	PHE	N-CA-C	-6.00	105.78	113.23
54	S2	833	C	C4'-C3'-O3'	-6.00	103.99	113.00
63	SL	120	VAL	N-CA-C	-6.00	103.51	110.05

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2746	A	N9-C1'-C2'	6.00	121.00	112.00
65	SO	105	THR	N-CA-C	6.00	123.58	110.80
32	5	1938	C	O4'-C4'-C3'	-6.00	100.10	106.10
54	S2	833	C	O4'-C1'-C2'	-6.00	101.60	107.60
54	S2	1088	U	O4'-C4'-C3'	-6.00	100.10	106.10
54	S2	1292	C	C4'-C3'-C2'	-6.00	96.60	102.60
35	B	262	VAL	N-CA-C	-6.00	101.82	109.80
54	S2	1104	G	C1'-C2'-O2'	6.00	117.39	108.40
86	Sf	114	ILE	N-CA-C	5.99	116.64	107.77
9	O	135	PHE	CA-CB-CG	5.99	119.79	113.80
1	A	189	TYR	N-CA-CB	5.99	120.13	110.42
35	B	149	ASP	N-CA-C	5.99	117.50	110.97
32	5	233	U	C2'-C3'-O3'	5.99	118.48	109.50
54	S2	149	A	N9-C1'-C2'	5.99	120.98	112.00
70	Sa	17	HIS	CA-CB-CG	-5.99	107.81	113.80
32	5	727	C	C2'-C3'-O3'	5.99	118.48	109.50
32	5	4560	C	O4'-C4'-C3'	-5.99	100.11	106.10
54	S2	158	A	C3'-C2'-O2'	5.99	119.68	110.70
32	5	963	G	C4'-C3'-O3'	5.98	118.37	109.40
36	C	232	VAL	N-CA-C	-5.98	105.02	110.82
32	5	421	C	C1'-C2'-O2'	5.98	117.37	108.40
32	5	1520	C	C3'-C2'-O2'	5.98	119.67	110.70
54	S2	1341	C	C2'-C3'-O3'	5.98	118.47	109.50
32	5	1847	C	N1-C1'-C2'	5.97	120.96	112.00
39	I	139	ARG	CG-CD-NE	5.97	125.14	112.00
54	S2	1369	A	C2'-C3'-O3'	-5.97	104.74	113.70
54	S2	1538	C	O4'-C1'-C2'	-5.97	101.63	107.60
32	5	157	U	N1-C1'-C2'	-5.97	103.05	112.00
58	SE	103	TYR	N-CA-CB	5.97	120.14	110.41
32	5	4683	U	N1-C1'-C2'	5.97	120.95	112.00
54	S2	617	G	C2'-C3'-O3'	5.96	122.65	113.70
61	SI	113	TYR	CB-CA-C	-5.96	101.52	110.88
38	F	119	ILE	N-CA-CB	5.96	117.44	110.82
54	S2	1671	G	N9-C1'-C2'	5.96	120.94	112.00
54	S2	1146	C	N1-C1'-C2'	5.96	120.94	112.00
54	S2	473	A	C2'-C3'-O3'	-5.96	104.76	113.70
10	Q	181	ARG	CA-CB-CG	5.96	126.01	114.10
42	j	8	PHE	CB-CA-C	5.96	122.27	110.42
23	e	47	ARG	N-CA-C	-5.95	97.99	108.23
32	5	85	G	O4'-C1'-C2'	-5.95	99.85	105.80
34	8	81	C	C1'-O4'-C4'	-5.95	103.95	109.90
60	SH	185	VAL	N-CA-C	5.95	116.43	108.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	b	13	SER	N-CA-C	-5.95	101.61	111.37
32	5	2666	U	C4'-C3'-C2'	-5.95	96.65	102.60
32	5	4510	A	O4'-C4'-C3'	-5.95	100.15	106.10
32	5	4742	G	O4'-C1'-C2'	-5.94	101.66	107.60
32	5	381	U	N1-C1'-C2'	5.94	120.91	112.00
32	5	1818	G	C4'-C3'-O3'	-5.94	104.09	113.00
32	5	1880	G	N9-C1'-C2'	5.94	120.91	112.00
32	5	4163	U	N1-C1'-C2'	-5.94	103.09	112.00
36	C	312	ARG	CG-CD-NE	-5.94	98.93	112.00
54	S2	1641	A	N9-C1'-C2'	5.94	120.91	112.00
2	D	20	PHE	CB-CA-C	5.94	122.24	110.42
12	S	97	TYR	CA-CB-CG	-5.94	103.21	113.90
32	5	1302	U	O4'-C1'-C2'	-5.94	101.66	107.60
32	5	2424	G	N9-C1'-C2'	5.94	120.91	112.00
32	5	1370	G	C4'-C3'-O3'	5.94	118.31	109.40
35	B	68	ASN	N-CA-CB	5.94	119.02	110.06
76	SM	34	GLY	N-CA-C	5.94	119.79	111.00
54	S2	32	U	C4'-C3'-O3'	-5.93	104.10	113.00
32	5	422	C	C2'-C3'-O3'	5.93	122.60	113.70
32	5	1440	U	C4'-C3'-O3'	5.93	121.90	113.00
54	S2	167	G	N9-C1'-C2'	5.93	120.90	112.00
32	5	221	C	C4'-C3'-O3'	-5.93	104.10	113.00
32	5	4368	G	O4'-C1'-C2'	-5.93	101.67	107.60
32	5	2803	U	C1'-C2'-O2'	5.93	117.30	108.40
35	B	363	ILE	N-CA-C	5.93	116.41	108.11
56	SB	165	ARG	CG-CD-NE	5.93	125.05	112.00
32	5	1899	G	C4'-C3'-O3'	-5.93	104.11	113.00
32	5	4519	C	O4'-C4'-C3'	-5.93	98.07	104.00
56	SB	120	VAL	N-CA-C	-5.93	103.59	110.05
32	5	962	C	C4'-C3'-O3'	-5.93	100.51	109.40
80	SS	95	TYR	CB-CA-C	5.92	119.64	111.23
32	5	1449	C	C2'-C3'-O3'	5.92	122.58	113.70
4	H	66	GLU	N-CA-C	-5.92	106.19	113.41
54	S2	1666	C	N1-C1'-C2'	5.92	120.88	112.00
33	7	114	U	N1-C1'-C2'	5.92	120.88	112.00
54	S2	215	G	C4'-C3'-O3'	5.92	118.28	109.40
54	S2	1337	C	C1'-C2'-O2'	5.92	117.28	108.40
32	5	3716	C	C4'-C3'-O3'	-5.92	104.13	113.00
36	C	48	ASN	N-CA-C	-5.92	101.15	109.96
59	SG	173	ALA	N-CA-C	5.92	113.54	108.22
32	5	2316	G	N9-C1'-C2'	5.91	120.87	112.00
32	5	2474	G	C2'-C3'-O3'	5.91	122.56	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	122	G	C1'-C2'-O2'	5.91	117.26	108.40
54	S2	376	A	C1'-C2'-O2'	5.91	117.26	108.40
54	S2	843	C	N1-C1'-C2'	5.91	120.86	112.00
54	S2	1225	U	N1-C1'-C2'	-5.91	103.14	112.00
32	5	426	A	C3'-C2'-O2'	5.91	119.56	110.70
32	5	2889	G	N9-C1'-C2'	5.91	120.86	112.00
32	5	333	U	N1-C1'-C2'	5.91	120.86	112.00
32	5	4693	C	O4'-C1'-N1	-5.91	99.64	108.50
35	B	55	HIS	CA-CB-CG	-5.90	107.90	113.80
26	h	119	PHE	N-CA-CB	5.90	120.47	110.49
54	S2	65	C	O4'-C4'-C3'	-5.90	100.20	106.10
32	5	3635	A	N9-C1'-C2'	-5.90	103.15	112.00
32	5	5001	U	C1'-C2'-O2'	-5.90	99.55	108.40
33	7	84	U	N1-C1'-C2'	5.90	122.85	114.00
54	S2	366	U	C2'-C3'-O3'	5.90	122.55	113.70
32	5	917	A	C4'-C3'-O3'	5.90	118.25	109.40
32	5	4170	A	N9-C1'-C2'	5.90	122.85	114.00
54	S2	413	G	C2'-C3'-O3'	-5.90	104.85	113.70
66	SV	50	PHE	N-CA-C	5.90	117.66	107.93
32	5	1370	G	O4'-C4'-C3'	-5.90	100.20	106.10
32	5	2000	G	C1'-C2'-O2'	5.90	117.25	108.40
32	5	4737	G	C1'-C2'-O2'	-5.90	99.55	108.40
54	S2	290	U	C4'-C3'-O3'	-5.90	104.16	113.00
32	5	5048	A	O4'-C1'-C2'	-5.90	101.70	107.60
9	O	108	ILE	CA-C-N	5.89	126.45	120.38
9	O	108	ILE	C-N-CA	5.89	126.45	120.38
54	S2	426	A	C4'-C3'-C2'	-5.89	96.70	102.60
2	D	95	TYR	N-CA-CB	5.89	118.72	109.94
32	5	42	A	C1'-O4'-C4'	-5.89	103.81	109.70
32	5	4761	G	N9-C1'-C2'	5.89	120.84	112.00
54	S2	76	U	C3'-C2'-O2'	5.89	119.54	110.70
54	S2	1253	A	C2'-C3'-O3'	5.89	118.34	109.50
51	4	39	C	C2'-C3'-O3'	5.89	118.34	109.50
32	5	2554	U	C2'-C3'-O3'	5.89	122.53	113.70
54	S2	1292	C	C5'-C4'-C3'	5.89	124.84	116.00
54	S2	1534	C	C2'-C3'-O3'	-5.89	100.67	109.50
54	S2	386	C	O4'-C1'-C2'	-5.89	101.71	107.60
32	5	4224	A	C1'-C2'-O2'	5.89	117.23	108.40
54	S2	313	A	C1'-O4'-C4'	-5.89	103.81	109.70
32	5	4695	C	N1-C1'-C2'	5.88	120.83	112.00
54	S2	872	A	C2'-C3'-O3'	5.88	118.33	109.50
32	5	2643	G	C2'-C3'-O3'	5.88	122.52	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	SH	126	HIS	N-CA-CB	5.88	119.40	110.28
87	Sg	82	SER	N-CA-C	5.88	117.15	108.86
33	7	56	G	C1'-C2'-O2'	-5.88	99.58	108.40
38	F	94	VAL	CB-CA-C	-5.88	102.93	110.98
54	S2	1207	G	C4'-C3'-O3'	-5.88	104.18	113.00
32	5	2077	C	C1'-C2'-O2'	5.87	117.21	108.40
34	8	126	C	C2'-C3'-O3'	5.87	118.31	109.50
46	K	88	PRO	N-CA-C	5.87	117.86	110.70
54	S2	53	C	O4'-C1'-C2'	-5.87	101.73	107.60
54	S2	687	C	C2'-C3'-O3'	5.87	118.31	109.50
79	SR	85	VAL	CA-C-N	-5.87	114.22	120.03
79	SR	85	VAL	C-N-CA	-5.87	114.22	120.03
6	L	5	ARG	N-CA-C	5.87	118.36	111.02
32	5	4238	G	C1'-C2'-O2'	5.87	117.20	108.40
32	5	4935	C	C2'-C3'-O3'	5.87	122.50	113.70
37	E	278	TYR	CA-C-N	5.87	125.97	119.87
37	E	278	TYR	C-N-CA	5.87	125.97	119.87
9	O	140	ARG	NE-CZ-NH2	5.87	124.48	119.20
54	S2	649	U	C4'-C3'-O3'	5.87	121.80	113.00
62	SJ	18	ARG	CA-C-N	5.87	125.41	119.19
62	SJ	18	ARG	C-N-CA	5.87	125.41	119.19
2	D	226	TYR	CA-CB-CG	-5.86	103.34	113.90
34	8	104	A	O4'-C4'-C3'	-5.86	100.24	106.10
32	5	2737	C	N1-C1'-C2'	5.86	120.79	112.00
32	5	2852	U	O4'-C1'-C2'	-5.86	101.74	107.60
32	5	4478	G	C1'-C2'-O2'	5.86	117.19	108.40
32	5	2725	A	N9-C1'-C2'	5.86	120.79	112.00
32	5	4592	C	C3'-C2'-O2'	5.86	119.49	110.70
39	I	34	PHE	N-CA-C	-5.86	106.04	112.72
54	S2	651	U	N1-C1'-C2'	5.86	120.79	112.00
32	5	315	G	C1'-O4'-C4'	-5.86	103.84	109.70
32	5	664	G	C1'-O4'-C4'	-5.86	103.84	109.70
32	5	2325	C	C2'-C3'-O3'	5.85	122.48	113.70
38	F	239	GLU	CA-CB-CG	5.85	125.80	114.10
12	S	151	LYS	N-CA-C	5.85	119.04	108.69
54	S2	469	A	O4'-C1'-C2'	-5.85	101.75	107.60
32	5	2666	U	C2'-C3'-O3'	5.85	122.47	113.70
54	S2	426	A	O4'-C4'-C3'	-5.85	98.15	104.00
32	5	4982	A	C1'-C2'-O2'	5.84	117.17	108.40
34	8	11	C	O4'-C1'-C2'	-5.84	101.76	107.60
32	5	107	G	C1'-C2'-O2'	5.84	117.17	108.40
1	A	210	PRO	N-CA-C	5.84	124.50	112.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	272	U	N1-C1'-C2'	5.84	120.76	112.00
32	5	1615	C	C2'-C3'-O3'	5.84	122.46	113.70
2	D	35	ARG	CG-CD-NE	5.84	124.85	112.00
32	5	1319	U	C2'-C3'-O3'	5.84	122.46	113.70
32	5	4950	U	N1-C1'-C2'	5.84	122.76	114.00
32	5	268	G	C2'-C3'-O3'	5.84	122.45	113.70
32	5	1539	G	C2'-C3'-O3'	5.84	122.46	113.70
32	5	1539	G	C1'-C2'-O2'	5.84	117.16	108.40
32	5	468	U	N1-C1'-C2'	5.83	120.75	112.00
54	S2	482	G	C1'-C2'-O2'	5.83	117.15	108.40
54	S2	1064	C	C1'-C2'-O2'	5.83	117.15	108.40
21	c	88	TYR	N-CA-CB	-5.83	102.30	111.39
54	S2	1204	A	C4'-C3'-O3'	5.83	121.74	113.00
32	5	2294	G	C4'-C3'-O3'	-5.83	104.26	113.00
34	8	46	G	N9-C1'-C2'	5.83	120.74	112.00
15	V	98	PHE	CA-CB-CG	-5.82	107.98	113.80
32	5	1214	C	O4'-C4'-C3'	-5.82	100.28	106.10
32	5	4463	U	C1'-C2'-O2'	5.82	117.14	108.40
86	Sf	146	LEU	CB-CA-C	5.82	121.17	111.51
86	Sf	150	PHE	CA-CB-CG	5.82	119.62	113.80
32	5	446	C	O4'-C1'-C2'	-5.82	101.78	107.60
32	5	1381	U	C4'-C3'-O3'	-5.82	104.27	113.00
32	5	4337	C	N1-C1'-C2'	5.82	120.73	112.00
54	S2	516	A	C2'-C3'-O3'	5.82	118.22	109.50
71	Sb	31	TYR	N-CA-C	5.81	117.36	108.52
32	5	1887	G	C4'-C3'-C2'	-5.81	96.79	102.60
54	S2	459	C	O4'-C1'-C2'	-5.81	101.79	107.60
78	SQ	115	TYR	N-CA-C	5.81	117.88	110.61
19	a	40	HIS	CA-CB-CG	5.81	119.61	113.80
21	c	78	ASN	CA-CB-CG	-5.81	106.79	112.60
32	5	2046	G	O4'-C1'-N9	5.81	117.22	108.50
32	5	4527	G	C4'-C3'-O3'	5.81	118.12	109.40
54	S2	1150	A	N9-C1'-C2'	5.81	122.72	114.00
54	S2	1339	U	C4'-C3'-O3'	-5.81	104.29	113.00
11	R	57	VAL	N-CA-C	5.81	117.56	109.55
54	S2	30	C	C1'-C2'-O2'	-5.81	99.69	108.40
54	S2	1622	U	O4'-C4'-C3'	-5.81	100.29	106.10
34	8	104	A	C2'-C3'-O3'	5.81	118.21	109.50
54	S2	600	G	N9-C1'-C2'	5.80	120.71	112.00
32	5	2080	U	N1-C1'-C2'	5.80	120.70	112.00
36	C	42	THR	N-CA-CB	5.80	118.42	110.01
27	i	28	ARG	CG-CD-NE	-5.80	99.24	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3812	C	C2'-C3'-O3'	5.80	122.40	113.70
32	5	4221	C	C3'-C2'-O2'	5.80	119.40	110.70
49	2	125	ALA	N-CA-C	-5.80	105.79	112.92
45	r	31	ASN	CA-CB-CG	-5.80	106.80	112.60
32	5	4379	A	N9-C1'-C2'	-5.80	103.31	112.00
54	S2	294	U	O4'-C4'-C3'	-5.80	100.30	106.10
54	S2	964	A	N9-C1'-C2'	5.79	122.69	114.00
10	Q	35	LEU	N-CA-C	5.79	117.27	111.07
21	c	87	LYS	N-CA-C	-5.79	103.06	110.53
32	5	2368	A	C2'-C3'-O3'	-5.79	105.01	113.70
32	5	4239	A	O4'-C1'-C2'	-5.79	101.81	107.60
34	8	10	G	O4'-C1'-C2'	-5.79	101.81	107.60
54	S2	638	C	N1-C1'-C2'	5.79	120.69	112.00
54	S2	1216	C	C4'-C3'-O3'	-5.79	104.32	113.00
32	5	1552	G	N9-C1'-C2'	-5.79	103.32	112.00
32	5	1444	G	N9-C1'-C2'	5.79	120.68	112.00
32	5	2275	G	C2'-C3'-O3'	5.79	122.38	113.70
32	5	4564	A	C4'-C3'-O3'	-5.79	104.32	113.00
1	A	205	ASN	N-CA-C	-5.78	102.33	110.31
32	5	3663	A	C4'-C3'-O3'	-5.78	100.72	109.40
32	5	4663	G	C3'-C2'-O2'	5.78	119.38	110.70
32	5	4665	A	C1'-C2'-O2'	5.78	117.08	108.40
35	B	49	TYR	CA-CB-CG	5.78	124.31	113.90
55	SA	117	ARG	N-CA-C	-5.78	99.18	108.55
32	5	2795	A	C1'-C2'-O2'	-5.78	103.13	111.80
45	r	31	ASN	N-CA-C	-5.78	101.46	110.42
54	S2	109	U	C4'-C3'-O3'	-5.78	104.33	113.00
32	5	1553	A	C3'-C2'-O2'	5.78	119.36	110.70
34	8	124	U	C2'-C3'-O3'	5.78	118.17	109.50
54	S2	1376	A	C2'-C3'-O3'	5.78	122.36	113.70
78	SQ	24	HIS	N-CA-C	5.78	118.63	108.75
12	S	29	ARG	CB-CA-C	5.78	118.09	110.06
32	5	3801	U	C4'-C3'-O3'	-5.78	104.34	113.00
37	E	275	ASN	CA-CB-CG	-5.78	106.83	112.60
55	SA	10	MET	N-CA-C	5.78	118.52	111.82
3	G	53	ARG	CG-CD-NE	-5.77	99.30	112.00
54	S2	457	C	C2'-C3'-O3'	5.77	122.36	113.70
32	5	2536	A	C2'-C3'-O3'	5.77	122.36	113.70
23	e	41	ILE	N-CA-C	-5.77	105.11	110.53
54	S2	427	U	P-O5'-C5'	5.77	129.56	120.90
32	5	166	C	C2'-C3'-O3'	-5.77	105.05	113.70
32	5	1410	U	C2'-C3'-O3'	5.77	118.15	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
88	S1	46	LEU	CA-C-N	5.77	132.35	121.97
88	S1	46	LEU	C-N-CA	5.77	132.35	121.97
6	L	192	PHE	N-CA-CB	5.76	118.53	109.94
14	U	90	TYR	CB-CA-C	-5.76	101.80	110.90
32	5	148	C	N1-C1'-C2'	5.76	120.64	112.00
32	5	4693	C	C5'-C4'-O4'	5.76	118.44	109.80
32	5	1341	U	N1-C1'-C2'	5.75	120.63	112.00
32	5	4527	G	N9-C1'-C2'	-5.75	105.37	114.00
54	S2	154	U	O4'-C1'-C2'	-5.75	101.84	107.60
81	ST	46	ALA	CA-C-N	5.75	125.71	119.78
81	ST	46	ALA	C-N-CA	5.75	125.71	119.78
2	D	145	TYR	CA-CB-CG	-5.75	103.54	113.90
54	S2	1481	G	N9-C1'-C2'	5.75	120.63	112.00
32	5	2836	A	C4'-C3'-O3'	-5.75	104.38	113.00
32	5	64	A	C4'-C3'-O3'	5.75	118.02	109.40
32	5	1365	C	C4'-C3'-O3'	5.75	118.02	109.40
32	5	2127	C	N1-C1'-C2'	5.75	120.62	112.00
39	I	78	LYS	N-CA-C	-5.75	98.56	110.80
54	S2	1649	U	C4'-C3'-O3'	-5.75	104.38	113.00
32	5	1467	C	C1'-C2'-O2'	5.74	117.02	108.40
32	5	2369	U	N1-C1'-C2'	-5.74	103.39	112.00
32	5	4510	A	N9-C1'-C2'	5.74	122.61	114.00
17	Y	72	GLN	CA-CB-CG	5.74	125.58	114.10
32	5	1820	C	C4'-C3'-O3'	5.74	118.01	109.40
32	5	2806	A	O4'-C1'-C2'	-5.74	101.86	107.60
32	5	4941	G	C4'-C3'-O3'	-5.74	104.39	113.00
56	SB	100	PHE	CA-CB-CG	-5.74	108.06	113.80
64	SN	90	HIS	CB-CA-C	5.74	120.31	110.79
32	5	1879	C	C2'-C3'-O3'	-5.74	105.10	113.70
54	S2	839	C	N1-C1'-C2'	5.74	120.60	112.00
84	Sc	51	ARG	N-CA-C	5.74	117.50	108.96
32	5	1521	C	N1-C1'-C2'	-5.73	103.40	112.00
32	5	4078	C	C2'-C3'-O3'	5.73	122.30	113.70
54	S2	647	U	C4'-C3'-O3'	5.73	121.60	113.00
76	SM	124	ILE	N-CA-C	5.73	118.26	111.09
36	C	96	CYS	N-CA-C	5.73	119.06	109.95
54	S2	312	G	C3'-C2'-O2'	5.73	119.30	110.70
32	5	1534	A	C2'-C3'-O3'	5.73	118.09	109.50
32	5	1479	G	N9-C1'-C2'	5.73	122.59	114.00
38	F	84	TYR	N-CA-CB	5.73	119.16	110.45
54	S2	1593	C	O4'-C1'-C2'	-5.73	101.87	107.60
68	SX	5	ARG	NE-CZ-NH2	5.73	124.36	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1576	G	C2'-C3'-O3'	5.73	118.09	109.50
54	S2	105	U	C2'-C3'-O3'	5.73	122.29	113.70
32	5	2658	G	N9-C1'-C2'	-5.72	103.42	112.00
54	S2	56	G	N9-C1'-C2'	5.72	120.58	112.00
32	5	3845	A	C1'-C2'-O2'	5.72	116.98	108.40
54	S2	1092	G	C2'-C3'-O3'	5.72	122.28	113.70
32	5	1465	G	C1'-C2'-O2'	5.72	116.98	108.40
54	S2	1858	G	C1'-C2'-O2'	5.72	116.97	108.40
32	5	37	U	C1'-C2'-O2'	5.71	116.97	108.40
32	5	4398	C	C2'-C3'-O3'	5.71	122.27	113.70
34	8	82	A	C4'-C3'-O3'	5.71	121.57	113.00
54	S2	639	C	C1'-C2'-O2'	-5.71	103.23	111.80
32	5	118	C	O4'-C1'-C2'	-5.71	101.89	107.60
32	5	1725	U	O4'-C1'-C2'	-5.71	101.89	107.60
2	D	44	TYR	CA-CB-CG	-5.71	103.62	113.90
32	5	1636	U	N1-C1'-C2'	5.71	120.57	112.00
34	8	67	U	C4'-C3'-O3'	-5.71	104.43	113.00
38	F	83	PHE	N-CA-CB	-5.71	101.97	110.71
34	8	12	G	C4'-C3'-O3'	-5.71	104.44	113.00
54	S2	1200	A	O4'-C1'-C2'	-5.71	101.89	107.60
5	J	54	ARG	N-CA-C	-5.71	104.97	111.07
54	S2	1629	C	O4'-C1'-C2'	-5.71	101.89	107.60
73	SD	24	PHE	N-CA-CB	5.71	118.44	109.94
18	Z	71	PHE	N-CA-C	5.70	116.61	108.74
32	5	4589	A	N9-C1'-C2'	5.70	122.56	114.00
32	5	4915	G	C4'-C3'-O3'	-5.70	104.44	113.00
54	S2	504	G	N9-C1'-C2'	5.70	120.56	112.00
54	S2	605	A	C4'-C3'-O3'	-5.70	104.44	113.00
32	5	922	C	C2'-C3'-O3'	5.70	122.25	113.70
32	5	4726	G	C4'-C3'-O3'	-5.70	104.45	113.00
54	S2	1623	A	O4'-C1'-C2'	-5.70	101.90	107.60
32	5	2450	G	C1'-C2'-O2'	5.70	116.94	108.40
86	Sf	138	ARG	CG-CD-NE	5.70	124.53	112.00
32	5	4324	A	C3'-C2'-O2'	5.70	119.25	110.70
32	5	4463	U	N1-C1'-C2'	-5.70	103.46	112.00
32	5	2058	G	O4'-C1'-C2'	-5.69	101.91	107.60
32	5	2250	C	P-O5'-C5'	5.69	129.44	120.90
32	5	1642	A	C2'-C3'-O3'	5.69	122.24	113.70
32	5	2543	A	C4'-C3'-O3'	5.69	121.54	113.00
32	5	4606	G	N9-C1'-C2'	5.69	120.54	112.00
64	SN	113	PHE	N-CA-C	-5.69	102.85	111.56
32	5	2305	U	O4'-C4'-C3'	-5.69	100.41	106.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	T	140	PHE	CB-CA-C	-5.69	99.76	110.51
26	h	96	ASN	N-CA-C	5.69	118.42	111.82
42	j	56	ARG	CG-CD-NE	5.69	124.51	112.00
32	5	956	A	C2'-C3'-O3'	5.68	118.03	109.50
32	5	1264	C	C2'-C3'-O3'	5.68	122.22	113.70
32	5	4601	U	O4'-C1'-C2'	-5.68	101.92	107.60
29	l	45	ARG	CG-CD-NE	-5.68	99.50	112.00
32	5	1382	G	C2'-C3'-O3'	-5.68	105.18	113.70
32	5	2086	G	C3'-C2'-O2'	5.68	119.22	110.70
34	8	67	U	N1-C1'-C2'	5.68	120.52	112.00
54	S2	1138	C	C2'-C3'-O3'	-5.68	105.18	113.70
50	3	19	U	C4'-C3'-O3'	5.68	117.92	109.40
32	5	54	G	N9-C1'-C2'	-5.68	103.48	112.00
32	5	2296	G	C4'-C3'-O3'	-5.68	104.48	113.00
54	S2	603	C	N1-C1'-C2'	-5.68	105.48	114.00
54	S2	1432	U	N1-C1'-C2'	5.68	120.52	112.00
32	5	171	U	N1-C1'-C2'	5.68	122.52	114.00
32	5	2805	C	C1'-C2'-O2'	5.68	116.92	108.40
40	P	25	HIS	CB-CA-C	5.68	120.98	111.22
54	S2	385	G	N9-C1'-C2'	5.68	122.52	114.00
54	S2	425	G	C4'-C3'-O3'	5.68	121.51	113.00
54	S2	668	A	C4'-C3'-O3'	-5.68	104.49	113.00
32	5	1394	G	C3'-C2'-O2'	5.67	119.21	110.70
32	5	4498	U	N1-C1'-C2'	-5.67	103.49	112.00
32	5	4539	U	N1-C1'-C2'	5.67	120.51	112.00
54	S2	1079	C	C4'-C3'-O3'	-5.67	104.49	113.00
32	5	4227	U	C2'-C3'-O3'	5.67	122.21	113.70
40	P	7	ASP	CB-CA-C	5.67	117.55	109.38
54	S2	752	G	C4'-C3'-O3'	5.67	117.91	109.40
35	B	137	TRP	CA-CB-CG	-5.67	102.83	113.60
36	C	85	HIS	N-CA-CB	5.67	118.75	110.47
54	S2	1846	G	C1'-C2'-O2'	5.67	116.90	108.40
62	SJ	67	ASP	CB-CA-C	5.67	117.07	109.42
32	5	5047	C	C2'-C3'-O3'	5.67	118.00	109.50
54	S2	1659	U	C4'-C3'-C2'	-5.67	96.93	102.60
32	5	1468	C	C1'-C2'-O2'	5.66	116.90	108.40
47	q	117	ALA	N-CA-C	5.66	122.33	109.81
54	S2	1852	C	C4'-C3'-O3'	-5.66	104.50	113.00
32	5	1463	C	C1'-C2'-O2'	5.66	116.89	108.40
45	r	68	SER	N-CA-C	-5.66	104.75	111.03
32	5	152	U	O4'-C1'-C2'	-5.66	101.94	107.60
45	r	45	HIS	N-CA-C	5.66	122.86	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	447	A	C1'-O4'-C4'	-5.66	104.04	109.70
73	SD	107	TYR	CA-CB-CG	5.66	124.09	113.90
32	5	2082	G	C1'-C2'-O2'	-5.66	99.91	108.40
32	5	2531	C	C1'-C2'-O2'	-5.66	103.31	111.80
32	5	5049	G	C4'-C3'-O3'	5.66	117.89	109.40
32	5	5050	C	O4'-C1'-C2'	-5.66	101.94	107.60
54	S2	1664	A	C4'-C3'-O3'	5.66	121.49	113.00
32	5	2669	C	C1'-C2'-O2'	5.66	120.28	111.80
54	S2	74	G	O4'-C1'-C2'	-5.66	101.94	107.60
1	A	86	GLN	N-CA-C	-5.65	101.07	110.17
32	5	370	U	N1-C1'-C2'	5.65	120.48	112.00
32	5	4291	G	N9-C1'-C2'	5.65	122.47	114.00
32	5	5019	A	C4'-C3'-O3'	-5.65	104.53	113.00
32	5	405	U	C2'-C3'-O3'	5.65	122.17	113.70
32	5	1534	A	C3'-C2'-O2'	-5.65	106.13	114.60
32	5	1825	A	C1'-C2'-O2'	5.65	116.87	108.40
32	5	4114	C	N1-C1'-C2'	5.65	120.47	112.00
32	5	940	C	N1-C1'-C2'	5.64	120.47	112.00
32	5	2533	C	C1'-C2'-O2'	-5.64	99.93	108.40
39	I	100	ASN	N-CA-C	-5.64	102.67	110.35
32	5	1756	U	N1-C1'-C2'	5.64	120.46	112.00
74	SF	134	VAL	N-CA-C	5.64	112.25	106.21
32	5	1320	U	C2'-C3'-O3'	-5.64	105.24	113.70
54	S2	1797	U	C3'-C2'-O2'	5.64	119.16	110.70
35	B	169	ARG	CG-CD-NE	5.64	124.40	112.00
54	S2	1839	U	C1'-C2'-O2'	5.64	116.85	108.40
73	SD	159	HIS	CB-CA-C	5.64	120.19	111.28
32	5	1534	A	C5'-C4'-O4'	5.63	117.55	109.10
54	S2	1017	U	O4'-C1'-C2'	-5.63	101.97	107.60
32	5	45	U	N1-C1'-C2'	5.63	120.45	112.00
32	5	2087	C	C1'-C2'-O2'	5.63	116.85	108.40
2	D	249	GLU	CA-CB-CG	5.63	125.36	114.10
80	SS	86	ARG	NE-CZ-NH1	-5.63	115.87	121.50
23	e	74	PHE	CB-CA-C	5.63	119.62	110.22
32	5	1920	C	C4'-C3'-O3'	5.63	117.84	109.40
53	6	54	ILE	N-CA-C	5.63	116.08	110.23
54	S2	1194	A	N9-C1'-C2'	-5.63	103.56	112.00
79	SR	121	GLN	CA-C-N	-5.63	114.46	120.03
79	SR	121	GLN	C-N-CA	-5.63	114.46	120.03
32	5	2667	C	C2'-C3'-O3'	-5.62	105.27	113.70
34	8	73	U	C2'-C3'-O3'	5.62	122.14	113.70
35	B	179	HIS	CB-CA-C	5.62	120.97	111.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1868	U	N1-C1'-C2'	5.62	122.43	114.00
65	SO	94	HIS	N-CA-CB	5.62	118.84	110.29
8	N	121	VAL	N-CA-C	5.62	121.03	109.34
32	5	1832	C	O4'-C1'-C2'	-5.62	101.98	107.60
32	5	2733	C	C2'-C3'-O3'	5.62	122.13	113.70
32	5	352	G	N9-C1'-C2'	-5.62	103.57	112.00
32	5	4158	C	N1-C1'-C2'	5.62	120.43	112.00
54	S2	422	U	N1-C1'-C2'	5.62	120.43	112.00
25	g	66	ARG	CG-CD-NE	5.62	124.36	112.00
32	5	737	C	C2'-C3'-O3'	5.61	122.12	113.70
32	5	4166	G	O4'-C1'-C2'	-5.61	101.99	107.60
54	S2	28	U	C2'-C3'-O3'	-5.61	105.28	113.70
54	S2	536	A	O4'-C1'-C2'	-5.61	101.99	107.60
54	S2	1743	G	N9-C1'-C2'	5.61	120.42	112.00
32	5	2510	G	N9-C1'-C2'	5.61	120.42	112.00
32	5	4404	U	C1'-C2'-O2'	5.61	116.82	108.40
54	S2	582	C	N1-C1'-C2'	5.61	120.42	112.00
58	SE	188	ASN	N-CA-C	-5.61	98.85	110.80
21	c	79	ILE	CB-CA-C	-5.61	104.64	111.87
32	5	1445	U	C2'-C3'-O3'	5.61	122.11	113.70
54	S2	797	C	O4'-C1'-C2'	-5.61	100.19	105.80
77	SP	42	ARG	CA-CB-CG	5.61	125.31	114.10
27	i	40	VAL	N-CA-CB	5.61	116.73	110.62
32	5	480	C	C2'-C3'-O3'	5.61	122.11	113.70
1	A	89	TYR	CB-CA-C	5.60	118.89	109.48
32	5	2671	C	N1-C1'-C2'	5.60	120.40	112.00
32	5	4288	C	N1-C1'-C2'	5.60	120.40	112.00
33	7	27	G	C1'-C2'-O2'	5.60	116.80	108.40
35	B	257	TRP	N-CA-CB	5.60	119.96	110.49
63	SL	62	PHE	N-CA-C	-5.60	106.49	113.38
54	S2	1439	A	C1'-C2'-O2'	-5.60	100.00	108.40
26	h	89	ARG	CG-CD-NE	5.60	124.31	112.00
32	5	157	U	C1'-O4'-C4'	-5.60	104.30	109.90
32	5	1620	U	N1-C1'-C2'	5.60	120.40	112.00
54	S2	504	G	C1'-C2'-O2'	-5.60	100.00	108.40
54	S2	381	C	C1'-C2'-O2'	-5.60	103.41	111.80
1	A	162	ASN	N-CA-CB	5.59	118.19	109.97
32	5	2753	G	C2'-C3'-O3'	5.59	122.09	113.70
54	S2	642	U	N1-C1'-C2'	-5.59	103.61	112.00
56	SB	165	ARG	NE-CZ-NH2	5.59	124.23	119.20
57	SC	223	TYR	N-CA-C	-5.59	100.58	109.76
81	ST	52	TRP	N-CA-CB	5.59	118.45	110.06

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	41	G	C4'-C3'-O3'	5.59	117.79	109.40
25	g	9	ARG	CB-CG-CD	5.59	124.16	111.30
32	5	1501	C	C1'-C2'-O2'	5.59	116.79	108.40
32	5	4991	U	C3'-C2'-O2'	5.59	119.09	110.70
21	c	89	TYR	CA-CB-CG	5.59	123.96	113.90
32	5	364	G	O4'-C1'-C2'	-5.59	102.01	107.60
32	5	2533	C	N1-C1'-C2'	5.59	120.39	112.00
54	S2	1605	G	C2'-C3'-O3'	5.59	122.08	113.70
54	S2	1606	G	N9-C1'-C2'	-5.59	103.61	112.00
54	S2	1061	U	O4'-C1'-C2'	-5.59	102.01	107.60
54	S2	1644	C	C1'-C2'-O2'	-5.59	100.02	108.40
32	5	2665	U	C2'-C3'-O3'	5.58	122.08	113.70
32	5	4513	A	N9-C1'-C2'	5.58	120.38	112.00
54	S2	1420	G	C2'-C3'-O3'	5.58	122.08	113.70
54	S2	1642	U	N1-C1'-C2'	5.58	120.38	112.00
32	5	1895	G	N9-C1'-C2'	5.58	120.38	112.00
32	5	4083	U	N1-C1'-C2'	5.58	120.38	112.00
25	g	52	ARG	N-CA-C	-5.58	103.01	110.55
32	5	4378	A	N9-C1'-C2'	5.58	122.37	114.00
32	5	5031	G	C4'-C3'-O3'	-5.58	104.63	113.00
10	Q	176	ARG	CG-CD-NE	-5.58	99.72	112.00
54	S2	1648	G	C4'-C3'-O3'	5.58	117.77	109.40
32	5	1683	U	O4'-C1'-C2'	-5.58	102.02	107.60
32	5	3647	A	C4'-C3'-O3'	-5.58	104.63	113.00
55	SA	104	THR	CA-C-N	5.58	126.81	119.84
55	SA	104	THR	C-N-CA	5.58	126.81	119.84
32	5	747	A	C3'-C2'-O2'	5.58	122.97	114.60
32	5	1681	G	C1'-C2'-O2'	5.58	116.77	108.40
32	5	4280	A	C4'-C3'-C2'	-5.58	97.02	102.60
32	5	84	A	C2'-C3'-O3'	5.58	117.86	109.50
32	5	1929	A	N9-C1'-C2'	5.58	120.36	112.00
32	5	220	C	C4'-C3'-O3'	-5.57	104.64	113.00
32	5	1376	C	N1-C1'-C2'	5.57	120.36	112.00
32	5	3636	C	O4'-C1'-C2'	-5.57	102.03	107.60
32	5	232	G	N9-C1'-C2'	-5.57	105.64	114.00
32	5	2113	G	C4'-C3'-O3'	5.57	121.36	113.00
54	S2	1142	G	O4'-C1'-C2'	-5.57	102.03	107.60
54	S2	1283	C	O4'-C1'-C2'	-5.57	102.03	107.60
38	F	194	HIS	N-CA-CB	5.57	118.05	109.98
39	I	95	HIS	N-CA-C	-5.57	101.41	110.20
55	SA	155	ARG	CG-CD-NE	-5.57	99.75	112.00
32	5	226	G	C4'-C3'-O3'	5.57	117.75	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	422	C	O4'-C1'-C2'	-5.57	102.03	107.60
37	E	250	ASP	CB-CA-C	5.57	121.92	110.40
54	S2	488	U	C2'-C3'-O3'	5.56	117.85	109.50
32	5	172	C	O4'-C1'-C2'	-5.56	100.24	105.80
32	5	218	A	C4'-C3'-O3'	5.56	117.74	109.40
32	5	2032	U	C3'-C2'-O2'	5.56	119.04	110.70
48	z	219	TYR	CA-CB-CG	5.56	123.91	113.90
54	S2	1034	A	N9-C1'-C2'	5.56	120.34	112.00
54	S2	1621	U	C1'-C2'-O2'	-5.56	103.46	111.80
63	SL	92	TYR	CA-CB-CG	5.56	123.91	113.90
32	5	5059	C	C4'-C3'-O3'	-5.56	104.66	113.00
4	H	117	PHE	CB-CA-C	5.56	117.79	110.06
32	5	1309	C	C1'-C2'-O2'	5.56	116.74	108.40
64	SN	25	TRP	N-CA-CB	5.56	119.17	109.72
54	S2	1604	G	N9-C1'-C2'	5.56	120.34	112.00
42	j	16	HIS	CB-CA-C	5.56	118.89	109.50
54	S2	1805	G	O4'-C1'-C2'	-5.56	102.04	107.60
32	5	1266	G	C2'-C3'-O3'	5.55	122.03	113.70
54	S2	1339	U	C1'-C2'-O2'	5.55	116.73	108.40
17	Y	19	PHE	N-CA-C	-5.55	105.65	113.20
32	5	2785	C	C4'-C3'-O3'	-5.55	104.67	113.00
32	5	3863	C	N1-C1'-C2'	5.55	120.33	112.00
86	Sf	143	LYS	N-CA-C	5.55	122.69	114.09
32	5	2688	G	O4'-C1'-C2'	-5.55	102.05	107.60
54	S2	1225	U	C2'-C3'-O3'	5.55	122.02	113.70
54	S2	62	G	C1'-C2'-O2'	5.55	116.72	108.40
54	S2	999	G	O4'-C1'-C2'	-5.55	102.05	107.60
65	SO	72	TYR	CA-CB-CG	5.55	123.88	113.90
23	e	74	PHE	N-CA-C	-5.54	100.14	108.96
32	5	55	G	C1'-C2'-O2'	5.54	116.72	108.40
59	SG	25	ARG	CB-CG-CD	5.54	124.05	111.30
32	5	4211	C	N1-C1'-C2'	5.54	120.31	112.00
32	5	4322	G	C2'-C3'-O3'	5.54	122.01	113.70
54	S2	73	C	C2'-C3'-O3'	5.54	117.81	109.50
77	SP	39	ALA	N-CA-C	5.54	117.78	111.02
64	SN	114	ARG	N-CA-C	-5.54	105.62	112.38
54	S2	139	C	C4'-C3'-O3'	5.54	121.31	113.00
32	5	395	A	C2'-C3'-O3'	-5.54	105.40	113.70
35	B	367	PHE	CA-CB-CG	-5.54	108.26	113.80
32	5	3894	A	C4'-C3'-O3'	-5.53	104.70	113.00
32	5	4542	U	N1-C1'-C2'	5.53	120.30	112.00
32	5	4623	G	C1'-C2'-O2'	5.53	116.70	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	X	79	PHE	N-CA-C	5.53	117.19	108.23
33	7	54	A	N9-C1'-C2'	5.53	120.30	112.00
32	5	2847	G	C1'-C2'-O2'	5.53	116.69	108.40
54	S2	1135	C	N1-C1'-C2'	5.53	120.30	112.00
32	5	100	C	O4'-C1'-C2'	-5.53	102.07	107.60
32	5	1867	A	C1'-C2'-O2'	-5.53	100.11	108.40
32	5	3879	G	C3'-C2'-O2'	5.53	118.99	110.70
54	S2	427	U	C5'-C4'-O4'	5.53	118.09	109.80
80	SS	42	HIS	CB-CA-C	-5.53	100.45	110.56
87	Sg	306	LEU	N-CA-C	5.53	116.81	108.46
32	5	1675	C	N1-C1'-C2'	5.53	120.29	112.00
8	N	108	ARG	CG-CD-NE	-5.52	99.85	112.00
32	5	976	G	O4'-C1'-C2'	-5.52	102.08	107.60
32	5	1293	G	N9-C1'-C2'	5.52	120.28	112.00
32	5	4454	G	C1'-C2'-O2'	5.52	116.68	108.40
32	5	4911	A	O4'-C1'-N9	5.52	116.78	108.50
33	7	39	C	C4'-C3'-O3'	-5.52	104.72	113.00
13	T	57	TYR	CA-CB-CG	5.52	123.83	113.90
32	5	56	A	O4'-C1'-C2'	-5.52	102.08	107.60
32	5	96	U	C2'-C3'-O3'	5.52	121.97	113.70
54	S2	608	C	O4'-C1'-C2'	-5.51	102.09	107.60
54	S2	1597	C	C2'-C3'-O3'	5.51	117.77	109.50
32	5	3909	C	O4'-C1'-C2'	-5.51	102.09	107.60
32	5	1609	U	C2'-C3'-O3'	5.51	121.96	113.70
61	SI	148	LYS	N-CA-C	5.51	116.96	111.07
54	S2	1386	A	C2'-C3'-O3'	5.51	121.96	113.70
54	S2	1568	C	C1'-C2'-O2'	-5.50	103.54	111.80
32	5	195	C	O4'-C1'-C2'	-5.50	102.10	107.60
32	5	2110	C	C3'-C2'-O2'	-5.50	106.35	114.60
54	S2	645	C	C2'-C3'-O3'	5.50	121.95	113.70
17	Y	27	ARG	NE-CZ-NH2	5.50	124.15	119.20
32	5	1793	A	C2'-C3'-O3'	5.50	121.95	113.70
54	S2	1109	C	C4'-C3'-O3'	5.50	117.64	109.40
32	5	969	C	C4'-C3'-O3'	5.49	117.64	109.40
32	5	3674	G	O4'-C1'-C2'	-5.49	102.11	107.60
12	S	10	TYR	CB-CA-C	5.49	121.35	110.42
6	L	7	GLY	N-CA-C	-5.49	101.17	111.66
18	Z	36	ARG	CG-CD-NE	5.49	124.08	112.00
20	b	41	ARG	CG-CD-NE	-5.49	99.92	112.00
54	S2	180	G	C2'-C3'-O3'	5.49	117.73	109.50
22	d	108	TYR	N-CA-CB	5.49	118.07	110.17
32	5	3898	G	C2'-C3'-O3'	5.49	121.93	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	8	38	U	C1'-O4'-C4'	-5.49	104.41	109.90
58	SE	47	PHE	CB-CA-C	-5.49	102.20	110.92
35	B	17	LEU	N-CA-C	5.49	121.93	109.81
54	S2	1476	A	O4'-C1'-C2'	-5.49	102.11	107.60
32	5	1832	C	C2'-C3'-O3'	5.48	121.92	113.70
32	5	3715	U	N1-C1'-C2'	5.48	120.23	112.00
32	5	4281	A	C2'-C3'-O3'	-5.48	105.47	113.70
46	K	55	GLY	N-CA-C	-5.48	100.19	113.18
54	S2	553	U	N1-C1'-C2'	5.48	120.22	112.00
54	S2	1567	G	C1'-O4'-C4'	-5.48	104.42	109.90
32	5	1986	U	C2'-C3'-O3'	-5.48	105.48	113.70
54	S2	1525	C	C2'-C3'-O3'	5.48	121.92	113.70
76	SM	72	HIS	CA-CB-CG	5.48	119.28	113.80
2	D	130	TYR	CA-CB-CG	-5.48	104.04	113.90
6	L	19	GLN	N-CA-C	5.48	117.68	111.11
54	S2	1644	C	C3'-C2'-O2'	5.47	118.91	110.70
14	U	99	TRP	N-CA-C	-5.47	104.86	112.30
32	5	3721	U	O4'-C1'-C2'	-5.47	102.13	107.60
54	S2	1194	A	C1'-C2'-O2'	5.47	116.61	108.40
32	5	977	C	C4'-C3'-C2'	-5.47	97.13	102.60
32	5	2437	C	C4'-C3'-O3'	5.47	117.60	109.40
54	S2	1296	U	N1-C1'-C2'	5.47	120.20	112.00
84	Sc	26	GLN	OE1-CD-NE2	5.47	128.07	122.60
33	7	60	G	O4'-C1'-C2'	-5.47	102.13	107.60
32	5	1292	C	C4'-C3'-O3'	-5.47	104.80	113.00
32	5	4441	A	C2'-C3'-O3'	5.47	121.90	113.70
54	S2	1350	U	C3'-C2'-O2'	5.47	118.90	110.70
33	7	57	C	C2'-C3'-O3'	5.46	121.90	113.70
54	S2	1391	C	C2'-C3'-O3'	5.46	121.89	113.70
3	G	54	PHE	CB-CA-C	5.46	119.82	111.02
32	5	1520	C	C2'-C3'-O3'	5.46	121.89	113.70
32	5	3875	G	N9-C1'-C2'	-5.46	103.81	112.00
50	3	46	G	N9-C1'-C2'	5.46	122.19	114.00
39	I	95	HIS	N-CA-CB	5.46	118.30	110.06
32	5	3697	U	C3'-C2'-O2'	5.46	118.89	110.70
50	3	16	U	C3'-C2'-O2'	5.46	118.89	110.70
4	H	180	TYR	CA-CB-CG	5.46	123.72	113.90
23	e	49	PHE	N-CA-C	-5.45	101.94	110.17
32	5	4239	A	C2'-C3'-O3'	5.45	121.88	113.70
32	5	4497	U	N1-C1'-C2'	-5.45	103.82	112.00
54	S2	1274	G	O4'-C4'-C3'	-5.45	100.65	106.10
88	S1	46	LEU	O-C-N	5.45	128.60	122.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	235	A	N9-C1'-C2'	-5.45	103.82	112.00
32	5	2560	C	O4'-C1'-C2'	-5.45	102.15	107.60
87	Sg	132	TRP	CA-CB-CG	-5.45	103.25	113.60
32	5	1620	U	C2'-C3'-O3'	-5.45	105.53	113.70
54	S2	612	U	N1-C1'-C2'	5.45	120.17	112.00
54	S2	836	G	N9-C1'-C2'	5.45	120.17	112.00
32	5	1501	C	C1'-O4'-C4'	-5.45	104.45	109.90
54	S2	1623	A	N9-C1'-C2'	-5.45	103.83	112.00
62	SJ	48	PHE	N-CA-CB	5.45	117.91	110.01
69	SY	58	PHE	N-CA-C	-5.44	101.17	108.19
32	5	1863	U	C1'-C2'-O2'	5.44	116.56	108.40
32	5	4958	C	O4'-C1'-C2'	-5.44	102.16	107.60
54	S2	169	U	C4'-C3'-O3'	-5.44	104.84	113.00
32	5	4183	G	O4'-C4'-C3'	-5.44	100.66	106.10
32	5	4217	G	N9-C1'-C2'	5.44	120.16	112.00
32	5	4985	U	N1-C1'-C2'	5.44	120.16	112.00
36	C	67	TRP	CA-CB-CG	5.44	123.93	113.60
54	S2	645	C	C1'-C2'-O2'	5.44	116.56	108.40
32	5	1878	G	N9-C1'-C2'	5.44	120.15	112.00
32	5	3719	A	C2'-C3'-O3'	5.44	121.85	113.70
32	5	2580	U	N1-C1'-C2'	5.43	120.15	112.00
54	S2	1525	C	O4'-C1'-C2'	-5.43	102.17	107.60
35	B	380	GLN	N-CA-C	5.43	119.86	112.04
32	5	931	C	C2'-C3'-O3'	5.43	117.64	109.50
54	S2	1097	G	C2'-C3'-O3'	5.43	121.84	113.70
32	5	1722	C	C4'-C3'-O3'	-5.42	104.86	113.00
32	5	338	A	C2'-C3'-O3'	5.42	121.83	113.70
33	7	81	G	C2'-C3'-O3'	5.42	121.83	113.70
38	F	57	LYS	N-CA-C	5.42	119.06	112.23
54	S2	31	U	C4'-C3'-O3'	-5.42	104.87	113.00
32	5	2043	A	C4'-C3'-O3'	-5.42	104.87	113.00
32	5	3875	G	C1'-C2'-O2'	5.42	116.53	108.40
54	S2	65	C	C4'-C3'-O3'	5.42	117.53	109.40
75	SK	57	TYR	CB-CA-C	5.42	121.21	110.42
54	S2	660	C	C3'-C2'-O2'	5.42	118.83	110.70
32	5	406	C	C3'-C2'-O2'	5.42	118.83	110.70
54	S2	1137	U	O4'-C4'-C3'	-5.42	100.68	106.10
78	SQ	82	TYR	N-CA-C	-5.42	106.17	112.89
80	SS	135	HIS	N-CA-C	-5.42	101.15	109.76
11	R	175	GLU	N-CA-C	-5.42	105.03	111.69
32	5	943	A	N9-C1'-C2'	-5.42	105.88	114.00
54	S2	59	U	N1-C1'-C2'	5.42	120.12	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1036	A	C2'-C3'-O3'	5.42	121.83	113.70
54	S2	381	C	P-O5'-C5'	5.42	129.02	120.90
54	S2	1338	G	C1'-C2'-O2'	5.42	116.52	108.40
32	5	2405	G	C1'-C2'-O2'	5.41	116.52	108.40
32	5	4307	A	C4'-C3'-O3'	-5.41	104.88	113.00
54	S2	1406	G	N9-C1'-C2'	5.41	120.12	112.00
54	S2	1712	A	C3'-C2'-O2'	5.41	118.82	110.70
54	S2	942	G	C4'-C3'-O3'	-5.41	104.88	113.00
54	S2	1584	G	N9-C1'-C2'	5.41	122.12	114.00
32	5	124	C	O4'-C1'-C2'	-5.41	102.19	107.60
32	5	3846	C	C1'-C2'-O2'	5.41	116.51	108.40
32	5	170	C	O4'-C4'-C3'	-5.41	100.69	106.10
32	5	280	G	O4'-C1'-N9	5.41	116.31	108.20
32	5	2452	G	C4'-C3'-O3'	-5.41	104.89	113.00
54	S2	406	U	N1-C1'-C2'	5.41	120.11	112.00
32	5	143	C	O4'-C1'-C2'	-5.40	102.20	107.60
32	5	1821	G	C3'-C2'-O2'	5.40	118.81	110.70
32	5	2827	G	N9-C1'-C2'	5.40	122.11	114.00
37	E	253	ILE	N-CA-C	-5.40	106.42	111.45
32	5	2527	A	C4'-C3'-O3'	-5.40	104.90	113.00
32	5	3917	A	C4'-C3'-O3'	-5.40	104.90	113.00
54	S2	646	G	C2'-C3'-O3'	5.40	121.80	113.70
54	S2	800	U	O4'-C4'-C3'	-5.40	98.60	104.00
54	S2	1351	G	C4'-C3'-O3'	-5.40	104.90	113.00
32	5	1326	A	C3'-C2'-O2'	5.40	118.80	110.70
32	5	1488	G	C2'-C3'-O3'	5.40	121.80	113.70
54	S2	1604	G	C2'-C3'-O3'	5.40	121.80	113.70
32	5	4464	A	O4'-C1'-N9	-5.40	100.40	108.50
54	S2	924	G	C1'-C2'-O2'	5.40	116.50	108.40
32	5	1541	C	C1'-C2'-O2'	5.40	116.49	108.40
32	5	1601	A	C1'-C2'-O2'	5.40	116.49	108.40
32	5	1880	G	C4'-C3'-O3'	-5.40	104.91	113.00
32	5	2307	A	C1'-C2'-O2'	-5.40	100.31	108.40
54	S2	1292	C	O4'-C4'-C3'	-5.40	98.60	104.00
32	5	2089	G	C4'-C3'-O3'	5.39	117.49	109.40
32	5	2599	G	C3'-C2'-O2'	5.39	118.79	110.70
32	5	4094	G	C2'-C3'-O3'	5.39	121.79	113.70
54	S2	968	U	C2'-C3'-O3'	5.39	121.79	113.70
12	S	160	ARG	N-CA-C	-5.39	101.47	109.94
26	h	109	ARG	CG-CD-NE	5.39	123.86	112.00
32	5	1210	C	N1-C1'-C2'	5.39	122.09	114.00
32	5	1455	G	C4'-C3'-O3'	-5.39	104.91	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2670	C	N1-C1'-C2'	5.39	120.09	112.00
61	SI	149	TYR	CB-CA-C	5.39	119.42	111.06
48	z	100	LYS	N-CA-C	5.39	116.88	110.19
54	S2	56	G	C2'-C3'-O3'	-5.39	105.61	113.70
54	S2	1863	A	C1'-C2'-O2'	-5.39	103.71	111.80
32	5	172	C	C1'-C2'-O2'	5.39	119.89	111.80
32	5	4123	C	C1'-C2'-O2'	5.39	116.48	108.40
32	5	4293	U	C1'-C2'-O2'	5.39	116.48	108.40
39	I	147	HIS	CB-CA-C	5.39	120.49	109.55
54	S2	1040	G	O4'-C1'-C2'	-5.39	102.21	107.60
74	SF	165	ASN	CA-CB-CG	-5.39	107.21	112.60
32	5	1536	U	N1-C1'-C2'	5.39	120.08	112.00
32	5	1867	A	C2'-C3'-O3'	-5.39	105.62	113.70
32	5	1319	U	N1-C1'-C2'	-5.38	103.92	112.00
32	5	1975	G	O4'-C4'-C3'	-5.38	100.72	106.10
13	T	142	ARG	N-CA-C	5.38	117.39	108.13
25	g	90	ARG	CG-CD-NE	-5.38	100.16	112.00
32	5	12	A	C1'-C2'-O2'	5.38	116.47	108.40
32	5	2112	G	N9-C1'-C2'	5.38	120.07	112.00
32	5	2272	C	C3'-C2'-O2'	5.38	118.78	110.70
56	SB	223	PHE	N-CA-C	5.38	122.27	110.80
32	5	1788	A	N9-C1'-C2'	5.38	120.07	112.00
34	8	113	C	C2'-C3'-O3'	5.38	121.77	113.70
33	7	59	G	C2'-C3'-O3'	5.38	121.77	113.70
32	5	98	A	C3'-C2'-O2'	5.38	118.77	110.70
54	S2	1313	A	C4'-C3'-O3'	5.38	117.47	109.40
32	5	1406	G	C4'-C3'-O3'	5.38	121.06	113.00
32	5	2034	G	O4'-C1'-C2'	-5.38	102.22	107.60
32	5	4522	G	N9-C1'-C2'	5.38	120.06	112.00
32	5	4727	A	N9-C1'-C2'	5.38	120.06	112.00
54	S2	1282	A	C4'-C3'-O3'	5.38	121.07	113.00
54	S2	1530	U	C4'-C3'-O3'	-5.38	104.94	113.00
32	5	4878	C	N1-C1'-C2'	5.38	120.06	112.00
54	S2	945	U	N1-C1'-C2'	5.38	120.06	112.00
32	5	1631	A	N9-C1'-C2'	5.37	122.06	114.00
32	5	1807	C	O4'-C1'-C2'	-5.37	102.23	107.60
32	5	4270	C	C4'-C3'-O3'	-5.37	104.94	113.00
54	S2	1416	C	C2'-C3'-O3'	5.37	121.76	113.70
61	SI	120	PRO	N-CA-C	5.37	118.74	111.22
32	5	3648	A	C4'-C3'-O3'	5.37	117.46	109.40
54	S2	683	G	C4'-C3'-O3'	-5.37	104.94	113.00
17	Y	87	ARG	CG-CD-NE	5.37	123.81	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	1474	A	C1'-C2'-O2'	-5.37	103.75	111.80
32	5	689	U	O4'-C1'-C2'	-5.37	102.23	107.60
32	5	1329	G	C3'-C2'-O2'	5.37	118.75	110.70
32	5	1378	C	C4'-C3'-O3'	5.37	121.05	113.00
32	5	2545	U	C2'-C3'-O3'	5.37	121.75	113.70
54	S2	654	A	C1'-C2'-O2'	5.37	116.45	108.40
54	S2	968	U	N1-C1'-C2'	-5.37	103.95	112.00
54	S2	1863	A	C2'-C3'-O3'	-5.37	101.45	109.50
55	SA	39	TYR	CA-CB-CG	5.37	123.56	113.90
54	S2	414	A	N9-C1'-C2'	5.37	120.05	112.00
54	S2	1464	C	N1-C1'-C2'	5.37	120.05	112.00
8	N	130	PHE	CB-CA-C	5.36	118.88	110.19
12	S	81	TRP	N-CA-CB	5.36	118.39	109.60
32	5	4120	U	N1-C1'-C2'	-5.36	103.95	112.00
78	SQ	81	ILE	N-CA-C	5.36	116.85	111.00
8	N	130	PHE	CA-CB-CG	-5.36	108.44	113.80
50	3	11	U	N1-C1'-C2'	5.36	120.04	112.00
54	S2	1361	G	C1'-C2'-O2'	5.36	116.44	108.40
54	S2	1374	C	C1'-C2'-O2'	-5.36	100.36	108.40
21	c	78	ASN	N-CA-CB	5.36	119.55	110.49
32	5	3925	U	C3'-C2'-O2'	5.36	118.74	110.70
63	SL	44	PHE	N-CA-CB	5.36	118.25	109.95
34	8	123	U	C3'-C2'-O2'	5.36	118.73	110.70
42	j	14	LYS	N-CA-C	5.36	118.35	109.46
54	S2	572	U	C4'-C3'-O3'	-5.35	104.97	113.00
55	SA	116	PHE	N-CA-CB	5.35	119.08	111.05
32	5	85	G	N9-C1'-C2'	-5.35	105.97	114.00
32	5	3869	C	N1-C1'-C2'	5.35	120.03	112.00
32	5	4980	C	C1'-C2'-O2'	5.35	116.43	108.40
50	3	57	G	N9-C1'-C2'	5.35	120.03	112.00
4	H	96	TYR	CA-CB-CG	5.35	123.53	113.90
54	S2	1513	C	N1-C1'-C2'	5.35	120.03	112.00
54	S2	368	U	C3'-C2'-O2'	5.35	118.72	110.70
54	S2	667	U	N1-C1'-C2'	5.35	120.02	112.00
32	5	2330	G	N9-C1'-C2'	5.35	120.02	112.00
32	5	970	G	N9-C1'-C2'	5.34	122.02	114.00
32	5	2008	U	O4'-C4'-C3'	-5.34	98.66	104.00
54	S2	666	U	O4'-C1'-C2'	-5.34	102.26	107.60
3	G	235	ARG	CG-CD-NE	5.34	123.75	112.00
32	5	1397	A	C2'-C3'-O3'	5.34	121.71	113.70
32	5	2090	U	N1-C1'-C2'	5.34	120.01	112.00
32	5	2279	A	C1'-C2'-O2'	5.34	116.41	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2598	A	N9-C1'-C2'	5.34	120.01	112.00
32	5	2851	G	O4'-C1'-C2'	-5.34	102.26	107.60
32	5	4336	A	N9-C1'-C2'	-5.34	103.99	112.00
4	H	106	GLN	N-CA-C	5.34	121.62	113.19
32	5	514	U	O4'-C1'-C2'	-5.34	102.26	107.60
13	T	140	PHE	CA-CB-CG	5.34	119.14	113.80
32	5	2054	U	C1'-O4'-C4'	-5.34	104.36	109.70
32	5	4251	A	N9-C1'-C2'	5.34	120.00	112.00
34	8	73	U	N1-C1'-C2'	-5.34	104.00	112.00
37	E	153	HIS	N-CA-C	5.34	122.17	110.80
9	O	135	PHE	CB-CA-C	-5.33	100.70	110.62
81	ST	53	PHE	CB-CA-C	5.33	120.38	109.55
32	5	498	C	C4'-C3'-O3'	5.33	117.40	109.40
32	5	1936	C	O4'-C1'-C2'	-5.33	102.27	107.60
32	5	2079	G	C4'-C3'-O3'	-5.33	105.00	113.00
54	S2	532	C	O4'-C1'-C2'	-5.33	102.27	107.60
31	o	48	TYR	CA-CB-CG	-5.33	104.30	113.90
32	5	4434	C	N1-C1'-C2'	5.33	120.00	112.00
54	S2	1068	G	N9-C1'-C2'	5.33	120.00	112.00
49	2	123	PHE	CA-CB-CG	5.33	119.13	113.80
32	5	1987	C	O4'-C1'-C2'	-5.33	102.27	107.60
32	5	2792	C	C1'-C2'-O2'	5.33	116.39	108.40
32	5	4497	U	C4'-C3'-C2'	-5.33	97.27	102.60
41	W	50	ASN	CB-CA-C	5.33	119.26	109.99
34	8	29	G	C1'-C2'-O2'	5.33	116.39	108.40
54	S2	1541	G	N9-C1'-C2'	5.33	119.99	112.00
32	5	55	G	O4'-C1'-C2'	-5.32	102.28	107.60
32	5	432	U	N1-C1'-C2'	-5.32	104.02	112.00
54	S2	1859	A	C1'-C2'-O2'	5.32	116.39	108.40
32	5	2009	A	C3'-C2'-O2'	5.32	118.68	110.70
10	Q	181	ARG	N-CA-CB	5.32	118.54	109.87
32	5	330	G	C4'-C3'-O3'	-5.32	105.02	113.00
32	5	454	U	C3'-C2'-O2'	5.32	118.68	110.70
32	5	1318	C	C1'-C2'-O2'	5.32	116.38	108.40
54	S2	1579	A	C2'-C3'-O3'	5.32	121.68	113.70
54	S2	1172	U	C4'-C3'-O3'	-5.32	105.02	113.00
25	g	95	PHE	CB-CA-C	-5.32	102.71	110.95
32	5	4400	G	C3'-C2'-O2'	5.32	118.68	110.70
36	C	102	PHE	N-CA-CB	5.32	117.83	109.69
63	SL	100	ASN	N-CA-C	5.32	122.12	110.80
32	5	1676	C	C2'-C3'-O3'	5.31	117.47	109.50
54	S2	373	G	C3'-C2'-O2'	5.31	118.67	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1295	C	N1-C1'-C2'	5.31	121.97	114.00
32	5	2643	G	O4'-C1'-C2'	-5.31	102.29	107.60
32	5	4725	C	C4'-C3'-O3'	5.31	120.97	113.00
54	S2	71	G	N9-C1'-C2'	5.31	121.97	114.00
54	S2	1653	U	C4'-C3'-O3'	-5.31	105.03	113.00
32	5	967	C	O4'-C1'-C2'	-5.31	102.29	107.60
32	5	1210	C	C4'-C3'-O3'	5.31	117.37	109.40
54	S2	580	U	O4'-C1'-C2'	-5.31	102.29	107.60
32	5	114	G	C2'-C3'-O3'	-5.31	105.74	113.70
32	5	1930	U	C4'-C3'-O3'	-5.31	101.44	109.40
32	5	4885	U	O4'-C1'-C2'	-5.31	102.29	107.60
34	8	125	C	O4'-C1'-C2'	-5.31	102.29	107.60
10	Q	26	ARG	CG-CD-NE	-5.30	100.33	112.00
32	5	1660	U	N1-C1'-C2'	-5.30	106.04	114.00
32	5	3905	A	N9-C1'-C2'	-5.30	104.04	112.00
54	S2	1352	G	C3'-C2'-O2'	5.30	118.66	110.70
54	S2	1473	G	C3'-C2'-O2'	5.30	118.66	110.70
54	S2	1839	U	O4'-C1'-C2'	-5.30	102.30	107.60
67	SW	55	ASP	N-CA-C	-5.30	102.54	110.23
10	Q	52	PHE	N-CA-CB	-5.30	101.53	110.49
21	c	88	TYR	N-CA-C	-5.30	104.39	111.87
32	5	1301	C	O4'-C1'-C2'	-5.30	102.30	107.60
32	5	4390	A	C3'-C2'-O2'	5.30	118.65	110.70
51	4	15	C	C1'-C2'-O2'	5.30	116.35	108.40
8	N	143	ARG	CB-CG-CD	5.30	123.49	111.30
10	Q	27	LEU	N-CA-C	5.30	116.86	111.14
32	5	219	G	P-O5'-C5'	5.30	128.85	120.90
47	q	148	SER	N-CA-C	-5.30	103.39	110.55
63	SL	13	GLN	N-CA-C	-5.30	99.85	109.44
15	V	36	ASN	N-CA-C	5.30	117.71	108.76
32	5	31	U	C1'-C2'-O2'	-5.30	100.45	108.40
32	5	4092	G	O4'-C1'-C2'	-5.30	102.30	107.60
8	N	6	TYR	CA-CB-CG	-5.30	104.37	113.90
54	S2	1225	U	C1'-C2'-O2'	5.30	116.34	108.40
81	ST	33	TRP	CB-CA-C	5.30	121.19	110.38
32	5	4504	C	N1-C1'-C2'	5.29	119.94	112.00
32	5	4941	G	N9-C1'-C2'	5.29	119.94	112.00
32	5	4201	G	N9-C1'-C2'	5.29	119.94	112.00
32	5	4600	G	N9-C1'-C2'	-5.29	104.06	112.00
32	5	2632	U	C4'-C3'-O3'	-5.29	105.06	113.00
32	5	3744	G	N9-C1'-C2'	5.29	119.94	112.00
32	5	4762	A	C4'-C3'-O3'	5.29	117.33	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	380	G	N9-C1'-C2'	5.29	119.94	112.00
54	S2	1676	U	C1'-C2'-O2'	5.29	116.33	108.40
58	SE	218	PHE	N-CA-C	-5.29	102.69	110.52
32	5	273	U	N1-C1'-C2'	5.29	119.93	112.00
37	E	123	SER	N-CA-C	5.29	117.63	111.02
32	5	3905	A	O4'-C4'-C3'	-5.29	98.71	104.00
32	5	81	C	C1'-C2'-O2'	5.29	116.33	108.40
32	5	2448	G	N9-C1'-C2'	5.29	121.93	114.00
32	5	4343	U	O4'-C1'-C2'	-5.29	102.31	107.60
35	B	116	ARG	CG-CD-NE	5.29	123.63	112.00
17	Y	61	HIS	CA-CB-CG	-5.28	108.52	113.80
32	5	63	G	N9-C1'-C2'	5.28	119.92	112.00
32	5	1819	G	N9-C1'-C2'	5.28	119.92	112.00
32	5	2532	C	N1-C1'-C2'	5.28	119.92	112.00
32	5	170	C	C4'-C3'-O3'	5.28	117.32	109.40
32	5	1380	G	C4'-C3'-O3'	5.28	117.32	109.40
32	5	2024	G	C4'-C3'-O3'	5.28	117.32	109.40
32	5	3635	A	C2'-C3'-O3'	5.28	121.62	113.70
47	q	127	ASN	CB-CA-C	5.28	118.18	110.26
34	8	40	A	C1'-C2'-O2'	5.28	116.32	108.40
8	N	119	TYR	N-CA-C	-5.28	102.18	110.36
3	G	67	ARG	N-CA-C	-5.28	103.49	111.56
54	S2	1204	A	O4'-C1'-C2'	-5.28	102.32	107.60
32	5	394	G	N9-C1'-C2'	-5.27	104.09	112.00
32	5	4342	C	O4'-C1'-C2'	-5.27	102.33	107.60
54	S2	1114	U	C1'-O4'-C4'	-5.27	104.43	109.70
54	S2	531	A	C4'-C3'-O3'	-5.27	105.09	113.00
32	5	1664	U	N1-C1'-C2'	5.27	119.91	112.00
54	S2	962	A	C2'-C3'-O3'	-5.27	105.79	113.70
32	5	1212	G	C2'-C3'-O3'	5.27	121.60	113.70
32	5	4981	G	C2'-C3'-O3'	5.27	121.60	113.70
2	D	230	ASN	CB-CA-C	5.27	119.37	111.89
32	5	2874	U	O4'-C4'-C3'	-5.27	100.83	106.10
32	5	4144	C	C4'-C3'-O3'	5.27	117.30	109.40
32	5	4670	C	C2'-C3'-O3'	-5.27	105.80	113.70
54	S2	1429	G	C4'-C3'-O3'	-5.27	105.10	113.00
32	5	1396	G	C3'-C2'-O2'	5.26	118.60	110.70
32	5	2675	G	O4'-C1'-C2'	-5.26	102.34	107.60
32	5	2857	A	C1'-C2'-O2'	-5.26	103.91	111.80
34	8	115	G	O4'-C1'-C2'	-5.26	102.34	107.60
54	S2	474	G	O4'-C1'-C2'	-5.26	102.34	107.60
32	5	3666	C	C2'-C3'-O3'	5.26	121.59	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	5022	U	O4'-C1'-C2'	-5.26	102.34	107.60
54	S2	358	C	C1'-C2'-O2'	5.26	116.29	108.40
32	5	746	A	C2'-C3'-O3'	5.26	117.39	109.50
32	5	4951	G	O4'-C4'-C3'	-5.26	100.84	106.10
54	S2	548	C	C2'-C3'-O3'	5.26	121.58	113.70
75	SK	68	TYR	CB-CA-C	5.26	120.88	110.42
32	5	2056	G	P-O5'-C5'	-5.25	113.02	120.90
32	5	244	G	C1'-C2'-O2'	5.25	116.28	108.40
32	5	349	A	O4'-C4'-C3'	-5.25	100.85	106.10
34	8	21	C	C4'-C3'-O3'	-5.25	105.12	113.00
2	D	66	TYR	CA-CB-CG	5.25	123.35	113.90
2	D	30	TYR	CB-CA-C	5.25	121.19	110.75
31	o	34	TYR	CA-CB-CG	-5.25	104.45	113.90
31	o	56	PHE	N-CA-CB	5.25	117.73	110.17
32	5	2363	A	C1'-C2'-O2'	5.25	116.27	108.40
54	S2	68	A	N9-C1'-C2'	5.25	119.87	112.00
54	S2	215	G	C2'-C3'-O3'	5.25	117.37	109.50
32	5	371	A	N9-C1'-C2'	5.25	119.87	112.00
32	5	4094	G	C4'-C3'-O3'	-5.25	105.13	113.00
32	5	4731	G	N9-C1'-C2'	5.25	121.87	114.00
34	8	5	U	N1-C1'-C2'	5.25	119.87	112.00
32	5	54	G	O4'-C1'-C2'	-5.25	102.36	107.60
37	E	153	HIS	N-CA-CB	-5.25	101.63	110.49
32	5	2670	C	C1'-C2'-O2'	-5.24	100.53	108.40
54	S2	1242	U	N1-C1'-C2'	5.24	121.86	114.00
8	N	109	HIS	N-CA-CB	5.24	117.58	109.98
64	SN	18	TYR	N-CA-C	-5.24	99.64	110.80
32	5	1740	C	C1'-C2'-O2'	5.24	116.26	108.40
39	I	94	PHE	N-CA-CB	-5.24	101.64	110.49
54	S2	922	A	C2'-C3'-O3'	5.24	121.56	113.70
32	5	1612	G	C2'-C3'-O3'	5.24	117.35	109.50
32	5	1961	G	C1'-C2'-O2'	5.24	116.25	108.40
40	P	3	ARG	CG-CD-NE	5.24	123.52	112.00
32	5	4543	G	C1'-C2'-O2'	-5.23	100.55	108.40
32	5	929	A	N9-C1'-C2'	-5.23	104.15	112.00
32	5	3626	G	C3'-C2'-O2'	5.23	118.55	110.70
32	5	4736	C	C1'-C2'-O2'	-5.23	103.95	111.80
42	j	39	TYR	CA-C-N	-5.23	113.35	119.32
42	j	39	TYR	C-N-CA	-5.23	113.35	119.32
5	J	83	LEU	N-CA-C	-5.23	105.49	111.14
32	5	322	C	O4'-C1'-C2'	-5.23	102.37	107.60
32	5	1921	C	C2'-C3'-O3'	5.23	117.34	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	3650	C	C3'-C2'-O2'	5.23	118.54	110.70
32	5	4331	G	C3'-C2'-O2'	5.23	118.54	110.70
32	5	4976	U	C5'-C4'-O4'	5.23	116.94	109.10
33	7	20	U	C3'-C2'-O2'	5.23	118.54	110.70
32	5	267	G	O4'-C1'-C2'	-5.23	102.37	107.60
32	5	4297	G	C1'-C2'-O2'	5.23	116.24	108.40
32	5	214	G	N9-C1'-C2'	5.22	119.84	112.00
34	8	82	A	C2'-C3'-O3'	5.22	121.53	113.70
38	F	168	ARG	CB-CG-CD	5.22	123.31	111.30
54	S2	1522	A	O4'-C4'-C3'	-5.22	98.78	104.00
54	S2	1857	G	C2'-C3'-O3'	5.22	121.53	113.70
75	SK	29	MET	CA-C-N	5.22	126.37	119.84
75	SK	29	MET	C-N-CA	5.22	126.37	119.84
32	5	4986	G	C1'-C2'-O2'	-5.22	100.57	108.40
32	5	4545	G	C1'-C2'-O2'	5.22	116.23	108.40
54	S2	1267	C	C1'-C2'-O2'	-5.22	100.57	108.40
32	5	964	A	C5'-C4'-O4'	-5.22	101.97	109.80
32	5	1323	A	N9-C1'-C2'	5.22	119.83	112.00
38	F	84	TYR	CA-CB-CG	-5.22	104.51	113.90
46	K	96	LYS	N-CA-C	5.22	121.91	110.80
32	5	32	G	C2'-C3'-O3'	5.21	121.52	113.70
32	5	1368	A	C3'-C2'-O2'	5.21	122.42	114.60
32	5	2474	G	C3'-C2'-O2'	5.21	118.52	110.70
32	5	4365	C	C4'-C3'-O3'	-5.21	105.18	113.00
54	S2	101	U	C2'-C3'-O3'	-5.21	105.88	113.70
54	S2	116	U	C3'-C2'-O2'	5.21	118.52	110.70
87	Sg	15	ASN	N-CA-C	-5.21	101.75	109.83
54	S2	1152	U	N1-C1'-C2'	5.21	119.82	112.00
32	5	936	C	N1-C1'-C2'	-5.21	106.18	114.00
32	5	1492	G	N9-C1'-C2'	5.21	119.82	112.00
54	S2	1185	C	C1'-C2'-O2'	5.21	116.22	108.40
54	S2	1643	U	N1-C1'-C2'	5.21	121.82	114.00
62	SJ	104	ASP	N-CA-C	5.21	116.65	110.97
1	A	34	PHE	CB-CA-C	-5.21	102.20	110.84
17	Y	8	THR	N-CA-C	5.21	120.66	110.56
32	5	2341	A	C1'-C2'-O2'	5.21	116.21	108.40
54	S2	92	A	O4'-C4'-C3'	-5.21	100.89	106.10
54	S2	1294	G	C2'-C3'-O3'	-5.20	105.89	113.70
32	5	1953	U	N1-C1'-C2'	5.20	119.80	112.00
32	5	49	U	N1-C1'-C2'	5.20	119.80	112.00
32	5	3790	U	O4'-C4'-C3'	-5.20	100.90	106.10
32	5	3909	C	C4'-C3'-O3'	-5.20	105.20	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4745	G	C3'-C2'-O2'	-5.20	102.90	110.70
54	S2	1222	G	N9-C1'-C2'	5.20	119.80	112.00
1	A	163	ARG	CB-CG-CD	5.20	123.26	111.30
32	5	95	G	C4'-C3'-O3'	5.20	120.80	113.00
32	5	4448	G	N9-C1'-C2'	5.20	121.80	114.00
32	5	4510	A	C4'-C3'-O3'	-5.20	101.60	109.40
86	Sf	138	ARG	N-CA-C	5.20	117.03	110.33
32	5	427	A	N9-C1'-C2'	5.20	119.79	112.00
54	S2	982	G	C2'-C3'-O3'	-5.20	105.91	113.70
54	S2	1637	A	C2'-C3'-O3'	5.20	117.29	109.50
56	SB	208	HIS	N-CA-CB	5.20	117.51	109.98
58	SE	126	VAL	N-CA-C	5.20	116.06	108.53
32	5	3647	A	C2'-C3'-O3'	5.19	121.49	113.70
32	5	2635	U	N1-C1'-C2'	5.19	119.79	112.00
32	5	4080	C	O4'-C1'-C2'	-5.19	102.41	107.60
32	5	4965	U	C4'-C3'-O3'	-5.19	105.21	113.00
54	S2	1140	G	C1'-C2'-O2'	5.19	116.19	108.40
32	5	269	G	O4'-C1'-C2'	-5.19	102.41	107.60
32	5	2453	A	O4'-C1'-C2'	-5.19	102.41	107.60
32	5	3693	U	O4'-C1'-C2'	-5.19	102.41	107.60
22	d	94	GLU	N-CA-C	5.19	117.34	111.11
32	5	4479	A	C1'-C2'-O2'	5.19	116.18	108.40
54	S2	1110	G	O4'-C1'-C2'	-5.19	102.41	107.60
47	q	97	GLU	N-CA-C	5.19	121.85	110.80
54	S2	336	A	C1'-C2'-O2'	5.19	116.18	108.40
32	5	2849	A	C4'-C3'-O3'	5.19	117.18	109.40
44	p	34	HIS	CA-CB-CG	-5.19	108.61	113.80
32	5	2037	C	C2'-C3'-O3'	-5.18	105.92	113.70
32	5	4434	C	C4'-C3'-O3'	-5.18	105.22	113.00
32	5	4736	C	N1-C1'-C2'	5.18	121.78	114.00
37	E	69	TYR	N-CA-C	5.18	117.62	107.57
45	r	45	HIS	CB-CA-C	-5.18	100.11	110.42
18	Z	49	TYR	N-CA-C	-5.18	102.50	110.01
32	5	1732	C	C1'-C2'-O2'	5.18	116.17	108.40
17	Y	75	ARG	CB-CG-CD	-5.18	99.39	111.30
32	5	1864	G	O4'-C1'-C2'	-5.18	102.42	107.60
32	5	2268	A	C2'-C3'-O3'	5.18	117.27	109.50
32	5	3653	A	N9-C1'-C2'	-5.18	104.23	112.00
32	5	4762	A	C2'-C3'-O3'	-5.18	101.73	109.50
69	SY	56	PHE	CB-CA-C	5.18	119.19	109.71
32	5	4230	C	N1-C1'-C2'	5.18	119.76	112.00
54	S2	1121	G	C2'-C3'-O3'	5.18	121.47	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
74	SF	152	TRP	CB-CA-C	-5.18	102.72	110.90
32	5	4359	U	C1'-C2'-O2'	5.17	116.16	108.40
46	K	111	ASN	N-CA-CB	5.17	117.51	110.01
54	S2	669	A	N9-C1'-C2'	5.17	119.76	112.00
54	S2	948	C	C2'-C3'-O3'	5.17	121.46	113.70
54	S2	1355	C	C2'-C3'-O3'	-5.17	105.94	113.70
54	S2	1629	C	C1'-C2'-O2'	5.17	116.16	108.40
81	ST	30	VAL	N-CA-CB	5.17	114.89	110.08
32	5	3726	A	N9-C1'-C2'	5.17	121.76	114.00
54	S2	848	U	N1-C1'-C2'	5.17	119.75	112.00
22	d	101	LYS	N-CA-C	-5.17	103.57	110.55
25	g	95	PHE	N-CA-CB	5.17	117.47	109.98
54	S2	868	G	C2'-C3'-O3'	-5.17	101.75	109.50
32	5	3938	G	O4'-C1'-N9	-5.17	100.45	108.20
54	S2	928	G	C4'-C3'-O3'	-5.17	105.25	113.00
32	5	3896	C	C3'-C2'-O2'	5.17	118.45	110.70
86	Sf	146	LEU	N-CA-C	-5.17	96.33	107.49
9	O	117	ARG	N-CA-C	5.16	116.92	108.76
32	5	3901	A	C3'-C2'-O2'	-5.16	106.86	114.60
32	5	4766	C	C2'-C3'-O3'	5.16	121.45	113.70
32	5	4888	U	C3'-C2'-O2'	-5.16	106.85	114.60
73	SD	197	LYS	N-CA-C	-5.16	99.80	110.80
32	5	2426	U	N1-C1'-C2'	5.16	119.74	112.00
32	5	5035	U	O4'-C1'-C2'	-5.16	102.44	107.60
23	e	77	PHE	N-CA-C	-5.16	100.99	109.40
32	5	2658	G	C1'-C2'-O2'	5.16	116.14	108.40
54	S2	917	U	C3'-C2'-O2'	5.16	118.44	110.70
54	S2	1024	A	C3'-C2'-O2'	5.16	118.44	110.70
46	K	102	GLY	N-CA-C	5.16	125.41	113.18
54	S2	980	A	O4'-C1'-C2'	-5.16	102.44	107.60
32	5	3688	U	O4'-C1'-C2'	-5.16	102.44	107.60
20	b	16	TRP	CB-CA-C	5.16	120.69	110.17
32	5	1494	U	N1-C1'-C2'	5.16	119.73	112.00
32	5	4537	C	O4'-C1'-C2'	-5.16	102.44	107.60
34	8	107	C	N1-C1'-C2'	5.16	119.73	112.00
36	C	337	ARG	N-CA-C	-5.16	105.57	111.14
54	S2	1827	U	N1-C1'-C2'	5.15	119.73	112.00
32	5	1423	U	N1-C1'-C2'	5.15	119.73	112.00
32	5	4333	C	N1-C1'-C2'	5.15	119.73	112.00
36	C	42	THR	N-CA-C	5.15	116.58	111.07
37	E	59	TYR	N-CA-CB	5.15	119.20	110.49
58	SE	18	TRP	CA-CB-CG	-5.15	103.81	113.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	P	116	HIS	N-CA-CB	5.15	118.66	110.16
54	S2	524	U	C4'-C3'-O3'	-5.15	105.27	113.00
82	SU	93	SER	N-CA-C	5.15	112.65	108.07
32	5	1806	G	C4'-C3'-O3'	-5.15	105.28	113.00
3	G	202	VAL	CB-CA-C	5.15	116.58	111.74
7	M	109	ARG	CA-CB-CG	5.14	124.39	114.10
23	e	75	ARG	CG-CD-NE	-5.14	100.68	112.00
32	5	2442	G	C4'-C3'-O3'	-5.14	105.28	113.00
70	Sa	72	HIS	N-CA-CB	-5.14	101.80	110.49
2	D	16	TYR	CA-CB-CG	-5.14	104.64	113.90
54	S2	165	G	O4'-C4'-C3'	-5.14	98.86	104.00
54	S2	923	G	O4'-C1'-C2'	-5.14	102.46	107.60
54	S2	967	C	C2'-C3'-O3'	5.14	121.41	113.70
55	SA	202	TYR	N-CA-C	5.14	120.41	113.72
75	SK	95	ARG	N-CA-C	5.14	117.45	111.02
32	5	4235	G	N9-C1'-C2'	5.14	119.71	112.00
1	A	195	CYS	N-CA-C	-5.14	102.17	110.14
4	H	156	ASN	N-CA-CB	5.14	117.46	110.01
32	5	701	G	O4'-C1'-C2'	-5.14	102.46	107.60
32	5	4550	G	O4'-C1'-C2'	-5.14	102.46	107.60
46	K	60	VAL	N-CA-C	-5.14	101.08	108.89
54	S2	1419	C	C3'-C2'-O2'	5.14	118.41	110.70
32	5	4266	G	C3'-C2'-O2'	5.14	118.41	110.70
1	A	19	HIS	N-CA-CB	-5.14	101.81	110.49
32	5	658	C	C2'-C3'-O3'	5.14	121.41	113.70
32	5	2732	G	C2'-C3'-O3'	5.14	121.41	113.70
32	5	3648	A	C1'-O4'-C4'	-5.14	104.56	109.70
54	S2	409	C	O4'-C1'-C2'	-5.14	102.46	107.60
63	SL	151	THR	N-CA-C	5.14	117.17	108.02
74	SF	48	TYR	CA-CB-CG	5.14	123.15	113.90
11	R	101	ILE	N-CA-C	5.13	115.35	110.42
32	5	693	C	C3'-C2'-O2'	5.13	118.40	110.70
32	5	2502	G	C3'-C2'-O2'	5.13	118.40	110.70
32	5	3638	G	N9-C1'-C2'	5.13	119.70	112.00
73	SD	152	PHE	N-CA-C	-5.13	100.53	108.90
77	SP	86	LEU	CA-C-N	5.13	126.26	119.84
77	SP	86	LEU	C-N-CA	5.13	126.26	119.84
32	5	3651	A	C2'-C3'-O3'	5.13	121.40	113.70
54	S2	1850	A	O4'-C1'-C2'	-5.13	102.47	107.60
69	SY	75	ILE	N-CA-C	5.13	116.06	107.18
13	T	17	ARG	CB-CA-C	5.13	117.48	109.42
32	5	393	U	C1'-C2'-O2'	5.13	116.10	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	1428	U	N1-C1'-C2'	5.13	119.70	112.00
32	5	4122	G	O4'-C1'-C2'	-5.13	102.47	107.60
54	S2	577	U	C2'-C3'-O3'	5.13	121.40	113.70
47	q	6	ARG	N-CA-C	5.13	121.73	110.80
32	5	1473	U	C2'-C3'-O3'	5.13	121.39	113.70
32	5	2793	G	C4'-C3'-O3'	-5.13	105.31	113.00
34	8	4	C	N1-C1'-C2'	5.13	119.69	112.00
49	2	112	GLY	CA-C-N	5.13	126.25	119.84
49	2	112	GLY	C-N-CA	5.13	126.25	119.84
54	S2	548	C	O4'-C1'-C2'	-5.13	102.47	107.60
54	S2	913	A	C4'-C3'-O3'	-5.13	105.31	113.00
12	S	44	PHE	N-CA-C	-5.13	105.77	111.36
34	8	34	U	O4'-C1'-C2'	-5.13	102.47	107.60
32	5	4311	A	C2'-C3'-O3'	5.12	121.39	113.70
54	S2	1142	G	C4'-C3'-C2'	-5.12	97.47	102.60
32	5	3864	C	C4'-C3'-O3'	-5.12	105.31	113.00
32	5	4303	C	C1'-C2'-O2'	-5.12	100.71	108.40
47	q	94	ASP	N-CA-CB	5.12	119.15	110.49
32	5	336	A	C4-N9-C1'	5.12	141.66	126.30
32	5	684	G	C2'-C3'-O3'	5.12	121.38	113.70
2	D	223	PHE	CA-C-N	5.12	127.45	120.54
2	D	223	PHE	C-N-CA	5.12	127.45	120.54
33	7	7	G	O4'-C1'-C2'	-5.12	102.48	107.60
48	z	370	ALA	N-CA-C	5.12	116.86	111.28
32	5	97	G	N9-C1'-C2'	-5.12	104.32	112.00
37	E	54	SER	N-CA-C	5.12	117.07	108.73
54	S2	879	C	O4'-C1'-C2'	-5.12	102.48	107.60
54	S2	1016	U	C4'-C3'-O3'	5.12	120.68	113.00
32	5	2264	C	C3'-C2'-O2'	5.12	122.28	114.60
32	5	3905	A	C1'-C2'-O2'	5.12	116.07	108.40
32	5	4215	C	C4'-C3'-O3'	-5.12	105.33	113.00
32	5	4878	C	C4'-C3'-O3'	-5.12	105.33	113.00
71	Sb	31	TYR	CA-CB-CG	5.12	123.11	113.90
73	SD	152	PHE	CB-CA-C	5.12	119.07	109.71
32	5	212	A	N9-C1'-C2'	5.11	119.67	112.00
32	5	1672	U	O4'-C1'-C2'	-5.11	102.49	107.60
32	5	2034	G	C1'-C2'-O2'	5.11	116.07	108.40
32	5	2807	A	C2'-C3'-O3'	5.11	121.37	113.70
54	S2	143	U	C1'-C2'-O2'	5.11	116.07	108.40
57	SC	200	ARG	CG-CD-NE	5.11	123.24	112.00
58	SE	235	TRP	CA-CB-CG	5.11	123.31	113.60
32	5	4413	C	C1'-C2'-O2'	5.11	116.06	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	7	82	G	C1'-C2'-O2'	5.11	116.06	108.40
53	6	110	LEU	N-CA-C	5.11	117.17	109.41
8	N	4	TYR	N-CA-C	5.11	118.29	111.75
22	d	87	ARG	N-CA-CB	5.11	117.47	110.57
45	r	124	VAL	N-CA-C	5.11	115.32	110.42
77	SP	42	ARG	CG-CD-NE	-5.11	100.76	112.00
8	N	175	GLY	N-CA-C	-5.11	103.90	110.69
17	Y	6	PHE	CA-CB-CG	-5.11	108.69	113.80
29	l	44	TRP	N-CA-CB	5.11	118.21	110.14
32	5	4767	C	C1'-C2'-O2'	5.11	116.06	108.40
54	S2	60	A	C4'-C3'-O3'	5.11	117.06	109.40
54	S2	1326	U	N1-C1'-C2'	5.11	121.66	114.00
3	G	40	GLY	N-CA-C	-5.10	104.83	112.89
32	5	3692	A	N9-C1'-C2'	-5.10	104.34	112.00
32	5	1068	G	C2'-C3'-O3'	5.10	121.35	113.70
32	5	1379	C	C5'-C4'-O4'	5.10	116.75	109.10
32	5	2623	A	O4'-C1'-C2'	-5.10	102.50	107.60
32	5	3852	A	C2'-C3'-O3'	-5.10	106.05	113.70
32	5	4228	G	O4'-C1'-C2'	-5.10	102.50	107.60
32	5	4978	G	C1'-C2'-O2'	-5.10	100.75	108.40
54	S2	1805	G	C2'-C3'-O3'	5.10	121.35	113.70
64	SN	25	TRP	N-CA-C	-5.10	103.01	111.37
70	Sa	18	VAL	CB-CA-C	-5.10	102.88	110.33
73	SD	192	TRP	N-CA-C	-5.10	107.01	113.18
32	5	394	G	C4'-C3'-C2'	-5.10	97.50	102.60
32	5	1724	G	C2'-C3'-O3'	-5.10	101.86	109.50
32	5	4911	A	O4'-C1'-C2'	-5.10	102.50	107.60
32	5	4982	A	O4'-C1'-C2'	-5.10	102.50	107.60
23	e	60	TYR	N-CA-CB	-5.09	103.70	111.19
32	5	4691	A	O4'-C1'-C2'	-5.09	102.51	107.60
34	8	94	G	O4'-C4'-C3'	-5.09	101.01	106.10
39	I	17	TYR	CA-C-N	-5.09	114.67	119.76
39	I	17	TYR	C-N-CA	-5.09	114.67	119.76
54	S2	641	A	C4'-C3'-O3'	5.09	120.64	113.00
54	S2	1342	U	C2'-C3'-O3'	5.09	117.14	109.50
6	L	186	ARG	CG-CD-NE	-5.09	100.80	112.00
32	5	3860	A	O4'-C1'-C2'	-5.09	102.51	107.60
32	5	4700	A	C1'-C2'-O2'	5.09	116.04	108.40
37	E	280	HIS	CA-CB-CG	-5.09	108.71	113.80
5	J	35	ARG	CG-CD-NE	5.09	123.20	112.00
54	S2	673	G	C3'-C2'-O2'	5.09	118.33	110.70
54	S2	796	G	N9-C1'-C2'	5.09	119.63	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
87	Sg	294	ASP	N-CA-C	5.09	118.98	112.87
32	5	4731	G	C4'-C3'-O3'	5.09	117.03	109.40
3	G	49	ARG	N-CA-CB	5.09	118.60	110.46
32	5	4282	A	O4'-C4'-C3'	-5.08	101.02	106.10
32	5	1534	A	O4'-C4'-C3'	-5.08	101.02	106.10
35	B	213	GLN	CB-CA-C	5.08	118.34	109.65
54	S2	1258	A	C3'-C2'-O2'	5.08	118.32	110.70
3	G	81	ASN	CB-CA-C	-5.08	102.90	110.88
32	5	1332	C	C2'-C3'-O3'	5.08	121.32	113.70
3	G	77	PRO	CA-C-N	5.08	126.19	119.84
3	G	77	PRO	C-N-CA	5.08	126.19	119.84
51	4	32	A	N9-C1'-C2'	-5.08	106.38	114.00
54	S2	554	A	N9-C1'-C2'	5.08	119.62	112.00
54	S2	1863	A	N9-C1'-C2'	5.08	121.62	114.00
2	D	33	ARG	N-CA-C	-5.08	105.83	111.36
32	5	111	C	C1'-C2'-O2'	5.08	116.02	108.40
32	5	4124	G	C4'-C3'-O3'	5.08	117.02	109.40
56	SB	106	THR	N-CA-C	5.08	119.43	113.23
32	5	2459	G	C2'-C3'-O3'	5.08	121.31	113.70
32	5	4441	A	N9-C1'-C2'	5.08	119.62	112.00
34	8	8	U	C1'-C2'-O2'	5.08	116.02	108.40
35	B	32	PHE	CB-CA-C	5.08	115.55	109.31
32	5	2055	G	O4'-C1'-C2'	-5.08	102.53	107.60
32	5	2677	G	O4'-C1'-C2'	-5.08	102.52	107.60
32	5	4860	G	O4'-C1'-C2'	-5.08	102.52	107.60
32	5	2583	C	C2'-C3'-O3'	5.07	121.31	113.70
54	S2	1452	A	C4'-C3'-O3'	-5.07	101.79	109.40
32	5	1798	G	C4'-C3'-O3'	-5.07	105.39	113.00
54	S2	395	G	N9-C1'-C2'	5.07	119.61	112.00
54	S2	1199	A	C3'-C2'-O2'	-5.07	103.09	110.70
32	5	4871	C	O4'-C4'-C3'	-5.07	101.03	106.10
78	SQ	99	TYR	N-CA-CB	5.07	117.75	110.40
10	Q	91	ARG	NE-CZ-NH2	5.07	123.76	119.20
32	5	453	G	O4'-C1'-C2'	-5.07	102.53	107.60
32	5	1674	C	C3'-C2'-O2'	5.07	118.30	110.70
32	5	2669	C	C2'-C3'-O3'	5.07	117.10	109.50
32	5	4333	C	C1'-C2'-O2'	-5.07	100.80	108.40
42	j	43	ARG	CG-CD-NE	5.07	123.15	112.00
54	S2	507	G	C1'-C2'-O2'	5.07	119.40	111.80
2	D	54	ARG	CB-CG-CD	5.07	122.95	111.30
32	5	3800	A	C4'-C3'-O3'	-5.07	105.40	113.00
54	S2	183	G	C4'-C3'-O3'	5.07	117.00	109.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	S2	798	A	C4'-C3'-C2'	-5.07	97.53	102.60
18	Z	78	ASN	N-CA-C	5.06	119.33	113.20
54	S2	4	C	O4'-C1'-C2'	-5.06	102.54	107.60
32	5	1672	U	N1-C1'-C2'	5.06	119.59	112.00
32	5	4873	G	N9-C1'-C2'	5.06	121.59	114.00
57	SC	198	ALA	CA-C-N	-5.06	114.77	120.14
57	SC	198	ALA	C-N-CA	-5.06	114.77	120.14
32	5	124	C	C2'-C3'-O3'	5.06	121.29	113.70
54	S2	1536	G	C1'-C2'-O2'	5.06	115.99	108.40
32	5	398	A	N9-C1'-C2'	5.06	119.59	112.00
32	5	1738	A	C4'-C3'-O3'	-5.06	105.41	113.00
33	7	49	A	N9-C1'-C2'	-5.06	106.41	114.00
55	SA	131	HIS	CB-CA-C	5.06	118.80	109.99
32	5	1522	G	C4'-C3'-C2'	-5.06	97.54	102.60
32	5	4936	G	C2'-C3'-O3'	-5.06	106.11	113.70
34	8	96	C	C3'-C2'-O2'	5.06	118.29	110.70
42	j	76	HIS	CB-CA-C	5.06	118.50	109.29
54	S2	365	C	C3'-C2'-O2'	5.06	118.29	110.70
32	5	231	U	C2'-C3'-O3'	5.06	121.28	113.70
32	5	4274	A	C2'-C3'-O3'	5.06	121.28	113.70
34	8	104	A	N9-C1'-C2'	5.06	121.58	114.00
54	S2	1853	C	C3'-C2'-O2'	5.06	118.28	110.70
32	5	435	A	C2'-C3'-O3'	5.05	121.28	113.70
32	5	2385	U	N1-C1'-C2'	5.05	119.58	112.00
54	S2	1743	G	C4'-C3'-O3'	-5.05	105.42	113.00
32	5	2687	U	C2'-C3'-O3'	-5.05	106.12	113.70
32	5	100	C	N1-C1'-C2'	-5.05	104.43	112.00
54	S2	1271	C	O4'-C1'-C2'	-5.05	102.55	107.60
69	SY	64	PHE	N-CA-CB	5.05	119.03	110.49
32	5	4212	A	N9-C1'-C2'	5.05	121.57	114.00
36	C	217	ILE	N-CA-C	5.05	115.77	110.62
32	5	92	C	C1'-C2'-O2'	5.05	115.97	108.40
54	S2	368	U	C2'-C3'-O3'	5.05	121.27	113.70
32	5	2813	A	N9-C1'-C2'	5.04	119.57	112.00
32	5	125	C	O4'-C1'-C2'	-5.04	102.56	107.60
32	5	1075	G	C2'-C3'-O3'	5.04	121.26	113.70
32	5	4944	C	N1-C1'-C2'	5.04	121.57	114.00
32	5	394	G	O4'-C1'-C2'	-5.04	102.56	107.60
32	5	3594	C	N1-C1'-C2'	5.04	119.56	112.00
32	5	4238	G	N9-C1'-C2'	-5.04	104.44	112.00
54	S2	651	U	C1'-C2'-O2'	-5.04	100.84	108.40
54	S2	813	A	C3'-C2'-O2'	5.04	118.26	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	2878	G	C1'-C2'-O2'	5.04	115.96	108.40
54	S2	1035	A	C1'-C2'-O2'	5.04	115.96	108.40
54	S2	1745	A	N9-C1'-C2'	5.04	119.56	112.00
62	SJ	3	VAL	N-CA-C	5.04	119.82	109.34
32	5	1591	U	C4'-C3'-O3'	-5.04	105.44	113.00
32	5	2089	G	O4'-C4'-C3'	-5.04	101.06	106.10
54	S2	1652	G	N9-C1'-C2'	5.04	119.56	112.00
32	5	4586	G	O4'-C1'-C2'	-5.04	102.56	107.60
35	B	25	HIS	CA-CB-CG	5.04	118.84	113.80
56	SB	80	ALA	N-CA-C	5.04	117.26	110.06
32	5	4644	G	C3'-C2'-O2'	-5.04	103.15	110.70
54	S2	689	U	N1-C1'-C2'	5.04	119.55	112.00
54	S2	919	A	C2'-C3'-O3'	-5.04	101.95	109.50
87	Sg	140	TYR	CA-CB-CG	-5.04	104.84	113.90
32	5	2257	C	C4'-C3'-O3'	5.03	116.95	109.40
32	5	3667	C	O4'-C1'-C2'	-5.03	102.57	107.60
32	5	4627	U	O4'-C1'-C2'	-5.03	102.57	107.60
38	F	93	PHE	CB-CA-C	5.03	117.94	109.89
38	F	197	TYR	N-CA-C	-5.03	103.24	111.04
54	S2	1430	C	O4'-C1'-C2'	-5.03	102.57	107.60
32	5	1534	A	P-O5'-C5'	5.03	128.45	120.90
54	S2	1727	G	C2'-C3'-O3'	5.03	121.25	113.70
8	N	85	VAL	CB-CA-C	-5.03	105.43	112.02
32	5	20	U	N1-C1'-C2'	-5.03	106.46	114.00
32	5	4160	C	N1-C1'-C2'	5.03	119.54	112.00
54	S2	493	A	C4'-C3'-O3'	-5.03	105.46	113.00
23	e	62	SER	N-CA-C	5.03	117.76	109.72
32	5	1934	A	C1'-C2'-O2'	5.03	115.94	108.40
32	5	2674	A	O4'-C4'-C3'	-5.03	101.07	106.10
32	5	4317	A	N9-C1'-C2'	5.03	119.54	112.00
54	S2	1362	U	C1'-C2'-O2'	-5.03	104.26	111.80
54	S2	1657	G	C1'-C2'-O2'	5.03	115.94	108.40
54	S2	1830	U	N1-C1'-C2'	-5.03	106.46	114.00
32	5	28	C	N1-C1'-C2'	5.03	119.54	112.00
32	5	1320	U	C1'-C2'-O2'	5.03	115.94	108.40
42	j	70	VAL	CB-CA-C	-5.03	105.39	111.87
54	S2	791	C	C1'-C2'-O2'	5.03	115.94	108.40
60	SH	106	ARG	N-CA-C	-5.03	105.51	111.69
32	5	970	G	O4'-C4'-C3'	-5.02	101.08	106.10
32	5	4563	U	N1-C1'-C2'	5.02	119.54	112.00
54	S2	588	G	C2'-C3'-O3'	5.02	117.04	109.50
10	Q	32	TYR	CA-CB-CG	5.02	122.94	113.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	d	108	TYR	N-CA-C	5.02	117.58	110.50
32	5	4078	C	O4'-C1'-C2'	-5.02	102.58	107.60
32	5	53	C	N1-C1'-C2'	-5.02	104.47	112.00
32	5	1382	G	C1'-C2'-O2'	-5.02	100.87	108.40
32	5	4436	U	N1-C1'-C2'	-5.02	106.47	114.00
32	5	4511	A	C3'-C2'-O2'	5.02	118.23	110.70
35	B	53	MET	N-CA-C	5.02	115.16	108.38
54	S2	105	U	O4'-C1'-C2'	-5.02	102.58	107.60
4	H	125	ARG	CG-CD-NE	5.02	123.04	112.00
54	S2	69	C	N1-C1'-C2'	5.02	119.53	112.00
32	5	1390	G	C2'-C3'-O3'	5.02	121.22	113.70
32	5	1850	A	N9-C1'-C2'	5.02	119.52	112.00
32	5	2089	G	C3'-C2'-O2'	5.02	122.12	114.60
54	S2	1022	U	C1'-C2'-O2'	5.02	115.92	108.40
54	S2	1249	C	C2'-C3'-O3'	5.02	121.22	113.70
32	5	150	U	C4'-C3'-O3'	5.01	116.92	109.40
32	5	338	A	C4'-C3'-O3'	-5.01	105.48	113.00
32	5	2269	C	C2'-C3'-O3'	-5.01	106.18	113.70
32	5	4625	C	C4'-C3'-O3'	-5.01	105.48	113.00
34	8	116	C	C2'-C3'-O3'	5.01	121.22	113.70
32	5	1237	C	C4'-C3'-O3'	-5.01	105.48	113.00
32	5	3746	A	C3'-C2'-O2'	5.01	118.22	110.70
32	5	4677	U	C1'-C2'-O2'	5.01	115.92	108.40
54	S2	1080	A	C4'-C3'-O3'	5.01	116.92	109.40
55	SA	117	ARG	CG-CD-NE	5.01	123.03	112.00
87	Sg	64	HIS	N-CA-C	5.01	116.61	109.14
15	V	97	TYR	N-CA-C	-5.01	102.44	109.96
32	5	73	A	N9-C1'-C2'	5.01	119.52	112.00
32	5	2056	G	O4'-C1'-C2'	-5.01	102.59	107.60
32	5	2079	G	O4'-C1'-C2'	-5.01	102.59	107.60
32	5	4763	U	O5'-C5'-C4'	-5.01	103.99	111.50
34	8	81	C	C1'-C2'-O2'	5.01	115.92	108.40
32	5	1364	U	C4'-C3'-C2'	-5.01	97.59	102.60
32	5	4730	C	C4'-C3'-O3'	5.01	116.91	109.40
34	8	73	U	C1'-C2'-O2'	5.01	115.91	108.40
17	Y	5	PRO	N-CA-C	-5.01	102.76	111.32
32	5	508	G	C2'-C3'-O3'	5.01	121.21	113.70
32	5	2467	U	N1-C1'-C2'	-5.01	104.49	112.00
32	5	2529	A	C1'-O4'-C4'	-5.00	104.89	109.90
17	Y	74	TYR	N-CA-C	-5.00	100.14	110.80
32	5	1995	G	N9-C1'-C2'	5.00	119.51	112.00
32	5	3933	G	C1'-C2'-O2'	5.00	115.90	108.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	5	4161	G	N9-C1'-C2'	5.00	119.51	112.00
32	5	4699	U	C4'-C3'-O3'	5.00	116.91	109.40
50	3	58	A	C2'-C3'-O3'	5.00	117.00	109.50
54	S2	1703	C	C1'-C2'-O2'	5.00	115.91	108.40
32	5	1727	U	N1-C1'-C2'	5.00	119.50	112.00
32	5	3938	G	C5'-C4'-O4'	5.00	116.60	109.10

There are no chirality outliers.

All (529) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
49	2	110	LYS	Peptide
32	5	100	C	Sidechain
32	5	120	A	Sidechain
32	5	1214	C	Sidechain
32	5	1319	U	Sidechain
32	5	1324	A	Sidechain
32	5	1365	C	Sidechain
32	5	1395	U	Sidechain
32	5	1398	A	Sidechain
32	5	147	A	Sidechain
32	5	1479	G	Sidechain
32	5	150	U	Sidechain
32	5	1501	C	Sidechain
32	5	151	G	Sidechain
32	5	1516	G	Sidechain
32	5	1521	C	Sidechain
32	5	1522	G	Sidechain
32	5	1534	A	Sidechain
32	5	1552	G	Sidechain
32	5	157	U	Sidechain
32	5	1613	A	Sidechain
32	5	1627	G	Sidechain
32	5	1631	A	Sidechain
32	5	1632	A	Sidechain
32	5	1650	A	Sidechain
32	5	1668	A	Sidechain
32	5	1671	U	Sidechain
32	5	1676	C	Sidechain
32	5	1682	A	Sidechain
32	5	1697	G	Sidechain
32	5	172	C	Sidechain

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Mol	Chain	Res	Type	Group
32	5	1740	C	Sidechain
32	5	1853	G	Sidechain
32	5	1887	G	Sidechain
32	5	1894	C	Sidechain
32	5	1930	U	Sidechain
32	5	1938	C	Sidechain
32	5	1946	G	Sidechain
32	5	2035	C	Sidechain
32	5	2037	C	Sidechain
32	5	2046	G	Sidechain
32	5	2056	G	Sidechain
32	5	2077	C	Sidechain
32	5	2081	C	Sidechain
32	5	2082	G	Sidechain
32	5	2087	C	Sidechain
32	5	22	G	Sidechain
32	5	2263	A	Sidechain
32	5	2268	A	Sidechain
32	5	2282	A	Sidechain
32	5	2305	U	Sidechain
32	5	2307	A	Sidechain
32	5	2325	C	Sidechain
32	5	2348	G	Sidechain
32	5	235	A	Sidechain
32	5	2361	G	Sidechain
32	5	2362	U	Sidechain
32	5	2394	G	Sidechain
32	5	2396	A	Sidechain
32	5	2406	G	Sidechain
32	5	2436	U	Sidechain
32	5	2438	A	Sidechain
32	5	2446	C	Sidechain
32	5	2450	G	Sidechain
32	5	2460	A	Sidechain
32	5	2465	C	Sidechain
32	5	2510	G	Sidechain
32	5	2511	A	Sidechain
32	5	2513	A	Sidechain
32	5	2515	G	Sidechain
32	5	2597	G	Sidechain
32	5	2649	G	Sidechain
32	5	2666	U	Sidechain

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Mol	Chain	Res	Type	Group
32	5	2675	G	Sidechain
32	5	2769	U	Sidechain
32	5	2796	G	Sidechain
32	5	280	G	Sidechain
32	5	2806	A	Sidechain
32	5	2827	G	Sidechain
32	5	2848	G	Sidechain
32	5	2851	G	Sidechain
32	5	2858	A	Sidechain
32	5	292	G	Sidechain
32	5	30	C	Sidechain
32	5	31	U	Sidechain
32	5	33	A	Sidechain
32	5	336	A	Sidechain
32	5	352	G	Sidechain
32	5	3621	A	Sidechain
32	5	3635	A	Sidechain
32	5	3648	A	Sidechain
32	5	3653	A	Sidechain
32	5	3663	A	Sidechain
32	5	3692	A	Sidechain
32	5	3726	A	Sidechain
32	5	3790	U	Sidechain
32	5	384	A	Sidechain
32	5	3843	C	Sidechain
32	5	3844	U	Sidechain
32	5	3860	A	Sidechain
32	5	3871	A	Sidechain
32	5	3875	G	Sidechain
32	5	3879	G	Sidechain
32	5	3880	G	Sidechain
32	5	3905	A	Sidechain
32	5	3906	A	Sidechain
32	5	3907	G	Sidechain
32	5	3938	G	Sidechain
32	5	394	G	Sidechain
32	5	405	U	Sidechain
32	5	4162	C	Sidechain
32	5	417	G	Sidechain
32	5	421	C	Sidechain
32	5	4228	G	Sidechain
32	5	4229	U	Sidechain

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Mol	Chain	Res	Type	Group
32	5	4234	A	Sidechain
32	5	4239	A	Sidechain
32	5	4270	C	Sidechain
32	5	4275	G	Sidechain
32	5	4280	A	Sidechain
32	5	4282	A	Sidechain
32	5	4283	G	Sidechain
32	5	43	U	Sidechain
32	5	4330	G	Sidechain
32	5	4331	G	Sidechain
32	5	4336	A	Sidechain
32	5	4341	C	Sidechain
32	5	4378	A	Sidechain
32	5	4404	U	Sidechain
32	5	4405	G	Sidechain
32	5	4449	A	Sidechain
32	5	4463	U	Sidechain
32	5	4464	A	Sidechain
32	5	4497	U	Sidechain
32	5	4498	U	Sidechain
32	5	4510	A	Sidechain
32	5	4519	C	Sidechain
32	5	4527	G	Sidechain
32	5	4528	G	Sidechain
32	5	4535	A	Sidechain
32	5	4589	A	Sidechain
32	5	4600	G	Sidechain
32	5	4670	C	Sidechain
32	5	4677	U	Sidechain
32	5	4693	C	Sidechain
32	5	4763	U	Sidechain
32	5	4871	C	Sidechain
32	5	4880	C	Sidechain
32	5	4911	A	Sidechain
32	5	4966	A	Sidechain
32	5	4976	U	Sidechain
32	5	4981	G	Sidechain
32	5	5001	U	Sidechain
32	5	5006	U	Sidechain
32	5	5040	U	Sidechain
32	5	5043	A	Sidechain
32	5	5044	A	Sidechain

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Mol	Chain	Res	Type	Group
32	5	5050	C	Sidechain
32	5	5066	U	Sidechain
32	5	53	C	Sidechain
32	5	54	G	Sidechain
32	5	55	G	Sidechain
32	5	62	A	Sidechain
32	5	664	G	Sidechain
32	5	72	C	Sidechain
32	5	77	U	Sidechain
32	5	84	A	Sidechain
32	5	85	G	Sidechain
32	5	89	C	Sidechain
32	5	91	G	Sidechain
32	5	92	C	Sidechain
32	5	93	G	Sidechain
32	5	94	A	Sidechain
32	5	964	A	Sidechain
32	5	97	G	Sidechain
32	5	99	A	Sidechain
33	7	42	A	Sidechain
33	7	56	G	Sidechain
34	8	10	G	Sidechain
34	8	104	A	Sidechain
34	8	14	U	Sidechain
34	8	34	U	Sidechain
34	8	35	C	Sidechain
34	8	38	U	Sidechain
34	8	39	G	Sidechain
34	8	70	G	Sidechain
34	8	73	U	Sidechain
34	8	9	A	Sidechain
34	8	94	G	Sidechain
1	A	18	ALA	Peptide
1	A	194	ASN	Peptide
1	A	196	TRP	Peptide
1	A	209	HIS	Sidechain
1	A	211	PHE	Sidechain
1	A	215	ASN	Peptide
1	A	66	PRO	Peptide
1	A	67	TYR	Sidechain
35	B	102	PHE	Peptide
35	B	108	GLU	Peptide

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Mol	Chain	Res	Type	Group
35	B	16	PHE	Peptide
35	B	179	HIS	Sidechain
35	B	257	TRP	Peptide
35	B	264	PHE	Peptide
35	B	322	HIS	Peptide
35	B	367	PHE	Sidechain
35	B	379	PHE	Peptide
35	B	387	ALA	Peptide
35	B	46	PHE	Peptide
35	B	55	HIS	Sidechain
36	C	113	ARG	Peptide
36	C	177	TRP	Peptide
36	C	265	GLY	Peptide
36	C	41	HIS	Sidechain
2	D	129	GLU	Peptide
2	D	190	PHE	Peptide
2	D	20	PHE	Peptide
2	D	218	ALA	Peptide
2	D	260	GLU	Peptide
2	D	266	TRP	Peptide
2	D	30	TYR	Peptide
2	D	41	LYS	Peptide
2	D	44	TYR	Sidechain
37	E	102	VAL	Peptide
37	E	103	VAL	Peptide
37	E	111	TYR	Peptide
37	E	123	SER	Peptide
37	E	152	ARG	Peptide
37	E	177	LEU	Peptide
37	E	216	LYS	Peptide
37	E	224	GLN	Peptide
37	E	230	ASP	Peptide
37	E	233	LYS	Peptide
37	E	235	LYS	Peptide
37	E	274	THR	Peptide
37	E	278	TYR	Sidechain
37	E	279	PRO	Peptide
37	E	280	HIS	Sidechain
37	E	281	LYS	Peptide
38	F	127	LEU	Peptide
38	F	197	TYR	Peptide
38	F	208	ASN	Peptide

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Mol	Chain	Res	Type	Group
38	F	228	HIS	Sidechain
38	F	237	ASN	Peptide
38	F	81	GLY	Peptide
38	F	82	ASN	Peptide
38	F	84	TYR	Peptide
3	G	101	LYS	Peptide
3	G	229	ARG	Peptide
3	G	54	PHE	Sidechain
3	G	66	GLN	Peptide
4	H	50	LYS	Peptide
4	H	59	LYS	Peptide
39	I	158	LYS	Peptide
39	I	77	VAL	Peptide
39	I	93	PRO	Peptide
5	J	87	LEU	Peptide
5	J	99	PHE	Sidechain
46	K	122	ALA	Peptide
46	K	123	ARG	Peptide
46	K	148	PRO	Peptide
46	K	54	LYS	Peptide
46	K	87	GLU	Peptide
46	K	88	PRO	Peptide
46	K	89	PRO	Peptide
46	K	9	GLU	Peptide
46	K	94	LYS	Peptide
46	K	97	ASN	Peptide
6	L	146	LEU	Peptide
6	L	46	ILE	Peptide
6	L	62	PRO	Peptide
6	L	66	TYR	Peptide
7	M	6	PHE	Sidechain
7	M	65	PRO	Peptide
7	M	94	LYS	Peptide
8	N	119	TYR	Sidechain
8	N	138	PHE	Peptide
8	N	139	HIS	Sidechain
8	N	180	PHE	Sidechain
8	N	181	HIS	Peptide
8	N	202	ARG	Peptide
8	N	29	GLN	Peptide
8	N	86	HIS	Peptide
8	N	90	ASN	Peptide

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Mol	Chain	Res	Type	Group
9	O	110	PRO	Peptide
9	O	117	ARG	Peptide
9	O	135	PHE	Sidechain
9	O	64	THR	Peptide
40	P	116	HIS	Sidechain
40	P	139	TYR	Sidechain
40	P	145	HIS	Sidechain
40	P	7	ASP	Peptide
10	Q	161	SER	Peptide
10	Q	3	VAL	Peptide
10	Q	32	TYR	Peptide
10	Q	34	PHE	Sidechain
10	Q	51	LEU	Peptide
11	R	132	PHE	Peptide,Sidechain
11	R	174	GLU	Peptide
11	R	19	LYS	Peptide
11	R	23	TRP	Peptide
11	R	31	GLU	Peptide
11	R	94	THR	Peptide
12	S	10	TYR	Sidechain
12	S	145	PHE	Peptide
12	S	152	PHE	Peptide
12	S	154	LEU	Peptide
12	S	159	LEU	Peptide
12	S	164	LYS	Peptide
12	S	32	ILE	Peptide
12	S	68	PHE	Peptide
88	S1	46	LEU	Peptide
88	S1	5	GLN	Mainchain,Peptide
88	S1	52	LYS	Peptide
54	S2	1036	A	Sidechain
54	S2	1063	C	Sidechain
54	S2	1085	C	Sidechain
54	S2	1088	U	Sidechain
54	S2	1142	G	Sidechain
54	S2	1167	G	Sidechain
54	S2	1168	G	Sidechain
54	S2	1221	G	Sidechain
54	S2	1247	C	Sidechain
54	S2	1249	C	Sidechain
54	S2	1378	A	Sidechain
54	S2	1408	U	Sidechain

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Mol	Chain	Res	Type	Group
54	S2	1452	A	Sidechain
54	S2	1453	C	Sidechain
54	S2	1537	A	Sidechain
54	S2	1552	G	Sidechain
54	S2	1578	U	Sidechain
54	S2	1603	G	Sidechain
54	S2	1606	G	Sidechain
54	S2	1623	A	Sidechain
54	S2	1659	U	Sidechain
54	S2	1835	A	Sidechain
54	S2	1838	U	Sidechain
54	S2	26	U	Sidechain
54	S2	27	A	Sidechain
54	S2	294	U	Sidechain
54	S2	3	C	Sidechain
54	S2	31	U	Sidechain
54	S2	313	A	Sidechain
54	S2	367	U	Sidechain
54	S2	381	C	Sidechain
54	S2	382	C	Sidechain
54	S2	399	C	Sidechain
54	S2	409	C	Sidechain
54	S2	421	G	Sidechain
54	S2	423	U	Sidechain
54	S2	426	A	Sidechain
54	S2	427	U	Sidechain
54	S2	428	U	Sidechain
54	S2	437	G	Sidechain
54	S2	447	A	Sidechain
54	S2	448	A	Sidechain
54	S2	482	G	Sidechain
54	S2	596	U	Sidechain
54	S2	617	G	Sidechain
54	S2	631	U	Sidechain
54	S2	642	U	Sidechain
54	S2	645	C	Sidechain
54	S2	648	A	Sidechain
54	S2	662	G	Sidechain
54	S2	821	G	Sidechain
54	S2	825	A	Sidechain
54	S2	841	G	Sidechain
54	S2	875	A	Sidechain

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Mol	Chain	Res	Type	Group
54	S2	876	C	Sidechain
54	S2	91	A	Sidechain
54	S2	92	A	Sidechain
54	S2	945	U	Sidechain
54	S2	999	G	Sidechain
55	SA	103	PHE	Sidechain
55	SA	115	ALA	Peptide
55	SA	163	CYS	Peptide
55	SA	2	SER	Peptide
55	SA	40	LYS	Peptide
56	SB	100	PHE	Sidechain
56	SB	205	TYR	Sidechain
56	SB	211	PHE	Peptide
56	SB	40	ASN	Peptide
56	SB	66	VAL	Peptide
56	SB	81	PHE	Peptide,Sidechain
57	SC	168	GLY	Peptide
57	SC	235	ASN	Peptide
57	SC	236	PHE	Sidechain
57	SC	240	THR	Peptide
57	SC	241	PHE	Sidechain
57	SC	60	TRP	Peptide
57	SC	96	PHE	Peptide
73	SD	159	HIS	Sidechain
73	SD	196	GLY	Peptide
73	SD	203	PRO	Peptide
58	SE	100	ARG	Peptide
58	SE	121	TYR	Sidechain
58	SE	17	HIS	Peptide
58	SE	205	PHE	Peptide
58	SE	41	CYS	Peptide
58	SE	86	PHE	Sidechain
74	SF	164	ARG	Peptide
74	SF	22	LYS	Peptide
74	SF	43	GLU	Peptide
74	SF	51	HIS	Sidechain
59	SG	57	ASP	Peptide
60	SH	108	SER	Peptide
60	SH	189	PHE	Peptide
61	SI	111	GLN	Peptide
61	SI	149	TYR	Peptide
61	SI	153	LYS	Peptide

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Mol	Chain	Res	Type	Group
61	SI	155	ASN	Peptide
61	SI	197	PHE	Peptide
61	SI	26	LYS	Peptide
61	SI	50	GLY	Peptide
61	SI	64	ASN	Peptide
61	SI	65	PHE	Peptide
62	SJ	18	ARG	Peptide
62	SJ	38	ARG	Peptide
62	SJ	93	LYS	Peptide
75	SK	60	GLU	Peptide
63	SL	15	THR	Peptide
63	SL	151	THR	Peptide
63	SL	62	PHE	Sidechain
76	SM	32	ALA	Peptide
76	SM	75	ASN	Peptide
64	SN	112	LYS	Peptide
64	SN	113	PHE	Peptide
64	SN	127	ARG	Peptide
64	SN	18	TYR	Sidechain
64	SN	57	SER	Peptide
65	SO	147	ARG	Sidechain
77	SP	11	THR	Peptide
77	SP	21	ASP	Sidechain
77	SP	36	LEU	Peptide
78	SQ	43	GLU	Peptide
80	SS	81	ASP	Peptide
81	ST	10	ASN	Peptide
81	ST	52	TRP	Peptide
82	SU	71	GLY	Peptide
66	SV	32	ILE	Peptide
66	SV	49	GLN	Peptide
66	SV	52	THR	Peptide
67	SW	44	HIS	Sidechain
67	SW	67	GLY	Peptide
67	SW	76	SER	Peptide
68	SX	16	HIS	Sidechain
68	SX	20	HIS	Sidechain
69	SY	34	THR	Peptide
83	SZ	108	ILE	Peptide
70	Sa	17	HIS	Sidechain
70	Sa	71	LEU	Peptide
70	Sa	9	GLY	Peptide

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Mol	Chain	Res	Type	Group
71	Sb	81	ARG	Peptide
85	Sd	10	HIS	Peptide
85	Sd	26	ASN	Peptide
85	Sd	8	TRP	Peptide
86	Sf	132	MET	Peptide
86	Sf	135	HIS	Peptide
86	Sf	138	ARG	Peptide
86	Sf	139	HIS	Peptide
87	Sg	125	ARG	Peptide
87	Sg	155	ARG	Peptide
87	Sg	64	HIS	Peptide
13	T	140	PHE	Sidechain
13	T	142	ARG	Peptide
15	V	108	ASN	Peptide
15	V	13	LYS	Peptide
15	V	98	PHE	Sidechain
41	W	16	GLY	Peptide
16	X	143	ASP	Peptide
16	X	73	HIS	Sidechain
17	Y	11	ARG	Sidechain
17	Y	61	HIS	Sidechain
17	Y	62	TYR	Peptide
18	Z	37	PRO	Peptide
19	a	142	GLY	Peptide
19	a	39	HIS	Peptide
19	a	60	HIS	Peptide
19	a	61	TYR	Peptide
19	a	62	HIS	Sidechain
19	a	91	ALA	Peptide
20	b	20	GLY	Peptide
20	b	7	HIS	Peptide
21	c	77	ASN	Peptide
22	d	103	TYR	Peptide
22	d	108	TYR	Peptide
22	d	25	TYR	Sidechain
22	d	37	GLY	Peptide
22	d	72	VAL	Peptide
23	e	74	PHE	Sidechain
24	f	100	ARG	Peptide
24	f	70	ILE	Peptide
25	g	6	THR	Peptide
25	g	95	PHE	Peptide

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Mol	Chain	Res	Type	Group
26	h	97	LYS	Peptide
27	i	26	HIS	Sidechain
27	i	39	PHE	Sidechain
27	i	49	GLY	Peptide
42	j	46	LYS	Peptide
42	j	48	ASN	Peptide
42	j	66	HIS	Sidechain
42	j	8	PHE	Sidechain
28	k	28	ASN	Peptide
30	m	117	HIS	Peptide
31	o	31	ASP	Peptide
31	o	43	ARG	Peptide
31	o	47	GLY	Peptide
44	p	17	ARG	Peptide
44	p	34	HIS	Sidechain
47	q	116	ILE	Peptide
47	q	117	ALA	Peptide
47	q	132	PRO	Peptide
47	q	202	GLU	Peptide
47	q	204	LEU	Peptide
47	q	5	ASP	Peptide
47	q	6	ARG	Peptide
47	q	94	ASP	Peptide
45	r	30	ASN	Peptide
45	r	70	GLN	Peptide
45	r	76	SER	Peptide
48	z	100	LYS	Peptide
48	z	196	LYS	Peptide
48	z	344	PRO	Mainchain,Peptide
48	z	482	UNK	Mainchain
48	z	69	LEU	Peptide
48	z	70	ASN	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	A	1868	0	1959	137	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	D	2380	0	2412	130	0
3	G	1912	0	2059	95	0
4	H	1518	0	1601	70	0
5	J	1359	0	1390	63	0
6	L	1703	0	1818	74	0
7	M	1131	0	1209	62	0
8	N	1701	0	1749	124	0
9	O	1651	0	1786	68	0
10	Q	1506	0	1623	71	0
11	R	1508	0	1663	116	0
12	S	1454	0	1496	118	0
13	T	1298	0	1366	61	0
14	U	808	0	831	15	0
15	V	979	0	1039	44	0
16	X	976	0	1053	40	0
17	Y	1115	0	1205	50	0
18	Z	1107	0	1182	58	0
19	a	1163	0	1211	83	0
20	b	610	0	650	42	0
21	c	732	0	769	53	0
22	d	888	0	930	52	0
23	e	1053	0	1147	69	0
24	f	876	0	912	48	0
25	g	906	0	1002	42	0
26	h	1015	0	1150	49	0
27	i	832	0	917	26	0
28	k	569	0	637	12	0
29	l	444	0	483	11	0
30	m	429	0	466	17	0
31	o	851	0	923	42	0
32	5	78406	0	39609	10957	0
33	7	2558	0	1296	327	0
34	8	3314	0	1683	583	0
35	B	3147	0	3280	201	0
36	C	2919	0	3100	129	0
37	E	1904	0	2055	118	0
38	F	1870	0	1996	131	0
39	I	1713	0	1752	132	0
40	P	1242	0	1269	63	0
41	W	528	0	541	57	0
42	j	706	0	742	41	0
43	n	222	0	257	34	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	p	708	0	760	19	0
45	r	1001	0	1062	49	0
46	K	1238	0	1293	101	0
47	q	1556	0	1612	117	0
48	z	3241	0	3211	483	0
49	2	233	0	291	32	0
50	3	1616	0	824	177	0
51	4	4551	0	2297	408	0
52	9	844	0	861	68	0
53	6	1497	0	1504	24	0
54	S2	36900	0	18592	5345	0
55	SA	1642	0	1646	179	0
56	SB	1725	0	1794	162	0
57	SC	1690	0	1777	77	0
58	SE	2076	0	2177	79	0
59	SG	1923	0	2089	77	0
60	SH	1521	0	1615	92	0
61	SI	1686	0	1772	87	0
62	SJ	1525	0	1640	67	0
63	SL	1238	0	1313	66	0
64	SN	1202	0	1289	63	0
65	SO	1016	0	1037	67	0
66	SV	625	0	628	20	0
67	SW	1034	0	1080	52	0
68	SX	1099	0	1166	47	0
69	SY	1023	0	1090	42	0
70	Sa	781	0	832	59	0
71	Sb	651	0	672	13	0
72	Se	452	0	494	13	0
73	SD	1765	0	1865	65	0
74	SF	1509	0	1563	140	0
75	SK	827	0	854	30	0
76	SM	960	0	989	64	0
77	SP	805	0	861	20	0
78	SQ	1124	0	1193	39	0
79	SR	1047	0	1101	225	0
80	SS	1139	0	1190	147	0
81	ST	1101	0	1135	61	0
82	SU	818	0	883	25	0
83	SZ	598	0	655	129	0
84	Sc	506	0	531	207	0
85	Sd	434	0	427	28	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
86	Sf	581	0	599	198	0
87	Sg	2436	0	2393	90	0
88	S1	608	0	617	32	0
89	S4	604	0	638	15	0
90	5	116	0	0	0	0
90	7	5	0	0	0	0
90	8	6	0	0	0	0
90	D	1	0	0	0	0
90	S2	36	0	0	1	0
90	V	1	0	0	0	0
90	g	1	0	0	0	0
91	Sa	1	0	0	2	0
91	j	1	0	0	1	0
91	m	1	0	0	0	0
91	o	1	0	0	2	0
All	All	228197	0	170130	22018	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 56.

All (22018) 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)
50:3:31:C:H4'	54:S2:1640:A:C2	1.26	1.69
48:z:297:MET:HE3	48:z:355:PHE:CD1	1.21	1.69
48:z:405:ARG:HG2	51:4:207:C:C4'	1.29	1.63
39:I:101:LYS:HE2	39:I:121:LYS:CG	1.28	1.61
48:z:413:SER:HB2	52:9:74:ARG:CB	1.33	1.59
48:z:413:SER:CB	52:9:74:ARG:HD2	1.34	1.57
32:5:294:G:C5'	32:5:296:A:H4'	1.19	1.57
43:n:10:MET:CE	54:S2:1172:U:C5'	1.76	1.57
54:S2:870:A:C5	54:S2:915:G:N7	1.72	1.57
48:z:405:ARG:CG	51:4:207:C:C5'	1.76	1.56
11:R:166:THR:HG21	54:S2:872:A:C3'	1.15	1.56
48:z:405:ARG:CG	51:4:207:C:H5''	1.20	1.56
83:SZ:58:LEU:CD2	83:SZ:77:LEU:CD1	1.82	1.55
54:S2:460:A:C2	54:S2:461:U:C5	1.92	1.54
32:5:100:C:C5	32:5:101:A:C8	1.94	1.53
48:z:413:SER:CA	52:9:74:ARG:HG3	1.38	1.53
54:S2:795:A:C2	54:S2:796:G:N7	1.78	1.52
83:SZ:58:LEU:HD21	83:SZ:77:LEU:CD1	1.32	1.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:R:149:LYS:C	11:R:150:ALA:N	1.67	1.51
39:I:101:LYS:CE	39:I:121:LYS:CG	1.81	1.50
48:z:413:SER:HB2	52:9:74:ARG:CG	1.40	1.50
84:Sc:14:VAL:CG2	84:Sc:30:VAL:HG12	1.03	1.50
11:R:151:ARG:NH2	63:SL:118:ARG:CD	1.69	1.49
54:S2:870:A:C5	54:S2:915:G:C8	2.00	1.49
11:R:172:ARG:HG2	54:S2:909:G:P	1.49	1.49
48:z:382:MET:C	51:4:208:A:H4'	1.27	1.49
5:J:119:TYR:CE1	80:SS:12:ILE:HG21	1.48	1.48
54:S2:1133:A:C2	54:S2:1134:G:C8	1.97	1.48
11:R:166:THR:CG2	54:S2:872:A:H3'	1.40	1.48
39:I:101:LYS:CE	39:I:121:LYS:HG2	1.04	1.48
43:n:10:MET:HE1	54:S2:1172:U:C5'	1.00	1.48
84:Sc:14:VAL:HG22	84:Sc:31:ARG:C	1.08	1.48
32:5:4283:G:C2	32:5:4284:C:C5	2.02	1.47
48:z:413:SER:CB	52:9:74:ARG:CD	1.92	1.47
51:4:183:A:O3'	51:4:184:A:P	1.08	1.47
32:5:4283:G:C2	32:5:4284:C:C6	2.01	1.47
84:Sc:14:VAL:CG2	84:Sc:31:ARG:C	1.84	1.47
48:z:410:SER:HB3	51:4:193:G:N2	1.22	1.46
54:S2:870:A:N7	54:S2:915:G:C8	1.83	1.46
32:5:3596:A:N1	63:SL:2:ALA:HB2	1.13	1.46
55:SA:200:ASP:CB	79:SR:85:VAL:CG1	1.91	1.45
50:3:34:A:C2	54:S2:1701:C:H6	1.34	1.45
61:SI:168:GLN:NE2	61:SI:170:LYS:HE2	1.13	1.45
84:Sc:14:VAL:CG1	84:Sc:31:ARG:O	1.65	1.44
32:5:2314:G:N2	32:5:2315:G:N7	1.63	1.44
48:z:293:LYS:HG2	48:z:351:MET:CB	1.22	1.44
4:H:31:ARG:NH1	4:H:87:GLY:HA3	1.28	1.44
84:Sc:14:VAL:CG2	84:Sc:30:VAL:CG1	1.95	1.43
54:S2:1249:C:C5	54:S2:1250:A:N7	1.85	1.43
54:S2:870:A:C4	54:S2:915:G:N7	1.84	1.43
48:z:402:ARG:HG2	51:4:185:C:P	1.53	1.43
55:SA:200:ASP:HB3	79:SR:85:VAL:CG1	0.96	1.43
56:SB:150:ILE:HD12	79:SR:129:LYS:NZ	1.14	1.43
11:R:151:ARG:NH2	63:SL:118:ARG:HD2	1.11	1.42
32:5:294:G:H5'	32:5:296:A:C4'	1.47	1.42
48:z:482:UNK:C	48:z:482:UNK:O	1.67	1.42
48:z:382:MET:O	51:4:208:A:C4'	1.68	1.41
48:z:297:MET:CE	48:z:355:PHE:CD1	2.02	1.41
33:7:18:C:N3	33:7:19:C:C5	1.88	1.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:n:10:MET:CE	54:S2:1172:U:H5'	1.41	1.41
48:z:413:SER:CB	52:9:74:ARG:CG	1.98	1.41
55:SA:50:ASN:HA	79:SR:105:MET:CE	1.47	1.41
56:SB:145:LYS:NZ	79:SR:128:PHE:CZ	1.85	1.41
65:SO:72:TYR:CD1	84:Sc:63:ARG:NH1	1.80	1.40
84:Sc:14:VAL:HG23	84:Sc:32:VAL:CG1	1.50	1.40
32:5:1613:A:N6	32:5:3637:U:N3	1.64	1.40
33:7:54:A:C2	33:7:55:A:N7	1.86	1.40
32:5:3759:A:N1	54:S2:1709:G:C5'	1.84	1.40
11:R:151:ARG:CZ	63:SL:118:ARG:HD2	1.52	1.39
56:SB:145:LYS:NZ	79:SR:128:PHE:CE2	1.89	1.39
84:Sc:14:VAL:CB	84:Sc:31:ARG:O	1.67	1.39
54:S2:381:C:N4	61:SI:49:ARG:NH1	1.69	1.39
15:V:97:TYR:HE2	41:W:21:TYR:CD1	1.39	1.39
39:I:101:LYS:NZ	39:I:121:LYS:CG	1.83	1.39
84:Sc:14:VAL:HG22	84:Sc:32:VAL:N	1.34	1.39
32:5:2856:C:O2	32:5:2857:A:C8	1.76	1.38
74:SF:95:HIS:NE2	83:SZ:108:ILE:CD1	1.84	1.38
79:SR:100:PRO:HG2	79:SR:119:VAL:CG1	1.51	1.38
54:S2:1453:C:C4	54:S2:1455:A:H1'	1.55	1.38
32:5:1174:G:N2	32:5:1175:A:N7	1.67	1.37
48:z:293:LYS:CG	48:z:351:MET:HB3	1.15	1.37
55:SA:12:GLU:OE1	79:SR:111:PHE:CD1	1.77	1.36
48:z:413:SER:CA	52:9:74:ARG:CG	2.01	1.36
48:z:413:SER:HA	52:9:74:ARG:CG	1.54	1.36
32:5:3759:A:N1	54:S2:1709:G:C4'	1.89	1.35
51:4:183:A:C3'	51:4:184:A:P	2.10	1.35
54:S2:830:A:N6	54:S2:844:U:H3	1.21	1.35
34:8:12:G:C2	34:8:13:G:C8	2.14	1.35
80:SS:13:LEU:CD1	80:SS:56:ALA:O	1.73	1.35
32:5:1478:C:O2	32:5:1479:G:N7	1.59	1.34
54:S2:746:C:O2'	60:SH:111:LYS:NZ	1.60	1.34
55:SA:50:ASN:CA	79:SR:105:MET:HE1	1.31	1.34
32:5:1899:G:C2	32:5:1900:C:C5	2.15	1.34
32:5:3759:A:C2	54:S2:1709:G:O4'	1.80	1.34
61:SI:168:GLN:NE2	61:SI:170:LYS:CE	1.89	1.34
50:3:31:C:C4'	54:S2:1640:A:H2	1.40	1.33
83:SZ:55:TYR:CE2	83:SZ:59:CYS:SG	2.20	1.33
84:Sc:45:ASN:ND2	84:Sc:68:LEU:HD22	1.39	1.33
32:5:4167:G:C2	32:5:4168:G:C8	2.16	1.33
32:5:983:C:O2	32:5:984:C:C6	1.78	1.33

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3662:A:N1	32:5:3680:U:O4	1.61	1.33
43:n:11:ARG:NH1	54:S2:1844:U:OP1	1.59	1.33
79:SR:100:PRO:CG	79:SR:119:VAL:CG1	2.06	1.33
32:5:4213:A:N1	32:5:4218:U:O4	1.60	1.33
54:S2:551:U:O2	54:S2:552:G:C8	1.79	1.33
32:5:2078:C:N3	32:5:2079:G:N7	1.77	1.32
32:5:4233:A:N1	32:5:4290:U:O4	1.61	1.32
54:S2:875:A:C6	54:S2:876:C:C5	2.16	1.32
54:S2:875:A:C2	54:S2:876:C:C6	2.18	1.32
32:5:3702:A:C2	32:5:3703:G:C8	2.15	1.32
32:5:4166:G:C2	32:5:4167:G:C8	2.18	1.32
56:SB:150:ILE:CD1	79:SR:129:LYS:NZ	1.91	1.32
65:SO:72:TYR:CE1	84:Sc:63:ARG:NH1	1.85	1.31
32:5:2314:G:C2	32:5:2315:G:N7	1.97	1.31
32:5:1756:U:O4	32:5:1775:A:N1	1.57	1.31
48:z:340:MET:C	48:z:341:LYS:N	1.86	1.31
74:SF:140:ASP:OD1	84:Sc:58:LEU:CD2	1.79	1.31
48:z:404:GLN:OE1	52:9:72:TRP:CZ2	1.83	1.30
79:SR:103:LYS:HB2	79:SR:117:LEU:CD1	1.58	1.30
48:z:405:ARG:HG3	51:4:207:C:C5'	1.44	1.30
48:z:410:SER:C	51:4:194:G:N3	1.88	1.30
54:S2:846:G:OP2	58:SE:108:ARG:NH2	1.62	1.30
32:5:4369:A:C2	32:5:4370:G:C8	2.19	1.29
32:5:3714:G:C6	32:5:3715:U:N3	1.99	1.29
48:z:340:MET:C	48:z:341:LYS:C	1.98	1.29
50:3:38:C:C2	50:3:39:G:C8	2.20	1.29
54:S2:50:A:N1	54:S2:488:U:O4	1.64	1.29
50:3:34:A:C2	54:S2:1701:C:C6	2.19	1.29
54:S2:841:G:C2	54:S2:842:C:C5	2.19	1.29
32:5:4080:C:O2	32:5:4081:G:H8	1.14	1.29
17:Y:74:TYR:HD1	34:8:74:U:O4	1.13	1.29
32:5:2058:G:C2	32:5:2059:C:C6	2.20	1.29
54:S2:458:A:C6	54:S2:459:C:C6	2.21	1.29
48:z:340:MET:C	48:z:341:LYS:CA	2.05	1.28
54:S2:870:A:N6	54:S2:915:G:C4	1.99	1.28
54:S2:994:C:N3	54:S2:995:G:N7	1.78	1.28
55:SA:198:MET:HE3	79:SR:86:PRO:O	1.24	1.28
46:K:35:LEU:O	46:K:35:LEU:HD12	1.24	1.28
54:S2:449:A:C6	54:S2:452:G:C5	2.22	1.28
32:5:4165:C:N3	32:5:4166:G:C8	2.02	1.28
55:SA:205:ARG:NH2	79:SR:84:TYR:CD2	2.01	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:q:106:LYS:O	47:q:107:VAL:HG13	1.14	1.28
48:z:405:ARG:CG	51:4:207:C:H4'	1.61	1.28
32:5:1632:A:N6	32:5:1634:A:C8	2.02	1.28
34:8:96:C:O2	34:8:97:A:C8	1.87	1.28
55:SA:39:TYR:OH	79:SR:104:GLU:HB2	1.31	1.28
17:Y:11:ARG:HH21	36:C:200:ARG:NH2	1.30	1.27
32:5:28:C:O2	32:5:29:G:C8	1.86	1.27
54:S2:870:A:C6	54:S2:915:G:C4	2.06	1.27
74:SF:128:ILE:CD1	84:Sc:68:LEU:HB2	1.64	1.27
84:Sc:13:ARG:CB	84:Sc:54:ASP:O	1.82	1.27
32:5:1628:C:O2	32:5:1629:G:C8	1.87	1.27
80:SS:26:ILE:CG1	80:SS:54:LYS:O	1.80	1.27
46:K:37:LEU:O	46:K:37:LEU:HD23	1.12	1.26
32:5:54:G:C6	32:5:55:G:C8	2.23	1.26
39:I:101:LYS:NZ	39:I:121:LYS:CD	1.97	1.26
48:z:297:MET:C	48:z:353:PRO:HD3	1.59	1.26
48:z:413:SER:CA	52:9:74:ARG:CD	2.12	1.26
50:3:38:C:N3	50:3:39:G:C8	2.02	1.26
32:5:1245:C:O2	32:5:1246:G:C8	1.88	1.26
32:5:3909:C:N3	32:5:3910:C:C5	2.04	1.26
54:S2:165:G:C8	54:S2:166:A:N7	2.04	1.26
54:S2:795:A:N3	54:S2:796:G:N7	1.81	1.26
79:SR:18:GLU:HB2	79:SR:70:SER:OG	1.36	1.26
32:5:3759:A:C6	54:S2:1709:G:H4'	1.70	1.26
32:5:1563:A:N7	54:S2:678:U:O4'	1.69	1.25
88:S1:5:GLN:O	88:S1:6:THR:HG23	1.31	1.25
32:5:1628:C:N3	32:5:1629:G:N7	1.83	1.25
54:S2:1293:A:N3	86:Sf:151:ASN:N	1.84	1.25
32:5:4283:G:N1	32:5:4284:C:C5	2.01	1.25
54:S2:1114:U:O4	54:S2:1119:A:N1	1.69	1.25
32:5:4518:A:C8	35:B:257:TRP:CH2	2.25	1.25
84:Sc:14:VAL:HB	84:Sc:30:VAL:CG1	1.66	1.25
84:Sc:14:VAL:HG13	84:Sc:31:ARG:O	1.21	1.25
32:5:1683:U:O2	32:5:1684:A:H8	1.16	1.25
32:5:1899:G:C8	32:5:2278:G:N1	2.03	1.25
32:5:2035:C:C4	32:5:2036:C:C5	2.24	1.25
34:8:11:C:N3	34:8:12:G:N7	1.84	1.25
39:I:101:LYS:NZ	39:I:121:LYS:HG2	1.45	1.25
54:S2:955:A:C8	54:S2:969:U:H5	1.52	1.25
11:R:172:ARG:HG2	54:S2:909:G:OP1	1.25	1.24
32:5:3759:A:N1	54:S2:1709:G:H5'	1.44	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:SZ:57:LYS:O	83:SZ:61:GLU:N	1.68	1.24
11:R:166:THR:HG21	54:S2:872:A:C2'	1.67	1.24
32:5:2784:C:C2	32:5:2785:C:C5	2.25	1.24
34:8:10:G:C6	34:8:11:C:C5	2.24	1.24
54:S2:458:A:N6	54:S2:459:C:C5	2.06	1.24
54:S2:1309:C:O2	86:Sf:143:LYS:CD	1.86	1.24
80:SS:13:LEU:HD12	80:SS:56:ALA:O	1.28	1.24
54:S2:1594:A:OP2	83:SZ:104:ARG:HG3	1.37	1.24
83:SZ:57:LYS:HD3	83:SZ:61:GLU:OE2	1.30	1.24
32:5:977:C:C2	32:5:978:G:C8	2.25	1.24
48:z:404:GLN:OE1	52:9:72:TRP:CE2	1.91	1.24
54:S2:460:A:H2	54:S2:461:U:C5	1.38	1.24
32:5:3596:A:N1	63:SL:2:ALA:CB	2.01	1.23
54:S2:56:G:C6	54:S2:90:G:N2	2.04	1.23
54:S2:796:G:O2'	60:SH:111:LYS:HG3	1.27	1.23
32:5:977:C:N3	32:5:978:G:N7	1.86	1.23
32:5:2078:C:O2	32:5:2079:G:H8	1.14	1.23
74:SF:141:VAL:O	84:Sc:56:LEU:HD13	1.32	1.23
5:J:125:ILE:CD1	80:SS:19:ASN:ND2	2.02	1.23
32:5:161:G:N2	32:5:275:C:O2	1.69	1.23
54:S2:1133:A:N1	54:S2:1134:G:N7	1.86	1.23
32:5:2314:G:N2	32:5:2315:G:C5	2.06	1.23
32:5:2743:A:C2	32:5:2744:A:C5	2.27	1.23
34:8:133:G:C2	34:8:134:G:C8	2.26	1.23
20:b:17:HIS:ND1	32:5:1724:G:N7	1.85	1.23
32:5:1632:A:C6	32:5:1634:A:C8	2.25	1.23
54:S2:42:A:N3	54:S2:426:A:N7	1.86	1.23
54:S2:1205:C:H5	54:S2:1206:G:N7	1.37	1.23
54:S2:1599:U:OP2	83:SZ:80:ARG:NH1	1.71	1.23
47:q:107:VAL:HB	47:q:108:PRO:CD	1.69	1.22
54:S2:349:A:H5''	61:SI:27:TYR:OH	1.39	1.22
54:S2:367:U:O2'	54:S2:371:A:N7	1.67	1.22
5:J:125:ILE:HD11	80:SS:19:ASN:ND2	1.52	1.22
32:5:1388:A:C6	32:5:1396:G:N2	2.05	1.22
32:5:2362:U:C4	32:5:3859:G:N2	2.07	1.22
54:S2:1433:C:H2'	54:S2:1434:C:O4'	1.39	1.22
5:J:119:TYR:CZ	80:SS:12:ILE:HG21	1.74	1.22
32:5:2080:U:C2	32:5:2081:C:C5	2.27	1.22
32:5:2314:G:N2	32:5:2315:G:C8	2.08	1.22
32:5:2326:G:C2	32:5:2327:G:C8	2.28	1.22
47:q:32:ALA:CA	47:q:187:LEU:HD22	1.69	1.22

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:q:32:ALA:HA	47:q:187:LEU:CD2	1.70	1.22
48:z:343:GLY:O	48:z:346:SER:HB2	1.05	1.22
48:z:402:ARG:CG	51:4:185:C:P	2.27	1.22
54:S2:1101:U:O2	54:S2:1102:G:N7	1.71	1.22
54:S2:1204:A:H2'	54:S2:1205:C:O2	1.39	1.22
32:5:28:C:O2	32:5:29:G:H8	1.14	1.21
32:5:1990:A:H2'	32:5:1991:A:C4'	1.70	1.21
32:5:4165:C:N3	32:5:4166:G:N7	1.89	1.21
55:SA:12:GLU:OE1	79:SR:111:PHE:HD1	1.08	1.21
84:Sc:14:VAL:CB	84:Sc:30:VAL:CG1	2.16	1.21
32:5:1672:U:C2	32:5:1673:U:C5	2.28	1.21
55:SA:198:MET:CE	79:SR:86:PRO:O	1.88	1.21
34:8:64:U:O2	34:8:65:A:N7	1.73	1.21
54:S2:386:C:N3	54:S2:387:C:C5	2.09	1.21
74:SF:141:VAL:O	84:Sc:56:LEU:CD1	1.86	1.21
48:z:405:ARG:NE	51:4:207:C:O3'	1.69	1.21
54:S2:875:A:C5	54:S2:876:C:C5	2.27	1.21
32:5:2079:G:C2	32:5:2080:U:C5	2.28	1.21
54:S2:460:A:C2	54:S2:461:U:H5	1.40	1.21
32:5:3702:A:N1	32:5:3703:G:C8	2.08	1.20
2:D:29:ASP:HA	32:5:4280:A:N6	1.56	1.20
32:5:1583:A:H1'	32:5:2396:A:N6	1.53	1.20
32:5:2856:C:O2	32:5:2857:A:N7	1.72	1.20
32:5:4537:C:N3	32:5:4538:G:N7	1.90	1.20
48:z:409:GLY:O	51:4:194:G:C2	1.94	1.20
54:S2:50:A:N6	54:S2:488:U:H3	1.39	1.20
54:S2:381:C:H42	61:SI:49:ARG:CZ	1.53	1.20
43:n:10:MET:CE	54:S2:1172:U:H5''	1.46	1.20
50:3:16:U:O4	50:3:59:A:N1	1.72	1.20
15:V:97:TYR:CE2	41:W:21:TYR:CD1	2.30	1.20
32:5:1683:U:O2	32:5:1684:A:C8	1.94	1.20
48:z:380:ASP:HB3	51:4:192:A:N1	1.57	1.20
84:Sc:45:ASN:ND2	84:Sc:68:LEU:CD2	2.03	1.20
48:z:404:GLN:CD	52:9:72:TRP:CZ2	2.20	1.20
54:S2:875:A:C4	54:S2:876:C:C6	2.30	1.19
32:5:1213:G:C4	32:5:1215:C:H1'	1.78	1.19
48:z:339:ILE:O	48:z:343:GLY:N	1.76	1.19
32:5:1310:C:N3	32:5:1311:G:C8	2.10	1.19
32:5:2843:U:O2	32:5:2844:A:C8	1.95	1.19
34:8:96:C:O2	34:8:97:A:H8	1.20	1.19
54:S2:1231:C:O4'	54:S2:1665:G:N2	1.76	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1936:C:C5	33:7:84:U:C5	2.30	1.19
32:5:2724:G:C2	32:5:2726:G:N7	2.10	1.19
32:5:2856:C:C2	32:5:2857:A:N7	2.10	1.19
32:5:3629:A:H1'	54:S2:1721:U:O4	1.40	1.19
32:5:4123:C:N3	32:5:4124:G:C8	2.11	1.19
48:z:385:GLN:NE2	51:4:184:A:OP1	1.76	1.19
34:8:10:G:C6	34:8:11:C:C6	2.30	1.18
48:z:293:LYS:CG	48:z:351:MET:CB	1.89	1.18
32:5:27:C:O2	32:5:28:C:H6	1.22	1.18
32:5:1475:G:C2	32:5:1476:C:C5	2.30	1.18
32:5:1961:G:O2'	32:5:2025:A:N6	1.75	1.18
32:5:2736:G:C2	32:5:2737:C:C5	2.30	1.18
33:7:18:C:O2	33:7:19:C:C6	1.96	1.18
47:q:106:LYS:O	47:q:107:VAL:CG1	1.91	1.18
48:z:352:ILE:N	48:z:355:PHE:CZ	1.79	1.18
55:SA:42:LYS:HD3	79:SR:99:ASP:OD2	1.37	1.18
15:V:97:TYR:CE2	41:W:21:TYR:HD1	1.61	1.18
32:5:2468:U:O4	32:5:2473:A:N1	1.77	1.18
34:8:96:C:C2	34:8:97:A:C8	2.31	1.18
84:Sc:60:GLU:HG3	84:Sc:63:ARG:HE	1.07	1.18
32:5:77:U:O4	32:5:335:A:N1	1.77	1.18
32:5:294:G:C5'	32:5:296:A:C4'	2.11	1.18
32:5:294:G:H3'	32:5:296:A:C5'	1.72	1.18
32:5:294:G:C3'	32:5:296:A:H5''	1.74	1.18
54:S2:870:A:C5	54:S2:915:G:C5	2.13	1.18
54:S2:1412:C:O2	54:S2:1413:G:N7	1.76	1.18
32:5:2497:C:N3	32:5:2498:C:C5	2.12	1.18
54:S2:1063:C:H4'	54:S2:1838:U:O4	1.42	1.18
32:5:1268:G:C2	32:5:1270:A:C8	2.32	1.17
32:5:1899:G:C2	32:5:1900:C:C6	2.32	1.17
54:S2:1249:C:C5	54:S2:1250:A:C8	2.31	1.17
55:SA:205:ARG:NH2	79:SR:84:TYR:CE2	2.11	1.17
80:SS:10:GLN:HG3	80:SS:13:LEU:HD21	1.21	1.17
32:5:208:A:O4'	32:5:232:G:N2	1.78	1.17
32:5:2327:G:C2	32:5:2328:G:C8	2.33	1.17
32:5:2843:U:N3	32:5:2844:A:N7	1.90	1.17
33:7:43:U:N3	33:7:44:C:C5	2.12	1.17
32:5:4999:G:C2	32:5:5000:G:C8	2.32	1.17
54:S2:551:U:O2	54:S2:552:G:N7	1.75	1.17
54:S2:955:A:N6	54:S2:971:G:H1'	1.60	1.17
55:SA:42:LYS:CD	79:SR:99:ASP:OD2	1.92	1.17

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:J:125:ILE:CD1	80:SS:19:ASN:HD21	1.57	1.17
32:5:88:A:N6	32:5:97:G:N3	1.88	1.17
34:8:96:C:N3	34:8:97:A:N7	1.92	1.17
54:S2:1309:C:O2	86:Sf:143:LYS:HD3	1.00	1.17
32:5:1929:A:N1	32:5:2054:U:O4	1.77	1.17
32:5:2035:C:N3	32:5:2036:C:C5	2.13	1.17
32:5:2508:U:O2	32:5:2509:C:C5	1.97	1.17
54:S2:1603:G:C6	80:SS:28:PHE:CZ	2.32	1.17
83:SZ:58:LEU:HD23	83:SZ:77:LEU:CD1	1.74	1.16
32:5:1632:A:N6	32:5:1634:A:N9	1.93	1.16
32:5:1823:G:O3'	32:5:1825:A:P	2.03	1.16
54:S2:955:A:H62	54:S2:971:G:H1'	1.02	1.16
54:S2:1539:U:O2	54:S2:1540:G:C8	1.99	1.16
79:SR:100:PRO:CG	79:SR:119:VAL:HG13	1.70	1.16
32:5:1563:A:N6	54:S2:677:G:O2'	1.77	1.16
32:5:1628:C:O2	32:5:1629:G:H8	1.22	1.16
47:q:107:VAL:HB	47:q:108:PRO:HD2	1.22	1.16
32:5:1946:G:N2	32:5:2037:C:C6	2.12	1.16
56:SB:150:ILE:CD1	79:SR:129:LYS:HZ1	1.48	1.16
32:5:1990:A:H2'	32:5:1991:A:H4'	1.18	1.16
32:5:2347:A:O2'	32:5:2348:G:N7	1.79	1.16
74:SF:122:ARG:HB3	84:Sc:57:THR:HG21	1.27	1.16
88:S1:48:CYS:O	88:S1:49:LEU:CD2	1.94	1.16
32:5:271:C:N3	32:5:272:U:C5	2.14	1.15
32:5:4276:G:C6	32:5:4277:G:C8	2.33	1.15
46:K:9:GLU:OE1	46:K:11:LYS:HG3	1.45	1.15
47:q:107:VAL:CB	47:q:108:PRO:HD2	1.73	1.15
48:z:380:ASP:O	51:4:208:A:H1'	1.46	1.15
48:z:413:SER:HA	52:9:74:ARG:CD	1.75	1.15
54:S2:1857:G:N7	65:SO:146:ARG:NH2	1.94	1.15
84:Sc:60:GLU:HG3	84:Sc:63:ARG:NE	1.58	1.15
32:5:294:G:O5'	32:5:296:A:H4'	1.45	1.15
54:S2:830:A:N6	54:S2:844:U:N3	1.83	1.15
54:S2:378:U:N3	54:S2:379:C:C5	2.14	1.15
88:S1:48:CYS:O	88:S1:49:LEU:HD23	0.99	1.15
32:5:1618:G:C2	32:5:1619:G:C8	2.34	1.14
54:S2:524:U:N3	54:S2:594:A:N6	1.95	1.14
54:S2:1292:C:P	86:Sf:149:CYS:H	1.70	1.14
32:5:3740:G:C6	32:5:3741:C:C6	2.36	1.14
43:n:8:LYS:NZ	54:S2:1845:A:N7	1.94	1.14
48:z:402:ARG:NE	51:4:184:A:C4'	2.05	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SA:39:TYR:OH	79:SR:104:GLU:CB	1.94	1.14
84:Sc:44:ARG:HG3	84:Sc:58:LEU:CD1	1.76	1.14
32:5:1556:C:O2	32:5:1557:C:C6	2.00	1.14
32:5:1667:G:N2	32:5:2283:G:O6	1.80	1.14
32:5:4983:C:O2	32:5:4984:C:C6	2.01	1.14
2:D:268:ARG:HD3	33:7:60:G:O2'	1.45	1.14
32:5:208:A:C1'	32:5:232:G:H21	1.59	1.14
32:5:294:G:H5'	32:5:296:A:C5'	1.76	1.14
32:5:1302:U:N3	32:5:1303:A:C8	2.14	1.14
33:7:18:C:C2	33:7:19:C:C5	2.34	1.14
32:5:3912:U:O2'	32:5:3913:G:H5'	1.47	1.14
54:S2:118:C:H1'	54:S2:445:A:C2	1.83	1.14
32:5:27:C:O2	32:5:28:C:C6	2.01	1.13
32:5:1378:C:H3'	32:5:1379:C:H5'	1.30	1.13
32:5:2449:A:C8	32:5:2450:G:H1'	1.83	1.13
32:5:2659:A:N6	32:5:2675:G:O2'	1.81	1.13
32:5:3737:A:H2'	32:5:3738:G:O4'	1.46	1.13
48:z:297:MET:O	48:z:353:PRO:HD3	1.45	1.13
48:z:343:GLY:O	48:z:346:SER:CB	1.97	1.13
74:SF:95:HIS:NE2	83:SZ:108:ILE:HD13	1.47	1.13
32:5:3907:G:H1'	32:5:4449:A:N9	1.62	1.13
50:3:39:G:C2	50:3:40:C:C6	2.35	1.13
54:S2:381:C:C4	61:SI:49:ARG:HG2	1.83	1.13
11:R:172:ARG:CG	54:S2:909:G:P	2.36	1.13
32:5:100:C:C4	32:5:101:A:N7	2.17	1.13
48:z:411:GLY:N	51:4:194:G:N3	1.95	1.13
55:SA:200:ASP:HB3	79:SR:85:VAL:HG12	1.19	1.13
83:SZ:46:ASN:ND2	83:SZ:78:LYS:HA	1.63	1.13
84:Sc:14:VAL:HG23	84:Sc:32:VAL:HG12	1.23	1.13
84:Sc:14:VAL:HG23	84:Sc:32:VAL:HG13	1.24	1.13
17:Y:74:TYR:CD1	34:8:74:U:O4	2.01	1.13
32:5:2078:C:O2	32:5:2079:G:C8	2.02	1.13
54:S2:925:G:C2	54:S2:926:A:C8	2.37	1.13
25:g:100:GLN:OE1	32:5:4119:C:N4	1.80	1.12
32:5:1266:G:N2	32:5:2111:G:N3	1.96	1.13
33:7:54:A:C2	33:7:55:A:C8	2.37	1.13
46:K:37:LEU:O	46:K:37:LEU:CD2	1.96	1.12
50:3:31:C:C4'	54:S2:1640:A:C2	2.20	1.12
54:S2:337:C:N3	54:S2:338:G:C8	2.17	1.12
54:S2:841:G:N3	54:S2:842:C:C5	2.17	1.13
32:5:1899:G:N3	32:5:1900:C:C6	2.16	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3739:C:N4	32:5:3740:G:N7	1.96	1.12
54:S2:841:G:N3	54:S2:842:C:C6	2.16	1.12
55:SA:50:ASN:CA	79:SR:105:MET:CE	2.10	1.12
84:Sc:13:ARG:HB2	84:Sc:54:ASP:O	1.46	1.12
32:5:2079:G:C2	32:5:2080:U:C6	2.36	1.12
32:5:3714:G:C6	32:5:3715:U:C4	2.36	1.12
39:I:101:LYS:HZ3	39:I:121:LYS:CD	1.58	1.12
54:S2:841:G:C2	54:S2:842:C:C4	2.36	1.12
83:SZ:49:LEU:HD23	83:SZ:83:LEU:CD1	1.79	1.12
21:c:101:ASP:CB	64:SN:43:LYS:HA	1.79	1.12
32:5:1475:G:N2	32:5:1476:C:C5	2.18	1.12
32:5:2058:G:N1	32:5:2059:C:C5	2.17	1.12
32:5:3675:G:C2	32:5:3676:G:N7	2.17	1.12
33:7:18:C:C2	33:7:19:C:C6	2.36	1.12
54:S2:1539:U:N3	54:S2:1540:G:N7	1.95	1.12
32:5:1392:A:C2	32:5:1393:G:C5	2.37	1.12
32:5:2843:U:C2	32:5:2844:A:C8	2.38	1.12
32:5:4283:G:N3	32:5:4284:C:C6	2.17	1.12
32:5:4343:U:N3	32:5:4344:U:C5	2.18	1.12
34:8:43:A:C2	34:8:44:A:C8	2.38	1.12
84:Sc:14:VAL:HG11	84:Sc:31:ARG:H	1.02	1.12
32:5:209:U:C2	32:5:233:U:C4	2.37	1.11
32:5:469:C:O2	32:5:688:U:H1'	1.49	1.11
32:5:983:C:O2	32:5:984:C:H6	1.16	1.11
32:5:1302:U:N3	32:5:1303:A:N7	1.96	1.11
43:n:10:MET:HE2	54:S2:1172:U:H5'	1.24	1.11
11:R:172:ARG:CG	54:S2:909:G:OP1	1.97	1.11
32:5:2604:C:O2	32:5:2605:G:H8	1.32	1.11
33:7:42:A:C2	33:7:43:U:C6	2.38	1.11
33:7:94:C:N3	33:7:95:C:C5	2.19	1.11
54:S2:1310:U:O4'	86:Sf:143:LYS:HD2	1.48	1.11
74:SF:192:LYS:NZ	74:SF:196:LEU:CD2	2.13	1.11
84:Sc:14:VAL:HG23	84:Sc:30:VAL:HG12	1.11	1.11
32:5:2127:C:H2'	32:5:2128:G:C8	1.85	1.11
32:5:3766:A:H1'	54:S2:1708:C:O2'	1.48	1.11
32:5:4892:A:N1	32:5:4927:G:O6	1.83	1.11
54:S2:1409:A:C2	54:S2:1410:C:C6	2.39	1.11
11:R:166:THR:OG1	54:S2:873:G:OP2	1.68	1.11
32:5:98:A:N3	32:5:292:G:O6	1.83	1.11
32:5:733:A:C8	32:5:734:G:C8	2.38	1.11
32:5:3710:G:C2	32:5:3711:A:C2	2.38	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4653:C:C2	32:5:4654:C:C5	2.38	1.11
54:S2:870:A:C8	54:S2:915:G:C8	2.37	1.11
54:S2:1405:A:H2'	54:S2:1406:G:O4'	1.51	1.11
32:5:2658:G:C2	32:5:2675:G:C2	2.39	1.11
32:5:3637:U:O4	32:5:3651:A:H2	1.32	1.11
43:n:11:ARG:HH12	54:S2:1844:U:P	1.73	1.11
48:z:412:VAL:HG22	48:z:416:ASP:CB	1.81	1.11
50:3:38:C:C4	50:3:39:G:N7	2.19	1.11
51:4:58:G:C6	51:4:288:G:N2	2.19	1.11
79:SR:103:LYS:CB	79:SR:117:LEU:HD11	1.81	1.11
32:5:2632:U:C2	32:5:2633:U:C5	2.39	1.10
32:5:4982:A:C6	32:5:4983:C:C5	2.38	1.10
43:n:11:ARG:NH1	54:S2:1844:U:P	2.24	1.10
54:S2:955:A:C8	54:S2:969:U:C5	2.39	1.10
54:S2:1292:C:C4	86:Sf:150:PHE:HB2	1.86	1.10
56:SB:60:ASP:OD1	56:SB:63:LYS:NZ	1.84	1.10
83:SZ:58:LEU:HD21	83:SZ:77:LEU:HD13	1.13	1.10
32:5:1556:C:N3	32:5:1557:C:C5	2.19	1.10
32:5:1563:A:C8	54:S2:678:U:C4'	2.34	1.10
32:5:4549:G:C2	32:5:4550:G:C8	2.40	1.10
34:8:132:G:C2	34:8:133:G:C8	2.39	1.10
48:z:363:GLY:O	48:z:367:GLU:OE1	1.68	1.10
48:z:382:MET:C	51:4:208:A:C4'	2.19	1.10
54:S2:381:C:H42	61:SI:49:ARG:NH1	1.35	1.10
54:S2:792:C:N3	54:S2:793:G:C8	2.18	1.10
54:S2:793:G:C6	54:S2:794:A:C8	2.38	1.10
54:S2:1453:C:N4	54:S2:1455:A:H1'	1.64	1.10
54:S2:1455:A:C2	54:S2:1456:G:C8	2.38	1.10
84:Sc:14:VAL:HG21	84:Sc:30:VAL:C	1.77	1.10
32:5:2735:G:C2	32:5:2736:G:C8	2.39	1.10
32:5:3710:G:N3	32:5:3711:A:C2	2.20	1.10
54:S2:648:A:C2	54:S2:649:U:C6	2.40	1.10
54:S2:875:A:N3	54:S2:876:C:C6	2.20	1.10
79:SR:100:PRO:CD	79:SR:119:VAL:CG1	2.28	1.10
32:5:2736:G:C2	32:5:2737:C:C6	2.39	1.10
32:5:3739:C:N3	32:5:3740:G:C8	2.20	1.10
32:5:4166:G:N1	32:5:4167:G:N7	1.98	1.10
48:z:405:ARG:HG2	51:4:207:C:C5'	1.50	1.10
12:S:45:TRP:CZ3	12:S:56:LYS:HA	1.88	1.09
32:5:144:G:C2	32:5:145:G:C8	2.41	1.09
32:5:1936:C:C5	33:7:84:U:C6	2.39	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3702:A:N1	32:5:3703:G:N7	1.98	1.09
32:5:4096:C:C4	32:5:4097:G:C8	2.40	1.09
32:5:4983:C:O2	32:5:4984:C:C5	2.05	1.09
80:SS:30:ILE:HD11	80:SS:45:LEU:HD21	1.23	1.09
83:SZ:50:PHE:CE2	83:SZ:79:ILE:HB	1.87	1.09
19:a:132:ARG:HH21	32:5:1468:C:H5''	1.07	1.09
32:5:85:G:N2	32:5:97:G:N7	2.00	1.09
32:5:983:C:N3	32:5:984:C:H5	1.51	1.09
32:5:4283:G:N1	32:5:4284:C:C4	2.19	1.09
32:5:4284:C:N3	32:5:4285:U:C5	2.21	1.09
54:S2:414:A:C2	54:S2:424:C:O2	2.06	1.09
54:S2:795:A:H2	54:S2:796:G:C5	1.70	1.09
84:Sc:44:ARG:HG3	84:Sc:58:LEU:HD11	1.29	1.09
32:5:43:U:C5	32:5:44:A:C8	2.39	1.09
32:5:2362:U:C5	32:5:3859:G:N2	2.20	1.09
32:5:2532:C:C2	32:5:2533:C:C5	2.40	1.09
32:5:2105:A:C2	32:5:2106:G:N7	2.19	1.09
32:5:3755:G:N1	32:5:3770:U:C4	2.01	1.09
32:5:4283:G:N2	32:5:4284:C:C6	2.18	1.09
32:5:4725:C:O2	32:5:4726:G:H8	1.33	1.09
48:z:413:SER:CB	52:9:74:ARG:CB	2.24	1.09
54:S2:799:U:H5''	60:SH:110:THR:HG22	1.19	1.09
79:SR:100:PRO:HG2	79:SR:119:VAL:HG11	1.10	1.09
26:h:70:ARG:NH1	32:5:134:G:O6	1.86	1.09
32:5:100:C:N4	32:5:101:A:N7	2.01	1.09
32:5:3710:G:N1	32:5:3711:A:N1	2.00	1.09
32:5:4983:C:C2	32:5:4984:C:H5	1.70	1.09
33:7:94:C:C2	33:7:95:C:C5	2.40	1.09
48:z:410:SER:HA	51:4:194:G:H1'	1.27	1.09
54:S2:875:A:C2	54:S2:876:C:N1	2.19	1.09
54:S2:1205:C:C5	54:S2:1206:G:N7	2.21	1.09
32:5:1634:A:C2	32:5:1635:C:C6	2.41	1.08
54:S2:419:G:N2	54:S2:661:U:O2	1.85	1.08
54:S2:1273:C:O2	54:S2:1506:A:H2	1.34	1.08
54:S2:1599:U:P	83:SZ:80:ARG:HH11	1.74	1.08
32:5:2095:A:N1	38:F:41:GLN:OE1	1.86	1.08
32:5:4094:G:H2'	32:5:4095:G:O4'	1.49	1.08
32:5:4229:U:C4	32:5:4230:C:C5	2.40	1.08
50:3:16:U:C4	50:3:59:A:N1	2.21	1.08
54:S2:1408:U:O4	54:S2:1439:A:N1	1.84	1.08
54:S2:1408:U:H2'	54:S2:1409:A:C8	1.88	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:Sc:14:VAL:CG2	84:Sc:32:VAL:HG13	1.83	1.08
12:S:99:ASP:OD1	12:S:100:LEU:N	1.85	1.08
32:5:1388:A:N6	32:5:1396:G:N2	2.01	1.08
54:S2:795:A:C2	54:S2:796:G:C5	2.41	1.08
80:SS:7:GLU:HG3	80:SS:9:PHE:HE2	1.16	1.08
83:SZ:58:LEU:CD2	83:SZ:77:LEU:HD11	1.84	1.08
32:5:483:G:C2	32:5:484:U:C5	2.41	1.08
32:5:2277:C:O2	32:5:2278:G:C8	2.05	1.08
32:5:4123:C:N3	32:5:4124:G:N7	2.02	1.08
46:K:37:LEU:CD2	46:K:68:GLN:HB3	1.84	1.08
32:5:3710:G:C2	32:5:3711:A:N1	2.22	1.08
32:5:3912:U:O2'	32:5:3913:G:C5'	2.02	1.08
32:5:4983:C:C2	32:5:4984:C:C5	2.42	1.08
48:z:410:SER:CB	51:4:193:G:N2	2.15	1.08
54:S2:874:G:H1'	60:SH:114:GLN:HE21	1.19	1.08
32:5:484:U:C4	32:5:486:C:C5	2.41	1.07
32:5:2856:C:N3	32:5:2857:A:N7	2.01	1.07
32:5:4283:G:N2	32:5:4284:C:N1	2.01	1.07
32:5:1899:G:C8	32:5:2278:G:C2	2.43	1.07
32:5:2080:U:O2	32:5:2081:C:C5	2.07	1.07
34:8:64:U:O2	34:8:65:A:C8	2.06	1.07
47:q:107:VAL:CG2	47:q:108:PRO:HD2	1.82	1.07
54:S2:99:A:C2	54:S2:100:U:C6	2.43	1.07
80:SS:26:ILE:HG13	80:SS:54:LYS:O	0.91	1.07
84:Sc:14:VAL:CB	84:Sc:30:VAL:HG12	1.81	1.07
5:J:119:TYR:CE1	80:SS:12:ILE:CG2	2.37	1.07
32:5:1245:C:C5	32:5:1269:G:C6	2.43	1.07
32:5:1379:C:H4'	32:5:1380:G:C8	1.90	1.07
32:5:1673:U:N3	32:5:1674:C:C5	2.23	1.07
32:5:2105:A:C2	32:5:2106:G:C8	2.42	1.07
48:z:297:MET:CE	48:z:355:PHE:CG	2.37	1.07
48:z:410:SER:CA	51:4:194:G:H1'	1.80	1.07
54:S2:1232:U:O2	54:S2:1233:G:C8	2.07	1.07
74:SF:123:GLU:OE1	84:Sc:59:LEU:HD21	1.49	1.07
32:5:1991:A:H3'	32:5:1992:U:H5''	1.29	1.07
32:5:2743:A:C2	32:5:2744:A:N7	2.23	1.07
32:5:3741:C:C2	32:5:3742:G:C8	2.42	1.07
32:5:4123:C:C2	32:5:4124:G:C8	2.43	1.07
48:z:409:GLY:C	51:4:194:G:C2	2.32	1.07
79:SR:103:LYS:CB	79:SR:117:LEU:CD1	2.32	1.07
83:SZ:58:LEU:CD2	83:SZ:77:LEU:HD13	1.63	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:SZ:58:LEU:HD21	83:SZ:77:LEU:HD12	1.13	1.07
17:Y:11:ARG:NH2	36:C:200:ARG:HH22	1.50	1.07
32:5:208:A:C1'	32:5:232:G:N2	2.18	1.07
32:5:1340:C:N3	32:5:1341:U:C5	2.22	1.07
32:5:3710:G:C4	32:5:3711:A:C2	2.41	1.07
32:5:3754:G:H8	32:5:3754:G:H5'	1.18	1.07
32:5:4080:C:O2	32:5:4081:G:C8	2.06	1.07
34:8:64:U:C2	34:8:65:A:N7	2.23	1.07
54:S2:387:C:N3	54:S2:388:U:C5	2.22	1.07
54:S2:460:A:C2	54:S2:461:U:C6	2.43	1.07
65:SO:72:TYR:HD1	84:Sc:63:ARG:CZ	1.68	1.07
88:S1:46:LEU:O	88:S1:47:VAL:HG13	1.54	1.07
32:5:54:G:O6	32:5:55:G:N7	1.87	1.06
84:Sc:14:VAL:CG2	84:Sc:32:VAL:CG1	2.33	1.06
84:Sc:14:VAL:HB	84:Sc:30:VAL:HG13	1.08	1.06
32:5:2395:A:O2'	32:5:2806:A:N3	1.88	1.06
32:5:3712:A:N6	32:5:3737:A:OP2	1.88	1.06
43:n:4:LYS:HE2	54:S2:1844:U:C4	1.90	1.06
43:n:10:MET:HE1	54:S2:1172:U:C4'	1.84	1.06
54:S2:1512:C:O2	54:S2:1513:C:C5	2.06	1.06
65:SO:72:TYR:HB2	74:SF:204:ARG:HH12	1.11	1.06
32:5:2438:A:C6	32:5:2441:C:C5	2.43	1.06
48:z:339:ILE:O	48:z:342:MET:C	1.96	1.06
54:S2:460:A:H2	54:S2:461:U:C6	1.73	1.06
61:SI:168:GLN:CD	61:SI:170:LYS:HE2	1.80	1.06
5:J:125:ILE:HD13	80:SS:19:ASN:HD21	1.19	1.06
32:5:3714:G:O6	32:5:3715:U:O4	1.72	1.06
32:5:4284:C:C2	32:5:4285:U:C5	2.43	1.06
32:5:4481:U:C2	32:5:4482:U:C5	2.43	1.06
32:5:4725:C:O2	32:5:4726:G:C8	2.07	1.06
34:8:119:C:N3	34:8:120:G:N7	2.04	1.06
48:z:412:VAL:HG22	48:z:416:ASP:HB2	1.12	1.06
54:S2:378:U:C2	54:S2:379:C:C6	2.43	1.06
54:S2:1284:A:O2'	76:SM:106:CYS:HA	1.54	1.06
56:SB:58:ALA:O	56:SB:61:GLY:N	1.88	1.06
11:R:166:THR:CG2	54:S2:872:A:C2'	2.34	1.06
48:z:381:SER:O	51:4:207:C:O2'	1.73	1.06
54:S2:469:A:N1	54:S2:470:G:C8	2.23	1.06
84:Sc:14:VAL:HG21	84:Sc:31:ARG:N	1.71	1.06
32:5:100:C:C5	32:5:101:A:N7	2.24	1.05
32:5:2784:C:O2	32:5:2785:C:C6	2.09	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3718:A:H2'	32:5:3719:A:O4'	1.55	1.05
32:5:4174:U:O2	32:5:4175:G:C8	2.09	1.05
54:S2:458:A:C6	54:S2:459:C:C5	2.44	1.05
54:S2:469:A:C2	54:S2:470:G:H8	1.73	1.05
54:S2:620:G:N2	54:S2:620:G:OP1	1.89	1.05
54:S2:1051:G:C2	54:S2:1052:A:C8	2.43	1.05
54:S2:1101:U:O2	54:S2:1102:G:C8	2.08	1.05
54:S2:1258:A:N7	54:S2:1659:U:O2	1.88	1.05
19:a:132:ARG:NH2	32:5:1468:C:H5''	1.72	1.05
32:5:471:A:C6	32:5:472:C:C6	2.43	1.05
32:5:4165:C:C2	32:5:4166:G:C8	2.43	1.05
32:5:1316:G:O4'	32:5:2348:G:N2	1.89	1.05
32:5:1556:C:C2	32:5:1557:C:C5	2.44	1.05
32:5:2035:C:N4	32:5:2036:C:N4	2.03	1.05
32:5:2441:C:O2	32:5:2442:G:C8	2.09	1.05
39:I:101:LYS:NZ	39:I:121:LYS:HD2	1.62	1.05
48:z:297:MET:HE2	48:z:355:PHE:HB2	1.35	1.05
54:S2:1292:C:O5'	86:Sf:149:CYS:N	1.88	1.05
54:S2:1840:U:N3	54:S2:1841:C:C5	2.24	1.05
74:SF:139:VAL:HG12	84:Sc:45:ASN:O	1.55	1.05
83:SZ:58:LEU:HD23	83:SZ:77:LEU:HD11	1.39	1.05
84:Sc:14:VAL:CA	84:Sc:31:ARG:O	2.03	1.05
9:O:114:LYS:HA	32:5:4757:C:O2	1.56	1.05
32:5:2691:U:O2	32:5:2692:U:C5	2.08	1.05
32:5:3723:A:N3	32:5:3724:A:N7	2.04	1.05
32:5:5005:G:N7	41:W:51:TRP:HD1	1.54	1.05
48:z:352:ILE:HB	48:z:355:PHE:CZ	1.91	1.05
48:z:410:SER:CA	51:4:194:G:N3	2.20	1.05
34:8:12:G:N1	34:8:13:G:N7	2.03	1.05
46:K:37:LEU:HD22	46:K:68:GLN:CB	1.86	1.05
48:z:297:MET:C	48:z:353:PRO:CD	2.29	1.05
48:z:413:SER:CB	52:9:74:ARG:HB3	1.85	1.05
51:4:58:G:O6	51:4:288:G:N2	1.89	1.05
54:S2:551:U:C2	54:S2:552:G:N7	2.24	1.05
54:S2:1314:U:H3	54:S2:1315:U:H1'	1.21	1.05
54:S2:1513:C:O2'	54:S2:1514:G:H5'	1.57	1.05
65:SO:72:TYR:HD1	84:Sc:63:ARG:NH2	1.54	1.05
32:5:440:U:O2	32:5:441:G:C8	2.10	1.04
32:5:964:A:N6	32:5:966:A:N7	2.04	1.04
32:5:1390:G:N2	32:5:1394:G:C5	2.24	1.04
32:5:1475:G:N2	32:5:1476:C:C4	2.25	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2326:G:N1	32:5:2327:G:N7	2.05	1.04
32:5:3755:G:C2	32:5:3770:U:C2	2.44	1.04
32:5:4981:G:C6	32:5:4982:A:C8	2.45	1.04
50:3:16:U:O4	50:3:59:A:C2	2.09	1.04
54:S2:1202:U:N3	54:S2:1203:G:C8	2.25	1.04
54:S2:1378:A:H4'	54:S2:1379:A:O5'	1.54	1.04
10:Q:178:ARG:NH1	32:5:4339:A:O2'	1.90	1.04
32:5:289:C:N3	32:5:290:U:C5	2.24	1.04
32:5:983:C:N3	32:5:984:C:C5	2.25	1.04
32:5:2078:C:C2	32:5:2079:G:C8	2.45	1.04
32:5:5005:G:N7	41:W:51:TRP:CD1	2.25	1.04
54:S2:841:G:C2	54:S2:842:C:C6	2.45	1.04
54:S2:875:A:C5	54:S2:876:C:C6	2.43	1.04
54:S2:1063:C:O2'	54:S2:1838:U:H5	1.39	1.04
79:SR:100:PRO:CD	79:SR:119:VAL:HG12	1.87	1.04
4:H:31:ARG:HH11	4:H:87:GLY:CA	1.68	1.04
11:R:151:ARG:NH2	63:SL:118:ARG:HD3	1.68	1.04
32:5:2109:G:O6	32:5:2122:G:O6	1.75	1.04
32:5:3723:A:C2	32:5:3724:A:C5	2.45	1.04
43:n:4:LYS:HE2	54:S2:1844:U:C5	1.91	1.04
54:S2:459:C:C4	54:S2:460:A:N7	2.25	1.04
32:5:424:U:O2	32:5:425:U:C5	2.10	1.04
32:5:2279:A:C2	32:5:2280:G:C5	2.45	1.04
48:z:412:VAL:CG2	48:z:416:ASP:CB	2.36	1.04
48:z:413:SER:HB2	52:9:74:ARG:HB3	1.05	1.04
74:SF:140:ASP:OD2	84:Sc:56:LEU:CD2	2.05	1.04
74:SF:192:LYS:NZ	74:SF:196:LEU:HD23	1.69	1.04
79:SR:88:VAL:HB	79:SR:91:LEU:HD23	1.07	1.04
80:SS:13:LEU:HD11	80:SS:56:ALA:O	1.57	1.04
84:Sc:45:ASN:HD21	84:Sc:68:LEU:CD2	1.65	1.04
32:5:1269:G:H3'	32:5:2111:G:O6	1.56	1.04
32:5:1408:G:O2'	32:5:1411:C:N4	1.91	1.04
32:5:1476:C:N3	32:5:1477:C:C5	2.26	1.04
32:5:1739:G:H2'	32:5:1740:C:O4'	1.58	1.04
54:S2:992:A:C6	54:S2:993:G:C8	2.46	1.04
32:5:1895:G:H2'	32:5:1896:A:O4'	1.56	1.03
32:5:1945:G:C6	32:5:1946:G:C8	2.46	1.03
32:5:2854:G:O6	32:5:2856:C:O4'	1.75	1.03
32:5:3914:U:O4	32:5:4378:A:N1	1.91	1.03
32:5:4239:A:C6	32:5:4240:G:C8	2.45	1.03
54:S2:597:G:N2	54:S2:640:A:C2	2.26	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1132:C:C4	54:S2:1133:A:C8	2.45	1.03
56:SB:150:ILE:HD13	79:SR:129:LYS:HG3	1.37	1.03
70:Sa:26:CYS:SG	91:Sa:101:ZN:ZN	1.44	1.03
74:SF:128:ILE:HD12	84:Sc:68:LEU:HB2	1.40	1.03
32:5:2058:G:C2	32:5:2059:C:C5	2.46	1.03
32:5:2851:G:C5	32:5:2852:U:H6	1.75	1.03
32:5:4414:A:C2	32:5:4427:G:N2	2.26	1.03
48:z:382:MET:O	51:4:208:A:H4'	0.86	1.03
48:z:409:GLY:O	51:4:194:G:N3	1.92	1.03
50:3:38:C:N3	50:3:39:G:N7	2.04	1.03
54:S2:402:C:N3	54:S2:403:G:C8	2.27	1.03
54:S2:426:A:C2	54:S2:427:U:C5	2.46	1.03
54:S2:636:C:N3	54:S2:637:U:C5	2.26	1.03
54:S2:795:A:N3	54:S2:796:G:C8	2.26	1.03
54:S2:874:G:C1'	60:SH:114:GLN:HE21	1.70	1.03
54:S2:1552:G:N7	54:S2:1578:U:O4	1.91	1.03
55:SA:200:ASP:HB3	79:SR:85:VAL:HG13	1.09	1.03
80:SS:33:ILE:O	80:SS:36:VAL:HG12	1.58	1.03
32:5:173:C:N3	32:5:174:C:C5	2.26	1.03
32:5:2604:C:O2	32:5:2605:G:C8	2.10	1.03
47:q:108:PRO:HB2	47:q:184:SER:HB2	1.40	1.03
54:S2:1100:A:C2	54:S2:1101:U:C6	2.46	1.03
54:S2:1594:A:OP2	83:SZ:104:ARG:CG	2.07	1.03
74:SF:95:HIS:NE2	83:SZ:108:ILE:HD12	1.69	1.03
32:5:294:G:H3'	32:5:296:A:H5''	1.06	1.03
32:5:1613:A:N6	32:5:3637:U:C2	2.26	1.03
32:5:1628:C:C2	32:5:1629:G:C8	2.47	1.03
32:5:1676:C:O2'	32:5:3914:U:O4	1.74	1.03
32:5:2361:G:O6	40:P:25:HIS:CD2	2.11	1.03
32:5:3773:U:O2	32:5:3776:G:C2	1.95	1.03
47:q:31:GLY:O	47:q:187:LEU:HA	1.56	1.03
50:3:72:C:C3'	50:3:73:A:H5''	1.89	1.03
54:S2:469:A:N1	54:S2:470:G:H8	1.56	1.03
54:S2:841:G:N2	54:S2:842:C:C2	2.26	1.03
32:5:1302:U:C2	32:5:1303:A:C8	2.46	1.03
32:5:1672:U:O2	32:5:1673:U:C6	2.12	1.03
32:5:1946:G:N1	32:5:2037:C:C4	2.27	1.03
32:5:2397:G:C8	32:5:2399:G:C8	2.47	1.03
32:5:3914:U:N3	32:5:4378:A:N6	2.07	1.03
32:5:1390:G:C2	32:5:1394:G:C6	2.47	1.02
32:5:2428:A:C5	32:5:2789:A:H2	1.77	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2590:G:C2	32:5:2754:G:C2	2.47	1.02
32:5:3741:C:N3	32:5:3742:G:N7	2.07	1.02
54:S2:349:A:C5'	61:SI:27:TYR:OH	2.05	1.02
54:S2:923:G:N2	54:S2:1022:U:O4	1.92	1.02
55:SA:158:ASP:OD1	55:SA:159:ILE:HB	1.59	1.02
74:SF:139:VAL:CG1	84:Sc:45:ASN:O	2.07	1.02
2:D:29:ASP:HA	32:5:4280:A:H61	1.08	1.02
32:5:470:A:C6	32:5:471:A:C8	2.47	1.02
48:z:413:SER:C	52:9:74:ARG:HG3	1.84	1.02
54:S2:215:G:H1'	54:S2:216:C:O2	1.58	1.02
54:S2:459:C:N3	54:S2:460:A:C8	2.26	1.02
74:SF:140:ASP:OD1	84:Sc:58:LEU:HD21	0.86	1.02
32:5:1378:C:H3'	32:5:1379:C:C5'	1.88	1.02
32:5:1899:G:N1	32:5:1900:C:C4	2.28	1.02
32:5:4283:G:N2	32:5:4284:C:C2	2.26	1.02
46:K:37:LEU:HD22	46:K:68:GLN:HB3	1.04	1.02
48:z:293:LYS:HG3	48:z:351:MET:HB3	1.05	1.02
48:z:383:ASN:HA	51:4:208:A:O3'	1.59	1.02
54:S2:634:A:C2	54:S2:635:G:C8	2.47	1.02
54:S2:796:G:O2'	60:SH:111:LYS:CG	2.08	1.02
54:S2:863:U:O2	54:S2:864:A:C8	2.12	1.02
32:5:1340:C:C2	32:5:1341:U:C5	2.48	1.02
32:5:1613:A:C6	32:5:3637:U:N3	2.26	1.02
32:5:1650:A:C2	36:C:100:ARG:NH2	2.27	1.02
32:5:3740:G:C6	32:5:3741:C:C5	2.47	1.02
33:7:59:G:C6	33:7:60:G:N7	2.27	1.02
48:z:381:SER:O	51:4:208:A:H5'	1.58	1.02
3:G:261:LEU:O	3:G:261:LEU:HD23	1.59	1.02
8:N:4:TYR:OH	32:5:151:G:OP2	1.77	1.02
32:5:1556:C:C2	32:5:1557:C:C6	2.48	1.02
32:5:4113:U:H2'	32:5:4114:C:O4'	1.60	1.02
32:5:4998:G:C2	32:5:4999:G:C8	2.46	1.02
12:S:158:VAL:HB	32:5:2055:G:O6	1.60	1.01
32:5:56:A:N1	32:5:57:G:C5	2.27	1.01
32:5:736:C:H2'	32:5:737:C:O4'	1.57	1.01
32:5:1214:C:O2'	32:5:2114:G:N1	1.92	1.01
32:5:1635:C:H2'	32:5:1636:U:H5'	1.42	1.01
32:5:1939:A:N1	32:5:3874:G:H5'	1.74	1.01
32:5:4518:A:N7	35:B:257:TRP:CZ2	2.27	1.01
48:z:405:ARG:CD	51:4:207:C:H5''	1.89	1.01
54:S2:989:C:N3	54:S2:1001:A:N1	2.08	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1204:A:N3	54:S2:1205:C:N3	2.08	1.01
55:SA:200:ASP:HB3	79:SR:85:VAL:HG11	1.05	1.01
32:5:92:C:OP2	32:5:4341:C:O2'	1.78	1.01
32:5:120:A:H1'	32:5:121:A:C2	1.93	1.01
32:5:293:G:H2'	32:5:297:U:N1	1.75	1.01
32:5:433:A:C2	32:5:3867:A:H4'	1.95	1.01
32:5:1301:C:C4	32:5:1302:U:C6	2.48	1.01
32:5:2367:A:N6	32:5:2788:U:H3	1.55	1.01
32:5:2468:U:N3	32:5:2473:A:N6	2.08	1.01
32:5:3693:U:C4	32:5:3694:U:C5	2.49	1.01
32:5:3905:A:C2	32:5:4449:A:N6	2.28	1.01
48:z:152:ALA:HB1	48:z:159:PHE:CE2	1.95	1.01
32:5:1672:U:O2	32:5:1673:U:C5	2.11	1.01
32:5:2078:C:N3	32:5:2079:G:C8	2.28	1.01
54:S2:799:U:O4'	60:SH:110:THR:HG21	1.61	1.01
54:S2:1860:A:C2	54:S2:1862:G:C8	2.48	1.01
80:SS:36:VAL:HG13	80:SS:37:GLY:H	1.24	1.01
22:d:34:HIS:CD2	32:5:5048:A:C8	2.47	1.01
32:5:70:A:N1	32:5:4355:G:O4'	1.93	1.01
32:5:161:G:N2	32:5:275:C:C2	2.26	1.01
32:5:2035:C:N4	32:5:2036:C:C4	2.28	1.01
32:5:2080:U:O2	32:5:2081:C:C6	2.14	1.01
32:5:3617:G:O2'	32:5:3620:G:N7	1.94	1.01
32:5:3910:C:C2	32:5:3911:C:C5	2.49	1.01
51:4:58:G:O6	51:4:288:G:C2	2.14	1.01
54:S2:119:U:N3	54:S2:120:U:C5	2.28	1.01
54:S2:1540:G:C2	54:S2:1541:G:C8	2.48	1.01
32:5:2508:U:C2	32:5:2509:C:H5	1.78	1.01
33:7:42:A:C6	33:7:43:U:C5	2.49	1.01
54:S2:524:U:N3	54:S2:594:A:C6	2.28	1.01
3:G:53:ARG:NH2	3:G:54:PHE:CZ	2.28	1.00
32:5:957:G:O5'	32:5:1284:G:N2	1.93	1.00
32:5:1929:A:N6	32:5:2054:U:H3	1.58	1.00
32:5:2844:A:C6	32:5:3839:G:C8	2.49	1.00
32:5:4982:A:N1	32:5:4983:C:C6	2.29	1.00
34:8:12:G:H21	34:8:13:G:H1'	1.25	1.00
34:8:118:C:N3	34:8:119:C:C5	2.28	1.00
34:8:130:C:N3	34:8:131:G:C8	2.28	1.00
39:I:109:ASP:OD1	39:I:110:ARG:N	1.93	1.00
54:S2:1408:U:N3	54:S2:1439:A:C2	2.29	1.00
54:S2:1419:C:OP2	81:ST:129:ARG:HA	1.59	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1594:A:C2	54:S2:1595:U:C6	2.48	1.00
74:SF:192:LYS:HZ1	74:SF:196:LEU:CD2	1.72	1.00
74:SF:192:LYS:HZ1	74:SF:196:LEU:HD21	1.21	1.00
32:5:1339:U:O2	32:5:1340:C:C6	2.14	1.00
32:5:1899:G:C2	32:5:1900:C:C4	2.48	1.00
32:5:4414:A:C2	32:5:4427:G:C2	2.49	1.00
32:5:4934:A:C2	32:5:4935:C:C6	2.50	1.00
39:I:101:LYS:HE2	39:I:121:LYS:HG3	1.43	1.00
41:W:50:ASN:HB3	41:W:55:TYR:HE2	1.24	1.00
48:z:404:GLN:CD	52:9:72:TRP:HZ2	1.61	1.00
48:z:413:SER:HB2	52:9:74:ARG:CD	1.70	1.00
54:S2:27:A:C2	54:S2:28:U:C6	2.49	1.00
83:SZ:46:ASN:HD22	83:SZ:78:LYS:CA	1.73	1.00
32:5:1635:C:C2	32:5:1636:U:C5	2.50	1.00
32:5:2452:G:C2	32:5:2467:U:C4	2.49	1.00
34:8:131:G:C6	34:8:132:G:N7	2.29	1.00
48:z:340:MET:CA	48:z:341:LYS:N	2.23	1.00
54:S2:458:A:N1	54:S2:459:C:C6	2.28	1.00
54:S2:869:A:N7	60:SH:115:LYS:HB2	1.75	1.00
54:S2:1310:U:O4'	86:Sf:143:LYS:CD	2.09	1.00
32:5:27:C:N3	32:5:28:C:H5	1.59	1.00
32:5:3655:C:N3	32:5:3656:A:C8	2.30	1.00
33:7:54:A:N3	33:7:55:A:C8	2.30	1.00
54:S2:1835:A:O4'	54:S2:1863:A:N7	1.95	1.00
54:S2:449:A:N6	54:S2:452:G:C5	2.29	1.00
54:S2:909:G:C2	54:S2:910:G:C8	2.48	1.00
54:S2:957:A:N1	54:S2:967:C:O2	1.95	1.00
54:S2:1250:A:H2	54:S2:1339:U:O2'	1.42	1.00
4:H:31:ARG:NH1	4:H:87:GLY:CA	2.24	1.00
32:5:4233:A:N6	32:5:4290:U:H3	1.59	1.00
39:I:101:LYS:HZ3	39:I:121:LYS:HD2	1.13	1.00
51:4:57:G:C2	51:4:289:A:C2	2.50	1.00
11:R:151:ARG:NH1	63:SL:118:ARG:HD2	1.77	1.00
32:5:1899:G:N2	32:5:1900:C:C2	2.30	1.00
32:5:4550:G:C6	32:5:4551:U:C5	2.50	1.00
54:S2:381:C:N4	61:SI:49:ARG:HH11	1.41	1.00
54:S2:597:G:C2	54:S2:640:A:C2	2.48	1.00
54:S2:618:C:N3	54:S2:619:A:C8	2.30	1.00
79:SR:88:VAL:HB	79:SR:91:LEU:CD2	1.91	1.00
84:Sc:14:VAL:CB	84:Sc:30:VAL:HG13	1.84	1.00
32:5:1325:C:H4'	32:5:3901:A:N1	1.76	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2417:A:C2	32:5:2418:A:C8	2.50	0.99
32:5:2784:C:O2	32:5:2785:C:C5	2.15	0.99
48:z:407:ALA:CA	48:z:412:VAL:O	2.10	0.99
54:S2:449:A:N1	54:S2:452:G:N7	2.09	0.99
54:S2:875:A:C4	54:S2:876:C:H6	1.71	0.99
74:SF:128:ILE:CD1	84:Sc:68:LEU:CB	2.40	0.99
83:SZ:57:LYS:HB3	83:SZ:61:GLU:HG3	1.41	0.99
84:Sc:14:VAL:HG11	84:Sc:31:ARG:N	1.77	0.99
32:5:88:A:N6	32:5:97:G:C2	2.30	0.99
32:5:330:G:C2	32:5:331:G:C8	2.49	0.99
32:5:472:C:C2	32:5:473:C:C6	2.51	0.99
32:5:4239:A:N6	32:5:4240:G:C5	2.29	0.99
32:5:4983:C:N3	32:5:4984:C:H5	1.60	0.99
54:S2:1294:G:C2	54:S2:1295:A:C8	2.50	0.99
88:S1:5:GLN:O	88:S1:6:THR:CG2	2.09	0.99
32:5:1358:G:C2'	32:5:1359:G:O4'	2.10	0.99
32:5:2508:U:O2	32:5:2509:C:C6	2.14	0.99
32:5:4355:G:C2	32:5:4356:G:N7	2.31	0.99
33:7:17:C:N3	33:7:18:C:C5	2.30	0.99
54:S2:1290:G:N3	86:Sf:146:LEU:HB3	1.75	0.99
54:S2:1453:C:C4	54:S2:1455:A:C1'	2.44	0.99
32:5:1673:U:C2	32:5:1674:C:C5	2.50	0.99
32:5:4414:A:N1	32:5:4427:G:C2	2.30	0.99
33:7:94:C:O2	33:7:95:C:C6	2.15	0.99
32:5:1886:G:N2	32:5:1894:C:C2	2.31	0.99
32:5:2327:G:C2	32:5:2328:G:N7	2.30	0.99
22:d:25:TYR:OH	22:d:119:THR:HB	1.61	0.99
32:5:2724:G:N2	32:5:2726:G:C5	2.31	0.99
34:8:96:C:C2	34:8:97:A:H8	1.73	0.99
32:5:1543:G:C2	32:5:1544:G:C8	2.51	0.99
32:5:84:A:N6	32:5:98:A:C8	2.29	0.99
32:5:3675:G:N2	32:5:3676:G:N7	2.10	0.99
54:S2:993:G:C6	54:S2:994:C:C5	2.51	0.99
54:S2:337:C:C2	54:S2:338:G:C8	2.51	0.99
54:S2:793:G:C5	54:S2:794:A:C8	2.51	0.99
54:S2:1528:G:C2	54:S2:1529:C:C4	2.51	0.99
32:5:246:G:C2	32:5:247:G:C8	2.51	0.99
32:5:4215:C:C2	32:5:4216:G:C8	2.51	0.99
32:5:5044:A:O2'	32:5:5045:G:H5'	1.62	0.99
34:8:10:G:N1	34:8:11:C:C6	2.30	0.99
54:S2:386:C:C2	54:S2:387:C:C6	2.51	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1869:A:C6	56:SB:115:LYS:HG2	1.98	0.99
54:S2:1204:A:C2'	54:S2:1205:C:O2	2.11	0.98
55:SA:205:ARG:HH22	79:SR:84:TYR:HD2	1.00	0.98
11:R:172:ARG:HD2	54:S2:909:G:OP2	1.61	0.98
16:X:117:TYR:O	16:X:119:ILE:HB	1.62	0.98
32:5:77:U:N3	32:5:335:A:N6	2.09	0.98
32:5:1248:C:N3	32:5:1249:C:C5	2.30	0.98
32:5:2833:A:O2'	32:5:2834:C:O4'	1.79	0.98
32:5:3879:G:C6	32:5:3882:C:C5	2.51	0.98
32:5:4167:G:N1	32:5:4168:G:N7	2.11	0.98
54:S2:38:A:C2	54:S2:515:G:N2	2.31	0.98
32:5:2532:C:O2	32:5:2533:C:C5	2.16	0.98
32:5:4234:A:C2	32:5:4271:A:C8	2.51	0.98
48:z:360:MET:HG2	48:z:365:GLU:CG	1.93	0.98
48:z:405:ARG:CG	51:4:207:C:C4'	2.10	0.98
54:S2:1290:G:H2'	86:Sf:146:LEU:HB3	1.45	0.98
55:SA:200:ASP:OD1	79:SR:89:SER:HB2	1.61	0.98
32:5:1583:A:H1'	32:5:2396:A:H62	1.27	0.98
32:5:1629:G:C2	32:5:1631:A:C6	2.52	0.98
39:I:101:LYS:CE	39:I:121:LYS:HG3	1.90	0.98
84:Sc:14:VAL:CG2	84:Sc:31:ARG:O	1.94	0.98
32:5:270:U:N3	32:5:271:C:C5	2.32	0.98
32:5:1650:A:N1	36:C:100:ARG:NH2	2.11	0.98
32:5:2293:U:O2	32:5:2294:G:C8	2.16	0.98
84:Sc:11:LEU:O	84:Sc:35:MET:HB3	1.62	0.98
32:5:70:A:C2	32:5:4355:G:O4'	2.15	0.98
48:z:338:ASN:O	48:z:342:MET:HG2	1.62	0.98
54:S2:118:C:C4	54:S2:119:U:C6	2.52	0.98
54:S2:841:G:N1	54:S2:842:C:C4	2.31	0.98
54:S2:1204:A:C2	54:S2:1205:C:N3	2.32	0.98
32:5:3785:A:C2	32:5:4536:C:H1'	1.97	0.98
32:5:4982:A:C2	32:5:4983:C:C6	2.52	0.98
54:S2:955:A:H61	54:S2:969:U:H5''	1.26	0.98
74:SF:140:ASP:CG	84:Sc:58:LEU:HD21	1.89	0.98
32:5:90:G:N2	32:5:95:G:C6	2.32	0.98
32:5:94:A:H2'	32:5:95:G:O4'	1.64	0.98
32:5:1310:C:C2	32:5:1311:G:C8	2.51	0.98
32:5:1613:A:N6	32:5:3637:U:C4	2.31	0.98
32:5:1949:U:O2	32:5:1950:U:C6	2.17	0.98
32:5:4174:U:N3	32:5:4175:G:N7	2.11	0.98
50:3:39:G:H2'	50:3:40:C:H5'	1.46	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:165:G:H8	54:S2:166:A:N7	1.50	0.98
54:S2:980:A:H2'	54:S2:981:A:C8	1.97	0.98
32:5:269:G:C6	32:5:270:U:C5	2.52	0.98
32:5:961:G:O6	32:5:969:C:C5	2.17	0.98
32:5:1340:C:O2	32:5:1341:U:C6	2.17	0.98
32:5:2326:G:C6	32:5:2327:G:N7	2.31	0.98
32:5:4335:C:H2'	32:5:4336:A:O4'	1.64	0.98
47:q:32:ALA:HA	47:q:187:LEU:HD22	0.99	0.98
48:z:402:ARG:HG3	51:4:184:A:O3'	1.64	0.98
32:5:43:U:C6	32:5:44:A:C8	2.52	0.98
47:q:108:PRO:O	47:q:184:SER:OG	1.80	0.98
80:SS:7:GLU:HG3	80:SS:9:PHE:CE2	1.98	0.98
84:Sc:11:LEU:O	84:Sc:35:MET:CB	2.12	0.98
32:5:1929:A:H61	32:5:2054:U:H3	0.99	0.97
41:W:50:ASN:HB3	41:W:55:TYR:CE2	1.98	0.97
48:z:404:GLN:CG	52:9:72:TRP:HZ2	1.76	0.97
54:S2:623:G:C2	54:S2:624:C:C6	2.52	0.97
54:S2:1250:A:C2	54:S2:1339:U:O2'	2.13	0.97
83:SZ:49:LEU:HD23	83:SZ:83:LEU:HD11	1.42	0.97
32:5:2509:C:O2'	32:5:2510:G:O5'	1.81	0.97
32:5:4369:A:N1	32:5:4370:G:N7	2.12	0.97
54:S2:992:A:N7	70:Sa:15:ARG:NH1	2.12	0.97
54:S2:1110:G:O2'	79:SR:122:PRO:HB3	1.63	0.97
54:S2:1291:A:C2	86:Sf:140:TYR:CD2	2.52	0.97
54:S2:1408:U:H2'	54:S2:1409:A:N9	1.79	0.97
84:Sc:11:LEU:HB3	84:Sc:55:VAL:CG1	1.93	0.97
32:5:2590:G:C2	32:5:2754:G:N2	2.31	0.97
32:5:2633:U:N3	32:5:2634:C:C5	2.33	0.97
32:5:3721:U:O2	32:5:3722:G:H8	1.48	0.97
46:K:9:GLU:OE1	46:K:11:LYS:CG	2.11	0.97
54:S2:449:A:N1	54:S2:452:G:C8	2.32	0.97
60:SH:111:LYS:HG2	60:SH:112:ASN:ND2	1.79	0.97
32:5:100:C:H5	32:5:101:A:C8	1.70	0.97
54:S2:1316:C:N3	54:S2:1317:C:C5	2.31	0.97
32:5:1190:C:N3	32:5:1191:C:C5	2.32	0.97
32:5:2736:G:N1	32:5:2737:C:C4	2.32	0.97
32:5:4078:C:O2'	32:5:4172:A:N6	1.96	0.97
56:SB:51:ARG:HH11	56:SB:51:ARG:HB2	1.29	0.97
32:5:909:A:C2	32:5:910:G:C8	2.52	0.97
32:5:1990:A:C2'	32:5:1991:A:H4'	1.94	0.97
32:5:3846:C:N3	32:5:3847:C:C5	2.32	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4213:A:N6	32:5:4218:U:H3	1.63	0.97
32:5:4999:G:C6	32:5:5000:G:N7	2.32	0.97
54:S2:996:A:C6	64:SN:113:PHE:CZ	2.52	0.97
74:SF:140:ASP:OD2	84:Sc:56:LEU:HD23	1.61	0.97
54:S2:1541:G:C2	54:S2:1542:C:C5	2.52	0.97
56:SB:145:LYS:NZ	79:SR:128:PHE:HZ	1.54	0.97
32:5:43:U:C4	32:5:44:A:H1'	2.00	0.97
32:5:291:U:C2'	32:5:292:G:H2'	1.95	0.97
32:5:733:A:N7	32:5:734:G:C8	2.32	0.97
32:5:917:A:C2	32:5:919:C:C5	2.52	0.97
32:5:3710:G:C6	32:5:3711:A:N1	2.32	0.97
32:5:4562:C:N3	32:5:4563:U:C6	2.33	0.97
54:S2:384:U:H5	54:S2:386:C:C6	1.80	0.97
83:SZ:46:ASN:HD22	83:SZ:78:LYS:HA	1.17	0.97
84:Sc:54:ASP:C	84:Sc:55:VAL:N	2.23	0.97
32:5:56:A:N6	32:5:57:G:O6	1.96	0.97
32:5:4285:U:C2	32:5:4286:C:C5	2.52	0.97
32:5:4982:A:C6	32:5:4983:C:C6	2.53	0.97
48:z:381:SER:OG	51:4:207:C:O2	1.83	0.97
54:S2:1123:C:N3	54:S2:1124:C:C5	2.32	0.97
55:SA:200:ASP:CG	79:SR:89:SER:HB2	1.90	0.97
25:g:13:TYR:CD2	32:5:2513:A:N7	2.33	0.97
32:5:1245:C:C6	32:5:1269:G:C6	2.53	0.97
34:8:131:G:C6	34:8:132:G:C8	2.52	0.97
48:z:360:MET:HA	48:z:365:GLU:HB2	1.47	0.97
54:S2:452:G:N3	54:S2:453:C:C6	2.33	0.97
56:SB:145:LYS:NZ	79:SR:128:PHE:HE2	1.60	0.97
32:5:28:C:N3	32:5:29:G:N7	2.13	0.96
32:5:1886:G:C2	32:5:1894:C:N3	2.32	0.96
32:5:4324:A:C2	32:5:4325:A:C5	2.53	0.96
32:5:4518:A:C8	35:B:257:TRP:CZ2	2.52	0.96
54:S2:337:C:C2	54:S2:338:G:H8	1.83	0.96
84:Sc:60:GLU:HG3	84:Sc:63:ARG:CD	1.94	0.96
32:5:1245:C:C2	32:5:1246:G:N7	2.32	0.96
32:5:3847:C:N3	32:5:3848:U:C5	2.33	0.96
32:5:4369:A:C2	32:5:4370:G:N7	2.33	0.96
34:8:12:G:N2	34:8:13:G:H1'	1.80	0.96
54:S2:862:A:C2	54:S2:863:U:C6	2.52	0.96
54:S2:1124:C:N3	54:S2:1125:C:C5	2.33	0.96
32:5:1310:C:N3	32:5:1311:G:N7	2.12	0.96
32:5:1358:G:H2'	32:5:1359:G:O4'	1.65	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1990:A:C2	32:5:1992:U:OP1	2.17	0.96
32:5:4343:U:C2	32:5:4344:U:C6	2.52	0.96
32:5:4933:C:N3	32:5:4934:A:C8	2.33	0.96
54:S2:378:U:C4	54:S2:379:C:C5	2.52	0.96
16:X:117:TYR:CD1	16:X:153:ILE:CG2	2.47	0.96
32:5:101:A:C2	32:5:102:G:C8	2.52	0.96
32:5:1696:C:H1'	32:5:1697:G:H5'	1.46	0.96
32:5:3759:A:H61	54:S2:1709:G:H5''	1.31	0.96
32:5:4165:C:C4	32:5:4166:G:N7	2.33	0.96
32:5:486:C:C2	32:5:487:G:C8	2.54	0.96
32:5:3702:A:C6	32:5:3703:G:N7	2.33	0.96
32:5:3732:A:C2	32:5:3733:A:C8	2.54	0.96
54:S2:524:U:C4	54:S2:594:A:N6	2.33	0.96
54:S2:633:C:N3	54:S2:634:A:C8	2.32	0.96
54:S2:1564:C:N3	54:S2:1565:C:C5	2.31	0.96
83:SZ:46:ASN:ND2	83:SZ:78:LYS:CA	2.28	0.96
32:5:2497:C:C2	32:5:2498:C:C6	2.53	0.96
32:5:3710:G:N1	32:5:3711:A:C6	2.33	0.96
54:S2:112:U:H1'	54:S2:114:G:O6	1.66	0.96
80:SS:10:GLN:HB2	80:SS:57:GLY:O	1.64	0.96
32:5:470:A:C5	32:5:471:A:C8	2.54	0.96
32:5:2035:C:C4	32:5:2036:C:H5	1.82	0.96
34:8:10:G:C2	34:8:11:C:H1'	2.00	0.96
32:5:1324:A:O2'	32:5:1326:A:OP1	1.83	0.96
32:5:1624:G:N2	32:5:1642:A:O2'	1.99	0.96
32:5:1946:G:C2	32:5:2037:C:C4	2.53	0.96
32:5:3709:U:H3'	32:5:3710:G:H5'	1.46	0.96
83:SZ:50:PHE:CE2	83:SZ:58:LEU:HD11	2.01	0.96
32:5:3880:G:O2'	32:5:3881:G:C8	2.17	0.96
39:I:101:LYS:HZ1	39:I:121:LYS:CD	1.72	0.96
48:z:413:SER:HA	52:9:74:ARG:HG3	1.10	0.96
54:S2:339:A:C2	54:S2:340:C:N4	2.34	0.96
54:S2:848:U:O2	54:S2:849:A:C8	2.18	0.96
54:S2:1109:C:N3	79:SR:123:THR:OG1	1.93	0.96
79:SR:88:VAL:CB	79:SR:91:LEU:HD23	1.95	0.96
32:5:1866:U:C4	32:5:4405:G:O4'	2.19	0.96
32:5:1946:G:N2	32:5:2037:C:N1	2.14	0.96
32:5:2127:C:H2'	32:5:2128:G:N7	1.79	0.96
32:5:2851:G:C5	32:5:2852:U:C6	2.53	0.96
32:5:4284:C:C2	32:5:4285:U:H5	1.82	0.96
32:5:4416:G:C2	32:5:4417:C:C6	2.54	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3739:C:C4	32:5:3740:G:N7	2.34	0.95
32:5:3759:A:C6	54:S2:1709:G:C4'	2.41	0.95
32:5:4095:G:N2	32:5:4096:C:C4	2.34	0.95
32:5:4983:C:N3	32:5:4984:C:C5	2.34	0.95
34:8:94:G:C8	34:8:94:G:H5'	2.00	0.95
54:S2:553:U:C2	54:S2:554:A:C8	2.53	0.95
32:5:27:C:O2	32:5:27:C:H2'	1.63	0.95
32:5:1601:A:C8	32:5:3643:A:C8	2.54	0.95
48:z:340:MET:O	48:z:344:PRO:HD3	1.66	0.95
48:z:405:ARG:CD	51:4:207:C:O3'	2.13	0.95
32:5:2735:G:C2	32:5:2736:G:N7	2.34	0.95
54:S2:858:A:C2	54:S2:859:G:N7	2.34	0.95
84:Sc:14:VAL:HG22	84:Sc:31:ARG:O	1.59	0.95
32:5:1984:A:N6	32:5:2011:C:O2'	1.98	0.95
32:5:2279:A:C2	32:5:2280:G:N7	2.33	0.95
32:5:4580:U:N3	32:5:4581:G:C8	2.34	0.95
32:5:4878:C:O2	32:5:4879:C:C5	2.19	0.95
48:z:410:SER:N	51:4:193:G:N1	2.09	0.95
54:S2:493:A:C2	54:S2:494:C:C5	2.53	0.95
32:5:2058:G:C6	32:5:2059:C:C5	2.55	0.95
32:5:2109:G:C6	32:5:2122:G:O6	2.18	0.95
32:5:2409:U:C4	32:5:2783:A:N1	2.35	0.95
32:5:2613:C:C4	32:5:2614:C:C5	2.54	0.95
32:5:3675:G:N2	32:5:3676:G:C5	2.34	0.95
32:5:3693:U:N3	32:5:3694:U:C5	2.35	0.95
47:q:188:VAL:HG13	47:q:189:ILE:H	1.27	0.95
54:S2:875:A:C6	54:S2:876:C:C4	2.55	0.95
55:SA:39:TYR:HH	79:SR:104:GLU:HB2	1.02	0.95
73:SD:76:ARG:HD2	73:SD:77:PHE:CE1	2.01	0.95
8:N:85:VAL:HG23	32:5:43:U:OP1	1.65	0.95
32:5:1563:A:C8	54:S2:678:U:H4'	2.00	0.95
32:5:2452:G:N1	32:5:2467:U:C4	2.34	0.95
32:5:3909:C:N3	32:5:3910:C:H5	1.54	0.95
32:5:4166:G:C6	32:5:4167:G:N7	2.34	0.95
32:5:4551:U:C2	32:5:4552:U:C5	2.54	0.95
34:8:119:C:O2	34:8:120:G:H8	1.48	0.95
49:2:128:VAL:C	50:3:76:A:O2'	2.08	0.95
54:S2:106:C:O2	54:S2:107:A:C8	2.19	0.95
54:S2:837:A:C2	54:S2:838:G:N7	2.34	0.95
54:S2:868:G:C2	60:SH:115:LYS:HD2	2.00	0.95
54:S2:1224:G:N2	54:S2:1643:U:N3	2.14	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:445:U:H1'	32:5:2313:A:C2	2.02	0.95
32:5:1444:G:H2'	32:5:1445:U:C6	2.01	0.95
32:5:1999:A:O2'	32:5:2000:G:O4'	1.85	0.95
32:5:2453:A:C6	32:5:2454:U:C5	2.54	0.95
32:5:2857:A:O2'	32:5:2858:A:C8	2.20	0.95
32:5:3607:U:O2	32:5:3608:A:C8	2.19	0.95
32:5:3731:C:N3	32:5:3732:A:N7	2.14	0.95
32:5:3795:A:O2'	54:S2:1815:A:H1'	1.67	0.95
32:5:4241:C:N3	32:5:4242:U:C5	2.34	0.95
39:I:101:LYS:HE3	39:I:121:LYS:HG2	1.48	0.95
46:K:9:GLU:OE2	46:K:11:LYS:HB2	1.67	0.95
54:S2:1051:G:N1	54:S2:1052:A:N7	2.14	0.95
54:S2:1415:C:H2'	54:S2:1416:C:O4'	1.67	0.95
32:5:207:G:N2	32:5:383:A:N7	2.14	0.95
32:5:484:U:N3	32:5:486:C:C6	2.35	0.95
32:5:1269:G:C8	32:5:2111:G:C6	2.55	0.95
32:5:3694:U:N3	32:5:3695:U:C5	2.34	0.95
32:5:4941:G:N2	32:5:4942:C:C4	2.35	0.95
34:8:9:A:C2	34:8:10:G:C8	2.55	0.95
54:S2:1310:U:H3	54:S2:1311:C:H5	1.14	0.95
32:5:120:A:C1'	32:5:121:A:N1	2.30	0.95
32:5:3858:C:N4	32:5:3859:G:C5	2.35	0.95
48:z:297:MET:HE3	48:z:355:PHE:CE1	2.02	0.95
79:SR:91:LEU:HD12	79:SR:92:ASP:N	1.82	0.95
32:5:1692:C:N3	32:5:1693:U:C5	2.35	0.94
32:5:2089:G:C6	32:5:2263:A:N7	2.35	0.94
32:5:2463:G:C2	32:5:2464:C:C4	2.55	0.94
54:S2:449:A:C6	54:S2:452:G:N7	2.35	0.94
54:S2:1132:C:N4	54:S2:1133:A:N7	2.14	0.94
32:5:4562:C:C2	32:5:4563:U:C6	2.54	0.94
54:S2:1291:A:H5''	86:Sf:146:LEU:HD12	1.49	0.94
55:SA:200:ASP:CB	79:SR:85:VAL:HG11	1.78	0.94
46:K:35:LEU:O	46:K:35:LEU:CD1	2.15	0.94
48:z:340:MET:O	48:z:344:PRO:CD	2.15	0.94
54:S2:42:A:H1'	54:S2:426:A:N7	1.82	0.94
54:S2:977:C:N3	54:S2:978:G:C8	2.34	0.94
54:S2:1398:G:C2	54:S2:1399:C:C5	2.56	0.94
18:Z:77:TYR:HB2	21:c:39:ARG:HD3	1.50	0.94
32:5:1354:A:C5	32:5:1503:A:C2	2.55	0.94
32:5:2058:G:N2	32:5:2059:C:N1	2.15	0.94
32:5:2277:C:O2	32:5:2278:G:N7	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:12:G:N2	34:8:13:G:N9	2.14	0.94
48:z:402:ARG:CG	51:4:184:A:O3'	2.15	0.94
32:5:1235:G:C2	32:5:1236:C:C5	2.56	0.94
32:5:1270:A:H2'	32:5:1271:G:O5'	1.66	0.94
32:5:2452:G:C2	32:5:2467:U:O4	2.19	0.94
32:5:3629:A:C4'	54:S2:1721:U:H3	1.81	0.94
32:5:3714:G:N1	32:5:3715:U:C4	2.35	0.94
32:5:4098:A:C2	32:5:4099:G:C8	2.56	0.94
50:3:34:A:N3	54:S2:1701:C:C5	2.35	0.94
54:S2:121:U:C2	54:S2:122:G:C8	2.55	0.94
54:S2:452:G:N2	54:S2:453:C:C2	2.35	0.94
54:S2:799:U:O4'	60:SH:110:THR:CG2	2.15	0.94
54:S2:1074:C:C2	54:S2:1075:C:C5	2.54	0.94
48:z:413:SER:HB3	52:9:74:ARG:HD2	0.95	0.94
54:S2:1017:U:N3	54:S2:1018:U:C5	2.35	0.94
54:S2:1291:A:C6	86:Sf:140:TYR:CE2	2.55	0.94
70:Sa:51:ARG:HH12	84:Sc:40:ARG:CD	1.79	0.94
74:SF:141:VAL:N	84:Sc:56:LEU:HD11	1.83	0.94
32:5:211:G:C2	32:5:212:A:C8	2.55	0.94
32:5:269:G:N1	32:5:270:U:C6	2.36	0.94
32:5:272:U:O2	32:5:273:U:C5	2.21	0.94
32:5:1477:C:N3	32:5:1478:C:C6	2.36	0.94
32:5:1899:G:N3	32:5:1900:C:C5	2.34	0.94
32:5:2270:G:C2	32:5:2271:C:C4	2.55	0.94
32:5:2726:G:C2	32:5:2727:C:C4	2.56	0.94
32:5:2857:A:O2'	32:5:2858:A:H8	1.50	0.94
32:5:3755:G:N1	32:5:3770:U:N3	2.14	0.94
46:K:37:LEU:HD21	46:K:68:GLN:OE1	1.65	0.94
54:S2:955:A:N6	54:S2:971:G:C1'	2.31	0.94
54:S2:1156:U:O4	57:SC:194:ARG:NH1	2.00	0.94
54:S2:1273:C:O2	54:S2:1506:A:C2	2.19	0.94
65:SO:72:TYR:HB2	74:SF:204:ARG:NH1	1.83	0.94
84:Sc:14:VAL:HG21	84:Sc:30:VAL:CG1	1.78	0.94
84:Sc:14:VAL:HA	84:Sc:31:ARG:O	1.68	0.94
1:A:67:TYR:CE1	32:5:4086:G:N7	2.35	0.94
8:N:65:ARG:NH1	32:5:2457:G:OP1	2.00	0.94
32:5:294:G:O2'	32:5:295:A:OP1	1.85	0.94
32:5:2301:G:C2	32:5:2302:C:C6	2.55	0.94
32:5:2428:A:C5	32:5:2789:A:C2	2.55	0.94
32:5:3731:C:N3	32:5:3732:A:C8	2.35	0.94
54:S2:18:C:O4'	54:S2:1194:A:N6	2.00	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SB:55:THR:O	56:SB:57:ILE:N	2.00	0.94
65:SO:72:TYR:HE1	84:Sc:63:ARG:NH1	1.60	0.94
32:5:271:C:C2	32:5:272:U:C6	2.55	0.94
32:5:425:U:O2	32:5:426:A:C8	2.21	0.94
32:5:2832:A:H2'	32:5:2833:A:H5''	1.50	0.94
32:5:3629:A:H4'	54:S2:1721:U:O2	1.67	0.94
32:5:3714:G:N1	32:5:3715:U:N3	2.14	0.94
34:8:73:U:C5	34:8:74:U:C6	2.56	0.94
54:S2:1114:U:N3	54:S2:1119:A:N6	2.16	0.94
54:S2:1258:A:C2	54:S2:1663:A:C5	2.55	0.94
84:Sc:44:ARG:HH12	84:Sc:58:LEU:HD22	1.33	0.94
32:5:977:C:N3	32:5:978:G:C8	2.30	0.93
32:5:1358:G:O2'	32:5:1359:G:O4'	1.86	0.93
32:5:1818:G:C8	32:5:1821:G:O6	2.19	0.93
32:5:4100:C:N3	32:5:4101:C:C5	2.36	0.93
33:7:54:A:H2	33:7:55:A:N7	1.59	0.93
11:R:172:ARG:CG	54:S2:909:G:OP2	2.15	0.93
32:5:1476:C:C2	32:5:1477:C:C6	2.57	0.93
32:5:3680:U:H2'	32:5:3680:U:O2	1.67	0.93
54:S2:381:C:H41	61:SI:49:ARG:HH11	0.95	0.93
54:S2:439:A:C2	54:S2:455:A:C2	2.56	0.93
84:Sc:31:ARG:HH12	84:Sc:41:SER:HB2	1.30	0.93
88:S1:48:CYS:C	88:S1:49:LEU:HD23	1.93	0.93
32:5:982:U:H2'	32:5:983:C:C6	2.03	0.93
32:5:2325:C:N3	32:5:2326:G:N7	2.16	0.93
32:5:2673:G:O4'	32:5:2675:G:H1'	1.69	0.93
32:5:4273:A:H2'	32:5:4274:A:O4'	1.67	0.93
32:5:4314:C:N3	32:5:4315:A:C8	2.37	0.93
48:z:414:THR:N	52:9:74:ARG:HG3	1.83	0.93
79:SR:103:LYS:HB2	79:SR:117:LEU:HD11	0.94	0.93
32:5:2059:C:N3	32:5:2060:G:N7	2.17	0.93
32:5:2078:C:C2	32:5:2079:G:H8	1.84	0.93
32:5:3873:G:H2'	32:5:3874:G:O4'	1.68	0.93
34:8:134:G:C2	34:8:135:C:C6	2.55	0.93
54:S2:426:A:N1	54:S2:427:U:C5	2.37	0.93
54:S2:841:G:C4	54:S2:842:C:C5	2.56	0.93
17:Y:11:ARG:NH2	36:C:200:ARG:NH2	2.11	0.93
32:5:98:A:C4	32:5:292:G:O6	2.21	0.93
32:5:3662:A:N1	32:5:3680:U:C4	2.36	0.93
32:5:4276:G:C5	32:5:4277:G:C8	2.55	0.93
32:5:4481:U:H2'	32:5:4482:U:C6	2.03	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4939:C:O2'	37:E:242:ARG:NH2	2.01	0.93
54:S2:983:A:OP1	54:S2:1073:U:O2'	1.87	0.93
54:S2:1051:G:C6	54:S2:1052:A:N7	2.37	0.93
32:5:1245:C:O2	32:5:1246:G:N7	2.01	0.93
32:5:1946:G:N1	32:5:2037:C:C5	2.37	0.93
32:5:2316:G:C2	32:5:2317:C:C4	2.57	0.93
32:5:3717:A:C6	32:5:3736:A:C6	2.56	0.93
32:5:4215:C:N3	32:5:4216:G:N7	2.17	0.93
32:5:4627:U:O2'	35:B:55:HIS:CE1	2.21	0.93
32:5:4934:A:C6	32:5:4935:C:C5	2.56	0.93
54:S2:447:A:C6	54:S2:449:A:C4	2.56	0.93
65:SO:75:MET:SD	84:Sc:62:GLU:OE1	2.26	0.93
65:SO:147:ARG:HB2	65:SO:147:ARG:CZ	1.99	0.93
18:Z:38:TYR:CE2	18:Z:76:ASN:OD1	2.22	0.93
32:5:126:C:N3	32:5:127:G:N7	2.16	0.93
32:5:246:G:C2	32:5:247:G:N7	2.37	0.93
54:S2:1666:C:C2	54:S2:1667:U:C5	2.56	0.93
55:SA:200:ASP:OD1	79:SR:89:SER:CB	2.17	0.93
56:SB:150:ILE:HD12	79:SR:129:LYS:HZ2	1.16	0.93
74:SF:192:LYS:HZ2	74:SF:196:LEU:HD23	1.25	0.93
32:5:291:U:H2'	32:5:292:G:H2'	1.48	0.93
32:5:300:A:C2	32:5:301:G:C5	2.56	0.93
32:5:1858:A:C2	32:5:1859:C:C5	2.57	0.93
32:5:2613:C:N3	32:5:2614:C:C5	2.37	0.93
32:5:5003:U:C2	32:5:5045:G:N2	2.37	0.93
54:S2:26:U:N3	54:S2:27:A:N7	2.17	0.93
54:S2:339:A:H2'	54:S2:340:C:C6	2.03	0.93
54:S2:1551:U:H2'	54:S2:1552:G:C1'	1.99	0.93
54:S2:1562:C:O2	54:S2:1563:G:C8	2.21	0.93
32:5:208:A:H1'	32:5:232:G:H21	1.29	0.93
32:5:2451:A:C5	32:5:2452:G:C8	2.57	0.93
32:5:3637:U:O4	32:5:3651:A:C2	2.21	0.93
32:5:3714:G:O6	32:5:3715:U:C4	2.20	0.93
32:5:3726:A:O2'	32:5:3727:A:C8	2.22	0.93
32:5:3867:A:C2	32:5:3880:G:O6	2.22	0.93
54:S2:158:A:N6	54:S2:466:G:O6	2.00	0.93
54:S2:1122:A:C6	54:S2:1123:C:C5	2.56	0.93
19:a:40:HIS:CE1	32:5:39:A:C2	2.57	0.93
32:5:56:A:N1	32:5:57:G:C6	2.37	0.93
32:5:1188:C:N3	32:5:1189:G:N7	2.17	0.93
32:5:1598:C:O2	32:5:1598:C:H2'	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1926:C:N3	32:5:1927:U:C5	2.36	0.93
32:5:1936:C:C6	33:7:84:U:C6	2.57	0.93
32:5:2590:G:N1	32:5:2754:G:C2	2.37	0.93
32:5:4653:C:O2	32:5:4654:C:C6	2.22	0.93
54:S2:618:C:C4	54:S2:619:A:N7	2.36	0.93
54:S2:1063:C:O2'	54:S2:1838:U:C5	2.12	0.93
54:S2:1545:A:C6	54:S2:1588:A:C6	2.57	0.93
55:SA:200:ASP:CB	79:SR:85:VAL:HG12	1.81	0.93
32:5:1198:G:H2'	32:5:1199:G:C8	2.03	0.92
32:5:1771:U:H2'	32:5:1772:C:O4'	1.69	0.92
32:5:4072:C:C2	32:5:4073:A:C8	2.56	0.92
32:5:4601:U:C4	32:5:4609:G:N2	2.37	0.92
50:3:39:G:N2	50:3:40:C:C2	2.37	0.92
54:S2:971:G:O2'	54:S2:972:A:C8	2.21	0.92
54:S2:1114:U:C4	54:S2:1119:A:N1	2.35	0.92
54:S2:1134:G:N3	54:S2:1135:C:C6	2.36	0.92
54:S2:1551:U:O4'	54:S2:1558:C:O2	1.87	0.92
32:5:1340:C:C2	32:5:1341:U:C6	2.56	0.92
32:5:2446:C:H2'	32:5:2447:U:C6	2.04	0.92
32:5:3759:A:C2	54:S2:1709:G:C4'	2.48	0.92
32:5:4080:C:N3	32:5:4081:G:N7	2.17	0.92
34:8:96:C:N3	34:8:97:A:C8	2.36	0.92
34:8:119:C:O2	34:8:120:G:C8	2.23	0.92
48:z:377:THR:HG21	51:4:194:G:H5'	1.49	0.92
54:S2:22:A:C2	54:S2:653:A:C2	2.57	0.92
74:SF:128:ILE:HD12	84:Sc:68:LEU:HD12	1.49	0.92
32:5:1899:G:N7	32:5:2278:G:N1	2.17	0.92
48:z:407:ALA:HA	48:z:412:VAL:O	1.69	0.92
54:S2:994:C:C2	54:S2:995:G:C8	2.58	0.92
74:SF:95:HIS:CD2	83:SZ:108:ILE:CD1	2.52	0.92
32:5:287:U:N3	32:5:288:G:N7	2.17	0.92
32:5:2436:U:O4	32:5:2783:A:C8	2.22	0.92
32:5:2457:G:N2	32:5:2465:C:C2	2.38	0.92
32:5:2724:G:C2	32:5:2726:G:C5	2.58	0.92
32:5:4276:G:O6	32:5:4277:G:C5	2.23	0.92
32:5:5047:C:C2	32:5:5048:A:C6	2.56	0.92
34:8:10:G:C5	34:8:11:C:C6	2.58	0.92
54:S2:870:A:N6	54:S2:915:G:N3	2.17	0.92
54:S2:923:G:N2	54:S2:1022:U:C4	2.37	0.92
1:A:67:TYR:CE1	32:5:4086:G:C8	2.57	0.92
32:5:2260:C:H2'	32:5:2261:G:N7	1.84	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2529:A:C5	32:5:2532:C:C5	2.56	0.92
32:5:3939:G:N3	32:5:4076:G:O6	2.01	0.92
32:5:5044:A:C2'	32:5:5045:G:H5'	1.99	0.92
34:8:133:G:N1	34:8:134:G:N7	2.17	0.92
54:S2:555:A:C2	54:S2:557:U:C5	2.56	0.92
54:S2:1540:G:N1	54:S2:1541:G:C5	2.37	0.92
32:5:1301:C:N3	32:5:1302:U:C5	2.38	0.92
32:5:1339:U:C2	32:5:1340:C:C5	2.57	0.92
32:5:1866:U:O2'	32:5:1867:A:O5'	1.88	0.92
54:S2:1149:A:C2	54:S2:1151:G:N7	2.38	0.92
54:S2:1310:U:O4'	86:Sf:143:LYS:HE3	1.69	0.92
13:T:140:PHE:HE1	32:5:1089:G:H5'	1.33	0.92
19:a:61:TYR:CE1	32:5:294:G:C2	2.56	0.92
32:5:977:C:O2	32:5:978:G:C8	2.23	0.92
32:5:1324:A:C2	32:5:3876:A:H2'	2.04	0.92
32:5:1916:G:N2	32:5:2067:C:O2	2.03	0.92
32:5:2089:G:C6	32:5:2263:A:C5	2.58	0.92
32:5:2370:A:HO2'	32:5:2826:U:H3	1.08	0.92
32:5:4355:G:C2	32:5:4356:G:C8	2.57	0.92
48:z:381:SER:HA	51:4:207:C:O2	1.69	0.92
50:3:34:A:N1	54:S2:1701:C:H6	1.67	0.92
54:S2:436:G:C6	54:S2:458:A:C2	2.57	0.92
54:S2:452:G:C2	54:S2:453:C:C4	2.58	0.92
8:N:30:TYR:CE1	8:N:63:ARG:HD2	2.03	0.92
32:5:100:C:C5	32:5:101:A:H8	1.83	0.92
32:5:3759:A:C6	54:S2:1709:G:C5'	2.53	0.92
32:5:4414:A:C6	32:5:4427:G:N1	2.38	0.92
32:5:1563:A:C6	54:S2:677:G:O2'	2.20	0.92
32:5:2288:G:C2	32:5:2290:C:C6	2.56	0.92
32:5:3868:G:C6	32:5:4562:C:H1'	2.03	0.92
32:5:42:A:N6	32:5:4379:A:C2	2.38	0.92
32:5:70:A:C2	32:5:4355:G:C1'	2.53	0.92
32:5:173:C:O2	32:5:174:C:C6	2.23	0.92
32:5:1302:U:C4	32:5:1303:A:N7	2.38	0.92
32:5:4440:G:O2'	39:I:103:LEU:HD13	1.70	0.92
37:E:157:ARG:HD2	37:E:266:TYR:CD1	2.05	0.92
54:S2:105:U:C4	54:S2:106:C:C6	2.58	0.92
54:S2:1293:A:N3	86:Sf:150:PHE:C	2.27	0.92
32:5:957:G:O5'	32:5:1284:G:C2	2.23	0.91
32:5:1321:G:N2	32:5:3876:A:C4	2.38	0.91
32:5:3702:A:C2	32:5:3703:G:H8	1.85	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4341:C:C4	32:5:4342:C:C6	2.57	0.91
34:8:68:G:C2	34:8:91:A:C2	2.58	0.91
54:S2:387:C:C2	54:S2:388:U:C5	2.58	0.91
54:S2:460:A:N1	54:S2:461:U:H5	1.68	0.91
75:SK:95:ARG:HA	75:SK:95:ARG:HE	1.35	0.91
79:SR:66:VAL:HB	79:SR:69:ILE:HB	1.50	0.91
32:5:711:A:C2	32:5:712:C:C5	2.58	0.91
32:5:970:G:H2'	32:5:971:U:O4'	1.68	0.91
32:5:1354:A:N7	32:5:1503:A:C2	2.38	0.91
32:5:1936:C:N3	32:5:1937:C:C5	2.38	0.91
32:5:2497:C:C2	32:5:2498:C:C5	2.58	0.91
32:5:4213:A:H61	32:5:4218:U:H3	1.18	0.91
32:5:4229:U:N3	32:5:4230:C:C6	2.38	0.91
48:z:381:SER:HB3	51:4:207:C:O2'	1.69	0.91
54:S2:403:G:C6	54:S2:404:G:N7	2.38	0.91
54:S2:404:G:C2	54:S2:405:G:C8	2.57	0.91
54:S2:1293:A:N3	86:Sf:151:ASN:CA	2.32	0.91
32:5:2632:U:O2	32:5:2633:U:C5	2.23	0.91
32:5:4095:G:N2	32:5:4096:C:N4	2.18	0.91
48:z:413:SER:HA	52:9:74:ARG:NE	1.83	0.91
54:S2:1407:U:H2'	54:S2:1408:U:C6	2.04	0.91
84:Sc:41:SER:C	84:Sc:42:ILE:HD12	1.94	0.91
32:5:3723:A:C2	32:5:3724:A:C6	2.58	0.91
32:5:4999:G:N1	32:5:5000:G:N7	2.18	0.91
34:8:65:A:C2	34:8:66:A:N7	2.39	0.91
32:5:754:U:N3	32:5:755:C:C5	2.39	0.91
32:5:1632:A:N1	32:5:1634:A:C8	2.39	0.91
54:S2:821:G:O6	62:SJ:150:ARG:HD2	1.69	0.91
54:S2:933:G:N2	54:S2:1000:C:N3	2.18	0.91
74:SF:140:ASP:HB2	84:Sc:56:LEU:CG	2.01	0.91
48:z:352:ILE:N	48:z:355:PHE:HZ	1.51	0.91
48:z:412:VAL:CG2	48:z:416:ASP:HB2	1.97	0.91
50:3:39:G:N2	50:3:40:C:N1	2.18	0.91
54:S2:1283:C:N4	76:SM:103:VAL:HA	1.85	0.91
54:S2:1538:C:N3	54:S2:1539:U:H5	1.68	0.91
55:SA:12:GLU:CD	79:SR:111:PHE:HD1	1.77	0.91
65:SO:72:TYR:HD1	84:Sc:63:ARG:NH1	1.51	0.91
32:5:370:U:C5	32:5:1637:A:C6	2.59	0.91
32:5:1289:C:C2	32:5:1290:G:C8	2.58	0.91
32:5:1302:U:C2	32:5:1303:A:H8	1.87	0.91
32:5:2851:G:N7	32:5:2852:U:C5	2.39	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1667:U:C2	54:S2:1668:U:C5	2.58	0.91
32:5:1390:G:N7	32:5:1392:A:OP2	2.04	0.91
32:5:1598:C:O2	32:5:1599:A:H8	1.54	0.91
32:5:1634:A:C6	32:5:1635:C:C5	2.58	0.91
32:5:4166:G:N1	32:5:4167:G:C5	2.38	0.91
48:z:410:SER:HB3	51:4:193:G:C2	2.05	0.91
54:S2:118:C:C1'	54:S2:445:A:C2	2.53	0.91
54:S2:1316:C:C2	54:S2:1317:C:C5	2.58	0.91
54:S2:1527:C:N3	54:S2:1528:G:C8	2.38	0.91
32:5:1671:U:N3	32:5:1672:U:H5	1.68	0.91
32:5:1884:C:H42	32:5:1896:A:H2	1.17	0.91
32:5:2058:G:N1	32:5:2059:C:C4	2.39	0.91
32:5:2326:G:N1	32:5:2327:G:C5	2.39	0.91
32:5:3791:C:N3	32:5:3802:U:C6	2.38	0.91
34:8:10:G:N2	34:8:11:C:H1'	1.83	0.91
34:8:10:G:O6	34:8:11:C:C5	2.22	0.91
34:8:134:G:C6	34:8:135:C:C5	2.59	0.91
48:z:339:ILE:HG21	49:2:83:LEU:HD13	1.53	0.91
48:z:404:GLN:HB3	52:9:72:TRP:HE1	1.36	0.91
50:3:39:G:N1	50:3:40:C:C4	2.38	0.91
54:S2:858:A:C2	54:S2:859:G:C8	2.59	0.91
61:SI:168:GLN:HE21	61:SI:170:LYS:HE2	1.21	0.91
32:5:440:U:C2	32:5:441:G:C8	2.59	0.91
32:5:962:C:OP2	32:5:2264:C:N3	2.03	0.91
32:5:1213:G:C5	32:5:1215:C:C6	2.59	0.91
32:5:2658:G:C2	32:5:2675:G:N2	2.39	0.91
32:5:4097:G:C2	32:5:4098:A:C8	2.59	0.91
32:5:4562:C:N3	32:5:4563:U:C5	2.39	0.91
37:E:181:PRO:HA	37:E:246:GLN:HE22	1.34	0.91
47:q:32:ALA:CB	47:q:187:LEU:CD2	2.49	0.91
48:z:359:PHE:HD2	48:z:360:MET:HG3	1.36	0.91
54:S2:1101:U:C2	54:S2:1102:G:N7	2.39	0.91
54:S2:1149:A:N1	54:S2:1151:G:C5	2.40	0.91
54:S2:1316:C:O2	54:S2:1317:C:C6	2.23	0.91
54:S2:1420:G:HO2'	81:ST:4:VAL:N	1.69	0.91
54:S2:1539:U:C2	54:S2:1540:G:N7	2.39	0.91
84:Sc:14:VAL:HG13	84:Sc:31:ARG:C	1.95	0.91
32:5:44:A:C2	32:5:45:U:C6	2.58	0.90
32:5:491:G:N2	32:5:663:G:N1	2.18	0.90
54:S2:310:C:H2'	54:S2:311:C:C6	2.06	0.90
54:S2:792:C:C2	54:S2:793:G:C8	2.59	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:830:A:N1	54:S2:844:U:O4	2.04	0.90
54:S2:955:A:N7	54:S2:969:U:C6	2.39	0.90
79:SR:57:LEU:O	79:SR:61:ILE:HG13	1.69	0.90
16:X:117:TYR:CD1	16:X:153:ILE:HG22	2.07	0.90
17:Y:11:ARG:HH11	17:Y:15:ARG:HD2	1.36	0.90
32:5:2508:U:C2	32:5:2509:C:C5	2.55	0.90
32:5:2743:A:N3	32:5:2744:A:N7	2.19	0.90
32:5:4481:U:H2'	32:5:4482:U:H6	1.34	0.90
54:S2:414:A:C2	54:S2:424:C:C2	2.59	0.90
54:S2:449:A:C6	54:S2:452:G:C6	2.58	0.90
84:Sc:14:VAL:HG22	84:Sc:32:VAL:CA	2.01	0.90
32:5:2497:C:O2	32:5:2498:C:C6	2.24	0.90
32:5:3790:U:N3	32:5:3792:G:O4'	2.02	0.90
38:F:107:VAL:HG11	38:F:141:TYR:CE1	2.06	0.90
39:I:101:LYS:HE2	39:I:121:LYS:CB	2.02	0.90
54:S2:339:A:C2	54:S2:340:C:C4	2.60	0.90
54:S2:459:C:C4	54:S2:460:A:C8	2.60	0.90
54:S2:1249:C:C4	54:S2:1250:A:N7	2.39	0.90
32:5:173:C:C2	32:5:174:C:C6	2.58	0.90
32:5:3711:A:N7	32:5:3712:A:H1'	1.85	0.90
32:5:4080:C:C2	32:5:4081:G:C8	2.59	0.90
54:S2:56:G:C6	54:S2:90:G:C2	2.60	0.90
84:Sc:31:ARG:HH11	84:Sc:31:ARG:HG2	1.36	0.90
3:G:53:ARG:NH2	3:G:54:PHE:HZ	1.66	0.90
4:H:156:ASN:OD1	4:H:157:SER:N	2.04	0.90
6:L:65:ARG:NH1	32:5:1382:G:OP1	2.03	0.90
11:R:172:ARG:CD	54:S2:909:G:OP2	2.19	0.90
32:5:153:G:C2	32:5:154:G:N7	2.40	0.90
32:5:466:A:C2	32:5:467:U:C5	2.59	0.90
32:5:1662:C:C2	32:5:1663:C:C5	2.59	0.90
32:5:1843:A:C2	32:5:1844:G:C8	2.59	0.90
32:5:2724:G:C2	32:5:2726:G:C8	2.60	0.90
32:5:2736:G:N3	32:5:2737:C:C6	2.39	0.90
32:5:3714:G:C2	32:5:3715:U:C2	2.58	0.90
32:5:3730:U:N3	32:5:3731:C:C5	2.39	0.90
32:5:3755:G:N1	32:5:3770:U:C5	2.39	0.90
43:n:11:ARG:CZ	54:S2:1844:U:OP1	2.20	0.90
54:S2:646:G:C6	54:S2:647:U:C6	2.59	0.90
54:S2:1527:C:N4	54:S2:1528:G:N7	2.19	0.90
32:5:146:G:C2	32:5:147:A:C8	2.59	0.90
32:5:1465:G:C6	32:5:1466:G:C8	2.59	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4080:C:C2	32:5:4081:G:H8	1.88	0.90
50:3:46:G:H3'	50:3:47:U:P	2.12	0.90
54:S2:999:G:C6	54:S2:1000:C:C5	2.59	0.90
54:S2:1855:G:OP2	65:SO:147:ARG:NH2	2.05	0.90
32:5:1266:G:H5''	32:5:2112:G:N3	1.85	0.90
32:5:2079:G:N1	32:5:2080:U:C5	2.39	0.90
32:5:2399:G:C2	32:5:2400:G:C8	2.58	0.90
32:5:2736:G:N2	32:5:2737:C:C2	2.40	0.90
34:8:65:A:N3	34:8:66:A:C8	2.40	0.90
47:q:108:PRO:HB2	47:q:184:SER:CB	2.01	0.90
54:S2:85:A:C2	54:S2:86:C:C5	2.59	0.90
54:S2:848:U:C2	54:S2:849:A:N7	2.40	0.90
80:SS:10:GLN:CG	80:SS:13:LEU:HD21	2.01	0.90
84:Sc:13:ARG:HD3	84:Sc:13:ARG:H	1.32	0.90
32:5:370:U:C4	32:5:1637:A:C6	2.60	0.90
32:5:2036:C:N3	32:5:2037:C:N4	2.18	0.90
32:5:2568:C:O2	32:5:2569:G:C8	2.25	0.90
32:5:3710:G:C2	32:5:3711:A:C6	2.59	0.90
54:S2:386:C:O2	54:S2:387:C:C6	2.25	0.90
54:S2:875:A:N1	54:S2:876:C:C6	2.40	0.90
54:S2:1000:C:H2'	54:S2:1000:C:O2	1.68	0.90
54:S2:1291:A:P	86:Sf:146:LEU:HG	2.12	0.90
65:SO:72:TYR:CD1	84:Sc:63:ARG:CZ	2.47	0.90
11:R:120:TYR:OH	32:5:2665:U:OP2	1.88	0.90
23:e:108:ARG:HD3	23:e:128:ARG:HB2	1.54	0.90
32:5:293:G:H2'	32:5:297:U:C1'	2.01	0.90
32:5:1359:G:H2'	32:5:1360:G:C8	2.07	0.90
32:5:2251:G:O4'	32:5:2252:G:N2	2.05	0.90
32:5:4344:U:C2	32:5:4345:C:C5	2.60	0.90
32:5:4549:G:N1	32:5:4550:G:N7	2.20	0.90
54:S2:341:C:N4	54:S2:342:C:C5	2.39	0.90
54:S2:460:A:N1	54:S2:461:U:C5	2.40	0.90
54:S2:1018:U:N3	54:S2:1019:C:C5	2.40	0.90
54:S2:1292:C:O4'	86:Sf:148:TYR:C	2.15	0.90
32:5:66:A:C2	32:5:312:G:O4'	2.25	0.90
32:5:173:C:C2	32:5:174:C:C5	2.60	0.90
32:5:2441:C:C2	32:5:2442:G:N7	2.41	0.90
32:5:4342:C:C4	32:5:4343:U:C5	2.60	0.90
34:8:12:G:N1	34:8:13:G:C8	2.37	0.90
54:S2:402:C:C4	54:S2:403:G:N7	2.40	0.90
54:S2:1018:U:O2	54:S2:1019:C:C6	2.24	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1133:A:N1	54:S2:1134:G:C8	2.32	0.90
54:S2:1417:C:N3	54:S2:1419:C:H5	1.69	0.90
83:SZ:49:LEU:HD23	83:SZ:83:LEU:HD13	1.52	0.90
84:Sc:13:ARG:HB3	84:Sc:54:ASP:O	1.68	0.90
11:R:95:TRP:O	11:R:98:ARG:N	2.05	0.89
11:R:131:VAL:HB	11:R:132:PHE:CZ	2.06	0.89
48:z:297:MET:HE3	48:z:355:PHE:HD1	1.12	0.89
54:S2:165:G:H8	54:S2:166:A:C8	1.89	0.89
54:S2:341:C:C4	54:S2:342:C:C5	2.60	0.89
84:Sc:14:VAL:CG1	84:Sc:31:ARG:C	2.44	0.89
31:o:15:CYS:HG	91:o:201:ZN:ZN	0.60	0.89
34:8:65:A:C2	34:8:66:A:C5	2.60	0.89
48:z:293:LYS:HG2	48:z:351:MET:CA	2.01	0.89
50:3:31:C:H2'	50:3:32:C:O4'	1.71	0.89
54:S2:11:A:C2	54:S2:12:U:C6	2.60	0.89
54:S2:120:U:N3	54:S2:121:U:C5	2.39	0.89
11:R:149:LYS:C	11:R:150:ALA:CA	2.45	0.89
32:5:2504:C:O2	32:5:2505:C:C5	2.25	0.89
54:S2:799:U:C5'	60:SH:110:THR:HG22	2.02	0.89
54:S2:1114:U:H3	54:S2:1119:A:N6	1.70	0.89
56:SB:62:LEU:HD13	56:SB:65:ARG:NH2	1.86	0.89
65:SO:72:TYR:HD1	84:Sc:63:ARG:HH22	1.17	0.89
21:c:101:ASP:HB3	64:SN:43:LYS:HA	1.53	0.89
32:5:1750:G:C2	32:5:1751:A:C8	2.61	0.89
32:5:4276:G:C6	32:5:4277:G:N7	2.39	0.89
34:8:119:C:C2	34:8:120:G:C8	2.59	0.89
54:S2:1050:A:N7	54:S2:1051:G:C8	2.41	0.89
54:S2:1315:U:N3	54:S2:1316:C:C5	2.41	0.89
16:X:117:TYR:O	16:X:119:ILE:N	2.06	0.89
32:5:78:U:C2	32:5:336:A:N6	2.41	0.89
32:5:144:G:C2	32:5:145:G:N7	2.41	0.89
32:5:1392:A:C2	32:5:1393:G:N7	2.41	0.89
48:z:410:SER:HA	51:4:194:G:C1'	2.03	0.89
50:3:39:G:C2	50:3:40:C:C5	2.60	0.89
54:S2:1293:A:C4	86:Sf:150:PHE:HB3	2.07	0.89
54:S2:1539:U:C2	54:S2:1540:G:C8	2.59	0.89
84:Sc:14:VAL:HG21	84:Sc:30:VAL:HG12	0.97	0.89
32:5:4490:C:N3	32:5:4491:G:C8	2.41	0.89
32:5:1325:C:C4'	32:5:3901:A:N1	2.34	0.89
32:5:2401:A:C2	32:5:2402:G:C8	2.60	0.89
32:5:3944:G:C2	32:5:3945:A:C8	2.61	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:72:C:H3'	50:3:73:A:H5''	1.53	0.89
54:S2:469:A:C2	54:S2:470:G:C8	2.58	0.89
54:S2:1455:A:N1	54:S2:1456:G:C8	2.41	0.89
54:S2:1569:A:C8	54:S2:1570:G:H1'	2.07	0.89
54:S2:1666:C:C2	54:S2:1667:U:C6	2.61	0.89
32:5:152:U:N3	32:5:153:G:N7	2.20	0.89
32:5:1247:U:N3	32:5:1248:C:C5	2.41	0.89
32:5:1248:C:C2	32:5:1249:C:C6	2.60	0.89
32:5:1674:C:N3	32:5:1675:C:C5	2.41	0.89
32:5:1676:C:O2'	32:5:3914:U:C4	2.22	0.89
32:5:2495:U:O2	32:5:2496:G:C8	2.25	0.89
32:5:2859:G:N2	32:5:3837:C:O2	2.05	0.89
32:5:4233:A:H61	32:5:4290:U:H3	1.08	0.89
54:S2:618:C:C4	54:S2:619:A:C8	2.60	0.89
54:S2:1110:G:O2'	79:SR:122:PRO:CB	2.20	0.89
32:5:1563:A:H8	54:S2:678:U:H4'	1.36	0.89
32:5:2529:A:C6	32:5:2532:C:C6	2.61	0.89
48:z:413:SER:CA	52:9:74:ARG:HD2	1.93	0.89
54:S2:337:C:N3	54:S2:338:G:N7	2.20	0.89
54:S2:600:G:C5	54:S2:631:U:C4	2.61	0.89
54:S2:869:A:N7	60:SH:115:LYS:CB	2.35	0.89
54:S2:875:A:C6	54:S2:876:C:C6	2.60	0.89
58:SE:100:ARG:NH1	58:SE:121:TYR:OH	2.06	0.89
32:5:983:C:C2	32:5:984:C:C6	2.60	0.89
32:5:3596:A:C6	63:SL:2:ALA:HB2	2.06	0.89
32:5:3662:A:C2	32:5:3680:U:O4	2.25	0.89
34:8:39:G:O2'	34:8:103:A:N6	2.06	0.89
54:S2:1030:A:C2	54:S2:1031:A:N7	2.40	0.89
54:S2:1455:A:C6	54:S2:1456:G:N7	2.41	0.89
56:SB:51:ARG:HB2	56:SB:51:ARG:NH1	1.86	0.89
32:5:457:G:C2	32:5:458:C:C6	2.60	0.88
32:5:2576:G:C6	32:5:2577:C:C5	2.61	0.88
54:S2:1291:A:C5'	86:Sf:146:LEU:HD12	2.02	0.88
54:S2:1408:U:C2'	54:S2:1409:A:C8	2.56	0.88
32:5:146:G:C2	32:5:147:A:N7	2.40	0.88
32:5:1262:G:C2	32:5:1263:A:C8	2.62	0.88
32:5:2856:C:O2	32:5:2857:A:H8	1.48	0.88
32:5:3596:A:C2	63:SL:2:ALA:HB2	2.08	0.88
32:5:3909:C:O2	32:5:3910:C:C6	2.26	0.88
47:q:106:LYS:C	47:q:107:VAL:HG13	1.98	0.88
48:z:359:PHE:CD2	48:z:360:MET:HG3	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:38:C:C2	50:3:39:G:H8	1.83	0.88
54:S2:394:G:C2	54:S2:395:G:C8	2.62	0.88
55:SA:50:ASN:HA	79:SR:105:MET:HE1	1.04	0.88
32:5:1960:A:C2	47:q:14:PHE:CD2	2.61	0.88
54:S2:1123:C:C4	54:S2:1124:C:C5	2.61	0.88
54:S2:1422:G:N2	54:S2:1424:G:C8	2.42	0.88
54:S2:1710:C:N3	54:S2:1711:U:C5	2.40	0.88
56:SB:52:THR:HG23	56:SB:57:ILE:HA	1.55	0.88
84:Sc:14:VAL:CG1	84:Sc:31:ARG:H	1.87	0.88
32:5:753:C:N3	32:5:754:U:C5	2.42	0.88
32:5:2453:A:C2	32:5:2454:U:C6	2.61	0.88
32:5:3653:A:N1	32:5:3692:A:H4'	1.88	0.88
32:5:3674:G:C2	32:5:3675:G:C8	2.61	0.88
32:5:3741:C:O2	32:5:3742:G:C8	2.26	0.88
32:5:4878:C:C2	32:5:4879:C:C5	2.61	0.88
48:z:337:GLN:O	48:z:341:LYS:N	2.05	0.88
51:4:57:G:C6	51:4:289:A:C6	2.61	0.88
54:S2:377:G:C2	54:S2:378:U:C6	2.61	0.88
54:S2:444:G:H21	54:S2:446:G:H8	0.90	0.88
54:S2:494:C:H2'	54:S2:494:C:O2	1.70	0.88
54:S2:955:A:N7	54:S2:969:U:C5	2.41	0.88
54:S2:1248:U:H2'	54:S2:1249:C:H1'	1.54	0.88
54:S2:1308:U:C2	54:S2:1309:C:C5	2.61	0.88
54:S2:1540:G:N3	54:S2:1541:G:C8	2.41	0.88
32:5:1247:U:C2	32:5:1248:C:C6	2.61	0.88
32:5:2272:C:O2'	32:5:2273:G:H5'	1.73	0.88
32:5:2327:G:N1	32:5:2328:G:N7	2.21	0.88
32:5:2646:C:O2	32:5:2647:A:H8	1.57	0.88
34:8:119:C:N3	34:8:120:G:C8	2.41	0.88
54:S2:341:C:C4	54:S2:342:C:C6	2.60	0.88
54:S2:1135:C:C2	54:S2:1136:U:C5	2.61	0.88
74:SF:192:LYS:HZ2	74:SF:196:LEU:CD2	1.84	0.88
32:5:2668:G:H2'	32:5:2669:C:H5'	1.56	0.88
32:5:2851:G:C6	32:5:2852:U:C6	2.62	0.88
54:S2:694:G:C2	54:S2:695:C:C5	2.62	0.88
54:S2:908:A:C2	54:S2:909:G:N7	2.41	0.88
74:SF:128:ILE:HD11	84:Sc:68:LEU:C	1.99	0.88
84:Sc:45:ASN:HD21	84:Sc:68:LEU:HD22	0.97	0.88
32:5:172:C:C2	32:5:173:C:C6	2.62	0.88
32:5:730:G:N2	32:5:939:G:N2	2.22	0.88
32:5:1876:U:C2	32:5:1877:G:C8	2.62	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4174:U:O2	32:5:4175:G:H8	1.51	0.88
34:8:10:G:C2	34:8:11:C:N1	2.42	0.88
42:j:22:CYS:SG	91:j:101:ZN:ZN	1.62	0.88
54:S2:551:U:O2'	72:Se:44:ASN:OD1	1.91	0.88
54:S2:955:A:H62	54:S2:971:G:C1'	1.85	0.88
54:S2:1204:A:N3	54:S2:1205:C:C2	2.42	0.88
54:S2:1307:U:C2	54:S2:1308:U:H1'	2.09	0.88
32:5:106:A:H1'	32:5:336:A:C8	2.09	0.88
32:5:424:U:O2	32:5:425:U:C6	2.26	0.88
32:5:451:C:N4	32:5:1295:C:H2'	1.89	0.88
32:5:4518:A:HO2'	35:B:257:TRP:HZ3	0.93	0.88
32:5:4884:G:C2	32:5:4885:U:C6	2.62	0.88
48:z:360:MET:HG2	48:z:365:GLU:HG3	1.54	0.88
54:S2:1398:G:C2	54:S2:1399:C:C6	2.62	0.88
54:S2:1508:A:C5	54:S2:1510:G:C8	2.62	0.88
79:SR:100:PRO:HD3	79:SR:119:VAL:HG12	1.51	0.88
16:X:117:TYR:CE1	16:X:153:ILE:CG2	2.56	0.88
32:5:709:C:C2	32:5:710:G:C8	2.62	0.88
32:5:1213:G:C6	32:5:1215:C:C2	2.62	0.88
32:5:1269:G:C5	32:5:2111:G:C2	2.61	0.88
32:5:1635:C:N3	32:5:1636:U:C5	2.41	0.88
32:5:4092:G:C6	32:5:4093:G:C2	2.62	0.88
33:7:18:C:N3	33:7:19:C:H5	1.43	0.88
54:S2:341:C:N3	54:S2:342:C:C6	2.41	0.88
54:S2:694:G:N2	54:S2:695:C:C2	2.42	0.88
54:S2:998:A:C8	54:S2:999:G:O4'	2.26	0.88
54:S2:1093:A:C6	54:S2:1094:C:C5	2.61	0.88
54:S2:1232:U:O2	54:S2:1233:G:H8	1.52	0.88
54:S2:1538:C:N3	54:S2:1539:U:C5	2.42	0.88
56:SB:79:VAL:HB	56:SB:81:PHE:CZ	2.09	0.88
32:5:1339:U:O2	32:5:1340:C:C5	2.26	0.88
32:5:2035:C:N3	32:5:2036:C:C6	2.42	0.88
48:z:409:GLY:C	51:4:194:G:N3	2.32	0.88
48:z:411:GLY:H	51:4:194:G:N2	1.72	0.88
54:S2:868:G:N2	60:SH:115:LYS:HA	1.89	0.88
54:S2:1203:G:H3'	54:S2:1204:A:C8	2.09	0.88
54:S2:1205:C:C6	54:S2:1206:G:C8	2.62	0.88
74:SF:194:ASP:CG	74:SF:195:GLU:OE1	2.17	0.88
79:SR:18:GLU:OE1	79:SR:70:SER:HB2	1.74	0.88
81:ST:31:PRO:HB2	81:ST:33:TRP:CH2	2.07	0.88
32:5:278:G:C2	32:5:330:G:C8	2.62	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:471:A:C5	32:5:472:C:C6	2.61	0.87
32:5:658:C:C2	32:5:659:G:C8	2.61	0.87
32:5:1321:G:O4'	32:5:1891:A:N6	2.07	0.87
32:5:1392:A:N3	32:5:1393:G:N7	2.21	0.87
32:5:1950:U:C2	32:5:1951:G:C8	2.62	0.87
32:5:2081:C:H2'	32:5:2082:G:O5'	1.71	0.87
32:5:2826:U:H1'	32:5:2827:G:H1	1.37	0.87
32:5:2857:A:O2'	32:5:2858:A:O5'	1.90	0.87
32:5:4284:C:N3	32:5:4285:U:H5	1.66	0.87
54:S2:387:C:N3	54:S2:388:U:H5	1.69	0.87
54:S2:1501:C:N3	54:S2:1502:C:C5	2.42	0.87
74:SF:122:ARG:HB3	84:Sc:57:THR:CG2	2.05	0.87
79:SR:91:LEU:CD1	79:SR:93:GLN:H	1.87	0.87
32:5:55:G:C2	32:5:56:A:C8	2.62	0.87
32:5:1542:U:O2	32:5:1543:G:C8	2.27	0.87
32:5:3629:A:C1'	54:S2:1721:U:H3	1.88	0.87
54:S2:381:C:N4	61:SI:49:ARG:HG2	1.89	0.87
54:S2:961:G:C2	54:S2:962:A:C8	2.61	0.87
54:S2:1063:C:C4'	54:S2:1838:U:O4	2.23	0.87
54:S2:1452:A:H4'	54:S2:1453:C:O4'	1.74	0.87
32:5:1757:U:C2	32:5:1758:G:C8	2.62	0.87
32:5:1876:U:N3	32:5:1877:G:C8	2.42	0.87
32:5:2507:A:N1	32:5:2508:U:H1'	1.88	0.87
32:5:2515:G:N7	32:5:2516:G:N7	2.23	0.87
32:5:4123:C:C4	32:5:4124:G:N7	2.41	0.87
50:3:38:C:H4'	54:S2:1058:A:H8	1.40	0.87
54:S2:305:U:O2'	54:S2:306:C:OP1	1.91	0.87
54:S2:995:G:N2	54:S2:996:A:O2'	2.08	0.87
54:S2:996:A:C6	64:SN:113:PHE:CE2	2.62	0.87
32:5:2452:G:N1	32:5:2467:U:C5	2.43	0.87
32:5:3606:U:N3	32:5:3607:U:C5	2.42	0.87
32:5:3695:U:C4	32:5:3696:C:C5	2.62	0.87
32:5:3907:G:N9	32:5:4449:A:H1'	1.90	0.87
54:S2:1018:U:C2	54:S2:1019:C:C5	2.62	0.87
54:S2:1398:G:N2	54:S2:1399:C:C6	2.42	0.87
54:S2:1454:A:C8	54:S2:1476:A:H1'	2.10	0.87
74:SF:102:LEU:HD13	83:SZ:110:THR:CG2	2.03	0.87
80:SS:7:GLU:N	80:SS:7:GLU:OE2	2.07	0.87
32:5:294:G:H5'	32:5:296:A:H5''	1.51	0.87
32:5:1625:G:C4	32:5:1642:A:N1	2.43	0.87
32:5:1634:A:N1	32:5:1635:C:C4	2.42	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2054:U:H4'	32:5:2056:G:H1'	1.55	0.87
32:5:3909:C:O2	32:5:3909:C:H2'	1.75	0.87
32:5:4189:U:H1'	32:5:4380:A:C2	2.09	0.87
32:5:4257:A:H2'	32:5:4258:C:C6	2.09	0.87
32:5:4325:A:H2'	32:5:4326:G:O4'	1.75	0.87
54:S2:459:C:C2	54:S2:460:A:C8	2.63	0.87
54:S2:1564:C:C2	54:S2:1565:C:C5	2.62	0.87
79:SR:65:PRO:HB3	79:SR:74:GLN:NE2	1.88	0.87
32:5:291:U:O2	32:5:292:G:O2'	1.92	0.87
32:5:961:G:H2'	32:5:961:G:N3	1.89	0.87
32:5:983:C:C2	32:5:984:C:C5	2.63	0.87
32:5:2268:A:H4'	32:5:2269:C:C5'	2.03	0.87
32:5:2613:C:C2	32:5:2614:C:C6	2.63	0.87
34:8:11:C:O2	34:8:12:G:H8	1.56	0.87
74:SF:95:HIS:CD2	83:SZ:108:ILE:HD13	2.07	0.87
83:SZ:48:VAL:HG12	83:SZ:83:LEU:HD11	1.56	0.87
32:5:1049:C:N3	32:5:1050:C:C5	2.43	0.87
32:5:1936:C:H5	33:7:84:U:C5	1.91	0.87
32:5:4530:U:H2'	32:5:4531:U:C2	2.09	0.87
32:5:5045:G:H2'	32:5:5046:U:O4'	1.74	0.87
48:z:410:SER:HB3	51:4:193:G:H22	1.30	0.87
54:S2:121:U:N3	54:S2:122:G:N7	2.23	0.87
54:S2:842:C:C2	54:S2:843:C:C5	2.63	0.87
54:S2:999:G:C2	54:S2:1000:C:C6	2.63	0.87
54:S2:1110:G:H3'	54:S2:1111:U:H6	1.36	0.87
80:SS:30:ILE:HD11	80:SS:45:LEU:CD2	2.04	0.87
23:e:35:TRP:CD1	23:e:36:ARG:N	2.43	0.87
32:5:745:G:H2'	32:5:746:A:O4'	1.75	0.87
32:5:1563:A:N7	54:S2:678:U:C4'	2.34	0.87
32:5:1667:G:C2	32:5:2283:G:O6	2.26	0.87
32:5:3622:C:O2	32:5:3623:C:C2	2.27	0.87
32:5:4240:G:C6	32:5:4241:C:C5	2.63	0.87
32:5:4283:G:C6	32:5:4284:C:C5	2.63	0.87
39:I:112:GLN:O	39:I:113:THR:OG1	1.91	0.87
84:Sc:60:GLU:CG	84:Sc:63:ARG:HD3	2.04	0.87
32:5:235:A:C6	32:5:238:C:C4	2.61	0.87
32:5:969:C:O2'	32:5:970:G:N3	2.08	0.87
32:5:2294:G:C2	32:5:2295:C:C5	2.63	0.87
32:5:2856:C:H42	32:5:2857:A:N6	1.72	0.87
54:S2:452:G:C2	54:S2:453:C:C5	2.62	0.87
84:Sc:14:VAL:CG2	84:Sc:31:ARG:N	2.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:270:U:C2	32:5:271:C:C5	2.63	0.86
32:5:1268:G:N1	32:5:1270:A:N7	2.22	0.86
32:5:2737:C:C2	32:5:2738:C:C5	2.63	0.86
32:5:3717:A:O2'	32:5:3718:A:O5'	1.91	0.86
48:z:297:MET:HE2	48:z:355:PHE:CB	2.04	0.86
48:z:411:GLY:N	51:4:194:G:C2	2.42	0.86
54:S2:445:A:H2'	54:S2:446:G:O4'	1.75	0.86
54:S2:862:A:C6	54:S2:863:U:C5	2.63	0.86
54:S2:1133:A:C2	54:S2:1134:G:N7	2.33	0.86
54:S2:1151:G:C2	54:S2:1152:U:C6	2.62	0.86
32:5:751:G:C2	32:5:752:G:N7	2.43	0.86
32:5:1427:A:H3'	32:5:1428:U:H6	1.39	0.86
32:5:3759:A:N6	54:S2:1709:G:H5''	1.90	0.86
32:5:4269:G:H1	32:5:4277:G:H1	1.23	0.86
32:5:4342:C:N3	32:5:4343:U:C5	2.43	0.86
54:S2:993:G:H1	54:S2:999:G:H1	1.24	0.86
54:S2:1453:C:C5	54:S2:1455:A:H1'	2.09	0.86
61:SI:168:GLN:HE21	61:SI:170:LYS:CE	1.77	0.86
18:Z:77:TYR:CB	21:c:39:ARG:HD3	2.05	0.86
32:5:707:C:O2'	32:5:4944:C:N4	2.07	0.86
32:5:1583:A:C5	32:5:1584:G:C8	2.62	0.86
32:5:1618:G:N1	32:5:1619:G:N7	2.23	0.86
32:5:3754:G:H5'	32:5:3754:G:C8	2.07	0.86
51:4:58:G:C6	51:4:289:A:C4	2.63	0.86
54:S2:1528:G:C2	54:S2:1529:C:C5	2.63	0.86
32:5:145:G:C2	32:5:146:G:C8	2.63	0.86
32:5:208:A:H1'	32:5:232:G:N2	1.87	0.86
32:5:514:U:H5	32:5:515:C:O4'	1.57	0.86
32:5:2086:G:N2	32:5:2272:C:C2	2.43	0.86
32:5:2089:G:O6	32:5:2263:A:H5''	1.75	0.86
32:5:4342:C:N3	32:5:4343:U:C6	2.44	0.86
48:z:140:PHE:CE1	48:z:194:ARG:NE	2.44	0.86
74:SF:140:ASP:HB3	84:Sc:57:THR:O	1.75	0.86
32:5:1248:C:C2	32:5:1249:C:C5	2.63	0.86
32:5:2507:A:C5	32:5:2508:U:C6	2.62	0.86
32:5:3662:A:N6	32:5:3680:U:H3	1.74	0.86
32:5:3732:A:C2	32:5:3733:A:N7	2.43	0.86
32:5:3740:G:O6	32:5:3741:C:C5	2.28	0.86
32:5:4745:G:O2'	32:5:4746:C:H6	1.57	0.86
35:B:25:HIS:HB2	35:B:274:TYR:OH	1.75	0.86
54:S2:387:C:O2	54:S2:388:U:C6	2.29	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1248:U:C5	54:S2:1249:C:C2	2.64	0.86
54:S2:1540:G:N2	54:S2:1541:G:C4	2.42	0.86
54:S2:1603:G:O6	80:SS:28:PHE:CZ	2.29	0.86
32:5:272:U:C2	32:5:273:U:C5	2.62	0.86
32:5:1245:C:C5	32:5:1269:G:O6	2.26	0.86
32:5:1367:C:C2	32:5:1370:G:H2'	2.10	0.86
32:5:1634:A:N3	32:5:1635:C:C6	2.43	0.86
32:5:1751:A:C6	32:5:1752:G:C8	2.62	0.86
32:5:3629:A:H4'	54:S2:1721:U:C2	2.10	0.86
48:z:407:ALA:CB	48:z:412:VAL:O	2.22	0.86
54:S2:381:C:N4	61:SI:49:ARG:CZ	2.26	0.86
54:S2:963:A:C2	54:S2:964:A:C5	2.63	0.86
54:S2:1290:G:H2'	86:Sf:146:LEU:CB	2.04	0.86
11:R:172:ARG:HG2	54:S2:909:G:OP2	1.75	0.86
32:5:2099:G:C2	32:5:2100:A:C8	2.62	0.86
32:5:3721:U:O2	32:5:3722:G:C8	2.27	0.86
32:5:4480:A:C6	32:5:4481:U:C6	2.63	0.86
32:5:4693:C:H5'	32:5:4693:C:C6	2.11	0.86
33:7:110:G:C2	33:7:111:C:C6	2.63	0.86
33:7:111:C:N3	33:7:112:U:C6	2.43	0.86
51:4:58:G:C5	51:4:289:A:C2	2.63	0.86
60:SH:111:LYS:HG2	60:SH:112:ASN:HD22	1.39	0.86
79:SR:88:VAL:HG11	79:SR:91:LEU:HB3	1.55	0.86
2:D:29:ASP:CA	32:5:4280:A:N6	2.39	0.86
12:S:94:TYR:OH	12:S:96:GLU:HG3	1.76	0.86
32:5:425:U:N3	32:5:426:A:N7	2.23	0.86
32:5:4085:A:H3'	32:5:4086:G:H5'	1.56	0.86
32:5:4217:G:O2'	32:5:4218:U:O5'	1.93	0.86
34:8:117:C:N3	34:8:118:C:C6	2.44	0.86
48:z:402:ARG:NE	51:4:184:A:H4'	1.36	0.86
54:S2:636:C:C2	54:S2:637:U:C5	2.64	0.86
32:5:352:G:O2'	34:8:22:U:O4	1.94	0.86
32:5:1248:C:O2	32:5:1249:C:C6	2.29	0.86
32:5:1439:C:H5'	38:F:36:ARG:HH12	1.36	0.86
32:5:1900:C:N3	32:5:1901:C:C5	2.44	0.86
32:5:2251:G:C1'	32:5:2252:G:N2	2.38	0.86
32:5:3731:C:C2	32:5:3732:A:C8	2.64	0.86
32:5:4281:A:C2	32:5:4283:G:C5	2.63	0.86
34:8:65:A:C2	34:8:66:A:C8	2.63	0.86
34:8:108:A:C2	34:8:112:G:N1	2.44	0.86
48:z:410:SER:CA	51:4:194:G:C1'	2.54	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:309:G:N2	54:S2:310:C:C2	2.43	0.86
54:S2:1302:G:C6	86:Sf:138:ARG:NH1	2.44	0.86
15:V:97:TYR:HE2	41:W:21:TYR:CE1	1.94	0.86
32:5:1238:A:O2'	32:5:1239:C:O5'	1.93	0.86
32:5:2293:U:O2	32:5:2294:G:H8	1.53	0.86
32:5:2726:G:C6	32:5:2727:C:N4	2.44	0.86
32:5:4285:U:O2	32:5:4286:C:C6	2.28	0.86
39:I:101:LYS:HZ3	39:I:121:LYS:CG	1.65	0.86
54:S2:449:A:N6	54:S2:452:G:C4	2.43	0.86
54:S2:1249:C:N4	54:S2:1250:A:N6	2.24	0.86
32:5:292:G:O2'	32:5:293:G:O5'	1.94	0.85
32:5:294:G:O5'	32:5:296:A:C4'	2.21	0.85
32:5:1213:G:C4	32:5:1215:C:C1'	2.58	0.85
32:5:1217:G:HO2'	32:5:1218:G:H8	0.89	0.85
32:5:1406:G:O6	32:5:1408:G:O2'	1.92	0.85
32:5:4344:U:O2	32:5:4345:C:C6	2.29	0.85
34:8:59:A:H4'	34:8:60:G:H3'	1.58	0.85
54:S2:29:G:C2	54:S2:30:C:C4	2.64	0.85
54:S2:828:G:C6	54:S2:829:C:C5	2.64	0.85
54:S2:1840:U:C2	54:S2:1841:C:C6	2.63	0.85
32:5:86:U:C4	32:5:97:G:C2	2.64	0.85
32:5:244:G:C6	32:5:246:G:N7	2.44	0.85
32:5:2079:G:N1	32:5:2080:U:C4	2.44	0.85
32:5:2856:C:H42	32:5:2857:A:H62	1.20	0.85
32:5:3739:C:C4	32:5:3740:G:C8	2.64	0.85
33:7:59:G:C6	33:7:60:G:C8	2.64	0.85
50:3:72:C:C2'	50:3:73:A:H5''	2.07	0.85
54:S2:380:G:N2	54:S2:382:C:H3'	1.89	0.85
80:SS:26:ILE:HD11	80:SS:54:LYS:CB	2.06	0.85
32:5:4239:A:N6	32:5:4240:G:N7	2.23	0.85
32:5:4699:U:O2	32:5:4701:A:N7	2.10	0.85
32:5:4735:G:N3	32:5:4736:C:C6	2.43	0.85
34:8:15:G:H2'	34:8:16:G:C1'	2.05	0.85
48:z:297:MET:HB3	48:z:353:PRO:HA	1.57	0.85
54:S2:26:U:O2	54:S2:27:A:H8	1.58	0.85
54:S2:994:C:H2'	54:S2:994:C:O2	1.73	0.85
54:S2:1310:U:C1'	86:Sf:143:LYS:HD2	2.06	0.85
55:SA:42:LYS:NZ	79:SR:99:ASP:OD2	2.09	0.85
74:SF:195:GLU:OE1	74:SF:195:GLU:N	2.09	0.85
84:Sc:44:ARG:NH1	84:Sc:58:LEU:HD22	1.91	0.85
32:5:270:U:O2	32:5:271:C:C6	2.30	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:383:A:O2'	32:5:384:A:C8	2.30	0.85
32:5:701:G:C6	32:5:702:U:C6	2.65	0.85
32:5:1490:G:C2	32:5:1491:A:C8	2.64	0.85
32:5:2450:G:C6	32:5:2451:A:C8	2.64	0.85
32:5:4699:U:C4	32:5:4702:G:C6	2.64	0.85
46:K:123:ARG:HB3	46:K:129:ILE:HD11	1.56	0.85
54:S2:439:A:C2	54:S2:455:A:N1	2.44	0.85
54:S2:453:C:O2'	54:S2:454:U:O5'	1.95	0.85
32:5:85:G:N2	32:5:97:G:C5	2.43	0.85
32:5:196:C:N3	32:5:243:A:N6	2.25	0.85
32:5:1807:C:N3	32:5:1808:C:C5	2.44	0.85
32:5:2449:A:C8	32:5:2450:G:C1'	2.58	0.85
32:5:4167:G:N2	32:5:4168:G:N9	2.24	0.85
32:5:4744:A:C2	32:5:4745:G:C5	2.64	0.85
34:8:132:G:N1	34:8:133:G:C5	2.44	0.85
54:S2:955:A:C5	54:S2:969:U:C6	2.64	0.85
54:S2:1109:C:C4	79:SR:123:THR:OG1	1.94	0.85
54:S2:1303:C:C5	54:S2:1304:U:C6	2.64	0.85
54:S2:1406:G:N3	54:S2:1407:U:H1'	1.91	0.85
54:S2:1793:A:C2	54:S2:1794:C:C5	2.64	0.85
2:D:29:ASP:CA	32:5:4280:A:H61	1.89	0.85
11:R:166:THR:CB	54:S2:872:A:H3'	2.06	0.85
32:5:86:U:O2	32:5:87:A:C8	2.30	0.85
32:5:1634:A:C2	32:5:1635:C:C5	2.64	0.85
32:5:1726:U:N3	32:5:1727:U:C5	2.45	0.85
32:5:2058:G:N3	32:5:2059:C:C6	2.43	0.85
34:8:11:C:O2	34:8:11:C:H2'	1.75	0.85
48:z:407:ALA:HB1	48:z:412:VAL:O	1.75	0.85
54:S2:491:C:H1'	54:S2:574:A:N6	1.90	0.85
54:S2:1414:A:C2	54:S2:1415:C:C5	2.64	0.85
70:Sa:21:ILE:HG21	70:Sa:72:HIS:CE1	2.11	0.85
5:J:125:ILE:HD11	80:SS:19:ASN:HD22	1.34	0.85
32:5:2327:G:N3	32:5:2328:G:C8	2.44	0.85
32:5:2613:C:N3	32:5:2614:C:C6	2.44	0.85
32:5:2851:G:H1'	32:5:3840:U:O2	1.75	0.85
32:5:3723:A:C2	32:5:3724:A:N7	2.43	0.85
32:5:3756:A:H8	32:5:3756:A:H5''	1.41	0.85
32:5:4079:C:N3	32:5:4080:C:C5	2.45	0.85
32:5:4286:C:O2	32:5:4287:G:N7	2.10	0.85
33:7:60:G:C6	33:7:61:G:N7	2.45	0.85
48:z:344:PRO:C	48:z:346:SER:N	2.34	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:352:ILE:CB	48:z:355:PHE:CZ	2.44	0.85
54:S2:371:A:C2	54:S2:372:U:C4	2.64	0.85
54:S2:1225:U:C4	54:S2:1226:G:N7	2.45	0.85
5:J:105:PHE:HE1	5:J:132:VAL:HB	1.40	0.85
32:5:483:G:C2	32:5:484:U:C4	2.65	0.85
32:5:486:C:N3	32:5:487:G:N7	2.25	0.85
32:5:504:G:N1	32:5:654:C:C2	2.44	0.85
32:5:2724:G:N2	32:5:2726:G:C4	2.45	0.85
32:5:2734:U:C2	32:5:2735:G:C8	2.64	0.85
32:5:3766:A:C1'	54:S2:1708:C:O2'	2.24	0.85
32:5:3910:C:O2	32:5:3911:C:C5	2.29	0.85
32:5:4277:G:C2	32:5:4278:C:C6	2.65	0.85
32:5:4536:C:N3	32:5:4537:C:C5	2.45	0.85
48:z:340:MET:C	48:z:343:GLY:H	1.84	0.85
54:S2:452:G:C4	54:S2:453:C:C5	2.65	0.85
54:S2:623:G:N1	54:S2:624:C:C4	2.45	0.85
54:S2:1134:G:C2	54:S2:1135:C:C6	2.65	0.85
54:S2:1310:U:P	86:Sf:143:LYS:HE2	2.16	0.85
54:S2:1396:A:H2'	54:S2:1398:G:N7	1.91	0.85
54:S2:1540:G:C6	54:S2:1541:G:N7	2.44	0.85
11:R:166:THR:CG2	54:S2:872:A:C3'	2.12	0.85
32:5:1213:G:N1	32:5:1215:C:C2	2.45	0.85
32:5:1442:C:C2	32:5:1443:A:C8	2.65	0.85
32:5:1950:U:O2	32:5:1951:G:C8	2.30	0.85
32:5:2784:C:N3	32:5:2785:C:C5	2.43	0.85
32:5:3629:A:H1'	54:S2:1721:U:C4	2.12	0.85
54:S2:1527:C:C4	54:S2:1528:G:N7	2.45	0.85
54:S2:1528:G:N2	54:S2:1529:C:C2	2.44	0.85
12:S:10:TYR:CZ	12:S:66:GLN:HG3	2.12	0.85
32:5:1887:G:O6	32:5:1890:G:N7	2.10	0.85
32:5:2058:G:N2	32:5:2059:C:C2	2.45	0.85
32:5:3693:U:C2	32:5:3694:U:C6	2.64	0.85
54:S2:120:U:C4	54:S2:121:U:C5	2.65	0.85
54:S2:444:G:N2	54:S2:446:G:O5'	2.10	0.85
54:S2:452:G:N1	54:S2:453:C:C4	2.45	0.85
32:5:422:C:O2	32:5:423:G:H8	1.59	0.84
32:5:470:A:N6	32:5:471:A:C5	2.45	0.84
32:5:1371:A:N6	34:8:28:C:O2'	2.10	0.84
32:5:1991:A:H3'	32:5:1992:U:C5'	2.07	0.84
32:5:3755:G:C2	32:5:3770:U:N3	2.44	0.84
32:5:4081:G:C2	32:5:4082:G:C8	2.65	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4341:C:C4	32:5:4342:C:C5	2.65	0.84
34:8:132:G:N1	34:8:133:G:N7	2.25	0.84
34:8:132:G:C6	34:8:133:G:N7	2.44	0.84
54:S2:1594:A:C6	54:S2:1595:U:C5	2.65	0.84
54:S2:1622:U:O4	80:SS:120:HIS:CE1	2.28	0.84
19:a:110:LYS:HG3	19:a:128:PHE:O	1.76	0.84
32:5:689:U:N3	32:5:690:C:C5	2.45	0.84
32:5:1309:C:N3	32:5:1310:C:C5	2.44	0.84
32:5:1899:G:C4	32:5:1900:C:C5	2.64	0.84
32:5:3606:U:O2	32:5:3607:U:C6	2.29	0.84
32:5:3723:A:N1	32:5:3724:A:N6	2.24	0.84
32:5:4416:G:N2	32:5:4417:C:C2	2.45	0.84
32:5:4581:G:C2	32:5:4582:C:C5	2.65	0.84
48:z:367:GLU:OE1	48:z:367:GLU:N	2.10	0.84
48:z:410:SER:CA	51:4:193:G:N1	2.40	0.84
50:3:16:U:O4	50:3:59:A:C6	2.29	0.84
54:S2:832:G:C5	54:S2:833:C:C6	2.65	0.84
54:S2:1545:A:C5	54:S2:1588:A:C6	2.65	0.84
83:SZ:57:LYS:CD	83:SZ:61:GLU:OE2	2.23	0.84
32:5:91:G:N7	32:5:93:G:C6	2.46	0.84
32:5:1245:C:N3	32:5:1246:G:N7	2.24	0.84
32:5:2857:A:HO2'	32:5:2858:A:H8	1.07	0.84
32:5:4164:C:N3	32:5:4165:C:C5	2.44	0.84
50:3:34:A:N3	54:S2:1701:C:C6	2.43	0.84
50:3:39:G:N3	50:3:40:C:C6	2.44	0.84
54:S2:1258:A:C5	54:S2:1659:U:O2	2.30	0.84
54:S2:1315:U:C4	54:S2:1316:C:C6	2.64	0.84
54:S2:1433:C:H2'	54:S2:1434:C:C1'	2.08	0.84
54:S2:1539:U:O2	54:S2:1540:G:H8	1.56	0.84
32:5:1074:G:C2	32:5:1238:A:C2	2.64	0.84
32:5:1582:U:C4	32:5:1583:A:C8	2.64	0.84
32:5:2251:G:H1'	32:5:2252:G:C2	2.12	0.84
32:5:2270:G:N2	32:5:2271:C:C2	2.46	0.84
54:S2:469:A:H2	54:S2:470:G:O4'	1.60	0.84
54:S2:524:U:C2	54:S2:594:A:N6	2.45	0.84
54:S2:792:C:N3	54:S2:793:G:N7	2.24	0.84
54:S2:1124:C:C2	54:S2:1125:C:C6	2.65	0.84
54:S2:1133:A:C6	54:S2:1134:G:N7	2.44	0.84
54:S2:1405:A:O4'	54:S2:1580:A:C6	2.30	0.84
80:SS:26:ILE:HG13	80:SS:54:LYS:C	2.00	0.84
32:5:738:C:N3	32:5:739:G:N7	2.25	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1687:U:O2	32:5:1850:A:C6	2.29	0.84
32:5:4981:G:N1	32:5:4982:A:C8	2.45	0.84
33:7:25:G:H2'	33:7:26:C:O4'	1.76	0.84
34:8:133:G:C6	34:8:134:G:N7	2.45	0.84
54:S2:518:G:C2	54:S2:519:A:C8	2.66	0.84
54:S2:955:A:N6	54:S2:969:U:H5''	1.92	0.84
54:S2:993:G:C2	54:S2:994:C:C6	2.66	0.84
32:5:2507:A:C6	32:5:2508:U:C6	2.65	0.84
32:5:2826:U:H1'	32:5:2827:G:N1	1.92	0.84
32:5:3607:U:C2	32:5:3608:A:C8	2.64	0.84
32:5:4166:G:C2	32:5:4167:G:N7	2.42	0.84
32:5:4223:C:H4'	39:I:119:PHE:CE2	2.12	0.84
47:q:186:GLY:O	47:q:188:VAL:HG12	1.77	0.84
54:S2:444:G:N2	54:S2:446:G:H8	1.74	0.84
54:S2:880:G:C8	54:S2:881:G:C8	2.66	0.84
56:SB:150:ILE:CD1	79:SR:129:LYS:HG3	2.07	0.84
58:SE:86:PHE:HE1	58:SE:102:ILE:HA	1.42	0.84
83:SZ:57:LYS:CB	83:SZ:61:GLU:HG3	2.08	0.84
32:5:1996:C:P	46:K:124:GLU:OE2	2.36	0.84
32:5:3739:C:C6	32:5:3739:C:H5''	2.12	0.84
32:5:4416:G:N1	32:5:4417:C:C4	2.46	0.84
32:5:4739:C:H2'	32:5:4740:G:O4'	1.77	0.84
54:S2:601:G:O2'	54:S2:602:G:C8	2.30	0.84
32:5:101:A:C6	32:5:102:G:N7	2.46	0.84
32:5:4502:C:C4	32:5:4503:A:C8	2.66	0.84
33:7:110:G:N2	33:7:111:C:C2	2.46	0.84
48:z:410:SER:CA	51:4:193:G:C2	2.61	0.84
51:4:195:U:O2'	52:9:74:ARG:NH2	2.10	0.84
54:S2:933:G:C2	54:S2:1000:C:N3	2.45	0.84
54:S2:994:C:O2	54:S2:995:G:C8	2.31	0.84
54:S2:1540:G:C4	54:S2:1541:G:C8	2.65	0.84
74:SF:192:LYS:NZ	74:SF:196:LEU:HD21	1.85	0.84
17:Y:11:ARG:HH21	36:C:200:ARG:HH22	0.86	0.84
32:5:484:U:C2	32:5:486:C:C6	2.66	0.84
32:5:1269:G:C6	32:5:2111:G:C2	2.66	0.84
32:5:2843:U:O2	32:5:2844:A:H8	1.59	0.84
32:5:4091:G:N2	32:5:4159:C:C2	2.45	0.84
32:5:4172:A:C2	32:5:4173:G:C8	2.66	0.84
32:5:4213:A:N1	32:5:4218:U:C4	2.46	0.84
32:5:4277:G:C6	32:5:4278:C:C5	2.66	0.84
32:5:4284:C:O2	32:5:4285:U:C6	2.31	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:109:LEU:HA	48:z:197:GLN:NE2	1.93	0.84
54:S2:449:A:C5	54:S2:452:G:C6	2.66	0.84
54:S2:1113:A:H2'	54:S2:1114:U:H3'	1.58	0.84
54:S2:1310:U:O2	54:S2:1311:C:H6	1.61	0.84
16:X:139:ARG:NH2	32:5:2533:C:OP1	2.11	0.84
32:5:1214:C:O2'	32:5:2114:G:C2	2.30	0.84
32:5:1264:C:C2	32:5:1265:G:C8	2.66	0.84
32:5:2367:A:H61	32:5:2788:U:H3	0.84	0.84
32:5:2632:U:O2	32:5:2633:U:C6	2.31	0.84
32:5:4269:G:C6	32:5:4270:C:C5	2.65	0.84
32:5:4426:C:C4	32:5:4427:G:N7	2.45	0.84
54:S2:92:A:C6	54:S2:447:A:C2	2.66	0.84
54:S2:402:C:C4	54:S2:403:G:C8	2.65	0.84
54:S2:1204:A:C2	54:S2:1205:C:C4	2.65	0.84
54:S2:1225:U:C4	54:S2:1226:G:C8	2.66	0.84
54:S2:1562:C:O2	54:S2:1563:G:H8	1.57	0.84
15:V:97:TYR:HE2	41:W:21:TYR:HD1	0.87	0.83
32:5:751:G:N2	32:5:752:G:C5	2.46	0.83
32:5:1411:C:O2	32:5:1412:G:C8	2.31	0.83
32:5:4239:A:C6	32:5:4240:G:N7	2.45	0.83
34:8:133:G:N1	34:8:134:G:C5	2.46	0.83
37:E:157:ARG:HD2	37:E:266:TYR:CE1	2.13	0.83
37:E:157:ARG:CD	37:E:266:TYR:CE1	2.61	0.83
39:I:98:ARG:CD	39:I:119:PHE:HE1	1.91	0.83
48:z:412:VAL:CG2	48:z:416:ASP:HB3	2.06	0.83
54:S2:1284:A:H61	76:SM:33:ARG:HB2	1.41	0.83
54:S2:1290:G:N3	86:Sf:146:LEU:CB	2.41	0.83
84:Sc:29:GLN:HG2	84:Sc:45:ASN:OD1	1.76	0.83
32:5:54:G:N1	32:5:55:G:N9	2.26	0.83
32:5:1249:C:N3	32:5:1250:C:C5	2.46	0.83
32:5:1671:U:H3	32:5:1672:U:H5	0.87	0.83
32:5:1987:C:N3	32:5:1988:G:C8	2.46	0.83
32:5:2078:C:O2	32:5:2078:C:H2'	1.78	0.83
32:5:2108:G:N2	32:5:2125:C:N3	2.25	0.83
32:5:2325:C:O2	32:5:2325:C:H2'	1.78	0.83
32:5:3858:C:C4	32:5:3859:G:N7	2.45	0.83
32:5:4537:C:O2	32:5:4538:G:C8	2.31	0.83
32:5:4551:U:O2	32:5:4552:U:C5	2.31	0.83
32:5:4998:G:C6	32:5:4999:G:N7	2.45	0.83
32:5:5062:G:C2	32:5:5063:G:C8	2.65	0.83
54:S2:309:G:C2	54:S2:310:C:C4	2.66	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:806:U:C2	54:S2:807:G:C8	2.65	0.83
54:S2:1453:C:H1'	79:SR:48:ASN:HD21	1.43	0.83
32:5:4745:G:H21	32:5:4746:C:N4	1.75	0.83
48:z:157:ILE:HB	48:z:159:PHE:HZ	1.43	0.83
50:3:39:G:N1	50:3:40:C:C5	2.46	0.83
54:S2:384:U:C5	54:S2:386:C:C6	2.67	0.83
19:a:61:TYR:CD1	32:5:294:G:C6	2.65	0.83
32:5:1628:C:C2	32:5:1629:G:N7	2.45	0.83
32:5:4653:C:O2	32:5:4654:C:C5	2.29	0.83
34:8:10:G:C2	34:8:11:C:C1'	2.62	0.83
54:S2:875:A:N1	54:S2:876:C:C5	2.45	0.83
54:S2:933:G:N2	54:S2:1000:C:C4	2.46	0.83
55:SA:39:TYR:CD2	79:SR:105:MET:HG2	2.13	0.83
63:SL:99:TYR:O	63:SL:101:ARG:HG2	1.78	0.83
87:Sg:245:ARG:HD3	87:Sg:247:TRP:CZ3	2.12	0.83
17:Y:11:ARG:CZ	34:8:22:U:OP1	2.26	0.83
19:a:132:ARG:HH11	19:a:132:ARG:HG2	1.42	0.83
32:5:657:C:H2'	32:5:658:C:O4'	1.78	0.83
32:5:1899:G:N1	32:5:1900:C:C5	2.43	0.83
32:5:3732:A:N3	32:5:3733:A:C8	2.46	0.83
54:S2:98:C:N3	54:S2:409:C:C5	2.47	0.83
54:S2:579:C:C4	54:S2:580:U:C5	2.65	0.83
54:S2:616:A:C5	54:S2:617:G:H1'	2.14	0.83
54:S2:1840:U:O2	54:S2:1841:C:C6	2.31	0.83
83:SZ:50:PHE:CZ	83:SZ:58:LEU:HD11	2.12	0.83
32:5:1280:C:C2	32:5:1282:G:N7	2.46	0.83
32:5:1354:A:C5	32:5:1503:A:H2	1.93	0.83
32:5:2735:G:N3	32:5:2736:G:C8	2.46	0.83
32:5:2743:A:H2	32:5:2744:A:C5	1.96	0.83
32:5:3907:G:H1'	32:5:4449:A:C8	2.14	0.83
32:5:4213:A:C2	32:5:4218:U:O4	2.31	0.83
32:5:4549:G:C6	32:5:4550:G:N7	2.46	0.83
32:5:4735:G:N2	32:5:4736:C:C2	2.47	0.83
32:5:5006:U:H1'	32:5:5042:A:N7	1.93	0.83
34:8:131:G:N1	34:8:132:G:C8	2.46	0.83
48:z:367:GLU:O	48:z:371:ARG:HG3	1.78	0.83
48:z:410:SER:HA	51:4:193:G:C2	2.12	0.83
54:S2:340:C:C2	54:S2:341:C:C5	2.66	0.83
54:S2:1409:A:C2	54:S2:1410:C:C5	2.66	0.83
54:S2:1575:G:C2	54:S2:1576:G:N7	2.46	0.83
55:SA:90:PHE:HB2	55:SA:179:ALA:HB2	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:SS:28:PHE:O	80:SS:31:THR:OG1	1.95	0.83
32:5:732:A:C6	32:5:733:A:C4	2.66	0.83
32:5:977:C:C4	32:5:978:G:N7	2.46	0.83
32:5:1807:C:C2	32:5:1808:C:C6	2.67	0.83
32:5:2089:G:C4	32:5:2262:G:H2'	2.13	0.83
32:5:2532:C:O2	32:5:2533:C:C6	2.31	0.83
34:8:10:G:N1	34:8:11:C:N1	2.26	0.83
34:8:12:G:N2	34:8:13:G:C8	2.46	0.83
34:8:60:G:H1'	34:8:61:A:OP1	1.79	0.83
34:8:133:G:C2	34:8:134:G:N7	2.47	0.83
48:z:374:LYS:HE3	51:4:195:U:OP1	1.79	0.83
54:S2:1603:G:C6	80:SS:28:PHE:HZ	1.61	0.83
32:5:290:U:C2	32:5:291:U:C5	2.66	0.83
32:5:1845:U:O2	32:5:1846:G:C8	2.32	0.83
32:5:2851:G:N7	32:5:2852:U:C6	2.45	0.83
32:5:4426:C:N3	32:5:4427:G:C8	2.47	0.83
32:5:4482:U:N3	32:5:4483:C:H5	1.77	0.83
54:S2:608:C:N3	54:S2:609:U:C5	2.47	0.83
54:S2:694:G:N1	54:S2:695:C:C4	2.47	0.83
54:S2:794:A:C2	54:S2:795:A:C4	2.67	0.83
54:S2:992:A:N1	54:S2:993:G:C8	2.46	0.83
54:S2:1149:A:C2	54:S2:1151:G:C5	2.65	0.83
54:S2:1314:U:N3	54:S2:1315:U:H1'	1.92	0.83
57:SC:170:TRP:CH2	67:SW:97:ARG:HD3	2.14	0.83
65:SO:75:MET:CE	84:Sc:62:GLU:OE1	2.27	0.83
87:Sg:17:TRP:HB3	87:Sg:303:THR:HA	1.59	0.83
32:5:28:C:C2	32:5:29:G:C8	2.67	0.83
32:5:48:G:O2'	32:5:49:U:OP2	1.97	0.83
32:5:2495:U:N3	32:5:2496:G:N7	2.27	0.83
54:S2:38:A:N1	54:S2:515:G:C2	2.47	0.83
54:S2:1840:U:C2	54:S2:1841:C:C5	2.66	0.83
74:SF:128:ILE:HD12	84:Sc:68:LEU:CB	2.08	0.83
32:5:83:C:OP2	32:5:84:A:O2'	1.96	0.83
32:5:1084:C:N3	32:5:1085:C:C5	2.47	0.83
32:5:1392:A:C2	32:5:1393:G:C6	2.67	0.83
32:5:1552:G:O2'	32:5:1575:A:N6	2.11	0.83
32:5:1663:C:C2	32:5:1664:U:C5	2.67	0.83
32:5:2055:G:H5'	32:5:2056:G:H5'	1.61	0.83
32:5:2367:A:C2	32:5:2368:A:N7	2.46	0.83
32:5:2743:A:C2	32:5:2744:A:C6	2.66	0.83
32:5:2784:C:C2	32:5:2785:C:H5	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4302:U:H5	32:5:4303:C:C5	1.97	0.83
32:5:5003:U:O2	32:5:5045:G:N2	2.12	0.83
48:z:157:ILE:HB	48:z:159:PHE:CZ	2.14	0.83
54:S2:1453:C:N4	54:S2:1455:A:C1'	2.40	0.83
80:SS:26:ILE:HD11	80:SS:54:LYS:HB2	1.61	0.83
32:5:66:A:C2	32:5:312:G:C1'	2.62	0.82
32:5:120:A:H1'	32:5:121:A:N1	1.92	0.82
32:5:244:G:N1	32:5:246:G:C8	2.47	0.82
32:5:424:U:O2	32:5:425:U:H5	1.62	0.82
32:5:2099:G:N2	32:5:2100:A:C8	2.47	0.82
32:5:2291:G:C2	32:5:2292:C:C6	2.67	0.82
32:5:3770:U:O2'	50:3:12:G:H1'	1.77	0.82
32:5:4981:G:N1	32:5:4982:A:N7	2.27	0.82
32:5:5012:G:N2	32:5:5014:A:C8	2.47	0.82
32:5:5062:G:N2	32:5:5063:G:C8	2.46	0.82
54:S2:617:G:N7	68:SX:67:ARG:NH1	2.26	0.82
54:S2:977:C:C2	54:S2:978:G:C8	2.66	0.82
54:S2:1289:U:H3'	54:S2:1290:G:H8	1.44	0.82
70:Sa:51:ARG:NH1	84:Sc:40:ARG:HD3	1.92	0.82
73:SD:22:ASN:HD22	73:SD:22:ASN:C	1.85	0.82
32:5:1885:G:C2	32:5:1895:G:C2	2.67	0.82
32:5:1983:A:C2	32:5:2010:A:H5''	2.14	0.82
32:5:2294:G:N3	32:5:2295:C:C6	2.47	0.82
32:5:3693:U:N3	32:5:3694:U:C6	2.47	0.82
32:5:4750:G:O6	32:5:4949:G:O6	1.96	0.82
54:S2:574:A:O2'	54:S2:575:A:C8	2.30	0.82
54:S2:1099:G:C6	54:S2:1100:A:N7	2.47	0.82
54:S2:1406:G:C4	54:S2:1407:U:H1'	2.14	0.82
54:S2:1528:G:N1	54:S2:1529:C:C4	2.47	0.82
32:5:294:G:H5'	32:5:296:A:H4'	0.83	0.82
32:5:1960:A:N1	47:q:14:PHE:CD2	2.47	0.82
32:5:2089:G:C2	32:5:2263:A:N6	2.47	0.82
32:5:2400:G:C2	32:5:2401:A:C8	2.67	0.82
32:5:2515:G:O6	32:5:2516:G:C4	2.32	0.82
54:S2:535:G:N2	54:S2:536:A:N7	2.27	0.82
54:S2:1073:U:N3	54:S2:1074:C:C5	2.46	0.82
54:S2:1114:U:O4	54:S2:1119:A:C2	2.32	0.82
54:S2:1249:C:C6	54:S2:1250:A:C8	2.66	0.82
56:SB:52:THR:HG23	56:SB:57:ILE:CA	2.09	0.82
70:Sa:51:ARG:HH12	84:Sc:40:ARG:HD3	1.45	0.82
32:5:211:G:C2	32:5:212:A:N7	2.48	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:660:A:C2	32:5:661:C:C6	2.67	0.82
32:5:1271:G:H3'	32:5:1272:C:H5'	1.60	0.82
32:5:1542:U:C2	32:5:1543:G:C8	2.67	0.82
32:5:1887:G:N1	32:5:1890:G:C6	2.47	0.82
32:5:3863:C:C2	32:5:3864:C:C5	2.67	0.82
32:5:4240:G:C5	32:5:4241:C:C5	2.66	0.82
54:S2:794:A:C6	54:S2:795:A:C5	2.68	0.82
54:S2:1735:A:N6	54:S2:1799:G:O2'	2.11	0.82
74:SF:128:ILE:HD11	84:Sc:68:LEU:CB	2.08	0.82
16:X:117:TYR:CE1	16:X:153:ILE:HG21	2.13	0.82
32:5:738:C:C2	32:5:739:G:C8	2.67	0.82
32:5:1217:G:O2'	32:5:1218:G:H8	1.63	0.82
32:5:1310:C:C2	32:5:1311:G:H8	1.93	0.82
32:5:2079:G:N3	32:5:2080:U:C6	2.47	0.82
32:5:2468:U:H3	32:5:2473:A:N6	1.74	0.82
32:5:2736:G:N1	32:5:2737:C:C5	2.45	0.82
32:5:4416:G:C2	32:5:4417:C:C5	2.66	0.82
33:7:94:C:C2	33:7:95:C:C6	2.66	0.82
54:S2:519:A:C2	54:S2:520:A:C8	2.67	0.82
54:S2:1053:C:O2	54:S2:1054:G:C8	2.32	0.82
54:S2:1292:C:H3'	86:Sf:150:PHE:HA	1.60	0.82
54:S2:1746:U:H4'	59:SG:65:GLN:HE22	1.43	0.82
83:SZ:58:LEU:CD2	83:SZ:77:LEU:HD12	1.78	0.82
18:Z:49:TYR:CE2	18:Z:133:LYS:HA	2.14	0.82
32:5:1466:G:C2	32:5:1467:C:C6	2.67	0.82
32:5:2468:U:C4	32:5:2473:A:N1	2.48	0.82
32:5:2857:A:C2	32:5:2858:A:C5	2.68	0.82
32:5:4071:U:N3	32:5:4072:C:C5	2.47	0.82
32:5:4343:U:C2	32:5:4344:U:C5	2.67	0.82
32:5:4563:U:C2	32:5:4564:A:N7	2.47	0.82
48:z:360:MET:CB	48:z:365:GLU:HB3	2.09	0.82
57:SC:230:THR:HG23	57:SC:236:PHE:CD2	2.15	0.82
83:SZ:55:TYR:CD2	83:SZ:59:CYS:SG	2.70	0.82
32:5:38:A:C6	32:5:41:C:C5	2.67	0.82
32:5:85:G:O2'	32:5:97:G:O6	1.97	0.82
32:5:1069:G:C2	32:5:1070:G:H1'	2.14	0.82
32:5:2590:G:C6	32:5:2754:G:N1	2.48	0.82
32:5:3723:A:H2'	32:5:3724:A:H8	1.43	0.82
32:5:3726:A:O2'	32:5:3727:A:N7	2.11	0.82
32:5:3772:U:O2'	32:5:3773:U:H5'	1.78	0.82
32:5:4552:U:O2	32:5:4553:A:C8	2.32	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:131:G:N2	34:8:132:G:H1'	1.94	0.82
34:8:135:C:C2	34:8:136:U:C5	2.68	0.82
54:S2:1410:C:C2	54:S2:1411:G:C8	2.68	0.82
54:S2:1644:C:O2'	54:S2:1645:C:C5'	2.26	0.82
79:SR:18:GLU:CD	79:SR:70:SER:HB2	2.04	0.82
8:N:96:ARG:NH1	32:5:2460:A:O2'	2.12	0.82
32:5:733:A:N7	32:5:734:G:N7	2.27	0.82
32:5:4934:A:N1	32:5:4935:C:C6	2.48	0.82
32:5:5006:U:H1'	32:5:5042:A:C5	2.14	0.82
34:8:59:A:H4'	34:8:60:G:C3'	2.10	0.82
34:8:106:G:C2	34:8:107:C:C4	2.67	0.82
48:z:346:SER:OG	48:z:369:MET:HE3	1.79	0.82
54:S2:1368:U:H1'	54:S2:1372:U:C4	2.15	0.82
54:S2:1378:A:N1	55:SA:105:PRO:HA	1.93	0.82
54:S2:1592:C:C4	54:S2:1593:C:C5	2.68	0.82
56:SB:52:THR:HG23	56:SB:57:ILE:CB	2.10	0.82
84:Sc:44:ARG:CG	84:Sc:58:LEU:HD11	2.10	0.82
32:5:55:G:N1	32:5:56:A:C8	2.47	0.82
32:5:1213:G:C5	32:5:1215:C:N1	2.47	0.82
32:5:1412:G:N2	32:5:1413:C:C2	2.48	0.82
32:5:1609:U:C4	32:5:1610:C:C5	2.68	0.82
32:5:1946:G:N2	32:5:2037:C:C2	2.48	0.82
32:5:2744:A:C2	32:5:2745:A:C6	2.68	0.82
32:5:4241:C:N3	32:5:4242:U:H5	1.76	0.82
32:5:4550:G:C2	32:5:4551:U:C6	2.67	0.82
33:7:50:A:C2	33:7:51:G:C8	2.67	0.82
34:8:59:A:C4'	34:8:60:G:H3'	2.10	0.82
48:z:43:ASP:HB2	48:z:258:GLY:HA3	1.61	0.82
50:3:39:G:C2'	50:3:40:C:H5'	2.09	0.82
54:S2:15:U:H2'	54:S2:16:G:O4'	1.80	0.82
54:S2:217:A:N3	54:S2:309:G:C6	2.48	0.82
54:S2:600:G:C8	54:S2:631:U:C5	2.68	0.82
54:S2:794:A:N1	54:S2:795:A:C5	2.47	0.82
54:S2:833:C:N3	54:S2:834:C:C5	2.47	0.82
54:S2:835:C:N3	54:S2:837:A:H4'	1.94	0.82
54:S2:1100:A:C6	54:S2:1101:U:C5	2.68	0.82
74:SF:91:ARG:HG2	83:SZ:103:HIS:CE1	2.14	0.82
8:N:192:TRP:HE1	32:5:48:G:H5'	1.44	0.82
20:b:17:HIS:CE1	32:5:1724:G:C8	2.67	0.82
32:5:435:A:C6	32:5:436:C:C6	2.67	0.82
32:5:1390:G:C2	32:5:1394:G:C5	2.68	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1563:A:C8	54:S2:678:U:C5'	2.62	0.82
32:5:2127:C:C2'	32:5:2128:G:C8	2.62	0.82
32:5:2261:G:H2'	32:5:2262:G:C8	2.14	0.82
32:5:2367:A:C8	32:5:2798:A:C2	2.67	0.82
32:5:4426:C:C2	32:5:4427:G:C8	2.67	0.82
54:S2:847:A:C2	54:S2:848:U:H1'	2.15	0.82
54:S2:1205:C:C5	54:S2:1206:G:C8	2.67	0.82
54:S2:1258:A:C2	54:S2:1663:A:C6	2.67	0.82
54:S2:1590:C:O2	54:S2:1652:G:N2	2.13	0.82
56:SB:52:THR:HG23	56:SB:57:ILE:HB	1.61	0.82
56:SB:150:ILE:CD1	79:SR:129:LYS:HZ2	1.70	0.82
83:SZ:56:ASP:O	83:SZ:60:LYS:N	2.13	0.82
3:G:53:ARG:HB3	3:G:54:PHE:CZ	2.15	0.81
12:S:10:TYR:OH	12:S:66:GLN:HG3	1.79	0.81
31:o:54:PRO:HA	32:5:4379:A:C8	2.15	0.81
32:5:730:G:N2	32:5:939:G:H22	1.78	0.81
32:5:753:C:C2	32:5:754:U:C6	2.68	0.81
32:5:942:G:OP2	38:F:244:ARG:NH1	2.13	0.81
32:5:1269:G:C3'	32:5:2111:G:O6	2.27	0.81
32:5:3899:G:P	35:B:257:TRP:HB2	2.19	0.81
32:5:4561:C:O2	32:5:4561:C:H2'	1.78	0.81
47:q:32:ALA:CA	47:q:187:LEU:CD2	2.39	0.81
49:2:120:SER:HB3	49:2:123:PHE:CE2	2.15	0.81
50:3:38:C:H4'	54:S2:1058:A:C8	2.15	0.81
54:S2:27:A:C6	54:S2:28:U:C5	2.67	0.81
54:S2:575:A:H2'	54:S2:576:A:O4'	1.80	0.81
54:S2:1430:C:C2	54:S2:1431:G:C8	2.67	0.81
54:S2:1510:G:C5	54:S2:1511:U:C5	2.68	0.81
32:5:27:C:N3	32:5:28:C:C5	2.47	0.81
32:5:468:U:O2	32:5:469:C:O4'	1.98	0.81
32:5:1303:A:C2	32:5:1304:C:C5	2.67	0.81
32:5:1929:A:N1	32:5:2054:U:C4	2.48	0.81
32:5:2279:A:N3	32:5:2280:G:C8	2.48	0.81
32:5:3909:C:C2	32:5:3910:C:C6	2.68	0.81
33:7:111:C:C4	33:7:112:U:C5	2.67	0.81
46:K:35:LEU:HB3	51:4:36:A:C5	2.15	0.81
54:S2:182:C:H2'	54:S2:184:G:H1'	1.63	0.81
54:S2:316:G:N2	54:S2:317:C:C2	2.48	0.81
54:S2:666:U:C2	54:S2:667:U:C5	2.67	0.81
86:Sf:133:ALA:HB3	86:Sf:139:HIS:HA	1.62	0.81
5:J:105:PHE:CE1	5:J:132:VAL:HB	2.15	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:289:C:C2	32:5:290:U:C6	2.69	0.81
32:5:924:C:N3	32:5:925:C:C5	2.49	0.81
32:5:951:G:C2	32:5:952:G:N7	2.48	0.81
32:5:1479:G:C6	32:5:1487:G:C2	2.69	0.81
32:5:2294:G:N2	32:5:2295:C:C2	2.48	0.81
32:5:2568:C:C2	32:5:2569:G:N7	2.48	0.81
32:5:2811:G:N2	32:5:2813:A:C8	2.49	0.81
32:5:2829:U:C2	32:5:2830:G:C8	2.69	0.81
32:5:2884:G:HO2'	54:S2:1731:A:C2'	1.91	0.81
32:5:3606:U:C2	32:5:3607:U:C5	2.68	0.81
32:5:3635:A:C6	32:5:3636:C:H1'	2.13	0.81
32:5:3740:G:N1	32:5:3741:C:C6	2.48	0.81
32:5:4627:U:N3	32:5:4628:U:C5	2.48	0.81
33:7:30:C:C2	33:7:48:G:N2	2.48	0.81
33:7:94:C:N3	33:7:95:C:H5	1.74	0.81
54:S2:426:A:C2	54:S2:427:U:C6	2.67	0.81
54:S2:449:A:C2	54:S2:452:G:N7	2.48	0.81
54:S2:986:G:C8	65:SO:137:SER:HA	2.15	0.81
54:S2:1074:C:N3	54:S2:1075:C:C5	2.48	0.81
54:S2:1294:G:C4	86:Sf:138:ARG:HD3	2.15	0.81
54:S2:1310:U:O4'	86:Sf:143:LYS:CE	2.27	0.81
79:SR:65:PRO:CB	79:SR:74:GLN:NE2	2.43	0.81
32:5:2327:G:N1	32:5:2328:G:C5	2.49	0.81
32:5:3710:G:C4	32:5:3711:A:H2	1.96	0.81
32:5:4342:C:C2	32:5:4343:U:C6	2.69	0.81
32:5:4562:C:C4	32:5:4563:U:C5	2.68	0.81
47:q:108:PRO:C	47:q:184:SER:OG	2.23	0.81
54:S2:182:C:C2'	54:S2:184:G:H1'	2.10	0.81
54:S2:461:U:N3	54:S2:462:C:C5	2.48	0.81
54:S2:863:U:C2	54:S2:864:A:N7	2.48	0.81
54:S2:1316:C:N3	54:S2:1317:C:H5	1.76	0.81
54:S2:1408:U:C4	54:S2:1439:A:C2	2.68	0.81
32:5:189:G:C2	32:5:190:G:N7	2.48	0.81
32:5:2465:C:H2'	32:5:2466:G:C8	2.15	0.81
32:5:2517:A:H2'	32:5:2518:G:C8	2.16	0.81
32:5:3593:C:H4'	32:5:3594:C:OP2	1.79	0.81
32:5:4167:G:N2	32:5:4168:G:C8	2.49	0.81
54:S2:10:G:C5	54:S2:1697:A:C2	2.68	0.81
54:S2:339:A:H2'	54:S2:340:C:C5	2.15	0.81
54:S2:1226:G:O6	54:S2:1638:G:H8	1.64	0.81
84:Sc:14:VAL:CG1	84:Sc:31:ARG:N	2.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:153:G:C2	32:5:154:G:C8	2.69	0.81
32:5:172:C:O4'	32:5:172:C:P	2.39	0.81
32:5:702:U:O2	32:5:703:G:O2'	1.96	0.81
32:5:1282:G:N7	37:E:124:HIS:CE1	2.49	0.81
32:5:1691:G:C6	32:5:1692:C:C5	2.67	0.81
32:5:1876:U:N3	32:5:1877:G:N7	2.29	0.81
32:5:2294:G:C2	32:5:2295:C:C6	2.68	0.81
32:5:2561:C:N3	32:5:2562:G:C8	2.49	0.81
32:5:4098:A:N1	32:5:4099:G:C5	2.48	0.81
32:5:4165:C:C2	32:5:4166:G:H8	1.97	0.81
32:5:4481:U:C2	32:5:4482:U:C6	2.67	0.81
34:8:119:C:C2	34:8:120:G:H8	1.97	0.81
54:S2:594:A:HO2'	54:S2:595:U:H5	1.28	0.81
54:S2:1053:C:N3	54:S2:1054:G:N7	2.28	0.81
54:S2:1267:C:O2'	54:S2:1268:C:O5'	1.98	0.81
54:S2:1467:C:OP1	79:SR:1:MET:N	2.14	0.81
32:5:120:A:C1'	32:5:121:A:C2	2.64	0.81
32:5:1909:G:OP1	33:7:84:U:O2	1.99	0.81
32:5:2270:G:C4	32:5:2271:C:C5	2.69	0.81
51:4:2:C:N3	51:4:3:C:C5	2.48	0.81
54:S2:563:G:C2	54:S2:564:A:C8	2.68	0.81
54:S2:623:G:C2	54:S2:624:C:C5	2.68	0.81
54:S2:848:U:O2	54:S2:849:A:N7	2.12	0.81
54:S2:1591:C:C4	54:S2:1592:C:C5	2.69	0.81
84:Sc:45:ASN:ND2	84:Sc:68:LEU:HD21	1.96	0.81
5:J:125:ILE:HD13	80:SS:19:ASN:ND2	1.82	0.81
11:R:166:THR:CG2	54:S2:872:A:H2'	2.11	0.81
32:5:77:U:C4	32:5:336:A:N6	2.49	0.81
32:5:976:G:C6	32:5:977:C:C5	2.69	0.81
32:5:1266:G:N2	32:5:1268:G:C5	2.49	0.81
32:5:1878:G:N2	32:5:1879:C:C2	2.49	0.81
32:5:3909:C:C2	32:5:3910:C:C5	2.68	0.81
32:5:4341:C:N4	32:5:4342:C:C5	2.49	0.81
43:n:10:MET:HE3	54:S2:1172:U:H5''	1.62	0.81
54:S2:118:C:H1'	54:S2:445:A:N3	1.95	0.81
54:S2:623:G:N2	54:S2:624:C:C2	2.48	0.81
54:S2:925:G:N1	54:S2:926:A:N7	2.28	0.81
54:S2:1397:U:O4	78:SQ:12:VAL:HA	1.81	0.81
32:5:42:A:C6	32:5:4379:A:C2	2.69	0.81
32:5:1268:G:N2	32:5:1270:A:C8	2.49	0.81
32:5:1671:U:H2'	32:5:1671:U:O2	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1899:G:N7	32:5:2278:G:C6	2.48	0.81
32:5:2726:G:C4	32:5:2727:C:C5	2.69	0.81
32:5:3591:C:N4	32:5:3592:G:N7	2.28	0.81
32:5:3743:G:H2'	32:5:3744:G:H5'	1.61	0.81
32:5:3912:U:HO2'	32:5:3913:G:H5'	1.42	0.81
32:5:4653:C:N3	32:5:4654:C:C5	2.48	0.81
81:ST:31:PRO:CB	81:ST:33:TRP:CH2	2.63	0.81
32:5:153:G:N3	32:5:154:G:C8	2.49	0.81
32:5:497:G:N2	32:5:657:C:C2	2.49	0.81
32:5:1271:G:H3'	32:5:1272:C:O4'	1.81	0.81
32:5:1857:C:O2	32:5:1858:A:C8	2.34	0.81
32:5:1866:U:O4	32:5:4405:G:C1'	2.29	0.81
32:5:1877:G:C2	32:5:1878:G:C8	2.69	0.81
32:5:2034:G:C6	32:5:2035:C:C5	2.69	0.81
32:5:3905:A:C6	32:5:4449:A:C6	2.69	0.81
32:5:4123:C:C2	32:5:4124:G:H8	1.93	0.81
32:5:4579:U:C2	32:5:4580:U:C5	2.69	0.81
32:5:4731:G:O4'	32:5:4732:G:N2	2.14	0.81
48:z:297:MET:CB	48:z:353:PRO:HA	2.11	0.81
48:z:394:LYS:HB3	48:z:394:LYS:HZ3	1.45	0.81
54:S2:386:C:C2	54:S2:387:C:C5	2.69	0.81
54:S2:394:G:C2	54:S2:395:G:N7	2.49	0.81
54:S2:1122:A:O3'	56:SB:205:TYR:OH	1.99	0.81
7:M:3:PHE:HB2	7:M:6:PHE:CZ	2.16	0.80
32:5:77:U:C4	32:5:335:A:N1	2.48	0.80
32:5:105:A:H2'	32:5:106:A:O4'	1.81	0.80
32:5:975:C:OP1	38:F:49:ARG:NH1	2.13	0.80
32:5:2035:C:N4	32:5:2036:C:C5	2.47	0.80
32:5:2294:G:N1	32:5:2295:C:C4	2.50	0.80
32:5:2690:C:C4	32:5:2691:U:C5	2.68	0.80
32:5:2734:U:O2	32:5:2735:G:C8	2.33	0.80
32:5:3648:A:C4	32:5:3785:A:N6	2.48	0.80
32:5:4560:C:H2'	32:5:4560:C:O2	1.78	0.80
39:I:98:ARG:HD3	39:I:119:PHE:HE1	1.45	0.80
48:z:349:LEU:HD11	49:2:80:LEU:HD13	1.63	0.80
54:S2:378:U:C2	54:S2:379:C:C5	2.66	0.80
54:S2:653:A:H2'	54:S2:654:A:O4'	1.80	0.80
54:S2:1828:C:H2'	54:S2:1829:G:O4'	1.81	0.80
79:SR:100:PRO:HG2	79:SR:119:VAL:HG13	1.40	0.80
11:R:124:TYR:CZ	32:5:2665:U:C4	2.69	0.80
32:5:436:C:O2	32:5:437:G:C8	2.35	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2272:C:O2'	32:5:2273:G:C5'	2.28	0.80
32:5:3914:U:H3	32:5:4378:A:N6	1.75	0.80
32:5:4498:U:H2'	32:5:4498:U:O2	1.80	0.80
32:5:4934:A:N1	32:5:4935:C:C5	2.48	0.80
40:P:54:GLN:HB3	40:P:83:TRP:CD1	2.15	0.80
54:S2:880:G:N7	54:S2:881:G:N7	2.29	0.80
54:S2:994:C:C2	54:S2:995:G:N7	2.48	0.80
54:S2:1134:G:C2	54:S2:1135:C:C5	2.69	0.80
74:SF:141:VAL:H	84:Sc:56:LEU:HD11	1.44	0.80
32:5:1287:G:C2	32:5:1289:C:C6	2.70	0.80
32:5:1391:A:C5	32:5:1392:A:N7	2.50	0.80
32:5:2690:C:C2	32:5:2691:U:C6	2.69	0.80
32:5:2736:G:N2	32:5:2737:C:N1	2.30	0.80
33:7:93:G:C2	33:7:94:C:C6	2.69	0.80
38:F:149:LEU:HB2	38:F:197:TYR:OH	1.80	0.80
54:S2:618:C:C2	54:S2:619:A:C8	2.68	0.80
54:S2:874:G:C1'	60:SH:114:GLN:NE2	2.45	0.80
54:S2:971:G:O2'	54:S2:972:A:N7	2.14	0.80
54:S2:1476:A:N3	54:S2:1476:A:H5'	1.96	0.80
54:S2:1575:G:N2	54:S2:1576:G:C5	2.50	0.80
56:SB:52:THR:CG2	56:SB:57:ILE:HA	2.11	0.80
61:SI:168:GLN:NE2	61:SI:170:LYS:HE3	1.96	0.80
83:SZ:50:PHE:CZ	83:SZ:79:ILE:CG1	2.64	0.80
3:G:169:PHE:CD2	8:N:6:TYR:HB3	2.16	0.80
11:R:130:ASN:O	11:R:131:VAL:HG22	1.82	0.80
32:5:287:U:C2	32:5:288:G:C8	2.69	0.80
32:5:289:C:C2	32:5:290:U:C5	2.70	0.80
32:5:1753:G:O6	32:5:1776:A:N6	2.13	0.80
32:5:2034:G:C5	32:5:2035:C:C5	2.69	0.80
32:5:2322:G:H2'	32:5:2323:C:O4'	1.81	0.80
32:5:2457:G:C2	32:5:2465:C:N3	2.49	0.80
34:8:12:G:N2	34:8:13:G:C1'	2.45	0.80
47:q:200:ASN:N	47:q:205:ASP:OD2	2.13	0.80
50:3:72:C:H3'	50:3:73:A:C5'	2.10	0.80
54:S2:10:G:N7	54:S2:1697:A:N3	2.30	0.80
54:S2:51:U:C2	54:S2:52:G:C8	2.69	0.80
54:S2:120:U:C2	54:S2:121:U:C6	2.69	0.80
54:S2:431:G:C2	54:S2:432:G:C8	2.69	0.80
54:S2:553:U:C2	54:S2:554:A:N7	2.50	0.80
54:S2:1592:C:C2	54:S2:1593:C:C6	2.69	0.80
54:S2:1666:C:O2	54:S2:1667:U:C6	2.34	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d:85:ARG:HG3	22:d:85:ARG:HH11	1.46	0.80
32:5:341:G:C2	32:5:342:G:C8	2.70	0.80
32:5:986:C:C2	32:5:1068:G:N2	2.48	0.80
32:5:1487:G:N2	32:5:1488:G:H1'	1.96	0.80
32:5:1886:G:N2	32:5:1894:C:N3	2.28	0.80
32:5:2736:G:C2	32:5:2737:C:C4	2.69	0.80
32:5:4080:C:N3	32:5:4081:G:C8	2.50	0.80
32:5:5005:G:O6	41:W:51:TRP:HB3	1.82	0.80
33:7:110:G:N1	33:7:111:C:C4	2.50	0.80
48:z:339:ILE:O	48:z:342:MET:CA	2.29	0.80
54:S2:957:A:C2	54:S2:967:C:O2	2.35	0.80
54:S2:1049:A:C4	54:S2:1070:A:C2	2.69	0.80
54:S2:1755:C:N3	54:S2:1756:C:C5	2.49	0.80
32:5:12:A:C2	32:5:14:C:C5	2.69	0.80
32:5:969:C:O2'	32:5:970:G:O4'	2.00	0.80
32:5:2689:C:N3	32:5:2690:C:H5	1.80	0.80
32:5:2856:C:N4	32:5:2857:A:H62	1.79	0.80
47:q:107:VAL:CB	47:q:108:PRO:CD	2.37	0.80
50:3:16:U:C4	50:3:59:A:C6	2.70	0.80
50:3:72:C:H2'	50:3:73:A:H5''	1.64	0.80
51:4:183:A:H3'	51:4:184:A:P	2.19	0.80
54:S2:1545:A:C5	54:S2:1588:A:N6	2.49	0.80
8:N:30:TYR:HE1	8:N:63:ARG:HD2	1.46	0.80
32:5:1634:A:C6	32:5:1635:C:C4	2.69	0.80
32:5:1756:U:C4	32:5:1775:A:N1	2.49	0.80
32:5:2059:C:O2	32:5:2060:G:C8	2.34	0.80
32:5:2753:G:H3'	32:5:2754:G:H8	1.45	0.80
32:5:5001:U:O2'	32:5:5002:U:O5'	1.99	0.80
37:E:278:TYR:CD2	37:E:278:TYR:N	2.46	0.80
47:q:108:PRO:C	47:q:184:SER:HG	1.90	0.80
48:z:408:ARG:HD2	51:4:206:G:H4'	1.62	0.80
54:S2:402:C:N4	54:S2:403:G:N7	2.30	0.80
54:S2:648:A:C2	54:S2:649:U:C5	2.69	0.80
54:S2:833:C:C2	54:S2:834:C:C6	2.70	0.80
54:S2:1378:A:C4'	54:S2:1379:A:O5'	2.30	0.80
54:S2:1534:C:N4	54:S2:1600:G:O6	2.13	0.80
54:S2:1540:G:C2	54:S2:1541:G:C4	2.69	0.80
55:SA:49:ILE:C	79:SR:105:MET:HE3	2.05	0.80
32:5:1339:U:N3	32:5:1340:C:C5	2.50	0.80
32:5:2089:G:N1	32:5:2263:A:C6	2.50	0.80
32:5:2658:G:C6	32:5:2675:G:C6	2.70	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4145:C:C2	32:5:4146:G:C8	2.70	0.80
32:5:4737:G:C6	32:5:4963:G:C2	2.70	0.80
33:7:42:A:C5	33:7:43:U:C5	2.69	0.80
34:8:11:C:O2	34:8:12:G:C8	2.35	0.80
50:3:34:A:N3	54:S2:1701:C:H5	1.80	0.80
50:3:39:G:C6	50:3:40:C:C5	2.70	0.80
54:S2:378:U:N3	54:S2:379:C:C6	2.47	0.80
54:S2:623:G:N1	54:S2:624:C:C5	2.49	0.80
54:S2:648:A:N1	54:S2:649:U:C5	2.50	0.80
32:5:755:C:C2	32:5:756:G:C8	2.69	0.80
32:5:1563:A:C8	54:S2:678:U:O4'	2.35	0.80
32:5:2382:A:N6	32:5:2830:G:O4'	2.15	0.80
32:5:2605:G:C2	32:5:2606:G:C8	2.70	0.80
32:5:2830:G:C2	32:5:2831:G:C8	2.70	0.80
32:5:3858:C:C4	32:5:3859:G:C8	2.70	0.80
34:8:117:C:N3	34:8:118:C:C5	2.50	0.80
48:z:482:UNK:O	48:z:482:UNK:CA	2.27	0.80
54:S2:75:G:N2	54:S2:77:A:OP1	2.12	0.80
54:S2:404:G:C6	54:S2:405:G:N7	2.50	0.80
54:S2:1303:C:C5	54:S2:1304:U:C5	2.69	0.80
54:S2:1594:A:N1	54:S2:1595:U:C5	2.49	0.80
61:SI:197:PHE:O	61:SI:200:ARG:N	2.15	0.80
76:SM:85:LEU:HA	76:SM:88:TRP:CH2	2.17	0.80
32:5:458:C:C2	32:5:459:C:C6	2.70	0.80
32:5:491:G:C2	32:5:492:U:C5	2.70	0.80
32:5:924:C:C2	32:5:925:C:C6	2.69	0.80
32:5:2301:G:N1	32:5:2302:C:C4	2.50	0.80
32:5:4269:G:H22	32:5:4277:G:H22	1.27	0.80
32:5:4504:C:H2'	32:5:4505:C:H6	1.46	0.80
32:5:4951:G:O2'	32:5:4952:G:OP1	1.98	0.80
32:5:4981:G:C6	32:5:4982:A:N9	2.50	0.80
33:7:54:A:C2	33:7:55:A:C5	2.70	0.80
54:S2:474:G:C2	54:S2:475:C:C6	2.70	0.80
54:S2:618:C:N4	54:S2:619:A:C5	2.50	0.80
54:S2:642:U:O2'	54:S2:644:G:O2'	1.95	0.80
54:S2:794:A:C2	54:S2:795:A:C8	2.70	0.80
54:S2:1249:C:H5	54:S2:1250:A:C8	1.92	0.80
54:S2:1569:A:N7	54:S2:1570:G:H1'	1.97	0.80
54:S2:1575:G:C2	54:S2:1576:G:C5	2.69	0.80
74:SF:139:VAL:CB	84:Sc:45:ASN:O	2.30	0.80
7:M:7:VAL:HB	12:S:152:PHE:HB2	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:e:108:ARG:CD	23:e:128:ARG:HB2	2.12	0.79
32:5:142:G:C2	32:5:144:G:C8	2.69	0.79
32:5:274:C:O2'	32:5:275:C:O5'	2.00	0.79
32:5:1878:G:C2	32:5:1879:C:C5	2.69	0.79
32:5:2395:A:O3'	32:5:2806:A:C2	2.35	0.79
32:5:2409:U:C5	32:5:2783:A:C2	2.69	0.79
32:5:2734:U:N3	32:5:2735:G:C8	2.50	0.79
32:5:2812:A:O2'	32:5:2813:A:O4'	1.99	0.79
32:5:3730:U:C2	32:5:3731:C:C6	2.70	0.79
32:5:4285:U:C2	32:5:4286:C:C6	2.69	0.79
32:5:4315:A:C2	32:5:4316:G:C8	2.70	0.79
32:5:4345:C:N3	32:5:4346:U:C5	2.50	0.79
32:5:4888:U:HO2'	32:5:4889:G:H8	1.27	0.79
47:q:107:VAL:HB	47:q:108:PRO:HD3	1.63	0.79
54:S2:106:C:O2	54:S2:107:A:N7	2.13	0.79
54:S2:599:A:O4'	54:S2:605:A:C2	2.35	0.79
54:S2:923:G:C2	54:S2:1022:U:O4	2.35	0.79
54:S2:1029:G:C2	54:S2:1030:A:C8	2.71	0.79
54:S2:1538:C:H2'	54:S2:1538:C:O2	1.82	0.79
54:S2:1868:U:H4'	54:S2:1869:A:OP2	1.83	0.79
65:SO:72:TYR:CD1	84:Sc:63:ARG:NH2	2.46	0.79
32:5:289:C:C4	32:5:290:U:C5	2.70	0.79
32:5:321:U:N3	32:5:322:C:C5	2.50	0.79
32:5:472:C:N3	32:5:473:C:C5	2.50	0.79
32:5:1946:G:N2	32:5:2037:C:C5	2.49	0.79
32:5:2604:C:N3	32:5:2605:G:N7	2.29	0.79
32:5:3730:U:C4	32:5:3731:C:C5	2.70	0.79
32:5:4078:C:C4	32:5:4079:C:C5	2.70	0.79
32:5:4257:A:H2'	32:5:4258:C:H6	1.47	0.79
32:5:4579:U:C2	32:5:4580:U:C6	2.70	0.79
32:5:4580:U:C4	32:5:4581:G:N7	2.50	0.79
32:5:4884:G:C2	32:5:4885:U:C5	2.70	0.79
32:5:5066:U:H2'	32:5:5067:U:C6	2.16	0.79
48:z:410:SER:HB2	51:4:194:G:O2'	1.82	0.79
50:3:16:U:N3	50:3:59:A:N6	2.29	0.79
54:S2:656:G:N2	54:S2:662:G:O4'	2.15	0.79
54:S2:1122:A:C2	54:S2:1123:C:C6	2.71	0.79
54:S2:1290:G:H2'	86:Sf:146:LEU:CA	2.12	0.79
31:o:31:ASP:OD1	32:5:4343:U:O3'	1.99	0.79
32:5:90:G:C2	32:5:95:G:N1	2.51	0.79
32:5:100:C:C4	32:5:101:A:C8	2.61	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1806:G:C2	32:5:1807:C:C6	2.71	0.79
32:5:1949:U:N3	32:5:1950:U:C5	2.50	0.79
32:5:3688:U:C2	32:5:3689:G:C8	2.71	0.79
32:5:4483:C:C2	32:5:4484:A:C8	2.71	0.79
32:5:4699:U:O4	32:5:4702:G:C6	2.35	0.79
32:5:4885:U:C2	32:5:4886:C:C6	2.70	0.79
33:7:6:C:N4	33:7:7:G:C8	2.50	0.79
47:q:108:PRO:HA	47:q:109:ALA:HB3	1.65	0.79
48:z:405:ARG:HG3	51:4:207:C:H5'	1.61	0.79
54:S2:56:G:N1	54:S2:90:G:C2	2.51	0.79
54:S2:314:U:OP1	59:SG:191:ARG:NH2	2.16	0.79
54:S2:794:A:N3	54:S2:795:A:C8	2.51	0.79
55:SA:36:GLN:HA	55:SA:36:GLN:NE2	1.96	0.79
55:SA:38:ILE:HD11	55:SA:150:THR:HG22	1.62	0.79
8:N:179:LYS:HB2	8:N:180:PHE:CE2	2.17	0.79
32:5:209:U:C5	32:5:211:G:C8	2.70	0.79
32:5:917:A:C6	32:5:919:C:C4	2.70	0.79
32:5:1325:C:C4'	32:5:3901:A:C2	2.66	0.79
32:5:1325:C:O4'	32:5:3901:A:C2	2.35	0.79
32:5:2011:C:H2'	32:5:2012:A:O4'	1.81	0.79
32:5:3785:A:H2	32:5:4536:C:H1'	1.47	0.79
48:z:360:MET:HG2	48:z:365:GLU:CB	2.13	0.79
50:3:38:C:C5'	54:S2:1058:A:H8	1.95	0.79
54:S2:1074:C:O2	54:S2:1075:C:C6	2.35	0.79
54:S2:1303:C:C4	54:S2:1304:U:C5	2.71	0.79
54:S2:1430:C:N3	54:S2:1431:G:C8	2.50	0.79
54:S2:1528:G:N3	54:S2:1529:C:C5	2.50	0.79
80:SS:12:ILE:O	80:SS:13:LEU:HD23	1.82	0.79
83:SZ:50:PHE:CD2	83:SZ:79:ILE:HD13	2.17	0.79
32:5:1175:A:C2	32:5:1176:C:C6	2.70	0.79
32:5:1421:G:C2	32:5:1422:G:C8	2.70	0.79
32:5:1438:U:O2	32:5:2099:G:O6	2.00	0.79
32:5:1674:C:C2	32:5:1675:C:C6	2.70	0.79
32:5:2329:U:O2'	32:5:2330:G:C8	2.34	0.79
32:5:2399:G:N1	32:5:2400:G:C5	2.50	0.79
32:5:3655:C:C2	32:5:3656:A:C8	2.71	0.79
32:5:4344:U:N3	32:5:4345:C:C5	2.50	0.79
32:5:4726:G:H4'	35:B:130:PHE:CE1	2.18	0.79
48:z:409:GLY:O	51:4:194:G:C4	2.35	0.79
54:S2:1538:C:O2	54:S2:1539:U:C6	2.35	0.79
54:S2:1552:G:O6	54:S2:1578:U:C2	2.35	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1592:C:N3	54:S2:1593:C:C6	2.51	0.79
54:S2:1869:A:N6	56:SB:115:LYS:HG2	1.97	0.79
20:b:17:HIS:CG	32:5:1724:G:N7	2.49	0.79
32:5:68:U:C4	32:5:69:A:C8	2.70	0.79
32:5:4167:G:N1	32:5:4168:G:C8	2.51	0.79
32:5:4535:A:C6	32:5:4536:C:C5	2.71	0.79
33:7:110:G:N3	33:7:111:C:C6	2.51	0.79
48:z:377:THR:HG22	51:4:193:G:O2'	1.83	0.79
54:S2:165:G:C8	54:S2:166:A:C8	2.67	0.79
54:S2:832:G:N1	54:S2:833:C:C2	2.51	0.79
54:S2:1784:G:H2'	54:S2:1785:C:H5'	1.61	0.79
5:J:99:PHE:CE2	5:J:105:PHE:HB2	2.18	0.79
22:d:87:ARG:NH1	22:d:87:ARG:N	2.30	0.79
32:5:126:C:O2	32:5:127:G:C8	2.36	0.79
32:5:1507:C:C2	32:5:1508:A:C8	2.71	0.79
32:5:1992:U:H1'	32:5:1993:C:OP2	1.83	0.79
32:5:2675:G:H2'	32:5:2675:G:N3	1.96	0.79
32:5:3711:A:N6	32:5:3712:A:N3	2.30	0.79
32:5:3773:U:C2	32:5:3776:G:N1	2.36	0.79
32:5:3833:C:N3	32:5:3834:C:C5	2.51	0.79
32:5:4537:C:O2	32:5:4537:C:H2'	1.83	0.79
32:5:4883:C:O2'	32:5:4884:G:OP2	1.99	0.79
48:z:250:LEU:HD11	48:z:273:ILE:HD13	1.65	0.79
54:S2:1416:C:H2'	54:S2:1417:C:C6	2.18	0.79
54:S2:1512:C:C2	54:S2:1513:C:C5	2.70	0.79
65:SO:147:ARG:CZ	65:SO:147:ARG:CB	2.60	0.79
3:G:53:ARG:CZ	3:G:54:PHE:HZ	1.96	0.79
32:5:2059:C:C2	32:5:2060:G:C8	2.69	0.79
33:7:110:G:C2	33:7:111:C:C5	2.71	0.79
34:8:14:U:O2'	34:8:15:G:O4'	2.01	0.79
39:I:9:TYR:HD2	39:I:97:ILE:HG12	1.45	0.79
54:S2:793:G:O6	54:S2:794:A:C5	2.35	0.79
54:S2:863:U:N3	54:S2:864:A:N7	2.30	0.79
54:S2:925:G:N2	54:S2:926:A:C8	2.50	0.79
16:X:117:TYR:CD1	16:X:153:ILE:HG21	2.18	0.79
32:5:90:G:C5	32:5:92:C:H1'	2.18	0.79
32:5:1214:C:H4'	32:5:1215:C:O5'	1.82	0.79
32:5:1280:C:C2	32:5:1282:G:C5	2.70	0.79
32:5:1756:U:C4	32:5:1776:A:C2	2.71	0.79
32:5:1949:U:C2	32:5:1950:U:C5	2.71	0.79
32:5:2452:G:C6	32:5:2467:U:C5	2.70	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2534:C:O2'	32:5:2535:G:H5'	1.82	0.79
33:7:18:C:C4	33:7:19:C:H5	2.01	0.79
54:S2:81:U:C4	54:S2:82:G:C8	2.71	0.79
54:S2:298:G:C2	54:S2:299:A:C8	2.71	0.79
54:S2:316:G:C2	54:S2:317:C:C4	2.71	0.79
54:S2:403:G:C2	54:S2:404:G:C8	2.70	0.79
54:S2:750:C:O2	54:S2:751:G:C8	2.36	0.79
54:S2:1501:C:C2	54:S2:1502:C:C6	2.71	0.79
74:SF:28:VAL:HA	74:SF:110:GLN:OE1	1.82	0.79
1:A:67:TYR:CD1	32:5:4086:G:N7	2.50	0.79
32:5:70:A:C2	32:5:4355:G:H1'	2.17	0.79
32:5:348:G:C2	32:5:350:C:C4	2.71	0.79
32:5:1878:G:C2	32:5:1879:C:C4	2.71	0.79
32:5:3935:C:N3	32:5:3936:A:C8	2.50	0.79
48:z:404:GLN:HG3	52:9:72:TRP:HZ2	1.46	0.79
54:S2:475:C:N3	54:S2:476:A:C8	2.51	0.79
54:S2:993:G:H22	54:S2:999:G:H22	1.31	0.79
54:S2:1567:G:H1'	80:SS:82:TRP:CH2	2.18	0.79
80:SS:86:ARG:HA	80:SS:86:ARG:HE	1.48	0.79
32:5:86:U:O4	32:5:97:G:C2	2.35	0.78
32:5:209:U:C4	32:5:211:G:C8	2.70	0.78
32:5:470:A:N6	32:5:471:A:C4	2.51	0.78
32:5:1049:C:C2	32:5:1050:C:C6	2.71	0.78
32:5:1074:G:H2'	32:5:1075:G:C1'	2.12	0.78
32:5:2326:G:N1	32:5:2327:G:C8	2.49	0.78
32:5:2463:G:N2	32:5:2464:C:C2	2.51	0.78
32:5:3695:U:N3	32:5:3696:C:C5	2.51	0.78
32:5:3845:A:C6	32:5:3846:C:C5	2.70	0.78
32:5:3867:A:N3	32:5:3880:G:C6	2.50	0.78
32:5:4601:U:O4	32:5:4609:G:N2	2.15	0.78
54:S2:92:A:N1	54:S2:447:A:C2	2.51	0.78
54:S2:403:G:C6	54:S2:404:G:C5	2.71	0.78
54:S2:1033:G:H1	54:S2:1080:A:HO2'	1.30	0.78
54:S2:1123:C:OP1	56:SB:205:TYR:OH	2.01	0.78
54:S2:1540:G:N1	54:S2:1541:G:N7	2.32	0.78
54:S2:1686:G:O3'	54:S2:1687:C:P	2.41	0.78
79:SR:100:PRO:HG3	79:SR:119:VAL:HG13	1.62	0.78
32:5:90:G:C2	32:5:95:G:C6	2.71	0.78
32:5:100:C:C6	32:5:101:A:C8	2.69	0.78
32:5:293:G:H2'	32:5:297:U:C6	2.17	0.78
32:5:2457:G:N2	32:5:2465:C:N3	2.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2633:U:C2	32:5:2634:C:C6	2.72	0.78
54:S2:70:G:C2	54:S2:80:G:C2	2.70	0.78
54:S2:1232:U:O2'	54:S2:1253:A:N7	2.15	0.78
54:S2:1405:A:C2	54:S2:1406:G:C4	2.71	0.78
54:S2:1511:U:N3	54:S2:1512:C:C6	2.51	0.78
54:S2:1564:C:O2	54:S2:1565:C:C6	2.36	0.78
74:SF:128:ILE:HD12	84:Sc:68:LEU:CD1	2.11	0.78
19:a:63:LEU:C	19:a:63:LEU:HD23	2.08	0.78
32:5:1661:C:O2	32:5:1662:C:C6	2.36	0.78
32:5:1981:G:O2'	32:5:1982:G:O4'	2.01	0.78
32:5:2077:C:H2'	32:5:2077:C:O2	1.81	0.78
32:5:4096:C:N4	32:5:4097:G:C5	2.52	0.78
32:5:4241:C:O2	32:5:4241:C:H2'	1.83	0.78
32:5:5012:G:C2	32:5:5014:A:N7	2.51	0.78
51:4:138:G:H4'	51:4:188:G:H4'	1.64	0.78
54:S2:499:G:C6	54:S2:501:C:H1'	2.18	0.78
54:S2:1302:G:C6	86:Sf:140:TYR:CE1	2.71	0.78
73:SD:192:TRP:CD1	73:SD:196:GLY:HA2	2.18	0.78
17:Y:11:ARG:HH21	36:C:200:ARG:CZ	1.96	0.78
21:c:101:ASP:OD1	64:SN:42:LYS:HG2	1.84	0.78
32:5:291:U:H2'	32:5:292:G:C2'	2.12	0.78
32:5:1280:C:O4'	36:C:323:ARG:NH2	2.17	0.78
32:5:1334:A:C6	32:5:1335:G:N7	2.51	0.78
32:5:1735:U:H2'	32:5:1735:U:O2	1.81	0.78
32:5:1998:A:N3	32:5:2019:C:O2'	2.15	0.78
32:5:4504:C:C2	32:5:4505:C:C5	2.72	0.78
54:S2:388:U:C2	54:S2:389:A:C8	2.71	0.78
54:S2:694:G:C2	54:S2:695:C:C6	2.71	0.78
54:S2:993:G:C2	54:S2:994:C:N1	2.51	0.78
54:S2:1039:C:N3	54:S2:1040:G:C8	2.51	0.78
54:S2:1109:C:H1'	54:S2:1110:G:P	2.24	0.78
32:5:1070:G:C6	32:5:1071:C:C5	2.71	0.78
32:5:1634:A:N1	32:5:1635:C:C5	2.52	0.78
32:5:1778:C:O2	32:5:1779:U:C5	2.37	0.78
32:5:1807:C:N3	32:5:1808:C:C6	2.51	0.78
32:5:1870:C:N3	32:5:1871:A:N7	2.31	0.78
32:5:1985:G:O2'	32:5:2003:G:OP2	2.01	0.78
32:5:2441:C:O2	32:5:2442:G:N7	2.16	0.78
32:5:2658:G:C6	32:5:2675:G:N1	2.52	0.78
32:5:3859:G:H4'	40:P:139:TYR:CE1	2.18	0.78
32:5:4240:G:C4	32:5:4241:C:C6	2.71	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:105:U:C4	54:S2:106:C:C5	2.72	0.78
54:S2:665:G:C2	54:S2:671:A:N7	2.52	0.78
54:S2:1045:U:N3	54:S2:1046:U:C5	2.51	0.78
54:S2:1394:G:N1	54:S2:1395:C:C5	2.51	0.78
54:S2:1596:U:C4	54:S2:1597:C:C5	2.72	0.78
64:SN:113:PHE:O	64:SN:116:ILE:N	2.17	0.78
83:SZ:50:PHE:CZ	83:SZ:79:ILE:HG12	2.17	0.78
3:G:55:VAL:HB	3:G:57:TRP:HE1	1.49	0.78
23:e:35:TRP:CD1	23:e:35:TRP:C	2.60	0.78
32:5:690:C:C2	32:5:691:C:C6	2.72	0.78
32:5:1563:A:N6	54:S2:1028:A:H61	1.82	0.78
32:5:1796:U:C4	32:5:1797:G:C8	2.71	0.78
32:5:1877:G:C6	32:5:1878:G:N7	2.52	0.78
32:5:1964:A:C5	32:5:1965:G:C8	2.71	0.78
32:5:2293:U:N3	32:5:2294:G:N7	2.30	0.78
32:5:3692:A:C5	32:5:3693:U:C6	2.71	0.78
32:5:3912:U:O2'	32:5:3913:G:H5''	1.81	0.78
32:5:4096:C:N4	32:5:4097:G:C8	2.51	0.78
32:5:4551:U:O2	32:5:4552:U:C6	2.37	0.78
32:5:4983:C:O2	32:5:4984:C:H6	1.66	0.78
32:5:5001:U:C2'	32:5:5002:U:O5'	2.31	0.78
33:7:22:A:C2	33:7:23:A:C5	2.71	0.78
33:7:42:A:C6	33:7:43:U:C4	2.70	0.78
34:8:14:U:H2'	34:8:15:G:C8	2.17	0.78
48:z:405:ARG:CD	51:4:207:C:C4'	2.61	0.78
54:S2:1528:G:C4	54:S2:1529:C:C5	2.72	0.78
84:Sc:14:VAL:HA	84:Sc:32:VAL:HA	1.66	0.78
32:5:85:G:N3	32:5:97:G:O6	2.17	0.78
32:5:723:A:C2	32:5:943:A:N1	2.52	0.78
32:5:1202:C:C2	32:5:1203:G:C8	2.71	0.78
32:5:1388:A:H2'	32:5:1389:U:O4'	1.84	0.78
32:5:1489:G:C6	32:5:1490:G:C8	2.71	0.78
32:5:3695:U:N3	32:5:3696:C:C6	2.50	0.78
32:5:3754:G:H1	32:5:3770:U:H3	1.32	0.78
32:5:3858:C:N3	32:5:3859:G:C8	2.52	0.78
32:5:4100:C:C2	32:5:4101:C:C6	2.71	0.78
32:5:4166:G:N2	32:5:4167:G:C8	2.52	0.78
32:5:4537:C:C2	32:5:4538:G:C8	2.72	0.78
80:SS:10:GLN:HG3	80:SS:13:LEU:CD2	2.08	0.78
84:Sc:45:ASN:HD22	84:Sc:68:LEU:HD22	1.49	0.78
10:Q:91:ARG:O	32:5:1501:C:N4	2.17	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:T:140:PHE:CE1	32:5:1089:G:H5'	2.17	0.78
32:5:1476:C:C2	32:5:1477:C:C5	2.71	0.78
32:5:1924:C:N3	32:5:1925:G:C8	2.51	0.78
32:5:1946:G:C6	32:5:2037:C:N4	2.52	0.78
32:5:2089:G:C5	32:5:2262:G:H2'	2.19	0.78
32:5:2347:A:C2	32:5:2348:G:N1	2.52	0.78
32:5:2857:A:C2	32:5:2858:A:C6	2.71	0.78
32:5:3793:U:N3	32:5:3794:C:C5	2.52	0.78
32:5:4229:U:C5	32:5:4230:C:C5	2.72	0.78
33:7:43:U:C2	33:7:44:C:C5	2.72	0.78
34:8:70:G:N1	34:8:87:G:C2	2.51	0.78
35:B:203:GLN:HA	35:B:203:GLN:HE21	1.49	0.78
54:S2:51:U:N3	54:S2:52:G:N7	2.32	0.78
54:S2:66:G:C6	54:S2:68:A:C8	2.71	0.78
54:S2:105:U:C5	54:S2:106:C:C5	2.72	0.78
54:S2:449:A:N6	54:S2:452:G:C6	2.52	0.78
54:S2:974:C:N3	54:S2:975:G:C8	2.52	0.78
54:S2:1123:C:N3	54:S2:1124:C:C6	2.52	0.78
55:SA:50:ASN:HA	79:SR:105:MET:SD	2.23	0.78
57:SC:253:PRO:O	57:SC:256:TRP:HB2	1.83	0.78
32:5:1926:C:O2	32:5:1927:U:C6	2.37	0.78
32:5:2079:G:N2	32:5:2080:U:C6	2.51	0.78
32:5:2793:G:C6	32:5:2797:C:C4	2.72	0.78
32:5:3899:G:OP1	35:B:257:TRP:HB2	1.84	0.78
32:5:4196:G:H2'	32:5:4197:G:O4'	1.83	0.78
32:5:5050:C:H1'	35:B:374:PHE:CE2	2.19	0.78
47:q:107:VAL:HG23	47:q:108:PRO:HD2	1.63	0.78
48:z:352:ILE:HB	48:z:355:PHE:HZ	1.49	0.78
54:S2:475:C:C2	54:S2:476:A:C8	2.72	0.78
54:S2:1139:C:H2'	54:S2:1140:G:O4'	1.82	0.78
54:S2:1419:C:OP2	81:ST:129:ARG:CA	2.31	0.78
54:S2:1776:G:C2	54:S2:1777:G:C8	2.71	0.78
60:SH:135:PHE:HD1	60:SH:136:PRO:N	1.81	0.78
3:G:231:ASN:HD22	3:G:231:ASN:N	1.82	0.78
19:a:132:ARG:HH21	32:5:1468:C:C5'	1.94	0.78
21:c:101:ASP:HB2	64:SN:43:LYS:HA	1.63	0.78
32:5:504:G:C2	32:5:654:C:O2	2.37	0.78
32:5:753:C:N3	32:5:754:U:C6	2.52	0.78
32:5:1598:C:C5	32:5:2798:A:N7	2.52	0.78
32:5:1686:C:H2'	32:5:1687:U:H5'	1.63	0.78
32:5:1744:U:C2	32:5:1745:G:C8	2.72	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1878:G:N3	32:5:1879:C:C6	2.51	0.78
32:5:3717:A:N6	32:5:3736:A:C6	2.51	0.78
32:5:4081:G:C2	32:5:4082:G:N7	2.52	0.78
32:5:4095:G:N3	32:5:4096:C:C5	2.52	0.78
48:z:405:ARG:HG2	51:4:207:C:H4'	0.78	0.78
50:3:19:U:N3	50:3:57:G:N2	2.31	0.78
54:S2:71:G:H3'	54:S2:72:C:H5''	1.64	0.78
54:S2:340:C:C2	54:S2:341:C:C6	2.72	0.78
54:S2:349:A:H5''	61:SI:27:TYR:HH	1.48	0.78
54:S2:404:G:N1	54:S2:405:G:C5	2.51	0.78
54:S2:977:C:N3	54:S2:978:G:N7	2.30	0.78
54:S2:1132:C:N3	54:S2:1133:A:C8	2.51	0.78
54:S2:1224:G:N2	54:S2:1643:U:C2	2.52	0.78
54:S2:1526:G:C2	54:S2:1527:C:C6	2.70	0.78
58:SE:86:PHE:CE1	58:SE:102:ILE:HA	2.18	0.78
32:5:86:U:O2	32:5:86:U:H2'	1.84	0.77
32:5:688:U:N3	32:5:689:U:C6	2.53	0.77
32:5:690:C:N3	32:5:691:C:C5	2.52	0.77
32:5:1806:G:N2	32:5:1807:C:C2	2.52	0.77
32:5:4098:A:C2	32:5:4099:G:N7	2.52	0.77
32:5:4416:G:N1	32:5:4417:C:C5	2.53	0.77
49:2:79:LEU:O	49:2:83:LEU:HG	1.84	0.77
54:S2:10:G:N7	54:S2:1697:A:C2	2.52	0.77
54:S2:118:C:C5	54:S2:119:U:C5	2.72	0.77
54:S2:933:G:N2	54:S2:1000:C:C2	2.52	0.77
79:SR:91:LEU:HD12	79:SR:93:GLN:H	1.48	0.77
6:L:103:ARG:NH2	32:5:75:G:O6	2.16	0.77
10:Q:65:ARG:NH1	32:5:1502:G:OP1	2.17	0.77
32:5:1217:G:N2	32:5:1218:G:O6	2.17	0.77
32:5:1485:C:O2	32:5:4349:C:C4	2.37	0.77
48:z:410:SER:HA	51:4:193:G:N1	1.99	0.77
50:3:9:A:O4'	50:3:46:G:C2	2.38	0.77
54:S2:875:A:N1	54:S2:876:C:C4	2.52	0.77
54:S2:1578:U:H4'	54:S2:1579:A:O5'	1.83	0.77
58:SE:191:ARG:HD2	58:SE:218:PHE:CE1	2.20	0.77
32:5:950:G:C2	32:5:951:G:C8	2.71	0.77
32:5:1555:G:C5	32:5:1556:C:C5	2.72	0.77
32:5:1563:A:C8	54:S2:678:U:H5'	2.20	0.77
32:5:1628:C:O2	32:5:1628:C:H2'	1.82	0.77
32:5:1811:G:N2	32:5:1812:C:C2	2.52	0.77
32:5:1946:G:C2	32:5:2037:C:C5	2.72	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2050:G:H2'	32:5:2051:C:O4'	1.84	0.77
32:5:2316:G:N2	32:5:2317:C:C2	2.52	0.77
32:5:2658:G:N1	32:5:2675:G:N1	2.32	0.77
32:5:2743:A:N1	32:5:2744:A:N6	2.31	0.77
32:5:4368:G:C6	32:5:4369:A:N7	2.52	0.77
32:5:4399:U:C4	32:5:4400:G:C8	2.72	0.77
32:5:4537:C:O2	32:5:4538:G:H8	1.67	0.77
34:8:5:U:OP2	40:P:62:ARG:NH1	2.17	0.77
34:8:81:C:O2	34:8:81:C:H2'	1.84	0.77
48:z:405:ARG:HD2	51:4:207:C:O3'	1.83	0.77
54:S2:43:U:H2'	54:S2:43:U:O2	1.83	0.77
54:S2:640:A:O2'	54:S2:641:A:O4'	2.02	0.77
54:S2:964:A:C2	54:S2:965:U:C4	2.73	0.77
65:SO:75:MET:HE1	84:Sc:62:GLU:OE1	1.84	0.77
87:Sg:125:ARG:HD3	87:Sg:150:TRP:CE2	2.18	0.77
32:5:56:A:N6	32:5:57:G:C6	2.52	0.77
32:5:1545:G:C6	32:5:1546:C:N4	2.52	0.77
32:5:1811:G:C2	32:5:1812:C:C6	2.72	0.77
32:5:2089:G:O6	32:5:2263:A:C5'	2.31	0.77
32:5:3905:A:C5	32:5:4449:A:N1	2.52	0.77
32:5:4095:G:C2	32:5:4096:C:C5	2.72	0.77
32:5:4536:C:C2	32:5:4537:C:C6	2.72	0.77
32:5:4687:A:C2	32:5:4688:C:C6	2.72	0.77
33:7:51:G:N2	33:7:52:C:C2	2.52	0.77
34:8:43:A:C2	34:8:44:A:N7	2.51	0.77
36:C:48:ASN:O	36:C:49:ARG:HB3	1.84	0.77
51:4:295:U:N3	51:4:296:C:C5	2.52	0.77
54:S2:26:U:O2	54:S2:26:U:H2'	1.84	0.77
54:S2:42:A:C4	54:S2:426:A:N7	2.52	0.77
54:S2:443:U:C4	54:S2:444:G:C8	2.72	0.77
54:S2:1678:A:OP1	74:SF:145:ARG:NH2	2.16	0.77
74:SF:140:ASP:OD2	84:Sc:56:LEU:HD21	1.84	0.77
2:D:268:ARG:CD	33:7:60:G:O2'	2.31	0.77
32:5:54:G:N1	32:5:55:G:C8	2.51	0.77
32:5:114:G:H2'	32:5:115:C:H5'	1.65	0.77
32:5:425:U:C2	32:5:426:A:C8	2.72	0.77
32:5:440:U:N3	32:5:441:G:N7	2.33	0.77
32:5:1836:G:C2	32:5:1837:A:C8	2.71	0.77
32:5:2301:G:N2	32:5:2302:C:C2	2.52	0.77
32:5:2485:U:O2	32:5:2486:G:C8	2.37	0.77
32:5:3773:U:O2'	32:5:3774:A:OP1	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4283:G:C2	32:5:4284:C:C4	2.64	0.77
32:5:4343:U:C4	32:5:4344:U:C5	2.72	0.77
33:7:43:U:C2	33:7:44:C:C6	2.73	0.77
54:S2:106:C:C2	54:S2:107:A:N7	2.53	0.77
54:S2:956:G:C2	54:S2:957:A:C5	2.72	0.77
54:S2:1111:U:O2	54:S2:1112:U:C6	2.37	0.77
54:S2:1111:U:O2	54:S2:1112:U:C5	2.38	0.77
54:S2:1134:G:N1	54:S2:1135:C:C4	2.52	0.77
54:S2:1552:G:O6	54:S2:1578:U:N3	2.17	0.77
74:SF:204:ARG:OXT	74:SF:204:ARG:HG3	1.84	0.77
76:SM:85:LEU:O	76:SM:85:LEU:HD23	1.84	0.77
10:Q:89:ASP:OD1	10:Q:91:ARG:NH2	2.17	0.77
12:S:45:TRP:HZ3	12:S:56:LYS:HA	1.49	0.77
32:5:422:C:O2	32:5:422:C:H2'	1.82	0.77
32:5:424:U:C2	32:5:425:U:H5	2.03	0.77
32:5:957:G:C5'	32:5:1284:G:N2	2.46	0.77
32:5:1866:U:O4	32:5:4405:G:C8	2.37	0.77
32:5:2107:C:C5	32:5:2126:G:C2	2.72	0.77
32:5:2251:G:O6	45:r:99:LYS:HA	1.85	0.77
32:5:3739:C:H5''	32:5:3739:C:H6	1.47	0.77
32:5:3794:C:C2	32:5:3795:A:C8	2.73	0.77
32:5:4745:G:H21	32:5:4746:C:H41	1.29	0.77
32:5:4966:A:H2'	32:5:4967:A:O4'	1.85	0.77
48:z:237:LYS:NZ	48:z:266:THR:OG1	2.15	0.77
50:3:49:C:C2	50:3:50:C:C5	2.72	0.77
54:S2:832:G:C2	54:S2:833:C:H1'	2.20	0.77
54:S2:989:C:O2	54:S2:1001:A:N6	2.17	0.77
54:S2:1290:G:H2'	86:Sf:146:LEU:N	2.00	0.77
54:S2:1562:C:N3	54:S2:1563:G:N7	2.31	0.77
5:J:75:ARG:NH1	33:7:42:A:C1'	2.48	0.77
32:5:193:G:H2'	32:5:194:C:O4'	1.85	0.77
32:5:300:A:C2	32:5:301:G:C6	2.73	0.77
32:5:484:U:N3	32:5:486:C:C5	2.50	0.77
32:5:514:U:C5	32:5:515:C:O4'	2.38	0.77
32:5:1280:C:N3	32:5:1282:G:C6	2.52	0.77
32:5:1341:U:O2	32:5:1342:A:C8	2.37	0.77
32:5:2037:C:H2'	32:5:2037:C:O2	1.83	0.77
32:5:2089:G:O6	32:5:2263:A:C8	2.38	0.77
32:5:3739:C:C6	32:5:3739:C:C5'	2.67	0.77
32:5:4239:A:C5	32:5:4240:G:C8	2.73	0.77
54:S2:551:U:HO2'	72:Se:44:ASN:CG	1.93	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SA:39:TYR:OH	79:SR:104:GLU:HB3	1.85	0.77
16:X:117:TYR:CE1	16:X:153:ILE:HG22	2.19	0.77
25:g:13:TYR:CG	32:5:2513:A:N7	2.53	0.77
32:5:299:C:N3	32:5:300:A:C8	2.53	0.77
32:5:330:G:C2	32:5:331:G:N7	2.53	0.77
32:5:466:A:C2	32:5:467:U:C6	2.72	0.77
32:5:481:G:C2	32:5:482:G:C8	2.72	0.77
32:5:1269:G:C6	32:5:2111:G:N2	2.53	0.77
32:5:1442:C:N3	32:5:1443:A:C8	2.53	0.77
32:5:1650:A:O4'	32:5:1650:A:N3	2.16	0.77
32:5:1684:A:C6	32:5:1685:G:N7	2.53	0.77
32:5:2113:G:C8	32:5:2115:G:H1'	2.20	0.77
32:5:2743:A:N1	32:5:2744:A:C6	2.53	0.77
32:5:4355:G:C2	32:5:4356:G:C5	2.72	0.77
32:5:4355:G:N2	32:5:4356:G:C4	2.53	0.77
48:z:409:GLY:C	51:4:194:G:N2	2.43	0.77
54:S2:870:A:C4	54:S2:915:G:C5	2.59	0.77
12:S:83:ARG:NH2	13:T:156:TYR:HB2	1.99	0.77
32:5:43:U:C5	32:5:44:A:N9	2.53	0.77
32:5:73:A:C2	32:5:74:G:C8	2.72	0.77
32:5:90:G:N7	32:5:92:C:C1'	2.47	0.77
32:5:1304:C:HO2'	34:8:8:U:HO2'	1.31	0.77
32:5:1618:G:C6	32:5:1619:G:N7	2.53	0.77
32:5:1683:U:O2	32:5:1683:U:H2'	1.84	0.77
32:5:1886:G:C2	32:5:1894:C:C4	2.73	0.77
32:5:2566:G:C2	32:5:2567:G:C8	2.73	0.77
32:5:3668:C:C4	32:5:3669:G:N7	2.53	0.77
32:5:3773:U:O2	32:5:3776:G:N3	2.17	0.77
34:8:15:G:H2'	34:8:16:G:H1'	1.65	0.77
40:P:41:ILE:HD11	40:P:150:LEU:HD13	1.67	0.77
54:S2:458:A:C2	54:S2:459:C:C1'	2.68	0.77
54:S2:622:C:N4	54:S2:623:G:H1'	1.99	0.77
54:S2:998:A:N7	54:S2:999:G:O4'	2.16	0.77
54:S2:1146:C:C2	54:S2:1147:C:C5	2.72	0.77
55:SA:39:TYR:CE2	79:SR:105:MET:HG2	2.19	0.77
55:SA:49:ILE:O	79:SR:105:MET:HE3	1.83	0.77
56:SB:145:LYS:HZ2	79:SR:128:PHE:HZ	1.09	0.77
57:SC:115:GLN:HA	57:SC:115:GLN:HE21	1.48	0.77
32:5:425:U:C2	32:5:426:A:N7	2.53	0.77
32:5:692:A:C2	32:5:693:C:C5	2.72	0.77
32:5:1076:C:O3'	32:5:2114:G:O6	2.03	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2126:G:H1'	32:5:2127:C:C6	2.18	0.77
32:5:2658:G:N1	32:5:2675:G:C2	2.53	0.77
32:5:4080:C:O2	32:5:4080:C:H2'	1.82	0.77
32:5:4215:C:N3	32:5:4216:G:C8	2.52	0.77
32:5:4216:G:C2	32:5:4217:G:C8	2.72	0.77
32:5:4425:G:C6	32:5:4426:C:C6	2.73	0.77
32:5:4988:U:H4'	32:5:4989:U:O2	1.85	0.77
43:n:10:MET:HE1	54:S2:1172:U:H5''	0.77	0.77
54:S2:85:A:C2	54:S2:86:C:C4	2.73	0.77
54:S2:1592:C:N3	54:S2:1593:C:C5	2.53	0.77
60:SH:133:LEU:HD21	60:SH:176:VAL:HG11	1.67	0.77
10:Q:176:ARG:NH2	32:5:1497:A:N6	2.34	0.76
17:Y:100:HIS:CD2	32:5:231:U:H4'	2.20	0.76
32:5:1190:C:C2	32:5:1191:C:C6	2.73	0.76
32:5:2364:G:C2	32:5:2365:C:C5	2.73	0.76
32:5:2367:A:C2	32:5:2368:A:C5	2.72	0.76
32:5:2633:U:C2	32:5:2634:C:C5	2.74	0.76
34:8:94:G:H4'	34:8:95:A:OP1	1.85	0.76
35:B:323:TYR:HB3	35:B:342:LYS:HG2	1.67	0.76
45:r:107:ARG:C	45:r:107:ARG:HD2	2.08	0.76
47:q:32:ALA:CB	47:q:187:LEU:HD22	2.14	0.76
47:q:188:VAL:HG13	47:q:189:ILE:N	1.96	0.76
54:S2:340:C:H2'	54:S2:341:C:H6	1.50	0.76
54:S2:874:G:O4'	60:SH:114:GLN:NE2	2.18	0.76
54:S2:1668:U:H5'	82:SU:77:TRP:CH2	2.21	0.76
54:S2:1772:C:N3	54:S2:1773:C:C5	2.53	0.76
54:S2:1859:A:C2	54:S2:1860:A:C5	2.74	0.76
32:5:1271:G:N2	32:5:2122:G:OP2	2.17	0.76
32:5:1764:G:C6	32:5:1766:A:OP2	2.38	0.76
32:5:1967:A:C2	32:5:1968:G:C8	2.73	0.76
32:5:2056:G:C5	32:5:2058:G:C8	2.72	0.76
32:5:2498:C:N3	32:5:2499:C:C5	2.53	0.76
32:5:4392:G:O2'	32:5:4395:U:O4	2.04	0.76
32:5:4880:C:C2'	32:5:4881:U:H5'	2.15	0.76
34:8:42:G:C2	34:8:43:A:C8	2.73	0.76
34:8:68:G:H2'	34:8:69:U:O4'	1.83	0.76
34:8:120:G:C2	34:8:121:G:C8	2.73	0.76
45:r:31:ASN:OD1	45:r:32:LEU:N	2.18	0.76
54:S2:430:C:C2	54:S2:431:G:C8	2.73	0.76
54:S2:444:G:N1	54:S2:446:G:OP2	2.17	0.76
54:S2:551:U:O2	54:S2:551:U:H2'	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:955:A:N7	54:S2:969:U:H6	1.83	0.76
54:S2:994:C:N3	54:S2:995:G:C8	2.52	0.76
54:S2:1839:U:C2	54:S2:1840:U:C6	2.72	0.76
56:SB:56:LYS:HD2	56:SB:57:ILE:N	2.01	0.76
74:SF:140:ASP:HB2	84:Sc:56:LEU:HG	1.67	0.76
79:SR:18:GLU:HB2	79:SR:70:SER:CB	2.14	0.76
32:5:1516:G:C5	32:5:1518:A:C8	2.74	0.76
32:5:1563:A:N7	54:S2:678:U:H5'	2.01	0.76
32:5:2726:G:N3	32:5:2727:C:C5	2.52	0.76
51:4:187:G:H2'	51:4:188:G:H8	1.50	0.76
54:S2:339:A:N3	54:S2:340:C:C5	2.54	0.76
54:S2:1134:G:C4	54:S2:1135:C:C5	2.72	0.76
54:S2:1291:A:C2	86:Sf:140:TYR:CG	2.73	0.76
54:S2:1392:U:C2	54:S2:1393:G:C8	2.73	0.76
54:S2:1540:G:C2	54:S2:1541:G:N9	2.53	0.76
79:SR:85:VAL:HG13	79:SR:86:PRO:HD2	1.67	0.76
87:Sg:142:VAL:HG13	87:Sg:177:TRP:CZ3	2.20	0.76
2:D:29:ASP:HB3	2:D:32:ALA:HB3	1.65	0.76
32:5:244:G:C6	32:5:246:G:C8	2.73	0.76
32:5:437:G:C2	32:5:438:G:C8	2.74	0.76
32:5:473:C:N3	32:5:474:C:C5	2.53	0.76
32:5:1177:U:O2	32:5:1178:G:C8	2.38	0.76
32:5:1213:G:C6	32:5:1215:C:N1	2.54	0.76
32:5:1990:A:C2'	32:5:1991:A:C4'	2.58	0.76
32:5:2328:G:O2'	32:5:2329:U:C5'	2.34	0.76
32:5:2568:C:N3	32:5:2569:G:N7	2.33	0.76
32:5:2646:C:O2	32:5:2647:A:C8	2.37	0.76
32:5:2736:G:N2	32:5:2737:C:C6	2.53	0.76
32:5:4549:G:N1	32:5:4550:G:C8	2.53	0.76
33:7:51:G:C2	33:7:52:C:C4	2.73	0.76
51:4:121:U:H3	51:4:229:U:H3	1.33	0.76
54:S2:551:U:O2	54:S2:552:G:H8	1.64	0.76
54:S2:649:U:O2	54:S2:649:U:H2'	1.82	0.76
54:S2:1376:A:C6	54:S2:1377:U:H1'	2.21	0.76
2:D:250:ASN:HD21	2:D:252:VAL:HG12	1.50	0.76
8:N:105:ARG:NH2	32:5:2459:G:N7	2.33	0.76
32:5:1287:G:C2	32:5:1289:C:C5	2.73	0.76
32:5:1354:A:C8	32:5:1503:A:C2	2.73	0.76
32:5:3717:A:N6	32:5:3736:A:C5	2.53	0.76
32:5:4332:C:O2	32:5:4332:C:H2'	1.83	0.76
32:5:5007:A:N7	32:5:5040:U:O4	2.19	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:54:A:H2	33:7:55:A:C5	2.01	0.76
48:z:191:THR:HG21	48:z:205:MET:HE1	1.67	0.76
54:S2:445:A:H2'	54:S2:446:G:O5'	1.85	0.76
54:S2:598:G:N2	54:S2:639:C:C2	2.54	0.76
54:S2:1511:U:C2	54:S2:1512:C:C6	2.74	0.76
54:S2:1622:U:O4	80:SS:120:HIS:HE1	1.67	0.76
56:SB:62:LEU:HD13	56:SB:65:ARG:CZ	2.15	0.76
5:J:119:TYR:HE1	80:SS:12:ILE:HG12	1.50	0.76
32:5:1684:A:C2	32:5:1685:G:H1'	2.20	0.76
32:5:2270:G:N1	32:5:2271:C:C4	2.54	0.76
32:5:3688:U:N3	32:5:3689:G:N7	2.34	0.76
32:5:4562:C:C2	32:5:4563:U:H6	2.03	0.76
48:z:405:ARG:CG	51:4:207:C:H5'	2.07	0.76
54:S2:118:C:C5	54:S2:119:U:C6	2.73	0.76
54:S2:799:U:H5''	60:SH:110:THR:CG2	2.08	0.76
54:S2:980:A:H2'	54:S2:981:A:H8	1.49	0.76
54:S2:1134:G:N2	54:S2:1135:C:C2	2.53	0.76
54:S2:1408:U:C4	54:S2:1439:A:N1	2.53	0.76
54:S2:1609:C:O2	54:S2:1610:G:C8	2.38	0.76
54:S2:1782:G:C2	54:S2:1784:G:N7	2.53	0.76
22:d:24:GLU:OE1	22:d:87:ARG:NH2	2.18	0.76
32:5:56:A:C6	32:5:57:G:C6	2.73	0.76
32:5:330:G:N2	32:5:331:G:C4	2.54	0.76
32:5:949:G:C2	32:5:950:G:C8	2.73	0.76
32:5:961:G:O6	32:5:969:C:C6	2.39	0.76
32:5:1261:G:C2	32:5:1262:G:C8	2.74	0.76
32:5:1490:G:N3	32:5:1491:A:C8	2.53	0.76
32:5:1634:A:C5	32:5:1635:C:C5	2.73	0.76
32:5:1945:G:C2	32:5:1946:G:H1'	2.20	0.76
32:5:2316:G:N1	32:5:2317:C:C4	2.53	0.76
32:5:2461:G:C2	32:5:2462:C:C5	2.73	0.76
51:4:59:A:N6	51:4:288:G:C2	2.54	0.76
54:S2:118:C:C1'	54:S2:445:A:N3	2.49	0.76
54:S2:794:A:C2	54:S2:795:A:N9	2.53	0.76
54:S2:1408:U:C3'	54:S2:1409:A:C8	2.69	0.76
54:S2:1722:G:N2	54:S2:1723:G:H1'	1.99	0.76
83:SZ:50:PHE:HE2	83:SZ:79:ILE:HB	1.51	0.76
32:5:2515:G:C5	32:5:2516:G:C8	2.74	0.76
32:5:4333:C:C2	32:5:4334:U:C5	2.73	0.76
54:S2:832:G:N2	54:S2:843:C:C2	2.54	0.76
54:S2:957:A:N1	54:S2:967:C:C2	2.54	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1205:C:H6	54:S2:1206:G:C8	2.03	0.76
54:S2:1317:C:C2	54:S2:1318:G:C8	2.73	0.76
54:S2:1400:U:H2'	54:S2:1401:A:O4'	1.86	0.76
54:S2:1408:U:N3	54:S2:1439:A:H2	1.80	0.76
54:S2:1417:C:O2	54:S2:1419:C:H5'	1.85	0.76
83:SZ:97:ILE:HD12	83:SZ:109:TYR:CE2	2.20	0.76
20:b:17:HIS:CE1	32:5:1724:G:N7	2.53	0.76
23:e:98:GLU:OE1	23:e:123:THR:OG1	2.03	0.76
32:5:1279:A:H2'	32:5:1280:C:C5	2.20	0.76
32:5:2279:A:C2	32:5:2280:G:C8	2.74	0.76
32:5:2463:G:C6	32:5:2464:C:N4	2.54	0.76
32:5:3657:U:N3	32:5:3658:C:C5	2.54	0.76
32:5:5047:C:O2	32:5:5048:A:C5	2.39	0.76
48:z:270:ILE:HG22	48:z:285:PHE:CE2	2.21	0.76
48:z:404:GLN:OE1	52:9:72:TRP:NE1	2.19	0.76
54:S2:119:U:C2	54:S2:120:U:C6	2.74	0.76
54:S2:1133:A:N1	54:S2:1134:G:C5	2.53	0.76
54:S2:1273:C:C2	54:S2:1506:A:H2	2.04	0.76
54:S2:1598:G:H3'	83:SZ:80:ARG:HE	1.50	0.76
54:S2:1623:A:N6	54:S2:1625:U:OP2	2.17	0.76
54:S2:1696:C:H2'	54:S2:1696:C:O2	1.85	0.76
32:5:55:G:N1	32:5:56:A:N7	2.34	0.76
32:5:271:C:C4	32:5:272:U:C5	2.74	0.76
32:5:1391:A:N7	32:5:1392:A:N7	2.34	0.76
32:5:1442:C:N3	32:5:1443:A:N7	2.33	0.76
32:5:2325:C:N3	32:5:2326:G:C8	2.53	0.76
32:5:4498:U:O2	32:5:4500:U:H5'	1.85	0.76
32:5:4580:U:C2	32:5:4581:G:C8	2.74	0.76
34:8:102:G:P	34:8:104:A:O2'	2.44	0.76
34:8:117:C:C4	34:8:118:C:C5	2.74	0.76
48:z:381:SER:O	51:4:208:A:C5'	2.32	0.76
48:z:410:SER:N	51:4:193:G:H1	1.53	0.76
54:S2:64:A:C6	54:S2:82:G:C2	2.74	0.76
54:S2:578:C:C4	54:S2:579:C:C6	2.73	0.76
54:S2:955:A:C5	54:S2:969:U:H6	2.04	0.76
54:S2:962:A:C2	54:S2:963:A:C8	2.74	0.76
54:S2:974:C:C2	54:S2:975:G:C8	2.74	0.76
54:S2:1035:A:H2'	54:S2:1036:A:O4'	1.86	0.76
54:S2:1146:C:O2	54:S2:1147:C:C6	2.39	0.76
54:S2:1309:C:H2'	86:Sf:143:LYS:CD	2.15	0.76
54:S2:1755:C:C2	54:S2:1756:C:C6	2.74	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SA:205:ARG:NH2	79:SR:84:TYR:HE2	1.82	0.76
68:SX:134:TYR:CE1	72:Se:13:ARG:NH2	2.53	0.76
1:A:40:TYR:HE1	32:5:4117:U:O2	1.68	0.75
32:5:88:A:H62	32:5:97:G:N2	1.83	0.75
32:5:208:A:C4'	32:5:232:G:N2	2.49	0.75
32:5:699:C:N3	32:5:700:G:C8	2.54	0.75
32:5:2279:A:N3	32:5:2280:G:N7	2.33	0.75
32:5:3909:C:O2	32:5:3910:C:H6	1.67	0.75
32:5:4285:U:N3	32:5:4286:C:C5	2.53	0.75
32:5:5063:G:C2	32:5:5064:G:C8	2.74	0.75
48:z:402:ARG:HG2	51:4:185:C:OP2	1.83	0.75
54:S2:1066:U:N3	54:S2:1067:C:C6	2.54	0.75
54:S2:1291:A:O3'	86:Sf:149:CYS:N	2.19	0.75
54:S2:1366:G:N2	54:S2:1374:C:N3	2.34	0.75
32:5:77:U:C2	32:5:335:A:N6	2.54	0.75
32:5:181:C:C2	32:5:256:G:N2	2.54	0.75
32:5:1277:G:C2	32:5:1278:C:C6	2.73	0.75
32:5:1482:G:N2	32:5:1484:G:H22	1.85	0.75
32:5:1673:U:C2	32:5:1674:C:H5	2.04	0.75
32:5:1806:G:N1	32:5:1807:C:C4	2.54	0.75
32:5:1898:C:C5	32:5:2279:A:H1'	2.22	0.75
32:5:2504:C:O2	32:5:2505:C:C6	2.40	0.75
32:5:2677:G:C6	32:5:2678:A:C8	2.73	0.75
32:5:2848:G:O2'	32:5:3838:U:O4	2.02	0.75
32:5:3846:C:O2	32:5:3846:C:H2'	1.85	0.75
48:z:340:MET:O	48:z:344:PRO:HD2	1.85	0.75
48:z:403:ILE:HG22	48:z:414:THR:HG23	1.68	0.75
54:S2:384:U:H5	54:S2:386:C:H6	1.32	0.75
54:S2:458:A:N1	54:S2:459:C:N1	2.33	0.75
54:S2:870:A:C5	54:S2:915:G:N9	2.54	0.75
54:S2:1123:C:P	56:SB:205:TYR:OH	2.44	0.75
54:S2:1248:U:H2'	54:S2:1249:C:C1'	2.15	0.75
54:S2:1310:U:O2	54:S2:1311:C:C6	2.38	0.75
54:S2:1860:A:C6	54:S2:1862:G:C5	2.74	0.75
7:M:3:PHE:HB2	7:M:6:PHE:HZ	1.51	0.75
32:5:516:C:C2	32:5:646:G:N2	2.54	0.75
32:5:752:G:C6	32:5:753:C:C6	2.74	0.75
32:5:1213:G:O6	32:5:1215:C:C4	2.40	0.75
32:5:1266:G:H5''	32:5:2112:G:C2	2.20	0.75
32:5:1538:U:O2'	32:5:1629:G:OP1	2.04	0.75
32:5:1583:A:C1'	32:5:2396:A:N6	2.43	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1936:C:N3	32:5:1937:C:H5	1.82	0.75
32:5:2301:G:C2	32:5:2302:C:C5	2.74	0.75
32:5:2565:A:N7	32:5:2566:G:H1'	2.01	0.75
32:5:3800:A:C2	32:5:4496:A:O4'	2.39	0.75
32:5:4406:U:C2	32:5:4407:G:C8	2.75	0.75
32:5:4414:A:N6	32:5:4427:G:C6	2.54	0.75
32:5:4536:C:C4	32:5:4537:C:C5	2.74	0.75
34:8:11:C:N3	34:8:12:G:C8	2.53	0.75
46:K:4:LYS:O	46:K:5:PHE:HB3	1.86	0.75
46:K:123:ARG:CB	46:K:129:ILE:HD11	2.16	0.75
54:S2:461:U:O2	54:S2:462:C:C6	2.40	0.75
54:S2:553:U:O2	54:S2:554:A:C8	2.39	0.75
54:S2:869:A:C8	60:SH:115:LYS:HB2	2.21	0.75
54:S2:1409:A:H2'	54:S2:1410:C:O4'	1.86	0.75
74:SF:128:ILE:HD11	84:Sc:68:LEU:O	1.85	0.75
8:N:138:PHE:HB3	8:N:143:ARG:HH22	1.52	0.75
20:b:16:TRP:H	20:b:16:TRP:CD1	2.04	0.75
32:5:1878:G:C4	32:5:1879:C:C5	2.74	0.75
32:5:4093:G:N7	32:5:4094:G:C8	2.54	0.75
32:5:4345:C:C2	32:5:4346:U:C5	2.74	0.75
54:S2:426:A:C2	54:S2:427:U:C4	2.74	0.75
54:S2:551:U:N3	54:S2:552:G:N7	2.34	0.75
54:S2:797:C:O4'	60:SH:109:ARG:NH1	2.19	0.75
54:S2:928:G:H2'	54:S2:929:G:C8	2.22	0.75
54:S2:1050:A:C6	54:S2:1051:G:H1'	2.20	0.75
54:S2:1408:U:H2'	54:S2:1409:A:C1'	2.15	0.75
27:i:45:ARG:NH1	27:i:49:GLY:O	2.20	0.75
32:5:124:C:N3	32:5:125:C:C5	2.55	0.75
32:5:331:G:C2	32:5:332:C:C5	2.74	0.75
32:5:719:C:C2	32:5:720:G:C8	2.74	0.75
32:5:1177:U:C2	32:5:1178:G:C8	2.75	0.75
32:5:1265:G:O2'	32:5:2112:G:H3'	1.86	0.75
32:5:1341:U:C2	32:5:1342:A:N7	2.54	0.75
32:5:1811:G:N1	32:5:1812:C:C4	2.55	0.75
32:5:2110:C:C6	32:5:2110:C:OP1	2.38	0.75
32:5:2290:C:N3	32:5:2291:G:C8	2.54	0.75
32:5:2567:G:C2	32:5:2568:C:C6	2.74	0.75
32:5:3717:A:C5	32:5:3736:A:N6	2.55	0.75
32:5:4233:A:N1	32:5:4290:U:C4	2.53	0.75
33:7:112:U:O2	33:7:113:G:C8	2.40	0.75
54:S2:92:A:C2	54:S2:447:A:C2	2.74	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:553:U:N3	54:S2:554:A:N7	2.35	0.75
54:S2:640:A:H2'	54:S2:641:A:O4'	1.86	0.75
54:S2:827:A:C5	54:S2:828:G:C8	2.75	0.75
54:S2:1225:U:O4	54:S2:1226:G:C5	2.39	0.75
54:S2:1393:G:C2	54:S2:1394:G:C8	2.75	0.75
56:SB:56:LYS:O	56:SB:57:ILE:HG12	1.86	0.75
73:SD:24:PHE:C	73:SD:24:PHE:CD1	2.63	0.75
83:SZ:52:LYS:HD3	83:SZ:52:LYS:C	2.12	0.75
32:5:1291:G:N2	32:5:1292:C:C2	2.55	0.75
32:5:1301:C:N3	32:5:1302:U:C6	2.53	0.75
32:5:1945:G:N1	32:5:1946:G:N9	2.35	0.75
32:5:2035:C:O2	32:5:2035:C:H2'	1.86	0.75
32:5:2081:C:C2'	32:5:2082:G:O5'	2.33	0.75
32:5:4122:G:C5	32:5:4123:C:C6	2.75	0.75
32:5:4472:G:C6	32:5:4473:A:C8	2.75	0.75
32:5:4482:U:H3	32:5:4483:C:H5	1.32	0.75
32:5:4743:G:C2	32:5:4744:A:C8	2.75	0.75
48:z:109:LEU:HA	48:z:197:GLN:HE21	1.52	0.75
54:S2:98:C:C2	54:S2:409:C:C6	2.75	0.75
54:S2:340:C:H2'	54:S2:341:C:C6	2.21	0.75
54:S2:964:A:N3	54:S2:965:U:C4	2.54	0.75
54:S2:1862:G:N3	54:S2:1863:A:O2'	2.18	0.75
74:SF:139:VAL:HB	84:Sc:45:ASN:O	1.87	0.75
3:G:166:LEU:HD12	32:5:150:U:O2	1.87	0.75
32:5:321:U:C2	32:5:322:C:C6	2.75	0.75
32:5:1213:G:N3	32:5:1215:C:H1'	2.01	0.75
32:5:2366:A:H2	32:5:3851:U:H1'	1.50	0.75
32:5:3785:A:C2	32:5:4536:C:C1'	2.70	0.75
32:5:3858:C:C4	32:5:3859:G:C5	2.75	0.75
32:5:3910:C:O2	32:5:3911:C:C6	2.38	0.75
32:5:4998:G:N1	32:5:4999:G:N7	2.35	0.75
48:z:358:ASP:O	48:z:361:SER:OG	2.05	0.75
54:S2:831:G:C2	54:S2:844:U:C4	2.75	0.75
54:S2:963:A:H2'	54:S2:964:A:C8	2.21	0.75
54:S2:989:C:N3	54:S2:1001:A:C2	2.55	0.75
54:S2:1146:C:O2	54:S2:1147:C:C5	2.40	0.75
54:S2:1224:G:N2	54:S2:1643:U:C4	2.54	0.75
54:S2:1646:C:OP1	78:SQ:138:ARG:NH1	2.20	0.75
32:5:44:A:C6	32:5:45:U:C4	2.74	0.75
32:5:445:U:C1'	32:5:2313:A:C2	2.69	0.75
32:5:447:C:N3	32:5:448:G:N7	2.34	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:992:C:C2	32:5:993:G:C8	2.75	0.75
32:5:1661:C:O2	32:5:1662:C:C5	2.40	0.75
32:5:1666:C:O2'	32:5:1688:G:OP1	2.05	0.75
32:5:2041:A:C2	32:5:4464:A:C6	2.75	0.75
32:5:2568:C:C2	32:5:2569:G:C8	2.74	0.75
32:5:3709:U:H3'	32:5:3710:G:C5'	2.17	0.75
32:5:3771:C:H2'	32:5:3772:U:C6	2.22	0.75
32:5:3794:C:N3	32:5:3795:A:N7	2.34	0.75
32:5:3859:G:OP2	40:P:25:HIS:NE2	2.18	0.75
32:5:4223:C:H4'	39:I:119:PHE:HE2	1.47	0.75
32:5:4302:U:C5	32:5:4303:C:C6	2.75	0.75
32:5:4702:G:C6	32:5:4703:U:C5	2.75	0.75
32:5:4723:A:C2	32:5:4724:A:C5	2.74	0.75
48:z:344:PRO:O	48:z:346:SER:N	2.18	0.75
48:z:380:ASP:O	51:4:208:A:C1'	2.30	0.75
48:z:381:SER:O	51:4:207:C:C2'	2.34	0.75
48:z:392:GLY:O	48:z:396:PHE:HD1	1.70	0.75
54:S2:27:A:C2	54:S2:28:U:H1'	2.22	0.75
54:S2:56:G:C5	54:S2:90:G:N2	2.55	0.75
54:S2:222:U:N3	54:S2:223:C:C5	2.55	0.75
54:S2:666:U:O4'	54:S2:1088:U:C4	2.40	0.75
54:S2:667:U:H5''	54:S2:1087:A:C2	2.22	0.75
54:S2:1109:C:O2	54:S2:1109:C:O2'	2.02	0.75
54:S2:1149:A:C5	54:S2:1151:G:C8	2.74	0.75
54:S2:1295:A:C5	54:S2:1296:U:H1'	2.21	0.75
54:S2:1511:U:N3	54:S2:1512:C:C5	2.55	0.75
10:Q:152:PHE:CE2	32:5:1847:C:H4'	2.21	0.75
31:o:21:HIS:HD2	31:o:72:CYS:HA	1.51	0.75
32:5:31:U:H2'	32:5:32:G:C8	2.22	0.75
32:5:1188:C:O2	32:5:1188:C:H2'	1.87	0.75
32:5:1482:G:N2	32:5:1484:G:N2	2.35	0.75
32:5:1673:U:O4	32:5:1674:C:N4	2.20	0.75
32:5:1826:G:C6	32:5:1827:C:C5	2.75	0.75
32:5:1946:G:C2	32:5:1948:G:C8	2.75	0.75
32:5:2034:G:C6	32:5:2035:C:C4	2.74	0.75
32:5:2281:U:O2	32:5:2281:U:H2'	1.86	0.75
32:5:2724:G:N3	32:5:2726:G:C8	2.55	0.75
32:5:4343:U:O2	32:5:4344:U:C6	2.39	0.75
32:5:4355:G:N3	32:5:4356:G:C8	2.55	0.75
32:5:4455:G:C2	32:5:4456:C:C6	2.75	0.75
34:8:134:G:N3	34:8:135:C:C6	2.54	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:P:30:ARG:NH2	40:P:34:GLN:OE1	2.19	0.75
48:z:360:MET:HA	48:z:365:GLU:CB	2.15	0.75
54:S2:309:G:H2'	54:S2:310:C:C6	2.21	0.75
54:S2:694:G:C2	54:S2:695:C:C4	2.75	0.75
54:S2:752:G:N1	54:S2:790:C:C4	2.55	0.75
84:Sc:14:VAL:CG2	84:Sc:31:ARG:CA	2.64	0.75
84:Sc:16:LYS:HG2	84:Sc:17:VAL:O	1.86	0.75
32:5:87:A:C2	32:5:292:G:N1	2.55	0.74
32:5:1213:G:C6	32:5:1215:C:C6	2.75	0.74
32:5:1598:C:O2	32:5:1598:C:C2'	2.34	0.74
32:5:1876:U:C4	32:5:1877:G:N7	2.54	0.74
32:5:2448:G:C6	32:5:2511:A:C6	2.74	0.74
32:5:4772:C:N3	32:5:4773:C:C5	2.55	0.74
34:8:115:G:C6	34:8:116:C:C5	2.75	0.74
36:C:325:MET:HE1	38:F:157:TYR:CE2	2.21	0.74
48:z:340:MET:N	48:z:341:LYS:N	2.34	0.74
54:S2:461:U:C2	54:S2:462:C:C5	2.75	0.74
54:S2:637:U:C2	54:S2:638:C:C5	2.75	0.74
54:S2:924:G:C5	54:S2:925:G:C8	2.74	0.74
54:S2:1420:G:O2'	81:ST:4:VAL:C	2.30	0.74
54:S2:1667:U:O2	54:S2:1668:U:C5	2.39	0.74
83:SZ:57:LYS:HB3	83:SZ:61:GLU:CG	2.17	0.74
2:D:41:LYS:HG3	13:T:93:ILE:HD11	1.69	0.74
21:c:89:TYR:CE1	32:5:2673:G:C2	2.74	0.74
32:5:66:A:N3	32:5:312:G:H1'	2.02	0.74
32:5:106:A:H1'	32:5:336:A:H8	1.52	0.74
32:5:244:G:N2	32:5:246:G:H1'	2.01	0.74
32:5:1755:C:H3'	32:5:1756:U:H5''	1.69	0.74
32:5:1899:G:N2	32:5:1900:C:N1	2.34	0.74
32:5:2436:U:C4	32:5:2783:A:C8	2.75	0.74
32:5:2830:G:C2	32:5:2831:G:N7	2.56	0.74
32:5:3731:C:C2	32:5:3732:A:H8	2.03	0.74
32:5:3762:U:H2'	32:5:3763:A:O4'	1.87	0.74
32:5:3847:C:C2	32:5:3848:U:C6	2.75	0.74
32:5:3858:C:H2'	32:5:3858:C:O2	1.87	0.74
32:5:3867:A:N3	32:5:3880:G:O6	2.19	0.74
32:5:3911:C:C2	32:5:3912:U:C5	2.74	0.74
32:5:4166:G:N2	32:5:4167:G:N9	2.35	0.74
32:5:4258:C:C2	32:5:4259:C:C5	2.74	0.74
33:7:18:C:O2	33:7:19:C:H6	1.66	0.74
34:8:70:G:C6	34:8:87:G:N1	2.55	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:495:U:O2'	54:S2:496:C:O4'	2.04	0.74
54:S2:1058:A:C2	54:S2:1059:G:C5	2.75	0.74
56:SB:55:THR:O	56:SB:56:LYS:HG3	1.85	0.74
74:SF:141:VAL:C	84:Sc:56:LEU:HD13	2.12	0.74
30:m:104:HIS:HD2	32:5:4697:U:H4'	1.53	0.74
32:5:642:G:N2	32:5:643:C:C2	2.56	0.74
32:5:2086:G:H2'	32:5:2087:C:O4'	1.88	0.74
32:5:2101:C:C2	32:5:2102:G:C8	2.75	0.74
32:5:2428:A:C4	32:5:2789:A:H2	2.05	0.74
32:5:3669:G:N2	32:5:3671:G:OP2	2.20	0.74
32:5:3860:A:C2	32:5:3861:A:H1'	2.22	0.74
32:5:4686:G:C6	32:5:4687:A:C8	2.75	0.74
48:z:404:GLN:CG	52:9:72:TRP:CZ2	2.64	0.74
54:S2:56:G:H2'	54:S2:57:U:O5'	1.87	0.74
54:S2:600:G:N7	54:S2:631:U:C5	2.55	0.74
54:S2:751:G:O6	54:S2:791:C:N3	2.20	0.74
54:S2:805:U:N3	54:S2:806:U:C5	2.55	0.74
54:S2:1399:C:C2	54:S2:1400:U:C5	2.75	0.74
54:S2:1408:U:H3'	54:S2:1409:A:C8	2.22	0.74
32:5:330:G:N3	32:5:331:G:C8	2.55	0.74
32:5:1271:G:H3'	32:5:1272:C:C5'	2.16	0.74
32:5:2077:C:C4	32:5:2078:C:C5	2.74	0.74
32:5:2288:G:N1	32:5:2290:C:C4	2.55	0.74
32:5:2713:C:O2	32:5:2714:G:C8	2.41	0.74
32:5:3596:A:C2	63:SL:2:ALA:CB	2.67	0.74
32:5:4122:G:C6	32:5:4123:C:C6	2.75	0.74
32:5:4269:G:C5	32:5:4270:C:C6	2.76	0.74
32:5:4677:U:H2'	32:5:4677:U:O2	1.85	0.74
50:3:19:U:H3	50:3:57:G:N2	1.86	0.74
54:S2:646:G:C5	54:S2:647:U:C6	2.75	0.74
54:S2:649:U:O2	54:S2:650:A:C8	2.40	0.74
54:S2:926:A:C6	54:S2:927:C:C5	2.75	0.74
32:5:38:A:N1	32:5:41:C:C5	2.54	0.74
32:5:54:G:C6	32:5:55:G:N7	2.49	0.74
32:5:1667:G:N2	32:5:2283:G:C6	2.56	0.74
32:5:1687:U:C2	32:5:1850:A:N6	2.55	0.74
32:5:1724:G:N3	38:F:105:PRO:HB3	2.02	0.74
32:5:1950:U:N3	32:5:1951:G:N7	2.35	0.74
32:5:2290:C:C2	32:5:2291:G:C8	2.76	0.74
32:5:2851:G:C6	32:5:2852:U:H6	2.03	0.74
32:5:3672:G:N7	32:5:3674:G:C1'	2.50	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3873:G:N2	32:5:3883:U:C2	2.56	0.74
38:F:184:TYR:HB3	38:F:202:ARG:HG2	1.68	0.74
48:z:339:ILE:HG21	49:2:83:LEU:CD1	2.17	0.74
48:z:413:SER:CB	52:9:74:ARG:HG3	1.89	0.74
54:S2:452:G:C2	54:S2:453:C:C6	2.76	0.74
54:S2:634:A:N1	54:S2:635:G:C5	2.56	0.74
3:G:102:TYR:OH	3:G:207:VAL:HA	1.87	0.74
23:e:35:TRP:CZ3	23:e:56:PRO:HD3	2.23	0.74
25:g:11:LEU:HB3	25:g:18:ASN:HD21	1.52	0.74
32:5:77:U:N3	32:5:336:A:N6	2.36	0.74
32:5:472:C:C2	32:5:473:C:C5	2.74	0.74
32:5:957:G:P	32:5:1284:G:H21	2.09	0.74
32:5:1359:G:H2'	32:5:1360:G:O4'	1.87	0.74
32:5:1543:G:N1	32:5:1544:G:N7	2.36	0.74
32:5:1692:C:O2	32:5:1692:C:H2'	1.87	0.74
32:5:2101:C:O2	32:5:2102:G:C8	2.41	0.74
32:5:2311:C:N4	32:5:2312:U:C5	2.55	0.74
32:5:2503:G:N2	32:5:4084:G:H5'	2.03	0.74
32:5:4537:C:N3	32:5:4538:G:C8	2.56	0.74
32:5:4754:G:N2	32:5:4880:C:C2	2.56	0.74
34:8:9:A:C6	34:8:10:G:N7	2.56	0.74
48:z:410:SER:HB3	51:4:193:G:H21	1.49	0.74
51:4:183:A:O3'	51:4:184:A:O5'	2.06	0.74
54:S2:995:G:H22	54:S2:997:A:H3'	1.51	0.74
54:S2:1294:G:C5	86:Sf:138:ARG:HD3	2.22	0.74
54:S2:1350:U:C2'	55:SA:110:ASN:OD1	2.35	0.74
54:S2:1394:G:C6	54:S2:1395:C:H5	2.06	0.74
54:S2:1409:A:C2	54:S2:1438:A:N1	2.56	0.74
60:SH:135:PHE:C	60:SH:135:PHE:CD1	2.65	0.74
1:A:50:HIS:HB3	32:5:2741:U:O2'	1.87	0.74
32:5:60:G:C2	32:5:61:A:C8	2.76	0.74
32:5:2076:G:C6	32:5:2077:C:C5	2.76	0.74
32:5:2327:G:C2	32:5:2328:G:C5	2.75	0.74
32:5:2361:G:O6	40:P:25:HIS:HD2	1.65	0.74
32:5:3631:U:N3	32:5:3632:C:C5	2.56	0.74
32:5:3702:A:C8	32:5:3774:A:C4	2.75	0.74
32:5:3907:G:C1'	32:5:4449:A:C1'	2.64	0.74
32:5:4981:G:C5	32:5:4982:A:C8	2.75	0.74
54:S2:86:C:C4	54:S2:87:U:C5	2.75	0.74
54:S2:794:A:C4	54:S2:795:A:C8	2.75	0.74
54:S2:996:A:C5	64:SN:113:PHE:CE2	2.75	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1540:G:C2	54:S2:1541:G:C5	2.75	0.74
11:R:109:TYR:CE1	11:R:114:LYS:HD2	2.23	0.74
32:5:144:G:N2	32:5:145:G:C8	2.56	0.74
32:5:293:G:O2'	32:5:297:U:C6	2.41	0.74
32:5:977:C:C2	32:5:978:G:H8	2.02	0.74
32:5:1245:C:O2	32:5:1246:G:H8	1.65	0.74
32:5:1273:G:N7	37:E:69:TYR:N	2.35	0.74
32:5:1887:G:N1	32:5:1890:G:O6	2.21	0.74
32:5:2691:U:O2	32:5:2692:U:H5	1.69	0.74
32:5:4098:A:N3	32:5:4099:G:C8	2.55	0.74
32:5:4344:U:O2	32:5:4345:C:C5	2.41	0.74
32:5:4369:A:N1	32:5:4370:G:C5	2.56	0.74
32:5:4744:A:C2	32:5:4745:G:C4	2.76	0.74
32:5:4745:G:N2	32:5:4746:C:H41	1.85	0.74
51:4:195:U:H2'	51:4:196:C:C6	2.23	0.74
54:S2:1411:G:C5	54:S2:1412:C:H1'	2.23	0.74
54:S2:1454:A:C8	54:S2:1476:A:C1'	2.70	0.74
32:5:1632:A:N6	32:5:1634:A:C4	2.54	0.74
32:5:1780:A:C6	32:5:1781:U:C6	2.76	0.74
32:5:1983:A:C2	32:5:2010:A:C5'	2.71	0.74
32:5:2108:G:N1	32:5:2125:C:N4	2.33	0.74
32:5:2650:G:H2'	32:5:2651:C:O4'	1.88	0.74
32:5:4091:G:C2	32:5:4159:C:N3	2.56	0.74
32:5:4234:A:C6	32:5:4271:A:H1'	2.23	0.74
34:8:21:C:OP1	36:C:195:LYS:NZ	2.21	0.74
34:8:102:G:O5'	34:8:104:A:O2'	2.05	0.74
50:3:34:A:C4	54:S2:1701:C:C5	2.76	0.74
51:4:5:G:H1'	51:4:290:C:OP1	1.88	0.74
54:S2:349:A:H4'	61:SI:27:TYR:OH	1.88	0.74
54:S2:458:A:N6	54:S2:459:C:C4	2.56	0.74
54:S2:833:C:N3	54:S2:834:C:C6	2.55	0.74
55:SA:50:ASN:HA	79:SR:105:MET:HE3	1.67	0.74
80:SS:38:ARG:HH21	81:ST:45:LEU:HD22	1.53	0.74
84:Sc:20:ARG:HG2	84:Sc:28:THR:HG22	1.68	0.74
85:Sd:40:ARG:HG2	85:Sd:41:GLN:OE1	1.88	0.74
7:M:109:ARG:HH21	7:M:109:ARG:HB2	1.53	0.74
20:b:12:GLN:O	20:b:13:SER:C	2.29	0.74
23:e:43:ASN:HD22	23:e:43:ASN:C	1.96	0.74
32:5:1390:G:N2	32:5:1394:G:C4	2.54	0.74
32:5:1616:U:O2	32:5:1617:G:C8	2.41	0.74
32:5:1845:U:O2	32:5:1846:G:N7	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2058:G:N2	32:5:2059:C:C6	2.53	0.74
32:5:2311:C:C4	32:5:2312:U:C6	2.75	0.74
32:5:2328:G:O2'	32:5:2329:U:O5'	2.05	0.74
32:5:2884:G:C2'	54:S2:1731:A:HO2'	1.98	0.74
32:5:4151:G:C2	32:5:4152:G:C8	2.75	0.74
32:5:4189:U:C1'	32:5:4380:A:C2	2.70	0.74
34:8:43:A:N1	34:8:44:A:N7	2.36	0.74
48:z:340:MET:O	48:z:341:LYS:C	2.31	0.74
48:z:404:GLN:HB3	52:9:72:TRP:NE1	2.03	0.74
49:2:80:LEU:O	49:2:84:LEU:HG	1.87	0.74
54:S2:600:G:N7	54:S2:631:U:C4	2.56	0.74
54:S2:830:A:N6	54:S2:844:U:C2	2.54	0.74
54:S2:1307:U:O2	54:S2:1308:U:H1'	1.86	0.74
70:Sa:28:ARG:HG3	70:Sa:28:ARG:HH11	1.51	0.74
3:G:29:ASN:HB3	3:G:32:PHE:CE1	2.23	0.73
6:L:35:ARG:C	6:L:39:ARG:HH12	1.95	0.73
32:5:153:G:C2	32:5:154:G:C5	2.75	0.73
32:5:287:U:O2	32:5:288:G:C8	2.41	0.73
32:5:917:A:N1	32:5:919:C:C4	2.55	0.73
32:5:2623:A:C2	32:5:2633:U:N3	2.56	0.73
32:5:2841:G:C6	32:5:2842:G:N7	2.56	0.73
32:5:3662:A:H61	32:5:3680:U:H3	1.33	0.73
32:5:3675:G:N2	32:5:3676:G:C8	2.56	0.73
32:5:4090:G:N2	32:5:4160:C:C2	2.56	0.73
32:5:4093:G:C5	32:5:4094:G:C8	2.75	0.73
32:5:4199:C:N3	32:5:4200:G:C8	2.55	0.73
34:8:95:A:C2	34:8:96:C:C6	2.76	0.73
36:C:122:TYR:CD1	36:C:122:TYR:O	2.41	0.73
54:S2:535:G:N2	54:S2:536:A:C8	2.56	0.73
54:S2:618:C:H2'	54:S2:618:C:O2	1.88	0.73
54:S2:956:G:N2	54:S2:957:A:C5	2.55	0.73
32:5:275:C:O2'	32:5:276:C:O4'	2.04	0.73
32:5:1076:C:C4	32:5:1077:C:C5	2.76	0.73
32:5:2076:G:C5	32:5:2077:C:C6	2.75	0.73
32:5:2691:U:C2	32:5:2692:U:H5	2.05	0.73
32:5:3668:C:N3	32:5:3669:G:C8	2.56	0.73
32:5:3724:A:N1	32:5:3729:U:O2	2.21	0.73
32:5:3754:G:C2	32:5:3755:G:C8	2.77	0.73
32:5:4627:U:O2	32:5:4628:U:C6	2.41	0.73
48:z:273:ILE:HD12	48:z:285:PHE:HE1	1.51	0.73
54:S2:357:C:N3	54:S2:358:C:C5	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1132:C:N4	54:S2:1133:A:C8	2.55	0.73
54:S2:1666:C:N3	54:S2:1667:U:C5	2.57	0.73
1:A:40:TYR:HE1	32:5:4117:U:C2	2.06	0.73
4:H:31:ARG:HH12	4:H:87:GLY:HA3	1.51	0.73
32:5:21:G:N1	34:8:36:G:C2	2.56	0.73
32:5:54:G:O6	32:5:55:G:C8	2.32	0.73
32:5:210:C:N4	32:5:231:U:C2	2.57	0.73
32:5:212:A:H2'	32:5:213:G:H8	1.52	0.73
32:5:655:C:C2	32:5:656:C:C5	2.77	0.73
32:5:754:U:C2	32:5:755:C:C6	2.76	0.73
32:5:914:U:H2'	32:5:915:A:O4'	1.86	0.73
32:5:1201:U:C2	32:5:1202:C:C6	2.76	0.73
32:5:1279:A:H3'	32:5:1280:C:C5	2.23	0.73
32:5:1477:C:O2	32:5:1478:C:H1'	1.87	0.73
32:5:2080:U:C2	32:5:2081:C:H5	1.99	0.73
32:5:2394:G:H1'	32:5:2397:G:H21	1.52	0.73
32:5:3794:C:N3	32:5:3795:A:C8	2.56	0.73
32:5:4098:A:C2	32:5:4099:G:C5	2.76	0.73
32:5:4229:U:C2	32:5:4230:C:C6	2.76	0.73
32:5:4302:U:H5	32:5:4303:C:C6	2.06	0.73
32:5:4332:C:C2	32:5:4333:C:H5	2.07	0.73
33:7:21:G:C6	33:7:58:A:C2	2.76	0.73
34:8:11:C:C2	34:8:12:G:C8	2.76	0.73
54:S2:752:G:C6	54:S2:790:C:N4	2.56	0.73
54:S2:1017:U:O2	54:S2:1018:U:C6	2.42	0.73
54:S2:1552:G:O6	54:S2:1578:U:O2	2.05	0.73
54:S2:1574:C:N3	54:S2:1575:G:N7	2.36	0.73
55:SA:200:ASP:CB	79:SR:85:VAL:HG13	1.90	0.73
32:5:44:A:C5	32:5:45:U:C5	2.75	0.73
32:5:55:G:C6	32:5:56:A:N7	2.56	0.73
32:5:1507:C:N3	32:5:1508:A:N7	2.36	0.73
32:5:1617:G:C6	32:5:1618:G:C5	2.75	0.73
32:5:1674:C:C2	32:5:1675:C:C5	2.76	0.73
32:5:1971:C:C2	32:5:1972:G:C8	2.76	0.73
32:5:2106:G:N2	32:5:2107:C:H5	1.87	0.73
32:5:2736:G:N3	32:5:2737:C:C5	2.56	0.73
32:5:3738:G:C5	32:5:3739:C:C6	2.76	0.73
32:5:3783:A:H2	32:5:3789:C:H42	1.34	0.73
32:5:4332:C:O2	32:5:4333:C:C5	2.41	0.73
32:5:4536:C:O2	32:5:4536:C:H2'	1.86	0.73
32:5:4767:C:O2'	32:5:4874:A:N6	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:F:239:GLU:O	38:F:241:GLN:N	2.21	0.73
54:S2:1111:U:C2	54:S2:1112:U:H5	2.06	0.73
54:S2:1133:A:N3	54:S2:1134:G:C8	2.56	0.73
54:S2:1229:G:H2'	54:S2:1230:C:O4'	1.88	0.73
54:S2:1526:G:N3	54:S2:1527:C:C6	2.57	0.73
83:SZ:55:TYR:CZ	83:SZ:59:CYS:SG	2.80	0.73
26:h:73:TYR:HD2	26:h:80:PRO:HD3	1.52	0.73
32:5:182:G:H22	32:5:254:G:H22	1.36	0.73
32:5:733:A:C8	32:5:734:G:H8	2.06	0.73
32:5:1267:C:H5''	32:5:2110:C:O2	1.89	0.73
32:5:1929:A:C2	32:5:2054:U:O4	2.41	0.73
32:5:1946:G:C2	32:5:1948:G:N7	2.57	0.73
32:5:2288:G:C2	32:5:2290:C:C5	2.75	0.73
32:5:2301:G:N3	32:5:2302:C:C6	2.56	0.73
32:5:2673:G:C4'	32:5:2675:G:H1'	2.18	0.73
32:5:2843:U:C2	32:5:2844:A:H8	2.03	0.73
32:5:3879:G:C6	32:5:3882:C:C4	2.76	0.73
32:5:3907:G:H1'	32:5:4449:A:C1'	2.19	0.73
32:5:4240:G:C6	32:5:4241:C:C4	2.75	0.73
32:5:4884:G:N1	32:5:4885:U:C5	2.56	0.73
32:5:5047:C:O4'	32:5:5048:A:C2	2.41	0.73
46:K:124:GLU:OE1	46:K:128:THR:HG21	1.88	0.73
48:z:414:THR:H	52:9:74:ARG:HG3	1.50	0.73
54:S2:60:A:O2'	54:S2:61:A:H5'	1.88	0.73
54:S2:381:C:N4	61:SI:49:ARG:CD	2.52	0.73
54:S2:636:C:C2	54:S2:637:U:C6	2.76	0.73
54:S2:806:U:N3	54:S2:807:G:N7	2.36	0.73
54:S2:1017:U:C2	54:S2:1018:U:C5	2.77	0.73
54:S2:1202:U:C4	54:S2:1203:G:N7	2.57	0.73
54:S2:1222:G:H2'	54:S2:1223:A:O4'	1.88	0.73
7:M:42:CYS:HG	7:M:77:TRP:CD1	2.07	0.73
17:Y:11:ARG:CZ	36:C:200:ARG:HH22	2.02	0.73
17:Y:72:GLN:HE21	17:Y:72:GLN:C	1.97	0.73
19:a:36:GLY:O	19:a:41:HIS:HB2	1.89	0.73
19:a:62:HIS:CE1	19:a:63:LEU:C	2.66	0.73
32:5:235:A:C5	32:5:238:C:N4	2.56	0.73
32:5:467:U:N3	32:5:468:U:C5	2.57	0.73
32:5:1412:G:N1	32:5:1413:C:C4	2.57	0.73
32:5:1866:U:O2'	32:5:1867:A:C8	2.39	0.73
32:5:1898:C:H5	32:5:2279:A:H1'	1.53	0.73
32:5:2041:A:N3	32:5:4464:A:C6	2.56	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2318:G:C2	32:5:2322:G:C2	2.76	0.73
32:5:2368:A:N6	32:5:2827:G:H1'	2.03	0.73
32:5:2604:C:C2	32:5:2605:G:C8	2.76	0.73
32:5:2634:C:C2	32:5:2635:U:C5	2.76	0.73
32:5:3714:G:N1	32:5:3715:U:C2	2.56	0.73
32:5:3771:C:H2'	32:5:3772:U:H6	1.52	0.73
32:5:4269:G:C6	32:5:4270:C:C6	2.77	0.73
32:5:4490:C:O2	32:5:4490:C:H2'	1.87	0.73
32:5:4997:G:C6	32:5:4998:G:N7	2.57	0.73
39:I:101:LYS:HE3	39:I:120:GLY:C	2.13	0.73
48:z:339:ILE:HA	48:z:342:MET:HB2	1.70	0.73
54:S2:56:G:C2'	54:S2:57:U:O5'	2.37	0.73
54:S2:220:U:C2	54:S2:221:A:C8	2.76	0.73
54:S2:648:A:N3	54:S2:649:U:C6	2.56	0.73
54:S2:821:G:C8	54:S2:821:G:H5'	2.23	0.73
54:S2:1667:U:N3	54:S2:1668:U:C4	2.56	0.73
84:Sc:14:VAL:HG23	84:Sc:30:VAL:CG1	1.87	0.73
32:5:752:G:C5	32:5:753:C:C6	2.77	0.73
32:5:1212:G:C2	32:5:1213:G:C8	2.76	0.73
32:5:1662:C:O2	32:5:1663:C:C6	2.41	0.73
32:5:1830:G:C2	32:5:1831:G:C8	2.76	0.73
32:5:2256:C:O2	32:5:2256:C:H2'	1.87	0.73
32:5:2318:G:N2	32:5:2320:G:O2'	2.22	0.73
32:5:2438:A:C6	32:5:2441:C:C4	2.75	0.73
32:5:2553:A:N1	32:5:2763:U:C5	2.57	0.73
32:5:2770:C:C2	32:5:2771:G:C8	2.77	0.73
32:5:4331:G:N3	32:5:4331:G:H2'	2.01	0.73
32:5:4735:G:N1	32:5:4736:C:C4	2.57	0.73
32:5:4910:G:H4'	32:5:4911:A:OP2	1.89	0.73
32:5:4932:U:H2'	32:5:4933:C:O4'	1.89	0.73
51:4:162:C:O2'	51:4:213:A:N3	2.22	0.73
54:S2:11:A:C6	54:S2:12:U:C5	2.77	0.73
54:S2:449:A:N7	54:S2:452:G:O6	2.22	0.73
54:S2:832:G:C2	54:S2:843:C:N3	2.57	0.73
54:S2:995:G:N2	54:S2:997:A:H3'	2.03	0.73
54:S2:1127:C:N3	54:S2:1128:C:C5	2.57	0.73
54:S2:1293:A:O4'	86:Sf:150:PHE:CG	2.42	0.73
54:S2:1311:C:N3	54:S2:1314:U:H5	1.86	0.73
54:S2:1644:C:O2'	54:S2:1645:C:O5'	2.06	0.73
71:Sb:46:VAL:HG22	71:Sb:54:VAL:HG11	1.70	0.73
6:L:129:ARG:CZ	32:5:173:C:OP1	2.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:152:U:H2'	32:5:152:U:O2	1.88	0.73
32:5:495:C:C2	32:5:496:G:C8	2.77	0.73
32:5:1404:G:N2	32:5:1414:C:C2	2.57	0.73
32:5:1672:U:C2	32:5:1673:U:H5	2.05	0.73
32:5:1885:G:N1	32:5:1895:G:C2	2.56	0.73
32:5:2288:G:N2	32:5:2290:C:C2	2.56	0.73
32:5:2738:C:C2	32:5:2741:U:C4	2.77	0.73
32:5:3871:A:C6	32:5:3885:G:C2	2.77	0.73
32:5:4368:G:C2	32:5:4369:A:C8	2.77	0.73
34:8:59:A:C3'	34:8:60:G:H3'	2.17	0.73
46:K:121:LEU:HD13	46:K:129:ILE:HD13	1.70	0.73
54:S2:493:A:H2	54:S2:494:C:C5	2.05	0.73
54:S2:908:A:C2	54:S2:909:G:C8	2.76	0.73
54:S2:1051:G:N1	54:S2:1052:A:C5	2.57	0.73
54:S2:1234:C:H2'	54:S2:1234:C:O2	1.89	0.73
54:S2:1378:A:C6	55:SA:105:PRO:HA	2.23	0.73
54:S2:1552:G:N7	54:S2:1578:U:C4	2.57	0.73
54:S2:1839:U:C2	54:S2:1840:U:C5	2.77	0.73
83:SZ:50:PHE:CE2	83:SZ:79:ILE:HD13	2.24	0.73
1:A:40:TYR:O	1:A:40:TYR:CG	2.42	0.73
30:m:104:HIS:CD2	32:5:4697:U:H4'	2.24	0.73
32:5:271:C:N3	32:5:272:U:C6	2.55	0.73
32:5:291:U:O2'	32:5:292:G:H2'	1.89	0.73
32:5:723:A:H2	32:5:943:A:N1	1.85	0.73
32:5:1878:G:N1	32:5:1879:C:C4	2.57	0.73
32:5:1899:G:C1'	32:5:2278:G:N2	2.52	0.73
32:5:2034:G:C5	32:5:2035:C:C6	2.77	0.73
32:5:2744:A:C2	32:5:2745:A:C5	2.76	0.73
32:5:2783:A:C4	32:5:2784:C:C5	2.77	0.73
32:5:3847:C:N3	32:5:3848:U:C6	2.57	0.73
32:5:4481:U:O2	32:5:4482:U:C6	2.42	0.73
32:5:4539:U:C2	32:5:4540:C:C5	2.77	0.73
32:5:4627:U:C2	32:5:4628:U:C5	2.76	0.73
33:7:94:C:C2	33:7:95:C:H5	2.03	0.73
54:S2:1030:A:C2	54:S2:1031:A:C8	2.77	0.73
54:S2:1231:C:C1'	54:S2:1665:G:H21	2.02	0.73
54:S2:1564:C:C2	54:S2:1565:C:C6	2.77	0.73
54:S2:1606:G:N1	54:S2:1632:G:C2	2.57	0.73
88:S1:71:ARG:CG	89:S4:80:GLN:HE22	2.01	0.73
3:G:54:PHE:CD2	3:G:54:PHE:N	2.55	0.73
32:5:126:C:C2	32:5:127:G:C8	2.76	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:661:C:C4	32:5:662:C:C5	2.77	0.73
32:5:1218:G:N1	32:5:1219:G:H1'	2.02	0.73
32:5:1870:C:C2	32:5:1871:A:C8	2.77	0.73
32:5:2033:A:C2	32:5:2034:G:C8	2.76	0.73
32:5:2347:A:N3	32:5:2348:G:C6	2.57	0.73
32:5:2522:G:N2	32:5:2534:C:C2	2.57	0.73
32:5:2589:C:C4	32:5:2590:G:C5	2.76	0.73
32:5:3717:A:C6	32:5:3736:A:N1	2.57	0.73
32:5:3730:U:N3	32:5:3731:C:C6	2.57	0.73
32:5:4158:C:O2	32:5:4159:C:C5	2.42	0.73
32:5:4355:G:N2	32:5:4356:G:C5	2.57	0.73
32:5:4518:A:C8	35:B:257:TRP:CZ3	2.77	0.73
34:8:91:A:H2'	34:8:92:U:O4'	1.89	0.73
38:F:161:TYR:CE2	38:F:168:ARG:NH2	2.56	0.73
54:S2:53:C:O2	54:S2:53:C:H2'	1.89	0.73
54:S2:120:U:N3	54:S2:121:U:C6	2.57	0.73
54:S2:340:C:N3	54:S2:341:C:C4	2.57	0.73
54:S2:819:G:H1	54:S2:828:G:H1	1.37	0.73
54:S2:1034:A:H2'	54:S2:1035:A:O4'	1.88	0.73
54:S2:1111:U:N3	54:S2:1112:U:H5	1.86	0.73
54:S2:1290:G:C4	86:Sf:146:LEU:HB3	2.23	0.73
54:S2:1293:A:N9	86:Sf:150:PHE:HB3	2.03	0.73
54:S2:1420:G:OP1	81:ST:132:ASP:HB3	1.89	0.73
66:SV:64:GLU:O	66:SV:66:ASP:N	2.22	0.73
74:SF:128:ILE:HD12	84:Sc:68:LEU:CG	2.19	0.73
79:SR:88:VAL:CG1	79:SR:91:LEU:HB3	2.19	0.73
1:A:180:LEU:O	32:5:3653:A:O2'	2.04	0.72
2:D:17:GLN:HG3	13:T:20:ARG:HA	1.69	0.72
4:H:96:TYR:CE2	4:H:100:PRO:HA	2.23	0.72
10:Q:34:PHE:HZ	10:Q:38:ARG:HE	1.36	0.72
32:5:90:G:N7	32:5:92:C:H1'	2.04	0.72
32:5:1544:G:C2	32:5:1545:G:C8	2.77	0.72
32:5:1545:G:C2	32:5:1546:C:C4	2.77	0.72
32:5:1926:C:C2	32:5:1927:U:C5	2.77	0.72
32:5:3742:G:C2	32:5:3743:G:C8	2.77	0.72
32:5:4693:C:C6	32:5:4693:C:C5'	2.71	0.72
34:8:55:U:H3	34:8:62:A:H2	1.36	0.72
34:8:106:G:N2	34:8:107:C:C2	2.57	0.72
34:8:133:G:N3	34:8:134:G:C8	2.56	0.72
39:I:101:LYS:HE2	39:I:121:LYS:HG2	0.87	0.72
48:z:381:SER:CA	51:4:207:C:O2	2.36	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:173:A:C6	54:S2:174:C:C5	2.76	0.72
54:S2:640:A:C2'	54:S2:641:A:O4'	2.37	0.72
54:S2:1291:A:O5'	86:Sf:146:LEU:HG	1.88	0.72
54:S2:1353:A:OP1	55:SA:139:TYR:OH	2.06	0.72
54:S2:1526:G:N2	54:S2:1527:C:C2	2.57	0.72
54:S2:1527:C:C4	54:S2:1528:G:C8	2.77	0.72
54:S2:1597:C:H2'	54:S2:1598:G:C8	2.23	0.72
74:SF:140:ASP:HB2	84:Sc:56:LEU:CD1	2.19	0.72
79:SR:100:PRO:CG	79:SR:119:VAL:HG11	1.89	0.72
80:SS:7:GLU:CG	80:SS:9:PHE:HE2	2.00	0.72
1:A:95:GLN:HB2	32:5:4118:U:O4	1.89	0.72
32:5:21:G:C6	34:8:36:G:N2	2.57	0.72
32:5:348:G:N2	32:5:350:C:C2	2.57	0.72
32:5:688:U:C4	32:5:689:U:C5	2.77	0.72
32:5:1198:G:H2'	32:5:1199:G:H8	1.54	0.72
32:5:1245:C:C6	32:5:1269:G:C5	2.77	0.72
32:5:1245:C:C2	32:5:1246:G:C8	2.76	0.72
32:5:2041:A:C2	32:5:4464:A:C5	2.77	0.72
32:5:2451:A:N6	32:5:2452:G:C4	2.58	0.72
32:5:2509:C:O2'	32:5:2510:G:C5'	2.37	0.72
32:5:2529:A:N7	32:5:2532:C:C4	2.57	0.72
32:5:4072:C:N3	32:5:4073:A:N7	2.37	0.72
54:S2:999:G:C2	54:S2:1000:C:N1	2.57	0.72
54:S2:1249:C:H5	54:S2:1250:A:N7	1.75	0.72
54:S2:1528:G:N3	54:S2:1529:C:C6	2.57	0.72
54:S2:1794:C:N3	54:S2:1795:G:C8	2.57	0.72
86:Sf:118:ARG:HB2	86:Sf:131:PHE:CE2	2.24	0.72
1:A:163:ARG:NH1	1:A:163:ARG:HB2	2.03	0.72
32:5:158:A:C6	32:5:277:G:C6	2.75	0.72
32:5:1170:G:C2	32:5:1192:C:C2	2.77	0.72
32:5:1171:G:C2	32:5:1191:C:C2	2.78	0.72
32:5:1245:C:C6	32:5:1269:G:O6	2.42	0.72
32:5:1421:G:N2	32:5:1422:G:C4	2.58	0.72
32:5:4266:G:C2	32:5:4279:A:C6	2.77	0.72
32:5:4480:A:C2	32:5:4481:U:O4'	2.42	0.72
32:5:5047:C:C2	32:5:5048:A:N6	2.57	0.72
33:7:18:C:C2	33:7:19:C:H6	2.07	0.72
39:I:47:PRO:CB	39:I:171:TRP:HE1	2.03	0.72
39:I:101:LYS:HZ1	39:I:121:LYS:CE	2.01	0.72
47:q:99:ARG:NE	47:q:103:ARG:NH2	2.36	0.72
51:4:16:G:C6	51:4:17:C:H1'	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:118[B]:A:H2'	51:4:119[B]:A:C8	2.24	0.72
54:S2:384:U:H5	54:S2:386:C:C5	2.08	0.72
54:S2:536:A:C6	54:S2:537:C:C6	2.76	0.72
54:S2:580:U:O4	54:S2:581:U:C5	2.42	0.72
54:S2:870:A:C8	54:S2:915:G:H8	1.99	0.72
54:S2:1040:G:C6	54:S2:1041:G:N7	2.58	0.72
54:S2:1383:A:O3'	73:SD:156:LEU:HD21	1.89	0.72
54:S2:1755:C:C4	54:S2:1756:C:C5	2.78	0.72
84:Sc:31:ARG:NH1	84:Sc:41:SER:HB2	2.04	0.72
32:5:70:A:N1	32:5:4355:G:C1'	2.52	0.72
32:5:86:U:N3	32:5:97:G:N2	2.36	0.72
32:5:125:C:N3	32:5:126:C:C5	2.57	0.72
32:5:488:G:C2	32:5:489:C:C6	2.77	0.72
32:5:732:A:C5	32:5:733:A:N3	2.57	0.72
32:5:1247:U:C4	32:5:1248:C:C5	2.77	0.72
32:5:1695:U:O2'	32:5:1696:C:H5'	1.90	0.72
32:5:1696:C:H1'	32:5:1697:G:C5'	2.19	0.72
32:5:1811:G:N3	32:5:1812:C:C6	2.57	0.72
32:5:2054:U:H4'	32:5:2056:G:C1'	2.19	0.72
32:5:2077:C:N3	32:5:2078:C:C5	2.58	0.72
32:5:2277:C:O2	32:5:2278:G:H8	1.69	0.72
32:5:4504:C:H2'	32:5:4505:C:C6	2.24	0.72
32:5:5042:A:C2	32:5:5043:A:C5	2.77	0.72
34:8:138:C:C2	34:8:139:G:C8	2.78	0.72
41:W:50:ASN:CB	41:W:55:TYR:CE2	2.73	0.72
54:S2:37:C:C4	54:S2:38:A:N7	2.57	0.72
54:S2:105:U:H4'	61:SI:21:TYR:OH	1.90	0.72
54:S2:384:U:C5	54:S2:386:C:H6	2.05	0.72
54:S2:1794:C:C2	54:S2:1795:G:C8	2.77	0.72
79:SR:71:ILE:HD12	79:SR:74:GLN:CD	2.14	0.72
84:Sc:14:VAL:CG2	84:Sc:32:VAL:N	2.29	0.72
2:D:33:ARG:NH2	33:7:8:G:OP1	2.23	0.72
32:5:33:A:H2'	32:5:34:A:C8	2.24	0.72
32:5:73:A:C2	32:5:74:G:N7	2.57	0.72
32:5:1991:A:H2'	32:5:1992:U:H2'	1.72	0.72
32:5:2449:A:N7	32:5:2450:G:H1'	2.02	0.72
32:5:2604:C:O2	32:5:2604:C:H2'	1.87	0.72
32:5:4999:G:N1	32:5:5000:G:C8	2.58	0.72
34:8:134:G:C4	34:8:135:C:C6	2.78	0.72
46:K:106:PHE:HB2	46:K:110:VAL:HG23	1.69	0.72
51:4:119[A]:A:H61	51:4:231[A]:A:H61	1.36	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:37:C:C4	54:S2:38:A:C8	2.76	0.72
54:S2:143:U:N3	54:S2:315:C:OP1	2.22	0.72
54:S2:650:A:H2'	54:S2:651:U:O5'	1.89	0.72
54:S2:1286:G:H21	76:SM:33:ARG:HD2	1.53	0.72
54:S2:1574:C:O2	54:S2:1574:C:H2'	1.87	0.72
79:SR:87:GLU:CD	79:SR:87:GLU:H	1.97	0.72
1:A:174:ARG:HA	44:p:69:TRP:CH2	2.24	0.72
4:H:61:TRP:HZ2	12:S:152:PHE:HE2	1.35	0.72
32:5:1358:G:O6	32:5:1379:C:N3	2.22	0.72
32:5:2107:C:C4	32:5:2126:G:N2	2.57	0.72
32:5:2532:C:C2	32:5:2533:C:H5	2.07	0.72
32:5:4164:C:N3	32:5:4165:C:C6	2.58	0.72
33:7:17:C:C2	33:7:18:C:C5	2.77	0.72
46:K:114:ARG:HD2	46:K:130:LYS:HA	1.71	0.72
48:z:410:SER:CB	51:4:193:G:C2	2.69	0.72
51:4:183:A:HO3'	51:4:184:A:P	1.49	0.72
54:S2:185:G:N2	54:S2:186:C:C2	2.57	0.72
54:S2:316:G:N1	54:S2:317:C:C4	2.57	0.72
54:S2:381:C:N4	61:SI:49:ARG:CG	2.51	0.72
54:S2:1292:C:C6	86:Sf:149:CYS:HA	2.25	0.72
54:S2:1841:C:O2	54:S2:1842:C:C5	2.43	0.72
79:SR:99:ASP:O	79:SR:102:THR:OG1	2.07	0.72
11:R:117:ARG:HD3	11:R:118:HIS:CE1	2.23	0.72
19:a:61:TYR:CE1	32:5:294:G:N1	2.58	0.72
24:f:6:TRP:HB2	24:f:102:ARG:HB3	1.69	0.72
32:5:186:G:H1'	32:5:187:U:H1'	1.70	0.72
32:5:492:U:C2	32:5:493:G:C8	2.77	0.72
32:5:1583:A:N7	32:5:1584:G:C8	2.58	0.72
32:5:2270:G:N3	32:5:2271:C:C5	2.58	0.72
32:5:2311:C:C4	32:5:2312:U:C5	2.78	0.72
32:5:2361:G:HO2'	32:5:3859:G:H1	1.34	0.72
32:5:3622:C:N3	32:5:3623:C:N3	2.37	0.72
32:5:4314:C:N3	32:5:4315:A:N7	2.37	0.72
32:5:4416:G:N2	32:5:4417:C:N1	2.38	0.72
32:5:4601:U:O4	32:5:4609:G:C2	2.43	0.72
32:5:4999:G:N3	32:5:5000:G:C8	2.58	0.72
34:8:64:U:O2	34:8:64:U:H2'	1.88	0.72
50:3:38:C:C4'	54:S2:1058:A:H8	2.03	0.72
50:3:39:G:C2	50:3:40:C:N1	2.53	0.72
54:S2:419:G:N2	54:S2:661:U:C2	2.57	0.72
54:S2:1317:C:O2	54:S2:1318:G:C8	2.42	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1599:U:OP2	83:SZ:80:ARG:CZ	2.37	0.72
54:S2:1665:G:N7	81:ST:88:MET:CG	2.52	0.72
65:SO:146:ARG:HD3	70:Sa:29:CYS:HB3	1.72	0.72
80:SS:36:VAL:HG13	80:SS:37:GLY:N	2.04	0.72
5:J:75:ARG:HH12	33:7:42:A:H1'	1.55	0.72
23:e:36:ARG:NH1	32:5:2322:G:OP1	2.23	0.72
32:5:101:A:C6	32:5:102:G:C5	2.77	0.72
32:5:660:A:C6	32:5:661:C:C5	2.76	0.72
32:5:1811:G:C2	32:5:1812:C:C5	2.78	0.72
32:5:1948:G:O6	32:5:2034:G:O6	2.07	0.72
32:5:2483:G:C2	32:5:2484:A:C8	2.78	0.72
32:5:2602:G:H1'	32:5:2742:G:C4	2.24	0.72
32:5:4174:U:C2	32:5:4175:G:C8	2.78	0.72
32:5:4454:G:HO2'	32:5:4500:U:HO2'	1.33	0.72
33:7:43:U:C4	33:7:44:C:C5	2.77	0.72
36:C:197:ARG:C	36:C:198:ASN:ND2	2.47	0.72
54:S2:403:G:N2	54:S2:404:G:H1'	2.05	0.72
56:SB:53:GLN:CG	56:SB:56:LYS:HE2	2.19	0.72
74:SF:128:ILE:HD11	84:Sc:68:LEU:HB2	1.63	0.72
3:G:41:ILE:O	32:5:4117:U:C6	2.43	0.72
15:V:57:VAL:HG23	15:V:84:GLN:HG2	1.70	0.72
18:Z:50:PRO:HG2	18:Z:122:TYR:HE2	1.54	0.72
32:5:42:A:N7	32:5:4379:A:C6	2.58	0.72
32:5:1291:G:N1	32:5:1292:C:C4	2.57	0.72
32:5:1522:G:C6	32:5:1653:A:C6	2.78	0.72
32:5:1898:C:N4	32:5:2279:A:O2'	2.23	0.72
32:5:2367:A:N7	32:5:2798:A:C4	2.57	0.72
32:5:3802:U:H3	32:5:4498:U:HO2'	1.37	0.72
32:5:4684:A:H2'	32:5:4685:U:O4'	1.89	0.72
32:5:4976:U:O4	35:B:342:LYS:HD2	1.90	0.72
34:8:12:G:N2	34:8:13:G:C4	2.57	0.72
43:n:8:LYS:NZ	54:S2:1845:A:C8	2.50	0.72
51:4:183:A:O3'	51:4:184:A:OP1	2.05	0.72
54:S2:23:G:N2	54:S2:652:U:C2	2.58	0.72
54:S2:219:U:N3	54:S2:220:U:C5	2.58	0.72
54:S2:452:G:N3	54:S2:453:C:C5	2.56	0.72
54:S2:459:C:N4	54:S2:460:A:N7	2.38	0.72
54:S2:973:C:C4	54:S2:974:C:C6	2.77	0.72
54:S2:1068:G:HO2'	54:S2:1069:U:H6	1.34	0.72
54:S2:1094:C:N3	54:S2:1095:U:C5	2.57	0.72
54:S2:1413:G:C2	54:S2:1414:A:H1'	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1510:G:C6	54:S2:1511:U:C5	2.76	0.72
55:SA:200:ASP:CA	79:SR:89:SER:HB2	2.20	0.72
3:G:141:ASN:ND2	32:5:151:G:C6	2.58	0.72
32:5:91:G:C5	32:5:93:G:C6	2.78	0.72
32:5:483:G:N1	32:5:484:U:C4	2.58	0.72
32:5:488:G:N2	32:5:489:C:C2	2.58	0.72
32:5:1080:C:C2	32:5:1221:G:C2	2.77	0.72
32:5:1440:U:H2'	32:5:1440:U:O2	1.90	0.72
32:5:1466:G:N3	32:5:1467:C:C6	2.58	0.72
32:5:1945:G:N2	32:5:1946:G:H1'	2.04	0.72
32:5:1970:A:C2	32:5:2016:C:C5	2.78	0.72
32:5:2294:G:C2	32:5:2295:C:C4	2.78	0.72
32:5:2301:G:N1	32:5:2302:C:C5	2.57	0.72
32:5:2394:G:H1'	32:5:2397:G:N2	2.04	0.72
32:5:2726:G:C2	32:5:2727:C:C5	2.77	0.72
32:5:4072:C:O2	32:5:4073:A:C8	2.43	0.72
32:5:4480:A:C6	32:5:4481:U:C5	2.78	0.72
32:5:4561:C:O2	32:5:4562:C:C5	2.42	0.72
32:5:4886:C:O2	32:5:4887:C:H6	1.72	0.72
34:8:13:G:C2	34:8:14:U:C2	2.78	0.72
48:z:237:LYS:HE2	48:z:268:SER:HB3	1.70	0.72
48:z:403:ILE:HD13	48:z:418:GLN:HG2	1.71	0.72
54:S2:218:U:O3'	54:S2:305:U:O4	2.08	0.72
54:S2:504:G:O2'	54:S2:505:G:H5'	1.90	0.72
54:S2:554:A:C2	54:S2:555:A:C5	2.78	0.72
54:S2:635:G:C4	54:S2:636:C:C5	2.78	0.72
54:S2:751:G:C6	54:S2:791:C:N3	2.58	0.72
54:S2:752:G:N1	54:S2:791:C:C2	2.58	0.72
54:S2:800:U:H2'	54:S2:801:U:O4'	1.90	0.72
54:S2:1292:C:H6	86:Sf:149:CYS:HA	1.54	0.72
54:S2:1526:G:N1	54:S2:1527:C:C4	2.58	0.72
55:SA:39:TYR:HE2	79:SR:105:MET:HA	1.54	0.72
87:Sg:150:TRP:HB2	87:Sg:170:TRP:HB2	1.70	0.72
10:Q:178:ARG:NH2	10:Q:186:TYR:CE1	2.58	0.71
32:5:66:A:C2	32:5:312:G:H1'	2.23	0.71
32:5:88:A:N6	32:5:97:G:N2	2.38	0.71
32:5:494:U:N3	32:5:495:C:C5	2.58	0.71
32:5:1339:U:C2	32:5:1340:C:H5	2.08	0.71
32:5:1583:A:N1	32:5:1584:G:H1'	2.05	0.71
32:5:1910:G:N2	32:5:1911:C:C2	2.58	0.71
32:5:2270:G:N3	32:5:2271:C:C6	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2282:A:H2'	32:5:2283:G:O5'	1.90	0.71
32:5:2673:G:C1'	32:5:2675:G:H1'	2.19	0.71
32:5:4223:C:H5'	39:I:119:PHE:HD2	1.54	0.71
32:5:4332:C:N3	32:5:4333:C:H5	1.88	0.71
34:8:13:G:C4	34:8:14:U:C5	2.77	0.71
43:n:2:ARG:HD3	54:S2:1842:C:OP2	1.89	0.71
48:z:367:GLU:H	48:z:367:GLU:CD	1.98	0.71
51:4:235:G:O2'	51:4:236:U:O4'	2.07	0.71
54:S2:434:G:H2'	54:S2:435:A:C8	2.25	0.71
54:S2:623:G:N3	54:S2:624:C:C6	2.58	0.71
54:S2:796:G:C5	60:SH:109:ARG:NH2	2.58	0.71
54:S2:989:C:C2	54:S2:1001:A:N1	2.57	0.71
54:S2:1843:G:O2'	54:S2:1844:U:O5'	2.07	0.71
74:SF:140:ASP:HB2	84:Sc:56:LEU:HD11	1.72	0.71
8:N:126:THR:C	8:N:127:TYR:HD1	1.97	0.71
11:R:95:TRP:HE1	32:5:1572:U:H4'	1.54	0.71
22:d:25:TYR:OH	22:d:119:THR:CB	2.37	0.71
32:5:125:C:O2	32:5:126:C:H6	1.74	0.71
32:5:659:G:C2	32:5:660:A:C8	2.78	0.71
32:5:1491:A:C2	32:5:1492:G:C4	2.78	0.71
32:5:2723:U:O2	32:5:2724:G:C8	2.43	0.71
32:5:2855:G:N2	32:5:2859:G:H22	1.88	0.71
32:5:3753:G:OP1	32:5:3777:G:H8	1.70	0.71
32:5:3832:U:N3	32:5:3833:C:C5	2.57	0.71
32:5:4397:A:O4'	50:3:76:A:C2	2.43	0.71
34:8:43:A:N1	34:8:44:A:C5	2.58	0.71
48:z:413:SER:CA	52:9:74:ARG:NE	2.47	0.71
54:S2:26:U:N3	54:S2:27:A:C8	2.57	0.71
54:S2:446:G:OP1	61:SI:50:GLY:N	2.19	0.71
54:S2:837:A:H2'	54:S2:837:A:N3	2.02	0.71
54:S2:875:A:C2	54:S2:876:C:C2	2.78	0.71
54:S2:1510:G:C6	54:S2:1511:U:C4	2.78	0.71
54:S2:1538:C:O2	54:S2:1539:U:H6	1.70	0.71
54:S2:1569:A:C8	54:S2:1570:G:C1'	2.72	0.71
54:S2:1593:C:O2	54:S2:1593:C:H2'	1.91	0.71
79:SR:103:LYS:HB2	79:SR:117:LEU:HD13	1.71	0.71
80:SS:6:PRO:HB2	83:SZ:49:LEU:HB3	1.72	0.71
83:SZ:50:PHE:CE2	83:SZ:79:ILE:CB	2.70	0.71
32:5:1190:C:C2	32:5:1191:C:C5	2.78	0.71
32:5:1298:C:C2	32:5:1299:G:C8	2.78	0.71
32:5:1358:G:O3'	36:C:114:ARG:NH1	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1378:C:C3'	32:5:1379:C:H5'	2.17	0.71
32:5:1744:U:N3	32:5:1745:G:C8	2.57	0.71
32:5:1885:G:C2	32:5:1895:G:N3	2.59	0.71
32:5:2277:C:O2	32:5:2277:C:H2'	1.89	0.71
32:5:2342:G:C2	32:5:2344:U:C6	2.77	0.71
32:5:2807:A:C2	32:5:2808:G:C8	2.78	0.71
32:5:4480:A:C2	32:5:4481:U:C1'	2.74	0.71
32:5:4490:C:C2	32:5:4491:G:H8	2.08	0.71
36:C:111:TRP:HB2	36:C:112:HIS:HD2	1.54	0.71
48:z:410:SER:C	51:4:194:G:C4	2.67	0.71
48:z:410:SER:OG	48:z:412:VAL:HG12	1.90	0.71
54:S2:379:C:C2	54:S2:380:G:C8	2.79	0.71
54:S2:796:G:C6	60:SH:109:ARG:NH2	2.58	0.71
54:S2:1124:C:C2	54:S2:1125:C:C5	2.78	0.71
54:S2:1249:C:C5	54:S2:1250:A:C5	2.77	0.71
54:S2:1450:G:O2'	87:Sg:64:HIS:CE1	2.43	0.71
80:SS:30:ILE:CD1	80:SS:45:LEU:HD21	2.14	0.71
12:S:81:TRP:HE1	12:S:94:TYR:HD1	1.36	0.71
32:5:472:C:C4	32:5:473:C:C5	2.78	0.71
32:5:1430:C:N3	32:5:1431:C:C5	2.59	0.71
32:5:2884:G:O2'	54:S2:1731:A:O2'	1.69	0.71
32:5:3591:C:C4	32:5:3592:G:C8	2.78	0.71
32:5:4286:C:O2	32:5:4287:G:C8	2.43	0.71
32:5:4730:C:O5'	32:5:4731:G:N2	2.23	0.71
32:5:4742:G:C6	32:5:4743:G:N7	2.58	0.71
54:S2:532:C:C2	54:S2:533:A:C8	2.78	0.71
54:S2:1201:U:H2'	54:S2:1202:U:C6	2.25	0.71
54:S2:1597:C:O2'	54:S2:1598:G:O4'	2.04	0.71
55:SA:39:TYR:HB3	55:SA:50:ASN:OD1	1.90	0.71
56:SB:145:LYS:CE	79:SR:128:PHE:HE2	2.02	0.71
31:o:45:GLN:HE21	31:o:45:GLN:HA	1.56	0.71
32:5:146:G:N3	32:5:147:A:C8	2.58	0.71
32:5:658:C:N3	32:5:659:G:N7	2.38	0.71
32:5:747:A:O2'	32:5:748:G:H5'	1.90	0.71
32:5:986:C:N3	32:5:1068:G:C2	2.59	0.71
32:5:1175:A:C6	32:5:1176:C:C5	2.78	0.71
32:5:1249:C:C2	32:5:1250:C:C6	2.79	0.71
32:5:2105:A:N1	32:5:2106:G:N7	2.38	0.71
32:5:2314:G:N3	32:5:2314:G:H2'	2.04	0.71
32:5:2743:A:N3	32:5:2744:A:C8	2.58	0.71
32:5:2753:G:H3'	32:5:2754:G:C8	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4167:G:C2	32:5:4168:G:N7	2.52	0.71
32:5:4275:G:C6	32:5:4276:G:C5	2.78	0.71
32:5:4606:G:H2'	32:5:4607:A:C8	2.25	0.71
32:5:4744:A:C6	32:5:4745:G:C6	2.78	0.71
33:7:9:C:C5	33:7:10:C:C5	2.78	0.71
48:z:410:SER:CB	51:4:194:G:H1'	2.20	0.71
54:S2:12:U:H2'	54:S2:13:C:C6	2.26	0.71
54:S2:963:A:C2	54:S2:964:A:C6	2.77	0.71
54:S2:1309:C:O2	86:Sf:143:LYS:CE	2.39	0.71
54:S2:1429:G:H2'	54:S2:1430:C:C6	2.25	0.71
54:S2:1841:C:C2	54:S2:1842:C:C5	2.79	0.71
54:S2:1859:A:C2	54:S2:1860:A:C4	2.78	0.71
88:S1:5:GLN:C	88:S1:6:THR:HG23	2.14	0.71
32:5:423:G:H1	34:8:10:G:H1	1.38	0.71
32:5:951:G:C2	32:5:952:G:C8	2.79	0.71
32:5:1771:U:C2	32:5:1772:C:C6	2.79	0.71
32:5:2737:C:N3	32:5:2738:C:C5	2.59	0.71
32:5:3857:G:C6	32:5:3858:C:C5	2.77	0.71
32:5:4093:G:C6	32:5:4094:G:N7	2.59	0.71
32:5:4999:G:N1	32:5:5000:G:C5	2.58	0.71
34:8:108:A:C2	34:8:112:G:C6	2.79	0.71
48:z:73:LYS:HD3	48:z:73:LYS:C	2.15	0.71
48:z:364:ASN:O	48:z:367:GLU:N	2.22	0.71
48:z:381:SER:C	51:4:208:A:O4'	2.33	0.71
54:S2:499:G:C2	54:S2:504:G:N1	2.59	0.71
54:S2:581:U:C4	54:S2:582:C:C5	2.78	0.71
54:S2:625:G:C4'	54:S2:629:A:C2	2.74	0.71
54:S2:874:G:H1'	60:SH:114:GLN:NE2	2.01	0.71
6:L:56:ARG:NH1	32:5:107:G:C6	2.59	0.71
12:S:27:LEU:C	12:S:28:TYR:HD1	1.98	0.71
19:a:12:ARG:NH1	32:5:1660:U:C4	2.58	0.71
32:5:62:A:H2'	32:5:63:G:C8	2.26	0.71
32:5:348:G:C6	32:5:350:C:N4	2.58	0.71
32:5:658:C:O2	32:5:659:G:C8	2.43	0.71
32:5:990:C:N3	32:5:991:C:C5	2.58	0.71
32:5:1215:C:N3	32:5:1216:C:C5	2.58	0.71
32:5:1542:U:N3	32:5:1543:G:C8	2.59	0.71
32:5:1683:U:C2	32:5:1684:A:C8	2.78	0.71
32:5:1696:C:O2	32:5:1697:G:H5'	1.91	0.71
32:5:2361:G:O6	40:P:25:HIS:CG	2.43	0.71
32:5:2495:U:C2	32:5:2496:G:C8	2.78	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2691:U:C2	32:5:2692:U:C5	2.78	0.71
32:5:2856:C:O2	32:5:2856:C:H2'	1.90	0.71
32:5:3909:C:O4'	49:2:128:VAL:HA	1.91	0.71
32:5:4174:U:C2	32:5:4175:G:N7	2.59	0.71
32:5:4425:G:C2	32:5:4426:C:H1'	2.25	0.71
32:5:5003:U:C2'	32:5:5004:C:O4'	2.38	0.71
33:7:7:G:C2	33:7:8:G:C8	2.79	0.71
33:7:60:G:C2	33:7:61:G:C8	2.79	0.71
34:8:70:G:C2	34:8:87:G:C2	2.78	0.71
35:B:51:ALA:HA	35:B:323:TYR:CE2	2.25	0.71
39:I:112:GLN:OE1	39:I:114:GLY:N	2.23	0.71
48:z:405:ARG:HG3	51:4:207:C:H5''	0.71	0.71
48:z:405:ARG:HE	51:4:207:C:C3'	2.02	0.71
54:S2:383:G:H2'	54:S2:384:U:O4'	1.90	0.71
54:S2:968:U:O2'	54:S2:972:A:H1'	1.91	0.71
54:S2:993:G:C5	54:S2:994:C:C5	2.78	0.71
54:S2:1302:G:O6	86:Sf:138:ARG:NH1	2.23	0.71
54:S2:1455:A:N1	54:S2:1456:G:N7	2.38	0.71
56:SB:53:GLN:HG3	56:SB:56:LYS:HE2	1.72	0.71
61:SI:165:GLN:HE21	61:SI:171:LEU:HD23	1.56	0.71
85:Sd:26:ASN:ND2	85:Sd:39:CYS:SG	2.64	0.71
14:U:82:TYR:CE1	32:5:2631:U:O4'	2.43	0.71
25:g:97:ILE:HA	32:5:4120:U:O4	1.91	0.71
32:5:54:G:O6	32:5:55:G:C5	2.44	0.71
32:5:94:A:H2'	32:5:95:G:C4'	2.21	0.71
32:5:300:A:C2	32:5:301:G:N7	2.59	0.71
32:5:516:C:C2	32:5:646:G:C2	2.79	0.71
32:5:665:C:O2	32:5:665:C:H2'	1.90	0.71
32:5:909:A:N1	32:5:910:G:C8	2.59	0.71
32:5:1284:G:O6	36:C:312:ARG:NH2	2.23	0.71
32:5:1759:G:C2	32:5:1760:G:C8	2.79	0.71
32:5:1867:A:N3	32:5:4403:U:O2'	2.23	0.71
32:5:2309:G:H2'	32:5:2310:C:O4'	1.91	0.71
32:5:2851:G:H2'	32:5:2851:G:N3	2.04	0.71
32:5:3938:G:C6	32:5:4077:A:H2	2.08	0.71
32:5:4123:C:H2'	32:5:4123:C:O2	1.89	0.71
32:5:4933:C:C4	32:5:4934:A:C8	2.78	0.71
32:5:4942:C:O2	32:5:4942:C:O5'	2.09	0.71
33:7:30:C:N3	33:7:48:G:C2	2.58	0.71
34:8:73:U:C4	34:8:74:U:N1	2.59	0.71
39:I:111:LEU:H	39:I:111:LEU:HD23	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:667:U:N3	54:S2:1144:A:C2	2.57	0.71
54:S2:927:C:C2	54:S2:928:G:C8	2.79	0.71
54:S2:1017:U:O2	54:S2:1017:U:H2'	1.91	0.71
54:S2:1224:G:C5	54:S2:1225:U:C6	2.77	0.71
54:S2:1375:G:H2'	54:S2:1376:A:C8	2.26	0.71
54:S2:1405:A:O4'	54:S2:1580:A:C5	2.44	0.71
54:S2:1417:C:N3	54:S2:1419:C:C5	2.56	0.71
54:S2:1781:A:C2	54:S2:1782:G:C5	2.78	0.71
54:S2:1834:A:H2	54:S2:1837:G:H1	1.38	0.71
55:SA:50:ASN:N	79:SR:105:MET:CE	2.54	0.71
61:SI:168:GLN:HE22	61:SI:170:LYS:CE	2.02	0.71
62:SJ:111:GLN:HE21	62:SJ:127:ARG:HB2	1.55	0.71
80:SS:6:PRO:O	83:SZ:49:LEU:HD13	1.90	0.71
80:SS:12:ILE:HA	80:SS:22:GLY:H	1.56	0.71
88:S1:6:THR:O	88:S1:51:TYR:CE1	2.43	0.71
5:J:119:TYR:CZ	80:SS:12:ILE:CG2	2.67	0.71
32:5:29:G:N7	32:5:54:G:N2	2.39	0.71
32:5:244:G:C2	32:5:246:G:C8	2.79	0.71
32:5:294:G:C5'	32:5:296:A:H5''	2.19	0.71
32:5:370:U:C6	32:5:1637:A:N1	2.58	0.71
32:5:450:G:O2'	32:5:452:A:H4'	1.91	0.71
32:5:499:G:C2	32:5:656:C:C2	2.79	0.71
32:5:719:C:N3	32:5:720:G:N7	2.39	0.71
32:5:1393:G:H2'	32:5:1394:G:H5'	1.72	0.71
32:5:1476:C:O2	32:5:1477:C:C6	2.43	0.71
32:5:1866:U:C4	32:5:4405:G:C1'	2.73	0.71
32:5:1866:U:O2'	32:5:1867:A:P	2.48	0.71
32:5:1994:C:C2	32:5:1995:G:C8	2.79	0.71
32:5:2382:A:H2'	32:5:2382:A:N3	2.04	0.71
32:5:2479:G:C6	32:5:2480:G:N7	2.59	0.71
32:5:3731:C:O2	32:5:3732:A:C8	2.44	0.71
32:5:3907:G:C1'	32:5:4449:A:N9	2.48	0.71
32:5:4885:U:N3	32:5:4886:C:C5	2.59	0.71
54:S2:66:G:C5	54:S2:68:A:C8	2.79	0.71
54:S2:99:A:N1	54:S2:100:U:C6	2.59	0.71
54:S2:217:A:C2	54:S2:309:G:C6	2.78	0.71
54:S2:371:A:N3	54:S2:372:U:C5	2.59	0.71
54:S2:377:G:C6	54:S2:378:U:C5	2.79	0.71
54:S2:378:U:O4	54:S2:379:C:N4	2.24	0.71
54:S2:386:C:N3	54:S2:387:C:C6	2.56	0.71
54:S2:946:U:C2	54:S2:947:G:C8	2.79	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1129:G:H3'	54:S2:1130:G:H8	1.53	0.71
54:S2:1291:A:O4'	86:Sf:146:LEU:HB2	1.90	0.71
74:Sf:102:LEU:HD13	83:SZ:110:THR:HG21	1.71	0.71
13:T:19:PHE:CZ	32:5:1791:U:H4'	2.26	0.71
32:5:1661:C:C2	32:5:1662:C:C5	2.79	0.71
32:5:1925:G:C5	32:5:1926:C:C5	2.79	0.71
32:5:2365:C:O2	32:5:2829:U:C5	2.44	0.71
32:5:2724:G:N2	32:5:2726:G:C8	2.58	0.71
32:5:3832:U:C2	32:5:3833:C:C6	2.79	0.71
32:5:3914:U:C4	32:5:4378:A:N1	2.58	0.71
32:5:4240:G:C5	32:5:4241:C:C6	2.78	0.71
32:5:4341:C:N3	32:5:4342:C:C6	2.59	0.71
33:7:59:G:N1	33:7:60:G:C5	2.58	0.71
35:B:49:TYR:CE1	35:B:171:LEU:HD11	2.26	0.71
48:z:340:MET:C	48:z:342:MET:N	2.49	0.71
50:3:9:A:O4'	50:3:46:G:N3	2.24	0.71
54:S2:378:U:O2	54:S2:379:C:C6	2.44	0.71
54:S2:691:G:C2	54:S2:692:G:C8	2.78	0.71
54:S2:1293:A:C2	86:Sf:150:PHE:C	2.69	0.71
54:S2:1316:C:C2	54:S2:1317:C:H5	2.07	0.71
54:S2:1430:C:C4	54:S2:1431:G:N7	2.59	0.71
54:S2:1606:G:C2	54:S2:1632:G:C2	2.78	0.71
55:SA:42:LYS:CE	79:SR:99:ASP:OD2	2.38	0.71
79:SR:77:GLU:OE2	79:SR:81:ARG:HD2	1.89	0.71
80:SS:54:LYS:HA	80:SS:55:ARG:NH2	2.06	0.71
2:D:23:ARG:NE	32:5:4280:A:C2	2.59	0.70
10:Q:37:ARG:HG3	10:Q:38:ARG:N	2.04	0.70
32:5:98:A:N3	32:5:292:G:C6	2.59	0.70
32:5:504:G:C6	32:5:654:C:C2	2.78	0.70
32:5:752:G:C6	32:5:753:C:C5	2.78	0.70
32:5:1491:A:C2	32:5:1492:G:C5	2.79	0.70
32:5:2258:C:H2'	32:5:2258:C:O2	1.91	0.70
32:5:2479:G:N1	32:5:2480:G:C5	2.59	0.70
32:5:3732:A:C2	32:5:3733:A:C5	2.78	0.70
32:5:4313:A:C6	32:5:4314:C:C5	2.78	0.70
32:5:4583:C:C4	32:5:4718:G:N1	2.59	0.70
32:5:4735:G:C2	32:5:4736:C:C6	2.78	0.70
32:5:5030:U:C2	32:5:5031:G:C8	2.79	0.70
50:3:56:C:H2'	50:3:57:G:C8	2.25	0.70
54:S2:184:G:C2	54:S2:185:G:C8	2.79	0.70
54:S2:833:C:C4	54:S2:834:C:C5	2.79	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:992:A:C6	54:S2:993:G:N7	2.59	0.70
54:S2:1034:A:H2'	54:S2:1035:A:O5'	1.90	0.70
54:S2:1083:A:N3	54:S2:1859:A:O2'	2.23	0.70
54:S2:1137:U:H3	54:S2:1148:A:H61	1.39	0.70
60:SH:61:ILE:HD12	60:SH:93:VAL:HG13	1.73	0.70
26:h:63:GLN:HE22	34:8:95:A:H2'	1.56	0.70
32:5:28:C:C2	32:5:29:G:N7	2.58	0.70
32:5:370:U:C5	32:5:1637:A:N1	2.58	0.70
32:5:1487:G:C6	32:5:1488:G:C8	2.79	0.70
32:5:1635:C:O2	32:5:1636:U:C6	2.43	0.70
32:5:1661:C:H1'	32:5:2345:G:N2	2.06	0.70
32:5:1693:U:C4	32:5:1694:C:C5	2.79	0.70
32:5:1755:C:O2'	32:5:1756:U:OP1	2.08	0.70
32:5:2606:G:N2	32:5:2607:C:C2	2.59	0.70
32:5:2632:U:H2'	32:5:2633:U:H6	1.55	0.70
32:5:2677:G:C5	32:5:2678:A:C8	2.78	0.70
32:5:2714:G:C2	32:5:2715:G:C8	2.79	0.70
32:5:2769:U:O2'	32:5:2770:C:H6	1.73	0.70
32:5:3607:U:C2	32:5:3608:A:N7	2.59	0.70
32:5:4167:G:N2	32:5:4168:G:C4	2.59	0.70
32:5:4532:U:H5	32:5:4554:G:H21	1.35	0.70
32:5:4563:U:O2	32:5:4564:A:C8	2.43	0.70
32:5:4735:G:C4	32:5:4736:C:C6	2.79	0.70
48:z:340:MET:CB	48:z:341:LYS:N	2.55	0.70
51:4:58:G:C5	51:4:288:G:N2	2.59	0.70
54:S2:85:A:N1	54:S2:86:C:C4	2.60	0.70
54:S2:497:C:C2	54:S2:506:G:N2	2.59	0.70
54:S2:634:A:N3	54:S2:635:G:C8	2.58	0.70
54:S2:981:A:H2'	54:S2:982:G:C8	2.26	0.70
54:S2:1134:G:C4	54:S2:1135:C:C6	2.79	0.70
54:S2:1394:G:C6	54:S2:1395:C:C5	2.79	0.70
83:SZ:46:ASN:ND2	83:SZ:78:LYS:CB	2.54	0.70
11:R:95:TRP:O	11:R:96:MET:C	2.33	0.70
18:Z:38:TYR:CZ	18:Z:76:ASN:OD1	2.43	0.70
32:5:978:G:H2'	32:5:979:C:O4'	1.91	0.70
32:5:1074:G:H2'	32:5:1075:G:O4'	1.91	0.70
32:5:1215:C:H2'	32:5:1216:C:H5'	1.73	0.70
32:5:1270:A:C2'	32:5:1271:G:O5'	2.37	0.70
32:5:1629:G:C2	32:5:1631:A:N1	2.59	0.70
32:5:1635:C:N3	32:5:1636:U:C4	2.60	0.70
32:5:1699:A:OP2	38:F:179:ARG:NH2	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3846:C:C2	32:5:3847:C:C6	2.79	0.70
32:5:4878:C:O2	32:5:4879:C:C6	2.43	0.70
32:5:4935:C:N4	37:E:179:ARG:HG2	2.06	0.70
32:5:4985:U:H4'	35:B:175:GLN:OE1	1.90	0.70
54:S2:998:A:N7	54:S2:999:G:C1'	2.53	0.70
54:S2:1085:C:C4	54:S2:1087:A:H1'	2.27	0.70
54:S2:1393:G:C6	54:S2:1394:G:N7	2.59	0.70
23:e:26:ASP:N	23:e:26:ASP:OD1	2.22	0.70
26:h:73:TYR:CD2	26:h:80:PRO:HD3	2.27	0.70
32:5:10:A:H1'	32:5:2472:A:N1	2.05	0.70
32:5:269:G:C2	32:5:270:U:C6	2.79	0.70
32:5:442:G:H2'	32:5:443:G:O5'	1.91	0.70
32:5:1203:G:C6	32:5:1204:C:C5	2.79	0.70
32:5:1309:C:C2	32:5:1310:C:C6	2.79	0.70
32:5:1321:G:N2	32:5:3876:A:N3	2.39	0.70
32:5:1404:G:C2	32:5:1414:C:C2	2.80	0.70
32:5:1488:G:C6	32:5:1489:G:N7	2.59	0.70
32:5:1912:G:N2	32:5:1913:C:C2	2.59	0.70
32:5:1926:C:N3	32:5:1927:U:H5	1.86	0.70
32:5:2422:C:C2	32:5:2423:A:C8	2.80	0.70
32:5:2632:U:H2'	32:5:2633:U:C6	2.27	0.70
32:5:2645:G:C2	32:5:2646:C:C6	2.79	0.70
32:5:2658:G:N2	32:5:2675:G:C2	2.60	0.70
32:5:2735:G:C2	32:5:2736:G:C5	2.80	0.70
32:5:3714:G:C5	32:5:3715:U:N3	2.59	0.70
32:5:4199:C:O2	32:5:4199:C:H2'	1.91	0.70
34:8:125:C:C2	34:8:125:C:H5''	2.26	0.70
48:z:360:MET:HB3	48:z:365:GLU:HB3	1.71	0.70
54:S2:50:A:N1	54:S2:488:U:C4	2.58	0.70
54:S2:378:U:C4	54:S2:379:C:C4	2.78	0.70
54:S2:393:U:O2	54:S2:394:G:C8	2.44	0.70
54:S2:841:G:N1	54:S2:842:C:N4	2.39	0.70
54:S2:847:A:N1	54:S2:848:U:H1'	2.07	0.70
54:S2:1151:G:C2	54:S2:1152:U:C5	2.79	0.70
54:S2:1177:U:C2	54:S2:1178:U:C5	2.78	0.70
54:S2:1205:C:H6	54:S2:1206:G:H8	1.37	0.70
54:S2:1398:G:N1	54:S2:1399:C:C5	2.59	0.70
66:SV:1:MET:SD	66:SV:1:MET:N	2.61	0.70
26:h:92:ARG:NH1	34:8:38:U:N3	2.40	0.70
32:5:314:G:C2	32:5:4355:G:N7	2.59	0.70
32:5:1358:G:C3'	36:C:114:ARG:HH12	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1412:G:N3	32:5:1413:C:C6	2.59	0.70
32:5:1537:A:N3	32:5:1628:C:O2'	2.25	0.70
32:5:2316:G:C4	32:5:2317:C:C5	2.79	0.70
32:5:2590:G:N1	32:5:2754:G:N1	2.39	0.70
32:5:2633:U:O2	32:5:2634:C:C6	2.45	0.70
32:5:3905:A:C6	32:5:4449:A:N1	2.59	0.70
32:5:4164:C:C4	32:5:4165:C:C5	2.78	0.70
32:5:4230:C:O2	32:5:4231:C:C6	2.44	0.70
32:5:4276:G:C6	32:5:4277:G:C5	2.80	0.70
33:7:33:U:N3	33:7:34:C:C5	2.60	0.70
34:8:106:G:C6	34:8:107:C:N4	2.60	0.70
48:z:160:TYR:CD2	48:z:179:PHE:CZ	2.79	0.70
51:4:117:U:H5''	53:6:114:ARG:HH21	1.56	0.70
54:S2:43:U:O2	54:S2:43:U:C2'	2.39	0.70
54:S2:185:G:N1	54:S2:186:C:C4	2.59	0.70
54:S2:380:G:H22	54:S2:382:C:H3'	1.57	0.70
54:S2:387:C:C2	54:S2:388:U:H5	2.05	0.70
54:S2:466:G:O2'	59:SG:59:GLN:NE2	2.24	0.70
54:S2:600:G:C2	54:S2:601:G:C5	2.79	0.70
1:A:40:TYR:O	1:A:40:TYR:CD1	2.45	0.70
7:M:123:ILE:HD11	9:O:182:GLU:HG3	1.72	0.70
11:R:131:VAL:HG23	11:R:132:PHE:CE2	2.26	0.70
12:S:81:TRP:NE1	12:S:94:TYR:HD1	1.90	0.70
32:5:1092:G:C6	32:5:1093:C:C5	2.80	0.70
32:5:1818:G:C8	32:5:1821:G:C6	2.79	0.70
32:5:2105:A:C2	32:5:2106:G:C5	2.80	0.70
32:5:2288:G:N1	32:5:2290:C:C5	2.60	0.70
32:5:2664:G:N2	32:5:2671:C:C2	2.60	0.70
32:5:2734:U:C2	32:5:2735:G:H8	2.08	0.70
32:5:3723:A:C2	32:5:3724:A:N6	2.58	0.70
32:5:3724:A:C6	32:5:3725:G:C5	2.80	0.70
32:5:3737:A:C2'	32:5:3738:G:O4'	2.33	0.70
32:5:3741:C:N3	32:5:3742:G:C8	2.57	0.70
32:5:4550:G:N1	32:5:4551:U:C6	2.59	0.70
44:p:29:ILE:HG23	44:p:69:TRP:CD1	2.25	0.70
48:z:140:PHE:CD2	48:z:192:SER:HB2	2.26	0.70
50:3:39:G:C6	50:3:40:C:C4	2.79	0.70
54:S2:316:G:C2	54:S2:317:C:C5	2.80	0.70
54:S2:413:G:C6	54:S2:425:G:C2	2.78	0.70
54:S2:449:A:C5	54:S2:452:G:O6	2.44	0.70
54:S2:694:G:N3	54:S2:695:C:C6	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:837:A:H2	54:S2:838:G:N7	1.87	0.70
54:S2:955:A:N6	54:S2:969:U:O4'	2.25	0.70
23:e:35:TRP:HD1	23:e:36:ARG:N	1.89	0.70
32:5:70:A:H2	32:5:4355:G:H1'	1.56	0.70
32:5:96:U:C5	32:5:97:G:C8	2.79	0.70
32:5:323:C:O2	32:5:324:A:C8	2.44	0.70
32:5:672:C:C4	32:5:673:C:C5	2.79	0.70
32:5:1298:C:N3	32:5:1299:G:C8	2.59	0.70
32:5:1758:G:C2	32:5:1759:G:C5	2.79	0.70
32:5:1946:G:C2	32:5:2037:C:N3	2.59	0.70
32:5:4879:C:C2	32:5:4880:C:C5	2.80	0.70
34:8:130:C:C2	34:8:131:G:C8	2.79	0.70
37:E:157:ARG:HD3	37:E:266:TYR:CE1	2.26	0.70
48:z:84:VAL:HA	48:z:291:ILE:HD13	1.73	0.70
50:3:40:C:O2	54:S2:1640:A:O2'	2.09	0.70
51:4:233[A]:U:H2'	51:4:234:A:C8	2.27	0.70
54:S2:633:C:C2	54:S2:634:A:C8	2.80	0.70
54:S2:644:G:H2'	54:S2:645:C:O4'	1.92	0.70
54:S2:1232:U:O2	54:S2:1232:U:H2'	1.90	0.70
54:S2:1291:A:O5'	86:Sf:146:LEU:CG	2.39	0.70
54:S2:1293:A:O4'	86:Sf:150:PHE:HB3	1.92	0.70
54:S2:1309:C:H2'	86:Sf:143:LYS:CG	2.21	0.70
54:S2:1322:G:H2'	54:S2:1323:U:C6	2.26	0.70
54:S2:1409:A:N1	54:S2:1410:C:C5	2.58	0.70
8:N:143:ARG:HD3	26:h:95:LEU:HD23	1.74	0.70
22:d:87:ARG:N	22:d:87:ARG:HH12	1.89	0.70
32:5:20:U:C4	34:8:37:A:C6	2.79	0.70
32:5:37:U:C4	32:5:38:A:N7	2.60	0.70
32:5:690:C:C4	32:5:691:C:C5	2.79	0.70
32:5:750:U:C2	32:5:751:G:C8	2.79	0.70
32:5:1265:G:H5''	32:5:2115:G:N2	2.07	0.70
32:5:1439:C:C5'	38:F:36:ARG:HH12	2.05	0.70
32:5:1699:A:N6	32:5:2094:G:O2'	2.24	0.70
32:5:1866:U:HO2'	32:5:1867:A:H8	1.30	0.70
32:5:2404:A:H2'	32:5:2405:G:O4'	1.91	0.70
32:5:2570:U:C2	32:5:2571:C:C5	2.80	0.70
32:5:2606:G:C4	32:5:2607:C:C5	2.79	0.70
32:5:2657:G:H3'	32:5:2658:G:H8	1.57	0.70
32:5:3648:A:C5	32:5:3785:A:N6	2.59	0.70
32:5:3878:C:O2	35:B:258:HIS:CE1	2.45	0.70
32:5:3878:C:O2	35:B:258:HIS:HE1	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4652:G:N2	32:5:4653:C:C2	2.60	0.70
32:5:5003:U:H2'	32:5:5004:C:O4'	1.91	0.70
34:8:43:A:N3	34:8:44:A:C8	2.59	0.70
37:E:197:ILE:HD12	37:E:257:ILE:HG23	1.72	0.70
41:W:28:VAL:HG12	41:W:30:GLN:OE1	1.92	0.70
47:q:62:ARG:HE	47:q:65:ILE:HB	1.56	0.70
54:S2:18:C:C4'	54:S2:1194:A:N6	2.55	0.70
54:S2:388:U:O2	54:S2:389:A:C8	2.45	0.70
54:S2:634:A:C6	54:S2:635:G:N7	2.60	0.70
54:S2:1141:G:N2	54:S2:1147:C:C2	2.59	0.70
54:S2:1220:A:N6	54:S2:1221:G:O6	2.25	0.70
54:S2:1410:C:H2'	54:S2:1410:C:O2	1.92	0.70
54:S2:1602:U:H4'	80:SS:24:ARG:HH21	1.56	0.70
54:S2:1782:G:N2	54:S2:1784:G:C5	2.60	0.70
17:Y:11:ARG:NH2	36:C:200:ARG:HH12	1.89	0.70
19:a:110:LYS:HD2	19:a:128:PHE:HB2	1.73	0.70
32:5:33:A:C6	32:5:50:C:C2	2.79	0.70
32:5:255:C:O2	32:5:255:C:H2'	1.90	0.70
32:5:909:A:C6	32:5:910:G:N7	2.60	0.70
32:5:1076:C:N3	32:5:1077:C:C6	2.59	0.70
32:5:2270:G:C2	32:5:2271:C:C5	2.80	0.70
32:5:2292:C:C2	32:5:2293:U:C6	2.79	0.70
32:5:4729:A:H5'	32:5:4965:U:O2'	1.92	0.70
34:8:10:G:C2	34:8:11:C:C6	2.80	0.70
34:8:131:G:C2	34:8:132:G:C8	2.80	0.70
48:z:152:ALA:HB1	48:z:159:PHE:CD2	2.27	0.70
54:S2:75:G:HO2'	54:S2:76:U:H6	1.37	0.70
54:S2:418:A:C6	54:S2:419:G:C5	2.79	0.70
54:S2:994:C:O2	54:S2:995:G:H8	1.75	0.70
54:S2:1149:A:C6	54:S2:1151:G:C8	2.80	0.70
54:S2:1290:G:H3'	86:Sf:146:LEU:HG	1.72	0.70
74:SF:166:ILE:HG22	74:SF:166:ILE:O	1.89	0.70
5:J:99:PHE:CE2	5:J:105:PHE:CB	2.75	0.70
22:d:32:ARG:HG2	22:d:48:GLU:HG2	1.73	0.70
22:d:114:PHE:HA	22:d:117:LEU:HD23	1.74	0.70
31:o:82:MET:HE1	32:5:4345:C:O2'	1.91	0.70
32:5:21:G:C5	34:8:36:G:N2	2.60	0.70
32:5:1379:C:C4'	32:5:1380:G:C8	2.72	0.70
32:5:1894:C:O2'	32:5:1895:G:H5'	1.92	0.70
32:5:2080:U:N3	32:5:2081:C:C4	2.60	0.70
32:5:2277:C:C2	32:5:2278:G:N7	2.59	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2295:C:O2	32:5:2296:G:C8	2.44	0.70
32:5:3754:G:H8	32:5:3754:G:C5'	2.01	0.70
54:S2:118:C:H1'	54:S2:445:A:C4	2.27	0.70
54:S2:311:C:C4	54:S2:312:G:C8	2.80	0.70
54:S2:924:G:H2'	54:S2:924:G:N3	2.07	0.70
55:SA:200:ASP:HA	79:SR:89:SER:HB2	1.73	0.70
32:5:86:U:O2	32:5:86:U:C2'	2.40	0.69
32:5:964:A:H3'	32:5:964:A:C8	2.27	0.69
32:5:1235:G:N2	32:5:1236:C:C6	2.59	0.69
32:5:1310:C:C4	32:5:1311:G:N7	2.59	0.69
32:5:1899:G:N2	32:5:1900:C:C6	2.59	0.69
32:5:2106:G:N2	32:5:2107:C:C5	2.60	0.69
32:5:2248:C:O2	32:5:2248:C:H2'	1.92	0.69
32:5:2529:A:C5	32:5:2532:C:C6	2.79	0.69
32:5:2769:U:O2'	32:5:2770:C:O5'	2.09	0.69
32:5:4498:U:H3	32:5:4500:U:P	2.15	0.69
32:5:4561:C:O2	32:5:4562:C:C6	2.45	0.69
32:5:4878:C:C2	32:5:4879:C:H5	2.07	0.69
33:7:42:A:N1	33:7:43:U:C5	2.60	0.69
33:7:59:G:C2	33:7:60:G:N9	2.60	0.69
34:8:132:G:C2	34:8:133:G:N9	2.59	0.69
48:z:346:SER:OG	48:z:369:MET:CE	2.39	0.69
54:S2:474:G:N2	54:S2:475:C:C2	2.60	0.69
54:S2:635:G:C6	54:S2:636:C:C4	2.80	0.69
54:S2:823:U:N3	69:SY:64:PHE:CD2	2.60	0.69
54:S2:1496:U:N3	54:S2:1498:A:C8	2.60	0.69
54:S2:1545:A:C6	54:S2:1588:A:N1	2.60	0.69
55:SA:116:PHE:C	55:SA:117:ARG:HG3	2.17	0.69
56:SB:27:LYS:HA	56:SB:51:ARG:NH1	2.07	0.69
32:5:1563:A:N7	54:S2:678:U:C5'	2.56	0.69
32:5:2463:G:N3	32:5:2464:C:C5	2.60	0.69
32:5:3674:G:C6	32:5:3675:G:N7	2.59	0.69
32:5:4583:C:C2	32:5:4718:G:N2	2.61	0.69
32:5:4735:G:C4	32:5:4736:C:C5	2.80	0.69
32:5:4939:C:N3	37:E:215:LYS:HA	2.06	0.69
34:8:12:G:C6	34:8:13:G:N7	2.60	0.69
34:8:134:G:C2	34:8:135:C:N1	2.60	0.69
54:S2:309:G:N3	54:S2:310:C:C5	2.60	0.69
54:S2:549:C:C4	54:S2:550:C:C6	2.80	0.69
54:S2:823:U:H5	54:S2:824:C:H5	1.40	0.69
54:S2:1039:C:C2	54:S2:1040:G:C8	2.80	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1205:C:C6	54:S2:1206:G:H8	2.10	0.69
54:S2:1225:U:N3	54:S2:1226:G:C8	2.61	0.69
54:S2:1249:C:N4	54:S2:1250:A:C6	2.60	0.69
54:S2:1291:A:O5'	86:Sf:146:LEU:CB	2.39	0.69
70:Sa:51:ARG:NH1	84:Sc:40:ARG:CD	2.52	0.69
84:Sc:42:ILE:HD12	84:Sc:42:ILE:N	2.06	0.69
10:Q:108:ARG:NH1	32:5:1355:G:OP1	2.23	0.69
32:5:247:G:N2	32:5:248:C:C2	2.60	0.69
32:5:447:C:C2	32:5:448:G:C8	2.80	0.69
32:5:692:A:C2	32:5:693:C:C4	2.80	0.69
32:5:917:A:C6	32:5:919:C:N4	2.60	0.69
32:5:1269:G:C5	32:5:2111:G:N1	2.60	0.69
32:5:2481:G:C2	32:5:2498:C:C2	2.81	0.69
32:5:2737:C:C2	32:5:2738:C:C6	2.79	0.69
32:5:2878:G:OP2	32:5:2879:A:O2'	2.10	0.69
32:5:4158:C:C2	32:5:4159:C:C5	2.80	0.69
32:5:4369:A:N3	32:5:4370:G:C8	2.58	0.69
32:5:4520:G:N2	35:B:253:CYS:SG	2.65	0.69
32:5:4539:U:C2	32:5:4540:C:C6	2.80	0.69
32:5:4998:G:N1	32:5:4999:G:C8	2.61	0.69
33:7:43:U:O2	33:7:44:C:C6	2.45	0.69
54:S2:599:A:O4'	54:S2:605:A:H2	1.76	0.69
54:S2:821:G:O6	62:SJ:150:ARG:NH1	2.25	0.69
54:S2:876:C:N3	54:S2:878:G:C8	2.60	0.69
54:S2:1141:G:H5'	54:S2:1142:G:OP2	1.93	0.69
54:S2:1323:U:H2'	54:S2:1324:G:O4'	1.92	0.69
9:O:116:LYS:HE3	12:S:169:THR:HG21	1.74	0.69
32:5:144:G:N3	32:5:145:G:C8	2.60	0.69
32:5:504:G:C6	32:5:654:C:N3	2.60	0.69
32:5:1074:G:N2	32:5:1238:A:C2	2.60	0.69
32:5:1265:G:C2'	32:5:1266:G:H5'	2.21	0.69
32:5:1309:C:C4	32:5:1310:C:C5	2.80	0.69
32:5:1467:C:C2	32:5:1468:C:C5	2.80	0.69
32:5:2451:A:C5	32:5:2452:G:N7	2.61	0.69
32:5:3723:A:N3	32:5:3724:A:C8	2.59	0.69
32:5:3878:C:C4	32:5:4518:A:C2	2.80	0.69
32:5:4195:G:N3	32:5:4195:G:H5''	2.06	0.69
32:5:4481:U:C2'	32:5:4482:U:H6	2.05	0.69
38:F:144:TRP:CH2	38:F:237:ASN:HB2	2.28	0.69
39:I:101:LYS:O	39:I:102:MET:HG2	1.92	0.69
43:n:2:ARG:HG2	54:S2:1842:C:OP2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:311:C:C2	54:S2:312:G:H1'	2.27	0.69
54:S2:358:C:C4	54:S2:359:U:C5	2.80	0.69
54:S2:635:G:C5	54:S2:636:C:C5	2.80	0.69
54:S2:909:G:N1	54:S2:910:G:N7	2.40	0.69
54:S2:1121:G:C6	54:S2:1122:A:C5	2.80	0.69
54:S2:1293:A:O4'	86:Sf:150:PHE:CD2	2.45	0.69
54:S2:1859:A:N1	54:S2:1860:A:C5	2.60	0.69
55:SA:110:ASN:O	55:SA:116:PHE:HD2	1.73	0.69
80:SS:8:LYS:HD2	83:SZ:49:LEU:HB2	1.73	0.69
10:Q:176:ARG:HH22	32:5:1497:A:N6	1.90	0.69
17:Y:11:ARG:NH2	36:C:200:ARG:NH1	2.41	0.69
32:5:125:C:N3	32:5:126:C:C6	2.60	0.69
32:5:271:C:O2	32:5:272:U:C6	2.44	0.69
32:5:743:G:C2	32:5:744:G:C5	2.80	0.69
32:5:1177:U:C2	32:5:1178:G:N7	2.61	0.69
32:5:1629:G:N2	32:5:1631:A:C2	2.60	0.69
32:5:1686:C:H2'	32:5:1687:U:C5'	2.22	0.69
32:5:1945:G:C2	32:5:1946:G:C1'	2.75	0.69
32:5:2279:A:N1	32:5:2280:G:C6	2.60	0.69
32:5:2451:A:C6	32:5:2452:G:C8	2.80	0.69
32:5:2726:G:N2	32:5:2727:C:C2	2.61	0.69
32:5:4071:U:C2	32:5:4072:C:C5	2.79	0.69
32:5:4345:C:C2	32:5:4346:U:C6	2.81	0.69
32:5:4510:A:H61	32:5:4592:C:H4'	1.58	0.69
34:8:59:A:H4'	34:8:60:G:O3'	1.92	0.69
46:K:142:ASN:CG	46:K:143:VAL:H	2.01	0.69
54:S2:56:G:O6	54:S2:90:G:N2	2.24	0.69
54:S2:402:C:C2	54:S2:403:G:C8	2.80	0.69
54:S2:625:G:O4'	54:S2:629:A:C2	2.46	0.69
54:S2:828:G:C2	54:S2:829:C:N1	2.61	0.69
54:S2:993:G:C4	54:S2:994:C:C6	2.80	0.69
54:S2:1045:U:N3	54:S2:1046:U:C4	2.59	0.69
54:S2:1294:G:O5'	86:Sf:151:ASN:O	2.10	0.69
54:S2:1667:U:C2	54:S2:1668:U:C4	2.80	0.69
55:SA:64:ALA:HB2	66:SV:34:MET:HE1	1.74	0.69
83:SZ:58:LEU:O	83:SZ:62:VAL:HB	1.93	0.69
84:Sc:13:ARG:HD3	84:Sc:13:ARG:N	2.07	0.69
32:5:86:U:C4	32:5:97:G:N2	2.61	0.69
32:5:1070:G:C2	32:5:1071:C:N1	2.60	0.69
32:5:1309:C:H2'	32:5:1309:C:O2	1.91	0.69
32:5:1479:G:O2'	32:5:1480:C:C5'	2.41	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1629:G:C4	32:5:1631:A:N6	2.60	0.69
32:5:2056:G:N1	32:5:2058:G:C5	2.61	0.69
32:5:2340:C:H2'	32:5:2340:C:O2	1.92	0.69
32:5:2448:G:O6	32:5:2510:G:O2'	2.10	0.69
32:5:3858:C:N4	32:5:3859:G:C6	2.59	0.69
32:5:4122:G:C5	32:5:4123:C:C5	2.81	0.69
32:5:4324:A:C2	32:5:4325:A:C6	2.80	0.69
32:5:4324:A:N1	32:5:4325:A:C6	2.60	0.69
32:5:4982:A:N6	32:5:4983:C:C5	2.60	0.69
48:z:352:ILE:CB	48:z:355:PHE:HZ	1.91	0.69
51:4:37:C:H3'	51:4:37:C:O2	1.92	0.69
54:S2:337:C:O2	54:S2:338:G:C8	2.44	0.69
54:S2:436:G:C2	54:S2:437:G:N7	2.61	0.69
54:S2:1067:C:C4	54:S2:1068:G:C5	2.80	0.69
54:S2:1201:U:H2'	54:S2:1202:U:H6	1.57	0.69
54:S2:1317:C:N3	54:S2:1318:G:N7	2.40	0.69
54:S2:1337:C:O2	54:S2:1337:C:H2'	1.93	0.69
54:S2:1382:A:C2	54:S2:1383:A:C8	2.81	0.69
54:S2:1785:C:C2	54:S2:1786:U:C5	2.79	0.69
79:SR:65:PRO:CB	79:SR:74:GLN:HE22	2.06	0.69
19:a:55:LYS:NZ	32:5:4342:C:OP1	2.15	0.69
32:5:33:A:N6	32:5:50:C:C2	2.61	0.69
32:5:422:C:C2	32:5:423:G:H8	2.11	0.69
32:5:736:C:H2'	32:5:737:C:C1'	2.22	0.69
32:5:1201:U:N3	32:5:1202:C:C5	2.61	0.69
32:5:1202:C:N3	32:5:1203:G:N7	2.40	0.69
32:5:1430:C:C2	32:5:1431:C:C6	2.81	0.69
32:5:1673:U:O2	32:5:1674:C:C6	2.46	0.69
32:5:1878:G:N3	32:5:1879:C:C5	2.61	0.69
32:5:1895:G:C2'	32:5:1896:A:O4'	2.38	0.69
32:5:1979:A:H3'	32:5:1980:U:H5'	1.74	0.69
32:5:2567:G:N3	32:5:2568:C:C6	2.61	0.69
32:5:3635:A:N7	32:5:3636:C:C6	2.60	0.69
32:5:3793:U:C2	32:5:3794:C:C6	2.80	0.69
32:5:5036:C:N3	32:5:5037:U:C5	2.61	0.69
33:7:62:U:C2	33:7:64:G:C8	2.80	0.69
34:8:92:U:H2'	34:8:93:C:O4'	1.93	0.69
34:8:134:G:N2	34:8:135:C:C2	2.61	0.69
54:S2:623:G:N2	54:S2:624:C:N1	2.40	0.69
60:SH:57:ARG:HA	60:SH:57:ARG:NE	2.07	0.69
75:SK:57:TYR:HB3	75:SK:75:GLY:HA2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:M:33:GLN:HA	7:M:33:GLN:NE2	2.08	0.69
32:5:31:U:O2	32:5:52:G:C2	2.45	0.69
32:5:44:A:N3	32:5:45:U:C6	2.61	0.69
32:5:77:U:N3	32:5:335:A:C6	2.61	0.69
32:5:166:C:O2	32:5:167:C:C5	2.46	0.69
32:5:209:U:C5	32:5:211:G:N7	2.61	0.69
32:5:298:G:C6	32:5:299:C:C5	2.81	0.69
32:5:672:C:N3	32:5:673:C:C6	2.61	0.69
32:5:711:A:C2	32:5:712:C:C6	2.80	0.69
32:5:984:C:C2	32:5:1070:G:C2	2.81	0.69
32:5:1313:C:N3	32:5:1323:A:C8	2.61	0.69
32:5:1491:A:N1	32:5:1492:G:C5	2.60	0.69
32:5:1541:C:C4	32:5:1542:U:C5	2.81	0.69
32:5:1554:A:OP2	44:p:4:ARG:NH1	2.26	0.69
32:5:1625:G:C8	32:5:1642:A:H2	2.09	0.69
32:5:1632:A:N1	32:5:1634:A:H8	1.90	0.69
32:5:1760:G:C2	32:5:1761:G:H1'	2.27	0.69
32:5:1965:G:O6	32:5:2021:G:O6	2.10	0.69
32:5:2079:G:C2	32:5:2080:U:C4	2.81	0.69
32:5:2326:G:N2	32:5:2327:G:N9	2.39	0.69
32:5:2327:G:N2	32:5:2328:G:C4	2.61	0.69
32:5:2367:A:C5	32:5:2798:A:N3	2.61	0.69
32:5:2368:A:N1	32:5:2788:U:C5	2.61	0.69
32:5:2811:G:H22	32:5:2813:A:H3'	1.58	0.69
32:5:2841:G:C6	32:5:2842:G:C8	2.81	0.69
32:5:3652:A:C8	32:5:3691:G:N2	2.61	0.69
32:5:3653:A:N1	32:5:3692:A:C4'	2.56	0.69
32:5:3653:A:C2	32:5:3692:A:H4'	2.27	0.69
32:5:3695:U:C2	32:5:3696:C:C6	2.80	0.69
32:5:3805:U:C2	32:5:3806:G:C8	2.81	0.69
32:5:4165:C:N4	32:5:4166:G:N7	2.40	0.69
32:5:4166:G:N3	32:5:4167:G:C8	2.61	0.69
32:5:4880:C:H2'	32:5:4881:U:H5'	1.74	0.69
32:5:5010:U:C2	32:5:5011:A:C8	2.80	0.69
34:8:10:G:N2	34:8:11:C:C1'	2.55	0.69
34:8:118:C:N3	34:8:119:C:H5	1.84	0.69
34:8:134:G:C5	34:8:135:C:C5	2.80	0.69
38:F:73:MET:HB3	38:F:84:TYR:HE2	1.58	0.69
48:z:411:GLY:N	51:4:194:G:N2	2.40	0.69
54:S2:11:A:N1	54:S2:12:U:C5	2.60	0.69
54:S2:52:G:C6	54:S2:53:C:C5	2.81	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:92:A:N1	54:S2:447:A:N1	2.41	0.69
54:S2:429:C:N3	54:S2:430:C:C5	2.61	0.69
54:S2:530:U:C2	54:S2:531:A:C8	2.81	0.69
54:S2:1100:A:N1	54:S2:1101:U:C5	2.61	0.69
54:S2:1100:A:N3	54:S2:1101:U:C6	2.60	0.69
54:S2:1124:C:O2	54:S2:1125:C:C6	2.46	0.69
54:S2:1217:A:H2'	54:S2:1218:C:C6	2.28	0.69
54:S2:1292:C:P	86:Sf:149:CYS:N	2.56	0.69
54:S2:1418:C:O2	54:S2:1420:G:C8	2.46	0.69
70:Sa:26:CYS:HG	70:Sa:77:CYS:HG	1.38	0.69
84:Sc:13:ARG:CG	84:Sc:54:ASP:O	2.39	0.69
12:S:94:TYR:CZ	12:S:96:GLU:HG3	2.27	0.69
12:S:95:ARG:NH1	12:S:97:TYR:OH	2.23	0.69
19:a:61:TYR:CD1	32:5:294:G:N1	2.61	0.69
32:5:86:U:O2	32:5:87:A:N7	2.24	0.69
32:5:1238:A:H2'	32:5:1239:C:C6	2.27	0.69
32:5:1489:G:N1	32:5:1490:G:C8	2.61	0.69
32:5:1689:G:H2'	32:5:1690:C:O4'	1.93	0.69
32:5:1937:C:H3'	32:5:1938:C:H2'	1.74	0.69
32:5:2454:U:N3	32:5:2455:G:N7	2.41	0.69
32:5:4164:C:C2	32:5:4165:C:C6	2.80	0.69
32:5:4920:C:H2'	32:5:4921:C:C6	2.28	0.69
40:P:30:ARG:HD3	40:P:30:ARG:C	2.18	0.69
45:r:80:THR:HG21	45:r:96:MET:HE1	1.74	0.69
48:z:126:GLN:HE22	48:z:157:ILE:HG12	1.57	0.69
54:S2:309:G:C4	54:S2:310:C:C5	2.81	0.69
54:S2:436:G:C8	54:S2:471:G:N2	2.60	0.69
54:S2:499:G:N2	54:S2:504:G:C2	2.61	0.69
54:S2:908:A:N3	54:S2:909:G:C8	2.59	0.69
54:S2:1256:G:C8	85:Sd:40:ARG:HD2	2.27	0.69
54:S2:1351:G:C4'	55:SA:110:ASN:HD21	2.06	0.69
54:S2:1418:C:C2	54:S2:1420:G:N7	2.60	0.69
58:SE:121:TYR:C	58:SE:121:TYR:CD2	2.69	0.69
87:Sg:46:THR:HG21	87:Sg:54:ILE:HD12	1.75	0.69
11:R:143:HIS:CE1	32:5:3596:A:O3'	2.46	0.69
11:R:172:ARG:CD	54:S2:909:G:P	2.79	0.69
32:5:44:A:C6	32:5:45:U:C5	2.80	0.69
32:5:56:A:C2	32:5:57:G:C4	2.81	0.69
32:5:87:A:C2	32:5:292:G:C2	2.81	0.69
32:5:138:G:H2'	32:5:139:G:H5'	1.73	0.69
32:5:288:G:N1	32:5:289:C:C4	2.61	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1475:G:N3	32:5:1476:C:C5	2.61	0.69
32:5:1619:G:C5	32:5:1620:U:C5	2.81	0.69
32:5:1877:G:N2	32:5:1878:G:H1'	2.07	0.69
32:5:2034:G:C4	32:5:2035:C:C6	2.81	0.69
32:5:2076:G:C6	32:5:2077:C:C6	2.81	0.69
32:5:2080:U:N3	32:5:2081:C:C5	2.61	0.69
32:5:2105:A:N3	32:5:2106:G:C8	2.61	0.69
32:5:2451:A:C6	32:5:2452:G:C4	2.81	0.69
32:5:3665:G:H2'	32:5:3666:C:O4'	1.93	0.69
32:5:4092:G:C5	32:5:4093:G:N2	2.60	0.69
32:5:4213:A:N6	32:5:4218:U:N3	2.34	0.69
32:5:4229:U:C4	32:5:4230:C:C4	2.81	0.69
32:5:4502:C:N3	32:5:4503:A:C8	2.61	0.69
32:5:4687:A:C2	32:5:4688:C:C5	2.81	0.69
32:5:4939:C:H2'	32:5:4939:C:O2	1.93	0.69
46:K:37:LEU:CD2	46:K:68:GLN:CB	2.59	0.69
48:z:297:MET:CE	48:z:355:PHE:CB	2.69	0.69
54:S2:18:C:C2	54:S2:19:A:C8	2.81	0.69
54:S2:404:G:N3	54:S2:405:G:C8	2.61	0.69
54:S2:751:G:N1	54:S2:792:C:C2	2.61	0.69
54:S2:1295:A:C4	54:S2:1296:U:H1'	2.28	0.69
54:S2:1302:G:C5	86:Sf:140:TYR:CE2	2.81	0.69
54:S2:1711:U:C2	54:S2:1712:A:C8	2.81	0.69
54:S2:1804:U:C2	54:S2:1805:G:C8	2.80	0.69
55:SA:205:ARG:HH22	79:SR:84:TYR:CE2	1.48	0.69
7:M:36:ALA:HB2	7:M:52:PHE:CE1	2.28	0.68
11:R:108:ARG:HH11	11:R:108:ARG:HG2	1.56	0.68
32:5:85:G:N2	32:5:97:G:C8	2.61	0.68
32:5:246:G:N2	32:5:247:G:C8	2.61	0.68
32:5:456:C:C2	32:5:457:G:C8	2.81	0.68
32:5:736:C:C2'	32:5:737:C:O4'	2.37	0.68
32:5:1476:C:C4	32:5:1477:C:C5	2.80	0.68
32:5:1543:G:C6	32:5:1544:G:N7	2.61	0.68
32:5:1904:G:N2	32:5:2073:C:C2	2.61	0.68
32:5:2288:G:N2	32:5:2290:C:N1	2.41	0.68
32:5:2453:A:N1	32:5:2454:U:C6	2.61	0.68
32:5:2735:G:N1	32:5:2736:G:C5	2.61	0.68
32:5:3607:U:N3	32:5:3608:A:N7	2.42	0.68
32:5:3629:A:H4'	54:S2:1721:U:H3	1.59	0.68
32:5:3858:C:C2	32:5:3859:G:C8	2.81	0.68
32:5:4167:G:N3	32:5:4168:G:C8	2.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4279:A:O4'	32:5:4281:A:C8	2.47	0.68
32:5:4397:A:H5'	50:3:76:A:N1	2.08	0.68
32:5:4400:G:N3	32:5:4400:G:H2'	2.07	0.68
32:5:4941:G:C2	32:5:4942:C:N3	2.61	0.68
33:7:93:G:C6	33:7:94:C:C5	2.81	0.68
34:8:82:A:H2'	34:8:82:A:N3	2.08	0.68
34:8:116:C:C4	34:8:117:C:C5	2.80	0.68
40:P:116:HIS:HE1	40:P:118:GLN:HB2	1.58	0.68
43:n:10:MET:HE3	54:S2:1172:U:C5'	2.11	0.68
50:3:72:C:C3'	50:3:73:A:C5'	2.68	0.68
54:S2:386:C:C4	54:S2:387:C:C5	2.79	0.68
54:S2:600:G:C2	54:S2:601:G:N7	2.61	0.68
54:S2:804:U:N3	54:S2:805:U:C5	2.61	0.68
54:S2:876:C:N4	54:S2:878:G:N7	2.40	0.68
54:S2:1541:G:C2	54:S2:1542:C:C4	2.82	0.68
55:SA:205:ARG:NH2	79:SR:84:TYR:HD2	1.61	0.68
76:SM:16:THR:HA	76:SM:19:GLN:HG3	1.75	0.68
79:SR:73:LEU:HA	79:SR:76:GLU:OE1	1.91	0.68
32:5:69:A:H3'	32:5:70:A:H8	1.57	0.68
32:5:144:G:N1	32:5:145:G:N7	2.42	0.68
32:5:1271:G:C3'	32:5:1272:C:H5'	2.23	0.68
32:5:1390:G:N3	32:5:1394:G:C6	2.60	0.68
32:5:1444:G:H2'	32:5:1445:U:C5	2.27	0.68
32:5:1447:C:C2	32:5:2098:G:C2	2.81	0.68
32:5:1555:G:N2	32:5:1556:C:H1'	2.08	0.68
32:5:2079:G:N2	32:5:2080:U:C2	2.61	0.68
32:5:2294:G:C4	32:5:2295:C:C5	2.81	0.68
32:5:2567:G:C6	32:5:2568:C:C5	2.82	0.68
32:5:3606:U:C2	32:5:3607:U:C6	2.81	0.68
32:5:3635:A:C8	32:5:3692:A:H1'	2.28	0.68
32:5:4772:C:C2	32:5:4773:C:C6	2.81	0.68
32:5:4911:A:C5'	35:B:100:ARG:HD3	2.23	0.68
47:q:60:MET:HE3	47:q:88:PHE:CE2	2.28	0.68
48:z:366:GLN:OE1	48:z:367:GLU:N	2.27	0.68
54:S2:100:U:O2	54:S2:100:U:H2'	1.92	0.68
54:S2:480:G:H2'	54:S2:481:C:O4'	1.93	0.68
54:S2:632:C:H2'	54:S2:632:C:O2	1.92	0.68
54:S2:1306:U:O4	86:Sf:140:TYR:CD1	2.45	0.68
54:S2:1448:A:C6	54:S2:1449:G:C8	2.80	0.68
54:S2:1528:G:C6	54:S2:1529:C:N4	2.61	0.68
54:S2:1805:G:C2	54:S2:1806:A:C8	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SB:54:GLY:O	56:SB:55:THR:OG1	2.08	0.68
6:L:56:ARG:O	6:L:116:ARG:NH2	2.25	0.68
32:5:87:A:N1	32:5:292:G:C6	2.61	0.68
32:5:197:A:N3	32:5:222:C:O2'	2.24	0.68
32:5:210:C:N4	32:5:231:U:N3	2.42	0.68
32:5:293:G:C2'	32:5:297:U:C6	2.76	0.68
32:5:299:C:H2'	32:5:299:C:O2	1.93	0.68
32:5:1542:U:N3	32:5:1543:G:N7	2.40	0.68
32:5:2071:A:C2	32:5:2072:C:C4	2.81	0.68
32:5:2263:A:O2'	32:5:2265:G:H2'	1.92	0.68
32:5:2533:C:C2	32:5:2534:C:C5	2.81	0.68
32:5:3867:A:C2	32:5:3880:G:C6	2.81	0.68
32:5:4286:C:C2	32:5:4287:G:N7	2.61	0.68
32:5:4314:C:C2	32:5:4315:A:C8	2.81	0.68
32:5:4535:A:H2'	32:5:4535:A:N3	2.07	0.68
34:8:35:C:O2'	34:8:36:G:H5'	1.94	0.68
48:z:95:THR:HG22	48:z:271:ILE:HG23	1.75	0.68
54:S2:751:G:H2'	54:S2:752:G:C8	2.27	0.68
54:S2:797:C:C2	60:SH:109:ARG:NH2	2.62	0.68
54:S2:1478:U:O2	54:S2:1479:G:C8	2.45	0.68
54:S2:1825:A:O2'	54:S2:1826:G:OP1	2.07	0.68
54:S2:1859:A:N1	54:S2:1860:A:C6	2.62	0.68
63:SL:13:GLN:N	63:SL:13:GLN:OE1	2.26	0.68
74:SF:195:GLU:HA	74:SF:198:ARG:HB3	1.76	0.68
83:SZ:50:PHE:CZ	83:SZ:79:ILE:CB	2.76	0.68
3:G:57:TRP:HE3	3:G:61:ILE:HG21	1.58	0.68
32:5:661:C:C2	32:5:662:C:C6	2.81	0.68
32:5:743:G:C2	32:5:744:G:N7	2.62	0.68
32:5:979:C:H2'	32:5:980:U:O4'	1.93	0.68
32:5:1264:C:N3	32:5:1265:G:C8	2.61	0.68
32:5:1272:C:HO2'	32:5:1273:G:C1'	2.07	0.68
32:5:1326:A:H2'	32:5:1327:C:C6	2.29	0.68
32:5:1339:U:O2	32:5:1339:U:H2'	1.92	0.68
32:5:1378:C:H2'	32:5:1378:C:O2	1.93	0.68
32:5:1397:A:N3	32:5:1499:C:H1'	2.08	0.68
32:5:1465:G:N2	32:5:1466:G:H1'	2.07	0.68
32:5:1485:C:O2	32:5:4349:C:C5	2.46	0.68
32:5:1846:G:C2	32:5:1847:C:C4	2.81	0.68
32:5:1964:A:N6	32:5:1965:G:C5	2.61	0.68
32:5:2348:G:H5'	32:5:2348:G:C8	2.28	0.68
32:5:2505:C:H1'	32:5:2506:G:C5	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2726:G:N1	32:5:2727:C:C4	2.61	0.68
32:5:2812:A:H2'	32:5:2813:A:C8	2.29	0.68
32:5:2905:C:C2	32:5:3590:G:C2	2.81	0.68
34:8:13:G:C5	34:8:14:U:C4	2.82	0.68
34:8:134:G:N1	34:8:135:C:C5	2.61	0.68
54:S2:404:G:N1	54:S2:405:G:N7	2.41	0.68
54:S2:459:C:N4	54:S2:460:A:C5	2.61	0.68
54:S2:594:A:O2'	54:S2:595:U:H5	1.76	0.68
54:S2:818:A:C6	54:S2:819:G:C8	2.82	0.68
54:S2:923:G:C2	54:S2:924:G:N9	2.62	0.68
54:S2:1130:G:C2	54:S2:1131:G:C8	2.81	0.68
54:S2:1266:C:O2	54:S2:1267:C:C5	2.46	0.68
54:S2:1431:G:C6	54:S2:1432:U:C5	2.82	0.68
55:SA:205:ARG:CZ	79:SR:84:TYR:HD2	2.06	0.68
32:5:56:A:C6	32:5:57:G:C5	2.82	0.68
32:5:68:U:C5	32:5:69:A:C8	2.81	0.68
32:5:84:A:C8	32:5:84:A:H5'	2.29	0.68
32:5:167:C:C2	32:5:269:G:C2	2.81	0.68
32:5:938:C:H2'	32:5:939:G:C8	2.29	0.68
32:5:987:C:H2'	32:5:988:C:O4'	1.93	0.68
32:5:1067:G:H2'	32:5:1068:G:O4'	1.93	0.68
32:5:1684:A:C6	32:5:1685:G:C8	2.82	0.68
32:5:2316:G:C2	32:5:2317:C:C5	2.81	0.68
32:5:3633:C:C2	32:5:3634:G:C8	2.81	0.68
32:5:4284:C:O2	32:5:4285:U:C5	2.47	0.68
32:5:5047:C:H5''	32:5:5050:C:H5	1.58	0.68
34:8:79:G:N3	34:8:80:A:C2	2.61	0.68
54:S2:37:C:N4	54:S2:38:A:C5	2.61	0.68
54:S2:384:U:C5	54:S2:386:C:C5	2.81	0.68
54:S2:474:G:N1	54:S2:475:C:C4	2.61	0.68
54:S2:495:U:O2'	54:S2:496:C:C5'	2.41	0.68
54:S2:948:C:C2	54:S2:949:G:C8	2.81	0.68
54:S2:1831:A:H1'	54:S2:1851:A:H2'	1.76	0.68
54:S2:1860:A:N1	54:S2:1862:G:C5	2.61	0.68
13:T:19:PHE:CE2	32:5:1791:U:H4'	2.29	0.68
19:a:112:LEU:HD22	32:5:1396:G:N7	2.08	0.68
32:5:449:C:N3	32:5:450:G:C8	2.62	0.68
32:5:730:G:H22	32:5:939:G:N2	1.92	0.68
32:5:919:C:H2'	32:5:920:C:O4'	1.94	0.68
32:5:950:G:C2	32:5:951:G:N7	2.61	0.68
32:5:1249:C:C2	32:5:1262:G:C2	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1358:G:N2	32:5:1359:G:O6	2.26	0.68
32:5:1394:G:O2'	32:5:1395:U:C5'	2.42	0.68
32:5:1479:G:C6	32:5:1487:G:N2	2.61	0.68
32:5:1672:U:H2'	32:5:1673:U:H6	1.58	0.68
32:5:1673:U:N3	32:5:1674:C:C4	2.61	0.68
32:5:1857:C:O4'	32:5:1892:A:C2	2.46	0.68
32:5:2293:U:C2	32:5:2294:G:C8	2.81	0.68
32:5:2784:C:C2	32:5:2785:C:C6	2.75	0.68
32:5:2851:G:N7	32:5:2852:U:H5	1.87	0.68
32:5:3629:A:C1'	54:S2:1721:U:N3	2.56	0.68
32:5:3944:G:C2	32:5:3945:A:N7	2.61	0.68
34:8:79:G:C2	34:8:80:A:N1	2.62	0.68
48:z:219:TYR:CD1	48:z:236:PHE:HD1	2.12	0.68
48:z:383:ASN:CA	51:4:208:A:O3'	2.40	0.68
51:4:54:G:C2	51:4:293:C:C2	2.81	0.68
54:S2:579:C:C4	54:S2:580:U:C6	2.80	0.68
54:S2:835:C:C2	54:S2:837:A:H4'	2.29	0.68
54:S2:836:G:H2'	54:S2:837:A:C5'	2.23	0.68
54:S2:1063:C:C2'	54:S2:1838:U:H5	2.05	0.68
54:S2:1134:G:C5	54:S2:1135:C:C5	2.81	0.68
54:S2:1145:A:N6	54:S2:1150:A:C2	2.62	0.68
54:S2:1191:C:H2'	54:S2:1192:U:O4'	1.94	0.68
54:S2:1290:G:C2'	86:Sf:146:LEU:HB3	2.21	0.68
54:S2:1311:C:H2'	54:S2:1312:G:O4'	1.92	0.68
54:S2:1409:A:H2	54:S2:1438:A:C2	2.11	0.68
61:SI:103:LEU:HD13	61:SI:170:LYS:HD2	1.75	0.68
80:SS:26:ILE:CG1	80:SS:54:LYS:C	2.65	0.68
20:b:13:SER:O	20:b:17:HIS:HB2	1.94	0.68
32:5:125:C:C2	32:5:126:C:H6	2.11	0.68
32:5:181:C:N3	32:5:256:G:C2	2.61	0.68
32:5:235:A:C6	32:5:238:C:C5	2.81	0.68
32:5:1479:G:O6	32:5:1487:G:C2	2.47	0.68
32:5:1595:G:C2	32:5:4557:U:H4'	2.27	0.68
32:5:2113:G:H8	32:5:2115:G:H1'	1.56	0.68
32:5:3590:G:C6	32:5:3591:C:C5	2.81	0.68
32:5:3674:G:N1	32:5:3675:G:N7	2.41	0.68
32:5:3771:C:C5	32:5:3772:U:C4	2.82	0.68
32:5:4330:G:C6	32:5:4331:G:C8	2.81	0.68
32:5:4490:C:N3	32:5:4491:G:N7	2.42	0.68
32:5:4906:C:C2	32:5:4916:G:C2	2.82	0.68
33:7:28:C:C4	33:7:29:C:C6	2.82	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:7:U:H2'	34:8:8:U:O4'	1.94	0.68
34:8:103:A:C8	34:8:104:A:N7	2.61	0.68
48:z:380:ASP:C	51:4:192:A:H61	2.02	0.68
54:S2:85:A:C2	54:S2:86:C:C6	2.82	0.68
54:S2:112:U:H1'	54:S2:114:G:C6	2.28	0.68
54:S2:358:C:H2'	54:S2:358:C:O2	1.92	0.68
54:S2:493:A:C8	54:S2:574:A:C8	2.81	0.68
54:S2:609:U:C2	54:S2:610:G:C8	2.81	0.68
54:S2:1711:U:N3	54:S2:1712:A:N7	2.42	0.68
22:d:73:TRP:HE1	32:5:2372:U:H1'	1.58	0.68
32:5:54:G:N2	32:5:55:G:H1'	2.08	0.68
32:5:907:C:C2	32:5:908:G:C8	2.82	0.68
32:5:1278:C:H3'	32:5:1279:A:H4'	1.74	0.68
32:5:1806:G:N3	32:5:1807:C:C6	2.61	0.68
32:5:1898:C:H1'	32:5:2070:U:O2	1.93	0.68
32:5:1899:G:H8	32:5:2278:G:C2	2.06	0.68
32:5:2059:C:O2	32:5:2060:G:H8	1.77	0.68
32:5:2367:A:N7	32:5:2798:A:N3	2.42	0.68
32:5:2688:G:N2	32:5:2689:C:C2	2.62	0.68
32:5:2848:G:C2	32:5:3838:U:C5	2.82	0.68
32:5:2857:A:N3	32:5:2858:A:C5	2.62	0.68
32:5:3704:U:C2	32:5:3705:G:C8	2.82	0.68
32:5:3857:G:C5	32:5:3858:C:C5	2.82	0.68
32:5:4085:A:H3'	32:5:4086:G:C5'	2.24	0.68
32:5:4466:C:C2	32:5:4467:A:C8	2.81	0.68
32:5:4698:C:H2'	32:5:4698:C:O2	1.94	0.68
33:7:58:A:C6	33:7:59:G:C5	2.82	0.68
34:8:117:C:C2	34:8:118:C:C6	2.82	0.68
54:S2:447:A:C5	54:S2:449:A:N9	2.62	0.68
54:S2:608:C:C2	54:S2:609:U:C6	2.82	0.68
54:S2:1280:G:C6	54:S2:1281:G:C8	2.82	0.68
54:S2:1315:U:C2	54:S2:1316:C:C5	2.82	0.68
54:S2:1501:C:C2	54:S2:1502:C:C5	2.81	0.68
54:S2:1561:A:C5	54:S2:1562:C:C6	2.81	0.68
54:S2:1605:G:H2'	54:S2:1606:G:H1'	1.75	0.68
54:S2:1760:G:C2	54:S2:1773:C:C2	2.82	0.68
54:S2:1860:A:N3	54:S2:1862:G:C8	2.61	0.68
74:SF:83:ASN:N	74:SF:83:ASN:HD22	1.91	0.68
8:N:99:GLN:OE1	8:N:167:ALA:HB2	1.93	0.68
32:5:90:G:N2	32:5:95:G:C5	2.61	0.68
32:5:145:G:N1	32:5:146:G:C5	2.62	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:208:A:H3'	32:5:209:U:H5''	1.75	0.68
32:5:288:G:N3	32:5:289:C:C6	2.62	0.68
32:5:459:C:C2	32:5:460:C:C6	2.82	0.68
32:5:504:G:C2	32:5:505:G:C5	2.82	0.68
32:5:1388:A:N1	32:5:1396:G:N3	2.42	0.68
32:5:1671:U:O2	32:5:1671:U:C2'	2.42	0.68
32:5:1672:U:N3	32:5:1673:U:C5	2.60	0.68
32:5:1878:G:C2	32:5:1879:C:C6	2.82	0.68
32:5:2328:G:C5	32:5:2329:U:C4	2.82	0.68
32:5:2451:A:N6	32:5:2452:G:C5	2.62	0.68
32:5:4281:A:C2	32:5:4283:G:C4	2.82	0.68
32:5:4561:C:O2	32:5:4561:C:C2'	2.42	0.68
50:3:75:C:H5'	50:3:75:C:C6	2.29	0.68
54:S2:29:G:H2'	54:S2:30:C:C6	2.28	0.68
54:S2:1259:A:H3'	54:S2:1259:A:N3	2.09	0.68
54:S2:1308:U:C2	54:S2:1309:C:C6	2.82	0.68
54:S2:1378:A:H5''	54:S2:1378:A:C8	2.29	0.68
54:S2:1642:U:O2	54:S2:1643:U:C5	2.47	0.68
1:A:208:GLU:OE1	32:5:1629:G:N1	2.27	0.68
32:5:299:C:C4	32:5:300:A:N7	2.62	0.68
32:5:699:C:C2	32:5:700:G:C8	2.82	0.68
32:5:916:C:N3	32:5:918:G:O6	2.27	0.68
32:5:957:G:P	32:5:1284:G:N2	2.66	0.68
32:5:1667:G:C5	32:5:2280:G:C2	2.82	0.68
32:5:3727:A:O2'	32:5:3728:A:O5'	2.11	0.68
32:5:3938:G:H4'	32:5:3939:G:O5'	1.94	0.68
32:5:4552:U:N3	32:5:4553:A:N7	2.42	0.68
48:z:109:LEU:HD23	48:z:197:GLN:CD	2.18	0.68
54:S2:221:A:C6	54:S2:222:U:C5	2.83	0.68
54:S2:376:A:C6	54:S2:377:G:C8	2.82	0.68
54:S2:457:C:C4	54:S2:458:A:N7	2.61	0.68
54:S2:794:A:N1	54:S2:795:A:C4	2.62	0.68
54:S2:797:C:H4'	54:S2:798:A:OP1	1.94	0.68
54:S2:798:A:OP1	54:S2:798:A:O3'	2.11	0.68
54:S2:1373:C:O2'	54:S2:1374:C:O4'	2.11	0.68
83:SZ:56:ASP:O	83:SZ:60:LYS:HG2	1.94	0.68
84:Sc:14:VAL:HG13	84:Sc:31:ARG:HB3	1.75	0.68
3:G:81:ASN:HD21	3:G:238:GLY:HA3	1.58	0.67
18:Z:76:ASN:ND2	18:Z:78:ASN:OD1	2.27	0.67
32:5:12:A:C2	32:5:14:C:C6	2.82	0.67
32:5:124:C:C4	32:5:125:C:C5	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:168:C:C2	32:5:268:G:N2	2.61	0.67
32:5:440:U:C2	32:5:441:G:N7	2.62	0.67
32:5:1465:G:C2	32:5:1466:G:H1'	2.29	0.67
32:5:1618:G:C2	32:5:1619:G:N7	2.59	0.67
32:5:1757:U:N3	32:5:1758:G:C8	2.62	0.67
32:5:1870:C:N3	32:5:1871:A:C8	2.62	0.67
32:5:1924:C:C4	32:5:1925:G:C8	2.82	0.67
32:5:2450:G:C5	32:5:2451:A:C8	2.81	0.67
32:5:2463:G:C4	32:5:2464:C:C5	2.82	0.67
32:5:2605:G:N2	32:5:2606:G:C4	2.62	0.67
32:5:2644:G:C6	32:5:2645:G:N7	2.62	0.67
32:5:3680:U:O2	32:5:3680:U:C2'	2.41	0.67
32:5:3736:A:O2'	32:5:3737:A:O5'	2.11	0.67
32:5:3753:G:OP1	32:5:3777:G:C8	2.46	0.67
32:5:4315:A:C2'	32:5:4316:G:H5'	2.24	0.67
32:5:4696:C:H2'	32:5:4697:U:O4'	1.95	0.67
33:7:8:G:C5	33:7:9:C:C5	2.82	0.67
34:8:132:G:N2	34:8:133:G:N9	2.41	0.67
54:S2:383:G:H2'	54:S2:384:U:C1'	2.24	0.67
54:S2:832:G:C6	54:S2:833:C:C5	2.82	0.67
54:S2:955:A:H61	54:S2:969:U:C5'	2.05	0.67
54:S2:1066:U:C4	54:S2:1067:C:C5	2.82	0.67
54:S2:1513:C:C2'	54:S2:1514:G:H5'	2.23	0.67
54:S2:1565:C:C2	54:S2:1571:G:C2	2.82	0.67
54:S2:1596:U:O2	54:S2:1596:U:H2'	1.93	0.67
54:S2:1606:G:C2	54:S2:1632:G:N2	2.62	0.67
55:SA:198:MET:HE1	79:SR:86:PRO:O	1.91	0.67
73:SD:76:ARG:HD2	73:SD:77:PHE:CD1	2.28	0.67
32:5:209:U:N3	32:5:233:U:C4	2.62	0.67
32:5:1265:G:H2'	32:5:1266:G:H5'	1.76	0.67
32:5:1299:G:C2	32:5:1300:G:C8	2.83	0.67
32:5:1516:G:C5	32:5:1518:A:N7	2.63	0.67
32:5:1557:C:H2'	32:5:1557:C:O2	1.95	0.67
32:5:1806:G:C2	32:5:1807:C:C5	2.82	0.67
32:5:2270:G:C6	32:5:2271:C:N4	2.63	0.67
32:5:2390:G:N2	32:5:2391:G:H1'	2.09	0.67
32:5:2593:C:N3	32:5:2594:C:C5	2.62	0.67
32:5:2595:C:C2	32:5:2596:G:C8	2.82	0.67
32:5:2689:C:N3	32:5:2690:C:C5	2.63	0.67
32:5:2690:C:N3	32:5:2691:U:C5	2.62	0.67
32:5:3621:A:C5	32:5:3622:C:C5	2.82	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3782:C:C4	32:5:3809:G:C6	2.83	0.67
32:5:4070:U:C2	32:5:4071:U:C6	2.82	0.67
32:5:4100:C:C2	32:5:4101:C:C5	2.82	0.67
32:5:4275:G:O6	32:5:4276:G:C5	2.46	0.67
34:8:42:G:C6	34:8:43:A:N7	2.63	0.67
34:8:86:U:H3'	34:8:86:U:C6	2.30	0.67
34:8:134:G:N1	34:8:135:C:C4	2.62	0.67
48:z:80:PHE:HA	48:z:295:LEU:CD1	2.24	0.67
48:z:402:ARG:NH1	51:4:184:A:O5'	2.27	0.67
54:S2:426:A:H3'	54:S2:426:A:N3	2.08	0.67
54:S2:970:G:H3'	54:S2:971:G:H5'	1.77	0.67
54:S2:1102:G:N2	54:S2:1103:C:C2	2.63	0.67
54:S2:1253:A:C2	54:S2:1666:C:O4'	2.46	0.67
54:S2:1291:A:O2'	86:Sf:141:CYS:O	2.12	0.67
54:S2:1591:C:N4	54:S2:1592:C:C4	2.62	0.67
54:S2:1784:G:C2'	54:S2:1785:C:H5'	2.24	0.67
55:SA:158:ASP:OD1	55:SA:159:ILE:CB	2.40	0.67
1:A:34:PHE:CE2	32:5:4087:G:C5	2.82	0.67
1:A:211:PHE:CE1	1:A:219:ILE:HG23	2.29	0.67
2:D:95:TYR:HA	2:D:158:LYS:HG2	1.76	0.67
3:G:56:LYS:HA	32:5:4085:A:N7	2.09	0.67
12:S:29:ARG:CZ	12:S:29:ARG:CB	2.72	0.67
19:a:110:LYS:HG2	19:a:112:LEU:HD21	1.75	0.67
32:5:124:C:O2	32:5:124:C:H2'	1.94	0.67
32:5:183:C:O2	32:5:189:G:O6	2.12	0.67
32:5:473:C:C2	32:5:474:C:C5	2.82	0.67
32:5:497:G:C2	32:5:657:C:N3	2.62	0.67
32:5:911:U:N3	32:5:912:G:C8	2.62	0.67
32:5:964:A:H8	32:5:964:A:C5'	2.07	0.67
32:5:1277:G:N2	32:5:1278:C:C2	2.62	0.67
32:5:1367:C:N4	32:5:1369:C:OP2	2.27	0.67
32:5:1392:A:H2	32:5:1393:G:C5	2.06	0.67
32:5:1990:A:H2'	32:5:1991:A:O4'	1.93	0.67
32:5:2857:A:C6	32:5:2858:A:N6	2.63	0.67
32:5:3623:C:H5	32:5:3624:A:C5	2.12	0.67
32:5:4174:U:O2	32:5:4174:U:H2'	1.94	0.67
32:5:4466:C:N3	32:5:4467:A:C8	2.62	0.67
32:5:4618:G:C2	32:5:4619:U:C6	2.82	0.67
32:5:4982:A:C5	32:5:4983:C:C5	2.82	0.67
33:7:59:G:C5	33:7:60:G:C8	2.83	0.67
34:8:13:G:C4	34:8:14:U:C4	2.83	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:74:U:H2'	34:8:74:U:O2	1.95	0.67
46:K:95:GLN:O	46:K:97:ASN:N	2.26	0.67
50:3:31:C:C2	50:3:32:C:C6	2.83	0.67
54:S2:20:G:H4'	54:S2:620:G:N7	2.10	0.67
54:S2:1149:A:C6	54:S2:1151:G:N9	2.62	0.67
54:S2:1293:A:O4'	86:Sf:150:PHE:CB	2.43	0.67
54:S2:1639:G:C2	54:S2:1640:A:C8	2.83	0.67
84:Sc:44:ARG:CG	84:Sc:58:LEU:CD1	2.65	0.67
8:N:138:PHE:N	8:N:138:PHE:CD1	2.60	0.67
17:Y:11:ARG:NH2	36:C:200:ARG:CZ	2.56	0.67
32:5:287:U:C2	32:5:288:G:N7	2.62	0.67
32:5:656:C:C2	32:5:657:C:C5	2.82	0.67
32:5:732:A:C5	32:5:733:A:C2	2.82	0.67
32:5:929:A:N1	32:5:930:G:H3'	2.10	0.67
32:5:1268:G:N2	32:5:1270:A:N9	2.42	0.67
32:5:1618:G:N1	32:5:1619:G:C5	2.62	0.67
32:5:1843:A:C6	32:5:1844:G:N7	2.62	0.67
32:5:1846:G:N2	32:5:1847:C:C2	2.63	0.67
32:5:3591:C:H2'	32:5:3591:C:O2	1.95	0.67
32:5:3688:U:N3	32:5:3689:G:C8	2.62	0.67
32:5:3909:C:O2'	49:2:128:VAL:O	2.12	0.67
32:5:3927:U:C4	32:5:4182:G:C2	2.83	0.67
32:5:4094:G:C2'	32:5:4095:G:O4'	2.36	0.67
32:5:4228:G:O2'	32:5:4373:G:O6	2.11	0.67
32:5:4268:A:H2'	32:5:4269:G:O4'	1.95	0.67
32:5:4276:G:N1	32:5:4277:G:C8	2.62	0.67
33:7:19:C:C2	33:7:20:U:C5	2.83	0.67
35:B:258:HIS:O	35:B:260:ALA:N	2.28	0.67
48:z:381:SER:OG	51:4:193:G:N2	2.27	0.67
54:S2:2:A:C8	57:SC:223:TYR:CB	2.77	0.67
54:S2:60:A:O2'	54:S2:61:A:C5'	2.41	0.67
54:S2:71:G:H2'	54:S2:72:C:C6	2.27	0.67
54:S2:99:A:N1	54:S2:100:U:C5	2.62	0.67
54:S2:381:C:C4	61:SI:49:ARG:CG	2.71	0.67
54:S2:1032:C:C2	54:S2:1033:G:C8	2.82	0.67
80:SS:16:LEU:HD22	80:SS:71:MET:HE2	1.76	0.67
23:e:89:LEU:HD13	23:e:118:LEU:HD22	1.76	0.67
32:5:470:A:C5	32:5:471:A:N7	2.61	0.67
32:5:738:C:C2	32:5:739:G:N7	2.63	0.67
32:5:911:U:N3	32:5:912:G:N7	2.43	0.67
32:5:1478:C:O2	32:5:1479:G:C8	2.45	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1629:G:H2'	32:5:1631:A:N7	2.09	0.67
32:5:2316:G:C6	32:5:2317:C:N4	2.63	0.67
32:5:2342:G:C6	32:5:2344:U:C4	2.83	0.67
32:5:2468:U:O4	32:5:2473:A:C2	2.48	0.67
32:5:2515:G:N7	32:5:2516:G:C8	2.62	0.67
32:5:2678:A:C2	32:5:2679:G:C8	2.83	0.67
32:5:3694:U:C4	32:5:3695:U:C5	2.82	0.67
32:5:3911:C:C2'	32:5:3912:U:O5'	2.43	0.67
32:5:4215:C:O2	32:5:4216:G:C8	2.47	0.67
32:5:4535:A:C6	32:5:4536:C:C6	2.83	0.67
32:5:4913:G:O2'	32:5:4914:C:O4'	2.11	0.67
34:8:11:C:O2	34:8:11:C:C2'	2.42	0.67
34:8:45:C:C2	34:8:46:G:C8	2.81	0.67
48:z:360:MET:HG2	48:z:365:GLU:HB3	1.75	0.67
54:S2:431:G:N1	54:S2:432:G:C5	2.63	0.67
54:S2:863:U:C2	54:S2:864:A:C8	2.82	0.67
54:S2:977:C:C4	54:S2:978:G:N7	2.62	0.67
54:S2:1085:C:N4	54:S2:1087:A:H1'	2.10	0.67
54:S2:1131:G:N1	54:S2:1132:C:C4	2.62	0.67
54:S2:1786:U:C2	54:S2:1787:G:C8	2.83	0.67
73:SD:150:MET:HB3	73:SD:152:PHE:HE1	1.59	0.67
11:R:95:TRP:NE1	32:5:1572:U:H4'	2.10	0.67
21:c:78:ASN:ND2	21:c:78:ASN:C	2.53	0.67
32:5:106:A:H2'	32:5:107:G:O4'	1.95	0.67
32:5:416:U:H2'	32:5:417:G:O4'	1.95	0.67
32:5:456:C:O2	32:5:457:G:C8	2.48	0.67
32:5:457:G:N1	32:5:458:C:C5	2.63	0.67
32:5:483:G:C2	32:5:484:U:C6	2.82	0.67
32:5:495:C:N3	32:5:496:G:C8	2.63	0.67
32:5:741:C:C2	32:5:742:G:C8	2.82	0.67
32:5:743:G:N2	32:5:744:G:C5	2.63	0.67
32:5:961:G:N3	32:5:961:G:C2'	2.57	0.67
32:5:1507:C:N3	32:5:1508:A:C8	2.62	0.67
32:5:1617:G:C6	32:5:1618:G:N7	2.62	0.67
32:5:1683:U:N3	32:5:1684:A:N7	2.42	0.67
32:5:1984:A:N7	32:5:2011:C:H4'	2.09	0.67
32:5:2326:G:C2	32:5:2327:G:N9	2.62	0.67
32:5:2783:A:C4	32:5:2784:C:C6	2.83	0.67
32:5:2784:C:H2'	32:5:2785:C:H6	1.60	0.67
32:5:4078:C:C4	32:5:4079:C:C6	2.83	0.67
32:5:4078:C:N3	32:5:4079:C:C6	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4097:G:N1	32:5:4098:A:C5	2.63	0.67
32:5:4215:C:C4	32:5:4216:G:N7	2.62	0.67
32:5:4518:A:O2'	35:B:257:TRP:HZ3	1.71	0.67
33:7:56:G:H2'	33:7:57:C:O5'	1.93	0.67
34:8:9:A:N1	34:8:10:G:C5	2.62	0.67
48:z:405:ARG:CD	51:4:207:C:H4'	2.24	0.67
54:S2:113:G:C2	54:S2:293:C:C4	2.83	0.67
54:S2:164:A:O2'	54:S2:165:G:H5'	1.94	0.67
54:S2:1052:A:C5	54:S2:1053:C:C5	2.82	0.67
54:S2:1203:G:H3'	54:S2:1204:A:N7	2.10	0.67
86:Sf:138:ARG:HH11	86:Sf:138:ARG:HG3	1.59	0.67
1:A:33:ASP:O	1:A:34:PHE:C	2.36	0.67
13:T:54:HIS:CD2	32:5:4301:U:H4'	2.30	0.67
25:g:14:ASN:OD1	25:g:14:ASN:C	2.37	0.67
32:5:491:G:N2	32:5:492:U:C5	2.63	0.67
32:5:1634:A:C4	32:5:1635:C:C5	2.82	0.67
32:5:1866:U:O4	32:5:4405:G:N9	2.27	0.67
32:5:2292:C:C2	32:5:2293:U:C5	2.83	0.67
32:5:2308:A:H2'	32:5:2309:G:O4'	1.94	0.67
32:5:2316:G:N3	32:5:2317:C:C5	2.63	0.67
32:5:2735:G:N1	32:5:2736:G:N7	2.42	0.67
32:5:3629:A:H4'	54:S2:1721:U:N3	2.08	0.67
32:5:4096:C:N4	32:5:4097:G:N7	2.43	0.67
32:5:4233:A:C2	32:5:4290:U:O4	2.44	0.67
32:5:4242:U:O2	32:5:4279:A:H2	1.76	0.67
32:5:4618:G:C2	32:5:4619:U:C5	2.83	0.67
36:C:341:LEU:HD11	37:E:52:ARG:HD3	1.75	0.67
48:z:109:LEU:HD23	48:z:197:GLN:NE2	2.10	0.67
48:z:297:MET:HB3	48:z:353:PRO:CA	2.25	0.67
48:z:410:SER:N	51:4:194:G:N3	2.43	0.67
51:4:173:A:O2'	51:4:174:G:O4'	2.13	0.67
54:S2:158:A:N6	54:S2:466:G:C6	2.62	0.67
54:S2:357:C:C2	54:S2:358:C:C6	2.83	0.67
54:S2:426:A:C2	54:S2:427:U:H5'	2.30	0.67
54:S2:599:A:H1'	54:S2:605:A:N3	2.10	0.67
54:S2:841:G:N2	54:S2:842:C:N1	2.42	0.67
54:S2:1368:U:N3	54:S2:1370:A:OP2	2.27	0.67
54:S2:1740:C:N3	54:S2:1741:U:C5	2.63	0.67
83:SZ:50:PHE:CD2	83:SZ:58:LEU:HD11	2.30	0.67
10:Q:33:ARG:HH21	10:Q:48:LEU:HD11	1.59	0.67
32:5:152:U:O2	32:5:153:G:H8	1.78	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:212:A:H2'	32:5:213:G:C8	2.29	0.67
32:5:293:G:C2'	32:5:297:U:O4'	2.43	0.67
32:5:370:U:C4	32:5:1637:A:N6	2.62	0.67
32:5:701:G:C6	32:5:702:U:C5	2.83	0.67
32:5:976:G:C5	32:5:977:C:C5	2.83	0.67
32:5:1296:G:H1'	32:5:1297:U:OP2	1.94	0.67
32:5:1542:U:C2	32:5:1543:G:H8	2.10	0.67
32:5:2328:G:O2'	32:5:2329:U:H5'	1.95	0.67
32:5:2394:G:O2'	32:5:2819:U:O4	2.13	0.67
32:5:3756:A:H5''	32:5:3756:A:C8	2.29	0.67
32:5:4233:A:O2'	32:5:4234:A:H3'	1.95	0.67
32:5:4279:A:C4	32:5:4281:A:N6	2.63	0.67
32:5:4579:U:N3	32:5:4580:U:C5	2.63	0.67
32:5:4884:G:N2	32:5:4885:U:C6	2.63	0.67
33:7:9:C:C4	33:7:10:C:C6	2.82	0.67
34:8:59:A:OP2	34:8:98:C:H5''	1.94	0.67
35:B:55:HIS:ND1	35:B:369:ASP:OD2	2.27	0.67
48:z:383:ASN:CB	51:4:209:G:P	2.83	0.67
54:S2:155:G:N2	54:S2:156:G:H1'	2.09	0.67
54:S2:379:C:C2	54:S2:380:G:N7	2.63	0.67
54:S2:436:G:O6	54:S2:458:A:C2	2.48	0.67
54:S2:444:G:H22	54:S2:446:G:C5'	2.07	0.67
54:S2:447:A:N6	54:S2:449:A:C5	2.62	0.67
54:S2:696:G:C2	54:S2:735:C:C2	2.83	0.67
54:S2:1149:A:C6	54:S2:1151:G:C4	2.83	0.67
55:SA:117:ARG:HH11	55:SA:117:ARG:HG2	1.59	0.67
65:SO:116:LEU:HD22	70:Sa:53:ILE:HD11	1.77	0.67
79:SR:85:VAL:CG1	79:SR:86:PRO:HD2	2.24	0.67
80:SS:125:HIS:CE1	80:SS:131:VAL:HG21	2.29	0.67
32:5:701:G:O6	32:5:702:U:C5	2.48	0.67
32:5:732:A:C2	32:5:733:A:H1'	2.29	0.67
32:5:747:A:H2'	32:5:749:G:C8	2.30	0.67
32:5:1070:G:C2	32:5:1071:C:C6	2.83	0.67
32:5:1074:G:H2'	32:5:1075:G:H1'	1.76	0.67
32:5:1296:G:O2'	32:5:1297:U:OP1	2.13	0.67
32:5:1302:U:O2	32:5:1303:A:C8	2.47	0.67
32:5:1632:A:C6	32:5:1634:A:H8	2.02	0.67
32:5:1725:U:N3	32:5:1726:U:C5	2.63	0.67
32:5:1934:A:C6	32:5:2048:U:C2	2.83	0.67
32:5:2792:C:O2'	42:j:11:ARG:HD3	1.94	0.67
32:5:3636:C:N4	32:5:3637:U:C5	2.63	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3873:G:H2'	32:5:3874:G:C1'	2.25	0.67
32:5:4081:G:N3	32:5:4082:G:C8	2.63	0.67
32:5:4886:C:O2	32:5:4887:C:C6	2.48	0.67
34:8:100:U:N3	34:8:101:C:C5	2.63	0.67
38:F:168:ARG:HD2	38:F:211:TRP:CD1	2.30	0.67
48:z:120:LYS:HD3	48:z:282:PHE:HE2	1.59	0.67
48:z:482:UNK:O	48:z:483:UNK:N	2.24	0.67
54:S2:45:A:C2	54:S2:481:C:H1'	2.29	0.67
54:S2:469:A:H2'	54:S2:469:A:N3	2.10	0.67
54:S2:656:G:H22	54:S2:662:G:C4'	2.07	0.67
54:S2:927:C:O2	54:S2:928:G:C8	2.47	0.67
54:S2:996:A:N6	64:SN:113:PHE:CE2	2.63	0.67
54:S2:1545:A:C4	54:S2:1588:A:N6	2.63	0.67
54:S2:1599:U:C5	74:SF:164:ARG:HA	2.30	0.67
54:S2:1665:G:N7	81:ST:88:MET:HG2	2.09	0.67
54:S2:1728:U:C4	54:S2:1729:U:C5	2.83	0.67
54:S2:1747:C:H2'	54:S2:1748:G:O4'	1.95	0.67
56:SB:39:PHE:CD2	56:SB:74:LEU:HD23	2.30	0.67
11:R:151:ARG:NH2	63:SL:118:ARG:CG	2.57	0.67
32:5:28:C:O2	32:5:28:C:H2'	1.94	0.67
32:5:341:G:N1	32:5:342:G:C8	2.63	0.67
32:5:488:G:N1	32:5:489:C:C4	2.63	0.67
32:5:1297:U:OP2	32:5:1297:U:O4'	2.13	0.67
32:5:1479:G:C5	32:5:1487:G:N2	2.63	0.67
32:5:2422:C:C6	32:5:2829:U:H1'	2.30	0.67
32:5:2521:G:C2	32:5:2535:G:C2	2.83	0.67
32:5:3857:G:C6	32:5:3858:C:C4	2.82	0.67
32:5:4276:G:C5	32:5:4277:G:N7	2.63	0.67
36:C:106:LYS:HG2	36:C:108:TRP:CZ2	2.30	0.67
48:z:357:THR:HG22	48:z:358:ASP:OD2	1.94	0.67
48:z:412:VAL:HG21	48:z:416:ASP:HB3	1.76	0.67
54:S2:92:A:N6	54:S2:447:A:C5	2.63	0.67
54:S2:415:A:H2'	54:S2:416:U:O4'	1.94	0.67
54:S2:426:A:N1	54:S2:427:U:C6	2.63	0.67
54:S2:439:A:N1	54:S2:455:A:C6	2.63	0.67
54:S2:1269:G:H2'	54:S2:1270:G:O4'	1.95	0.67
54:S2:1407:U:O2	54:S2:1408:U:C5	2.48	0.67
61:SI:65:PHE:O	61:SI:109:TYR:OH	2.13	0.67
1:A:204:MET:SD	32:5:1631:A:H2	2.18	0.66
4:H:117:PHE:C	4:H:117:PHE:HD1	2.03	0.66
18:Z:49:TYR:HE2	18:Z:133:LYS:HA	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:a:21:ARG:HD3	32:5:2282:A:H5''	1.77	0.66
32:5:189:G:C2	32:5:190:G:C5	2.83	0.66
32:5:288:G:C4	32:5:289:C:C5	2.83	0.66
32:5:499:G:C2	32:5:500:G:C8	2.83	0.66
32:5:1264:C:C2'	32:5:1265:G:H5'	2.25	0.66
32:5:1475:G:C2	32:5:1476:C:H5	2.07	0.66
32:5:1632:A:N6	32:5:1634:A:C1'	2.58	0.66
32:5:1936:C:O2	32:5:1936:C:H2'	1.95	0.66
32:5:2272:C:C2'	32:5:2273:G:O5'	2.42	0.66
32:5:2745:A:O2'	32:5:2746:A:O5'	2.13	0.66
32:5:2842:G:C2	32:5:2843:U:C6	2.83	0.66
32:5:3654:G:O2'	32:5:3693:U:OP1	2.13	0.66
32:5:3693:U:C4	32:5:3694:U:C4	2.82	0.66
32:5:4099:G:C6	32:5:4100:C:C4	2.83	0.66
32:5:4229:U:C4	32:5:4230:C:C6	2.80	0.66
32:5:4283:G:N3	32:5:4284:C:H6	1.89	0.66
32:5:4344:U:C2	32:5:4345:C:H5	2.12	0.66
32:5:4482:U:N3	32:5:4483:C:C5	2.59	0.66
32:5:4548:A:H4'	32:5:4549:G:C5'	2.25	0.66
33:7:56:G:H2'	33:7:57:C:O4'	1.95	0.66
48:z:392:GLY:O	48:z:396:PHE:CD1	2.48	0.66
54:S2:77:A:O2'	59:SG:175:LYS:HA	1.95	0.66
54:S2:293:C:O2	54:S2:293:C:H2'	1.95	0.66
54:S2:958:G:H2'	54:S2:958:G:N3	2.11	0.66
54:S2:1454:A:N6	54:S2:1468:C:OP2	2.27	0.66
74:SF:38:TYR:HD2	74:SF:143:PRO:HB2	1.60	0.66
83:SZ:46:ASN:HD22	83:SZ:78:LYS:C	2.02	0.66
15:V:98:PHE:CE1	41:W:22:ALA:HB3	2.29	0.66
22:d:71:ALA:HB3	22:d:108:TYR:CE2	2.30	0.66
32:5:189:G:N2	32:5:190:G:C5	2.63	0.66
32:5:294:G:H3'	32:5:296:A:H5'	1.71	0.66
32:5:674:G:N2	32:5:675:C:C2	2.63	0.66
32:5:1534:A:O2'	32:5:1637:A:N3	2.20	0.66
32:5:1663:C:O2	32:5:1664:U:C5	2.48	0.66
32:5:1990:A:H2	32:5:1992:U:OP1	1.73	0.66
32:5:2020:U:N3	32:5:2021:G:N7	2.43	0.66
32:5:2319:C:O2	32:5:2319:C:H2'	1.94	0.66
32:5:2325:C:O2	32:5:2325:C:C2'	2.42	0.66
32:5:2340:C:N3	32:5:2341:A:C8	2.63	0.66
32:5:2453:A:C4	32:5:2507:A:C8	2.83	0.66
32:5:2606:G:N3	32:5:2607:C:C6	2.63	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3722:G:C2	32:5:3723:A:C8	2.82	0.66
32:5:3755:G:C6	32:5:3770:U:N3	2.35	0.66
32:5:3772:U:C2'	32:5:3773:U:H5'	2.26	0.66
32:5:3859:G:H4'	40:P:139:TYR:CZ	2.29	0.66
33:7:59:G:C6	33:7:60:G:C5	2.83	0.66
34:8:102:G:H3'	34:8:104:A:H2'	1.77	0.66
48:z:381:SER:OG	51:4:207:C:H1'	1.94	0.66
50:3:38:C:H5'	54:S2:1058:A:C8	2.30	0.66
54:S2:315:C:O2	54:S2:316:G:C8	2.48	0.66
54:S2:526:A:HO2'	62:SJ:125:HIS:HD1	1.43	0.66
54:S2:957:A:C4	54:S2:958:G:C6	2.83	0.66
54:S2:1224:G:C2	54:S2:1643:U:C4	2.84	0.66
54:S2:1308:U:H2'	54:S2:1309:C:C6	2.29	0.66
54:S2:1366:G:N2	54:S2:1374:C:C2	2.62	0.66
54:S2:1427:C:O2	54:S2:1428:G:C8	2.48	0.66
54:S2:1538:C:O2	54:S2:1538:C:C2'	2.42	0.66
59:SG:41:LEU:HD13	59:SG:45:TRP:HZ3	1.60	0.66
74:SF:141:VAL:C	84:Sc:56:LEU:CD1	2.69	0.66
80:SS:8:LYS:HE3	80:SS:8:LYS:N	2.10	0.66
17:Y:74:TYR:HE1	34:8:74:U:H3	1.44	0.66
19:a:109:TYR:O	19:a:110:LYS:HB2	1.95	0.66
25:g:13:TYR:OH	32:5:2402:G:N2	2.28	0.66
26:h:59:THR:HA	34:8:60:G:O6	1.95	0.66
32:5:299:C:N3	32:5:300:A:N7	2.43	0.66
32:5:483:G:N3	32:5:484:U:C5	2.63	0.66
32:5:923:C:C4	32:5:924:C:C5	2.83	0.66
32:5:1480:C:O2	32:5:1484:G:O6	2.13	0.66
32:5:1777:C:C2	32:5:1778:C:C6	2.84	0.66
32:5:1982:G:O2'	32:5:2010:A:H5'	1.94	0.66
32:5:2423:A:C2	32:5:2424:G:C4	2.84	0.66
32:5:2494:U:C2	32:5:2495:U:C6	2.84	0.66
32:5:2857:A:N1	32:5:2858:A:C6	2.63	0.66
32:5:3821:A:C6	32:5:3822:U:C5	2.83	0.66
32:5:4217:G:C2'	32:5:4218:U:O5'	2.43	0.66
32:5:4228:G:O2'	32:5:4337:C:N4	2.28	0.66
32:5:4297:G:C2	32:5:4298:A:C8	2.84	0.66
32:5:5012:G:C2	32:5:5014:A:C8	2.83	0.66
35:B:116:ARG:HG3	35:B:177:LYS:HG3	1.77	0.66
51:4:15:C:O2'	51:4:39:C:OP2	2.12	0.66
51:4:183:A:C3'	51:4:184:A:OP2	2.43	0.66
54:S2:18:C:N3	54:S2:19:A:N7	2.43	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:27:A:N1	54:S2:28:U:C5	2.63	0.66
54:S2:360:A:C2	54:S2:363:A:C8	2.83	0.66
54:S2:440:G:N2	54:S2:454:U:C2	2.63	0.66
54:S2:443:U:C5	54:S2:444:G:C8	2.82	0.66
54:S2:676:C:C2	54:S2:677:G:C8	2.83	0.66
54:S2:1052:A:C6	54:S2:1053:C:C5	2.83	0.66
54:S2:1500:G:C5	54:S2:1501:C:C4	2.83	0.66
54:S2:1643:U:C2	54:S2:1644:C:C5	2.83	0.66
66:SV:53:TYR:OH	66:SV:72:LEU:C	2.38	0.66
74:SF:71:ARG:NH1	74:SF:148:ASN:OD1	2.27	0.66
78:SQ:44:PRO:HG2	78:SQ:81:ILE:HD11	1.75	0.66
4:H:41:ILE:HD11	4:H:69:THR:CB	2.26	0.66
32:5:293:G:C2'	32:5:297:U:C1'	2.74	0.66
32:5:990:C:C4	32:5:1064:G:C2	2.84	0.66
32:5:1726:U:C2	32:5:1727:U:C6	2.84	0.66
32:5:1868:A:C8	32:5:1870:C:C6	2.84	0.66
32:5:2055:G:C5'	32:5:2056:G:H5'	2.26	0.66
32:5:2115:G:C8	32:5:2116:C:O4'	2.48	0.66
32:5:2315:G:C2	32:5:2316:G:C8	2.83	0.66
32:5:2688:G:N1	32:5:2689:C:C4	2.64	0.66
32:5:2769:U:O2'	32:5:2770:C:C6	2.46	0.66
32:5:4549:G:N1	32:5:4550:G:C5	2.63	0.66
32:5:5038:A:OP1	41:W:61:LYS:NZ	2.25	0.66
33:7:19:C:N3	33:7:20:U:C5	2.63	0.66
34:8:37:A:O4'	34:8:39:G:H1'	1.95	0.66
48:z:340:MET:CA	48:z:343:GLY:H	2.08	0.66
48:z:382:MET:O	51:4:208:A:C3'	2.43	0.66
54:S2:28:U:O2	54:S2:28:U:H2'	1.94	0.66
54:S2:50:A:C2	54:S2:488:U:O4	2.48	0.66
54:S2:118:C:N1	54:S2:445:A:C2	2.63	0.66
54:S2:636:C:C4	54:S2:637:U:C5	2.83	0.66
54:S2:909:G:C2	54:S2:910:G:N7	2.64	0.66
81:ST:62:ARG:HD2	81:ST:62:ARG:C	2.20	0.66
87:Sg:188:HIS:HB3	87:Sg:219:TRP:CZ3	2.31	0.66
1:A:186:TYR:N	1:A:196:TRP:HZ3	1.93	0.66
12:S:68:PHE:CZ	32:5:728:U:C4	2.84	0.66
16:X:119:ILE:HA	16:X:144:TYR:HE2	1.60	0.66
18:Z:13:VAL:HG13	18:Z:75:TYR:HE1	1.59	0.66
18:Z:50:PRO:CG	18:Z:122:TYR:HE2	2.07	0.66
32:5:77:U:O4	32:5:335:A:C2	2.48	0.66
32:5:120:A:C2	32:5:148:C:O2	2.49	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:195:C:H2'	32:5:195:C:O2	1.96	0.66
32:5:1070:G:O6	37:E:42:ARG:NH1	2.28	0.66
32:5:1185:G:C6	32:5:1186:U:C6	2.83	0.66
32:5:1213:G:N7	32:5:1215:C:C6	2.63	0.66
32:5:1596:U:O2	40:P:131:ARG:NH2	2.28	0.66
32:5:1673:U:C4	32:5:1674:C:N4	2.63	0.66
32:5:1949:U:O2	32:5:1950:U:C5	2.48	0.66
32:5:2251:G:C1'	32:5:2252:G:C2	2.78	0.66
32:5:2479:G:C6	32:5:2480:G:C5	2.83	0.66
32:5:2770:C:C4	32:5:2771:G:N7	2.63	0.66
32:5:3655:C:N3	32:5:3656:A:N7	2.44	0.66
32:5:4124:G:O2'	32:5:4125:C:OP1	2.14	0.66
32:5:4735:G:C2	32:5:4736:C:C5	2.83	0.66
33:7:93:G:N3	33:7:94:C:C6	2.63	0.66
34:8:132:G:N3	34:8:133:G:C8	2.64	0.66
54:S2:12:U:C2	54:S2:13:C:C5	2.83	0.66
54:S2:51:U:N3	54:S2:52:G:C8	2.63	0.66
54:S2:88:G:C2	54:S2:500:A:C2	2.83	0.66
54:S2:413:G:C5	54:S2:425:G:N2	2.63	0.66
54:S2:803:C:C2	54:S2:804:U:C6	2.84	0.66
54:S2:974:C:N3	54:S2:975:G:N7	2.44	0.66
54:S2:1017:U:C2	54:S2:1018:U:C6	2.82	0.66
54:S2:1030:A:C2	54:S2:1031:A:C5	2.83	0.66
54:S2:1111:U:C2	54:S2:1112:U:C5	2.83	0.66
54:S2:1114:U:O4	54:S2:1119:A:C6	2.47	0.66
54:S2:1258:A:C2	54:S2:1663:A:C4	2.84	0.66
54:S2:1308:U:H2'	54:S2:1309:C:H6	1.60	0.66
54:S2:1683:C:O2	54:S2:1684:C:C6	2.48	0.66
1:A:207:VAL:HG23	1:A:208:GLU:HG2	1.78	0.66
5:J:75:ARG:HH12	33:7:42:A:C1'	2.07	0.66
12:S:158:VAL:CB	32:5:2055:G:O6	2.41	0.66
32:5:196:C:H2'	32:5:196:C:O2	1.96	0.66
32:5:1066:G:H2'	32:5:1067:G:O4'	1.95	0.66
32:5:1466:G:N2	32:5:1467:C:C2	2.63	0.66
32:5:1570:G:C6	32:5:1571:G:N7	2.64	0.66
32:5:1697:G:O2'	38:F:165:ASN:ND2	2.22	0.66
32:5:2397:G:N7	32:5:2399:G:C8	2.64	0.66
32:5:2612:G:C6	32:5:2613:C:C4	2.83	0.66
32:5:2856:C:O2	32:5:2856:C:C2'	2.44	0.66
32:5:3630:A:C2	32:5:3631:U:C6	2.84	0.66
32:5:3848:U:C2	32:5:3849:A:C8	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4071:U:C2	32:5:4072:C:C6	2.84	0.66
32:5:4097:G:C2	32:5:4098:A:N7	2.63	0.66
32:5:4283:G:N3	32:5:4284:C:C5	2.53	0.66
32:5:4297:G:C6	32:5:4298:A:N7	2.63	0.66
32:5:4561:C:C2	32:5:4562:C:C5	2.83	0.66
54:S2:635:G:N3	54:S2:636:C:C6	2.64	0.66
54:S2:695:C:C2	54:S2:696:G:C8	2.83	0.66
54:S2:994:C:C4	54:S2:995:G:N7	2.63	0.66
54:S2:1350:U:O3'	55:SA:110:ASN:OD1	2.13	0.66
54:S2:1687:C:N3	54:S2:1688:C:C5	2.64	0.66
54:S2:1852:C:C2	54:S2:1853:C:C5	2.83	0.66
56:SB:79:VAL:CB	56:SB:81:PHE:CZ	2.78	0.66
88:S1:71:ARG:HG3	89:S4:80:GLN:HE22	1.60	0.66
20:b:12:GLN:NE2	32:5:1671:U:O2'	2.24	0.66
32:5:88:A:H62	32:5:97:G:H21	1.44	0.66
32:5:212:A:C2	32:5:213:G:C5	2.84	0.66
32:5:480:C:C2	32:5:481:G:C8	2.84	0.66
32:5:1412:G:C2	32:5:1413:C:C6	2.84	0.66
32:5:1846:G:H2'	32:5:1847:C:H6	1.60	0.66
32:5:1964:A:C6	32:5:1965:G:C8	2.83	0.66
32:5:4270:C:H2'	32:5:4270:C:O2	1.95	0.66
32:5:4651:A:C6	32:5:4652:G:C8	2.83	0.66
34:8:81:C:H3'	34:8:82:A:H4'	1.77	0.66
47:q:31:GLY:O	47:q:187:LEU:CA	2.39	0.66
48:z:382:MET:C	51:4:208:A:C5'	2.69	0.66
54:S2:10:G:C6	54:S2:11:A:N7	2.64	0.66
54:S2:23:G:H2'	54:S2:24:C:O4'	1.94	0.66
54:S2:635:G:C4	54:S2:636:C:C6	2.84	0.66
54:S2:983:A:H2'	54:S2:984:C:O4'	1.96	0.66
54:S2:1202:U:C2	54:S2:1203:G:C8	2.83	0.66
54:S2:1311:C:N3	54:S2:1314:U:C5	2.64	0.66
28:k:22:SER:HA	28:k:65:ALA:HB3	1.75	0.66
32:5:55:G:C6	32:5:56:A:C8	2.84	0.66
32:5:438:G:C6	32:5:439:G:N7	2.64	0.66
32:5:642:G:N1	32:5:643:C:C4	2.63	0.66
32:5:1394:G:O2'	32:5:1395:U:O5'	2.14	0.66
32:5:1900:C:C2	32:5:1901:C:C6	2.84	0.66
32:5:2366:A:H2'	32:5:2367:A:C5'	2.26	0.66
32:5:2519:U:C2	32:5:2520:C:C5	2.82	0.66
32:5:2791:C:C2	32:5:2792:C:C5	2.84	0.66
32:5:2842:G:C6	32:5:2843:U:C5	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4315:A:H2'	32:5:4316:G:H5'	1.78	0.66
32:5:4361:U:C2	32:5:4362:A:C8	2.83	0.66
32:5:4426:C:N4	32:5:4427:G:C5	2.64	0.66
32:5:4484:A:C2	32:5:4485:C:C5	2.83	0.66
32:5:4509:U:H2'	32:5:4510:A:H2'	1.78	0.66
32:5:4949:G:N2	32:5:4950:U:H2'	2.11	0.66
33:7:19:C:O2	33:7:19:C:H2'	1.94	0.66
33:7:111:C:N3	33:7:112:U:C5	2.63	0.66
34:8:73:U:C4	34:8:74:U:C6	2.84	0.66
36:C:109:ARG:HD2	36:C:111:TRP:CZ3	2.31	0.66
54:S2:447:A:C5	54:S2:449:A:C8	2.83	0.66
54:S2:973:C:C4	54:S2:974:C:C5	2.84	0.66
54:S2:1202:U:C4	54:S2:1203:G:C8	2.84	0.66
54:S2:1238:U:H2'	54:S2:1239:U:O4'	1.95	0.66
54:S2:1835:A:O4'	54:S2:1863:A:C8	2.48	0.66
55:SA:90:PHE:C	55:SA:90:PHE:CD1	2.73	0.66
80:SS:15:VAL:HB	80:SS:20:ILE:HD12	1.77	0.66
1:A:95:GLN:CB	32:5:4118:U:O4	2.44	0.66
10:Q:73:PRO:O	32:5:1456:C:O2'	2.13	0.66
32:5:130:C:C2	32:5:139:G:C2	2.84	0.66
32:5:1277:G:N1	32:5:1278:C:C4	2.63	0.66
32:5:1280:C:N3	32:5:1282:G:C5	2.64	0.66
32:5:1298:C:N3	32:5:1299:G:N7	2.44	0.66
32:5:1325:C:H4'	32:5:3901:A:C2	2.29	0.66
32:5:1613:A:N7	32:5:3637:U:O2	2.29	0.66
32:5:1666:C:C2	32:5:2284:G:N2	2.64	0.66
32:5:2097:U:O2	32:5:2097:U:H5'	1.95	0.66
32:5:2263:A:H5''	32:5:2263:A:C8	2.31	0.66
32:5:2466:G:H2'	32:5:2467:U:C1'	2.26	0.66
32:5:3863:C:O2	32:5:3864:C:C6	2.49	0.66
32:5:3867:A:H3'	32:5:3868:G:H8	1.60	0.66
32:5:4323:A:C2	32:5:4324:A:C4	2.83	0.66
32:5:4413:C:H3'	32:5:4414:A:H8	1.60	0.66
32:5:4510:A:H62	32:5:4592:C:C2'	2.08	0.66
32:5:4744:A:N1	32:5:4745:G:C6	2.64	0.66
32:5:4956:A:C6	32:5:4957:C:C5	2.84	0.66
33:7:28:C:C5	33:7:29:C:C5	2.84	0.66
34:8:94:G:C8	34:8:94:G:C5'	2.76	0.66
36:C:289:LEU:HG	45:r:4:HIS:CD2	2.30	0.66
50:3:31:C:H2'	50:3:32:C:C6	2.31	0.66
54:S2:436:G:H2'	54:S2:437:G:O5'	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:656:G:O4'	54:S2:662:G:N2	2.29	0.66
54:S2:868:G:N2	60:SH:115:LYS:HD2	2.11	0.66
54:S2:992:A:N6	54:S2:993:G:N7	2.43	0.66
54:S2:1111:U:O2	54:S2:1111:U:H2'	1.94	0.66
54:S2:1127:C:C2	54:S2:1128:C:C5	2.84	0.66
54:S2:1640:A:C2	54:S2:1641:A:H1'	2.31	0.66
58:SE:182:MET:HE2	58:SE:192:ILE:HD11	1.77	0.66
63:SL:82:MET:HB2	63:SL:85:THR:HG23	1.75	0.66
84:Sc:11:LEU:HB3	84:Sc:55:VAL:HG11	1.76	0.66
32:5:43:U:C4	32:5:44:A:C1'	2.77	0.66
32:5:65:A:C2	32:5:76:A:H4'	2.31	0.66
32:5:83:C:P	32:5:84:A:O2'	2.55	0.66
32:5:739:G:C6	32:5:740:G:N7	2.64	0.66
32:5:910:G:C6	32:5:911:U:C5	2.84	0.66
32:5:1409:C:H2'	32:5:1411:C:C5	2.32	0.66
32:5:1441:C:OP1	32:5:2109:G:O3'	2.13	0.66
32:5:1489:G:N3	32:5:1489:G:H2'	2.10	0.66
32:5:1634:A:C2	32:5:1635:C:N1	2.64	0.66
32:5:1676:C:C2'	32:5:3914:U:O4	2.44	0.66
32:5:1695:U:H2'	32:5:1696:C:O4'	1.96	0.66
32:5:2250:C:OP2	32:5:2250:C:H4'	1.95	0.66
32:5:2327:G:C6	32:5:2328:G:N7	2.64	0.66
32:5:2399:G:N3	32:5:2400:G:C8	2.64	0.66
32:5:2463:G:C2	32:5:2464:C:N3	2.64	0.66
32:5:4097:G:N3	32:5:4098:A:C8	2.64	0.66
32:5:4101:C:C2	32:5:4109:G:C2	2.84	0.66
32:5:4982:A:C2	32:5:4983:C:C1'	2.79	0.66
32:5:4990:C:O3'	32:5:4991:U:H4'	1.94	0.66
32:5:5047:C:O4'	32:5:5048:A:N1	2.29	0.66
34:8:116:C:N3	34:8:117:C:C6	2.64	0.66
48:z:219:TYR:CD1	48:z:236:PHE:CD1	2.84	0.66
48:z:405:ARG:CD	51:4:207:C:C5'	2.58	0.66
54:S2:750:C:O2	54:S2:750:C:H2'	1.95	0.66
54:S2:1040:G:C6	54:S2:1041:G:C5	2.84	0.66
54:S2:1053:C:O2	54:S2:1054:G:H8	1.79	0.66
54:S2:1099:G:C2	54:S2:1100:A:C8	2.82	0.66
54:S2:1292:C:C1'	86:Sf:148:TYR:HB3	2.26	0.66
12:S:167:PHE:CD2	12:S:167:PHE:N	2.64	0.65
32:5:127:G:N2	32:5:128:C:C2	2.64	0.65
32:5:152:U:O2	32:5:153:G:C8	2.48	0.65
32:5:479:G:C6	32:5:480:C:C5	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:495:C:N3	32:5:496:G:N7	2.43	0.65
32:5:499:G:N2	32:5:656:C:C2	2.64	0.65
32:5:1081:C:C2	32:5:1220:G:C2	2.84	0.65
32:5:1280:C:C4	32:5:1282:G:O6	2.49	0.65
32:5:1619:G:C6	32:5:1620:U:C4	2.84	0.65
32:5:2823:G:C6	32:5:2824:C:C5	2.83	0.65
32:5:3629:A:C4'	54:S2:1721:U:N3	2.56	0.65
32:5:3655:C:C4	32:5:3656:A:N7	2.64	0.65
32:5:4233:A:N6	32:5:4290:U:N3	2.27	0.65
32:5:4441:A:H8	32:5:4441:A:H5''	1.60	0.65
32:5:4455:G:N3	32:5:4456:C:C6	2.65	0.65
32:5:4528:G:C2	32:5:4529:G:C8	2.84	0.65
32:5:4997:G:C2	32:5:4998:G:C8	2.84	0.65
32:5:5006:U:C1'	32:5:5042:A:N7	2.58	0.65
32:5:5031:G:N2	32:5:5032:C:C2	2.65	0.65
37:E:175:LEU:HB2	37:E:246:GLN:HE21	1.61	0.65
47:q:108:PRO:CB	47:q:184:SER:HB2	2.24	0.65
50:3:31:C:C4	50:3:32:C:C4	2.84	0.65
54:S2:182:C:C3'	54:S2:184:G:H1'	2.26	0.65
54:S2:185:G:C2	54:S2:186:C:C6	2.84	0.65
54:S2:436:G:C2	54:S2:437:G:C5	2.85	0.65
54:S2:922:A:OP1	67:SW:28:ARG:NH2	2.29	0.65
54:S2:964:A:O2'	54:S2:965:U:O5'	2.14	0.65
54:S2:1539:U:O2	54:S2:1539:U:H2'	1.95	0.65
54:S2:1736:G:O6	54:S2:1798:C:N4	2.28	0.65
56:SB:29:ASP:HB3	56:SB:51:ARG:HD2	1.78	0.65
83:SZ:73:VAL:HG13	83:SZ:77:LEU:HD12	1.76	0.65
7:M:17:PHE:HD1	32:5:1921:C:C5	2.14	0.65
11:R:151:ARG:HH12	63:SL:118:ARG:HD2	1.61	0.65
19:a:79:TRP:N	19:a:79:TRP:CD1	2.61	0.65
32:5:674:G:N1	32:5:675:C:C4	2.64	0.65
32:5:924:C:N3	32:5:925:C:C6	2.64	0.65
32:5:1261:G:N1	32:5:1262:G:C5	2.64	0.65
32:5:1272:C:O2'	32:5:1273:G:N9	2.29	0.65
32:5:1310:C:O2	32:5:1310:C:H2'	1.95	0.65
32:5:1410:U:C5	32:5:1815:G:N2	2.64	0.65
32:5:1490:G:C2	32:5:1491:A:N7	2.64	0.65
32:5:1945:G:C6	32:5:1946:G:N7	2.64	0.65
32:5:1945:G:N1	32:5:1946:G:C4	2.65	0.65
32:5:2751:G:C2	32:5:2752:G:C8	2.84	0.65
32:5:2829:U:N3	32:5:2830:G:N7	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3731:C:O2	32:5:3732:A:H8	1.78	0.65
32:5:4404:U:C5	32:5:4436:U:O4	2.49	0.65
32:5:4511:A:H2'	32:5:4512:U:O4'	1.95	0.65
32:5:4660:G:C2	32:5:4661:G:N7	2.64	0.65
32:5:4939:C:H1'	37:E:236:TYR:CD1	2.30	0.65
32:5:5005:G:C5	41:W:51:TRP:HD1	2.15	0.65
32:5:5051:C:O2	32:5:5051:C:H2'	1.95	0.65
34:8:133:G:N2	34:8:134:G:N9	2.44	0.65
48:z:377:THR:OG1	51:4:194:G:H4'	1.96	0.65
51:4:59:A:C6	51:4:288:G:N3	2.64	0.65
54:S2:123:G:H2'	54:S2:123:G:N3	2.10	0.65
54:S2:615:C:H2'	54:S2:616:A:O4'	1.96	0.65
54:S2:796:G:H3'	54:S2:797:C:H5''	1.76	0.65
54:S2:870:A:N9	54:S2:915:G:N7	2.43	0.65
54:S2:1100:A:C2	54:S2:1101:U:C5	2.84	0.65
54:S2:1283:C:O2'	76:SM:91:LEU:HD22	1.96	0.65
58:SE:100:ARG:CZ	58:SE:121:TYR:OH	2.44	0.65
32:5:42:A:C5	32:5:4379:A:N1	2.64	0.65
32:5:229:G:C2	32:5:240:G:C2	2.84	0.65
32:5:247:G:N1	32:5:248:C:C4	2.64	0.65
32:5:691:C:C2	32:5:692:A:C8	2.85	0.65
32:5:1261:G:C6	32:5:1262:G:N7	2.64	0.65
32:5:1674:C:O2	32:5:1675:C:C6	2.49	0.65
32:5:1988:G:C2	32:5:1989:G:C8	2.84	0.65
32:5:2261:G:C2'	32:5:2262:G:C8	2.80	0.65
32:5:2279:A:N1	32:5:2280:G:C5	2.64	0.65
32:5:3668:C:O2	32:5:3668:C:H2'	1.96	0.65
32:5:3693:U:O4	32:5:3694:U:C4	2.50	0.65
32:5:3799:A:H2'	32:5:3800:A:C8	2.31	0.65
32:5:4099:G:C5	32:5:4100:C:C5	2.85	0.65
32:5:4197:G:N2	50:3:75:C:C4	2.64	0.65
32:5:4730:C:O2	32:5:4734:A:N7	2.29	0.65
32:5:4920:C:H2'	32:5:4921:C:H6	1.60	0.65
33:7:42:A:N1	33:7:43:U:C6	2.64	0.65
34:8:125:C:C2	34:8:125:C:C5'	2.79	0.65
37:E:277:ILE:N	37:E:278:TYR:CE2	2.65	0.65
47:q:107:VAL:CG2	47:q:108:PRO:CD	2.70	0.65
48:z:106:PHE:CE2	48:z:188:ILE:HG23	2.31	0.65
54:S2:309:G:C2	54:S2:310:C:C5	2.85	0.65
54:S2:648:A:C6	54:S2:649:U:C5	2.84	0.65
54:S2:793:G:C6	54:S2:794:A:N7	2.63	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:963:A:N1	54:S2:964:A:C6	2.63	0.65
56:SB:47:THR:HA	65:SO:46:ASP:OD2	1.95	0.65
75:SK:27:VAL:HG13	75:SK:43:LEU:HD23	1.78	0.65
1:A:89:TYR:HB2	1:A:100:ASN:HD21	1.61	0.65
2:D:118:ILE:HB	2:D:119:TYR:CE1	2.32	0.65
11:R:117:ARG:NH2	11:R:117:ARG:HB2	2.11	0.65
32:5:112:C:C5	32:5:157:U:C4	2.84	0.65
32:5:223:G:H4'	32:5:225:G:N7	2.11	0.65
32:5:341:G:C6	32:5:342:G:N7	2.64	0.65
32:5:473:C:O2	32:5:474:C:C6	2.49	0.65
32:5:1278:C:C2	32:5:1279:A:H1'	2.31	0.65
32:5:1676:C:O2'	32:5:3914:U:N3	2.29	0.65
32:5:2079:G:N2	32:5:2080:U:N1	2.44	0.65
32:5:2081:C:O2'	32:5:2082:G:H5'	1.97	0.65
32:5:2422:C:N3	32:5:2423:A:N7	2.45	0.65
32:5:2577:C:N3	32:5:2578:G:N7	2.44	0.65
32:5:3656:A:C4'	32:5:3747:A:C2	2.79	0.65
32:5:3873:G:N2	32:5:3883:U:N3	2.45	0.65
32:5:4114:C:H3'	32:5:4115:G:O4'	1.95	0.65
32:5:4579:U:H2'	32:5:4580:U:O4'	1.97	0.65
32:5:4901:G:N2	32:5:4921:C:C2	2.63	0.65
32:5:5029:C:C2	32:5:5030:U:C6	2.85	0.65
34:8:28:C:C2	34:8:29:G:C8	2.84	0.65
35:B:106:PHE:CE2	35:B:130:PHE:CZ	2.84	0.65
37:E:43:ASN:ND2	37:E:43:ASN:C	2.53	0.65
40:P:129:THR:HB	40:P:139:TYR:HB2	1.78	0.65
54:S2:27:A:N1	54:S2:28:U:C6	2.65	0.65
54:S2:38:A:C2	54:S2:515:G:C2	2.84	0.65
54:S2:404:G:C4	54:S2:405:G:C8	2.84	0.65
54:S2:574:A:O2'	54:S2:575:A:H8	1.78	0.65
54:S2:580:U:C4	54:S2:581:U:C5	2.85	0.65
54:S2:636:C:N3	54:S2:637:U:C4	2.64	0.65
54:S2:1648:G:O2'	54:S2:1674:G:O6	2.04	0.65
54:S2:1850:A:O2'	54:S2:1851:A:O4'	2.09	0.65
60:SH:135:PHE:HD1	60:SH:135:PHE:C	2.05	0.65
2:D:94:ASN:C	2:D:94:ASN:HD22	2.04	0.65
4:H:113:GLU:OE2	4:H:113:GLU:HA	1.94	0.65
8:N:84:PRO:HA	8:N:87:HIS:HB2	1.78	0.65
32:5:270:U:N3	32:5:271:C:H5	1.90	0.65
32:5:302:C:C2	32:5:303:C:C5	2.84	0.65
32:5:449:C:C2	32:5:450:G:C8	2.84	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:986:C:C2	32:5:1068:G:C2	2.84	0.65
32:5:1336:G:H2'	32:5:1337:A:N7	2.11	0.65
32:5:1474:C:C2	32:5:1475:G:C8	2.85	0.65
32:5:1552:G:C2	32:5:1574:G:C2	2.84	0.65
32:5:1617:G:N1	32:5:1618:G:C5	2.63	0.65
32:5:1685:G:C4	32:5:1686:C:C5	2.84	0.65
32:5:1774:C:C2	32:5:1775:A:C8	2.85	0.65
32:5:1787:A:O2'	32:5:1788:A:N7	2.30	0.65
32:5:1964:A:C2	32:5:1965:G:H1'	2.32	0.65
32:5:2035:C:H41	32:5:2036:C:N4	1.93	0.65
32:5:2658:G:N3	32:5:2675:G:N2	2.44	0.65
32:5:2689:C:H2'	32:5:2689:C:O2	1.96	0.65
32:5:3621:A:C4	32:5:3622:C:C6	2.85	0.65
32:5:4078:C:N4	32:5:4079:C:C5	2.64	0.65
32:5:4081:G:C2	32:5:4082:G:C5	2.84	0.65
32:5:4165:C:H2'	32:5:4165:C:O2	1.96	0.65
32:5:4724:A:C5	32:5:4725:C:C5	2.85	0.65
32:5:4743:G:N1	32:5:4744:A:C5	2.64	0.65
34:8:65:A:N1	34:8:66:A:C5	2.65	0.65
35:B:119:TYR:N	35:B:119:TYR:CD1	2.64	0.65
37:E:157:ARG:HD3	37:E:266:TYR:HE1	1.62	0.65
38:F:149:LEU:CB	38:F:197:TYR:OH	2.45	0.65
54:S2:338:G:C4	54:S2:339:A:C8	2.84	0.65
54:S2:404:G:N2	54:S2:405:G:C4	2.65	0.65
54:S2:532:C:N3	54:S2:533:A:N7	2.45	0.65
54:S2:597:G:N2	54:S2:640:A:N3	2.45	0.65
54:S2:597:G:C2	54:S2:640:A:N1	2.64	0.65
54:S2:1123:C:C4	54:S2:1124:C:H5	2.13	0.65
54:S2:1266:C:C2	54:S2:1267:C:C5	2.84	0.65
54:S2:1293:A:C4	86:Sf:152:LYS:N	2.64	0.65
2:D:44:TYR:CD2	32:5:1823:G:H4'	2.32	0.65
5:J:125:ILE:CD1	80:SS:19:ASN:HD22	1.93	0.65
8:N:105:ARG:NE	32:5:2459:G:O6	2.29	0.65
32:5:272:U:C2	32:5:273:U:H5	2.12	0.65
32:5:976:G:C4	32:5:977:C:C6	2.84	0.65
32:5:1302:U:O2	32:5:1303:A:H8	1.79	0.65
32:5:1692:C:N3	32:5:1693:U:H5	1.95	0.65
32:5:2108:G:C2	32:5:2125:C:N3	2.64	0.65
32:5:2691:U:O2	32:5:2692:U:C6	2.49	0.65
32:5:3648:A:C8	32:5:3785:A:N6	2.65	0.65
32:5:3907:G:H1	49:2:127:MET:HE1	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3935:C:C2	32:5:3936:A:C8	2.84	0.65
33:7:111:C:C2	33:7:112:U:C6	2.85	0.65
35:B:367:PHE:HZ	35:B:369:ASP:HA	1.61	0.65
54:S2:69:C:C2	54:S2:70:G:C8	2.85	0.65
54:S2:99:A:C2	54:S2:100:U:N1	2.65	0.65
54:S2:945:U:H2'	54:S2:946:U:C6	2.32	0.65
54:S2:946:U:N3	54:S2:947:G:C8	2.65	0.65
54:S2:965:U:H2'	54:S2:966:U:O4'	1.96	0.65
54:S2:1052:A:C4	54:S2:1053:C:C6	2.85	0.65
54:S2:1142:G:N3	54:S2:1142:G:H2'	2.11	0.65
54:S2:1294:G:N1	54:S2:1295:A:N7	2.44	0.65
54:S2:1366:G:C2	54:S2:1374:C:N3	2.64	0.65
54:S2:1563:G:C4	54:S2:1564:C:C5	2.85	0.65
9:O:19:LEU:HD23	9:O:41:ILE:HD11	1.79	0.65
10:Q:177:ALA:O	10:Q:179:GLY:N	2.29	0.65
20:b:16:TRP:CD1	20:b:16:TRP:N	2.65	0.65
22:d:87:ARG:NH1	22:d:87:ARG:CA	2.60	0.65
32:5:90:G:C8	32:5:92:C:C6	2.85	0.65
32:5:456:C:N3	32:5:457:G:N7	2.45	0.65
32:5:671:G:N2	32:5:672:C:C2	2.65	0.65
32:5:977:C:O2	32:5:977:C:H2'	1.94	0.65
32:5:1563:A:OP1	54:S2:678:U:O2'	2.15	0.65
32:5:1816:C:O2	32:5:1816:C:H2'	1.95	0.65
32:5:1848:C:H6	32:5:1848:C:H5''	1.61	0.65
32:5:2480:G:C6	32:5:2481:G:N7	2.65	0.65
32:5:2605:G:N3	32:5:2606:G:C8	2.64	0.65
32:5:3793:U:O2	32:5:3794:C:C6	2.50	0.65
32:5:3805:U:N3	32:5:3806:G:N7	2.45	0.65
32:5:4096:C:C5	32:5:4097:G:C8	2.85	0.65
32:5:4134:C:O2	32:5:4135:G:C8	2.49	0.65
32:5:4539:U:N3	32:5:4540:C:C5	2.64	0.65
32:5:4629:U:C2	32:5:4630:G:C8	2.84	0.65
36:C:111:TRP:HB2	36:C:112:HIS:CD2	2.32	0.65
38:F:148:ASN:HB3	38:F:243:ASN:ND2	2.11	0.65
54:S2:349:A:C4'	61:SI:27:TYR:OH	2.45	0.65
54:S2:598:G:C2	54:S2:639:C:N3	2.65	0.65
54:S2:744:G:H2'	54:S2:745:C:C6	2.31	0.65
54:S2:796:G:C2'	60:SH:111:LYS:HG3	2.26	0.65
54:S2:879:C:C4	54:S2:880:G:C2	2.84	0.65
54:S2:1056:U:H2'	54:S2:1057:C:O4'	1.97	0.65
54:S2:1134:G:C2	54:S2:1135:C:C4	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1181:A:C2	54:S2:1182:A:C2	2.85	0.65
84:Sc:10:LYS:HG2	84:Sc:36:ASP:OD2	1.96	0.65
15:V:82:ILE:HG22	15:V:83:ARG:HG3	1.77	0.65
21:c:30:GLY:O	21:c:93:THR:HB	1.96	0.65
32:5:88:A:C2'	32:5:89:C:O5'	2.45	0.65
32:5:300:A:N3	32:5:301:G:N7	2.44	0.65
32:5:301:G:C6	32:5:302:C:C4	2.85	0.65
32:5:909:A:C2	32:5:910:G:N9	2.64	0.65
32:5:1355:G:C6	32:5:1385:G:C2	2.84	0.65
32:5:1404:G:C2	32:5:1414:C:N3	2.64	0.65
32:5:1598:C:C2	32:5:1599:A:H8	2.14	0.65
32:5:1727:U:C2	32:5:1728:U:C5	2.85	0.65
32:5:2362:U:H2'	32:5:2362:U:O2	1.96	0.65
32:5:2363:A:C2	32:5:2364:G:H1'	2.31	0.65
32:5:2594:C:C2	32:5:2595:C:C5	2.85	0.65
32:5:2736:G:C4	32:5:2737:C:C5	2.85	0.65
32:5:2874:U:H5'	32:5:2874:U:C6	2.32	0.65
32:5:3738:G:N7	32:5:3739:C:C6	2.65	0.65
32:5:3859:G:C4'	40:P:139:TYR:CE1	2.79	0.65
32:5:4257:A:H2'	32:5:4258:C:C5	2.32	0.65
32:5:4335:C:H2'	32:5:4336:A:C1'	2.27	0.65
34:8:122:G:H2'	34:8:123:U:O4'	1.96	0.65
41:W:55:TYR:CD1	41:W:55:TYR:C	2.75	0.65
54:S2:10:G:C2	54:S2:11:A:C8	2.85	0.65
54:S2:355:G:H5''	54:S2:356:C:OP2	1.97	0.65
54:S2:394:G:N3	54:S2:395:G:C8	2.65	0.65
54:S2:429:C:C2	54:S2:430:C:C5	2.85	0.65
54:S2:431:G:C6	54:S2:432:G:N7	2.65	0.65
54:S2:667:U:O4	54:S2:1144:A:N1	2.29	0.65
54:S2:792:C:C4	54:S2:793:G:N7	2.65	0.65
54:S2:858:A:N3	54:S2:859:G:C8	2.64	0.65
54:S2:1151:G:C6	54:S2:1152:U:C5	2.85	0.65
54:S2:1310:U:C5'	86:Sf:143:LYS:HE3	2.27	0.65
54:S2:1407:U:H2'	54:S2:1408:U:C5	2.31	0.65
6:L:23:ALA:HB3	8:N:199:GLN:OE1	1.97	0.65
10:Q:29:VAL:HG13	10:Q:33:ARG:HH22	1.61	0.65
21:c:78:ASN:CG	21:c:79:ILE:N	2.55	0.65
32:5:711:A:C2	32:5:712:C:C4	2.85	0.65
32:5:744:G:H2'	32:5:745:G:H8	1.62	0.65
32:5:1272:C:O2'	32:5:1273:G:C1'	2.45	0.65
32:5:1441:C:C2	32:5:1442:C:C6	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1506:G:O2'	36:C:116:ASN:OD1	2.09	0.65
32:5:1627:G:H3'	32:5:1628:C:H6	1.62	0.65
32:5:1885:G:C4	32:5:1895:G:N2	2.65	0.65
32:5:2108:G:N2	32:5:2125:C:C2	2.64	0.65
32:5:2341:A:C2	32:5:2342:G:C8	2.85	0.65
32:5:2362:U:O4	32:5:3859:G:C2	2.50	0.65
32:5:2424:G:H2'	32:5:2426:U:C5	2.32	0.65
32:5:2745:A:C2	32:5:2746:A:C6	2.84	0.65
32:5:3870:C:H4'	35:B:261:ARG:HE	1.61	0.65
32:5:3880:G:O2'	32:5:3881:G:H8	1.72	0.65
32:5:3905:A:N1	32:5:4449:A:C6	2.64	0.65
45:r:45:HIS:CE1	45:r:103:ARG:NH1	2.64	0.65
48:z:360:MET:CG	48:z:365:GLU:HB3	2.25	0.65
54:S2:29:G:N3	54:S2:30:C:C5	2.65	0.65
54:S2:217:A:C2	54:S2:309:G:O6	2.50	0.65
54:S2:309:G:H2'	54:S2:310:C:H6	1.60	0.65
54:S2:403:G:N1	54:S2:404:G:C5	2.65	0.65
54:S2:457:C:N4	54:S2:458:A:C5	2.65	0.65
54:S2:610:G:C2	54:S2:611:G:C8	2.85	0.65
54:S2:647:U:O2	54:S2:648:A:C8	2.50	0.65
54:S2:795:A:H2	54:S2:796:G:C6	2.15	0.65
54:S2:832:G:H2'	54:S2:833:C:O4'	1.96	0.65
54:S2:948:C:N3	54:S2:949:G:N7	2.44	0.65
54:S2:1371:U:H2'	54:S2:1371:U:O2	1.95	0.65
54:S2:1562:C:C2	54:S2:1563:G:C8	2.84	0.65
54:S2:1616:U:H2'	54:S2:1617:G:O4'	1.96	0.65
61:SI:167:GLN:HG3	61:SI:168:GLN:N	2.11	0.65
84:Sc:33:GLU:OE1	84:Sc:33:GLU:HA	1.97	0.65
3:G:81:ASN:HD21	3:G:238:GLY:CA	2.10	0.65
6:L:59:VAL:HG13	32:5:74:G:H5'	1.79	0.65
11:R:166:THR:HG21	54:S2:872:A:H3'	0.66	0.65
12:S:45:TRP:CE3	12:S:56:LYS:HA	2.30	0.65
15:V:13:LYS:HG2	15:V:128:LEU:HD13	1.78	0.65
21:c:28:VAL:CG1	21:c:33:GLN:HB3	2.26	0.65
32:5:919:C:C4	32:5:920:C:C5	2.85	0.65
32:5:1348:U:O2	32:5:1349:G:C8	2.50	0.65
32:5:1388:A:C6	32:5:1396:G:C2	2.84	0.65
32:5:1542:U:OP1	32:5:2743:A:C8	2.50	0.65
32:5:1812:C:C2	32:5:1813:U:C5	2.85	0.65
32:5:2293:U:O2	32:5:2293:U:H2'	1.96	0.65
32:5:2371:U:O4	32:5:2825:A:H2	1.80	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2423:A:C6	32:5:2424:G:C6	2.85	0.65
32:5:2623:A:C2	32:5:2624:G:C5	2.85	0.65
32:5:3736:A:O2'	32:5:3737:A:C8	2.50	0.65
32:5:4230:C:N3	32:5:4231:C:H5	1.95	0.65
32:5:4385:A:N6	32:5:4531:U:H5'	2.12	0.65
32:5:4620:U:C4	32:5:4621:C:C5	2.84	0.65
50:3:38:C:C5'	54:S2:1058:A:C8	2.78	0.65
54:S2:58:C:C2	54:S2:500:A:C8	2.85	0.65
54:S2:532:C:H4'	54:S2:532:C:OP1	1.96	0.65
54:S2:870:A:C5	54:S2:915:G:C4	2.63	0.65
54:S2:1394:G:N1	54:S2:1395:C:C6	2.65	0.65
54:S2:1411:G:H3'	54:S2:1412:C:H4'	1.76	0.65
54:S2:1420:G:HO2'	81:ST:4:VAL:CA	2.09	0.65
54:S2:1658:G:H1	54:S2:1664:A:H62	1.44	0.65
68:SX:51:VAL:HG13	68:SX:70:VAL:HG13	1.79	0.65
88:S1:32:ARG:HD3	88:S1:35:ASP:OD2	1.97	0.65
1:A:85:GLY:HA2	32:5:4121:G:N2	2.11	0.64
3:G:81:ASN:HD21	3:G:238:GLY:N	1.95	0.64
4:H:61:TRP:CZ2	12:S:152:PHE:HE2	2.15	0.64
5:J:74:VAL:C	5:J:75:ARG:HG2	2.20	0.64
12:S:160:ARG:HB2	32:5:1921:C:O2	1.96	0.64
15:V:99:GLU:HG3	41:W:21:TYR:OH	1.97	0.64
21:c:78:ASN:OD1	21:c:79:ILE:HG13	1.96	0.64
26:h:92:ARG:NH1	34:8:38:U:H3	1.95	0.64
32:5:259:C:H2'	32:5:260:C:O4'	1.98	0.64
32:5:288:G:N2	32:5:289:C:C2	2.65	0.64
32:5:1071:C:O2	32:5:1071:C:H2'	1.96	0.64
32:5:1412:G:C2	32:5:1413:C:C5	2.85	0.64
32:5:1427:A:H3'	32:5:1428:U:C6	2.28	0.64
32:5:1598:C:C6	32:5:2798:A:N7	2.65	0.64
32:5:1617:G:C2	32:5:1618:G:C8	2.85	0.64
32:5:1625:G:C5	32:5:1642:A:N1	2.64	0.64
32:5:1886:G:N2	32:5:1894:C:C4	2.65	0.64
32:5:1926:C:C2	32:5:1927:U:C6	2.84	0.64
32:5:2034:G:C2	32:5:2035:C:N1	2.65	0.64
32:5:2366:A:C2	32:5:3851:U:H1'	2.31	0.64
32:5:2444:U:C5	32:5:2445:C:H5	2.15	0.64
32:5:2773:G:N1	32:5:2774:C:C4	2.65	0.64
32:5:3729:U:C4	32:5:3730:U:C5	2.85	0.64
32:5:4455:G:C6	32:5:4456:C:C5	2.84	0.64
32:5:4997:G:C2	32:5:4998:G:N9	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:8:G:C6	33:7:9:C:C5	2.85	0.64
54:S2:70:G:C4	54:S2:71:G:C8	2.84	0.64
54:S2:167:G:N1	54:S2:168:C:C4	2.65	0.64
54:S2:360:A:N1	54:S2:363:A:N7	2.45	0.64
54:S2:381:C:C5'	54:S2:381:C:C6	2.81	0.64
54:S2:494:C:N4	54:S2:510:G:O4'	2.30	0.64
54:S2:1018:U:O2	54:S2:1018:U:H2'	1.96	0.64
54:S2:1284:A:O2'	76:SM:106:CYS:CA	2.38	0.64
54:S2:1307:U:H1'	86:Sf:133:ALA:HB2	1.78	0.64
54:S2:1641:A:N3	54:S2:1642:U:C6	2.65	0.64
83:SZ:50:PHE:CZ	83:SZ:79:ILE:HB	2.31	0.64
84:Sc:14:VAL:CG2	84:Sc:32:VAL:CA	2.73	0.64
8:N:84:PRO:HA	8:N:87:HIS:CB	2.28	0.64
11:R:109:TYR:OH	32:5:3597:G:OP1	2.11	0.64
23:e:35:TRP:C	23:e:35:TRP:HD1	2.03	0.64
32:5:29:G:C6	32:5:54:G:N3	2.65	0.64
32:5:78:U:O2	32:5:336:A:C6	2.50	0.64
32:5:662:C:O2	32:5:663:G:C8	2.51	0.64
32:5:1190:C:O2	32:5:1191:C:C6	2.50	0.64
32:5:1260:G:C2	32:5:1261:G:C8	2.85	0.64
32:5:1358:G:N1	32:5:1379:C:O2	2.29	0.64
32:5:1516:G:C6	32:5:1518:A:C5	2.85	0.64
32:5:1672:U:O2'	32:5:4304:A:OP1	2.10	0.64
32:5:1742:A:C2	32:5:1743:A:N7	2.64	0.64
32:5:1807:C:C4	32:5:1808:C:C5	2.84	0.64
32:5:2328:G:C6	32:5:2329:U:C4	2.85	0.64
32:5:2341:A:N1	32:5:2342:G:C5	2.65	0.64
32:5:2884:G:O2'	54:S2:1731:A:C1'	2.45	0.64
32:5:3629:A:C6	32:5:3630:A:C8	2.85	0.64
32:5:4199:C:C6	32:5:4199:C:O5'	2.50	0.64
32:5:4761:G:H2'	32:5:4762:A:O4'	1.96	0.64
34:8:61:A:H8	34:8:61:A:O5'	1.80	0.64
34:8:79:G:C4	34:8:80:A:C2	2.86	0.64
47:q:77:LYS:HG3	47:q:198:ILE:HD11	1.79	0.64
48:z:120:LYS:HG2	48:z:279:ILE:HA	1.78	0.64
51:4:58:G:N7	51:4:289:A:C2	2.64	0.64
54:S2:14:C:O2	54:S2:668:A:H2	1.80	0.64
54:S2:579:C:N3	54:S2:580:U:C6	2.65	0.64
54:S2:678:U:C2	54:S2:679:A:C8	2.85	0.64
54:S2:793:G:C6	54:S2:794:A:N9	2.64	0.64
54:S2:857:U:C2	54:S2:858:A:C8	2.85	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1112:U:H2'	54:S2:1113:A:O4'	1.98	0.64
54:S2:1294:G:C2	86:Sf:138:ARG:HG2	2.32	0.64
54:S2:1315:U:N3	54:S2:1316:C:C6	2.65	0.64
54:S2:1542:C:O2'	54:S2:1543:U:C6	2.49	0.64
54:S2:1709:G:C2	54:S2:1710:C:C6	2.86	0.64
54:S2:1725:U:C2	54:S2:1726:G:C8	2.85	0.64
8:N:63:ARG:CZ	8:N:63:ARG:HB2	2.27	0.64
8:N:99:GLN:HG3	8:N:130:PHE:CD2	2.32	0.64
32:5:101:A:N1	32:5:102:G:C5	2.65	0.64
32:5:211:G:N3	32:5:212:A:C8	2.65	0.64
32:5:731:G:N1	32:5:732:A:H1'	2.13	0.64
32:5:753:C:C4	32:5:754:U:C5	2.85	0.64
32:5:1246:G:C5	32:5:1247:U:C5	2.86	0.64
32:5:1250:C:C2	32:5:1261:G:C2	2.86	0.64
32:5:1258:G:C2	32:5:1259:G:C8	2.84	0.64
32:5:1886:G:N1	32:5:1894:C:N4	2.45	0.64
32:5:1949:U:N3	32:5:1950:U:H5	1.96	0.64
32:5:3935:C:C4	32:5:3936:A:N7	2.65	0.64
32:5:4277:G:C2	32:5:4278:C:N1	2.66	0.64
32:5:4548:A:H4'	32:5:4549:G:OP2	1.98	0.64
32:5:4627:U:C2	32:5:4628:U:C6	2.85	0.64
32:5:4735:G:C2	32:5:4736:C:C4	2.85	0.64
32:5:4981:G:C2	32:5:4982:A:N7	2.65	0.64
32:5:5003:U:O2'	32:5:5004:C:O4'	2.12	0.64
33:7:93:G:C5	33:7:94:C:C5	2.85	0.64
38:F:73:MET:HB3	38:F:84:TYR:CE2	2.32	0.64
54:S2:403:G:C2	54:S2:404:G:N9	2.65	0.64
54:S2:609:U:N3	54:S2:610:G:N7	2.45	0.64
54:S2:823:U:N3	69:SY:64:PHE:HD2	1.95	0.64
54:S2:836:G:H2'	54:S2:837:A:H5'	1.77	0.64
54:S2:925:G:N2	54:S2:926:A:N9	2.45	0.64
54:S2:1050:A:C8	54:S2:1051:G:C8	2.84	0.64
54:S2:1111:U:H3	54:S2:1112:U:H5	1.44	0.64
54:S2:1342:U:C4	54:S2:1483:A:C5	2.85	0.64
54:S2:1708:C:N3	54:S2:1709:G:N7	2.45	0.64
54:S2:1812:U:O2	54:S2:1813:A:C8	2.50	0.64
73:SD:152:PHE:N	73:SD:152:PHE:CD1	2.62	0.64
74:SF:122:ARG:O	84:Sc:57:THR:HB	1.97	0.64
74:SF:140:ASP:CG	84:Sc:58:LEU:CD2	2.56	0.64
83:SZ:50:PHE:CG	83:SZ:79:ILE:HD13	2.32	0.64
87:Sg:64:HIS:HB3	87:Sg:65:PHE:CD2	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:282:GLN:HB3	32:5:1177:U:H4'	1.78	0.64
4:H:60:TRP:HE1	12:S:153:PRO:HG3	1.62	0.64
12:S:167:PHE:N	12:S:167:PHE:HD2	1.94	0.64
15:V:97:TYR:CE2	41:W:21:TYR:CE1	2.77	0.64
32:5:433:A:H2	32:5:3867:A:H4'	1.55	0.64
32:5:1240:G:N7	32:5:1271:G:H4'	2.12	0.64
32:5:1278:C:C3'	32:5:1279:A:H4'	2.27	0.64
32:5:2508:U:N3	32:5:2509:C:H5	1.95	0.64
32:5:2532:C:N3	32:5:2533:C:C4	2.65	0.64
32:5:3711:A:C6	32:5:3712:A:N3	2.65	0.64
32:5:3779:A:H2'	32:5:3780:G:O4'	1.97	0.64
32:5:3819:G:C2	32:5:3820:G:C8	2.85	0.64
32:5:3829:G:C2	32:5:3830:A:C8	2.86	0.64
32:5:4283:G:C4	32:5:4284:C:C5	2.85	0.64
32:5:4284:C:O2	32:5:4284:C:H2'	1.96	0.64
32:5:4490:C:C2	32:5:4491:G:C8	2.85	0.64
36:C:245:HIS:ND1	45:r:13:CYS:SG	2.62	0.64
37:E:43:ASN:HB3	37:E:58:MET:HE1	1.79	0.64
51:4:59:A:C2	51:4:60:U:H1'	2.32	0.64
54:S2:90:G:H2'	54:S2:91:A:O4'	1.97	0.64
54:S2:751:G:C2	54:S2:792:C:C2	2.86	0.64
54:S2:841:G:N2	54:S2:842:C:N3	2.46	0.64
54:S2:1018:U:O2	54:S2:1019:C:C5	2.49	0.64
54:S2:1113:A:H2'	54:S2:1114:U:C3'	2.25	0.64
54:S2:1133:A:H2	54:S2:1134:G:C8	2.06	0.64
54:S2:1330:G:N2	54:S2:1333:U:C4	2.65	0.64
54:S2:1772:C:C2	54:S2:1773:C:C5	2.84	0.64
83:SZ:49:LEU:CD2	83:SZ:83:LEU:HD11	2.23	0.64
84:Sc:14:VAL:CG1	84:Sc:31:ARG:CA	2.76	0.64
17:Y:10:ASP:O	17:Y:11:ARG:C	2.41	0.64
32:5:85:G:N3	32:5:97:G:C6	2.65	0.64
32:5:209:U:C4	32:5:211:G:N9	2.66	0.64
32:5:383:A:O2'	32:5:384:A:O5'	2.15	0.64
32:5:916:C:C4	32:5:917:A:C8	2.85	0.64
32:5:1268:G:N1	32:5:1270:A:C8	2.62	0.64
32:5:1490:G:C2	32:5:1491:A:C5	2.86	0.64
32:5:2294:G:H2'	32:5:2295:C:H6	1.63	0.64
32:5:2400:G:C6	32:5:2401:A:N7	2.65	0.64
32:5:2448:G:C6	32:5:2511:A:C5	2.86	0.64
32:5:2584:G:C6	32:5:2585:C:C5	2.86	0.64
32:5:2656:U:H3'	32:5:2657:G:H8	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2657:G:C6	32:5:2658:G:C6	2.85	0.64
32:5:3859:G:O4'	40:P:139:TYR:OH	2.16	0.64
32:5:4416:G:N3	32:5:4417:C:C6	2.65	0.64
32:5:4482:U:O2	32:5:4483:C:C6	2.50	0.64
32:5:4498:U:O2	32:5:4500:U:C5'	2.44	0.64
32:5:4510:A:N6	32:5:4592:C:H4'	2.12	0.64
32:5:4691:A:C6	32:5:4692:A:C8	2.85	0.64
32:5:4734:A:C6	32:5:4735:G:C5	2.86	0.64
32:5:4754:G:C2	32:5:4880:C:N3	2.66	0.64
32:5:4998:G:N1	32:5:4999:G:C5	2.66	0.64
48:z:124:TYR:OH	48:z:282:PHE:N	2.30	0.64
54:S2:84:A:O2'	69:SY:119:GLY:O	2.14	0.64
54:S2:415:A:H2'	54:S2:416:U:O5'	1.97	0.64
54:S2:444:G:H2'	54:S2:444:G:N3	2.13	0.64
54:S2:457:C:C4	54:S2:458:A:C8	2.85	0.64
54:S2:557:U:H2'	54:S2:558:G:O4'	1.96	0.64
54:S2:604:A:C8	62:SJ:20:PHE:CD2	2.86	0.64
54:S2:609:U:O2	54:S2:610:G:C8	2.51	0.64
54:S2:868:G:H21	60:SH:115:LYS:HA	1.60	0.64
54:S2:926:A:C2	54:S2:927:C:C6	2.85	0.64
54:S2:1224:G:N7	54:S2:1225:U:C5	2.65	0.64
54:S2:1291:A:O4'	86:Sf:146:LEU:CB	2.45	0.64
79:SR:18:GLU:CB	79:SR:70:SER:OG	2.29	0.64
3:G:235:ARG:HG3	3:G:235:ARG:HH11	1.62	0.64
8:N:120:TRP:CZ2	8:N:123:GLU:HB3	2.32	0.64
19:a:62:HIS:CD2	19:a:62:HIS:C	2.75	0.64
32:5:27:C:C2	32:5:28:C:C5	2.84	0.64
32:5:102:G:HO2'	32:5:1381:U:HO2'	1.25	0.64
32:5:316:U:O2	32:5:316:U:H2'	1.98	0.64
32:5:1553:A:C2	32:5:1575:A:H1'	2.32	0.64
32:5:2314:G:N2	32:5:2315:G:C4	2.66	0.64
32:5:2480:G:C2	32:5:2481:G:C8	2.85	0.64
32:5:2884:G:O2'	54:S2:1731:A:H1'	1.96	0.64
32:5:3724:A:N6	32:5:3729:U:N3	2.46	0.64
32:5:3754:G:C2	32:5:3755:G:N9	2.66	0.64
32:5:3909:C:C4	32:5:3910:C:H5	2.14	0.64
32:5:4627:U:O2	32:5:4627:U:H2'	1.97	0.64
32:5:4980:C:C5	32:5:4981:G:C4	2.86	0.64
33:7:9:C:O2	33:7:9:C:H2'	1.97	0.64
34:8:131:G:C2	34:8:132:G:N9	2.65	0.64
36:C:78:ARG:HH11	36:C:78:ARG:HG2	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:q:108:PRO:HA	47:q:109:ALA:C	2.23	0.64
50:3:24:A:H2'	50:3:25:C:O4'	1.98	0.64
51:4:284:G:N2	51:4:285:C:C2	2.66	0.64
54:S2:10:G:C8	54:S2:1697:A:N3	2.66	0.64
54:S2:58:C:H1'	54:S2:59:U:C5	2.32	0.64
54:S2:71:G:H3'	54:S2:72:C:C5'	2.27	0.64
54:S2:119:U:N3	54:S2:120:U:C6	2.66	0.64
54:S2:663:C:N3	54:S2:664:A:C8	2.66	0.64
54:S2:961:G:C6	54:S2:962:A:C5	2.85	0.64
54:S2:1077:A:C6	54:S2:1078:C:C5	2.85	0.64
54:S2:1159:G:H2'	54:S2:1160:U:O4'	1.98	0.64
54:S2:1419:C:O4'	81:ST:128:GLN:OE1	2.15	0.64
54:S2:1547:C:H2'	54:S2:1548:G:O4'	1.97	0.64
54:S2:1683:C:O2	54:S2:1683:C:H2'	1.95	0.64
57:SC:74:LYS:HG3	57:SC:269:PHE:CD2	2.32	0.64
74:SF:140:ASP:HB2	84:Sc:56:LEU:CD2	2.28	0.64
19:a:132:ARG:HH11	19:a:132:ARG:CG	2.11	0.64
32:5:913:U:C2	32:5:914:U:C5	2.86	0.64
32:5:1270:A:C5	32:5:1271:G:H1'	2.33	0.64
32:5:1314:C:C2	32:5:1315:C:C5	2.86	0.64
32:5:1696:C:C1'	32:5:1697:G:H5'	2.24	0.64
32:5:1902:G:H2'	32:5:1903:G:O5'	1.97	0.64
32:5:1945:G:O6	32:5:1946:G:N7	2.30	0.64
32:5:1983:A:C8	32:5:1987:C:OP2	2.51	0.64
32:5:2021:G:C5	32:5:2022:C:C5	2.85	0.64
32:5:2076:G:N1	32:5:2077:C:C2	2.65	0.64
32:5:2078:C:O2	32:5:2078:C:C2'	2.43	0.64
32:5:2485:U:C2	32:5:2486:G:N7	2.66	0.64
32:5:3629:A:O2'	54:S2:1721:U:N3	2.22	0.64
32:5:4089:G:C2	32:5:4161:G:C2	2.85	0.64
32:5:4127:A:N7	32:5:4156:G:N2	2.46	0.64
32:5:4222:G:C6	32:5:4223:C:C5	2.86	0.64
32:5:4332:C:O2	32:5:4332:C:C2'	2.45	0.64
32:5:4745:G:HO2'	32:5:4746:C:H6	0.74	0.64
32:5:4976:U:H5'	32:5:4976:U:C6	2.32	0.64
32:5:5047:C:C5	32:5:5050:C:H5''	2.33	0.64
33:7:51:G:C2	33:7:52:C:C5	2.86	0.64
50:3:34:A:C4	54:S2:1701:C:C6	2.85	0.64
54:S2:31:U:O2	54:S2:644:G:N2	2.31	0.64
54:S2:122:G:C5	54:S2:123:G:C8	2.86	0.64
54:S2:297:A:C6	54:S2:298:G:C8	2.86	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:377:G:N1	54:S2:378:U:C5	2.66	0.64
54:S2:452:G:C4	54:S2:453:C:C6	2.84	0.64
54:S2:518:G:C2	54:S2:519:A:N7	2.65	0.64
54:S2:600:G:C5	54:S2:631:U:O4	2.51	0.64
54:S2:604:A:H2'	54:S2:605:A:C8	2.33	0.64
54:S2:622:C:C4	54:S2:623:G:H1'	2.32	0.64
54:S2:806:U:O2	54:S2:807:G:C8	2.51	0.64
54:S2:1308:U:N3	54:S2:1309:C:C4	2.66	0.64
54:S2:1412:C:HO2'	54:S2:1413:G:H8	1.46	0.64
54:S2:1500:G:H4'	73:SD:179:GLN:O	1.98	0.64
54:S2:1561:A:H2'	54:S2:1561:A:N3	2.11	0.64
54:S2:1759:G:C2	54:S2:1774:C:C2	2.86	0.64
55:SA:200:ASP:HA	55:SA:203:PHE:CE1	2.33	0.64
10:Q:34:PHE:HZ	10:Q:38:ARG:NE	1.95	0.64
26:h:94:ARG:NH2	32:5:135:G:N2	2.46	0.64
32:5:436:C:O2	32:5:436:C:H2'	1.96	0.64
32:5:656:C:N3	32:5:657:C:C5	2.65	0.64
32:5:752:G:C5	32:5:753:C:C5	2.86	0.64
32:5:1260:G:N1	32:5:1261:G:C5	2.66	0.64
32:5:1320:U:H2'	32:5:1891:A:H61	1.63	0.64
32:5:1367:C:H1'	32:5:1370:G:C8	2.33	0.64
32:5:1543:G:N1	32:5:1544:G:C5	2.66	0.64
32:5:1598:C:N3	32:5:1599:A:C8	2.66	0.64
32:5:1608:G:O4'	32:5:3828:A:C2	2.51	0.64
32:5:1781:U:N3	32:5:1782:U:C5	2.66	0.64
32:5:2361:G:O2'	32:5:2362:U:OP2	2.15	0.64
32:5:2453:A:C5	32:5:2454:U:C5	2.86	0.64
32:5:2723:U:C2	32:5:2724:G:N7	2.66	0.64
32:5:2734:U:N3	32:5:2735:G:N7	2.46	0.64
32:5:2840:A:C6	32:5:2841:G:N7	2.66	0.64
32:5:4666:G:C6	32:5:4667:C:C4	2.85	0.64
32:5:4677:U:H3	32:5:4713:G:H22	1.45	0.64
33:7:56:G:C2'	33:7:57:C:O5'	2.45	0.64
34:8:108:A:O2'	34:8:110:U:O4	2.15	0.64
47:q:127:ASN:HB3	47:q:153:GLU:HG3	1.80	0.64
54:S2:10:G:C6	54:S2:1697:A:C2	2.86	0.64
54:S2:52:G:C5	54:S2:53:C:C5	2.86	0.64
54:S2:53:C:N3	54:S2:54:A:C8	2.66	0.64
54:S2:381:C:O2'	54:S2:382:C:C5'	2.45	0.64
54:S2:650:A:C2'	54:S2:651:U:O5'	2.45	0.64
54:S2:669:A:H2'	54:S2:670:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:949:G:C5	54:S2:950:C:C5	2.86	0.64
54:S2:1040:G:C6	54:S2:1041:G:C8	2.86	0.64
54:S2:1309:C:O2	54:S2:1309:C:H2'	1.98	0.64
54:S2:1545:A:N6	54:S2:1588:A:C2	2.66	0.64
54:S2:1630:A:C2	54:S2:1631:U:C6	2.86	0.64
54:S2:1643:U:C2	54:S2:1644:C:C4	2.86	0.64
54:S2:1648:G:C8	78:SQ:125:ARG:HB3	2.32	0.64
54:S2:1775:U:C2	54:S2:1776:G:C8	2.86	0.64
57:SC:127:PHE:CE1	57:SC:234:GLY:HA2	2.33	0.64
84:Sc:34:PHE:O	84:Sc:35:MET:HB3	1.97	0.64
32:5:269:G:N1	32:5:270:U:C5	2.62	0.64
32:5:751:G:C2	32:5:752:G:C5	2.84	0.64
32:5:910:G:C5	32:5:911:U:C5	2.86	0.64
32:5:1219:G:C2	32:5:1220:G:C8	2.85	0.64
32:5:1289:C:N3	32:5:1290:G:N7	2.46	0.64
32:5:2301:G:C6	32:5:2302:C:C5	2.86	0.64
32:5:2326:G:N3	32:5:2327:G:C8	2.66	0.64
32:5:2468:U:H2'	32:5:2506:G:C6	2.32	0.64
32:5:2791:C:H2'	32:5:2791:C:O2	1.97	0.64
32:5:3674:G:N1	32:5:3675:G:C5	2.66	0.64
32:5:4176:C:C2	32:5:4177:C:C5	2.86	0.64
32:5:4241:C:O2	32:5:4241:C:C2'	2.44	0.64
32:5:4911:A:H5''	35:B:100:ARG:HD3	1.78	0.64
32:5:4981:G:C2	32:5:4982:A:C8	2.86	0.64
47:q:32:ALA:CB	47:q:187:LEU:HD21	2.27	0.64
54:S2:119:U:O2	54:S2:120:U:C6	2.51	0.64
54:S2:546:G:H2'	54:S2:547:G:O4'	1.98	0.64
54:S2:851:C:O2'	54:S2:852:G:N2	2.31	0.64
54:S2:1133:A:C2	54:S2:1134:G:H8	2.01	0.64
54:S2:1432:U:H2'	54:S2:1432:U:O2	1.97	0.64
62:SJ:94:LEU:HD12	62:SJ:97:ILE:HD12	1.78	0.64
65:SO:146:ARG:C	65:SO:148:GLY:N	2.52	0.64
68:SX:134:TYR:HE1	72:Se:13:ARG:NH2	1.95	0.64
78:SQ:71:ARG:HH11	78:SQ:71:ARG:HG2	1.62	0.64
8:N:120:TRP:HZ2	8:N:123:GLU:HB3	1.62	0.64
11:R:124:TYR:OH	32:5:2665:U:C4	2.48	0.64
32:5:486:C:O2	32:5:487:G:C8	2.51	0.64
32:5:662:C:O2	32:5:663:G:N7	2.31	0.64
32:5:731:G:C6	32:5:732:A:N9	2.66	0.64
32:5:1481:C:O2'	32:5:1482:G:OP2	2.12	0.64
32:5:1666:C:H2'	32:5:1667:G:O4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1771:U:N3	32:5:1772:C:C5	2.66	0.64
32:5:2603:C:C4	32:5:2604:C:C5	2.86	0.64
32:5:2605:G:N1	32:5:2606:G:C5	2.66	0.64
32:5:2607:C:O2	32:5:2608:G:C8	2.51	0.64
32:5:2634:C:C2	32:5:2635:U:C6	2.86	0.64
32:5:2773:G:N2	32:5:2774:C:C2	2.66	0.64
32:5:3663:A:H4'	32:5:3664:G:OP2	1.96	0.64
32:5:3857:G:C5	32:5:3858:C:C6	2.87	0.64
32:5:4224:A:C6	32:5:4225:G:C8	2.85	0.64
32:5:4230:C:O2	32:5:4230:C:H2'	1.98	0.64
32:5:5028:G:C4	32:5:5029:C:C5	2.86	0.64
33:7:11:A:H4'	33:7:13:A:C8	2.33	0.64
33:7:17:C:C2	33:7:18:C:C6	2.86	0.64
51:4:2:C:C2	51:4:3:C:C5	2.86	0.64
51:4:51:G:C2	51:4:296:C:C2	2.86	0.64
51:4:147:G:N2	51:4:150:G:OP2	2.31	0.64
54:S2:44:U:O2'	54:S2:45:A:H2'	1.97	0.64
54:S2:309:G:OP2	54:S2:309:G:H4'	1.96	0.64
54:S2:447:A:C4	54:S2:449:A:H1'	2.33	0.64
54:S2:617:G:C6	54:S2:618:C:C6	2.85	0.64
54:S2:1135:C:N3	54:S2:1136:U:C4	2.66	0.64
54:S2:1204:A:H2'	54:S2:1205:C:C2	2.30	0.64
54:S2:1215:C:N4	54:S2:1646:C:N4	2.45	0.64
54:S2:1271:C:C4	54:S2:1272:C:C5	2.86	0.64
54:S2:1292:C:N3	86:Sf:150:PHE:HB2	2.13	0.64
54:S2:1302:G:C5	86:Sf:140:TYR:CZ	2.86	0.64
54:S2:1310:U:O2	54:S2:1310:U:H2'	1.97	0.64
54:S2:1571:G:C6	54:S2:1572:C:C4	2.86	0.64
54:S2:1842:C:H2'	54:S2:1843:G:O5'	1.98	0.64
64:SN:33:VAL:HG21	64:SN:66:VAL:HG11	1.80	0.64
74:SF:198:ARG:HD3	74:SF:198:ARG:C	2.23	0.64
32:5:27:C:O2	32:5:28:C:C5	2.51	0.63
32:5:99:A:C6	32:5:100:C:N3	2.66	0.63
32:5:120:A:O4'	32:5:121:A:N1	2.31	0.63
32:5:211:G:N2	32:5:212:A:C8	2.66	0.63
32:5:237:G:O2'	32:5:238:C:P	2.56	0.63
32:5:1091:C:C2	32:5:1092:G:C8	2.86	0.63
32:5:1183:C:C2	32:5:1184:A:C8	2.86	0.63
32:5:1490:G:N1	32:5:1491:A:C5	2.66	0.63
32:5:1519:C:O2'	32:5:1520:C:O5'	2.15	0.63
32:5:1554:A:C5	32:5:1555:G:C8	2.86	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1684:A:C2	32:5:1685:G:C8	2.86	0.63
32:5:1912:G:C2	32:5:1913:C:C4	2.86	0.63
32:5:2090:U:P	32:5:2090:U:O4'	2.56	0.63
32:5:2108:G:C6	32:5:2125:C:N4	2.67	0.63
32:5:2394:G:O6	32:5:2819:U:P	2.56	0.63
32:5:2646:C:O2	32:5:2646:C:H2'	1.97	0.63
32:5:2650:G:N2	32:5:2684:C:C2	2.66	0.63
32:5:4198:G:N2	50:3:74:C:C4	2.66	0.63
32:5:4619:U:C2	32:5:4620:U:C6	2.86	0.63
34:8:70:G:C6	34:8:87:G:C2	2.86	0.63
39:I:92:HIS:O	39:I:94:PHE:HB2	1.99	0.63
54:S2:85:A:N3	54:S2:86:C:C6	2.66	0.63
54:S2:447:A:N7	54:S2:449:A:C8	2.66	0.63
54:S2:527:C:H2'	54:S2:528:A:C8	2.33	0.63
54:S2:623:G:C6	54:S2:624:C:C5	2.85	0.63
54:S2:925:G:N3	54:S2:925:G:H2'	2.12	0.63
54:S2:950:C:O2	54:S2:950:C:H2'	1.97	0.63
54:S2:1432:U:N3	54:S2:1433:C:C5	2.66	0.63
54:S2:1561:A:C6	54:S2:1562:C:C6	2.86	0.63
61:SI:83:TYR:CD1	61:SI:83:TYR:C	2.75	0.63
1:A:34:PHE:CE1	32:5:4087:G:C8	2.87	0.63
12:S:95:ARG:NH2	32:5:1951:G:O2'	2.32	0.63
32:5:195:C:N3	32:5:196:C:C5	2.66	0.63
32:5:659:G:C6	32:5:660:A:N7	2.66	0.63
32:5:1085:C:C4	32:5:1086:C:C5	2.87	0.63
32:5:1263:A:C5	32:5:1264:C:C5	2.86	0.63
32:5:1287:G:N2	32:5:1289:C:C6	2.66	0.63
32:5:1334:A:C2	32:5:1335:G:C8	2.87	0.63
32:5:1341:U:C2	32:5:1342:A:C8	2.86	0.63
32:5:1458:C:H2'	32:5:1458:C:O2	1.98	0.63
32:5:1465:G:C5	32:5:1466:G:C8	2.86	0.63
32:5:1662:C:N3	32:5:1663:C:C5	2.65	0.63
32:5:1846:G:H2'	32:5:1847:C:C6	2.32	0.63
32:5:1881:C:O4'	32:5:2281:U:C6	2.52	0.63
32:5:2439:G:C2	32:5:2440:U:C6	2.85	0.63
32:5:4079:C:C2	32:5:4080:C:C6	2.85	0.63
32:5:4093:G:C3'	32:5:4094:G:H5'	2.28	0.63
32:5:4229:U:H2'	32:5:4229:U:O2	1.98	0.63
32:5:4941:G:C2	32:5:4942:C:C4	2.85	0.63
32:5:4998:G:C2	32:5:4999:G:N9	2.66	0.63
34:8:70:G:C2	34:8:87:G:N2	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:80:A:C6	34:8:81:C:C5	2.86	0.63
38:F:120:PHE:HZ	38:F:217:SER:HA	1.63	0.63
44:p:68:ALA:HB1	44:p:69:TRP:CZ3	2.33	0.63
54:S2:842:C:O2	54:S2:843:C:C6	2.52	0.63
54:S2:946:U:O2'	54:S2:1046:U:OP1	2.10	0.63
54:S2:996:A:N6	64:SN:113:PHE:CZ	2.65	0.63
54:S2:1293:A:N3	86:Sf:152:LYS:N	2.45	0.63
54:S2:1303:C:C6	54:S2:1304:U:C6	2.85	0.63
54:S2:1510:G:C2	54:S2:1511:U:C6	2.86	0.63
54:S2:1604:G:H2'	54:S2:1605:G:O4'	1.98	0.63
56:SB:137:LEU:HD11	56:SB:176:VAL:HG21	1.80	0.63
59:SG:209:TYR:HE2	59:SG:213:LEU:HD23	1.63	0.63
73:SD:115:VAL:HG21	73:SD:142:LEU:HD11	1.79	0.63
18:Z:38:TYR:OH	18:Z:76:ASN:N	2.31	0.63
23:e:35:TRP:HE1	23:e:37:LYS:HA	1.62	0.63
32:5:70:A:H4'	32:5:71:C:H5'	1.80	0.63
32:5:145:G:C6	32:5:146:G:N7	2.67	0.63
32:5:345:C:O2	32:5:346:G:C8	2.51	0.63
32:5:375:G:OP2	42:j:52:LYS:NZ	2.31	0.63
32:5:457:G:C2	32:5:458:C:C5	2.86	0.63
32:5:482:G:H2'	32:5:483:G:C1'	2.29	0.63
32:5:982:U:C6	37:E:67:ARG:HG3	2.34	0.63
32:5:1542:U:H5''	32:5:2743:A:N7	2.13	0.63
32:5:1563:A:N6	54:S2:677:G:H1'	2.13	0.63
32:5:1843:A:N1	32:5:1844:G:C5	2.66	0.63
32:5:1865:G:H22	32:5:1867:A:H3'	1.64	0.63
32:5:1933:G:H2'	32:5:1934:A:O4'	1.99	0.63
32:5:2422:C:H2'	32:5:2422:C:O2	1.98	0.63
32:5:2468:U:N3	32:5:2473:A:C6	2.66	0.63
32:5:2496:G:C6	32:5:2497:C:C4	2.86	0.63
32:5:2612:G:C5	32:5:2613:C:C5	2.87	0.63
32:5:2658:G:H22	32:5:2675:G:H2'	1.63	0.63
32:5:3729:U:H2'	32:5:3730:U:O4'	1.99	0.63
32:5:4462:C:C2	32:5:4515:G:N2	2.67	0.63
32:5:4766:C:H2'	32:5:4767:C:O4'	1.99	0.63
32:5:4904:G:N2	32:5:4905:C:C2	2.67	0.63
32:5:5050:C:C4	32:5:5051:C:C5	2.87	0.63
47:q:188:VAL:CG1	47:q:189:ILE:H	2.06	0.63
48:z:194:ARG:HB2	48:z:195:HIS:CD2	2.34	0.63
48:z:341:LYS:O	48:z:345:PHE:CD1	2.52	0.63
54:S2:309:G:C6	54:S2:310:C:N4	2.66	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:377:G:C2	54:S2:378:U:C5	2.86	0.63
54:S2:422:U:O2'	54:S2:423:U:O4'	2.08	0.63
54:S2:561:A:O2'	62:SJ:134:HIS:NE2	2.31	0.63
54:S2:1151:G:N1	54:S2:1152:U:C5	2.67	0.63
54:S2:1293:A:H62	86:Sf:139:HIS:CB	2.12	0.63
54:S2:1754:G:C6	54:S2:1755:C:C4	2.87	0.63
56:SB:62:LEU:HD13	56:SB:65:ARG:HH21	1.62	0.63
64:SN:69:ASN:H	64:SN:69:ASN:HD22	1.44	0.63
6:L:4:SER:C	6:L:5:ARG:HG3	2.22	0.63
18:Z:127:ASN:HD22	18:Z:127:ASN:N	1.96	0.63
24:f:38:GLU:HG3	37:E:280:HIS:CD2	2.32	0.63
31:o:26:TYR:C	31:o:26:TYR:HD1	2.06	0.63
32:5:60:G:C5	32:5:61:A:N7	2.66	0.63
32:5:70:A:H1'	32:5:71:C:N4	2.12	0.63
32:5:138:G:C2'	32:5:139:G:H5'	2.28	0.63
32:5:1188:C:O2	32:5:1189:G:C8	2.52	0.63
32:5:1214:C:C2'	32:5:2114:G:C2	2.81	0.63
32:5:1313:C:C2	32:5:1323:A:C8	2.86	0.63
32:5:1473:U:C4	32:5:1474:C:C5	2.86	0.63
32:5:1491:A:N3	32:5:1492:G:C8	2.66	0.63
32:5:1662:C:C2	32:5:1663:C:C6	2.86	0.63
32:5:1843:A:C2	32:5:1844:G:N9	2.66	0.63
32:5:2606:G:C2	32:5:2607:C:C4	2.87	0.63
32:5:2829:U:N3	32:5:2830:G:C8	2.66	0.63
32:5:3642:A:HO2'	42:j:2:THR:N	1.97	0.63
32:5:3723:A:H2'	32:5:3724:A:C8	2.30	0.63
32:5:4152:G:N2	32:5:4153:C:C2	2.66	0.63
32:5:4368:G:N1	32:5:4369:A:C8	2.66	0.63
32:5:4552:U:C2	32:5:4553:A:C8	2.86	0.63
37:E:52:ARG:NH2	37:E:53:TYR:CE1	2.66	0.63
46:K:142:ASN:OD1	46:K:143:VAL:N	2.31	0.63
48:z:17:LEU:HD11	48:z:31:MET:HE2	1.80	0.63
48:z:270:ILE:HG22	48:z:285:PHE:CZ	2.33	0.63
48:z:410:SER:HA	51:4:194:G:N3	2.13	0.63
51:4:22:C:O2'	51:4:58:G:N2	2.30	0.63
54:S2:532:C:O2	54:S2:533:A:C8	2.52	0.63
54:S2:832:G:C6	54:S2:833:C:C4	2.87	0.63
54:S2:847:A:C5	54:S2:848:U:C6	2.86	0.63
54:S2:926:A:C5	54:S2:927:C:C5	2.86	0.63
54:S2:1284:A:C2'	76:SM:106:CYS:HA	2.28	0.63
54:S2:1414:A:C2	54:S2:1415:C:C6	2.87	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1419:C:C2	54:S2:1429:G:N2	2.67	0.63
54:S2:1526:G:C6	54:S2:1527:C:C5	2.86	0.63
54:S2:1590:C:C4	54:S2:1591:C:H1'	2.33	0.63
55:SA:39:TYR:HE2	79:SR:105:MET:CA	2.12	0.63
63:SL:39:ASN:C	63:SL:39:ASN:OD1	2.40	0.63
64:SN:101:HIS:C	64:SN:101:HIS:CD2	2.76	0.63
1:A:186:TYR:N	1:A:196:TRP:CZ3	2.67	0.63
8:N:26:ARG:O	8:N:30:TYR:HB2	1.97	0.63
11:R:172:ARG:HD2	54:S2:909:G:P	2.39	0.63
32:5:459:C:N3	32:5:460:C:C5	2.66	0.63
32:5:673:C:C2	32:5:674:G:N7	2.67	0.63
32:5:722:G:H21	36:C:343:GLN:NE2	1.96	0.63
32:5:755:C:N3	32:5:756:G:N7	2.46	0.63
32:5:1070:G:N2	32:5:1071:C:H1'	2.14	0.63
32:5:1243:C:O2	32:5:1269:G:N3	2.32	0.63
32:5:1567:U:N3	32:5:1568:C:C5	2.66	0.63
32:5:1583:A:C1'	32:5:2396:A:H62	2.08	0.63
32:5:2567:G:C4	32:5:2568:C:C6	2.87	0.63
32:5:2685:C:H2'	32:5:2686:G:O4'	1.98	0.63
32:5:2738:C:N3	32:5:2741:U:C4	2.67	0.63
32:5:2746:A:H2'	32:5:2747:U:O4'	1.98	0.63
32:5:2770:C:N3	32:5:2771:G:C8	2.66	0.63
32:5:3621:A:H1'	32:5:4655:A:H2	1.64	0.63
32:5:3724:A:N6	32:5:3725:G:C6	2.67	0.63
32:5:4216:G:H2'	32:5:4217:G:H5'	1.81	0.63
32:5:4737:G:C6	32:5:4738:C:N4	2.66	0.63
34:8:39:G:C2	34:8:104:A:C2	2.86	0.63
34:8:101:C:O2	34:8:101:C:H2'	1.98	0.63
48:z:414:THR:H	52:9:74:ARG:CG	2.12	0.63
51:4:57:G:N1	51:4:289:A:C2	2.66	0.63
51:4:57:G:N1	51:4:290:C:C2	2.66	0.63
54:S2:27:A:C2	54:S2:28:U:N1	2.66	0.63
54:S2:590:A:O2'	54:S2:591:U:O5'	2.16	0.63
54:S2:672:A:O2'	54:S2:674:C:OP2	2.16	0.63
54:S2:832:G:C6	54:S2:833:C:C6	2.87	0.63
54:S2:962:A:C6	54:S2:963:A:N7	2.67	0.63
54:S2:1290:G:C2	86:Sf:146:LEU:HB2	2.33	0.63
54:S2:1316:C:O2	54:S2:1317:C:C5	2.50	0.63
54:S2:1409:A:C2	54:S2:1438:A:C2	2.86	0.63
57:SC:60:TRP:CZ2	57:SC:92:GLU:HB2	2.32	0.63
69:SY:20:ARG:HB3	69:SY:76:TYR:CD1	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:Sa:51:ARG:NH2	70:Sa:52:ASP:OD1	2.31	0.63
84:Sc:31:ARG:HH11	84:Sc:31:ARG:CG	2.11	0.63
1:A:27:ALA:O	1:A:128:ARG:NH2	2.31	0.63
8:N:162:ARG:NH2	32:5:61:A:OP1	2.31	0.63
20:b:36:ASP:HB3	32:5:4314:C:O2'	1.97	0.63
32:5:65:A:H2	32:5:76:A:H4'	1.62	0.63
32:5:85:G:C2	32:5:97:G:N7	2.66	0.63
32:5:158:A:C5	32:5:277:G:C6	2.86	0.63
32:5:168:C:C2	32:5:268:G:C2	2.86	0.63
32:5:235:A:N6	32:5:238:C:C4	2.67	0.63
32:5:731:G:O6	32:5:732:A:C4	2.51	0.63
32:5:1215:C:N3	32:5:1216:C:C6	2.66	0.63
32:5:1263:A:C4	32:5:1264:C:C6	2.87	0.63
32:5:1266:G:N2	32:5:1268:G:C6	2.67	0.63
32:5:1392:A:N3	32:5:1393:G:C8	2.66	0.63
32:5:1668:A:C8	32:5:1881:C:N4	2.67	0.63
32:5:1691:G:C5	32:5:1692:C:C5	2.86	0.63
32:5:1691:G:C5	32:5:1692:C:C6	2.86	0.63
32:5:2592:U:C5	32:5:2593:C:C6	2.86	0.63
32:5:2645:G:N2	32:5:2646:C:C2	2.66	0.63
32:5:2861:C:O2	32:5:3626:G:H4'	1.98	0.63
32:5:3688:U:O2	32:5:3689:G:C8	2.51	0.63
32:5:3737:A:H2'	32:5:3738:G:C1'	2.29	0.63
32:5:3859:G:C4'	40:P:139:TYR:OH	2.46	0.63
33:7:42:A:N3	33:7:43:U:C6	2.67	0.63
38:F:96:ARG:O	38:F:120:PHE:HA	1.98	0.63
39:I:76:MET:HE1	39:I:140:THR:HG21	1.79	0.63
48:z:140:PHE:CZ	48:z:194:ARG:NE	2.62	0.63
48:z:160:TYR:CD2	48:z:179:PHE:HZ	2.16	0.63
54:S2:54:A:C2	54:S2:451:G:C2	2.86	0.63
54:S2:63:U:H5'	54:S2:64:A:OP2	1.98	0.63
54:S2:636:C:N4	54:S2:637:U:O4	2.31	0.63
54:S2:794:A:C5	54:S2:795:A:N7	2.67	0.63
54:S2:805:U:C2	54:S2:806:U:C5	2.86	0.63
54:S2:1149:A:C4	54:S2:1151:G:C8	2.86	0.63
54:S2:1294:G:C2	54:S2:1295:A:N7	2.65	0.63
54:S2:1568:C:OP1	81:ST:96:SER:OG	2.13	0.63
54:S2:1571:G:C5	54:S2:1572:C:C5	2.87	0.63
54:S2:1595:U:H3	54:S2:1596:U:H6	1.46	0.63
54:S2:1647:A:N6	54:S2:1675:A:C2	2.67	0.63
83:SZ:51:ASP:OD2	83:SZ:54:THR:HG23	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:91:LYS:HA	32:5:432:U:O4	1.99	0.63
23:e:126:ASN:C	23:e:126:ASN:HD22	2.07	0.63
32:5:89:C:O2'	32:5:90:G:H5'	1.98	0.63
32:5:225:G:O4'	32:5:243:A:H1'	1.99	0.63
32:5:1491:A:C4	32:5:1492:G:C8	2.87	0.63
32:5:1617:G:C2	32:5:1618:G:N9	2.66	0.63
32:5:2080:U:N3	32:5:2081:C:N4	2.47	0.63
32:5:2368:A:C6	32:5:2788:U:C4	2.87	0.63
32:5:2529:A:N7	32:5:2532:C:C5	2.67	0.63
32:5:2843:U:N3	32:5:2844:A:C8	2.51	0.63
32:5:4258:C:O2	32:5:4259:C:C6	2.52	0.63
32:5:4480:A:N1	32:5:4481:U:C6	2.67	0.63
32:5:4547:C:C2	32:5:4549:G:N7	2.67	0.63
32:5:4737:G:C4	32:5:4738:C:C5	2.86	0.63
33:7:8:G:C6	33:7:9:C:C4	2.86	0.63
33:7:8:G:C4	33:7:9:C:C6	2.87	0.63
51:4:33:G:N2	51:4:34:C:C2	2.67	0.63
54:S2:26:U:O2	54:S2:27:A:C8	2.48	0.63
54:S2:26:U:C2	54:S2:27:A:C8	2.87	0.63
54:S2:139:C:O2'	54:S2:140:C:O3'	2.17	0.63
54:S2:164:A:H2'	54:S2:165:G:N3	2.13	0.63
54:S2:552:G:C4	54:S2:553:U:C5	2.87	0.63
54:S2:632:C:C2	54:S2:633:C:C5	2.87	0.63
54:S2:672:A:C2	54:S2:1162:C:O2'	2.45	0.63
54:S2:1085:C:C4	54:S2:1087:A:C1'	2.82	0.63
54:S2:1605:G:H3'	54:S2:1606:G:O4'	1.98	0.63
63:SL:35:ARG:NH2	63:SL:55:TYR:O	2.31	0.63
70:Sa:2:THR:O	70:Sa:2:THR:OG1	2.15	0.63
80:SS:86:ARG:HA	80:SS:86:ARG:NE	2.11	0.63
12:S:94:TYR:OH	12:S:96:GLU:CG	2.45	0.63
12:S:99:ASP:CG	12:S:100:LEU:N	2.57	0.63
32:5:209:U:O4	32:5:211:G:H1'	1.98	0.63
32:5:293:G:O2'	32:5:294:G:H5''	1.97	0.63
32:5:911:U:C2	32:5:912:G:C8	2.87	0.63
32:5:1542:U:O2	32:5:1542:U:H2'	1.99	0.63
32:5:1570:G:C6	32:5:1571:G:C8	2.87	0.63
32:5:1759:G:C6	32:5:1760:G:N7	2.67	0.63
32:5:1910:G:N1	32:5:1911:C:C4	2.67	0.63
32:5:2277:C:O2	32:5:2277:C:C2'	2.46	0.63
32:5:2690:C:N3	32:5:2691:U:C6	2.67	0.63
32:5:2826:U:C1'	32:5:2827:G:N1	2.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3731:C:O2	32:5:3731:C:H2'	1.97	0.63
32:5:3785:A:N1	32:5:4536:C:H1'	2.12	0.63
32:5:4333:C:C2'	32:5:4334:U:O5'	2.47	0.63
32:5:4453:C:C2	32:5:4529:G:C2	2.86	0.63
32:5:4479:A:C2	32:5:4480:A:H1'	2.33	0.63
32:5:4744:A:N1	32:5:4745:G:C5	2.66	0.63
32:5:5062:G:C2	32:5:5063:G:N7	2.66	0.63
34:8:34:U:O2	42:j:74:PHE:CG	2.52	0.63
51:4:143:C:H42	51:4:154:G:H1	1.46	0.63
54:S2:52:G:C4	54:S2:53:C:C6	2.86	0.63
54:S2:145:G:H2'	54:S2:146:G:O4'	1.98	0.63
54:S2:574:A:O2'	54:S2:575:A:O5'	2.16	0.63
54:S2:1308:U:O2	54:S2:1309:C:C6	2.52	0.63
54:S2:1540:G:C2	54:S2:1541:G:N7	2.66	0.63
55:SA:32:PHE:C	55:SA:32:PHE:CD1	2.77	0.63
55:SA:200:ASP:OD2	79:SR:86:PRO:O	2.17	0.63
1:A:40:TYR:CE1	32:5:4117:U:O2	2.52	0.63
12:S:176:PHE:CD2	32:5:4871:C:C4	2.87	0.63
18:Z:50:PRO:HG2	18:Z:122:TYR:CE2	2.33	0.63
32:5:330:G:N1	32:5:331:G:N7	2.47	0.63
32:5:424:U:O2	32:5:424:U:H2'	1.97	0.63
32:5:493:G:C6	32:5:494:U:C5	2.87	0.63
32:5:1279:A:C2	32:5:1280:C:N3	2.67	0.63
32:5:1291:G:C2	32:5:1292:C:C5	2.87	0.63
32:5:1545:G:C2	32:5:1546:C:N3	2.67	0.63
32:5:1550:G:C2	32:5:1579:C:C2	2.87	0.63
32:5:1556:C:N3	32:5:1557:C:H5	1.86	0.63
32:5:1797:G:C2	32:5:1798:G:N7	2.66	0.63
32:5:2021:G:C6	32:5:2022:C:C4	2.87	0.63
32:5:2390:G:C6	32:5:2391:G:C8	2.87	0.63
32:5:2457:G:H2'	32:5:2458:C:O4'	1.99	0.63
32:5:2561:C:C2	32:5:2562:G:C8	2.86	0.63
32:5:3763:A:H2'	32:5:3764:U:O4'	1.99	0.63
32:5:3774:A:OP1	32:5:3774:A:H8	1.81	0.63
32:5:3907:G:C1'	32:5:4449:A:H1'	2.29	0.63
32:5:3909:C:C1'	49:2:128:VAL:HA	2.29	0.63
32:5:3914:U:C2	32:5:4378:A:N6	2.67	0.63
32:5:4079:C:O2	32:5:4079:C:H2'	1.98	0.63
32:5:4093:G:H3'	32:5:4094:G:H5'	1.80	0.63
32:5:4192:A:C2	32:5:4204:C:N3	2.67	0.63
32:5:4369:A:C6	32:5:4370:G:N7	2.67	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4996:C:C4	32:5:4997:G:C8	2.87	0.63
32:5:5047:C:O2	32:5:5048:A:C6	2.51	0.63
34:8:132:G:N2	34:8:133:G:C4	2.67	0.63
38:F:120:PHE:CZ	38:F:217:SER:HA	2.34	0.63
48:z:381:SER:CB	51:4:207:C:O2	2.46	0.63
54:S2:105:U:O2	54:S2:105:U:H2'	1.97	0.63
54:S2:379:C:N3	54:S2:380:G:C5	2.67	0.63
54:S2:403:G:N1	54:S2:404:G:C8	2.67	0.63
54:S2:458:A:C2	54:S2:459:C:H1'	2.34	0.63
54:S2:475:C:N3	54:S2:476:A:N7	2.47	0.63
54:S2:493:A:C2	54:S2:494:C:H5	2.14	0.63
54:S2:809:A:H2'	54:S2:810:A:O4'	1.99	0.63
54:S2:1126:G:N2	54:S2:1127:C:C2	2.66	0.63
54:S2:1307:U:C2	54:S2:1308:U:C1'	2.82	0.63
54:S2:1466:G:N2	54:S2:1467:C:C2	2.67	0.63
54:S2:1527:C:N4	54:S2:1528:G:C5	2.67	0.63
54:S2:1538:C:C2	54:S2:1539:U:C5	2.87	0.63
54:S2:1551:U:H2'	54:S2:1552:G:N9	2.14	0.63
54:S2:1593:C:N3	54:S2:1594:A:C8	2.67	0.63
59:SG:223:LYS:O	59:SG:227:GLN:N	2.32	0.63
61:SI:114:GLU:O	61:SI:136:ILE:HG21	1.99	0.63
76:SM:19:GLN:HG2	76:SM:88:TRP:CB	2.28	0.63
82:SU:63:ILE:HG21	85:Sd:43:PHE:HE2	1.63	0.63
88:S1:5:GLN:O	88:S1:6:THR:CB	2.47	0.63
32:5:977:C:N3	32:5:978:G:C5	2.66	0.62
32:5:1070:G:C5	32:5:1071:C:C5	2.87	0.62
32:5:1252:C:C2	32:5:1259:G:C2	2.87	0.62
32:5:1354:A:C4	32:5:1503:A:H2	2.17	0.62
32:5:1392:A:N1	32:5:1393:G:C6	2.67	0.62
32:5:1628:C:C2	32:5:1629:G:H8	2.04	0.62
32:5:1987:C:O2	32:5:1987:C:H2'	1.99	0.62
32:5:2261:G:O2'	32:5:2262:G:O5'	2.17	0.62
32:5:2289:C:O2	32:5:2289:C:H2'	1.98	0.62
32:5:2532:C:N3	32:5:2533:C:N4	2.46	0.62
32:5:2857:A:O2'	32:5:2858:A:P	2.55	0.62
32:5:3605:C:C2	32:5:3606:U:C6	2.87	0.62
32:5:3813:A:C2	32:5:4539:U:O4'	2.52	0.62
32:5:4069:U:O2	32:5:4070:U:C5	2.52	0.62
32:5:4077:A:N7	32:5:4078:C:C6	2.66	0.62
32:5:4243:C:H2'	32:5:4243:C:O2	1.97	0.62
32:5:4737:G:C5	32:5:4963:G:N2	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:194:ARG:HD2	48:z:195:HIS:CE1	2.34	0.62
48:z:344:PRO:O	48:z:346:SER:HB3	1.99	0.62
48:z:381:SER:CB	51:4:207:C:HI'	2.29	0.62
54:S2:29:G:N2	54:S2:30:C:C2	2.68	0.62
54:S2:121:U:O2	54:S2:122:G:C8	2.52	0.62
54:S2:309:G:N3	54:S2:310:C:C6	2.67	0.62
54:S2:570:C:N3	54:S2:571:U:C5	2.66	0.62
54:S2:668:A:OP2	90:S2:1923:MG:MG	1.40	0.62
54:S2:1114:U:C4	54:S2:1119:A:C6	2.87	0.62
54:S2:1135:C:N3	54:S2:1136:U:C5	2.66	0.62
54:S2:1144:A:HI'	54:S2:1199:A:O2'	1.99	0.62
54:S2:1287:A:C2	54:S2:1313:A:C4	2.87	0.62
54:S2:1427:C:C2	54:S2:1428:G:N7	2.67	0.62
54:S2:1755:C:N3	54:S2:1756:C:C6	2.66	0.62
55:SA:30:LEU:HD22	55:SA:47:TYR:CE2	2.33	0.62
58:SE:108:ARG:O	58:SE:108:ARG:HG3	1.98	0.62
58:SE:161:GLN:HB3	58:SE:170:THR:O	1.99	0.62
64:SN:128:TYR:C	64:SN:128:TYR:CD1	2.77	0.62
82:SU:61:LEU:HD22	85:Sd:34:TYR:OH	1.99	0.62
10:Q:37:ARG:HG2	10:Q:37:ARG:HH21	1.63	0.62
11:R:124:TYR:CE1	32:5:2665:U:O4	2.52	0.62
12:S:176:PHE:CE2	32:5:4871:C:C5	2.87	0.62
32:5:114:G:C2'	32:5:115:C:H5'	2.29	0.62
32:5:181:C:C2	32:5:256:G:C2	2.87	0.62
32:5:246:G:N1	32:5:247:G:N7	2.47	0.62
32:5:494:U:C2	32:5:495:C:C6	2.87	0.62
32:5:1268:G:C2	32:5:1270:A:N7	2.65	0.62
32:5:1277:G:C6	32:5:1278:C:C5	2.87	0.62
32:5:1286:C:C2	32:5:1287:G:C8	2.86	0.62
32:5:1394:G:HO2'	32:5:1395:U:C5'	2.12	0.62
32:5:1529:G:H21	42:j:49:TRP:HZ2	1.47	0.62
32:5:1669:A:H4'	32:5:1685:G:N2	2.14	0.62
32:5:1900:C:C2	32:5:1901:C:C5	2.88	0.62
32:5:2284:G:H2'	32:5:2285:A:O4'	1.98	0.62
32:5:2366:A:H2	32:5:3851:U:C1'	2.11	0.62
32:5:2394:G:N2	32:5:2820:C:C5	2.67	0.62
32:5:2445:C:O2	32:5:2445:C:H2'	1.98	0.62
32:5:2532:C:N3	32:5:2533:C:C5	2.67	0.62
32:5:3656:A:H4'	32:5:3747:A:C2	2.34	0.62
32:5:4093:G:H2'	32:5:4094:G:C5'	2.29	0.62
32:5:4552:U:C2	32:5:4553:A:N7	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:E:184:ARG:NH2	37:E:210:ASP:OD1	2.32	0.62
54:S2:42:A:N3	54:S2:426:A:C5	2.67	0.62
54:S2:53:C:N3	54:S2:54:A:N7	2.46	0.62
54:S2:501:C:O2	54:S2:501:C:H3'	1.98	0.62
54:S2:876:C:C4	54:S2:878:G:C8	2.87	0.62
54:S2:1097:G:C6	54:S2:1098:C:C5	2.86	0.62
54:S2:1131:G:N2	54:S2:1132:C:C2	2.67	0.62
54:S2:1223:A:OP1	74:SF:79:HIS:HA	1.98	0.62
54:S2:1393:G:C2	54:S2:1394:G:N9	2.68	0.62
54:S2:1434:C:C3'	54:S2:1435:C:O4'	2.47	0.62
54:S2:1742:C:C2	54:S2:1743:G:C8	2.87	0.62
1:A:207:VAL:HG12	32:5:3919:C:H5'	1.82	0.62
8:N:199:GLN:OE1	8:N:199:GLN:HA	1.99	0.62
16:X:117:TYR:O	16:X:119:ILE:CB	2.43	0.62
24:f:76:ARG:HE	24:f:85:ARG:NH2	1.97	0.62
32:5:246:G:N2	32:5:247:G:C4	2.67	0.62
32:5:422:C:N3	32:5:423:G:C8	2.67	0.62
32:5:713:C:H42	32:5:955:G:H1	1.47	0.62
32:5:1049:C:C2	32:5:1050:C:C5	2.86	0.62
32:5:1211:G:C2	32:5:1212:G:C5	2.87	0.62
32:5:1488:G:C2	32:5:1489:G:N9	2.67	0.62
32:5:1673:U:N3	32:5:1674:C:H5	1.91	0.62
32:5:1725:U:C6	32:5:1725:U:H5''	2.34	0.62
32:5:1743:A:C6	32:5:1744:U:C5	2.87	0.62
32:5:2106:G:O2'	32:5:2107:C:O4'	2.14	0.62
32:5:2384:U:C2	32:5:2385:U:C5	2.87	0.62
32:5:2645:G:C6	32:5:2646:C:C5	2.87	0.62
32:5:3636:C:O2	32:5:3636:C:H2'	1.98	0.62
32:5:4633:G:O2'	32:5:4635:A:OP2	2.09	0.62
32:5:5030:U:O2	32:5:5031:G:C8	2.52	0.62
41:W:44:ARG:HH11	41:W:44:ARG:HG3	1.63	0.62
48:z:402:ARG:NE	51:4:184:A:O4'	2.31	0.62
48:z:408:ARG:HG3	52:9:72:TRP:HD1	1.64	0.62
54:S2:98:C:C2	54:S2:409:C:C5	2.88	0.62
54:S2:219:U:C2	54:S2:220:U:C6	2.86	0.62
54:S2:404:G:C2	54:S2:405:G:N9	2.67	0.62
54:S2:430:C:N3	54:S2:431:G:N7	2.47	0.62
54:S2:449:A:C2	54:S2:452:G:C8	2.85	0.62
54:S2:795:A:C2	54:S2:796:G:C6	2.87	0.62
54:S2:1129:G:H3'	54:S2:1130:G:C8	2.34	0.62
54:S2:1131:G:C2	54:S2:1132:C:C6	2.86	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1189:A:C2	54:S2:1190:A:C5	2.88	0.62
54:S2:1204:A:C4	54:S2:1205:C:N3	2.67	0.62
54:S2:1292:C:C5	86:Sf:150:PHE:HB2	2.33	0.62
54:S2:1307:U:C4	54:S2:1308:U:C6	2.88	0.62
54:S2:1405:A:C1'	54:S2:1580:A:C6	2.81	0.62
54:S2:1659:U:O2	54:S2:1659:U:H2'	1.99	0.62
54:S2:1709:G:N1	54:S2:1710:C:C4	2.66	0.62
54:S2:1831:A:C1'	54:S2:1851:A:H2'	2.29	0.62
76:SM:32:ALA:HB2	76:SM:112:LYS:HD3	1.80	0.62
80:SS:62:ASP:O	80:SS:66:ARG:HG3	2.00	0.62
8:N:193:ARG:CZ	8:N:193:ARG:HB2	2.28	0.62
32:5:199:G:C4	32:5:201:C:C5	2.87	0.62
32:5:293:G:C8	32:5:297:U:H1'	2.34	0.62
32:5:1204:C:O2	32:5:1205:G:C8	2.52	0.62
32:5:1235:G:N2	32:5:1236:C:C5	2.67	0.62
32:5:1445:U:N3	32:5:1446:C:C5	2.67	0.62
32:5:1466:G:C2	32:5:1467:C:C5	2.86	0.62
32:5:1515:A:C2	32:5:1516:G:H1'	2.34	0.62
32:5:1642:A:H2'	32:5:1642:A:N3	2.13	0.62
32:5:1856:C:O2	32:5:1856:C:H2'	1.99	0.62
32:5:2301:G:N2	32:5:2302:C:N1	2.46	0.62
32:5:2314:G:C6	32:5:2326:G:C5	2.88	0.62
32:5:2521:G:H2'	32:5:2522:G:O4'	2.00	0.62
32:5:2791:C:N3	32:5:2792:C:C5	2.68	0.62
32:5:3635:A:C6	32:5:3636:C:C1'	2.82	0.62
32:5:4269:G:C2	32:5:4270:C:N1	2.67	0.62
32:5:4344:U:O2	32:5:4344:U:H2'	1.98	0.62
32:5:4759:C:H2'	32:5:4760:G:O4'	2.00	0.62
33:7:17:C:O2	33:7:18:C:C6	2.51	0.62
51:4:119[A]:A:N6	51:4:231[A]:A:H61	1.97	0.62
54:S2:92:A:C5	54:S2:447:A:N3	2.66	0.62
54:S2:477:G:C2	54:S2:478:G:C8	2.87	0.62
54:S2:751:G:N1	54:S2:791:C:O2	2.33	0.62
54:S2:1099:G:N1	54:S2:1100:A:C8	2.67	0.62
54:S2:1103:C:OP1	56:SB:157:GLN:NE2	2.27	0.62
54:S2:1249:C:C6	54:S2:1250:A:N7	2.60	0.62
54:S2:1261:C:C5	54:S2:1262:C:C5	2.88	0.62
54:S2:1590:C:C6	54:S2:1591:C:C6	2.88	0.62
54:S2:1841:C:O2	54:S2:1841:C:H2'	1.99	0.62
55:SA:50:ASN:N	79:SR:105:MET:HE1	2.08	0.62
61:SI:25:ARG:C	61:SI:27:TYR:HB2	2.23	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:SJ:91:LYS:HG3	62:SJ:96:TYR:CE2	2.34	0.62
80:SS:16:LEU:CD2	80:SS:71:MET:CE	2.77	0.62
80:SS:38:ARG:NH2	81:ST:45:LEU:HD13	2.13	0.62
2:D:123:VAL:HG13	2:D:248:ARG:HH22	1.65	0.62
7:M:17:PHE:CE1	32:5:1921:C:H2'	2.34	0.62
32:5:208:A:H1'	32:5:232:G:C2	2.33	0.62
32:5:490:C:H2'	32:5:491:G:C8	2.34	0.62
32:5:711:A:N1	32:5:712:C:C4	2.68	0.62
32:5:1251:C:N3	32:5:1252:C:C5	2.67	0.62
32:5:1272:C:H5''	32:5:2122:G:C8	2.34	0.62
32:5:1488:G:C5	32:5:1489:G:C8	2.87	0.62
32:5:1750:G:N1	32:5:1751:A:N7	2.48	0.62
32:5:2288:G:N3	32:5:2290:C:C6	2.67	0.62
32:5:2292:C:N3	32:5:2293:U:C5	2.67	0.62
32:5:4314:C:C4	32:5:4315:A:N7	2.67	0.62
32:5:4322:G:N2	32:5:4326:G:C6	2.68	0.62
32:5:4332:C:O2	32:5:4333:C:H5	1.79	0.62
32:5:4984:C:N3	32:5:4985:U:C5	2.67	0.62
32:5:4997:G:C6	32:5:4998:G:C5	2.88	0.62
35:B:58:ARG:HD3	35:B:285:TYR:CE1	2.34	0.62
50:3:16:U:H3	50:3:59:A:N6	1.97	0.62
51:4:18:G:C4	51:4:19:C:C5	2.88	0.62
51:4:59:A:C5	51:4:288:G:N2	2.67	0.62
51:4:132:U:H3	51:4:165:G:H1	1.47	0.62
54:S2:113:G:N3	54:S2:293:C:C5	2.67	0.62
54:S2:832:G:C5	54:S2:833:C:C5	2.88	0.62
54:S2:841:G:C6	54:S2:842:C:N4	2.67	0.62
54:S2:924:G:C6	54:S2:925:G:C8	2.88	0.62
54:S2:1281:G:N2	54:S2:1315:U:O4	2.30	0.62
54:S2:1537:A:O2'	54:S2:1604:G:H5'	1.99	0.62
54:S2:1568:C:H2'	54:S2:1569:A:C8	2.35	0.62
54:S2:1588:A:C2	54:S2:1589:A:C6	2.88	0.62
54:S2:1709:G:N2	54:S2:1710:C:C2	2.67	0.62
54:S2:1841:C:C2	54:S2:1842:C:H5	2.17	0.62
1:A:196:TRP:CG	1:A:197:PRO:N	2.67	0.62
5:J:75:ARG:NH1	33:7:42:A:C8	2.67	0.62
7:M:91:TRP:HE1	32:5:4871:C:H3'	1.65	0.62
12:S:120:ARG:HB2	12:S:122:HIS:HD2	1.64	0.62
32:5:37:U:C4	32:5:38:A:C5	2.88	0.62
32:5:187:U:C6	32:5:245:C:N3	2.68	0.62
32:5:398:A:C2	32:5:399:G:C8	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:690:C:N3	32:5:691:C:C6	2.68	0.62
32:5:695:G:H3'	32:5:696:C:H5'	1.82	0.62
32:5:732:A:N7	32:5:733:A:C2	2.68	0.62
32:5:931:C:O2'	32:5:932:A:O4'	2.14	0.62
32:5:1393:G:H2'	32:5:1394:G:C5'	2.29	0.62
32:5:1465:G:C2	32:5:1466:G:C1'	2.83	0.62
32:5:1617:G:C4	32:5:1618:G:C8	2.87	0.62
32:5:1887:G:C6	32:5:1890:G:O6	2.53	0.62
32:5:1945:G:C5	32:5:1946:G:C8	2.87	0.62
32:5:2567:G:N2	32:5:2568:C:C2	2.68	0.62
32:5:3591:C:N4	32:5:3592:G:C8	2.68	0.62
32:5:3710:G:C5	32:5:3711:A:N1	2.67	0.62
32:5:3894:A:C2	32:5:4567:G:C2	2.88	0.62
32:5:3894:A:O4'	32:5:4979:A:N1	2.33	0.62
32:5:4077:A:C8	32:5:4078:C:C6	2.87	0.62
32:5:4123:C:O2	32:5:4124:G:C8	2.52	0.62
32:5:4544:A:C8	32:5:4545:G:H1'	2.35	0.62
32:5:4550:G:N1	32:5:4551:U:C5	2.67	0.62
32:5:4742:G:C2	32:5:4743:G:C8	2.88	0.62
34:8:10:G:N1	34:8:11:C:C2	2.68	0.62
37:E:95:ASP:OD1	37:E:96:LYS:N	2.32	0.62
48:z:114:LYS:O	48:z:118:CYS:SG	2.52	0.62
54:S2:104:A:C5	54:S2:105:U:C6	2.88	0.62
54:S2:210:U:C2	54:S2:211:G:C8	2.88	0.62
54:S2:399:C:C4'	68:SX:11:ARG:NH1	2.63	0.62
54:S2:500:A:H3'	54:S2:501:C:C5	2.34	0.62
54:S2:646:G:C5	54:S2:647:U:C5	2.88	0.62
54:S2:842:C:N3	54:S2:843:C:C5	2.66	0.62
54:S2:1270:G:H2'	54:S2:1271:C:O4'	2.00	0.62
54:S2:1294:G:H8	86:Sf:151:ASN:C	2.07	0.62
54:S2:1609:C:O2	54:S2:1610:G:N7	2.33	0.62
57:SC:200:ARG:HH21	57:SC:200:ARG:HG3	1.65	0.62
57:SC:230:THR:HG23	57:SC:236:PHE:CE2	2.35	0.62
70:Sa:74:CYS:SG	91:Sa:101:ZN:ZN	1.86	0.62
5:J:75:ARG:NH1	33:7:42:A:N9	2.47	0.62
15:V:100:ASP:N	15:V:100:ASP:OD1	2.33	0.62
32:5:55:G:C2	32:5:56:A:N9	2.67	0.62
32:5:209:U:C2	32:5:233:U:N3	2.68	0.62
32:5:347:A:C2	32:5:348:G:C5	2.87	0.62
32:5:1093:C:N3	32:5:1094:G:C8	2.67	0.62
32:5:1216:C:C2	32:5:1217:G:C8	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1271:G:H5''	32:5:1272:C:O4'	1.99	0.62
32:5:1316:G:C1'	32:5:2348:G:H21	2.13	0.62
32:5:1628:C:O2	32:5:1628:C:C2'	2.48	0.62
32:5:1948:G:C6	32:5:1949:U:C4	2.88	0.62
32:5:2498:C:C2	32:5:2499:C:C6	2.88	0.62
32:5:2508:U:O2	32:5:2508:U:H2'	1.99	0.62
32:5:2509:C:C2	32:5:2510:G:N7	2.68	0.62
32:5:2562:G:N2	32:5:2564:G:C8	2.68	0.62
32:5:2678:A:N1	32:5:2679:G:C5	2.67	0.62
32:5:3911:C:H5''	32:5:4197:G:O2'	2.00	0.62
32:5:4255:A:C6	32:5:4256:A:C2	2.87	0.62
32:5:4483:C:N3	32:5:4484:A:C8	2.68	0.62
32:5:4583:C:N4	32:5:4718:G:C6	2.68	0.62
32:5:4724:A:C6	32:5:4725:C:C4	2.87	0.62
34:8:82:A:N1	34:8:83:C:H5''	2.15	0.62
34:8:137:A:C2	34:8:138:C:C5	2.87	0.62
39:I:47:PRO:CA	39:I:171:TRP:HE1	2.13	0.62
50:3:56:C:O3'	50:3:57:G:P	2.58	0.62
51:4:2:C:C2	51:4:3:C:C6	2.88	0.62
51:4:16:G:N3	51:4:33:G:C6	2.68	0.62
54:S2:64:A:C6	54:S2:82:G:N1	2.67	0.62
54:S2:114:G:C2	54:S2:383:G:N2	2.67	0.62
54:S2:666:U:H2'	54:S2:667:U:H6	1.64	0.62
54:S2:900:C:O2	54:S2:901:G:C8	2.53	0.62
54:S2:923:G:C2	54:S2:924:G:C8	2.88	0.62
54:S2:1411:G:N7	54:S2:1412:C:H1'	2.15	0.62
54:S2:1683:C:N3	54:S2:1684:C:C5	2.67	0.62
54:S2:1868:U:C4'	54:S2:1869:A:OP2	2.47	0.62
55:SA:55:TRP:O	55:SA:56:GLU:C	2.41	0.62
55:SA:205:ARG:NH1	79:SR:84:TYR:HD2	1.97	0.62
65:SO:117:ARG:HG2	84:Sc:62:GLU:OE2	2.00	0.62
74:SF:140:ASP:CG	84:Sc:56:LEU:HD21	2.25	0.62
83:SZ:57:LYS:HA	83:SZ:60:LYS:HB2	1.81	0.62
5:J:107:PHE:CE1	5:J:130:PHE:CB	2.83	0.62
9:O:16:LEU:HD11	9:O:83:THR:HG21	1.82	0.62
16:X:73:HIS:N	16:X:73:HIS:CD2	2.68	0.62
32:5:246:G:N3	32:5:247:G:C8	2.67	0.62
32:5:288:G:C2	32:5:289:C:C6	2.87	0.62
32:5:491:G:N2	32:5:492:U:C4	2.67	0.62
32:5:909:A:N1	32:5:910:G:N7	2.46	0.62
32:5:992:C:O2	32:5:993:G:C8	2.53	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1308:C:N3	32:5:1309:C:C5	2.67	0.62
32:5:1373:A:N3	32:5:1374:G:C8	2.67	0.62
32:5:1896:A:C5	38:F:101:ASN:ND2	2.67	0.62
32:5:2107:C:C5	32:5:2126:G:N2	2.68	0.62
32:5:2327:G:N2	32:5:2328:G:N9	2.48	0.62
32:5:2496:G:C5	32:5:2497:C:C5	2.88	0.62
32:5:2540:C:C2	32:5:2541:G:C8	2.87	0.62
32:5:2573:A:H2'	32:5:2574:G:O4'	2.00	0.62
32:5:3656:A:O4'	32:5:3747:A:C2	2.53	0.62
32:5:3741:C:C2	32:5:3742:G:N7	2.58	0.62
32:5:3938:G:C6	32:5:4077:A:C2	2.88	0.62
32:5:4287:G:C6	32:5:4288:C:N4	2.68	0.62
32:5:4769:G:H2'	32:5:4770:U:O4'	1.99	0.62
33:7:51:G:N1	33:7:52:C:C4	2.67	0.62
34:8:34:U:O2	34:8:34:U:O4'	2.14	0.62
34:8:108:A:N3	34:8:112:G:C2	2.68	0.62
35:B:92:TYR:CE2	35:B:101:THR:HB	2.35	0.62
43:n:10:MET:HE1	54:S2:1172:U:H4'	1.77	0.62
45:r:7:TRP:CZ3	45:r:11:ARG:HA	2.35	0.62
54:S2:399:C:C4'	68:SX:11:ARG:HH12	2.12	0.62
54:S2:468:A:C4	54:S2:469:A:C8	2.88	0.62
54:S2:632:C:N3	54:S2:633:C:C5	2.68	0.62
54:S2:804:U:C2	54:S2:805:U:C5	2.87	0.62
54:S2:958:G:O2'	54:S2:959:G:O4'	2.18	0.62
54:S2:963:A:C2	54:S2:964:A:C4	2.88	0.62
54:S2:1099:G:C6	54:S2:1100:A:C8	2.87	0.62
54:S2:1794:C:C4	54:S2:1795:G:N7	2.68	0.62
79:SR:57:LEU:HD23	79:SR:60:ARG:HD3	1.80	0.62
85:Sd:41:GLN:OE1	85:Sd:41:GLN:N	2.33	0.62
1:A:207:VAL:HG12	32:5:3919:C:C5'	2.28	0.62
7:M:17:PHE:CD2	7:M:17:PHE:C	2.78	0.62
13:T:158:PHE:CE1	13:T:160:ALA:HB2	2.35	0.62
32:5:470:A:C6	32:5:471:A:N9	2.68	0.62
32:5:662:C:C2	32:5:663:G:N7	2.68	0.62
32:5:1204:C:C2	32:5:1205:G:C8	2.88	0.62
32:5:1570:G:C2	32:5:1571:G:N9	2.67	0.62
32:5:1629:G:N3	32:5:1631:A:C6	2.67	0.62
32:5:1973:G:O6	32:5:2002:A:C8	2.52	0.62
32:5:2055:G:H5'	32:5:2056:G:C5'	2.28	0.62
32:5:2086:G:N2	32:5:2272:C:N3	2.48	0.62
32:5:2539:C:C2	32:5:2540:C:C5	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2758:G:H2'	32:5:2759:G:C8	2.34	0.62
32:5:3694:U:C2	32:5:3695:U:C6	2.87	0.62
32:5:3724:A:C6	32:5:3725:G:C6	2.88	0.62
32:5:3848:U:O2	32:5:3849:A:C8	2.52	0.62
32:5:3890:A:N7	32:5:4571:A:H1'	2.14	0.62
32:5:4191:G:N2	32:5:4374:U:O4'	2.32	0.62
32:5:4626:A:H5'	35:B:53:MET:HE3	1.82	0.62
32:5:4771:C:C6	32:5:4772:C:C6	2.88	0.62
32:5:4886:C:O2	32:5:4886:C:H2'	2.00	0.62
33:7:51:G:C6	33:7:52:C:N4	2.68	0.62
34:8:95:A:C6	34:8:96:C:C5	2.87	0.62
34:8:116:C:H2'	34:8:116:C:O2	2.00	0.62
35:B:388:PHE:O	35:B:390:GLY:N	2.33	0.62
37:E:153:HIS:CE1	37:E:180:VAL:HG22	2.34	0.62
48:z:193:GLY:HA2	48:z:201:LEU:HD11	1.80	0.62
48:z:381:SER:OG	51:4:193:G:C2	2.52	0.62
48:z:402:ARG:HE	51:4:184:A:C4'	2.10	0.62
50:3:16:U:N3	50:3:60:A:C2	2.68	0.62
51:4:57:G:N2	51:4:289:A:C2	2.67	0.62
54:S2:12:U:H2'	54:S2:13:C:H6	1.65	0.62
54:S2:220:U:N3	54:S2:221:A:C8	2.68	0.62
54:S2:1401:A:H2'	54:S2:1402:A:C8	2.35	0.62
54:S2:1431:G:C2	54:S2:1432:U:H1'	2.35	0.62
54:S2:1513:C:HO2'	54:S2:1514:G:H5'	1.65	0.62
54:S2:1795:G:C2	54:S2:1796:G:C8	2.88	0.62
55:SA:24:HIS:NE2	79:SR:102:THR:CG2	2.63	0.62
55:SA:158:ASP:OD1	55:SA:159:ILE:N	2.33	0.62
81:ST:56:ARG:HD3	81:ST:79:TYR:HE2	1.65	0.62
3:G:169:PHE:CE2	8:N:6:TYR:CB	2.83	0.62
32:5:21:G:C6	34:8:36:G:C2	2.88	0.62
32:5:187:U:C5	32:5:245:C:N3	2.68	0.62
32:5:322:C:H2'	32:5:322:C:O2	2.00	0.62
32:5:722:G:H21	36:C:343:GLN:HE22	1.46	0.62
32:5:916:C:N3	32:5:917:A:C8	2.68	0.62
32:5:961:G:C6	32:5:969:C:C5	2.88	0.62
32:5:1074:G:C2	32:5:1238:A:N1	2.68	0.62
32:5:1177:U:H2'	32:5:1178:G:H8	1.64	0.62
32:5:1216:C:C4	32:5:1217:G:N7	2.68	0.62
32:5:1279:A:C4	32:5:1280:C:N4	2.68	0.62
32:5:1735:U:O2	32:5:1736:A:C8	2.53	0.62
32:5:1839:U:H3'	32:5:1840:G:H21	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1899:G:C8	32:5:2278:G:N2	2.67	0.62
32:5:1899:G:N1	32:5:1900:C:N4	2.47	0.62
32:5:2020:U:O2	32:5:2021:G:C8	2.53	0.62
32:5:2786:C:H4'	32:5:2787:A:C8	2.35	0.62
32:5:3591:C:N3	32:5:3592:G:C8	2.68	0.62
32:5:3629:A:C2'	54:S2:1721:U:H3	2.13	0.62
32:5:3692:A:N7	32:5:3693:U:C5	2.68	0.62
32:5:3724:A:N6	32:5:3729:U:H3	1.98	0.62
32:5:3847:C:C4	32:5:3848:U:C5	2.87	0.62
32:5:4165:C:O2	32:5:4166:G:C8	2.52	0.62
32:5:4653:C:C2	32:5:4654:C:H5	2.07	0.62
32:5:4653:C:H2'	32:5:4654:C:H6	1.65	0.62
32:5:5000:G:C6	32:5:5001:U:C4	2.87	0.62
32:5:5052:C:C4	32:5:5053:U:C5	2.88	0.62
34:8:130:C:C4	34:8:131:G:C8	2.88	0.62
48:z:24:ASN:OD1	48:z:26:GLU:N	2.33	0.62
48:z:69:LEU:C	48:z:71:LYS:H	2.07	0.62
48:z:402:ARG:CD	51:4:184:A:H4'	2.28	0.62
48:z:407:ALA:HA	48:z:412:VAL:HG13	1.82	0.62
54:S2:750:C:O2	54:S2:750:C:C2'	2.48	0.62
54:S2:751:G:C2	54:S2:792:C:O2	2.53	0.62
54:S2:997:A:H2'	54:S2:998:A:O4'	2.00	0.62
54:S2:1168:G:C2	54:S2:1192:U:O2	2.53	0.62
54:S2:1262:C:H2'	54:S2:1263:U:O4'	1.99	0.62
54:S2:1274:G:N7	75:SK:43:LEU:HD22	2.14	0.62
54:S2:1409:A:H5''	78:SQ:24:HIS:CE1	2.35	0.62
54:S2:1576:G:C2	54:S2:1577:G:C8	2.88	0.62
55:SA:116:PHE:C	55:SA:116:PHE:CD1	2.78	0.62
80:SS:8:LYS:HE3	80:SS:8:LYS:H	1.65	0.62
31:o:26:TYR:C	31:o:26:TYR:CD1	2.78	0.61
32:5:269:G:H2'	32:5:269:G:N3	2.13	0.61
32:5:674:G:C2	32:5:675:C:C6	2.88	0.61
32:5:1488:G:C6	32:5:1489:G:C8	2.88	0.61
32:5:1617:G:N3	32:5:2513:A:C2	2.68	0.61
32:5:2056:G:C6	32:5:2058:G:C8	2.88	0.61
32:5:2467:U:H5''	32:5:2468:U:OP1	2.00	0.61
32:5:2497:C:C4	32:5:2498:C:C5	2.88	0.61
32:5:2738:C:C2	32:5:2741:U:C5	2.87	0.61
32:5:3702:A:H2'	32:5:3702:A:N3	2.13	0.61
32:5:3732:A:N1	32:5:3733:A:C5	2.69	0.61
32:5:3923:A:C2	32:5:3924:C:C4	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4463:U:C4	32:5:4488:A:C5	2.88	0.61
32:5:4530:U:H2'	32:5:4531:U:N3	2.14	0.61
32:5:4647:G:C2	32:5:4648:A:C8	2.88	0.61
37:E:55:ARG:O	37:E:58:MET:O	2.17	0.61
46:K:9:GLU:OE1	46:K:11:LYS:CD	2.48	0.61
48:z:219:TYR:CE1	48:z:236:PHE:HD1	2.18	0.61
48:z:237:LYS:NZ	48:z:263:VAL:O	2.33	0.61
54:S2:414:A:N1	54:S2:424:C:C2	2.68	0.61
54:S2:803:C:C4	54:S2:804:U:C5	2.88	0.61
54:S2:993:G:O6	70:Sa:15:ARG:HG2	2.00	0.61
54:S2:1053:C:O2	54:S2:1053:C:H2'	2.00	0.61
54:S2:1162:C:O2	54:S2:1162:C:H2'	2.00	0.61
54:S2:1253:A:OP2	54:S2:1526:G:N2	2.32	0.61
54:S2:1348:G:C2	54:S2:1349:G:C8	2.88	0.61
55:SA:24:HIS:NE2	79:SR:102:THR:HG22	2.14	0.61
75:SK:64:TRP:CZ3	85:Sd:23:VAL:HG22	2.35	0.61
79:SR:69:ILE:HD13	79:SR:71:ILE:HD11	1.81	0.61
83:SZ:46:ASN:ND2	83:SZ:78:LYS:HB3	2.14	0.61
83:SZ:57:LYS:O	83:SZ:61:GLU:CA	2.48	0.61
84:Sc:14:VAL:CG2	84:Sc:32:VAL:HG12	2.14	0.61
8:N:101:VAL:HG12	8:N:105:ARG:HD2	1.81	0.61
8:N:162:ARG:NH1	32:5:56:A:O2'	2.33	0.61
11:R:74:ARG:NH1	32:5:2891:U:C5	2.68	0.61
12:S:29:ARG:CZ	12:S:29:ARG:HB3	2.30	0.61
32:5:57:G:N2	32:5:58:G:C2	2.67	0.61
32:5:99:A:C6	32:5:100:C:C2	2.88	0.61
32:5:438:G:C4	32:5:439:G:C8	2.87	0.61
32:5:482:G:H2'	32:5:483:G:O4'	2.00	0.61
32:5:755:C:N3	32:5:756:G:C8	2.67	0.61
32:5:1291:G:C2	32:5:1292:C:C4	2.88	0.61
32:5:1542:U:O2	32:5:1543:G:H8	1.81	0.61
32:5:1634:A:C4	32:5:1635:C:C6	2.87	0.61
32:5:1665:C:O2'	32:5:1666:C:H5'	2.00	0.61
32:5:1720:C:H2'	32:5:1721:G:O4'	2.00	0.61
32:5:2602:G:C6	32:5:2603:C:C4	2.88	0.61
32:5:3629:A:HO2'	54:S2:1721:U:H3	1.45	0.61
32:5:3652:A:N7	32:5:3691:G:C2	2.68	0.61
32:5:4091:G:C5	32:5:4092:G:C8	2.88	0.61
32:5:4136:G:C6	32:5:4137:C:C4	2.88	0.61
32:5:4313:A:C2	32:5:4314:C:C6	2.88	0.61
32:5:4482:U:O2	32:5:4482:U:H2'	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4563:U:C4	32:5:4564:A:N6	2.68	0.61
34:8:131:G:C5	34:8:132:G:C8	2.88	0.61
48:z:340:MET:HB2	48:z:341:LYS:N	2.15	0.61
53:6:83:GLN:OE1	53:6:125:ARG:NH1	2.33	0.61
54:S2:122:G:C6	54:S2:123:G:N7	2.69	0.61
54:S2:217:A:C6	54:S2:218:U:C5	2.88	0.61
54:S2:350:C:C2	54:S2:351:G:C8	2.88	0.61
54:S2:474:G:N3	54:S2:475:C:C6	2.68	0.61
54:S2:475:C:H2'	54:S2:475:C:O2	1.98	0.61
54:S2:491:C:C1'	54:S2:574:A:N6	2.61	0.61
54:S2:831:G:N2	54:S2:844:U:C4	2.69	0.61
54:S2:875:A:C5	54:S2:876:C:H5	2.10	0.61
54:S2:961:G:N1	54:S2:962:A:C5	2.68	0.61
54:S2:1051:G:N1	54:S2:1052:A:C8	2.61	0.61
54:S2:1233:G:C6	54:S2:1234:C:C5	2.87	0.61
54:S2:1268:C:H2'	54:S2:1269:G:O4'	1.99	0.61
54:S2:1528:G:N1	54:S2:1529:C:N4	2.48	0.61
1:A:40:TYR:CE1	32:5:4117:U:N3	2.67	0.61
32:5:60:G:C6	32:5:61:A:N7	2.68	0.61
32:5:371:A:O2'	32:5:372:A:C5'	2.49	0.61
32:5:917:A:C5	32:5:919:C:N4	2.68	0.61
32:5:1270:A:C6	32:5:1271:G:H1'	2.35	0.61
32:5:1321:G:C1'	32:5:1891:A:H62	2.13	0.61
32:5:1427:A:C8	32:5:1428:U:O4'	2.53	0.61
32:5:1441:C:C4	32:5:1442:C:C5	2.89	0.61
32:5:1577:G:O2'	32:5:1612:G:H4'	2.00	0.61
32:5:1912:G:C4	32:5:1913:C:C5	2.88	0.61
32:5:2401:A:C2	32:5:2402:G:N7	2.67	0.61
32:5:2576:G:C2	32:5:2577:C:N1	2.68	0.61
32:5:2606:G:N1	32:5:2607:C:C4	2.68	0.61
32:5:3791:C:N3	32:5:3802:U:H6	1.97	0.61
32:5:4239:A:C6	32:5:4240:G:C5	2.88	0.61
32:5:4345:C:O2	32:5:4346:U:C6	2.53	0.61
32:5:4734:A:C4	32:5:4735:G:C8	2.88	0.61
32:5:5050:C:N3	32:5:5051:C:C5	2.68	0.61
33:7:59:G:N1	33:7:60:G:C8	2.68	0.61
48:z:84:VAL:HA	48:z:291:ILE:CD1	2.30	0.61
48:z:339:ILE:C	48:z:342:MET:H	2.08	0.61
48:z:408:ARG:CD	51:4:206:G:H4'	2.28	0.61
51:4:6:G:H2'	51:4:7:C:C6	2.36	0.61
54:S2:834:C:C2	54:S2:841:G:C2	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1108:G:O2'	54:S2:1109:C:H5'	2.00	0.61
54:S2:1398:G:N3	54:S2:1398:G:H2'	2.13	0.61
54:S2:1500:G:C2	54:S2:1501:C:C2	2.88	0.61
54:S2:1599:U:P	83:SZ:80:ARG:NH1	2.56	0.61
55:SA:110:ASN:O	55:SA:116:PHE:CD2	2.52	0.61
55:SA:116:PHE:C	55:SA:116:PHE:HD1	2.08	0.61
62:SJ:20:PHE:N	62:SJ:20:PHE:HD1	1.98	0.61
74:SF:43:GLU:HB2	74:SF:45:TYR:CD2	2.34	0.61
79:SR:94:GLU:O	79:SR:95:ILE:HB	1.99	0.61
4:H:41:ILE:HD11	4:H:69:THR:HG21	1.82	0.61
18:Z:41:ALA:HB2	18:Z:77:TYR:HE1	1.66	0.61
32:5:60:G:C4	32:5:61:A:C8	2.88	0.61
32:5:293:G:C4'	32:5:294:G:H8	2.12	0.61
32:5:348:G:C2	32:5:350:C:C5	2.88	0.61
32:5:438:G:C2	32:5:439:G:C8	2.89	0.61
32:5:920:C:H2'	32:5:921:C:O4'	2.00	0.61
32:5:964:A:C8	32:5:964:A:C3'	2.83	0.61
32:5:991:C:C2	32:5:992:C:C6	2.88	0.61
32:5:1238:A:H2'	32:5:1239:C:C5	2.35	0.61
32:5:1279:A:N3	32:5:1280:C:C4	2.69	0.61
32:5:1316:G:C1'	32:5:2348:G:N2	2.63	0.61
32:5:1320:U:H2'	32:5:1320:U:O2	1.99	0.61
32:5:1444:G:H2'	32:5:1445:U:H6	1.64	0.61
32:5:1646:A:H1'	42:j:49:TRP:CH2	2.35	0.61
32:5:1857:C:H1'	32:5:1892:A:N3	2.15	0.61
32:5:1894:C:H2'	32:5:1895:G:O5'	1.99	0.61
32:5:1948:G:H1	32:5:2034:G:H1	1.48	0.61
32:5:2279:A:N3	32:5:2279:A:H2'	2.14	0.61
32:5:2438:A:N6	32:5:2441:C:C4	2.68	0.61
32:5:2612:G:H2'	32:5:2613:C:O4'	1.99	0.61
32:5:3717:A:O2'	32:5:3718:A:P	2.58	0.61
32:5:3721:U:O2	32:5:3721:U:H2'	2.01	0.61
32:5:3894:A:H2'	32:5:3895:G:O4'	2.00	0.61
32:5:4092:G:C2	32:5:4158:C:C2	2.89	0.61
32:5:4199:C:O2	32:5:4199:C:C2'	2.47	0.61
32:5:4230:C:N3	32:5:4231:C:C5	2.69	0.61
32:5:4589:A:C8	32:5:4589:A:H5'	2.35	0.61
32:5:4687:A:N7	32:5:4698:C:C6	2.68	0.61
33:7:57:C:H2'	33:7:58:A:O4'	2.00	0.61
33:7:111:C:N4	33:7:112:U:C5	2.68	0.61
34:8:12:G:N1	34:8:13:G:C5	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:127:U:H2'	34:8:128:C:O4'	2.00	0.61
39:I:100:ASN:O	39:I:100:ASN:ND2	2.31	0.61
45:r:106:LEU:O	45:r:107:ARG:C	2.44	0.61
54:S2:309:G:N1	54:S2:310:C:C4	2.67	0.61
54:S2:474:G:C2	54:S2:475:C:C5	2.88	0.61
54:S2:604:A:C5	62:SJ:20:PHE:CE2	2.88	0.61
54:S2:608:C:N3	54:S2:609:U:C6	2.69	0.61
54:S2:799:U:C4'	60:SH:110:THR:CG2	2.78	0.61
54:S2:862:A:H2'	54:S2:862:A:N3	2.15	0.61
54:S2:906:U:O2	54:S2:907:G:N7	2.33	0.61
54:S2:925:G:N1	54:S2:926:A:C8	2.64	0.61
54:S2:948:C:O2	54:S2:949:G:C8	2.53	0.61
54:S2:1063:C:HO2'	54:S2:1838:U:H5	0.67	0.61
54:S2:1073:U:C2	54:S2:1074:C:C5	2.89	0.61
54:S2:1293:A:O5'	86:Sf:150:PHE:CD1	2.54	0.61
54:S2:1426:U:C2	54:S2:1427:C:C6	2.87	0.61
54:S2:1665:G:N7	81:ST:88:MET:HG3	2.14	0.61
54:S2:1860:A:N6	54:S2:1862:G:C6	2.68	0.61
65:SO:139:SER:O	65:SO:140:THR:O	2.17	0.61
2:D:44:TYR:N	2:D:44:TYR:CD1	2.63	0.61
11:R:95:TRP:HB3	11:R:99:MET:SD	2.40	0.61
11:R:131:VAL:CB	11:R:132:PHE:CZ	2.82	0.61
32:5:44:A:C2	32:5:45:U:N1	2.69	0.61
32:5:145:G:N3	32:5:146:G:C8	2.67	0.61
32:5:436:C:C2	32:5:437:G:C8	2.87	0.61
32:5:1334:A:C6	32:5:1335:G:C5	2.89	0.61
32:5:1443:A:H2'	32:5:1444:G:O4'	2.00	0.61
32:5:2367:A:C2	32:5:2368:A:C8	2.88	0.61
32:5:2421:G:OP2	32:5:2828:U:H1'	2.00	0.61
32:5:2428:A:C6	32:5:2789:A:C2	2.88	0.61
32:5:4096:C:N4	32:5:4097:G:C4	2.67	0.61
32:5:4240:G:C2	32:5:4241:C:N1	2.68	0.61
32:5:4628:U:N3	32:5:4629:U:C5	2.68	0.61
39:I:101:LYS:HZ3	39:I:121:LYS:HG3	1.59	0.61
39:I:101:LYS:HZ1	39:I:121:LYS:HE3	1.65	0.61
48:z:237:LYS:HE2	48:z:268:SER:CB	2.29	0.61
54:S2:504:G:H2'	54:S2:505:G:O5'	2.00	0.61
54:S2:752:G:N2	54:S2:790:C:C2	2.69	0.61
54:S2:868:G:C6	60:SH:115:LYS:HE3	2.36	0.61
54:S2:927:C:N3	54:S2:928:G:N7	2.48	0.61
54:S2:1074:C:C2	54:S2:1075:C:C6	2.86	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1098:C:C2	54:S2:1099:G:C8	2.88	0.61
54:S2:1283:C:O4'	76:SM:91:LEU:HD13	2.00	0.61
54:S2:1498:A:C2	54:S2:1499:U:H1'	2.35	0.61
54:S2:1860:A:C6	54:S2:1862:G:N7	2.69	0.61
54:S2:1863:A:C2	70:Sa:76:SER:HA	2.36	0.61
55:SA:89:LYS:HB3	55:SA:202:TYR:CZ	2.35	0.61
62:SJ:20:PHE:N	62:SJ:20:PHE:CD1	2.69	0.61
81:ST:52:TRP:HE3	81:ST:53:PHE:N	1.98	0.61
87:Sg:152:SER:OG	87:Sg:168:CYS:SG	2.58	0.61
1:A:89:TYR:O	1:A:100:ASN:ND2	2.34	0.61
2:D:275:GLN:NE2	32:5:1175:A:H1'	2.16	0.61
8:N:124:ASP:OD1	8:N:125:SER:N	2.34	0.61
8:N:126:THR:C	8:N:127:TYR:CD1	2.78	0.61
9:O:27:VAL:HG12	9:O:98:ALA:HB1	1.82	0.61
20:b:28:ARG:HB3	32:5:1805:A:N7	2.14	0.61
23:e:108:ARG:HD3	23:e:128:ARG:CB	2.28	0.61
32:5:60:G:N3	32:5:61:A:C8	2.68	0.61
32:5:348:G:N3	32:5:350:C:C5	2.68	0.61
32:5:441:G:C2	32:5:442:G:C5	2.89	0.61
32:5:671:G:C2	32:5:672:C:C6	2.88	0.61
32:5:1202:C:O2	32:5:1203:G:C8	2.54	0.61
32:5:1290:G:C2	32:5:1291:G:N7	2.68	0.61
32:5:1627:G:H3'	32:5:1628:C:C6	2.35	0.61
32:5:1694:C:N3	32:5:1695:U:C5	2.69	0.61
32:5:2086:G:C2	32:5:2272:C:N3	2.68	0.61
32:5:2439:G:N3	32:5:2439:G:H2'	2.16	0.61
32:5:2622:G:C6	32:5:2623:A:N7	2.68	0.61
32:5:2901:G:N2	32:5:2902:G:H22	1.99	0.61
32:5:3652:A:N6	32:5:3691:G:O2'	2.34	0.61
32:5:3656:A:C2	32:5:3657:U:C6	2.89	0.61
32:5:3675:G:C2	32:5:3676:G:C8	2.88	0.61
32:5:4483:C:N3	32:5:4484:A:N7	2.48	0.61
32:5:4501:U:C5	32:5:4502:C:C6	2.89	0.61
32:5:4583:C:N3	32:5:4718:G:C2	2.67	0.61
32:5:4895:C:O2	32:5:4896:G:C5	2.54	0.61
32:5:4997:G:N2	32:5:4998:G:H1'	2.16	0.61
33:7:33:U:C2	33:7:34:C:C6	2.88	0.61
33:7:111:C:H2'	33:7:111:C:O2	2.00	0.61
34:8:75:G:N2	34:8:76:C:C2	2.68	0.61
46:K:9:GLU:CD	46:K:11:LYS:HB2	2.26	0.61
47:q:107:VAL:HG23	47:q:108:PRO:CD	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:94:G:O2'	54:S2:508:A:O2'	2.13	0.61
54:S2:580:U:N3	54:S2:581:U:C6	2.69	0.61
54:S2:638:C:O2'	54:S2:639:C:C5'	2.47	0.61
54:S2:690:G:C5	54:S2:691:G:H1'	2.35	0.61
54:S2:858:A:C2	54:S2:859:G:C5	2.88	0.61
54:S2:1110:G:HO2'	79:SR:122:PRO:HB3	1.63	0.61
54:S2:1134:G:C6	54:S2:1135:C:C5	2.88	0.61
25:g:93:ARG:HD3	32:5:4122:G:O4'	2.01	0.61
32:5:29:G:C6	32:5:54:G:C4	2.89	0.61
32:5:44:A:C4	32:5:45:U:C5	2.89	0.61
32:5:427:A:O2'	32:5:428:G:H5'	2.01	0.61
32:5:446:C:N3	32:5:447:C:C5	2.69	0.61
32:5:661:C:N3	32:5:662:C:C5	2.69	0.61
32:5:1211:G:C2	32:5:1212:G:N7	2.68	0.61
32:5:1301:C:N4	32:5:1302:U:C6	2.69	0.61
32:5:1323:A:C2	32:5:1324:A:C4	2.89	0.61
32:5:1387:A:C4	32:5:1397:A:N6	2.63	0.61
32:5:2382:A:N7	32:5:2830:G:O2'	2.31	0.61
32:5:2567:G:C5	32:5:2568:C:C5	2.89	0.61
32:5:2622:G:C6	32:5:2623:A:C8	2.89	0.61
32:5:2744:A:C6	32:5:2745:A:N6	2.69	0.61
32:5:3692:A:N7	32:5:3693:U:C6	2.68	0.61
32:5:3717:A:O2'	32:5:3718:A:C8	2.54	0.61
32:5:3755:G:N2	32:5:3770:U:C2	2.69	0.61
32:5:3785:A:C2	32:5:4536:C:C2'	2.84	0.61
32:5:3802:U:N3	32:5:4498:U:O2'	2.30	0.61
32:5:3907:G:C6	32:5:3909:C:C4	2.89	0.61
32:5:4070:U:N3	32:5:4071:U:C5	2.69	0.61
32:5:4080:C:O2	32:5:4080:C:C2'	2.47	0.61
32:5:4426:C:C4	32:5:4427:G:C5	2.89	0.61
32:5:4628:U:C2	32:5:4629:U:C5	2.89	0.61
35:B:235:TRP:CD1	35:B:267:ALA:HA	2.36	0.61
54:S2:185:G:C2	54:S2:186:C:C5	2.89	0.61
54:S2:447:A:N3	54:S2:449:A:H1'	2.14	0.61
54:S2:841:G:N2	54:S2:842:C:C6	2.67	0.61
54:S2:1049:A:C6	54:S2:1070:A:N3	2.69	0.61
54:S2:1808:U:C2	54:S2:1809:A:C8	2.89	0.61
55:SA:43:SER:HB2	79:SR:123:THR:HG22	1.83	0.61
64:SN:128:TYR:C	64:SN:128:TYR:HD1	2.08	0.61
87:Sg:245:ARG:HD3	87:Sg:247:TRP:CE3	2.36	0.61
32:5:77:U:C4	32:5:335:A:C6	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:101:A:N1	32:5:102:G:C8	2.68	0.61
32:5:247:G:N3	32:5:248:C:C6	2.68	0.61
32:5:288:G:C2	32:5:289:C:C5	2.88	0.61
32:5:976:G:C2	32:5:977:C:N1	2.68	0.61
32:5:1498:G:N2	32:5:1499:C:C2	2.69	0.61
32:5:1758:G:N3	32:5:1759:G:C8	2.69	0.61
32:5:2399:G:C2	32:5:2400:G:N7	2.69	0.61
32:5:2783:A:C5	32:5:2784:C:C5	2.89	0.61
32:5:3754:G:H2'	32:5:3755:G:C5'	2.30	0.61
32:5:4167:G:C6	32:5:4168:G:N7	2.69	0.61
32:5:4977:A:C2	32:5:4978:G:C4	2.88	0.61
33:7:60:G:N1	33:7:61:G:C8	2.69	0.61
34:8:55:U:O4	34:8:62:A:N1	2.34	0.61
38:F:93:PHE:HB2	38:F:124:PHE:CD1	2.36	0.61
39:I:101:LYS:HD2	39:I:101:LYS:N	2.16	0.61
54:S2:172:U:C2'	54:S2:172:U:O2	2.48	0.61
54:S2:216:C:O2	54:S2:216:C:O4'	2.18	0.61
54:S2:379:C:N4	54:S2:380:G:O6	2.34	0.61
54:S2:638:C:O2'	54:S2:639:C:H5'	1.99	0.61
54:S2:870:A:N7	54:S2:915:G:N9	2.47	0.61
54:S2:1073:U:C2	54:S2:1074:C:C6	2.89	0.61
54:S2:1113:A:C2'	54:S2:1114:U:H3'	2.28	0.61
54:S2:1174:U:C2	54:S2:1175:G:C8	2.89	0.61
54:S2:1206:G:N2	54:S2:1835:A:OP1	2.34	0.61
54:S2:1294:G:O4'	86:Sf:151:ASN:O	2.18	0.61
55:SA:84:GLN:HE21	55:SA:100:ALA:HB1	1.65	0.61
57:SC:60:TRP:HB3	57:SC:62:PRO:HD3	1.83	0.61
64:SN:125:LEU:HD22	64:SN:129:TYR:CE2	2.35	0.61
74:SF:187:SER:OG	74:SF:188:TYR:N	2.33	0.61
4:H:88:PHE:CE2	4:H:151:ILE:HB	2.35	0.61
22:d:28:ASN:OD1	22:d:28:ASN:C	2.44	0.61
32:5:54:G:C2	32:5:55:G:H1'	2.35	0.61
32:5:88:A:N1	32:5:97:G:H1'	2.16	0.61
32:5:278:G:N2	32:5:330:G:C8	2.69	0.61
32:5:515:C:C2	32:5:647:G:C2	2.88	0.61
32:5:724:C:HO2'	32:5:945:U:HO2'	1.48	0.61
32:5:748:G:C6	32:5:918:G:H1'	2.36	0.61
32:5:1358:G:H2'	32:5:1359:G:C8	2.36	0.61
32:5:1406:G:C2	32:5:1409:C:N4	2.69	0.61
32:5:1566:C:H2'	32:5:1567:U:C6	2.36	0.61
32:5:1829:G:C2	32:5:1830:G:C4	2.89	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1899:G:C6	32:5:1900:C:C5	2.89	0.61
32:5:2020:U:C2	32:5:2021:G:C8	2.89	0.61
32:5:2268:A:O4'	32:5:2270:G:N7	2.34	0.61
32:5:2361:G:H22	32:5:3859:G:H3'	1.65	0.61
32:5:2477:A:H2'	32:5:2478:C:H6	1.65	0.61
32:5:2589:C:N4	32:5:2590:G:C6	2.68	0.61
32:5:2612:G:C4	32:5:2613:C:C6	2.89	0.61
32:5:2676:A:C2	32:5:2677:G:H1'	2.36	0.61
32:5:3884:U:H2'	32:5:3885:G:O4'	2.01	0.61
32:5:3938:G:H5'	32:5:3938:G:N3	2.16	0.61
32:5:4258:C:N3	32:5:4259:C:C5	2.69	0.61
32:5:4355:G:N1	32:5:4356:G:N7	2.48	0.61
32:5:4735:G:C2	32:5:4736:C:C2	2.89	0.61
32:5:4755:G:N1	32:5:4876:U:C4	2.69	0.61
32:5:4984:C:C4	32:5:4985:U:C5	2.88	0.61
33:7:93:G:C2	33:7:94:C:N1	2.69	0.61
36:C:288:ASP:OD1	36:C:290:SER:N	2.34	0.61
54:S2:83:A:N1	54:S2:84:A:H1'	2.15	0.61
54:S2:654:A:C5	54:S2:655:A:C2	2.88	0.61
54:S2:697:G:C2	54:S2:734:C:C2	2.89	0.61
54:S2:752:G:C2	54:S2:791:C:O2	2.54	0.61
54:S2:1144:A:C2'	54:S2:1199:A:O2'	2.49	0.61
54:S2:1290:G:C2	54:S2:1291:A:C8	2.88	0.61
54:S2:1292:C:C2	86:Sf:150:PHE:CD1	2.89	0.61
54:S2:1488:C:O2	54:S2:1490:G:C8	2.54	0.61
54:S2:1603:G:O6	80:SS:28:PHE:CE1	2.54	0.61
54:S2:1808:U:O2	54:S2:1809:A:C8	2.54	0.61
8:N:150:TRP:HE3	8:N:151:ILE:N	1.98	0.61
25:g:76:ARG:NH1	32:5:2583:C:OP2	2.33	0.61
26:h:119:PHE:N	26:h:119:PHE:CD1	2.69	0.61
32:5:100:C:C6	32:5:101:A:H8	2.11	0.61
32:5:271:C:C4	32:5:272:U:H5	2.19	0.61
32:5:295:A:N7	32:5:316:U:O2'	2.30	0.61
32:5:320:C:C4	32:5:321:U:C5	2.89	0.61
32:5:458:C:C4	32:5:459:C:C5	2.88	0.61
32:5:973:G:O6	32:5:1282:G:C2	2.53	0.61
32:5:976:G:H22	32:5:1277:G:H22	1.48	0.61
32:5:1324:A:C2	32:5:3876:A:C2'	2.82	0.61
32:5:1410:U:C5	32:5:1815:G:C2	2.89	0.61
32:5:1682:A:H3'	32:5:1683:U:H6	1.65	0.61
32:5:1779:U:C2	32:5:1780:A:C8	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1949:U:O2	32:5:1950:U:H6	1.79	0.61
32:5:2362:U:C4	32:5:3859:G:C2	2.88	0.61
32:5:2645:G:N1	32:5:2646:C:C4	2.69	0.61
32:5:3629:A:C1'	54:S2:1721:U:C4	2.83	0.61
32:5:3694:U:C2	32:5:3695:U:C5	2.88	0.61
32:5:4687:A:N1	32:5:4688:C:C5	2.69	0.61
32:5:4737:G:C2	32:5:4738:C:N3	2.69	0.61
33:7:17:C:O2	33:7:17:C:H2'	2.01	0.61
34:8:135:C:N3	34:8:136:U:C4	2.69	0.61
48:z:297:MET:HE2	48:z:355:PHE:CD1	2.27	0.61
48:z:386:GLU:OE2	48:z:402:ARG:NH1	2.31	0.61
51:4:234:A:O2'	51:4:235:G:H5'	2.00	0.61
54:S2:56:G:N1	54:S2:90:G:N3	2.49	0.61
54:S2:428:U:H4'	54:S2:429:C:OP2	2.00	0.61
54:S2:436:G:C6	54:S2:458:A:N3	2.69	0.61
54:S2:1112:U:C4	54:S2:1113:A:C5	2.88	0.61
54:S2:1121:G:C4	54:S2:1122:A:C8	2.89	0.61
54:S2:1406:G:C5	54:S2:1407:U:C6	2.89	0.61
54:S2:1508:A:N7	54:S2:1510:G:C8	2.67	0.61
54:S2:1640:A:N1	54:S2:1641:A:H1'	2.16	0.61
54:S2:1771:G:N2	54:S2:1772:C:C2	2.69	0.61
74:SF:198:ARG:NH1	74:SF:202:SER:OG	2.34	0.61
1:A:117:GLU:OE2	1:A:163:ARG:HD3	2.00	0.60
6:L:47:ALA:HB3	6:L:48:PRO:HD3	1.82	0.60
16:X:117:TYR:HD1	16:X:153:ILE:HG22	1.62	0.60
32:5:190:G:C2	32:5:252:C:O2	2.54	0.60
32:5:294:G:C4'	32:5:296:A:H5''	2.30	0.60
32:5:312:G:H2'	32:5:313:U:O4'	2.01	0.60
32:5:465:G:C2	32:5:466:A:C8	2.89	0.60
32:5:466:A:N1	32:5:467:U:C4	2.69	0.60
32:5:664:G:N2	32:5:667:A:C6	2.69	0.60
32:5:1204:C:N3	32:5:1205:G:N7	2.49	0.60
32:5:1212:G:N3	32:5:1213:G:C8	2.69	0.60
32:5:1249:C:C4	32:5:1250:C:C5	2.89	0.60
32:5:1298:C:C4	32:5:1299:G:N7	2.69	0.60
32:5:1299:G:C6	32:5:1300:G:N7	2.69	0.60
32:5:1520:C:H2'	32:5:1521:C:O4'	2.00	0.60
32:5:1552:G:H2'	32:5:1574:G:H22	1.65	0.60
32:5:1598:C:N3	32:5:1599:A:N7	2.48	0.60
32:5:1669:A:H2'	32:5:1670:G:O4'	2.01	0.60
32:5:1781:U:C2	32:5:1782:U:C6	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1798:G:O4'	32:5:4215:C:C6	2.54	0.60
32:5:1902:G:C6	32:5:2075:G:C2	2.89	0.60
32:5:2420:A:C2	32:5:2427:G:C2	2.89	0.60
32:5:2688:G:C2	32:5:2689:C:C6	2.89	0.60
32:5:4099:G:C4	32:5:4100:C:C6	2.89	0.60
32:5:4539:U:O2	32:5:4540:C:C6	2.54	0.60
34:8:131:G:O6	34:8:132:G:N7	2.33	0.60
46:K:48:LYS:HG2	46:K:52:ASP:OD2	2.01	0.60
51:4:57:G:N1	51:4:289:A:C6	2.69	0.60
54:S2:205:G:H2'	54:S2:206:G:O4'	2.00	0.60
54:S2:340:C:C4	54:S2:341:C:N4	2.69	0.60
54:S2:401:A:C8	54:S2:402:C:C6	2.89	0.60
54:S2:870:A:N6	54:S2:915:G:C2	2.69	0.60
54:S2:975:G:C6	54:S2:976:G:N7	2.69	0.60
54:S2:1149:A:N1	54:S2:1151:G:C4	2.69	0.60
54:S2:1175:G:C6	54:S2:1176:G:C5	2.89	0.60
54:S2:1508:A:C6	54:S2:1510:G:C8	2.89	0.60
54:S2:1709:G:N3	54:S2:1710:C:C6	2.68	0.60
54:S2:1840:U:O2	54:S2:1840:U:H2'	2.01	0.60
55:SA:158:ASP:OD2	66:SV:34:MET:HE2	2.00	0.60
59:SG:226:GLU:HA	59:SG:229:ALA:HB3	1.82	0.60
69:SY:23:MET:SD	69:SY:23:MET:N	2.74	0.60
83:SZ:50:PHE:CZ	83:SZ:58:LEU:CD1	2.82	0.60
7:M:17:PHE:C	7:M:17:PHE:HD2	2.09	0.60
11:R:7:GLN:N	11:R:7:GLN:OE1	2.35	0.60
11:R:131:VAL:HB	11:R:132:PHE:CE1	2.36	0.60
16:X:73:HIS:O	16:X:116:LEU:HD11	2.00	0.60
18:Z:77:TYR:HB2	21:c:39:ARG:CD	2.29	0.60
32:5:425:U:O4	34:8:9:A:N1	2.34	0.60
32:5:1263:A:H2'	32:5:1264:C:O4'	2.00	0.60
32:5:1370:G:O3'	32:5:1371:A:O4'	2.19	0.60
32:5:1618:G:N3	32:5:1619:G:C8	2.68	0.60
32:5:1973:G:C6	32:5:2002:A:N7	2.69	0.60
32:5:2335:C:H2'	32:5:2335:C:O2	2.00	0.60
32:5:3656:A:N3	32:5:3657:U:C6	2.69	0.60
32:5:3676:G:O2'	32:5:3677:U:H5'	2.01	0.60
32:5:3771:C:O2'	32:5:3772:U:H5'	2.01	0.60
32:5:3943:A:C6	32:5:3944:G:C5	2.89	0.60
32:5:4143:G:C5	32:5:4145:C:C6	2.88	0.60
32:5:4335:C:C2'	32:5:4336:A:O4'	2.46	0.60
32:5:4627:U:C2'	35:B:55:HIS:CE1	2.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4765:G:H22	32:5:4869:U:H3	1.46	0.60
34:8:64:U:N3	34:8:65:A:N6	2.49	0.60
34:8:101:C:C4	34:8:102:G:C5	2.89	0.60
46:K:107:ASP:HA	46:K:143:VAL:HG22	1.81	0.60
48:z:339:ILE:O	48:z:342:MET:N	2.34	0.60
50:3:34:A:C2	54:S2:1701:C:C5	2.79	0.60
54:S2:29:G:C6	54:S2:646:G:C4	2.89	0.60
54:S2:72:C:H4'	54:S2:73:C:OP1	2.00	0.60
54:S2:340:C:C4	54:S2:341:C:C4	2.88	0.60
54:S2:409:C:O2	54:S2:409:C:H2'	2.01	0.60
54:S2:476:A:H2	54:S2:488:U:O2	1.84	0.60
54:S2:634:A:C2	54:S2:635:G:N7	2.68	0.60
54:S2:818:A:C5	54:S2:819:G:C8	2.90	0.60
54:S2:923:G:C6	54:S2:924:G:N7	2.69	0.60
54:S2:949:G:C4	54:S2:950:C:C6	2.89	0.60
54:S2:950:C:N3	54:S2:951:C:C5	2.70	0.60
54:S2:1121:G:C5	54:S2:1122:A:C8	2.89	0.60
54:S2:1405:A:C4	54:S2:1406:G:C8	2.89	0.60
54:S2:1644:C:O2'	54:S2:1645:C:O4'	2.19	0.60
54:S2:1850:A:H2'	54:S2:1851:A:C8	2.37	0.60
57:SC:104:ASP:OD2	57:SC:130:ILE:HB	2.01	0.60
57:SC:190:SER:OG	57:SC:191:VAL:N	2.32	0.60
62:SJ:86:VAL:HG21	62:SJ:105:PHE:CE1	2.36	0.60
67:SW:77:PRO:HD2	67:SW:79:PHE:CZ	2.36	0.60
82:SU:66:ARG:HD2	82:SU:77:TRP:CD1	2.36	0.60
83:SZ:55:TYR:HE2	83:SZ:59:CYS:SG	2.15	0.60
12:S:29:ARG:HH12	13:T:150:LEU:HA	1.64	0.60
18:Z:49:TYR:HB3	18:Z:50:PRO:HD2	1.84	0.60
19:a:40:HIS:NE2	32:5:39:A:C2	2.69	0.60
20:b:12:GLN:O	20:b:15:LYS:N	2.33	0.60
23:e:38:PRO:HB2	23:e:43:ASN:OD1	2.02	0.60
32:5:30:C:H2'	32:5:31:U:C6	2.37	0.60
32:5:70:A:C1'	32:5:71:C:N4	2.64	0.60
32:5:1280:C:O2'	32:5:1281:G:H3'	2.01	0.60
32:5:1671:U:O4	32:5:1853:G:O2'	2.14	0.60
32:5:1685:G:C6	32:5:1686:C:N4	2.69	0.60
32:5:1844:G:C6	32:5:1845:U:C4	2.90	0.60
32:5:1899:G:N2	32:5:1900:C:N3	2.48	0.60
32:5:2376:A:H2'	32:5:2377:C:O4'	2.02	0.60
32:5:2417:A:C2	32:5:2418:A:N7	2.69	0.60
32:5:2505:C:H1'	32:5:2506:G:C6	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2507:A:C6	32:5:2508:U:N1	2.69	0.60
32:5:3800:A:N3	32:5:4496:A:H1'	2.16	0.60
32:5:4276:G:N1	32:5:4277:G:N9	2.48	0.60
35:B:100:ARG:HB3	35:B:100:ARG:CZ	2.31	0.60
48:z:361:SER:O	48:z:362:LYS:HB2	2.01	0.60
51:4:51:G:C6	51:4:52:C:C5	2.89	0.60
54:S2:70:G:C6	54:S2:71:G:C5	2.89	0.60
54:S2:310:C:N3	54:S2:311:C:C4	2.69	0.60
54:S2:533:A:C6	54:S2:534:G:N7	2.69	0.60
54:S2:634:A:N1	54:S2:635:G:N7	2.48	0.60
54:S2:1018:U:N3	54:S2:1019:C:H5	1.93	0.60
54:S2:1292:C:H2'	54:S2:1292:C:O2	2.00	0.60
54:S2:1434:C:H3'	54:S2:1435:C:O4'	2.01	0.60
54:S2:1810:U:C2	54:S2:1811:C:C6	2.89	0.60
74:SF:103:LEU:HD23	74:SF:178:ILE:HD13	1.82	0.60
13:T:140:PHE:CE1	32:5:1089:G:C5'	2.84	0.60
15:V:20:LEU:HD21	15:V:101:ASN:ND2	2.17	0.60
32:5:89:C:O2'	32:5:90:G:C5'	2.49	0.60
32:5:445:U:H2'	32:5:446:C:O4'	2.01	0.60
32:5:471:A:C6	32:5:472:C:C5	2.89	0.60
32:5:925:C:H2'	32:5:925:C:O2	2.02	0.60
32:5:933:G:C5	32:5:940:C:C4	2.90	0.60
32:5:1398:A:H2'	32:5:1398:A:OP1	2.02	0.60
32:5:1421:G:C2	32:5:1422:G:C5	2.90	0.60
32:5:1504:G:H2'	32:5:1505:C:O4'	2.02	0.60
32:5:1726:U:C4	32:5:1727:U:C5	2.90	0.60
32:5:1758:G:N2	32:5:1759:G:C4	2.70	0.60
32:5:1776:A:C6	32:5:1777:C:C4	2.89	0.60
32:5:1819:G:N2	32:5:1820:C:C2	2.69	0.60
32:5:1899:G:C8	32:5:2278:G:C6	2.85	0.60
32:5:2004:U:H2'	32:5:2005:G:O4'	2.00	0.60
32:5:2515:G:C6	32:5:2516:G:C4	2.90	0.60
32:5:3741:C:C4	32:5:3742:G:N7	2.69	0.60
32:5:3913:G:C2	32:5:4390:A:C2	2.88	0.60
32:5:4117:U:O2	32:5:4117:U:H2'	2.01	0.60
32:5:4518:A:N9	35:B:257:TRP:CH2	2.68	0.60
32:5:4651:A:C2	32:5:4652:G:H1'	2.36	0.60
32:5:4886:C:N3	32:5:4887:C:H5	1.99	0.60
32:5:5006:U:C5	41:W:50:ASN:HB2	2.37	0.60
32:5:5055:G:C2	32:5:5056:A:C5	2.89	0.60
33:7:59:G:N1	33:7:60:G:C4	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:F:101:ASN:OD1	38:F:101:ASN:N	2.34	0.60
54:S2:165:G:O2'	54:S2:166:A:H5'	2.00	0.60
54:S2:185:G:N3	54:S2:186:C:C6	2.68	0.60
54:S2:381:C:O2'	54:S2:382:C:C6	2.47	0.60
54:S2:823:U:C5	54:S2:824:C:H5	2.19	0.60
54:S2:949:G:C6	54:S2:950:C:C4	2.89	0.60
54:S2:1739:C:N3	54:S2:1740:C:C5	2.70	0.60
74:SF:140:ASP:HB2	84:Sc:56:LEU:HD21	1.84	0.60
6:L:18:TRP:CH2	6:L:19:GLN:HG2	2.36	0.60
13:T:82:GLY:HA3	20:b:16:TRP:HB2	1.82	0.60
16:X:155:ILE:O	16:X:156:ILE:HB	2.01	0.60
19:a:63:LEU:HD21	19:a:65:ARG:HE	1.66	0.60
32:5:27:C:O2'	32:5:60:G:C2'	2.50	0.60
32:5:158:A:C6	32:5:277:G:C5	2.89	0.60
32:5:167:C:C2	32:5:269:G:N2	2.69	0.60
32:5:650:C:H2'	32:5:651:C:C6	2.36	0.60
32:5:673:C:C2	32:5:674:G:C8	2.90	0.60
32:5:1291:G:N3	32:5:1292:C:C6	2.69	0.60
32:5:1357:C:N4	32:5:1380:G:N7	2.48	0.60
32:5:1466:G:N1	32:5:1467:C:C4	2.70	0.60
32:5:1555:G:C6	32:5:1556:C:C5	2.88	0.60
32:5:2315:G:N2	32:5:2316:G:C4	2.69	0.60
32:5:2328:G:C2	32:5:2329:U:C2	2.89	0.60
32:5:2409:U:O4	32:5:2783:A:C6	2.55	0.60
32:5:2577:C:H2'	32:5:2577:C:O2	2.02	0.60
32:5:2607:C:C2	32:5:2608:G:N7	2.69	0.60
32:5:2805:C:C4	32:5:2806:A:N7	2.69	0.60
32:5:2830:G:N3	32:5:2831:G:C8	2.70	0.60
32:5:3672:G:N7	32:5:3674:G:H1'	2.17	0.60
32:5:4077:A:H8	32:5:4077:A:O5'	1.85	0.60
32:5:4138:C:C2	32:5:4147:G:C2	2.89	0.60
32:5:4145:C:N3	32:5:4146:G:N7	2.48	0.60
32:5:4399:U:C4	32:5:4400:G:N7	2.69	0.60
32:5:4481:U:N3	32:5:4482:U:C5	2.68	0.60
32:5:4700:A:N6	32:5:4701:A:N6	2.50	0.60
32:5:4719:G:O2'	32:5:4720:C:H4'	2.02	0.60
33:7:29:C:C2	33:7:30:C:C5	2.89	0.60
48:z:43:ASP:CB	48:z:258:GLY:HA3	2.31	0.60
48:z:250:LEU:HD11	48:z:273:ILE:CD1	2.31	0.60
51:4:51:G:C6	51:4:52:C:C4	2.90	0.60
54:S2:140:C:O2'	54:S2:141:A:O4'	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:386:C:N3	54:S2:387:C:H5	1.92	0.60
54:S2:440:G:N2	54:S2:454:U:N3	2.49	0.60
54:S2:494:C:C2	54:S2:495:U:C5	2.89	0.60
54:S2:818:A:N6	54:S2:819:G:C5	2.70	0.60
54:S2:1034:A:C2	54:S2:1082:A:C2	2.88	0.60
54:S2:1102:G:N1	54:S2:1103:C:C4	2.69	0.60
54:S2:1350:U:C3'	55:SA:110:ASN:OD1	2.49	0.60
54:S2:1431:G:N3	54:S2:1432:U:H1'	2.16	0.60
54:S2:1661:A:OP2	85:Sd:32:ARG:NH2	2.35	0.60
54:S2:1839:U:O2	54:S2:1840:U:C6	2.54	0.60
67:SW:80:ASP:N	67:SW:80:ASP:OD1	2.34	0.60
87:Sg:17:TRP:HB3	87:Sg:303:THR:CA	2.30	0.60
3:G:166:LEU:CD1	32:5:150:U:O2	2.49	0.60
5:J:75:ARG:NH1	33:7:42:A:H1'	2.13	0.60
10:Q:104:ARG:NH2	32:5:1353:G:N7	2.50	0.60
17:Y:11:ARG:NE	36:C:200:ARG:HH22	1.99	0.60
22:d:86:VAL:C	22:d:87:ARG:HH12	2.10	0.60
32:5:54:G:C2	32:5:55:G:C1'	2.84	0.60
32:5:91:G:C8	32:5:93:G:C6	2.89	0.60
32:5:330:G:C2	32:5:331:G:C5	2.90	0.60
32:5:469:C:H2'	32:5:470:A:O4'	2.01	0.60
32:5:1070:G:C4	32:5:1071:C:C6	2.89	0.60
32:5:1263:A:C6	32:5:1264:C:C4	2.90	0.60
32:5:1572:U:H3'	32:5:1573:G:H8	1.64	0.60
32:5:1599:A:H2'	32:5:1600:A:H5''	1.83	0.60
32:5:2272:C:O2'	32:5:2273:G:O5'	2.19	0.60
32:5:2366:A:C2	32:5:3851:U:C1'	2.85	0.60
32:5:4216:G:N1	32:5:4217:G:C5	2.69	0.60
32:5:4312:U:C2	32:5:4313:A:C8	2.89	0.60
32:5:4551:U:C2	32:5:4552:U:H5	2.14	0.60
32:5:4723:A:N3	32:5:4724:A:C8	2.69	0.60
32:5:4896:G:N1	32:5:4897:G:C5	2.70	0.60
32:5:5031:G:N1	32:5:5032:C:C4	2.70	0.60
33:7:18:C:C4	33:7:19:C:C5	2.79	0.60
34:8:118:C:C2	34:8:119:C:C6	2.89	0.60
54:S2:70:G:N1	54:S2:80:G:C2	2.70	0.60
54:S2:372:U:H2'	54:S2:373:G:O5'	2.01	0.60
54:S2:437:G:C2	54:S2:457:C:O2	2.55	0.60
54:S2:1309:C:C2	86:Sf:143:LYS:NZ	2.66	0.60
54:S2:1572:C:N3	54:S2:1573:G:C8	2.69	0.60
54:S2:1589:A:H2'	54:S2:1590:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1717:C:C2	54:S2:1817:G:C2	2.89	0.60
80:SS:11:HIS:O	80:SS:12:ILE:HB	2.01	0.60
84:Sc:60:GLU:CG	84:Sc:63:ARG:HE	1.98	0.60
87:Sg:188:HIS:HB3	87:Sg:219:TRP:CE3	2.37	0.60
2:D:94:ASN:C	2:D:94:ASN:ND2	2.60	0.60
11:R:148:ASP:O	11:R:152:LYS:HB2	2.01	0.60
32:5:12:A:N1	32:5:14:C:C4	2.70	0.60
32:5:27:C:C2	32:5:28:C:C6	2.88	0.60
32:5:209:U:C2	32:5:233:U:C5	2.89	0.60
32:5:491:G:N2	32:5:663:G:C6	2.68	0.60
32:5:497:G:C2	32:5:657:C:C2	2.90	0.60
32:5:702:U:H2'	32:5:703:G:H4'	1.83	0.60
32:5:1093:C:C2	32:5:1094:G:C8	2.90	0.60
32:5:1189:G:C6	32:5:1190:C:C4	2.89	0.60
32:5:1619:G:C4	32:5:1620:U:C5	2.90	0.60
32:5:1872:G:C2	32:5:1873:A:C8	2.90	0.60
32:5:1891:A:H2'	32:5:1892:A:C8	2.36	0.60
32:5:1912:G:N1	32:5:1913:C:C4	2.70	0.60
32:5:2065:G:H2'	32:5:2066:C:O4'	2.01	0.60
32:5:2089:G:N1	32:5:2263:A:C5	2.67	0.60
32:5:2327:G:N2	32:5:2328:G:C8	2.70	0.60
32:5:2453:A:C6	32:5:2454:U:C4	2.90	0.60
32:5:2567:G:N1	32:5:2568:C:C4	2.70	0.60
32:5:2669:C:O2'	32:5:2670:C:H6	1.84	0.60
32:5:3711:A:H3'	32:5:3712:A:C5'	2.32	0.60
32:5:3945:A:C2	32:5:3946:G:C5	2.90	0.60
32:5:4112:C:C4	32:5:4113:U:C5	2.89	0.60
32:5:4277:G:N1	32:5:4278:C:C5	2.69	0.60
32:5:4455:G:C5	32:5:4456:C:C5	2.89	0.60
32:5:5035:U:C4	32:5:5036:C:C5	2.89	0.60
33:7:93:G:C6	33:7:94:C:C4	2.90	0.60
34:8:108:A:H2'	34:8:109:C:O4'	2.01	0.60
34:8:134:G:C6	34:8:135:C:C4	2.90	0.60
38:F:41:GLN:HA	38:F:41:GLN:HE21	1.67	0.60
46:K:2:PRO:HD3	46:K:6:ASP:HB2	1.83	0.60
48:z:404:GLN:CB	52:9:72:TRP:HE1	2.11	0.60
51:4:51:G:C5	51:4:52:C:C5	2.89	0.60
51:4:212:C:O2'	51:4:214:A:OP2	2.18	0.60
54:S2:401:A:C8	54:S2:402:C:C5	2.89	0.60
54:S2:497:C:N3	54:S2:506:G:C2	2.70	0.60
54:S2:618:C:C4	54:S2:619:A:C5	2.87	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:796:G:H3'	54:S2:797:C:C5'	2.32	0.60
54:S2:999:G:C5	54:S2:1000:C:C5	2.89	0.60
54:S2:1283:C:H2'	54:S2:1283:C:O2	2.00	0.60
54:S2:1378:A:N6	55:SA:105:PRO:HA	2.16	0.60
54:S2:1392:U:N3	54:S2:1393:G:C8	2.70	0.60
54:S2:1524:G:C6	54:S2:1525:C:C5	2.89	0.60
54:S2:1563:G:N2	54:S2:1564:C:C2	2.69	0.60
56:SB:52:THR:O	56:SB:53:GLN:HB3	2.00	0.60
60:SH:177:TYR:HE2	60:SH:185:VAL:HG21	1.67	0.60
62:SJ:132:GLN:HB2	62:SJ:134:HIS:HD2	1.67	0.60
79:SR:10:LYS:HD3	79:SR:53:TYR:CE2	2.36	0.60
84:Sc:60:GLU:CG	84:Sc:63:ARG:CD	2.66	0.60
8:N:120:TRP:CD1	8:N:121:VAL:N	2.70	0.60
32:5:120:A:H2	32:5:148:C:O2	1.84	0.60
32:5:382:G:H2'	32:5:383:A:H2'	1.83	0.60
32:5:516:C:N3	32:5:646:G:C2	2.70	0.60
32:5:711:A:N3	32:5:712:C:C6	2.70	0.60
32:5:965:G:H2'	32:5:965:G:N3	2.17	0.60
32:5:1171:G:C6	32:5:1172:C:C4	2.90	0.60
32:5:1264:C:N3	32:5:1265:G:N7	2.50	0.60
32:5:1413:C:C2	32:5:1414:C:C5	2.90	0.60
32:5:1467:C:N3	32:5:1468:C:C5	2.70	0.60
32:5:1684:A:C5	32:5:1685:G:C8	2.90	0.60
32:5:1902:G:C2'	32:5:1903:G:O5'	2.50	0.60
32:5:2436:U:C5	32:5:2783:A:O4'	2.55	0.60
32:5:2438:A:N7	32:5:2781:G:O6	2.34	0.60
32:5:2439:G:C8	32:5:2777:G:C6	2.89	0.60
32:5:2453:A:N6	32:5:2454:U:C4	2.70	0.60
32:5:2495:U:O2	32:5:2496:G:H8	1.83	0.60
32:5:3721:U:C2	32:5:3722:G:C8	2.90	0.60
32:5:3800:A:C2	32:5:4496:A:C1'	2.85	0.60
32:5:4426:C:C4	32:5:4427:G:C8	2.90	0.60
32:5:4482:U:C2	32:5:4483:C:H5	2.20	0.60
32:5:4508:C:N3	32:5:4512:U:H5	1.99	0.60
32:5:4880:C:O2'	32:5:4881:U:H5'	2.00	0.60
32:5:5020:G:C6	32:5:5021:C:C4	2.90	0.60
32:5:5051:C:N3	32:5:5052:C:C5	2.70	0.60
34:8:59:A:OP1	34:8:60:G:O2'	2.20	0.60
34:8:99:U:N3	34:8:100:U:C5	2.69	0.60
51:4:235:G:O2'	51:4:236:U:O5'	2.18	0.60
54:S2:17:C:C2	54:S2:18:C:C5	2.90	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:69:C:H2'	54:S2:70:G:C8	2.37	0.60
54:S2:74:G:N2	54:S2:77:A:OP2	2.35	0.60
54:S2:311:C:C3'	54:S2:312:G:H4'	2.32	0.60
54:S2:340:C:N3	54:S2:341:C:C5	2.69	0.60
54:S2:388:U:C2	54:S2:389:A:N7	2.70	0.60
54:S2:651:U:HO2'	54:S2:652:U:C5'	2.14	0.60
54:S2:656:G:H21	54:S2:663:C:H5'	1.67	0.60
54:S2:964:A:C2	54:S2:965:U:O4	2.55	0.60
54:S2:993:G:C6	54:S2:994:C:C4	2.90	0.60
54:S2:1030:A:N3	54:S2:1031:A:C8	2.70	0.60
54:S2:1034:A:C2'	54:S2:1035:A:O5'	2.49	0.60
54:S2:1066:U:O4	54:S2:1067:C:C5	2.55	0.60
54:S2:1310:U:O5'	86:Sf:143:LYS:HE2	2.00	0.60
54:S2:1741:U:C4	54:S2:1742:C:C5	2.90	0.60
74:SF:121:PRO:C	74:SF:146:ARG:HD2	2.26	0.60
83:SZ:50:PHE:CE1	83:SZ:58:LEU:CD1	2.85	0.60
1:A:85:GLY:CA	32:5:4121:G:N2	2.65	0.60
8:N:11:TRP:CE3	8:N:19:MET:HE2	2.36	0.60
32:5:202:C:C2	32:5:214:G:C2	2.89	0.60
32:5:744:G:C2	32:5:745:G:C5	2.89	0.60
32:5:1387:A:N3	32:5:1397:A:N6	2.49	0.60
32:5:1412:G:C2	32:5:1413:C:C4	2.90	0.60
32:5:1421:G:N1	32:5:1422:G:C5	2.70	0.60
32:5:1487:G:C2	32:5:1488:G:C1'	2.84	0.60
32:5:1563:A:H61	54:S2:677:G:H1'	1.67	0.60
32:5:1828:C:C2	32:5:1829:G:C8	2.89	0.60
32:5:2036:C:N4	32:5:2037:C:H41	1.99	0.60
32:5:2451:A:C6	32:5:2452:G:N9	2.70	0.60
32:5:2783:A:N3	32:5:2784:C:C6	2.69	0.60
32:5:3632:C:C4	32:5:3633:C:C5	2.89	0.60
32:5:4071:U:O2	32:5:4072:C:C6	2.55	0.60
32:5:4229:U:O4	32:5:4230:C:C4	2.54	0.60
32:5:4396:A:C2	32:5:4397:A:C8	2.90	0.60
32:5:4982:A:C5	32:5:4983:C:C6	2.90	0.60
34:8:96:C:O2	34:8:96:C:H2'	2.00	0.60
43:n:8:LYS:HE3	54:S2:1846:G:O6	2.02	0.60
46:K:86:LYS:C	46:K:104:ILE:HG21	2.27	0.60
48:z:344:PRO:O	48:z:346:SER:CB	2.50	0.60
48:z:405:ARG:CD	51:4:207:C:C3'	2.79	0.60
51:4:49:A:H2'	51:4:50:G:O4'	2.01	0.60
54:S2:98:C:O2	54:S2:409:C:C6	2.54	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:300:U:C2	54:S2:301:A:C8	2.90	0.60
54:S2:404:G:C2	54:S2:405:G:C4	2.90	0.60
54:S2:426:A:C6	54:S2:427:U:C5	2.90	0.60
54:S2:508:A:C6	54:S2:509:G:H1'	2.36	0.60
54:S2:649:U:O2	54:S2:649:U:C2'	2.50	0.60
54:S2:832:G:C4	54:S2:833:C:C6	2.90	0.60
54:S2:993:G:N2	54:S2:994:C:H1'	2.17	0.60
54:S2:1039:C:N3	54:S2:1040:G:N7	2.49	0.60
54:S2:1180:C:H2'	54:S2:1180:C:O2	2.02	0.60
54:S2:1185:C:C4	54:S2:1186:U:C5	2.90	0.60
54:S2:1289:U:C4	54:S2:1290:G:C5	2.90	0.60
54:S2:1293:A:C1'	86:Sf:150:PHE:CD2	2.85	0.60
54:S2:1406:G:H2'	54:S2:1407:U:C1'	2.32	0.60
54:S2:1610:G:C2	54:S2:1611:G:C4	2.90	0.60
54:S2:1709:G:C6	54:S2:1710:C:C5	2.90	0.60
54:S2:1776:G:N3	54:S2:1777:G:C8	2.69	0.60
55:SA:121:LEU:HD12	55:SA:143:PRO:HB2	1.84	0.60
56:SB:58:ALA:O	56:SB:60:ASP:N	2.35	0.60
62:SJ:136:ARG:HD2	62:SJ:160:SER:HA	1.83	0.60
11:R:120:TYR:CD1	11:R:120:TYR:C	2.80	0.60
32:5:218:A:C8	36:C:181:LYS:HG3	2.37	0.60
32:5:471:A:N6	32:5:472:C:C5	2.69	0.60
32:5:699:C:C4	32:5:700:G:N7	2.70	0.60
32:5:737:C:C4	32:5:738:C:C5	2.90	0.60
32:5:750:U:N3	32:5:751:G:C8	2.70	0.60
32:5:976:G:C6	32:5:977:C:C4	2.90	0.60
32:5:992:C:N3	32:5:993:G:N7	2.49	0.60
32:5:1075:G:C6	32:5:1076:C:C4	2.90	0.60
32:5:1776:A:C5	32:5:1777:C:C5	2.89	0.60
32:5:1780:A:C2	32:5:1781:U:H1'	2.37	0.60
32:5:1944:A:N6	32:5:1945:G:C5	2.70	0.60
32:5:2314:G:C5	32:5:2326:G:C4	2.90	0.60
32:5:2438:A:C6	32:5:2441:C:C6	2.88	0.60
32:5:2463:G:N2	32:5:2464:C:N3	2.49	0.60
32:5:2714:G:C2	32:5:2715:G:N7	2.69	0.60
32:5:2756:G:C2	32:5:2757:A:C5	2.90	0.60
32:5:3723:A:C4	32:5:3724:A:N7	2.70	0.60
32:5:3727:A:O2'	32:5:3728:A:C5'	2.50	0.60
32:5:4187:G:H2'	32:5:4188:U:O4'	2.01	0.60
32:5:4498:U:N3	32:5:4500:U:OP2	2.34	0.60
32:5:4733:C:N4	32:5:4734:A:O2'	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4896:G:N2	32:5:4897:G:C4	2.70	0.60
33:7:42:A:C2	33:7:43:U:C5	2.88	0.60
34:8:60:G:H1'	34:8:61:A:P	2.41	0.60
34:8:101:C:C2	34:8:102:G:C8	2.90	0.60
47:q:184:SER:O	47:q:185:PHE:HB2	2.00	0.60
54:S2:381:C:C6	54:S2:381:C:O5'	2.55	0.60
54:S2:625:G:H4'	54:S2:629:A:C2	2.36	0.60
54:S2:806:U:N3	54:S2:807:G:C8	2.70	0.60
54:S2:999:G:N1	54:S2:1000:C:C5	2.70	0.60
54:S2:1243:U:C2	54:S2:1265:A:C2	2.90	0.60
54:S2:1256:G:H2'	54:S2:1256:G:N3	2.15	0.60
54:S2:1283:C:O2	54:S2:1283:C:C2'	2.49	0.60
54:S2:1287:A:C6	54:S2:1314:U:C4	2.90	0.60
54:S2:1413:G:C6	54:S2:1414:A:C8	2.90	0.60
54:S2:1455:A:N3	54:S2:1455:A:H2'	2.17	0.60
54:S2:1563:G:N3	54:S2:1564:C:C6	2.70	0.60
54:S2:1578:U:H6	73:SD:6:SER:CA	2.15	0.60
54:S2:1757:G:C2	54:S2:1758:G:C8	2.90	0.60
74:SF:122:ARG:CB	84:Sc:57:THR:HG21	2.18	0.60
3:G:53:ARG:O	32:5:4164:C:H4'	2.02	0.59
4:H:117:PHE:C	4:H:117:PHE:CD1	2.78	0.59
25:g:13:TYR:O	25:g:14:ASN:C	2.43	0.59
32:5:209:U:N3	32:5:233:U:C5	2.70	0.59
32:5:259:C:C4	32:5:260:C:C5	2.89	0.59
32:5:328:A:C2	32:5:329:A:C5	2.91	0.59
32:5:471:A:C2	32:5:472:C:C1'	2.85	0.59
32:5:660:A:N1	32:5:661:C:C5	2.70	0.59
32:5:1188:C:C2	32:5:1189:G:C8	2.89	0.59
32:5:1251:C:C2	32:5:1252:C:C6	2.90	0.59
32:5:1601:A:N7	32:5:3643:A:C8	2.69	0.59
32:5:1683:U:O2	32:5:1683:U:C2'	2.50	0.59
32:5:1688:G:N2	32:5:1849:U:O2	2.35	0.59
32:5:1950:U:C2	32:5:1951:G:N7	2.69	0.59
32:5:2056:G:C6	32:5:2058:G:C5	2.90	0.59
32:5:2724:G:N3	32:5:2726:G:N7	2.47	0.59
32:5:4194:U:O2'	32:5:4221:C:N4	2.35	0.59
32:5:4236:G:H4'	32:5:4328:G:O2'	2.02	0.59
32:5:4271:A:H3'	32:5:4272:G:H21	1.66	0.59
32:5:4283:G:C6	32:5:4284:C:H5	2.19	0.59
32:5:4333:C:H2'	32:5:4334:U:O5'	2.02	0.59
32:5:4470:G:N2	32:5:4486:C:C2	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:I:9:TYR:HD2	39:I:97:ILE:CG1	2.12	0.59
45:r:7:TRP:CD1	45:r:38:PHE:CD1	2.91	0.59
51:4:25:U:C5	89:S4:59:ARG:NH1	2.70	0.59
54:S2:56:G:O6	54:S2:90:G:C2	2.55	0.59
54:S2:570:C:C2	54:S2:571:U:C6	2.90	0.59
54:S2:862:A:C5	54:S2:863:U:C5	2.90	0.59
54:S2:955:A:C5	54:S2:969:U:C5	2.90	0.59
54:S2:999:G:C6	54:S2:1000:C:C4	2.90	0.59
54:S2:1061:U:O2	54:S2:1061:U:H2'	2.02	0.59
54:S2:1258:A:N1	54:S2:1663:A:C5	2.70	0.59
54:S2:1392:U:N3	54:S2:1393:G:N7	2.50	0.59
54:S2:1660:C:O4'	54:S2:1660:C:O2	2.18	0.59
56:SB:60:ASP:C	56:SB:62:LEU:H	2.10	0.59
2:D:72:ASP:OD1	33:7:7:G:O2'	2.13	0.59
6:L:190:ARG:NH2	32:5:4352:U:OP1	2.34	0.59
11:R:163:ARG:HG2	54:S2:871:U:O2'	2.02	0.59
17:Y:5:PRO:O	17:Y:6:PHE:HB2	2.02	0.59
23:e:50:LYS:HB2	32:5:1884:C:OP1	2.02	0.59
32:5:90:G:N7	32:5:92:C:N1	2.49	0.59
32:5:123:C:H2'	32:5:123:C:O2	2.01	0.59
32:5:124:C:C2	32:5:125:C:C6	2.89	0.59
32:5:226:G:O2'	32:5:227:A:OP2	2.16	0.59
32:5:293:G:H4'	32:5:294:G:H8	1.67	0.59
32:5:717:U:C4	32:5:718:C:C5	2.90	0.59
32:5:1421:G:N3	32:5:1422:G:C8	2.70	0.59
32:5:1760:G:C5	32:5:1761:G:C8	2.89	0.59
32:5:1787:A:O2'	32:5:1788:A:C8	2.55	0.59
32:5:1804:A:H4'	32:5:1805:A:O5'	2.02	0.59
32:5:2036:C:H42	32:5:2037:C:H41	1.48	0.59
32:5:2245:G:H2'	32:5:2246:C:O4'	2.01	0.59
32:5:2316:G:N1	32:5:2317:C:N4	2.50	0.59
32:5:2391:G:N3	32:5:2392:C:C6	2.71	0.59
32:5:2593:C:C2	32:5:2594:C:C6	2.90	0.59
32:5:3668:C:N4	32:5:3669:G:C5	2.70	0.59
32:5:4933:C:N4	32:5:4934:A:N7	2.50	0.59
35:B:291:TYR:CZ	35:B:327:THR:HA	2.37	0.59
41:W:50:ASN:HA	41:W:55:TYR:CE2	2.37	0.59
47:q:66:ARG:HD2	47:q:69:LEU:HD22	1.83	0.59
48:z:405:ARG:HD2	51:4:207:C:H5''	1.83	0.59
50:3:16:U:N3	50:3:59:A:C6	2.70	0.59
51:4:186:C:H5''	51:4:187:G:OP2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:215:A:H8	51:4:215:A:O5'	1.85	0.59
54:S2:504:G:O2'	54:S2:505:G:C5'	2.50	0.59
54:S2:793:G:O6	54:S2:794:A:C4	2.55	0.59
54:S2:909:G:N1	54:S2:910:G:C5	2.70	0.59
54:S2:910:G:C6	54:S2:911:C:C4	2.90	0.59
54:S2:1040:G:N1	54:S2:1041:G:C4	2.70	0.59
54:S2:1317:C:N3	54:S2:1318:G:C8	2.70	0.59
54:S2:1354:G:H2'	54:S2:1354:G:N3	2.17	0.59
54:S2:1409:A:N3	54:S2:1410:C:C6	2.70	0.59
54:S2:1595:U:H2'	54:S2:1595:U:O2	2.00	0.59
54:S2:1700:C:C2	54:S2:1834:A:N6	2.70	0.59
76:SM:93:LYS:O	76:SM:94:ILE:HG22	2.02	0.59
79:SR:104:GLU:HA	79:SR:104:GLU:OE1	2.02	0.59
32:5:38:A:C2	32:5:41:C:C4	2.90	0.59
32:5:104:G:O2'	32:5:1361:G:O2'	2.17	0.59
32:5:235:A:N1	32:5:238:C:C5	2.70	0.59
32:5:665:C:O2	32:5:665:C:C2'	2.50	0.59
32:5:1175:A:N1	32:5:1176:C:C5	2.71	0.59
32:5:1321:G:N2	32:5:3876:A:O4'	2.36	0.59
32:5:2282:A:H2'	32:5:2283:G:C5'	2.32	0.59
32:5:2445:C:C2	32:5:2446:C:C5	2.91	0.59
32:5:2454:U:H2'	32:5:2454:U:O2	2.02	0.59
32:5:2597:G:N1	32:5:2749:C:C2	2.70	0.59
32:5:2657:G:H3'	32:5:2658:G:C8	2.37	0.59
32:5:3820:G:C6	32:5:3821:A:C5	2.90	0.59
32:5:3861:A:C2	32:5:3862:A:C8	2.91	0.59
32:5:4281:A:C5	32:5:4283:G:C8	2.89	0.59
32:5:4406:U:N3	32:5:4407:G:N7	2.50	0.59
32:5:4878:C:O2	32:5:4878:C:H2'	2.01	0.59
34:8:82:A:C6	34:8:83:C:H5''	2.37	0.59
38:F:248:ARG:CZ	38:F:248:ARG:HB3	2.31	0.59
48:z:339:ILE:C	48:z:342:MET:N	2.59	0.59
50:3:27:U:C2	50:3:28:U:C5	2.90	0.59
50:3:31:C:H2'	50:3:32:C:H6	1.66	0.59
54:S2:378:U:N3	54:S2:379:C:C4	2.69	0.59
54:S2:608:C:C4	54:S2:609:U:C5	2.91	0.59
54:S2:633:C:N3	54:S2:634:A:N7	2.50	0.59
54:S2:1251:A:H2'	54:S2:1251:A:N3	2.17	0.59
54:S2:1707:U:O2	54:S2:1849:G:N2	2.35	0.59
74:SF:128:ILE:HD11	84:Sc:68:LEU:CA	2.31	0.59
81:ST:62:ARG:HG3	81:ST:62:ARG:HH21	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:18:TRP:CZ2	6:L:19:GLN:HG2	2.37	0.59
19:a:7:LYS:NZ	32:5:2285:A:OP2	2.35	0.59
22:d:78:ARG:NH1	32:5:4636:U:O4	2.35	0.59
32:5:451:C:C4	32:5:1295:C:H2'	2.38	0.59
32:5:981:C:C4	37:E:69:TYR:CZ	2.90	0.59
32:5:1266:G:O2'	32:5:1267:C:H5'	2.02	0.59
32:5:1277:G:N3	32:5:1278:C:C6	2.69	0.59
32:5:1289:C:N3	32:5:1290:G:C8	2.71	0.59
32:5:1305:C:H2'	32:5:1306:C:O4'	2.02	0.59
32:5:1756:U:O4	32:5:1775:A:C6	2.50	0.59
32:5:1866:U:O2'	32:5:1867:A:H8	1.81	0.59
32:5:1946:G:C2	32:5:2037:C:C2	2.91	0.59
32:5:2270:G:C2	32:5:2271:C:N3	2.70	0.59
32:5:2316:G:N3	32:5:2317:C:C6	2.70	0.59
32:5:2735:G:N2	32:5:2736:G:C8	2.70	0.59
32:5:2739:C:H4'	44:p:52:VAL:HG21	1.85	0.59
32:5:2844:A:C5	32:5:3839:G:C8	2.91	0.59
32:5:3724:A:N1	32:5:3729:U:C2	2.70	0.59
32:5:3755:G:C5	32:5:3770:U:N3	2.70	0.59
32:5:3807:A:C2	32:5:3808:C:C6	2.90	0.59
32:5:3846:C:N3	32:5:3847:C:C6	2.70	0.59
32:5:3857:G:C4	32:5:3858:C:C6	2.91	0.59
32:5:3862:A:C2	32:5:3863:C:H1'	2.38	0.59
32:5:4255:A:C2	32:5:4256:A:N3	2.70	0.59
32:5:4730:C:H5''	32:5:4965:U:O2	2.02	0.59
48:z:410:SER:HA	51:4:194:G:C4	2.37	0.59
50:3:38:C:O2	50:3:39:G:C8	2.50	0.59
54:S2:92:A:C6	54:S2:447:A:C4	2.90	0.59
54:S2:1040:G:C5	54:S2:1041:G:C8	2.90	0.59
54:S2:1137:U:H3	54:S2:1148:A:N6	2.00	0.59
54:S2:1435:C:C4	54:S2:1436:C:C5	2.89	0.59
54:S2:1781:A:C2	54:S2:1782:G:C6	2.91	0.59
56:SB:27:LYS:CA	56:SB:51:ARG:NH1	2.64	0.59
57:SC:199:PRO:CD	57:SC:223:TYR:OH	2.50	0.59
79:SR:98:VAL:O	79:SR:117:LEU:HD22	2.02	0.59
79:SR:100:PRO:HD3	79:SR:119:VAL:CG1	2.16	0.59
2:D:51:MET:HE1	2:D:163:LEU:HA	1.84	0.59
14:U:97:ARG:O	14:U:98:ASP:HB2	2.03	0.59
32:5:56:A:C2	32:5:57:G:C5	2.90	0.59
32:5:293:G:C4'	32:5:294:G:C8	2.86	0.59
32:5:671:G:N1	32:5:672:C:C4	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:984:C:N3	32:5:1070:G:C2	2.70	0.59
32:5:1188:C:N3	32:5:1189:G:C8	2.70	0.59
32:5:1310:C:O2	32:5:1311:G:C8	2.56	0.59
32:5:1602:U:H2'	32:5:1602:U:O2	2.01	0.59
32:5:1723:A:N1	32:5:1838:A:C2	2.71	0.59
32:5:1936:C:C6	33:7:84:U:H6	2.15	0.59
32:5:2438:A:C5	32:5:2441:C:C5	2.89	0.59
32:5:2557:G:H2'	32:5:2558:C:O4'	2.02	0.59
32:5:2597:G:C2	32:5:2749:C:O2	2.55	0.59
32:5:3690:U:C2	32:5:3691:G:C8	2.91	0.59
32:5:4324:A:C2	32:5:4325:A:N7	2.70	0.59
32:5:4426:C:N4	32:5:4427:G:C6	2.70	0.59
32:5:5042:A:C6	32:5:5043:A:C6	2.90	0.59
33:7:93:G:C4	33:7:94:C:C6	2.90	0.59
34:8:68:G:N2	34:8:91:A:N3	2.50	0.59
49:2:128:VAL:HG23	50:3:76:A:H4'	1.82	0.59
53:6:52:LEU:HD22	53:6:116:LEU:HB3	1.83	0.59
54:S2:37:C:N3	54:S2:38:A:C8	2.70	0.59
54:S2:114:G:H2'	54:S2:114:G:N3	2.16	0.59
54:S2:440:G:H2'	54:S2:441:C:O4'	2.03	0.59
54:S2:1176:G:C6	54:S2:1177:U:C4	2.91	0.59
54:S2:1501:C:C4	54:S2:1502:C:C5	2.91	0.59
54:S2:1542:C:O2'	54:S2:1543:U:O5'	2.21	0.59
54:S2:1826:G:C2	54:S2:1827:U:C5	2.91	0.59
54:S2:1843:G:C2'	54:S2:1844:U:O5'	2.50	0.59
88:S1:46:LEU:C	88:S1:47:VAL:HG13	2.26	0.59
7:M:81:ASP:OD1	7:M:84:ALA:HB3	2.03	0.59
13:T:158:PHE:C	13:T:158:PHE:CD1	2.79	0.59
19:a:59:ARG:HB3	19:a:61:TYR:CD2	2.37	0.59
21:c:31:TYR:HD1	21:c:32:LYS:N	2.01	0.59
25:g:9:ARG:HE	32:5:2441:C:H4'	1.67	0.59
32:5:289:C:N4	32:5:290:U:O4	2.36	0.59
32:5:463:A:N1	32:5:692:A:C2	2.71	0.59
32:5:662:C:H2'	32:5:663:G:H8	1.66	0.59
32:5:908:G:C6	32:5:909:A:N7	2.71	0.59
32:5:1171:G:C5	32:5:1172:C:C5	2.91	0.59
32:5:1287:G:N1	32:5:1289:C:C5	2.70	0.59
32:5:1751:A:N6	32:5:1752:G:N7	2.49	0.59
32:5:1960:A:C2	47:q:14:PHE:CE2	2.90	0.59
32:5:2399:G:N1	32:5:2400:G:N7	2.50	0.59
32:5:2438:A:N1	32:5:2441:C:C5	2.71	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2439:G:C6	32:5:2440:U:C4	2.90	0.59
32:5:2455:G:H2'	32:5:2456:G:O5'	2.02	0.59
32:5:2656:U:H2'	32:5:2657:G:O4'	2.03	0.59
32:5:2714:G:N3	32:5:2715:G:C8	2.70	0.59
32:5:3862:A:C5	32:5:3863:C:C6	2.91	0.59
32:5:3912:U:C2'	32:5:3913:G:H5'	2.32	0.59
32:5:4199:C:N3	32:5:4200:G:H8	1.99	0.59
32:5:4896:G:C2	32:5:4897:G:C4	2.90	0.59
32:5:5050:C:C1'	35:B:374:PHE:CE2	2.86	0.59
38:F:202:ARG:N	38:F:202:ARG:HD2	2.17	0.59
49:2:77:LEU:O	49:2:81:LEU:HG	2.03	0.59
50:3:19:U:C2	50:3:57:G:N2	2.69	0.59
50:3:39:G:C5	50:3:40:C:C5	2.91	0.59
51:4:45:G:C6	51:4:46:C:C4	2.90	0.59
54:S2:26:U:O2	54:S2:26:U:C2'	2.48	0.59
54:S2:156:G:OP1	59:SG:2:LYS:NZ	2.36	0.59
54:S2:367:U:H4'	54:S2:371:A:H8	1.67	0.59
54:S2:579:C:N4	54:S2:580:U:C4	2.70	0.59
54:S2:824:C:H2'	54:S2:825:A:O5'	2.03	0.59
54:S2:832:G:C2	54:S2:833:C:C1'	2.86	0.59
54:S2:960:U:O4	65:SO:66:ARG:HA	2.03	0.59
54:S2:1163:C:O2	54:S2:1164:G:N7	2.35	0.59
54:S2:1203:G:H3'	54:S2:1204:A:H8	1.67	0.59
54:S2:1233:G:C5	54:S2:1234:C:C5	2.91	0.59
54:S2:1280:G:C6	54:S2:1281:G:N7	2.71	0.59
54:S2:1840:U:N3	54:S2:1841:C:H5	1.97	0.59
56:SB:62:LEU:HD12	56:SB:62:LEU:O	2.03	0.59
57:SC:170:TRP:CH2	67:SW:97:ARG:CD	2.85	0.59
84:Sc:12:ALA:HB2	84:Sc:34:PHE:C	2.27	0.59
84:Sc:50:VAL:HG12	84:Sc:51:ARG:N	2.17	0.59
11:R:118:HIS:HA	32:5:2663:G:OP1	2.01	0.59
19:a:12:ARG:NH1	32:5:1660:U:O4	2.36	0.59
19:a:63:LEU:HD22	19:a:65:ARG:HH11	1.68	0.59
32:5:99:A:C2	32:5:100:C:C2	2.91	0.59
32:5:161:G:N2	32:5:275:C:N3	2.46	0.59
32:5:165:A:H3'	32:5:166:C:H6	1.67	0.59
32:5:433:A:H2'	32:5:434:A:O4'	2.01	0.59
32:5:479:G:C2	32:5:480:C:C6	2.91	0.59
32:5:978:G:C6	32:5:979:C:C4	2.90	0.59
32:5:1487:G:C2	32:5:1488:G:H1'	2.37	0.59
32:5:1846:G:N1	32:5:1847:C:C4	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2079:G:N3	32:5:2080:U:C5	2.67	0.59
32:5:2399:G:C6	32:5:2400:G:N7	2.71	0.59
32:5:2477:A:H2'	32:5:2478:C:C6	2.37	0.59
32:5:2712:G:N2	32:5:2713:C:C2	2.71	0.59
32:5:2712:G:C2	32:5:2713:C:C6	2.91	0.59
32:5:3795:A:C5	32:5:3796:U:C5	2.91	0.59
32:5:3846:C:N3	32:5:3847:C:H5	1.99	0.59
32:5:3873:G:C2'	32:5:3874:G:O4'	2.48	0.59
32:5:4139:G:C6	32:5:4140:C:C5	2.90	0.59
32:5:4237:C:H2'	32:5:4238:G:O4'	2.02	0.59
32:5:4323:A:H3'	32:5:4324:A:H8	1.67	0.59
32:5:4441:A:H5''	32:5:4441:A:C8	2.38	0.59
32:5:4548:A:H4'	32:5:4549:G:H5'	1.84	0.59
33:7:21:G:H8	33:7:21:G:H5''	1.67	0.59
34:8:10:G:O6	34:8:11:C:C4	2.56	0.59
51:4:18:G:C6	51:4:19:C:N4	2.71	0.59
54:S2:10:G:C6	54:S2:11:A:C5	2.91	0.59
54:S2:26:U:C2	54:S2:27:A:H8	2.21	0.59
54:S2:52:G:C5	54:S2:53:C:C6	2.91	0.59
54:S2:418:A:C2	54:S2:419:G:C8	2.90	0.59
54:S2:568:C:C5	54:S2:569:A:C8	2.91	0.59
54:S2:624:C:H1'	54:S2:631:U:O2	2.02	0.59
54:S2:665:G:C2	54:S2:671:A:C8	2.90	0.59
54:S2:874:G:H3'	54:S2:875:A:H5''	1.83	0.59
54:S2:1108:G:C2	54:S2:1125:C:C2	2.90	0.59
54:S2:1126:G:N1	54:S2:1127:C:C4	2.70	0.59
54:S2:1294:G:O4'	86:Sf:152:LYS:HA	2.02	0.59
54:S2:1328:G:C2	54:S2:1502:C:C2	2.90	0.59
54:S2:1528:G:N2	54:S2:1529:C:N3	2.49	0.59
54:S2:1528:G:O2'	54:S2:1666:C:OP1	2.20	0.59
56:SB:27:LYS:HA	56:SB:51:ARG:HH12	1.67	0.59
76:SM:87:GLU:HA	76:SM:91:LEU:HD11	1.82	0.59
79:SR:91:LEU:HD13	79:SR:93:GLN:H	1.67	0.59
84:Sc:11:LEU:HD22	84:Sc:57:THR:OG1	2.02	0.59
3:G:57:TRP:N	3:G:57:TRP:CD1	2.65	0.59
32:5:166:C:O2	32:5:166:C:H2'	2.00	0.59
32:5:216:C:O4'	32:5:216:C:P	2.59	0.59
32:5:950:G:N3	32:5:951:G:C8	2.70	0.59
32:5:1203:G:C2	32:5:1204:C:C6	2.90	0.59
32:5:1247:U:C2	32:5:1248:C:C5	2.89	0.59
32:5:1688:G:C2	32:5:1849:U:O2	2.56	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1945:G:C2	32:5:1946:G:N9	2.70	0.59
32:5:1979:A:H3'	32:5:1980:U:C5'	2.33	0.59
32:5:2107:C:O2'	32:5:2108:G:OP2	2.17	0.59
32:5:2250:C:C2	32:5:2252:G:H1'	2.37	0.59
32:5:2261:G:H2'	32:5:2262:G:N7	2.17	0.59
32:5:2263:A:O3'	32:5:2264:C:H6	1.85	0.59
32:5:2401:A:N3	32:5:2402:G:C8	2.70	0.59
32:5:2448:G:O2'	32:5:2449:A:O4'	2.21	0.59
32:5:3702:A:N7	32:5:3774:A:N3	2.51	0.59
32:5:3888:G:O2'	32:5:3889:G:OP1	2.16	0.59
32:5:4277:G:N3	32:5:4278:C:C6	2.70	0.59
32:5:4281:A:H2'	32:5:4282:A:H2'	1.85	0.59
32:5:4285:U:H2'	32:5:4286:C:H6	1.68	0.59
32:5:4414:A:C6	32:5:4427:G:C6	2.91	0.59
32:5:4467:A:C2	32:5:4468:U:C6	2.90	0.59
32:5:4652:G:C4	32:5:4653:C:C5	2.90	0.59
33:7:8:G:C2	33:7:9:C:N1	2.71	0.59
34:8:133:G:N2	34:8:134:G:C8	2.67	0.59
48:z:401:GLY:HA3	51:4:185:C:O2	2.03	0.59
54:S2:81:U:C5	54:S2:82:G:N7	2.71	0.59
54:S2:367:U:H4'	54:S2:371:A:C8	2.37	0.59
54:S2:494:C:O2	54:S2:494:C:C2'	2.46	0.59
54:S2:862:A:N1	54:S2:863:U:C6	2.71	0.59
54:S2:1315:U:C5	54:S2:1316:C:C6	2.91	0.59
54:S2:1526:G:C4	54:S2:1527:C:C6	2.91	0.59
56:SB:70:SER:OG	65:SO:128:ARG:NH1	2.35	0.59
62:SJ:47:LYS:HA	62:SJ:102:ILE:HD11	1.84	0.59
83:SZ:57:LYS:CA	83:SZ:61:GLU:HG3	2.33	0.59
1:A:3:ARG:HG3	1:A:3:ARG:HH11	1.68	0.59
2:D:35:ARG:HH11	2:D:35:ARG:HG2	1.68	0.59
10:Q:4:ASP:OD2	38:F:100:ILE:HG21	2.03	0.59
32:5:132:G:C2	32:5:133:C:H1'	2.38	0.59
32:5:177:G:C6	32:5:178:C:C4	2.91	0.59
32:5:394:G:N3	32:5:394:G:H2'	2.18	0.59
32:5:1100:U:O2	32:5:1167:C:C6	2.56	0.59
32:5:1509:C:O2	32:5:1510:G:C8	2.56	0.59
32:5:1570:G:C5	32:5:1571:G:C8	2.91	0.59
32:5:1629:G:N1	32:5:1631:A:N1	2.50	0.59
32:5:1634:A:N6	32:5:1635:C:N4	2.51	0.59
32:5:1887:G:C2	32:5:1890:G:O6	2.55	0.59
32:5:1936:C:O2	32:5:1936:C:C2'	2.50	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2328:G:C4	32:5:2329:U:C5	2.91	0.59
32:5:2586:G:N7	32:5:2587:A:C2	2.70	0.59
32:5:2841:G:N1	32:5:2842:G:C8	2.70	0.59
32:5:2853:C:C4	32:5:2854:G:C2	2.91	0.59
32:5:2905:C:C2	32:5:3590:G:N2	2.71	0.59
32:5:3689:G:C6	32:5:3690:U:C4	2.90	0.59
32:5:3771:C:O2'	32:5:3772:U:O4'	2.18	0.59
32:5:3910:C:C2	32:5:3911:C:H5	2.15	0.59
32:5:4146:G:C2	32:5:4147:G:C8	2.91	0.59
32:5:4330:G:C5	32:5:4331:G:C8	2.91	0.59
32:5:4344:U:N3	32:5:4345:C:H5	1.97	0.59
33:7:38:U:N3	33:7:40:U:OP2	2.35	0.59
54:S2:99:A:C6	54:S2:100:U:C5	2.91	0.59
54:S2:371:A:C2	54:S2:372:U:C5	2.91	0.59
54:S2:859:G:C2	54:S2:860:G:C8	2.91	0.59
54:S2:1102:G:N2	54:S2:1130:G:N2	2.51	0.59
54:S2:1122:A:N1	54:S2:1123:C:C6	2.71	0.59
54:S2:1224:G:C6	54:S2:1225:U:C2	2.91	0.59
54:S2:1315:U:C4	54:S2:1316:C:N1	2.71	0.59
54:S2:1610:G:N1	54:S2:1611:G:C5	2.71	0.59
54:S2:1804:U:N3	54:S2:1805:G:C8	2.71	0.59
55:SA:10:MET:HE2	55:SA:15:VAL:HG22	1.84	0.59
55:SA:200:ASP:OD2	79:SR:86:PRO:C	2.39	0.59
81:ST:60:THR:HG23	81:ST:75:MET:HE2	1.84	0.59
84:Sc:59:LEU:HB2	84:Sc:60:GLU:OE2	2.03	0.59
87:Sg:83:TRP:HH2	87:Sg:125:ARG:HH22	1.48	0.59
5:J:107:PHE:CE1	5:J:130:PHE:HB2	2.38	0.59
6:L:14:PHE:HD1	6:L:18:TRP:CD1	2.21	0.59
12:S:13:VAL:HG12	12:S:29:ARG:CA	2.33	0.59
15:V:39:ILE:HG23	15:V:61:VAL:HG13	1.85	0.59
20:b:36:ASP:OD1	20:b:39:PHE:HB2	2.03	0.59
32:5:73:A:N3	32:5:74:G:C8	2.71	0.59
32:5:96:U:C4	32:5:97:G:C4	2.91	0.59
32:5:125:C:O2	32:5:125:C:H2'	2.00	0.59
32:5:146:G:C2	32:5:147:A:C5	2.91	0.59
32:5:167:C:N3	32:5:168:C:C5	2.71	0.59
32:5:187:U:C5	32:5:245:C:N4	2.71	0.59
32:5:672:C:C2	32:5:673:C:C6	2.91	0.59
32:5:731:G:C5	32:5:732:A:C8	2.91	0.59
32:5:747:A:C2	32:5:918:G:O6	2.56	0.59
32:5:917:A:C2	32:5:919:C:C6	2.90	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1673:U:O2	32:5:1674:C:C5	2.54	0.59
32:5:1682:A:C5	32:5:1683:U:C5	2.91	0.59
32:5:1726:U:N3	32:5:1727:U:C6	2.71	0.59
32:5:1846:G:C6	32:5:1847:C:N4	2.71	0.59
32:5:1855:G:C5	32:5:1856:C:C5	2.90	0.59
32:5:1929:A:N6	32:5:2054:U:N3	2.37	0.59
32:5:2592:U:C5	32:5:2593:C:C5	2.91	0.59
32:5:2676:A:C5	32:5:2677:G:C8	2.91	0.59
32:5:2735:G:N2	32:5:2736:G:C4	2.71	0.59
32:5:3842:C:OP2	32:5:3843:C:O2'	2.20	0.59
32:5:4167:G:H21	32:5:4168:G:H1'	1.66	0.59
32:5:4455:G:C4	32:5:4456:C:C6	2.91	0.59
33:7:27:G:H1'	33:7:56:G:H1	1.68	0.59
34:8:42:G:C2	34:8:43:A:N9	2.71	0.59
34:8:95:A:C6	34:8:96:C:C4	2.91	0.59
34:8:139:G:C6	34:8:140:C:C4	2.91	0.59
37:E:229:PHE:CE2	37:E:230:ASP:OD1	2.55	0.59
38:F:209:PHE:C	38:F:209:PHE:CD1	2.80	0.59
46:K:61:LYS:HE3	46:K:72:GLU:HB3	1.84	0.59
51:4:187:G:H2'	51:4:188:G:C8	2.34	0.59
54:S2:139:C:O2'	54:S2:140:C:O5'	2.13	0.59
54:S2:165:G:N7	54:S2:166:A:N7	2.48	0.59
54:S2:476:A:C2	54:S2:488:U:O2	2.56	0.59
54:S2:891:G:C2	54:S2:892:U:C6	2.91	0.59
54:S2:994:C:O2	54:S2:994:C:C2'	2.41	0.59
54:S2:1167:G:C6	54:S2:1193:U:O2	2.55	0.59
54:S2:1220:A:N6	54:S2:1221:G:C6	2.71	0.59
54:S2:1283:C:H1'	76:SM:86:GLY:HA3	1.84	0.59
54:S2:1323:U:C2'	54:S2:1324:G:O4'	2.51	0.59
54:S2:1434:C:H2'	54:S2:1435:C:C1'	2.32	0.59
57:SC:204:ILE:HD13	57:SC:215:MET:HE3	1.84	0.59
66:SV:62:MET:SD	67:SW:20:ARG:NH1	2.76	0.59
80:SS:117:ILE:O	80:SS:119:ALA:N	2.35	0.59
17:Y:1:MET:HE2	32:5:1368:A:H1'	1.85	0.58
19:a:61:TYR:CZ	32:5:294:G:C2	2.91	0.58
22:d:22:THR:HG22	22:d:89:SER:CB	2.32	0.58
28:k:11:PHE:O	28:k:15:ALA:N	2.32	0.58
32:5:83:C:P	32:5:84:A:HO2'	2.26	0.58
32:5:299:C:C2	32:5:300:A:C8	2.91	0.58
32:5:331:G:C2	32:5:332:C:C4	2.91	0.58
32:5:1186:U:C4	32:5:1187:G:C5	2.91	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1268:G:C4	32:5:2111:G:C2	2.91	0.58
32:5:1277:G:C2	32:5:1278:C:C5	2.91	0.58
32:5:1498:G:C2	32:5:1499:C:C6	2.91	0.58
32:5:1684:A:C2	32:5:1685:G:C1'	2.86	0.58
32:5:1764:G:O6	32:5:1766:A:H5''	2.02	0.58
32:5:2089:G:O6	32:5:2263:A:C5	2.56	0.58
32:5:2268:A:H4'	32:5:2269:C:H5'	1.84	0.58
32:5:3634:G:N2	32:5:3636:C:H5'	2.18	0.58
32:5:3688:U:O2	32:5:3688:U:H2'	2.02	0.58
32:5:3833:C:C2	32:5:3834:C:C5	2.91	0.58
32:5:3909:C:O2	32:5:3909:C:C2'	2.46	0.58
32:5:4219:A:O2'	32:5:4220:A:C8	2.51	0.58
32:5:4561:C:C2	32:5:4562:C:H5	2.20	0.58
32:5:4699:U:C4	32:5:4702:G:O6	2.55	0.58
32:5:4975:G:C5	32:5:4977:A:C6	2.91	0.58
33:7:44:C:C2	33:7:45:U:C5	2.90	0.58
39:I:111:LEU:HD23	39:I:111:LEU:N	2.16	0.58
48:z:260:LEU:HD21	48:z:273:ILE:HD11	1.83	0.58
48:z:271:ILE:C	48:z:285:PHE:HD2	2.11	0.58
54:S2:46:A:C6	54:S2:99:A:N7	2.71	0.58
54:S2:388:U:N3	54:S2:389:A:N7	2.51	0.58
54:S2:445:A:C2'	54:S2:446:G:O5'	2.51	0.58
54:S2:501:C:O2	54:S2:501:C:C2'	2.51	0.58
54:S2:816:A:C5	54:S2:817:G:C8	2.91	0.58
54:S2:875:A:N6	54:S2:876:C:C4	2.70	0.58
54:S2:963:A:C6	54:S2:964:A:N6	2.70	0.58
54:S2:1052:A:C2	54:S2:1053:C:C6	2.90	0.58
58:SE:100:ARG:NH2	58:SE:121:TYR:OH	2.35	0.58
61:SI:6:ASP:OD1	61:SI:6:ASP:N	2.36	0.58
1:A:227:ARG:HB3	1:A:239:ALA:HB2	1.83	0.58
6:L:169:ILE:HD13	19:a:142:GLY:HA2	1.83	0.58
10:Q:33:ARG:NH2	10:Q:48:LEU:HD11	2.17	0.58
17:Y:11:ARG:O	17:Y:15:ARG:HG3	2.03	0.58
18:Z:4:PHE:N	18:Z:4:PHE:HD1	2.01	0.58
32:5:56:A:N1	32:5:57:G:C4	2.70	0.58
32:5:187:U:H3'	32:5:245:C:O2	2.03	0.58
32:5:286:U:C2	32:5:287:U:C6	2.91	0.58
32:5:470:A:N6	37:E:101:ARG:NH2	2.51	0.58
32:5:488:G:N3	32:5:489:C:C6	2.70	0.58
32:5:919:C:H2'	32:5:920:C:O5'	2.03	0.58
32:5:1262:G:N1	32:5:1263:A:N7	2.51	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1555:G:C5	32:5:1556:C:C6	2.90	0.58
32:5:1619:G:C4	32:5:1620:U:C6	2.92	0.58
32:5:2035:C:C2	32:5:2036:C:C6	2.90	0.58
32:5:2089:G:O2'	32:5:2090:U:P	2.61	0.58
32:5:2409:U:C4	32:5:2783:A:C2	2.91	0.58
32:5:2438:A:C5	32:5:2441:C:C4	2.91	0.58
32:5:2478:C:C2	32:5:2479:G:C8	2.91	0.58
32:5:2744:A:N3	32:5:2745:A:C5	2.71	0.58
32:5:3662:A:N6	32:5:3680:U:N3	2.39	0.58
32:5:3844:U:N3	32:5:3845:A:C8	2.71	0.58
32:5:3880:G:C2	32:5:3881:G:C6	2.91	0.58
32:5:4085:A:C3'	32:5:4086:G:C5'	2.81	0.58
32:5:4281:A:C6	32:5:4283:G:C8	2.90	0.58
32:5:4343:U:O2	32:5:4343:U:H2'	2.02	0.58
32:5:4481:U:N3	32:5:4482:U:C4	2.72	0.58
32:5:4946:U:O2	32:5:4946:U:H2'	2.03	0.58
33:7:23:A:O2'	33:7:24:C:C6	2.54	0.58
34:8:134:G:C2	34:8:135:C:C5	2.91	0.58
51:4:58:G:C5	51:4:289:A:N3	2.70	0.58
54:S2:56:G:N1	54:S2:90:G:N2	2.48	0.58
54:S2:92:A:C6	54:S2:447:A:N3	2.71	0.58
54:S2:155:G:N2	59:SG:56:ASN:OD1	2.36	0.58
54:S2:186:C:O2	54:S2:187:G:C8	2.56	0.58
54:S2:312:G:HO2'	54:S2:313:A:P	2.26	0.58
54:S2:332:G:O6	59:SG:186:GLN:NE2	2.36	0.58
54:S2:436:G:C2'	54:S2:437:G:O5'	2.51	0.58
54:S2:635:G:C2	54:S2:636:C:C2	2.91	0.58
54:S2:875:A:C2	54:S2:876:C:C1'	2.85	0.58
54:S2:1273:C:C2	54:S2:1506:A:C2	2.86	0.58
54:S2:1394:G:O2'	78:SQ:124:PRO:O	2.14	0.58
54:S2:1454:A:OP1	79:SR:49:LYS:CE	2.51	0.58
54:S2:1526:G:C2	54:S2:1527:C:C5	2.90	0.58
54:S2:1573:G:C5	54:S2:1574:C:C5	2.91	0.58
54:S2:1575:G:N2	54:S2:1576:G:C4	2.70	0.58
54:S2:1784:G:N2	54:S2:1785:C:C2	2.71	0.58
54:S2:1860:A:C2	54:S2:1862:G:N7	2.71	0.58
56:SB:150:ILE:HD12	79:SR:129:LYS:HZ1	0.77	0.58
58:SE:73:ASP:OD1	58:SE:73:ASP:N	2.36	0.58
73:SD:6:SER:O	73:SD:10:LYS:N	2.35	0.58
80:SS:7:GLU:C	80:SS:8:LYS:HD3	2.28	0.58
1:A:185:ALA:HB3	1:A:196:TRP:CH2	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:196:ASN:N	8:N:196:ASN:HD22	2.01	0.58
19:a:25:HIS:ND1	32:5:1338:G:N2	2.51	0.58
32:5:91:G:N7	32:5:93:G:C5	2.72	0.58
32:5:163:A:C6	32:5:164:G:C8	2.91	0.58
32:5:224:U:O4'	32:5:224:U:O2	2.22	0.58
32:5:709:C:N3	32:5:710:G:C8	2.71	0.58
32:5:754:U:C4	32:5:755:C:C5	2.91	0.58
32:5:1167:C:C2	32:5:1195:G:C2	2.91	0.58
32:5:1280:C:C5'	32:5:1280:C:C6	2.86	0.58
32:5:1778:C:O2	32:5:1778:C:H2'	2.02	0.58
32:5:1856:C:N3	32:5:1857:C:C5	2.71	0.58
32:5:1960:A:C6	47:q:14:PHE:CE2	2.91	0.58
32:5:2085:G:N2	32:5:2273:G:C4	2.71	0.58
32:5:2451:A:N7	32:5:2452:G:N7	2.52	0.58
32:5:2496:G:C4	32:5:2497:C:C6	2.90	0.58
32:5:2858:A:C4	32:5:2859:G:C6	2.91	0.58
32:5:3712:A:C6	32:5:3737:A:OP2	2.55	0.58
32:5:3834:C:C2	32:5:3835:C:C5	2.91	0.58
32:5:3839:G:H1	32:5:3842:C:N4	2.01	0.58
32:5:4132:C:C4	32:5:4133:C:C5	2.90	0.58
32:5:4136:G:C5	32:5:4137:C:C5	2.91	0.58
32:5:4510:A:N6	32:5:4592:C:C4'	2.67	0.58
32:5:4535:A:N1	32:5:4536:C:C6	2.71	0.58
32:5:4578:G:C6	32:5:4579:U:C5	2.92	0.58
32:5:4767:C:H4'	32:5:4874:A:N1	2.17	0.58
32:5:4881:U:O2	32:5:4881:U:H2'	2.02	0.58
32:5:4881:U:O2'	32:5:4882:U:O4'	2.20	0.58
34:8:131:G:N1	34:8:132:G:N9	2.51	0.58
38:F:93:PHE:C	38:F:93:PHE:CD1	2.80	0.58
39:I:47:PRO:HD2	39:I:141:LYS:HA	1.84	0.58
54:S2:105:U:N3	54:S2:106:C:C6	2.70	0.58
54:S2:112:U:C1'	54:S2:114:G:O6	2.48	0.58
54:S2:155:G:C2	54:S2:156:G:H1'	2.39	0.58
54:S2:166:A:N3	54:S2:167:G:C8	2.71	0.58
54:S2:182:C:H2'	54:S2:184:G:C1'	2.31	0.58
54:S2:383:G:H2'	54:S2:384:U:H1'	1.85	0.58
54:S2:429:C:C2	54:S2:430:C:C6	2.91	0.58
54:S2:493:A:C2	54:S2:494:C:C6	2.91	0.58
54:S2:519:A:C2	54:S2:520:A:N7	2.71	0.58
54:S2:880:G:N7	54:S2:881:G:C8	2.69	0.58
54:S2:943:U:H2'	54:S2:944:A:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1176:G:C5	54:S2:1177:U:C5	2.92	0.58
54:S2:1286:G:N2	76:SM:33:ARG:HG3	2.18	0.58
54:S2:1371:U:OP2	54:S2:1372:U:H5	1.85	0.58
54:S2:1546:G:O2'	54:S2:1547:C:O5'	2.21	0.58
54:S2:1571:G:C4	54:S2:1572:C:C6	2.91	0.58
54:S2:1649:U:H2'	54:S2:1649:U:O2	2.03	0.58
63:SL:117:PHE:HZ	63:SL:144:LYS:HA	1.68	0.58
70:Sa:28:ARG:HH11	70:Sa:28:ARG:CG	2.15	0.58
12:S:10:TYR:OH	12:S:66:GLN:CG	2.50	0.58
32:5:211:G:N1	32:5:212:A:C5	2.72	0.58
32:5:422:C:O2	32:5:423:G:C8	2.49	0.58
32:5:459:C:C4	32:5:460:C:C5	2.90	0.58
32:5:460:C:O2	32:5:461:G:C8	2.57	0.58
32:5:1246:G:C6	32:5:1247:U:C4	2.91	0.58
32:5:1320:U:C2	32:5:1321:G:C8	2.92	0.58
32:5:1752:G:H2'	32:5:1753:G:O4'	2.04	0.58
32:5:1808:C:C2	32:5:1831:G:C2	2.92	0.58
32:5:2482:C:N3	32:5:2483:G:C8	2.72	0.58
32:5:2744:A:N1	32:5:2745:A:C6	2.71	0.58
32:5:4081:G:N1	32:5:4082:G:C5	2.71	0.58
32:5:4414:A:N3	32:5:4427:G:N2	2.50	0.58
32:5:5000:G:C4	32:5:5001:U:C5	2.91	0.58
46:K:35:LEU:HB3	51:4:36:A:C6	2.39	0.58
54:S2:338:G:C2	54:S2:339:A:C4	2.92	0.58
54:S2:454:U:C2'	54:S2:455:A:O5'	2.51	0.58
54:S2:488:U:H3'	54:S2:489:A:C5'	2.33	0.58
54:S2:676:C:C4	54:S2:677:G:C5	2.92	0.58
54:S2:824:C:C4	62:SJ:144:ILE:HG12	2.37	0.58
54:S2:882:U:H2'	54:S2:883:U:O4'	2.03	0.58
54:S2:1059:G:O2'	54:S2:1060:A:H5'	2.03	0.58
54:S2:1233:G:C4	54:S2:1234:C:C6	2.92	0.58
54:S2:1351:G:C4'	55:SA:110:ASN:ND2	2.67	0.58
54:S2:1378:A:C8	54:S2:1378:A:C5'	2.87	0.58
54:S2:1412:C:O2'	54:S2:1413:G:H8	1.85	0.58
54:S2:1573:G:C4	54:S2:1574:C:C6	2.91	0.58
54:S2:1773:C:N3	54:S2:1774:C:C5	2.71	0.58
58:SE:87:MET:HE1	58:SE:236:ILE:HD13	1.85	0.58
65:SO:150:ARG:HG2	65:SO:150:ARG:HH21	1.67	0.58
9:O:160:ARG:NH2	32:5:4759:C:OP1	2.36	0.58
11:R:71:ARG:NH1	32:5:3605:C:OP2	2.37	0.58
26:h:7:ARG:NE	34:8:86:U:O4	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:145:G:C2	32:5:146:G:N9	2.71	0.58
32:5:295:A:O3'	32:5:296:A:C8	2.56	0.58
32:5:301:G:C5	32:5:302:C:C5	2.91	0.58
32:5:717:U:O4	32:5:718:C:C5	2.56	0.58
32:5:725:G:H2'	32:5:726:G:O4'	2.02	0.58
32:5:731:G:N7	32:5:732:A:C8	2.71	0.58
32:5:732:A:C6	32:5:733:A:N3	2.71	0.58
32:5:985:C:C2	32:5:1069:G:C2	2.92	0.58
32:5:1079:C:N3	32:5:1080:C:C5	2.70	0.58
32:5:1267:C:H5''	32:5:2110:C:O2'	2.04	0.58
32:5:1406:G:N2	32:5:1409:C:N4	2.51	0.58
32:5:1635:C:C2	32:5:1636:U:H5	2.19	0.58
32:5:1673:U:O2	32:5:1673:U:H2'	2.02	0.58
32:5:1789:C:O2'	32:5:1790:U:H5'	2.03	0.58
32:5:2816:G:C6	32:5:2817:C:C4	2.91	0.58
32:5:2823:G:C2	32:5:2824:C:C6	2.91	0.58
32:5:3605:C:N3	32:5:3606:U:C5	2.72	0.58
32:5:3714:G:C6	32:5:3715:U:C2	2.89	0.58
32:5:3868:G:H22	32:5:3899:G:N2	2.02	0.58
32:5:4551:U:N3	32:5:4552:U:C5	2.72	0.58
32:5:4734:A:C2	32:5:4735:G:C4	2.91	0.58
35:B:235:TRP:HD1	35:B:267:ALA:HA	1.66	0.58
35:B:257:TRP:O	35:B:257:TRP:CG	2.56	0.58
36:C:178:ASN:ND2	36:C:178:ASN:N	2.51	0.58
38:F:100:ILE:O	38:F:100:ILE:HG23	2.03	0.58
50:3:5:C:N3	50:3:6:C:C5	2.71	0.58
54:S2:386:C:O2	54:S2:387:C:H6	1.86	0.58
54:S2:475:C:C4	54:S2:476:A:N7	2.70	0.58
54:S2:793:G:C5	54:S2:794:A:N7	2.71	0.58
54:S2:804:U:H2'	54:S2:804:U:O2	2.01	0.58
54:S2:1099:G:N2	54:S2:1100:A:H1'	2.19	0.58
54:S2:1427:C:O2	54:S2:1428:G:N7	2.37	0.58
54:S2:1453:C:N4	54:S2:1455:A:N9	2.52	0.58
54:S2:1641:A:C4	54:S2:1642:U:C5	2.91	0.58
55:SA:200:ASP:CG	79:SR:89:SER:CB	2.70	0.58
55:SA:205:ARG:HH12	79:SR:84:TYR:HD2	1.50	0.58
56:SB:49:VAL:HG11	56:SB:58:ALA:HB1	1.84	0.58
58:SE:121:TYR:HB2	58:SE:161:GLN:NE2	2.18	0.58
68:SX:74:LEU:HD21	68:SX:81:ILE:HD12	1.85	0.58
74:SF:140:ASP:CB	84:Sc:56:LEU:HG	2.33	0.58
74:SF:203:ASN:O	74:SF:204:ARG:HB3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SK:82:TYR:O	76:SM:27:ILE:HD11	2.03	0.58
2:D:42:ASN:N	2:D:42:ASN:OD1	2.36	0.58
32:5:37:U:O4	32:5:38:A:C6	2.55	0.58
32:5:101:A:N6	32:5:102:G:C6	2.72	0.58
32:5:199:G:C6	32:5:201:C:N4	2.71	0.58
32:5:436:C:N3	32:5:437:G:N7	2.50	0.58
32:5:933:G:C6	32:5:940:C:C4	2.92	0.58
32:5:954:C:H2'	32:5:955:G:O4'	2.02	0.58
32:5:989:U:H2'	32:5:990:C:H5	1.68	0.58
32:5:1211:G:N2	32:5:1212:G:C4	2.72	0.58
32:5:1268:G:C6	32:5:1270:A:N7	2.70	0.58
32:5:1303:A:C2	32:5:1304:C:C6	2.92	0.58
32:5:1321:G:C2	32:5:3876:A:C4	2.91	0.58
32:5:1366:G:C8	32:5:1367:C:O3'	2.56	0.58
32:5:1479:G:O2'	32:5:1480:C:O4'	2.20	0.58
32:5:1517:G:C2	32:5:1650:A:C5	2.92	0.58
32:5:1691:G:C6	32:5:1692:C:C4	2.91	0.58
32:5:2034:G:N1	32:5:2035:C:C2	2.72	0.58
32:5:2294:G:N3	32:5:2295:C:C5	2.70	0.58
32:5:2451:A:C4	32:5:2452:G:C8	2.91	0.58
32:5:2623:A:N1	32:5:2633:U:O4	2.37	0.58
32:5:2703:G:C6	32:5:2704:C:C5	2.92	0.58
32:5:3736:A:O2'	32:5:3737:A:P	2.62	0.58
32:5:4077:A:C2	32:5:4170:A:C5	2.91	0.58
32:5:4235:G:O5'	32:5:4331:G:O2'	2.22	0.58
32:5:4266:G:C6	32:5:4279:A:N7	2.72	0.58
32:5:4277:G:C5	32:5:4278:C:C5	2.92	0.58
32:5:4735:G:C5	32:5:4736:C:C5	2.92	0.58
32:5:4888:U:O2'	32:5:4889:G:H8	1.84	0.58
32:5:5000:G:C5	32:5:5001:U:C5	2.91	0.58
34:8:35:C:O2'	34:8:36:G:C5'	2.52	0.58
34:8:118:C:O2	34:8:119:C:C6	2.57	0.58
40:P:122:ALA:HA	40:P:145:HIS:HE1	1.68	0.58
47:q:186:GLY:O	47:q:188:VAL:N	2.36	0.58
51:4:120:G:N2	51:4:230[B]:C:O2	2.37	0.58
54:S2:521:A:O2'	54:S2:824:C:N4	2.37	0.58
54:S2:892:U:N3	54:S2:893:U:C5	2.71	0.58
54:S2:1141:G:C2	54:S2:1147:C:N3	2.72	0.58
54:S2:1291:A:N1	86:Sf:140:TYR:CE2	2.71	0.58
54:S2:1343:U:H2'	54:S2:1343:U:O2	2.04	0.58
54:S2:1453:C:H1'	79:SR:48:ASN:ND2	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1578:U:O2'	73:SD:4:GLN:O	2.17	0.58
54:S2:1686:G:C2	54:S2:1687:C:C6	2.90	0.58
54:S2:1836:G:O4'	54:S2:1837:G:N2	2.36	0.58
55:SA:200:ASP:CB	79:SR:89:SER:HB2	2.34	0.58
58:SE:67:GLN:HB3	58:SE:69:PHE:CE2	2.38	0.58
65:SO:113:GLN:OE1	70:Sa:46:GLU:HG3	2.04	0.58
70:Sa:18:VAL:HG21	70:Sa:33:ASP:OD2	2.03	0.58
73:SD:22:ASN:C	73:SD:22:ASN:ND2	2.58	0.58
74:SF:38:TYR:CD2	74:SF:143:PRO:HB2	2.38	0.58
8:N:119:TYR:CE1	8:N:131:GLU:HG3	2.38	0.58
8:N:203:TYR:CE1	36:C:113:ARG:O	2.57	0.58
23:e:108:ARG:NH1	23:e:128:ARG:NH2	2.52	0.58
32:5:172:C:C4	32:5:173:C:C4	2.92	0.58
32:5:209:U:O2	32:5:233:U:C4	2.55	0.58
32:5:468:U:O4	32:5:687:U:O4	2.21	0.58
32:5:1086:C:C2	32:5:1212:G:C2	2.91	0.58
32:5:1188:C:O2	32:5:1189:G:H8	1.86	0.58
32:5:1217:G:C2'	32:5:1218:G:H8	2.17	0.58
32:5:1432:G:C2	32:5:1451:G:C2	2.92	0.58
32:5:1584:G:C6	32:5:1585:C:C4	2.91	0.58
32:5:1609:U:N3	32:5:1610:C:C6	2.71	0.58
32:5:1831:G:C5	32:5:1832:C:C5	2.92	0.58
32:5:1899:G:C1'	32:5:2278:G:H22	2.15	0.58
32:5:2363:A:H1'	32:5:4560:C:H5	1.68	0.58
32:5:2623:A:N3	32:5:2624:G:C8	2.72	0.58
32:5:3771:C:C4	32:5:3772:U:C4	2.91	0.58
32:5:4083:U:C2'	32:5:4084:G:O5'	2.52	0.58
32:5:4277:G:C4	32:5:4278:C:C6	2.92	0.58
32:5:4490:C:O2	32:5:4491:G:H8	1.86	0.58
32:5:4498:U:N3	32:5:4500:U:P	2.77	0.58
32:5:4510:A:N6	32:5:4592:C:C2'	2.67	0.58
32:5:4724:A:C4	32:5:4725:C:C6	2.92	0.58
32:5:4981:G:O6	32:5:4982:A:C4	2.56	0.58
33:7:6:C:C4	33:7:7:G:C8	2.92	0.58
34:8:15:G:H2'	34:8:16:G:O4'	2.04	0.58
38:F:219:ARG:O	38:F:248:ARG:NH2	2.37	0.58
41:W:8:PHE:CD1	41:W:8:PHE:C	2.81	0.58
48:z:140:PHE:CZ	48:z:194:ARG:HG3	2.37	0.58
54:S2:46:A:C6	54:S2:99:A:C8	2.92	0.58
54:S2:220:U:N3	54:S2:221:A:N7	2.52	0.58
54:S2:403:G:C6	54:S2:404:G:C8	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:403:G:N1	54:S2:404:G:C4	2.71	0.58
54:S2:804:U:C2	54:S2:805:U:C6	2.92	0.58
54:S2:1132:C:N4	54:S2:1133:A:C5	2.72	0.58
54:S2:1291:A:C6	86:Sf:140:TYR:CZ	2.91	0.58
54:S2:1293:A:N9	86:Sf:152:LYS:HB2	2.18	0.58
54:S2:1299:A:C2'	54:S2:1301:A:H5'	2.33	0.58
54:S2:1368:U:H1'	54:S2:1372:U:N3	2.19	0.58
54:S2:1426:U:N3	54:S2:1427:C:C5	2.71	0.58
54:S2:1754:G:C5	54:S2:1755:C:C5	2.91	0.58
54:S2:1786:U:N3	54:S2:1787:G:N7	2.52	0.58
73:SD:35:SER:O	73:SD:99:ILE:HD11	2.04	0.58
77:SP:53:GLN:HE21	77:SP:80:LEU:HD13	1.68	0.58
3:G:41:ILE:O	32:5:4117:U:C5	2.56	0.58
6:L:63:THR:O	6:L:65:ARG:N	2.36	0.58
6:L:65:ARG:HB2	19:a:69:PHE:CD2	2.38	0.58
8:N:94:PHE:CE1	32:5:2460:A:O4'	2.57	0.58
15:V:85:ARG:NH1	32:5:2847:G:OP1	2.37	0.58
32:5:106:A:C1'	32:5:336:A:H8	2.17	0.58
32:5:223:G:O2'	36:C:223:ASN:ND2	2.37	0.58
32:5:298:G:C5	32:5:299:C:C5	2.91	0.58
32:5:438:G:C6	32:5:439:G:C5	2.92	0.58
32:5:466:A:N3	32:5:467:U:C6	2.72	0.58
32:5:698:G:C2	32:5:699:C:C6	2.91	0.58
32:5:732:A:N6	32:5:733:A:C5	2.72	0.58
32:5:1656:U:N3	32:5:1657:G:N7	2.52	0.58
32:5:1750:G:C6	32:5:1751:A:N7	2.72	0.58
32:5:1757:U:N3	32:5:1758:G:N7	2.52	0.58
32:5:2258:C:O2	32:5:2258:C:C2'	2.51	0.58
32:5:2407:G:O2'	32:5:2409:U:N3	2.36	0.58
32:5:2494:U:C4	32:5:2495:U:C5	2.92	0.58
32:5:2576:G:C2	32:5:2577:C:C6	2.91	0.58
32:5:2726:G:N3	32:5:2727:C:C6	2.71	0.58
32:5:3740:G:C5	32:5:3741:C:C6	2.89	0.58
32:5:4495:G:N2	32:5:4506:C:C2	2.72	0.58
33:7:110:G:C2	33:7:111:C:C4	2.91	0.58
33:7:110:G:N1	33:7:111:C:C5	2.72	0.58
33:7:112:U:O2	33:7:113:G:H8	1.83	0.58
34:8:116:C:N3	34:8:117:C:C5	2.71	0.58
34:8:146:U:N3	34:8:147:G:C8	2.72	0.58
38:F:197:TYR:O	38:F:199:VAL:N	2.36	0.58
47:q:108:PRO:CA	47:q:109:ALA:HB3	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:234:A:H2'	51:4:235:G:C8	2.38	0.58
54:S2:73:C:O2'	54:S2:74:G:O5'	2.19	0.58
54:S2:292:A:H4'	63:SL:40:ILE:O	2.03	0.58
54:S2:555:A:C2	54:S2:557:U:C6	2.91	0.58
54:S2:752:G:N1	54:S2:791:C:O2	2.37	0.58
54:S2:907:G:H3'	54:S2:908:A:H8	1.68	0.58
54:S2:956:G:O6	54:S2:968:U:O2	2.22	0.58
54:S2:982:G:O2'	54:S2:983:A:H5'	2.04	0.58
54:S2:1162:C:C4	54:S2:1163:C:C5	2.92	0.58
54:S2:1686:G:C2	54:S2:1687:C:C5	2.92	0.58
54:S2:1730:U:C2	54:S2:1731:A:C8	2.91	0.58
54:S2:1730:U:C4	54:S2:1731:A:N7	2.72	0.58
79:SR:116:ASN:OD1	79:SR:116:ASN:N	2.36	0.58
80:SS:12:ILE:HG23	80:SS:20:ILE:O	2.03	0.58
2:D:200:LEU:HB2	2:D:202:GLN:HE22	1.68	0.58
4:H:5:LEU:HD13	4:H:60:TRP:CE3	2.39	0.58
8:N:94:PHE:O	32:5:300:A:O2'	2.19	0.58
21:c:49:ALA:HB2	21:c:81:LEU:HD12	1.85	0.58
23:e:108:ARG:NH1	23:e:128:ARG:HH22	2.02	0.58
32:5:146:G:N2	32:5:147:A:C8	2.72	0.58
32:5:230:G:N2	32:5:239:C:C2	2.72	0.58
32:5:270:U:C2	32:5:271:C:H5	2.22	0.58
32:5:471:A:C2	32:5:472:C:O4'	2.57	0.58
32:5:517:C:C2	32:5:645:G:C2	2.92	0.58
32:5:732:A:C2	32:5:733:A:C1'	2.86	0.58
32:5:991:C:C4	32:5:992:C:C4	2.92	0.58
32:5:1201:U:C2	32:5:1202:C:C5	2.91	0.58
32:5:1202:C:N3	32:5:1203:G:C8	2.72	0.58
32:5:1301:C:O4'	32:5:1301:C:O2	2.18	0.58
32:5:1487:G:H8	32:5:1487:G:O5'	1.86	0.58
32:5:1615:C:C4	32:5:1616:U:C6	2.92	0.58
32:5:1885:G:N2	32:5:1895:G:N3	2.52	0.58
32:5:1977:C:O2	32:5:1990:A:N1	2.37	0.58
32:5:2367:A:C8	32:5:2798:A:N3	2.72	0.58
32:5:2508:U:N3	32:5:2509:C:C5	2.71	0.58
32:5:2673:G:H5'	32:5:2674:A:H2'	1.86	0.58
32:5:2697:A:C2	32:5:2698:G:C8	2.92	0.58
32:5:2844:A:N6	32:5:3839:G:C8	2.72	0.58
32:5:3773:U:O2	32:5:3776:G:N1	2.32	0.58
32:5:3871:A:N1	32:5:3885:G:C2	2.71	0.58
32:5:4476:C:O2'	32:5:4478:G:OP2	2.20	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4747:C:H2'	32:5:4748:U:C6	2.38	0.58
42:j:22:CYS:SG	42:j:37:CYS:SG	3.01	0.58
45:r:7:TRP:HZ3	45:r:11:ARG:HA	1.68	0.58
48:z:52:LEU:HD12	48:z:86:LEU:HD12	1.86	0.58
48:z:230:GLU:HG3	48:z:262:ALA:HB1	1.85	0.58
54:S2:25:A:C6	54:S2:26:U:C5	2.92	0.58
54:S2:316:G:N3	54:S2:317:C:C6	2.72	0.58
54:S2:604:A:N7	62:SJ:20:PHE:CE2	2.72	0.58
54:S2:834:C:C4	54:S2:835:C:C6	2.92	0.58
54:S2:841:G:C4	54:S2:842:C:H5	2.16	0.58
54:S2:951:C:C2	54:S2:952:G:C8	2.92	0.58
54:S2:961:G:C6	54:S2:962:A:N7	2.71	0.58
54:S2:1231:C:C4'	54:S2:1665:G:N2	2.66	0.58
54:S2:1339:U:C2	54:S2:1340:U:C5	2.92	0.58
54:S2:1399:C:N3	54:S2:1400:U:C5	2.72	0.58
54:S2:1508:A:N7	54:S2:1510:G:N7	2.51	0.58
54:S2:1512:C:O2	54:S2:1513:C:C6	2.56	0.58
54:S2:1525:C:H2'	54:S2:1525:C:O2	2.03	0.58
54:S2:1606:G:H22	54:S2:1632:G:H2'	1.69	0.58
54:S2:1777:G:C6	54:S2:1778:C:C4	2.92	0.58
55:SA:33:GLN:HB3	55:SA:154:LEU:HD12	1.84	0.58
55:SA:198:MET:CG	55:SA:199:PRO:HD2	2.34	0.58
60:SH:110:THR:O	60:SH:110:THR:HG23	2.04	0.58
69:SY:58:PHE:CE1	69:SY:72:PHE:HB3	2.38	0.58
74:SF:136:ARG:HB2	74:SF:203:ASN:HD21	1.69	0.58
5:J:126:TYR:N	5:J:126:TYR:CD1	2.71	0.58
9:O:114:LYS:CA	32:5:4757:C:O2	2.44	0.58
11:R:149:LYS:CA	11:R:150:ALA:N	2.64	0.58
12:S:9:GLU:OE1	12:S:33:PHE:CD1	2.57	0.58
15:V:82:ILE:HD12	15:V:104:VAL:HG13	1.85	0.58
32:5:84:A:H4'	32:5:85:G:OP1	2.04	0.58
32:5:90:G:N3	32:5:95:G:N1	2.52	0.58
32:5:146:G:N2	32:5:147:A:C4	2.72	0.58
32:5:197:A:H2'	32:5:198:A:C8	2.38	0.58
32:5:423:G:O6	34:8:10:G:O6	2.21	0.58
32:5:457:G:N2	32:5:458:C:C6	2.72	0.58
32:5:1191:C:N3	32:5:1192:C:C5	2.72	0.58
32:5:1212:G:C2	32:5:1213:G:N7	2.71	0.58
32:5:1340:C:N3	32:5:1341:U:C4	2.71	0.58
32:5:1589:C:C2'	32:5:1590:C:O5'	2.51	0.58
32:5:1785:C:H1'	39:I:94:PHE:CE2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1855:G:C4	32:5:1856:C:C6	2.92	0.58
32:5:2291:G:N1	32:5:2292:C:C5	2.72	0.58
32:5:2391:G:N2	32:5:2392:C:C2	2.72	0.58
32:5:2463:G:N1	32:5:2464:C:C4	2.71	0.58
32:5:2481:G:C6	32:5:2482:C:C4	2.92	0.58
32:5:2589:C:N4	32:5:2590:G:C5	2.72	0.58
32:5:2690:C:C4	32:5:2691:U:C4	2.91	0.58
32:5:2712:G:N1	32:5:2713:C:C4	2.72	0.58
32:5:2804:C:O2	32:5:2804:C:H2'	2.04	0.58
32:5:2851:G:O6	32:5:2852:U:C6	2.56	0.58
32:5:3648:A:C2	32:5:3785:A:N7	2.72	0.58
32:5:3710:G:C5	32:5:3711:A:C2	2.91	0.58
32:5:3846:C:O2	32:5:3847:C:C6	2.57	0.58
32:5:3878:C:C5	32:5:4518:A:C2	2.92	0.58
32:5:3898:G:H2'	32:5:3899:G:H5'	1.86	0.58
32:5:3944:G:N2	32:5:3945:A:C4	2.72	0.58
32:5:4413:C:H3'	32:5:4414:A:C8	2.39	0.58
32:5:4482:U:C2	32:5:4483:C:C5	2.92	0.58
32:5:4535:A:N6	32:5:4536:C:C5	2.72	0.58
32:5:4543:G:O2'	32:5:4544:A:C5'	2.51	0.58
32:5:5061:A:H4'	32:5:5062:G:H5''	1.86	0.58
33:7:30:C:C2	33:7:48:G:C2	2.91	0.58
33:7:44:C:H2'	33:7:45:U:O5'	2.03	0.58
39:I:98:ARG:CD	39:I:119:PHE:CE1	2.81	0.58
50:3:12:G:H2'	50:3:13:U:O4'	2.04	0.58
52:9:100:SER:O	52:9:103:SER:OG	2.21	0.58
54:S2:166:A:C2	54:S2:167:G:C8	2.91	0.58
54:S2:211:G:C6	54:S2:212:C:C4	2.92	0.58
54:S2:433:A:H2'	54:S2:434:G:C8	2.38	0.58
54:S2:452:G:C2	54:S2:453:C:C2	2.91	0.58
54:S2:452:G:O2'	54:S2:453:C:H5'	2.03	0.58
54:S2:637:U:N3	54:S2:638:C:C5	2.71	0.58
54:S2:999:G:C4	54:S2:1000:C:C6	2.92	0.58
54:S2:1224:G:N7	54:S2:1225:U:C6	2.71	0.58
54:S2:1232:U:N3	54:S2:1233:G:N7	2.52	0.58
54:S2:1294:G:N1	54:S2:1295:A:C5	2.72	0.58
54:S2:1363:C:N3	54:S2:1376:A:N1	2.51	0.58
54:S2:1366:G:N1	54:S2:1374:C:N4	2.51	0.58
54:S2:1551:U:C2'	54:S2:1552:G:O4'	2.52	0.58
54:S2:1612:G:C2	54:S2:1628:C:C2	2.92	0.58
54:S2:1667:U:O2	54:S2:1668:U:C6	2.56	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1677:U:N3	54:S2:1678:A:C2	2.72	0.58
56:SB:205:TYR:O	56:SB:207:LEU:HG	2.04	0.58
59:SG:52:ILE:HD11	59:SG:102:VAL:HG21	1.85	0.58
78:SQ:8:GLN:HG2	78:SQ:95:TYR:CZ	2.39	0.58
79:SR:62:GLN:HA	79:SR:62:GLN:OE1	2.04	0.58
2:D:18:VAL:HG13	33:7:11:A:C8	2.39	0.57
6:L:176:PHE:C	6:L:176:PHE:CD1	2.81	0.57
9:O:37:ARG:NH2	32:5:4760:G:OP2	2.37	0.57
12:S:44:PHE:C	12:S:44:PHE:CD1	2.82	0.57
32:5:29:G:C4	32:5:30:C:C5	2.91	0.57
32:5:125:C:C2	32:5:126:C:C6	2.91	0.57
32:5:209:U:C2	32:5:233:U:O4	2.57	0.57
32:5:246:G:C2	32:5:247:G:C5	2.91	0.57
32:5:323:C:O2	32:5:323:C:H2'	2.04	0.57
32:5:994:G:C2	32:5:1050:C:C2	2.92	0.57
32:5:1071:C:O2	32:5:1071:C:C2'	2.52	0.57
32:5:1197:C:H2'	32:5:1198:G:O4'	2.04	0.57
32:5:1213:G:O6	32:5:1215:C:C5	2.57	0.57
32:5:1618:G:N2	32:5:1619:G:C8	2.72	0.57
32:5:1684:A:C2	32:5:1685:G:N9	2.72	0.57
32:5:1794:A:C8	32:5:4214:A:N6	2.72	0.57
32:5:2021:G:C4	32:5:2022:C:C6	2.91	0.57
32:5:2108:G:N1	32:5:2125:C:C4	2.71	0.57
32:5:2263:A:O2'	32:5:2265:G:C2'	2.51	0.57
32:5:2288:G:C6	32:5:2290:C:C5	2.92	0.57
32:5:2448:G:C5	32:5:2511:A:N6	2.72	0.57
32:5:2494:U:H2'	32:5:2495:U:O4'	2.04	0.57
32:5:2559:G:C6	32:5:2560:C:C5	2.92	0.57
32:5:2566:G:C2	32:5:2567:G:N7	2.72	0.57
32:5:2623:A:N1	32:5:2633:U:C4	2.72	0.57
32:5:3621:A:H8	32:5:4642:U:H1'	1.69	0.57
32:5:3689:G:C5	32:5:3690:U:C5	2.91	0.57
32:5:3766:A:N1	54:S2:1827:U:O2'	2.36	0.57
32:5:4097:G:N1	32:5:4098:A:N7	2.52	0.57
32:5:4635:A:C2	32:5:4664:A:C5	2.91	0.57
32:5:5043:A:O2'	32:5:5044:A:C5'	2.52	0.57
34:8:85:U:H2'	34:8:87:G:H8	1.68	0.57
34:8:97:A:C4	34:8:98:C:C5	2.91	0.57
34:8:131:G:C6	34:8:132:G:C5	2.91	0.57
36:C:318:PRO:O	36:C:320:LYS:N	2.36	0.57
54:S2:52:G:H1	54:S2:474:G:H1	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:53:C:O2	54:S2:54:A:H8	1.87	0.57
54:S2:363:A:N6	54:S2:400:C:O2'	2.37	0.57
54:S2:436:G:C2	54:S2:437:G:C8	2.92	0.57
54:S2:439:A:N1	54:S2:455:A:N1	2.52	0.57
54:S2:495:U:O2'	54:S2:496:C:H5''	2.03	0.57
54:S2:517:C:C5	54:S2:518:G:C8	2.92	0.57
54:S2:862:A:C2	54:S2:863:U:N1	2.72	0.57
54:S2:913:A:O2'	54:S2:914:U:OP1	2.17	0.57
54:S2:946:U:C4	54:S2:947:G:N7	2.72	0.57
54:S2:1248:U:C6	54:S2:1249:C:C2	2.91	0.57
54:S2:1290:G:H2'	86:Sf:146:LEU:H	1.68	0.57
54:S2:1350:U:H2'	55:SA:110:ASN:OD1	2.03	0.57
54:S2:1729:U:H2'	54:S2:1729:U:O2	2.04	0.57
59:SG:213:LEU:HD12	59:SG:214:ALA:N	2.19	0.57
69:SY:88:LYS:HE3	69:SY:97:TYR:OH	2.04	0.57
83:SZ:57:LYS:C	83:SZ:61:GLU:H	1.97	0.57
1:A:204:MET:SD	32:5:1631:A:C2	2.97	0.57
18:Z:50:PRO:CG	18:Z:122:TYR:CE2	2.87	0.57
32:5:42:A:N6	32:5:4379:A:N3	2.51	0.57
32:5:111:C:O2	32:5:111:C:H2'	2.04	0.57
32:5:293:G:O2'	32:5:297:U:H6	1.88	0.57
32:5:655:C:O2	32:5:656:C:C6	2.56	0.57
32:5:708:G:C2	32:5:709:C:C6	2.92	0.57
32:5:1070:G:C6	32:5:1071:C:C4	2.92	0.57
32:5:1382:G:O2'	32:5:1383:G:H5'	2.04	0.57
32:5:1498:G:N1	32:5:1499:C:C4	2.72	0.57
32:5:1534:A:N6	42:j:14:LYS:HA	2.19	0.57
32:5:1797:G:C2	32:5:1798:G:C8	2.93	0.57
32:5:1899:G:H1'	32:5:2278:G:H22	1.68	0.57
32:5:2018:C:H2'	32:5:2019:C:O4'	2.04	0.57
32:5:2352:U:C2	32:5:2353:U:C5	2.91	0.57
32:5:2408:U:H1'	32:5:2409:U:C5	2.39	0.57
32:5:2529:A:N6	32:5:2532:C:H1'	2.18	0.57
32:5:2533:C:O2	32:5:2534:C:C5	2.57	0.57
32:5:2782:U:H2'	32:5:2782:U:O2	2.05	0.57
32:5:3622:C:C2	32:5:3623:C:C2	2.92	0.57
32:5:4098:A:N1	32:5:4099:G:N7	2.53	0.57
32:5:4168:G:H2'	32:5:4169:G:O5'	2.03	0.57
32:5:4224:A:N6	32:5:4225:G:N7	2.52	0.57
32:5:4489:G:C6	32:5:4490:C:C4	2.91	0.57
32:5:4605:A:H2'	32:5:4606:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4652:G:N1	32:5:4653:C:C4	2.72	0.57
32:5:4742:G:N1	32:5:4743:G:C8	2.72	0.57
32:5:4939:C:O2	32:5:4939:C:C2'	2.53	0.57
32:5:4996:C:C4	32:5:4997:G:N7	2.73	0.57
34:8:132:G:C2	34:8:133:G:N7	2.67	0.57
34:8:142:U:C2	34:8:143:G:C8	2.92	0.57
35:B:67:VAL:HG13	35:B:70:LYS:HB2	1.86	0.57
35:B:114:CYS:SG	35:B:180:LEU:HD11	2.44	0.57
35:B:308:ASP:OD1	35:B:308:ASP:C	2.48	0.57
36:C:48:ASN:O	36:C:49:ARG:CB	2.51	0.57
39:I:171:TRP:HB2	39:I:181:PHE:CD2	2.39	0.57
54:S2:376:A:C2	54:S2:377:G:H1'	2.39	0.57
54:S2:832:G:C2	54:S2:843:C:C2	2.91	0.57
54:S2:910:G:C5	54:S2:911:C:C5	2.91	0.57
54:S2:933:G:C4	54:S2:1001:A:C8	2.92	0.57
54:S2:1215:C:H42	54:S2:1221:G:H1	1.49	0.57
54:S2:1275:G:O6	54:S2:1506:A:O2'	2.11	0.57
54:S2:1576:G:N1	54:S2:1577:G:C5	2.72	0.57
54:S2:1590:C:C5	54:S2:1591:C:C1'	2.86	0.57
55:SA:50:ASN:CA	79:SR:105:MET:HE3	2.26	0.57
65:SO:146:ARG:HD3	70:Sa:29:CYS:CB	2.34	0.57
82:SU:50:VAL:HA	82:SU:91:LEU:HD23	1.85	0.57
2:D:284:LYS:HB3	39:I:209:TRP:CZ3	2.39	0.57
11:R:163:ARG:HD2	54:S2:871:U:H2'	1.85	0.57
12:S:166:ARG:C	12:S:167:PHE:HD2	2.12	0.57
32:5:172:C:C2	32:5:173:C:C5	2.92	0.57
32:5:211:G:C2	32:5:212:A:C5	2.92	0.57
32:5:307:A:H3'	32:5:308:G:H21	1.68	0.57
32:5:321:U:O2	32:5:322:C:C6	2.57	0.57
32:5:325:U:H2'	32:5:326:C:C6	2.39	0.57
32:5:358:C:C2	32:5:359:A:C8	2.92	0.57
32:5:494:U:C4	32:5:495:C:C5	2.93	0.57
32:5:1189:G:C5	32:5:1190:C:C5	2.92	0.57
32:5:1380:G:C4	32:5:1382:G:C6	2.92	0.57
32:5:1617:G:C5	32:5:1618:G:N7	2.72	0.57
32:5:1719:A:O2'	32:5:1720:C:C6	2.56	0.57
32:5:1850:A:H2'	32:5:1851:G:O5'	2.04	0.57
32:5:2000:G:O2'	32:5:2017:A:N1	2.31	0.57
32:5:2004:U:C2	32:5:2005:G:C8	2.92	0.57
32:5:2805:C:C5	32:5:2806:A:N7	2.72	0.57
32:5:3869:C:C2	32:5:3870:C:C5	2.91	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4223:C:H5''	32:5:4224:A:OP2	2.05	0.57
32:5:4277:G:N1	32:5:4278:C:C4	2.72	0.57
32:5:4652:G:N3	32:5:4653:C:C6	2.73	0.57
35:B:367:PHE:CZ	35:B:369:ASP:HA	2.38	0.57
45:r:31:ASN:HD21	45:r:34:ALA:N	2.02	0.57
50:3:27:U:H2'	50:3:28:U:C6	2.39	0.57
51:4:51:G:C2	51:4:52:C:C6	2.93	0.57
51:4:226:U:OP2	53:6:84:ARG:NH2	2.32	0.57
54:S2:81:U:C5	54:S2:82:G:C8	2.92	0.57
54:S2:291:G:H8	54:S2:291:G:O5'	1.87	0.57
54:S2:403:G:C5	54:S2:404:G:N7	2.71	0.57
54:S2:841:G:N2	54:S2:842:C:C4	2.72	0.57
54:S2:956:G:N3	54:S2:957:A:N7	2.52	0.57
54:S2:1225:U:O4	54:S2:1226:G:N7	2.36	0.57
54:S2:1475:G:H1'	54:S2:1476:A:H5''	1.86	0.57
55:SA:36:GLN:HA	55:SA:36:GLN:HE21	1.68	0.57
65:SO:94:HIS:HB3	65:SO:128:ARG:HB2	1.84	0.57
67:SW:78:ARG:HD3	67:SW:126:LEU:HD23	1.85	0.57
68:SX:88:ASP:OD1	68:SX:88:ASP:C	2.47	0.57
76:SM:85:LEU:HA	76:SM:88:TRP:CZ2	2.39	0.57
77:SP:81:ARG:HH11	77:SP:81:ARG:HG2	1.69	0.57
81:ST:34:VAL:HG13	81:ST:52:TRP:CH2	2.39	0.57
3:G:261:LEU:O	3:G:261:LEU:CD2	2.45	0.57
21:c:101:ASP:CG	64:SN:43:LYS:HA	2.28	0.57
32:5:62:A:O2'	32:5:63:G:H5'	2.05	0.57
32:5:101:A:C2	32:5:102:G:N9	2.73	0.57
32:5:298:G:C6	32:5:299:C:C4	2.92	0.57
32:5:323:C:C2	32:5:324:A:C8	2.92	0.57
32:5:448:G:N1	32:5:449:C:C6	2.73	0.57
32:5:486:C:N3	32:5:487:G:C8	2.70	0.57
32:5:504:G:H22	32:5:654:C:H1'	1.70	0.57
32:5:728:U:O2'	32:5:729:G:OP1	2.20	0.57
32:5:916:C:C4	32:5:917:A:N7	2.72	0.57
32:5:1075:G:N2	32:5:1076:C:C2	2.72	0.57
32:5:1177:U:N3	32:5:1178:G:N7	2.52	0.57
32:5:1211:G:C2	32:5:1212:G:C8	2.93	0.57
32:5:1297:U:O2	32:5:1298:C:C6	2.57	0.57
32:5:1411:C:O2	32:5:1412:G:H8	1.80	0.57
32:5:1624:G:C5	32:5:1643:A:C8	2.92	0.57
32:5:1629:G:C2	32:5:1631:A:C5	2.93	0.57
32:5:1672:U:C2	32:5:1673:U:C6	2.80	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1877:G:N1	32:5:1878:G:C5	2.72	0.57
32:5:1939:A:N1	32:5:3874:G:C5'	2.60	0.57
32:5:2480:G:N1	32:5:2481:G:C5	2.72	0.57
32:5:2481:G:C5	32:5:2482:C:C5	2.93	0.57
32:5:2556:G:N2	32:5:2572:C:C2	2.72	0.57
32:5:2594:C:N3	32:5:2595:C:C5	2.71	0.57
32:5:2603:C:N3	32:5:2604:C:C5	2.72	0.57
32:5:2688:G:N3	32:5:2689:C:C6	2.72	0.57
32:5:2727:C:C2	32:5:2728:U:C5	2.93	0.57
32:5:2793:G:C5	32:5:2797:C:N4	2.72	0.57
32:5:3703:G:C6	32:5:3704:U:C4	2.92	0.57
32:5:3793:U:C2	32:5:3794:C:C5	2.93	0.57
32:5:4117:U:O2	32:5:4117:U:C2'	2.52	0.57
32:5:4984:C:C2	32:5:4985:U:C6	2.93	0.57
33:7:22:A:C2	33:7:23:A:C6	2.91	0.57
34:8:130:C:C4	34:8:131:G:N7	2.72	0.57
39:I:108:ALA:O	39:I:109:ASP:HB3	2.05	0.57
47:q:11:SER:HA	47:q:14:PHE:CD2	2.39	0.57
51:4:18:G:N2	51:4:19:C:C2	2.73	0.57
54:S2:190:G:O2'	54:S2:209:A:N6	2.37	0.57
54:S2:333:G:N7	59:SG:190:ARG:NH1	2.52	0.57
54:S2:440:G:OP1	54:S2:1798:C:O2'	2.22	0.57
54:S2:794:A:C6	54:S2:795:A:C6	2.91	0.57
54:S2:913:A:C2	60:SH:120:ARG:NH2	2.72	0.57
54:S2:1053:C:C2	54:S2:1054:G:C8	2.93	0.57
54:S2:1291:A:O5'	86:Sf:146:LEU:C	2.47	0.57
54:S2:1591:C:N3	54:S2:1592:C:C6	2.72	0.57
54:S2:1648:G:H8	78:SQ:125:ARG:HB3	1.68	0.57
54:S2:1776:G:N2	54:S2:1777:G:C4	2.73	0.57
54:S2:1860:A:C6	54:S2:1862:G:C6	2.92	0.57
56:SB:107:ARG:HH11	56:SB:107:ARG:HB3	1.70	0.57
60:SH:118:ARG:O	60:SH:121:THR:HG22	2.04	0.57
2:D:20:PHE:HD2	2:D:30:TYR:HH	1.48	0.57
32:5:1:C:C6	32:5:2:G:C8	2.93	0.57
32:5:69:A:C2	32:5:70:A:C5	2.91	0.57
32:5:98:A:C6	32:5:99:A:C4	2.92	0.57
32:5:247:G:C4	32:5:248:C:C5	2.93	0.57
32:5:286:U:H2'	32:5:287:U:O4'	2.03	0.57
32:5:426:A:O2'	32:5:427:A:H5'	2.05	0.57
32:5:470:A:N7	32:5:471:A:N7	2.53	0.57
32:5:483:G:N3	32:5:484:U:C6	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:751:G:C2	32:5:752:G:C8	2.91	0.57
32:5:933:G:C2	32:5:940:C:C5	2.93	0.57
32:5:1085:C:N3	32:5:1086:C:C6	2.72	0.57
32:5:1216:C:N3	32:5:1217:G:C8	2.72	0.57
32:5:1261:G:C2	32:5:1262:G:N9	2.72	0.57
32:5:1271:G:C3'	32:5:1272:C:C5'	2.83	0.57
32:5:1534:A:H1'	42:j:11:ARG:NH2	2.19	0.57
32:5:1857:C:C2	32:5:1858:A:C8	2.92	0.57
32:5:2089:G:O2'	32:5:2090:U:O2	2.23	0.57
32:5:2291:G:C2	32:5:2292:C:C5	2.92	0.57
32:5:2394:G:N2	32:5:2820:C:H5	2.03	0.57
32:5:2401:A:N1	32:5:2402:G:N7	2.52	0.57
32:5:2435:G:H21	32:5:2783:A:H1'	1.70	0.57
32:5:2441:C:H2'	32:5:2442:G:H8	1.69	0.57
32:5:4102:C:C2	32:5:4108:G:C2	2.93	0.57
32:5:4109:G:C6	32:5:4110:C:C4	2.93	0.57
32:5:4238:G:C2	32:5:4287:G:C6	2.92	0.57
32:5:4271:A:N3	32:5:4271:A:H2'	2.20	0.57
32:5:4468:U:O2	32:5:4708:A:C8	2.57	0.57
32:5:4563:U:N3	32:5:4564:A:C5	2.73	0.57
32:5:4876:U:H1'	32:5:4878:C:C5	2.39	0.57
32:5:4958:C:H2'	32:5:4958:C:O2	2.04	0.57
34:8:44:A:C4	34:8:45:C:C5	2.92	0.57
37:E:102:VAL:HB	37:E:103:VAL:HG13	1.85	0.57
50:3:18:G:H4'	50:3:60:A:C2	2.40	0.57
54:S2:121:U:C4	54:S2:122:G:N7	2.73	0.57
54:S2:201:C:C4	54:S2:202:G:H1'	2.39	0.57
54:S2:522:A:OP2	62:SJ:45:ARG:NH1	2.34	0.57
54:S2:647:U:O2	54:S2:647:U:H2'	2.03	0.57
54:S2:665:G:N2	54:S2:671:A:C8	2.73	0.57
54:S2:675:U:O2	54:S2:675:U:H2'	2.03	0.57
54:S2:980:A:C2	54:S2:981:A:C6	2.92	0.57
54:S2:1303:C:O2	54:S2:1303:C:O4'	2.18	0.57
54:S2:1495:G:O2'	85:Sd:26:ASN:ND2	2.37	0.57
54:S2:1596:U:N3	54:S2:1597:C:C6	2.72	0.57
54:S2:1602:U:H4'	80:SS:24:ARG:NH2	2.19	0.57
54:S2:1667:U:O2	54:S2:1667:U:H2'	2.03	0.57
54:S2:1741:U:C2	54:S2:1742:C:C6	2.92	0.57
54:S2:1759:G:N2	54:S2:1774:C:C2	2.72	0.57
54:S2:1791:A:C6	54:S2:1792:G:H1'	2.39	0.57
56:SB:49:VAL:CG2	56:SB:62:LEU:HD22	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SB:150:ILE:HD13	79:SR:129:LYS:HZ2	1.62	0.57
58:SE:11:ARG:O	58:SE:12:VAL:HB	2.02	0.57
62:SJ:114:VAL:HG12	62:SJ:120:ALA:HB2	1.86	0.57
4:H:31:ARG:HH11	4:H:87:GLY:HA3	0.78	0.57
10:Q:34:PHE:C	10:Q:34:PHE:CD2	2.82	0.57
10:Q:178:ARG:NH2	10:Q:186:TYR:HE1	2.01	0.57
13:T:132:PRO:HG2	38:F:128:ASN:HD21	1.70	0.57
32:5:174:C:C2	32:5:263:G:C2	2.93	0.57
32:5:270:U:O2	32:5:270:U:H2'	2.03	0.57
32:5:1069:G:C6	32:5:1070:G:C8	2.92	0.57
32:5:1267:C:O2'	32:5:1271:G:O6	2.22	0.57
32:5:1691:G:C4	32:5:1692:C:C6	2.92	0.57
32:5:2330:G:H2'	32:5:2331:G:C1'	2.34	0.57
32:5:2347:A:C4	32:5:2348:G:C6	2.92	0.57
32:5:2557:G:C6	32:5:2558:C:C4	2.93	0.57
32:5:3670:C:O2'	32:5:3671:G:C8	2.57	0.57
32:5:3732:A:N1	32:5:3733:A:N7	2.52	0.57
32:5:3764:U:H2'	32:5:3765:G:O4'	2.05	0.57
32:5:4273:A:H2'	32:5:4274:A:C1'	2.33	0.57
32:5:4336:A:C8	32:5:4336:A:H3'	2.40	0.57
32:5:4368:G:N2	32:5:4369:A:H1'	2.20	0.57
32:5:4984:C:N3	32:5:4985:U:C6	2.73	0.57
32:5:4984:C:H4'	35:B:25:HIS:CD2	2.40	0.57
32:5:4997:G:N1	32:5:4998:G:C5	2.73	0.57
32:5:5005:G:O6	41:W:51:TRP:CB	2.50	0.57
33:7:43:U:O4	33:7:44:C:N4	2.38	0.57
36:C:143:ARG:HH21	36:C:145:GLU:HG3	1.70	0.57
39:I:85:PHE:CD1	39:I:85:PHE:C	2.82	0.57
46:K:1:MET:H2	46:K:2:PRO:HD3	1.70	0.57
47:q:124:PRO:O	47:q:126:GLN:N	2.37	0.57
48:z:69:LEU:C	48:z:71:LYS:N	2.63	0.57
48:z:134:LEU:HD12	48:z:159:PHE:CE1	2.39	0.57
50:3:34:A:N1	54:S2:1701:C:C6	2.55	0.57
51:4:32:A:O2'	51:4:33:G:C8	2.58	0.57
54:S2:49:C:H2'	54:S2:49:C:O2	2.05	0.57
54:S2:550:C:C2	54:S2:551:U:C5	2.92	0.57
54:S2:625:G:O4'	54:S2:629:A:H2	1.87	0.57
54:S2:875:A:H2	54:S2:910:G:H22	1.50	0.57
54:S2:1162:C:C2	54:S2:1163:C:C6	2.92	0.57
54:S2:1230:C:H2'	54:S2:1665:G:H22	1.69	0.57
54:S2:1563:G:C6	54:S2:1564:C:C4	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1573:G:C6	54:S2:1574:C:C4	2.93	0.57
54:S2:1683:C:C2	54:S2:1684:C:C5	2.92	0.57
56:SB:27:LYS:CA	56:SB:51:ARG:HH12	2.17	0.57
58:SE:121:TYR:CE2	58:SE:122:LYS:HA	2.39	0.57
62:SJ:32:ILE:HD11	62:SJ:40:LYS:HD3	1.87	0.57
74:SF:140:ASP:CB	84:Sc:56:LEU:HD21	2.35	0.57
77:SP:37:TYR:HA	77:SP:42:ARG:HH22	1.69	0.57
1:A:174:ARG:NH2	32:5:3684:G:OP1	2.38	0.57
2:D:44:TYR:CE2	32:5:1823:G:H4'	2.40	0.57
7:M:33:GLN:HA	7:M:33:GLN:HE21	1.67	0.57
12:S:96:GLU:HB3	12:S:142:VAL:HG21	1.87	0.57
18:Z:46:ILE:HD12	18:Z:49:TYR:CD1	2.40	0.57
32:5:450:G:O6	32:5:1295:C:C4	2.58	0.57
32:5:515:C:C2	32:5:516:C:C5	2.93	0.57
32:5:1271:G:H3'	32:5:1272:C:C4'	2.35	0.57
32:5:1555:G:C4	32:5:1556:C:C6	2.91	0.57
32:5:1743:A:C5	32:5:1744:U:C5	2.93	0.57
32:5:1929:A:C6	32:5:2054:U:O4	2.57	0.57
32:5:2037:C:O2	32:5:2037:C:C2'	2.51	0.57
32:5:2128:G:C6	32:5:2129:C:C4	2.93	0.57
32:5:2570:U:N3	32:5:2571:C:C5	2.73	0.57
32:5:2598:A:C2	32:5:2748:C:C2	2.92	0.57
32:5:2605:G:C2	32:5:2606:G:C5	2.92	0.57
32:5:2700:G:H2'	32:5:2701:U:O4'	2.04	0.57
32:5:3590:G:C5	32:5:3591:C:C5	2.92	0.57
32:5:3833:C:C2	32:5:3834:C:C6	2.92	0.57
32:5:3869:C:N3	32:5:3870:C:C5	2.73	0.57
32:5:4099:G:C2	32:5:4100:C:C2	2.93	0.57
32:5:4133:C:O2	32:5:4134:C:C6	2.58	0.57
32:5:4458:C:H2'	32:5:4459:U:H6	1.69	0.57
32:5:4537:C:O2	32:5:4537:C:C2'	2.47	0.57
32:5:5061:A:C4'	32:5:5062:G:H5''	2.34	0.57
33:7:55:A:C2	33:7:56:G:C5	2.92	0.57
35:B:91:GLY:HA3	35:B:153:MET:HE3	1.86	0.57
37:E:229:PHE:CD2	37:E:230:ASP:OD1	2.57	0.57
45:r:30:ASN:HB3	45:r:50:GLY:HA3	1.86	0.57
51:4:45:G:C5	51:4:46:C:C5	2.93	0.57
51:4:120:G:N2	51:4:230[A]:C:O2	2.38	0.57
54:S2:31:U:C2	54:S2:644:G:N2	2.72	0.57
54:S2:121:U:C2	54:S2:122:G:N7	2.70	0.57
54:S2:875:A:N3	54:S2:876:C:H6	1.80	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1113:A:H2'	54:S2:1114:U:H2'	1.86	0.57
54:S2:1127:C:C2	54:S2:1128:C:C6	2.92	0.57
54:S2:1203:G:C3'	54:S2:1204:A:C8	2.84	0.57
54:S2:1272:C:C4	54:S2:1273:C:C5	2.92	0.57
54:S2:1293:A:C8	86:Sf:152:LYS:HB2	2.40	0.57
54:S2:1449:G:H2'	54:S2:1450:G:O4'	2.04	0.57
54:S2:1642:U:O2	54:S2:1643:U:H5	1.86	0.57
54:S2:1686:G:C3'	54:S2:1687:C:P	2.93	0.57
58:SE:48:LEU:HD21	58:SE:70:ILE:HD11	1.86	0.57
70:Sa:22:ARG:CZ	70:Sa:22:ARG:CB	2.82	0.57
83:SZ:49:LEU:HA	83:SZ:83:LEU:CD1	2.34	0.57
7:M:107:PHE:CD1	37:E:266:TYR:CD2	2.93	0.57
11:R:131:VAL:CG2	11:R:132:PHE:CZ	2.87	0.57
18:Z:4:PHE:N	18:Z:4:PHE:CD1	2.72	0.57
31:o:26:TYR:CD2	31:o:82:MET:HE3	2.40	0.57
32:5:29:G:C5	32:5:54:G:C2	2.92	0.57
32:5:32:G:C8	32:5:48:G:N2	2.73	0.57
32:5:40:G:H2'	32:5:41:C:O4'	2.05	0.57
32:5:388:A:C6	32:5:411:G:C6	2.91	0.57
32:5:504:G:N1	32:5:654:C:O2	2.36	0.57
32:5:962:C:P	32:5:2264:C:N3	2.77	0.57
32:5:1291:G:C2	32:5:1292:C:C6	2.93	0.57
32:5:1398:A:C2	32:5:1399:G:H1'	2.40	0.57
32:5:1433:A:N6	32:5:1451:G:O2'	2.38	0.57
32:5:1511:U:H2'	32:5:1512:G:O4'	2.05	0.57
32:5:1615:C:C4	32:5:1616:U:C5	2.93	0.57
32:5:1644:C:N3	32:5:1645:C:C5	2.73	0.57
32:5:1667:G:C6	32:5:2280:G:C4	2.93	0.57
32:5:1910:G:C2	32:5:1911:C:C5	2.92	0.57
32:5:1936:C:C4	33:7:84:U:C5	2.92	0.57
32:5:2268:A:H4'	32:5:2269:C:O5'	2.05	0.57
32:5:2519:U:C2	32:5:2520:C:C4	2.92	0.57
32:5:2603:C:H2'	32:5:2603:C:O2	2.03	0.57
32:5:2634:C:N3	32:5:2635:U:C5	2.72	0.57
32:5:2860:C:H2'	32:5:2861:C:O4'	2.05	0.57
32:5:3590:G:C6	32:5:3591:C:C4	2.92	0.57
32:5:3719:A:N7	32:5:3720:G:C8	2.72	0.57
32:5:3937:C:O2	32:5:3937:C:H2'	2.03	0.57
32:5:4177:C:C2	32:5:4178:A:C8	2.93	0.57
32:5:4277:G:N2	32:5:4278:C:C2	2.72	0.57
32:5:4502:C:N4	32:5:4503:A:N7	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4737:G:C4	32:5:4738:C:C4	2.93	0.57
32:5:5028:G:C6	32:5:5029:C:N4	2.73	0.57
32:5:5029:C:N3	32:5:5030:U:C5	2.73	0.57
32:5:5030:U:N3	32:5:5031:G:N7	2.53	0.57
33:7:54:A:H2	33:7:55:A:C8	2.05	0.57
35:B:51:ALA:HA	35:B:323:TYR:HE2	1.66	0.57
47:q:167:VAL:HG21	47:q:183:PHE:CE2	2.40	0.57
48:z:273:ILE:HD12	48:z:285:PHE:CE1	2.36	0.57
51:4:114:G:H1	51:4:237:U:H3	1.52	0.57
54:S2:340:C:N4	54:S2:341:C:N4	2.52	0.57
54:S2:377:G:C6	54:S2:378:U:C4	2.92	0.57
54:S2:467:G:C6	54:S2:468:A:C8	2.93	0.57
54:S2:1223:A:C2	54:S2:1644:C:N3	2.72	0.57
54:S2:1351:G:O4'	55:SA:110:ASN:ND2	2.34	0.57
54:S2:1573:G:C6	54:S2:1574:C:C5	2.93	0.57
54:S2:1590:C:C5	54:S2:1591:C:H1'	2.39	0.57
54:S2:1797:U:O2'	54:S2:1798:C:O5'	2.17	0.57
55:SA:10:MET:HA	55:SA:55:TRP:CZ3	2.39	0.57
56:SB:196:ASP:OD1	56:SB:196:ASP:C	2.47	0.57
75:SK:11:ILE:HD12	75:SK:45:VAL:HG22	1.86	0.57
84:Sc:6:VAL:HG12	84:Sc:8:PRO:HD3	1.87	0.57
84:Sc:13:ARG:H	84:Sc:13:ARG:CD	2.13	0.57
10:Q:32:TYR:OH	10:Q:123:PHE:HD2	1.87	0.57
11:R:124:TYR:CZ	32:5:2665:U:C5	2.93	0.57
13:T:82:GLY:CA	20:b:16:TRP:HB2	2.35	0.57
18:Z:97:ASN:OD1	18:Z:98:LYS:N	2.37	0.57
32:5:662:C:H2'	32:5:663:G:C8	2.39	0.57
32:5:989:U:H2'	32:5:990:C:C5	2.39	0.57
32:5:990:C:C4	32:5:991:C:C5	2.93	0.57
32:5:993:G:C2	32:5:994:G:C8	2.92	0.57
32:5:1246:G:C4	32:5:1247:U:C6	2.93	0.57
32:5:1285:U:C4	32:5:1286:C:C5	2.93	0.57
32:5:1392:A:H2'	32:5:1393:G:C8	2.40	0.57
32:5:1394:G:O2'	32:5:1395:U:H5'	2.05	0.57
32:5:1778:C:O2	32:5:1779:U:H5	1.87	0.57
32:5:1844:G:C5	32:5:1845:U:C5	2.92	0.57
32:5:1878:G:C6	32:5:1879:C:N4	2.73	0.57
32:5:1944:A:C5	32:5:1945:G:C8	2.93	0.57
32:5:2853:C:C5	32:5:2854:G:C4	2.93	0.57
32:5:4258:C:C2	32:5:4259:C:C6	2.93	0.57
32:5:4996:C:N3	32:5:4997:G:C8	2.73	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:9:A:N1	34:8:10:G:N7	2.52	0.57
34:8:14:U:O2'	34:8:15:G:C5'	2.52	0.57
37:E:43:ASN:C	37:E:43:ASN:HD22	2.13	0.57
39:I:76:MET:HE2	39:I:80:CYS:SG	2.45	0.57
39:I:91:LEU:HD12	39:I:135:ILE:HG23	1.86	0.57
47:q:161:ILE:HD11	47:q:171:GLU:HG3	1.85	0.57
54:S2:431:G:N3	54:S2:432:G:C8	2.73	0.57
54:S2:1109:C:H3'	54:S2:1109:C:OP2	2.04	0.57
54:S2:1291:A:C5	86:Sf:140:TYR:CE2	2.92	0.57
54:S2:1292:C:H6	86:Sf:149:CYS:CA	2.17	0.57
58:SE:210:VAL:HB	58:SE:218:PHE:CE2	2.40	0.57
63:SL:40:ILE:HD11	63:SL:68:ILE:HB	1.87	0.57
64:SN:34:LYS:O	64:SN:38:TYR:HB2	2.04	0.57
69:SY:58:PHE:CZ	69:SY:72:PHE:HB3	2.40	0.57
79:SR:103:LYS:CB	79:SR:117:LEU:HD13	2.32	0.57
32:5:77:U:C4	32:5:335:A:N6	2.73	0.57
32:5:84:A:C6	32:5:86:U:C5	2.93	0.57
32:5:88:A:O2'	32:5:89:C:O5'	2.23	0.57
32:5:102:G:C2'	32:5:103:G:O5'	2.53	0.57
32:5:421:C:C4	32:5:422:C:C5	2.93	0.57
32:5:426:A:C2	32:5:427:A:C5	2.92	0.57
32:5:438:G:N1	32:5:439:G:C5	2.73	0.57
32:5:442:G:O2'	32:5:443:G:H5'	2.05	0.57
32:5:676:C:C2	32:5:677:G:C8	2.92	0.57
32:5:715:G:H2'	32:5:716:C:O4'	2.05	0.57
32:5:1213:G:C5	32:5:1215:C:C1'	2.87	0.57
32:5:1279:A:C2'	32:5:1280:C:C5	2.86	0.57
32:5:1529:G:N2	42:j:49:TRP:HZ2	2.03	0.57
32:5:1635:C:C2'	32:5:1636:U:H5'	2.25	0.57
32:5:1831:G:C4	32:5:1832:C:C6	2.93	0.57
32:5:2549:G:N2	32:5:2770:C:N3	2.53	0.57
32:5:2601:A:C8	32:5:2743:A:OP1	2.58	0.57
32:5:2614:C:H2'	32:5:2614:C:O2	2.04	0.57
32:5:2713:C:C2	32:5:2714:G:C8	2.93	0.57
32:5:3612:C:H2'	32:5:3613:U:O4'	2.05	0.57
32:5:3710:G:N2	32:5:3711:A:C5	2.73	0.57
32:5:3718:A:H2'	32:5:3719:A:C1'	2.34	0.57
32:5:3758:U:C4	32:5:3765:G:C6	2.93	0.57
32:5:3863:C:O2	32:5:3864:C:C5	2.58	0.57
32:5:4081:G:N2	32:5:4082:G:C4	2.73	0.57
32:5:4091:G:C6	32:5:4092:G:C5	2.93	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4142:C:C4	32:5:4143:G:N1	2.72	0.57
32:5:4145:C:O2	32:5:4146:G:C8	2.57	0.57
32:5:4167:G:N2	32:5:4168:G:C1'	2.67	0.57
32:5:4296:U:C4	32:5:4297:G:C8	2.93	0.57
32:5:4744:A:N3	32:5:4745:G:C8	2.73	0.57
33:7:92:C:O2	33:7:93:G:C8	2.58	0.57
33:7:112:U:O2	33:7:112:U:H2'	2.04	0.57
34:8:70:G:N2	34:8:87:G:O2'	2.38	0.57
34:8:73:U:N3	34:8:74:U:H1'	2.19	0.57
34:8:143:G:C2	34:8:144:U:C6	2.93	0.57
35:B:160:ILE:HD13	35:B:194:LEU:HD13	1.86	0.57
40:P:3:ARG:HG3	40:P:3:ARG:HH11	1.69	0.57
54:S2:64:A:C5	54:S2:82:G:N1	2.73	0.57
54:S2:1124:C:C4	54:S2:1125:C:C5	2.93	0.57
54:S2:1428:G:H2'	54:S2:1429:G:O4'	2.05	0.57
54:S2:1457:U:C2	54:S2:1458:G:C8	2.93	0.57
54:S2:1589:A:OP1	81:ST:81:GLY:N	2.38	0.57
54:S2:1605:G:C3'	54:S2:1606:G:O4'	2.52	0.57
54:S2:1609:C:O2	54:S2:1609:C:H2'	2.03	0.57
54:S2:1776:G:C2	54:S2:1777:G:N7	2.73	0.57
62:SJ:39:ASN:OD1	62:SJ:41:ARG:N	2.37	0.57
11:R:132:PHE:N	11:R:132:PHE:CD2	2.72	0.56
12:S:66:GLN:CD	12:S:68:PHE:HB3	2.30	0.56
32:5:57:G:C2	32:5:58:G:N1	2.74	0.56
32:5:271:C:C2	32:5:272:U:C5	2.79	0.56
32:5:471:A:N1	32:5:472:C:H1'	2.20	0.56
32:5:494:U:N3	32:5:495:C:C6	2.72	0.56
32:5:658:C:N3	32:5:659:G:C8	2.73	0.56
32:5:712:C:N3	32:5:713:C:C5	2.73	0.56
32:5:1048:G:C6	32:5:1049:C:C4	2.93	0.56
32:5:1280:C:N4	32:5:1282:G:O6	2.38	0.56
32:5:1282:G:C8	37:E:124:HIS:CE1	2.93	0.56
32:5:1373:A:C2	32:5:1374:G:C8	2.93	0.56
32:5:1582:U:O4	32:5:1583:A:C5	2.58	0.56
32:5:1751:A:C5	32:5:1752:G:C8	2.93	0.56
32:5:1855:G:C6	32:5:1856:C:C4	2.93	0.56
32:5:2745:A:O2'	32:5:2746:A:C5'	2.52	0.56
32:5:2844:A:C2	32:5:3839:G:N7	2.72	0.56
32:5:3676:G:O2'	32:5:3677:U:C5'	2.53	0.56
32:5:4275:G:O6	32:5:4276:G:C6	2.58	0.56
32:5:4299:U:C2	32:5:4300:U:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4479:A:N6	32:5:4480:A:C4	2.73	0.56
32:5:4518:A:C2'	35:B:257:TRP:CZ3	2.88	0.56
32:5:4731:G:C8	32:5:4732:G:C6	2.93	0.56
34:8:125:C:C4'	34:8:126:C:H3'	2.35	0.56
35:B:264:PHE:C	35:B:264:PHE:CD1	2.83	0.56
38:F:248:ARG:HB3	38:F:248:ARG:NH1	2.20	0.56
48:z:383:ASN:HB2	51:4:209:G:P	2.44	0.56
54:S2:119:U:C4	54:S2:120:U:C5	2.92	0.56
54:S2:364:A:C2	54:S2:397:G:N3	2.73	0.56
54:S2:675:U:N3	54:S2:676:C:C5	2.73	0.56
54:S2:962:A:N1	54:S2:963:A:C5	2.73	0.56
54:S2:963:A:N3	54:S2:964:A:C5	2.72	0.56
54:S2:976:G:C5	54:S2:977:C:C5	2.93	0.56
54:S2:997:A:C2'	54:S2:998:A:O4'	2.53	0.56
54:S2:1038:U:H1'	54:S2:1181:A:N1	2.20	0.56
54:S2:1249:C:N4	54:S2:1250:A:H62	1.98	0.56
54:S2:1290:G:C2'	86:Sf:146:LEU:H	2.17	0.56
54:S2:1294:G:C8	86:Sf:151:ASN:C	2.82	0.56
54:S2:1352:G:OP1	55:SA:109:THR:HG21	2.04	0.56
10:Q:17:GLU:HA	10:Q:52:PHE:HE1	1.70	0.56
32:5:127:G:N3	32:5:128:C:C6	2.73	0.56
32:5:288:G:C5	32:5:289:C:C5	2.93	0.56
32:5:1464:C:O2	32:5:1464:C:H2'	2.06	0.56
32:5:2282:A:C2'	32:5:2283:G:O5'	2.52	0.56
32:5:2477:A:C2	32:5:2478:C:C4	2.92	0.56
32:5:2479:G:C4	32:5:2480:G:C8	2.93	0.56
32:5:2602:G:H1	32:5:2736:G:H1	1.51	0.56
32:5:3636:C:C4	32:5:3637:U:C5	2.93	0.56
32:5:3743:G:C2'	32:5:3744:G:H5'	2.31	0.56
32:5:3759:A:C6	54:S2:1709:G:H5''	2.30	0.56
32:5:3848:U:N3	32:5:3849:A:N7	2.52	0.56
32:5:4100:C:C4	32:5:4101:C:C5	2.93	0.56
32:5:4330:G:C2	32:5:4331:G:H1'	2.39	0.56
32:5:4341:C:N4	32:5:4342:C:C4	2.73	0.56
32:5:4661:G:H2'	32:5:4662:C:O4'	2.05	0.56
32:5:4772:C:C2	32:5:4773:C:C5	2.93	0.56
34:8:59:A:P	34:8:60:G:HO2'	2.27	0.56
34:8:66:A:H2'	34:8:67:U:C6	2.40	0.56
34:8:80:A:H3'	34:8:81:C:H4'	1.85	0.56
46:K:48:LYS:O	46:K:52:ASP:HB2	2.05	0.56
47:q:109:ALA:O	47:q:110:ALA:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:134:LEU:HB2	48:z:159:PHE:CD1	2.40	0.56
48:z:160:TYR:HD2	48:z:179:PHE:HZ	1.52	0.56
49:2:119:MET:O	49:2:120:SER:CB	2.53	0.56
50:3:49:C:O2	50:3:50:C:C6	2.58	0.56
51:4:29:C:OP1	89:S4:2:VAL:N	2.38	0.56
51:4:53:U:O2	51:4:54:G:C8	2.58	0.56
54:S2:2:A:C8	57:SC:223:TYR:HB3	2.41	0.56
54:S2:31:U:H2'	54:S2:32:U:C6	2.39	0.56
54:S2:191:A:H3'	54:S2:192:C:H5''	1.87	0.56
54:S2:218:U:H2'	54:S2:219:U:C6	2.40	0.56
54:S2:377:G:N1	54:S2:378:U:C4	2.72	0.56
54:S2:443:U:O2	54:S2:443:U:H2'	2.05	0.56
54:S2:600:G:N2	54:S2:601:G:C5	2.73	0.56
54:S2:752:G:C6	54:S2:791:C:N3	2.72	0.56
54:S2:969:U:C6	54:S2:971:G:N2	2.73	0.56
54:S2:1121:G:C5	54:S2:1122:A:N7	2.72	0.56
54:S2:1266:C:O2	54:S2:1266:C:H2'	2.05	0.56
54:S2:1433:C:C2'	54:S2:1434:C:O4'	2.33	0.56
54:S2:1488:C:C2	54:S2:1490:G:N7	2.73	0.56
54:S2:1551:U:H2'	54:S2:1552:G:O4'	2.05	0.56
54:S2:1565:C:C2	54:S2:1571:G:N2	2.73	0.56
54:S2:1793:A:C2	54:S2:1794:C:C6	2.93	0.56
54:S2:1797:U:H2'	54:S2:1798:C:C6	2.39	0.56
55:SA:73:ASP:N	55:SA:73:ASP:OD1	2.37	0.56
56:SB:120:VAL:HG22	56:SB:142:PHE:HE1	1.69	0.56
5:J:119:TYR:CE1	80:SS:12:ILE:CB	2.88	0.56
12:S:91:HIS:HE1	32:5:2032:U:O2'	1.87	0.56
19:a:61:TYR:CZ	32:5:294:G:N2	2.73	0.56
21:c:56:ARG:HG3	21:c:56:ARG:HH11	1.70	0.56
21:c:89:TYR:CD1	32:5:2673:G:N2	2.73	0.56
23:e:17:THR:HB	32:5:1302:U:H5'	1.87	0.56
23:e:51:GLY:O	23:e:52:GLN:OE1	2.23	0.56
29:l:44:TRP:CZ3	29:l:45:ARG:HB2	2.40	0.56
32:5:29:G:N2	32:5:30:C:C2	2.73	0.56
32:5:125:C:O2	32:5:126:C:C6	2.56	0.56
32:5:154:G:N2	32:5:155:C:C2	2.72	0.56
32:5:179:G:C6	32:5:180:C:C4	2.93	0.56
32:5:209:U:C5	32:5:211:G:C5	2.93	0.56
32:5:313:U:N3	32:5:314:G:C8	2.72	0.56
32:5:456:C:C2	32:5:457:G:N7	2.74	0.56
32:5:465:G:C6	32:5:466:A:N7	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:488:G:C2	32:5:489:C:C5	2.93	0.56
32:5:491:G:N2	32:5:663:G:H1	2.02	0.56
32:5:500:G:C2	32:5:504:G:N7	2.73	0.56
32:5:750:U:C4	32:5:751:G:N7	2.73	0.56
32:5:1091:C:N3	32:5:1092:G:C8	2.74	0.56
32:5:1100:U:C2	32:5:1167:C:C5	2.93	0.56
32:5:1188:C:O2	32:5:1188:C:C2'	2.53	0.56
32:5:1440:U:C2	32:5:1441:C:C5	2.93	0.56
32:5:1466:G:N2	32:5:1467:C:N1	2.53	0.56
32:5:1598:C:C2	32:5:1599:A:C8	2.92	0.56
32:5:1616:U:O2	32:5:1617:G:H8	1.87	0.56
32:5:1618:G:N2	32:5:1619:G:N9	2.52	0.56
32:5:1632:A:O2'	32:5:3641:U:O2	2.22	0.56
32:5:1688:G:H2'	32:5:1689:G:O4'	2.05	0.56
32:5:1691:G:C2	32:5:1692:C:N1	2.74	0.56
32:5:1697:G:H4'	32:5:1698:C:OP1	2.05	0.56
32:5:1767:A:C2	32:5:1769:G:H1'	2.40	0.56
32:5:2079:G:C6	32:5:2080:U:C5	2.93	0.56
32:5:2351:C:H2'	32:5:2351:C:O2	2.05	0.56
32:5:2365:C:C2	32:5:2829:U:C5	2.92	0.56
32:5:2392:C:H2'	32:5:2392:C:O2	2.04	0.56
32:5:2468:U:C4	32:5:2473:A:C6	2.92	0.56
32:5:2598:A:C2	32:5:2748:C:O2	2.58	0.56
32:5:2747:U:H2'	32:5:2748:C:O4'	2.05	0.56
32:5:3608:A:C2	32:5:3609:G:C5	2.94	0.56
32:5:3738:G:C6	32:5:3739:C:N1	2.73	0.56
32:5:3840:U:O2	32:5:3840:U:H2'	2.06	0.56
32:5:3875:G:O6	32:5:3877:A:H4'	2.05	0.56
32:5:4090:G:C5	32:5:4091:G:C8	2.94	0.56
32:5:4091:G:C2	32:5:4159:C:C2	2.92	0.56
32:5:4297:G:N1	32:5:4298:A:C8	2.73	0.56
32:5:4490:C:N3	32:5:4491:G:H8	1.98	0.56
32:5:4652:G:C2	32:5:4653:C:C5	2.93	0.56
32:5:4908:G:H1	32:5:4913:G:H21	1.52	0.56
32:5:5028:G:N2	32:5:5029:C:C2	2.73	0.56
33:7:104:C:N3	33:7:105:C:C5	2.74	0.56
33:7:110:G:N2	33:7:111:C:N1	2.53	0.56
34:8:10:G:C4	34:8:11:C:C6	2.93	0.56
34:8:79:G:C2	34:8:80:A:C6	2.93	0.56
35:B:58:ARG:NH2	35:B:60:VAL:HG22	2.20	0.56
36:C:341:LEU:HD21	37:E:52:ARG:HD2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:I:95:HIS:ND1	39:I:95:HIS:C	2.63	0.56
46:K:35:LEU:HD12	46:K:35:LEU:C	2.18	0.56
47:q:110:ALA:O	47:q:111:ALA:HB3	2.05	0.56
48:z:73:LYS:HD3	48:z:74:MET:N	2.21	0.56
48:z:340:MET:O	48:z:341:LYS:O	2.23	0.56
48:z:380:ASP:HB3	51:4:192:A:C6	2.37	0.56
54:S2:18:C:C4'	54:S2:1194:A:H62	2.17	0.56
54:S2:42:A:C6	54:S2:43:U:H5	2.23	0.56
54:S2:333:G:H2'	54:S2:334:C:O4'	2.05	0.56
54:S2:452:G:N2	54:S2:453:C:N3	2.53	0.56
54:S2:469:A:N3	54:S2:469:A:C2'	2.67	0.56
54:S2:695:C:N3	54:S2:696:G:C8	2.74	0.56
54:S2:946:U:N3	54:S2:947:G:N7	2.53	0.56
54:S2:990:A:C2	54:S2:992:A:C5	2.92	0.56
54:S2:1100:A:C2	54:S2:1101:U:N1	2.72	0.56
54:S2:1134:G:C6	54:S2:1135:C:C4	2.93	0.56
54:S2:1291:A:O4'	86:Sf:146:LEU:HA	2.06	0.56
54:S2:1308:U:N3	54:S2:1309:C:C5	2.72	0.56
54:S2:1532:C:H5''	54:S2:1533:A:O4'	2.05	0.56
54:S2:1576:G:N3	54:S2:1577:G:C8	2.73	0.56
54:S2:1629:C:O2	54:S2:1629:C:H2'	2.04	0.56
54:S2:1754:G:C4	54:S2:1755:C:C6	2.94	0.56
55:SA:43:SER:O	55:SA:45:GLY:N	2.38	0.56
59:SG:209:TYR:CE2	59:SG:213:LEU:HD23	2.39	0.56
61:SI:113:TYR:CD2	61:SI:121:LEU:HD21	2.40	0.56
70:Sa:21:ILE:HG21	70:Sa:72:HIS:NE2	2.19	0.56
81:ST:56:ARG:HD3	81:ST:79:TYR:CE2	2.40	0.56
4:H:156:ASN:OD1	4:H:157:SER:CA	2.53	0.56
11:R:9:ARG:HH11	11:R:9:ARG:HG2	1.70	0.56
12:S:57:SER:OG	33:7:98:G:OP1	2.21	0.56
12:S:94:TYR:CE2	12:S:96:GLU:HG3	2.40	0.56
23:e:24:GLN:HE21	32:5:2347:A:H61	1.52	0.56
32:5:87:A:C6	32:5:292:G:C6	2.93	0.56
32:5:93:G:C2	32:5:94:A:C2	2.94	0.56
32:5:964:A:C8	32:5:964:A:C5'	2.88	0.56
32:5:1368:A:O2'	32:5:1369:C:OP1	2.18	0.56
32:5:1582:U:C4	32:5:1583:A:N7	2.73	0.56
32:5:1663:C:O2	32:5:1664:U:C6	2.58	0.56
32:5:1672:U:H2'	32:5:1673:U:C6	2.39	0.56
32:5:1739:G:H2'	32:5:1740:C:C1'	2.36	0.56
32:5:1797:G:C2	32:5:1798:G:C5	2.93	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1846:G:C4	32:5:1847:C:C5	2.93	0.56
32:5:1942:A:H2'	32:5:1943:A:C8	2.41	0.56
32:5:1995:G:C4	32:5:1996:C:C5	2.94	0.56
32:5:2852:U:C2'	32:5:2852:U:O2	2.53	0.56
32:5:2854:G:O6	32:5:2856:C:C6	2.58	0.56
32:5:3656:A:C2	32:5:3657:U:C5	2.92	0.56
32:5:3698:G:N1	32:5:3699:C:C4	2.74	0.56
32:5:3910:C:H2'	32:5:3911:C:H6	1.70	0.56
32:5:4075:U:H4'	32:5:4076:G:OP1	2.03	0.56
32:5:4229:U:H3'	32:5:4230:C:H6	1.71	0.56
32:5:4266:G:N1	32:5:4279:A:C5	2.74	0.56
32:5:4276:G:C6	32:5:4277:G:N9	2.73	0.56
32:5:4425:G:C5	32:5:4426:C:C6	2.93	0.56
32:5:4467:A:C6	32:5:4468:U:C5	2.93	0.56
36:C:325:MET:HA	36:C:325:MET:HE3	1.87	0.56
40:P:114:ILE:HD12	40:P:148:MET:HE3	1.87	0.56
48:z:402:ARG:HG2	51:4:184:A:O3'	1.88	0.56
51:4:33:G:N1	51:4:34:C:C4	2.73	0.56
54:S2:93:U:H2'	54:S2:94:G:O4'	2.05	0.56
54:S2:367:U:C2'	54:S2:371:A:N7	2.66	0.56
54:S2:404:G:C2	54:S2:405:G:C5	2.94	0.56
54:S2:461:U:C2	54:S2:462:C:C6	2.94	0.56
54:S2:563:G:N2	54:S2:564:A:C8	2.74	0.56
54:S2:588:G:C1'	54:S2:589:G:H21	2.18	0.56
54:S2:854:A:H2'	54:S2:855:G:O4'	2.05	0.56
54:S2:1037:G:C6	54:S2:1038:U:C5	2.93	0.56
54:S2:1073:U:H2'	54:S2:1073:U:O2	2.05	0.56
54:S2:1290:G:N2	54:S2:1291:A:C8	2.74	0.56
54:S2:1307:U:C1'	86:Sf:133:ALA:HB2	2.34	0.56
54:S2:1342:U:C5	54:S2:1483:A:C6	2.93	0.56
54:S2:1552:G:H5''	54:S2:1553:C:H5''	1.87	0.56
54:S2:1735:A:H2'	54:S2:1736:G:O4'	2.06	0.56
54:S2:1868:U:H1'	70:Sa:97:PRO:HB2	1.88	0.56
63:SL:13:GLN:OE1	63:SL:56:ILE:HD12	2.05	0.56
74:SF:95:HIS:CD2	83:SZ:108:ILE:HD11	2.37	0.56
5:J:98:ASN:OD1	5:J:98:ASN:N	2.37	0.56
8:N:86:HIS:CD2	32:5:33:A:H5'	2.41	0.56
24:f:18:LEU:HB3	24:f:19:ARG:HH12	1.71	0.56
30:m:119:ASN:OD1	30:m:119:ASN:C	2.48	0.56
32:5:25:A:C4	32:5:341:G:C8	2.93	0.56
32:5:127:G:N1	32:5:128:C:C4	2.74	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:206:U:O2	32:5:208:A:H8	1.88	0.56
32:5:424:U:C2	32:5:425:U:C5	2.83	0.56
32:5:932:A:H2'	32:5:932:A:N3	2.21	0.56
32:5:991:C:C4	32:5:992:C:C5	2.93	0.56
32:5:1212:G:C2	32:5:1213:G:C5	2.93	0.56
32:5:1297:U:O2	32:5:1298:C:H6	1.88	0.56
32:5:1388:A:N1	32:5:1396:G:C2	2.73	0.56
32:5:1757:U:O2	32:5:1758:G:C8	2.58	0.56
32:5:1934:A:O2'	32:5:2059:C:OP1	2.20	0.56
32:5:1947:U:O2	32:5:1947:U:H2'	2.06	0.56
32:5:1966:C:O2	32:5:1966:C:H2'	2.03	0.56
32:5:1983:A:N1	32:5:2010:A:OP2	2.39	0.56
32:5:2437:C:H5''	32:5:2782:U:O4	2.06	0.56
32:5:2833:A:HO2'	32:5:2834:C:C4'	2.13	0.56
32:5:3711:A:N6	32:5:3712:A:C2	2.73	0.56
32:5:3879:G:OP1	32:5:3879:G:O4'	2.23	0.56
32:5:3944:G:N1	32:5:3945:A:N7	2.53	0.56
32:5:4346:U:H2'	32:5:4347:G:O5'	2.06	0.56
32:5:4534:G:C6	32:5:4535:A:N9	2.74	0.56
32:5:4988:U:H2'	32:5:4988:U:O2	2.05	0.56
32:5:4990:C:O2	35:B:169:ARG:HD2	2.06	0.56
32:5:5003:U:OP2	35:B:378:ARG:NH2	2.38	0.56
32:5:5057:C:H2'	32:5:5058:A:C8	2.39	0.56
34:8:120:G:C6	34:8:121:G:N7	2.73	0.56
47:q:133:GLU:O	47:q:135:THR:HG23	2.06	0.56
48:z:379:MET:HA	48:z:382:MET:HG3	1.87	0.56
50:3:5:C:C2	50:3:6:C:C5	2.93	0.56
54:S2:118:C:C4	54:S2:119:U:N1	2.73	0.56
54:S2:194:C:C2	54:S2:206:G:N2	2.73	0.56
54:S2:648:A:H1'	68:SX:46:HIS:NE2	2.20	0.56
54:S2:1109:C:H1'	54:S2:1110:G:OP1	2.05	0.56
54:S2:1292:C:N4	86:Sf:132:MET:SD	2.79	0.56
54:S2:1454:A:OP1	79:SR:49:LYS:NZ	2.38	0.56
54:S2:1568:C:O2'	54:S2:1569:A:O4'	2.24	0.56
54:S2:1709:G:C5	54:S2:1710:C:C5	2.94	0.56
54:S2:1729:U:O2	54:S2:1730:U:C5	2.58	0.56
54:S2:1758:G:N1	54:S2:1759:G:C5	2.74	0.56
54:S2:1772:C:C2	54:S2:1773:C:C6	2.92	0.56
54:S2:1858:G:C6	54:S2:1859:A:C8	2.94	0.56
58:SE:103:TYR:CE1	58:SE:189:LEU:HD11	2.40	0.56
59:SG:220:ALA:HA	59:SG:223:LYS:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:157:ILE:HG23	3:G:167:VAL:HG11	1.88	0.56
10:Q:34:PHE:CZ	10:Q:38:ARG:HG3	2.41	0.56
12:S:9:GLU:O	12:S:11:LYS:N	2.38	0.56
12:S:47:PHE:HE1	12:S:125:GLN:HG2	1.70	0.56
12:S:173:ASN:OD1	12:S:174:THR:N	2.38	0.56
32:5:59:A:C4	32:5:60:G:C8	2.94	0.56
32:5:69:A:C2	32:5:70:A:C4	2.94	0.56
32:5:100:C:O4'	32:5:100:C:O2	2.22	0.56
32:5:152:U:C2	32:5:153:G:C8	2.93	0.56
32:5:190:G:N1	32:5:252:C:C2	2.74	0.56
32:5:269:G:C6	32:5:270:U:C6	2.90	0.56
32:5:422:C:C2	32:5:423:G:C8	2.94	0.56
32:5:486:C:C4	32:5:487:G:N7	2.74	0.56
32:5:503:C:OP2	32:5:505:G:OP2	2.24	0.56
32:5:1264:C:C4	32:5:1265:G:N7	2.74	0.56
32:5:1285:U:C4	32:5:1286:C:C4	2.93	0.56
32:5:1583:A:C6	32:5:1584:G:H1'	2.41	0.56
32:5:1886:G:N1	32:5:1894:C:C4	2.73	0.56
32:5:2270:G:N2	32:5:2271:C:N3	2.53	0.56
32:5:2368:A:C6	32:5:2788:U:O4	2.59	0.56
32:5:2392:C:N3	32:5:2393:C:C5	2.74	0.56
32:5:2507:A:C2	32:5:2508:U:H1'	2.40	0.56
32:5:2589:C:C5	32:5:2590:G:N7	2.74	0.56
32:5:2595:C:O2	32:5:2596:G:C8	2.59	0.56
32:5:2840:A:C6	32:5:2841:G:C8	2.94	0.56
32:5:2895:A:C2	32:5:2896:G:C8	2.94	0.56
32:5:3652:A:H3'	32:5:3653:A:C8	2.41	0.56
32:5:4090:G:C2	32:5:4160:C:N3	2.74	0.56
32:5:4093:G:C2'	32:5:4094:G:H5'	2.36	0.56
32:5:4152:G:N3	32:5:4153:C:C6	2.73	0.56
32:5:4230:C:O2	32:5:4231:C:H6	1.84	0.56
32:5:4530:U:H5'	32:5:4531:U:OP2	2.05	0.56
32:5:4549:G:N3	32:5:4549:G:H2'	2.19	0.56
32:5:4623:G:H4'	35:B:16:PHE:HE2	1.71	0.56
32:5:4702:G:N2	32:5:4703:U:H1'	2.20	0.56
32:5:4978:G:O2'	32:5:4979:A:H3'	2.06	0.56
32:5:5042:A:C2	32:5:5043:A:C4	2.93	0.56
34:8:95:A:C5	34:8:96:C:C5	2.93	0.56
34:8:125:C:O4'	34:8:125:C:O2	2.23	0.56
38:F:58:HIS:O	38:F:61:LYS:N	2.38	0.56
38:F:100:ILE:C	38:F:101:ASN:OD1	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:q:78:LEU:HD21	47:q:193:PHE:CD2	2.41	0.56
52:9:53:CYS:O	52:9:56:VAL:HG12	2.06	0.56
54:S2:38:A:C6	54:S2:515:G:N1	2.74	0.56
54:S2:436:G:N2	54:S2:437:G:C4	2.74	0.56
54:S2:504:G:C2'	54:S2:505:G:O5'	2.54	0.56
54:S2:695:C:N3	54:S2:696:G:N7	2.53	0.56
54:S2:1073:U:O2	54:S2:1074:C:C6	2.58	0.56
54:S2:1407:U:C2	54:S2:1408:U:C5	2.94	0.56
56:SB:133:TYR:CE2	56:SB:181:LEU:HG	2.41	0.56
59:SG:215:LYS:O	59:SG:219:GLU:N	2.36	0.56
61:SI:8:TRP:CD1	61:SI:9:HIS:N	2.73	0.56
75:SK:95:ARG:HE	75:SK:95:ARG:CA	2.15	0.56
78:SQ:12:VAL:HG11	78:SQ:90:LYS:HB3	1.88	0.56
80:SS:36:VAL:HG22	80:SS:37:GLY:N	2.21	0.56
84:Sc:14:VAL:CA	84:Sc:32:VAL:HA	2.36	0.56
88:S1:53:THR:HG23	88:S1:54:ASP:H	1.70	0.56
13:T:156:TYR:OH	13:T:158:PHE:HB2	2.06	0.56
17:Y:3:PHE:HE2	36:C:222:ARG:HH21	1.54	0.56
27:i:38:LYS:O	27:i:39:PHE:C	2.48	0.56
27:i:39:PHE:CZ	27:i:43:MET:CG	2.89	0.56
31:o:15:CYS:SG	91:o:201:ZN:ZN	1.78	0.56
32:5:84:A:C6	32:5:86:U:C4	2.94	0.56
32:5:90:G:O2'	32:5:94:A:N6	2.39	0.56
32:5:95:G:H2'	32:5:96:U:O4'	2.05	0.56
32:5:288:G:C6	32:5:289:C:C4	2.93	0.56
32:5:691:C:C2	32:5:692:A:N7	2.74	0.56
32:5:1308:C:C2	32:5:1309:C:C6	2.94	0.56
32:5:1421:G:C2	32:5:1422:G:N7	2.73	0.56
32:5:1463:C:C2	32:5:1464:C:C6	2.94	0.56
32:5:1478:C:O2	32:5:1478:C:C2'	2.54	0.56
32:5:1677:U:H5''	32:5:1680:G:N2	2.20	0.56
32:5:1751:A:N6	32:5:1752:G:C5	2.73	0.56
32:5:1769:G:C2	32:5:1770:A:C5	2.93	0.56
32:5:1776:A:C2	32:5:1777:C:C6	2.93	0.56
32:5:1899:G:C6	32:5:1900:C:N4	2.74	0.56
32:5:1996:C:OP2	46:K:124:GLU:OE2	2.24	0.56
32:5:2290:C:H1'	32:5:2321:G:N3	2.21	0.56
32:5:2300:A:C2	36:C:182:LYS:HA	2.41	0.56
32:5:2417:A:N1	32:5:2418:A:N7	2.52	0.56
32:5:2480:G:C2	32:5:2499:C:C2	2.94	0.56
32:5:2561:C:N3	32:5:2562:G:N7	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2715:G:C4	32:5:2716:C:C5	2.94	0.56
32:5:2721:G:C2	32:5:2722:G:C8	2.93	0.56
32:5:3590:G:C4	32:5:3591:C:C6	2.93	0.56
32:5:3621:A:C2	32:5:3622:C:C6	2.94	0.56
32:5:3632:C:N3	32:5:3633:C:C5	2.74	0.56
32:5:3696:C:C2	32:5:3697:U:C5	2.94	0.56
32:5:3728:A:C8	32:5:3729:U:O4'	2.59	0.56
32:5:3901:A:C8	32:5:4450:U:C6	2.94	0.56
32:5:4072:C:C2	32:5:4073:A:N7	2.72	0.56
32:5:4091:G:C2	32:5:4159:C:C4	2.94	0.56
32:5:4169:G:H4'	32:5:4171:C:O2	2.04	0.56
32:5:4714:C:O2	32:5:4714:C:H2'	2.04	0.56
33:7:51:G:N3	33:7:52:C:C5	2.74	0.56
39:I:100:ASN:N	39:I:100:ASN:HD22	2.04	0.56
40:P:15:CYS:SG	40:P:150:LEU:HB2	2.46	0.56
53:6:112:ASP:OD2	53:6:113:ASN:N	2.38	0.56
54:S2:167:G:N2	54:S2:168:C:C2	2.74	0.56
54:S2:368:U:O2'	54:S2:369:C:H5''	2.06	0.56
54:S2:447:A:N6	54:S2:449:A:C6	2.74	0.56
54:S2:648:A:N3	54:S2:648:A:H2'	2.20	0.56
54:S2:666:U:H2'	54:S2:667:U:C6	2.39	0.56
54:S2:794:A:C6	54:S2:795:A:N7	2.74	0.56
54:S2:799:U:C5'	60:SH:110:THR:CG2	2.78	0.56
54:S2:805:U:O2	54:S2:805:U:H2'	2.06	0.56
54:S2:1017:U:O2	54:S2:1017:U:C2'	2.54	0.56
54:S2:1192:U:H2'	54:S2:1193:U:O4'	2.06	0.56
54:S2:1310:U:N3	54:S2:1311:C:H5	1.92	0.56
54:S2:1365:G:O6	54:S2:1375:G:N2	2.38	0.56
54:S2:1667:U:N3	54:S2:1668:U:O4	2.39	0.56
54:S2:1718:G:C2	54:S2:1814:G:C2	2.93	0.56
54:S2:1756:C:H2'	54:S2:1756:C:O2	2.04	0.56
54:S2:1865:C:O2'	70:Sa:95:ARG:NH1	2.37	0.56
58:SE:31:PRO:HG2	58:SE:38:LEU:HD12	1.87	0.56
67:SW:8:ALA:HA	67:SW:74:VAL:HG11	1.86	0.56
70:Sa:10:ARG:NH1	70:Sa:12:LYS:HD3	2.20	0.56
74:SF:128:ILE:CD1	84:Sc:68:LEU:CG	2.81	0.56
3:G:51:LEU:HD11	32:5:4086:G:N3	2.21	0.56
23:e:107:ASN:OD1	23:e:107:ASN:N	2.39	0.56
32:5:27:C:O2'	32:5:60:G:H2'	2.06	0.56
32:5:269:G:O6	32:5:270:U:C5	2.59	0.56
32:5:1091:C:N3	32:5:1092:G:N7	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1203:G:C4	32:5:1204:C:C6	2.94	0.56
32:5:1262:G:N1	32:5:1263:A:C5	2.74	0.56
32:5:1277:G:N1	32:5:1278:C:C5	2.74	0.56
32:5:1441:C:N3	32:5:1442:C:C5	2.73	0.56
32:5:1571:G:C5	32:5:1572:U:C5	2.93	0.56
32:5:1617:G:N1	32:5:1618:G:C4	2.74	0.56
32:5:2287:G:C2	32:5:2288:G:H1'	2.40	0.56
32:5:2484:A:H2'	32:5:2485:U:O4'	2.05	0.56
32:5:2546:G:O2'	32:5:2547:G:H5''	2.05	0.56
32:5:2614:C:O2	32:5:2726:G:C2	2.58	0.56
32:5:2644:G:C6	32:5:2645:G:C5	2.94	0.56
32:5:3644:U:O2	32:5:4554:G:O2'	2.23	0.56
32:5:4268:A:C2	32:5:4269:G:H1'	2.41	0.56
32:5:4324:A:N3	32:5:4325:A:N7	2.54	0.56
32:5:4462:C:C2	32:5:4515:G:C2	2.93	0.56
32:5:4480:A:N6	32:5:4481:U:C5	2.74	0.56
32:5:4739:C:C2'	32:5:4740:G:O4'	2.53	0.56
32:5:5037:U:C2	32:5:5038:A:C8	2.94	0.56
33:7:43:U:O2	33:7:43:U:H2'	2.06	0.56
34:8:94:G:C5	42:j:79:ARG:HD2	2.41	0.56
48:z:340:MET:C	48:z:341:LYS:HA	2.22	0.56
48:z:408:ARG:CZ	51:4:206:G:O3'	2.54	0.56
51:4:50:G:N1	51:4:51:G:C5	2.73	0.56
51:4:284:G:N1	51:4:285:C:C4	2.74	0.56
51:4:295:U:C2	51:4:296:C:C6	2.94	0.56
54:S2:222:U:C2	54:S2:223:C:C6	2.94	0.56
54:S2:631:U:H5'	54:S2:631:U:H6	1.71	0.56
54:S2:694:G:C4	54:S2:695:C:C5	2.94	0.56
54:S2:828:G:C2	54:S2:829:C:C6	2.93	0.56
54:S2:933:G:C5	54:S2:1001:A:C5	2.94	0.56
54:S2:1265:A:N3	54:S2:1266:C:C6	2.74	0.56
54:S2:1330:G:N7	54:S2:1492:U:H3'	2.21	0.56
54:S2:1500:G:C6	54:S2:1501:C:C4	2.94	0.56
54:S2:1606:G:C6	54:S2:1632:G:N1	2.74	0.56
54:S2:1696:C:N3	54:S2:1697:A:N7	2.53	0.56
54:S2:1771:G:C2	54:S2:1772:C:C6	2.94	0.56
54:S2:1776:G:N1	54:S2:1777:G:C5	2.74	0.56
58:SE:29:PRO:HG2	58:SE:46:ILE:HD11	1.86	0.56
73:SD:123:LEU:HD21	73:SD:154:ASP:HB3	1.88	0.56
83:SZ:51:ASP:OD1	83:SZ:54:THR:OG1	2.24	0.56
85:Sd:40:ARG:CG	85:Sd:41:GLN:OE1	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:141:ASN:ND2	32:5:151:G:O6	2.38	0.56
12:S:27:LEU:C	12:S:28:TYR:CD1	2.83	0.56
12:S:99:ASP:OD1	12:S:100:LEU:CA	2.54	0.56
26:h:7:ARG:HG2	34:8:86:U:O4	2.06	0.56
32:5:218:A:H1'	32:5:219:G:H5''	1.88	0.56
32:5:371:A:O2'	32:5:372:A:H5'	2.05	0.56
32:5:1090:G:C6	32:5:1091:C:C4	2.94	0.56
32:5:1265:G:C5'	32:5:2115:G:N2	2.69	0.56
32:5:1490:G:N2	32:5:1491:A:C4	2.74	0.56
32:5:1519:C:C2'	32:5:1520:C:O5'	2.53	0.56
32:5:1541:C:C2	32:5:1542:U:C6	2.94	0.56
32:5:1883:G:N2	32:5:1884:C:C2	2.74	0.56
32:5:2343:G:C2	36:C:101:MET:HE2	2.41	0.56
32:5:2855:G:H22	32:5:2859:G:H22	1.52	0.56
32:5:3747:A:C1'	32:5:3817:A:H2'	2.35	0.56
32:5:3879:G:N7	32:5:3882:C:N4	2.54	0.56
32:5:3927:U:O4	32:5:4182:G:C2	2.59	0.56
32:5:3945:A:N3	32:5:3946:G:C8	2.74	0.56
32:5:4068:U:C2	32:5:4069:U:H1'	2.41	0.56
32:5:4083:U:H2'	32:5:4084:G:O5'	2.06	0.56
32:5:4152:G:N1	32:5:4153:C:C4	2.74	0.56
32:5:4323:A:N3	32:5:4324:A:C8	2.74	0.56
32:5:4347:G:H2'	32:5:4348:A:C8	2.41	0.56
32:5:4467:A:C6	32:5:4468:U:C4	2.94	0.56
32:5:4737:G:O2'	32:5:4738:C:O5'	2.24	0.56
32:5:4957:C:O2	32:5:4957:C:H2'	2.04	0.56
32:5:4999:G:C4	32:5:5000:G:C8	2.93	0.56
33:7:59:G:O6	33:7:60:G:N7	2.38	0.56
33:7:82:G:N2	33:7:95:C:C2	2.74	0.56
34:8:43:A:C6	34:8:44:A:N7	2.74	0.56
34:8:63:U:C2'	34:8:63:U:O2	2.54	0.56
34:8:125:C:H4'	34:8:126:C:H3'	1.88	0.56
34:8:127:U:C2'	34:8:128:C:O4'	2.54	0.56
38:F:149:LEU:N	38:F:197:TYR:OH	2.39	0.56
46:K:30:PRO:O	46:K:32:ILE:N	2.39	0.56
46:K:121:LEU:HD13	46:K:129:ILE:CD1	2.35	0.56
51:4:57:G:C2	51:4:289:A:N1	2.74	0.56
52:9:16:ILE:HD11	52:9:84:VAL:HB	1.87	0.56
54:S2:188:C:N3	54:S2:189:U:C5	2.74	0.56
54:S2:316:G:C4	54:S2:317:C:C5	2.94	0.56
54:S2:381:C:O2'	54:S2:382:C:H5'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:410:G:C6	54:S2:411:G:C5	2.94	0.56
54:S2:452:G:C5	54:S2:453:C:C5	2.93	0.56
54:S2:455:A:H2'	54:S2:456:C:O4'	2.05	0.56
54:S2:638:C:O2'	54:S2:639:C:O5'	2.23	0.56
54:S2:752:G:C2	54:S2:790:C:N3	2.74	0.56
54:S2:824:C:C2'	54:S2:825:A:O5'	2.53	0.56
54:S2:832:G:C2	54:S2:833:C:N1	2.74	0.56
54:S2:1031:A:C5	54:S2:1032:C:C5	2.94	0.56
54:S2:1258:A:H2	54:S2:1663:A:C4	2.23	0.56
54:S2:1294:G:N3	54:S2:1295:A:C8	2.72	0.56
54:S2:1313:A:O2'	76:SM:90:GLY:C	2.49	0.56
54:S2:1416:C:C2'	54:S2:1417:C:C6	2.87	0.56
54:S2:1541:G:N3	54:S2:1542:C:C5	2.73	0.56
54:S2:1552:G:C8	54:S2:1578:U:O4	2.59	0.56
54:S2:1823:A:H1'	54:S2:1824:A:O5'	2.06	0.56
56:SB:99:ASN:O	56:SB:100:PHE:C	2.49	0.56
74:SF:20:PHE:HB3	74:SF:23:TRP:HB2	1.88	0.56
81:ST:52:TRP:O	81:ST:56:ARG:N	2.36	0.56
84:Sc:34:PHE:HD1	84:Sc:36:ASP:HB2	1.71	0.56
2:D:20:PHE:HB3	2:D:30:TYR:OH	2.06	0.56
2:D:29:ASP:O	2:D:33:ARG:HB2	2.06	0.56
17:Y:62:TYR:N	17:Y:62:TYR:CD1	2.74	0.56
21:c:78:ASN:ND2	21:c:79:ILE:N	2.54	0.56
31:o:54:PRO:CA	32:5:4379:A:C8	2.88	0.56
32:5:127:G:C2	32:5:128:C:C6	2.94	0.56
32:5:172:C:O4'	32:5:172:C:OP1	2.23	0.56
32:5:209:U:O2	32:5:233:U:N3	2.39	0.56
32:5:314:G:N2	32:5:4355:G:C5	2.74	0.56
32:5:323:C:N3	32:5:324:A:N7	2.54	0.56
32:5:674:G:N3	32:5:675:C:C6	2.74	0.56
32:5:747:A:H2'	32:5:749:G:N7	2.21	0.56
32:5:931:C:O2'	32:5:932:A:OP1	2.24	0.56
32:5:976:G:C5	32:5:977:C:C6	2.93	0.56
32:5:1257:A:C2	32:5:1258:G:H1'	2.40	0.56
32:5:1269:G:C4	32:5:2111:G:N1	2.74	0.56
32:5:1563:A:N6	54:S2:677:G:C1'	2.69	0.56
32:5:1570:G:N1	32:5:1571:G:C4	2.74	0.56
32:5:1583:A:C6	32:5:1584:G:N9	2.75	0.56
32:5:1684:A:C6	32:5:1685:G:C5	2.94	0.56
32:5:1685:G:N2	32:5:1686:C:C2	2.74	0.56
32:5:1873:A:C2	32:5:1874:A:C8	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1954:U:H2'	32:5:1955:G:O4'	2.06	0.56
32:5:1971:C:O2	32:5:1971:C:H2'	2.06	0.56
32:5:2391:G:C2	32:5:2392:C:C6	2.94	0.56
32:5:2408:U:C6	32:5:2409:U:O4	2.59	0.56
32:5:2485:U:C2	32:5:2486:G:C8	2.93	0.56
32:5:2498:C:C4	32:5:2499:C:C5	2.94	0.56
32:5:2560:C:N3	32:5:2561:C:C5	2.74	0.56
32:5:2645:G:N3	32:5:2646:C:C6	2.74	0.56
32:5:2689:C:O2	32:5:2689:C:C2'	2.53	0.56
32:5:2735:G:N2	32:5:2736:G:N9	2.54	0.56
32:5:2805:C:N4	32:5:2806:A:C5	2.74	0.56
32:5:3729:U:C4	32:5:3730:U:C4	2.94	0.56
32:5:3830:A:C6	32:5:3831:U:C5	2.93	0.56
32:5:3870:C:C2	32:5:3886:G:N2	2.74	0.56
32:5:4092:G:N1	32:5:4093:G:N3	2.53	0.56
32:5:4123:C:O2	32:5:4123:C:C2'	2.54	0.56
32:5:4324:A:N1	32:5:4325:A:N6	2.54	0.56
32:5:4332:C:O2	32:5:4333:C:C6	2.59	0.56
32:5:4464:A:H5'	32:5:4464:A:N3	2.21	0.56
32:5:4510:A:H61	32:5:4592:C:C4'	2.18	0.56
34:8:64:U:H2'	34:8:65:A:C8	2.41	0.56
36:C:164:THR:HG22	36:C:220:ALA:O	2.06	0.56
37:E:279:PRO:C	37:E:281:LYS:N	2.64	0.56
48:z:405:ARG:NE	51:4:207:C:C3'	2.63	0.56
50:3:25:C:C4	50:3:26:G:N7	2.74	0.56
51:4:171:U:H1'	51:4:174:G:C6	2.41	0.56
54:S2:107:A:H2'	54:S2:108:G:C8	2.41	0.56
54:S2:119:U:N3	54:S2:120:U:H5	2.01	0.56
54:S2:122:G:C2	54:S2:123:G:C4	2.93	0.56
54:S2:310:C:H2'	54:S2:311:C:O4'	2.05	0.56
54:S2:316:G:C6	54:S2:317:C:N4	2.74	0.56
54:S2:410:G:C6	54:S2:411:G:N7	2.74	0.56
54:S2:517:C:C4	54:S2:518:G:C8	2.94	0.56
54:S2:580:U:O2	54:S2:580:U:H2'	2.05	0.56
54:S2:1122:A:C2	54:S2:1123:C:N1	2.73	0.56
54:S2:1122:A:H4'	56:SB:205:TYR:CZ	2.40	0.56
54:S2:1202:U:O4	54:S2:1203:G:N7	2.39	0.56
54:S2:1510:G:H2'	54:S2:1510:G:N3	2.21	0.56
54:S2:1576:G:C4	54:S2:1577:G:C8	2.94	0.56
55:SA:64:ALA:CB	66:SV:34:MET:HE1	2.36	0.56
59:SG:55:GLY:N	59:SG:63:MET:SD	2.79	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:SD:72:VAL:HG13	75:SK:68:TYR:HE2	1.71	0.56
79:SR:92:ASP:OD1	79:SR:93:GLN:NE2	2.39	0.56
80:SS:10:GLN:HB2	80:SS:57:GLY:C	2.30	0.56
80:SS:38:ARG:HH21	81:ST:45:LEU:CD2	2.19	0.56
81:ST:34:VAL:HG13	81:ST:52:TRP:HH2	1.71	0.56
82:SU:47:ASN:N	82:SU:47:ASN:HD22	2.04	0.56
84:Sc:44:ARG:HG3	84:Sc:44:ARG:NH2	2.13	0.56
87:Sg:48:ASP:OD1	87:Sg:49:GLU:N	2.39	0.56
9:O:156:LEU:HB3	32:5:4910:G:N7	2.22	0.55
10:Q:34:PHE:CE2	10:Q:38:ARG:HG3	2.41	0.55
14:U:85:TYR:CD1	32:5:2632:U:C5	2.94	0.55
20:b:6:ASN:N	20:b:6:ASN:ND2	2.53	0.55
32:5:60:G:C6	32:5:61:A:C5	2.94	0.55
32:5:80:C:C2	32:5:104:G:N2	2.75	0.55
32:5:166:C:O2	32:5:167:C:C6	2.59	0.55
32:5:437:G:N1	32:5:438:G:C5	2.74	0.55
32:5:660:A:N1	32:5:661:C:C4	2.75	0.55
32:5:973:G:O6	32:5:1282:G:N2	2.39	0.55
32:5:1189:G:C4	32:5:1190:C:C6	2.93	0.55
32:5:1269:G:N7	32:5:2111:G:C6	2.74	0.55
32:5:1361:G:C6	32:5:1362:G:N7	2.74	0.55
32:5:1398:A:P	32:5:1420:A:H61	2.28	0.55
32:5:1408:G:N3	32:5:1408:G:H2'	2.20	0.55
32:5:1543:G:N1	32:5:1544:G:C8	2.75	0.55
32:5:1635:C:O2	32:5:1636:U:C5	2.55	0.55
32:5:1650:A:N1	36:C:100:ARG:CZ	2.69	0.55
32:5:1823:G:C3'	32:5:1825:A:P	2.94	0.55
32:5:1994:C:O2	32:5:1995:G:C8	2.59	0.55
32:5:2105:A:N1	32:5:2106:G:C5	2.74	0.55
32:5:2113:G:OP1	32:5:2113:G:O4'	2.25	0.55
32:5:2307:A:N3	32:5:2333:G:O2'	2.39	0.55
32:5:2314:G:C8	32:5:2326:G:C2	2.94	0.55
32:5:2363:A:C1'	32:5:4560:C:H5	2.19	0.55
32:5:2712:G:N3	32:5:2713:C:C6	2.75	0.55
32:5:2854:G:O6	32:5:2856:C:C1'	2.53	0.55
32:5:2892:C:O2'	61:SI:92:ARG:NH1	2.39	0.55
32:5:3672:G:C5	32:5:3674:G:H1'	2.41	0.55
32:5:4283:G:N1	32:5:4284:C:N4	2.53	0.55
32:5:4326:G:H2'	32:5:4327:C:O4'	2.06	0.55
32:5:4550:G:C6	32:5:4551:U:C6	2.94	0.55
32:5:4580:U:N3	32:5:4581:G:N7	2.51	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4580:U:C4	32:5:4581:G:C8	2.93	0.55
32:5:4975:G:C2	32:5:4977:A:C8	2.94	0.55
33:7:23:A:HO2'	33:7:24:C:H6	1.51	0.55
33:7:45:U:H2'	33:7:46:C:O4'	2.06	0.55
34:8:100:U:C2	34:8:101:C:C6	2.93	0.55
46:K:86:LYS:HE2	46:K:139:VAL:HG11	1.87	0.55
47:q:6:ARG:HG2	47:q:10:LYS:HE3	1.88	0.55
48:z:429:GLN:O	48:z:432:LYS:HG2	2.06	0.55
51:4:12:U:H2'	51:4:14:G:N7	2.22	0.55
51:4:51:G:C4	51:4:52:C:C6	2.94	0.55
51:4:56:A:C2	51:4:57:G:C5	2.94	0.55
54:S2:155:G:C2	54:S2:164:A:C8	2.94	0.55
54:S2:469:A:C2	54:S2:470:G:O4'	2.52	0.55
54:S2:488:U:H3'	54:S2:489:A:H5'	1.88	0.55
54:S2:848:U:H2'	54:S2:849:A:H8	1.71	0.55
54:S2:976:G:C6	54:S2:977:C:C4	2.95	0.55
54:S2:1049:A:N3	54:S2:1070:A:C2	2.73	0.55
54:S2:1168:G:N2	54:S2:1192:U:O2	2.39	0.55
54:S2:1250:A:N3	54:S2:1339:U:H4'	2.20	0.55
54:S2:1302:G:N7	86:Sf:140:TYR:CD2	2.74	0.55
54:S2:1310:U:O5'	86:Sf:143:LYS:CE	2.54	0.55
54:S2:1417:C:O2	54:S2:1419:C:H6	1.88	0.55
54:S2:1431:G:C5	54:S2:1432:U:C6	2.94	0.55
54:S2:1526:G:N1	54:S2:1527:C:C5	2.74	0.55
54:S2:1574:C:C2	54:S2:1575:G:C8	2.93	0.55
54:S2:1610:G:C4	54:S2:1611:G:C8	2.94	0.55
54:S2:1664:A:C5	54:S2:1666:C:C5	2.94	0.55
58:SE:85:GLY:N	58:SE:88:ASP:OD2	2.39	0.55
60:SH:66:VAL:HG22	60:SH:96:ALA:HB1	1.87	0.55
63:SL:62:PHE:N	63:SL:62:PHE:CD2	2.72	0.55
67:SW:11:LEU:HD11	67:SW:37:PHE:CE2	2.41	0.55
73:SD:150:MET:HB3	73:SD:152:PHE:CE1	2.40	0.55
1:A:40:TYR:HB3	1:A:93:LYS:HB2	1.88	0.55
2:D:20:PHE:CZ	33:7:10:C:C4	2.94	0.55
3:G:50:ASP:OD1	3:G:50:ASP:C	2.50	0.55
12:S:83:ARG:HH22	13:T:156:TYR:HB2	1.70	0.55
20:b:28:ARG:CB	32:5:1805:A:C8	2.89	0.55
31:o:40:ARG:CB	31:o:40:ARG:HH21	2.19	0.55
32:5:22:G:C2	34:8:35:C:N3	2.74	0.55
32:5:426:A:O2'	32:5:427:A:C5'	2.54	0.55
32:5:467:U:N3	32:5:468:U:C6	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:486:C:C2	32:5:487:G:N7	2.70	0.55
32:5:1263:A:C2	32:5:1264:C:C2	2.94	0.55
32:5:1281:G:O4'	32:5:1281:G:N3	2.40	0.55
32:5:1540:C:N3	32:5:1541:C:C5	2.73	0.55
32:5:1733:G:H5''	32:5:1734:G:OP2	2.06	0.55
32:5:1781:U:C2	32:5:1782:U:C5	2.94	0.55
32:5:1887:G:C6	32:5:1890:G:C6	2.94	0.55
32:5:2248:C:O2	32:5:2248:C:C2'	2.55	0.55
32:5:2326:G:N2	32:5:2327:G:C4	2.74	0.55
32:5:2339:G:C6	32:5:2340:C:C5	2.95	0.55
32:5:2496:G:C2	32:5:2497:C:C2	2.94	0.55
32:5:2578:G:C2	32:5:2579:G:C8	2.95	0.55
32:5:2602:G:C5	32:5:2603:C:C5	2.94	0.55
32:5:2854:G:O6	32:5:2856:C:H6	1.89	0.55
32:5:3829:G:C6	32:5:3830:A:N7	2.75	0.55
32:5:4092:G:N2	32:5:4158:C:C2	2.74	0.55
32:5:4095:G:H2'	32:5:4096:C:H6	1.71	0.55
32:5:4350:C:N3	32:5:4351:U:C5	2.74	0.55
32:5:4579:U:H2'	32:5:4580:U:H6	1.71	0.55
32:5:5021:C:C2	32:5:5022:U:C6	2.94	0.55
32:5:5029:C:C4	32:5:5030:U:C5	2.94	0.55
34:8:42:G:N2	34:8:43:A:H1'	2.21	0.55
34:8:152:U:H2'	34:8:153:C:O4'	2.05	0.55
45:r:106:LEU:O	45:r:108:MET:N	2.39	0.55
54:S2:42:A:C4	54:S2:426:A:N6	2.67	0.55
54:S2:338:G:C6	54:S2:339:A:C5	2.95	0.55
54:S2:529:A:C6	54:S2:530:U:C5	2.94	0.55
54:S2:533:A:C5	54:S2:534:G:C8	2.94	0.55
54:S2:596:U:O2'	54:S2:597:G:O5'	2.23	0.55
54:S2:794:A:C2	54:S2:795:A:C5	2.94	0.55
54:S2:926:A:C2	54:S2:927:C:N1	2.75	0.55
54:S2:993:G:N1	54:S2:994:C:C5	2.74	0.55
54:S2:1133:A:C2	54:S2:1134:G:N9	2.66	0.55
54:S2:1292:C:C5'	86:Sf:149:CYS:O	2.54	0.55
54:S2:1302:G:C6	86:Sf:140:TYR:CZ	2.94	0.55
54:S2:1306:U:H1'	86:Sf:135:HIS:HA	1.88	0.55
54:S2:1323:U:O2'	54:S2:1324:G:O4'	2.22	0.55
54:S2:1527:C:H2'	54:S2:1527:C:O2	2.04	0.55
54:S2:1805:G:C6	54:S2:1806:A:N7	2.74	0.55
54:S2:1841:C:O2	54:S2:1842:C:C6	2.59	0.55
55:SA:42:LYS:HD3	79:SR:99:ASP:CG	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SA:158:ASP:OD2	66:SV:34:MET:HG3	2.06	0.55
56:SB:49:VAL:CG1	56:SB:58:ALA:HB1	2.36	0.55
56:SB:57:ILE:HG13	56:SB:58:ALA:N	2.21	0.55
60:SH:122:LEU:C	60:SH:122:LEU:HD13	2.31	0.55
84:Sc:34:PHE:CD1	84:Sc:36:ASP:HB2	2.41	0.55
3:G:169:PHE:CE2	8:N:6:TYR:HB2	2.41	0.55
6:L:74:ARG:HD2	6:L:99:ASP:HB2	1.89	0.55
7:M:86:TRP:CD1	7:M:92:ALA:HB2	2.41	0.55
19:a:40:HIS:CE1	32:5:39:A:H2	2.22	0.55
26:h:119:PHE:N	26:h:119:PHE:HD1	2.02	0.55
32:5:44:A:C4	32:5:45:U:C6	2.94	0.55
32:5:88:A:C2	32:5:89:C:C4	2.94	0.55
32:5:294:G:O2'	32:5:294:G:N3	2.39	0.55
32:5:295:A:N6	32:5:4362:A:O4'	2.39	0.55
32:5:642:G:C2	32:5:643:C:C4	2.94	0.55
32:5:982:U:H2'	32:5:983:C:H6	1.69	0.55
32:5:1373:A:C4	32:5:1374:G:C8	2.94	0.55
32:5:1583:A:N6	32:5:1584:G:C4	2.75	0.55
32:5:1725:U:C2	32:5:1726:U:C6	2.94	0.55
32:5:1831:G:C6	32:5:1832:C:C4	2.94	0.55
32:5:1936:C:C4	32:5:1937:C:H5	2.25	0.55
32:5:1967:A:C2	32:5:1968:G:N7	2.75	0.55
32:5:2399:G:C2	32:5:2400:G:C5	2.94	0.55
32:5:2451:A:C6	32:5:2452:G:C5	2.95	0.55
32:5:2452:G:N2	32:5:2467:U:C4	2.74	0.55
32:5:2532:C:O2	32:5:2532:C:H2'	2.07	0.55
32:5:2826:U:C2'	32:5:2826:U:O2	2.54	0.55
32:5:2851:G:N2	32:5:2856:C:N4	2.55	0.55
32:5:3606:U:O2	32:5:3606:U:H2'	2.06	0.55
32:5:4093:G:H2'	32:5:4094:G:H5''	1.88	0.55
32:5:4143:G:C5	32:5:4145:C:C5	2.94	0.55
32:5:4397:A:H5'	50:3:76:A:C2	2.41	0.55
32:5:4433:G:H2'	32:5:4434:C:C6	2.42	0.55
32:5:4503:A:C4	32:5:4504:C:C5	2.95	0.55
32:5:4772:C:O2	32:5:4773:C:C6	2.59	0.55
32:5:5020:G:C5	32:5:5021:C:C5	2.94	0.55
34:8:106:G:N1	34:8:107:C:C4	2.74	0.55
34:8:108:A:C2	34:8:112:G:C2	2.94	0.55
48:z:410:SER:CA	51:4:194:G:C4	2.89	0.55
54:S2:426:A:N3	54:S2:427:U:C4	2.74	0.55
54:S2:551:U:O3'	72:Se:39:ASN:ND2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:609:U:N3	54:S2:610:G:C8	2.75	0.55
54:S2:993:G:N3	54:S2:994:C:C6	2.74	0.55
54:S2:999:G:N3	54:S2:1000:C:C6	2.74	0.55
54:S2:1083:A:N3	54:S2:1859:A:H1'	2.21	0.55
54:S2:1100:A:N1	54:S2:1101:U:C4	2.74	0.55
54:S2:1144:A:C1'	54:S2:1199:A:O2'	2.54	0.55
54:S2:1287:A:N6	54:S2:1314:U:C4	2.74	0.55
54:S2:1598:G:N2	74:SF:166:ILE:HG23	2.21	0.55
54:S2:1687:C:C2	54:S2:1688:C:C6	2.95	0.55
55:SA:205:ARG:NH1	79:SR:84:TYR:O	2.39	0.55
58:SE:130:PHE:CB	58:SE:138:HIS:HB2	2.36	0.55
63:SL:124:ASP:OD1	63:SL:147:LYS:HA	2.05	0.55
69:SY:35:VAL:HG21	69:SY:40:ILE:HD13	1.89	0.55
78:SQ:30:GLY:HA2	78:SQ:67:ASP:HA	1.88	0.55
78:SQ:70:VAL:HG11	78:SQ:84:ILE:HG22	1.87	0.55
80:SS:16:LEU:O	80:SS:17:ASN:HB2	2.06	0.55
81:ST:92:PHE:HD1	81:ST:93:SER:N	2.04	0.55
3:G:231:ASN:N	3:G:231:ASN:ND2	2.54	0.55
24:f:76:ARG:HE	24:f:85:ARG:HH21	1.53	0.55
27:i:36:HIS:ND1	32:5:276:C:OP2	2.39	0.55
32:5:12:A:N3	32:5:14:C:C6	2.75	0.55
32:5:118:C:N3	32:5:121:A:N7	2.53	0.55
32:5:405:U:H2'	32:5:405:U:O2	2.06	0.55
32:5:471:A:N1	32:5:472:C:C1'	2.69	0.55
32:5:474:C:O2	32:5:475:G:C8	2.59	0.55
32:5:488:G:N2	32:5:489:C:N1	2.54	0.55
32:5:492:U:N3	32:5:493:G:N7	2.53	0.55
32:5:751:G:N3	32:5:752:G:C8	2.75	0.55
32:5:1245:C:C4	32:5:1269:G:O6	2.59	0.55
32:5:1581:G:C6	32:5:1610:C:N3	2.75	0.55
32:5:2126:G:C1'	32:5:2127:C:C6	2.88	0.55
32:5:2450:G:C2	32:5:2451:A:H1'	2.41	0.55
32:5:2543:A:C2	32:5:2773:G:N1	2.74	0.55
32:5:2690:C:N4	32:5:2691:U:C4	2.75	0.55
32:5:2714:G:N2	32:5:2715:G:C4	2.74	0.55
32:5:2841:G:N2	32:5:2842:G:H1'	2.21	0.55
32:5:2904:U:O2	32:5:2905:C:H6	1.90	0.55
32:5:3836:A:H2'	32:5:3837:C:O4'	2.06	0.55
32:5:3892:U:O2'	40:P:80:GLN:NE2	2.40	0.55
32:5:3907:G:C4	32:5:4449:A:H1'	2.41	0.55
32:5:4095:G:H22	32:5:4096:C:N4	2.05	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4466:C:N3	32:5:4467:A:N7	2.54	0.55
34:8:134:G:H21	34:8:135:C:H1'	1.71	0.55
36:C:143:ARG:NH2	36:C:145:GLU:HG3	2.21	0.55
47:q:32:ALA:HB1	47:q:187:LEU:CD2	2.34	0.55
54:S2:336:A:C4	54:S2:337:C:C6	2.95	0.55
54:S2:537:C:C4	54:S2:538:U:C5	2.95	0.55
54:S2:636:C:C4	54:S2:637:U:C4	2.94	0.55
54:S2:864:A:C2	54:S2:865:A:C5	2.94	0.55
54:S2:927:C:C2	54:S2:928:G:N7	2.74	0.55
54:S2:1314:U:O2	54:S2:1315:U:O4'	2.25	0.55
54:S2:1430:C:N3	54:S2:1431:G:N7	2.54	0.55
54:S2:1502:C:N3	54:S2:1503:C:C5	2.74	0.55
54:S2:1528:G:C2	54:S2:1529:C:C6	2.94	0.55
54:S2:1709:G:C6	54:S2:1710:C:C4	2.95	0.55
54:S2:1722:G:C6	54:S2:1723:G:N7	2.75	0.55
55:SA:41:ARG:HD3	55:SA:47:TYR:CZ	2.41	0.55
56:SB:53:GLN:HG3	56:SB:56:LYS:CE	2.36	0.55
57:SC:227:ARG:HD3	57:SC:227:ARG:C	2.32	0.55
8:N:63:ARG:HG3	8:N:131:GLU:HB3	1.87	0.55
10:Q:37:ARG:NH1	32:5:2087:C:C5	2.73	0.55
32:5:29:G:C6	32:5:30:C:C4	2.94	0.55
32:5:78:U:C2	32:5:336:A:C6	2.93	0.55
32:5:142:G:N2	32:5:144:G:C8	2.74	0.55
32:5:183:C:H4'	32:5:184:U:C5	2.42	0.55
32:5:293:G:H4'	32:5:294:G:C8	2.41	0.55
32:5:302:C:N3	32:5:303:C:C5	2.75	0.55
32:5:1170:G:C2	32:5:1171:G:C8	2.94	0.55
32:5:1170:G:N2	32:5:1192:C:C2	2.74	0.55
32:5:1899:G:H1'	32:5:2278:G:N2	2.21	0.55
32:5:1899:G:C5	32:5:1900:C:C5	2.94	0.55
32:5:1987:C:C4	32:5:1988:G:C8	2.95	0.55
32:5:2089:G:C5	32:5:2263:A:N7	2.75	0.55
32:5:2322:G:N1	32:5:2323:C:C2	2.75	0.55
32:5:2410:C:C2	32:5:2411:C:C5	2.94	0.55
32:5:2492:C:H2'	32:5:2493:G:O4'	2.07	0.55
32:5:2612:G:C2	32:5:2613:C:C2	2.95	0.55
32:5:3657:U:C2	32:5:3658:C:C6	2.94	0.55
32:5:4079:C:C4	32:5:4080:C:C5	2.95	0.55
32:5:4122:G:C6	32:5:4123:C:C5	2.95	0.55
32:5:4133:C:N3	32:5:4134:C:C5	2.75	0.55
32:5:4175:G:C6	32:5:4176:C:C4	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4451:G:H2'	32:5:4522:G:N1	2.22	0.55
32:5:4452:U:C2	49:2:127:MET:HG3	2.41	0.55
32:5:4536:C:C2	32:5:4537:C:C5	2.93	0.55
32:5:4665:A:O2'	32:5:5047:C:N4	2.40	0.55
32:5:4755:G:C6	32:5:4876:U:C4	2.93	0.55
32:5:4935:C:N4	37:E:179:ARG:CG	2.69	0.55
33:7:58:A:C6	33:7:59:G:N7	2.75	0.55
34:8:31:G:H2'	34:8:32:C:O4'	2.07	0.55
34:8:102:G:OP2	34:8:104:A:O2'	2.25	0.55
35:B:53:MET:HE1	35:B:336:CYS:HB3	1.89	0.55
35:B:291:TYR:CE2	35:B:327:THR:HA	2.41	0.55
38:F:93:PHE:CE1	38:F:95:ILE:HG13	2.42	0.55
50:3:39:G:C4	50:3:40:C:C5	2.94	0.55
54:S2:321:C:C2	54:S2:322:C:C5	2.95	0.55
54:S2:336:A:C5	54:S2:337:C:C5	2.94	0.55
54:S2:549:C:N3	54:S2:550:C:C6	2.75	0.55
54:S2:581:U:O2	69:SY:33:ALA:HB1	2.06	0.55
54:S2:678:U:N3	54:S2:679:A:C8	2.74	0.55
54:S2:993:G:C5	54:S2:994:C:C6	2.95	0.55
54:S2:994:C:N4	54:S2:995:G:O6	2.37	0.55
54:S2:1101:U:H2'	54:S2:1102:G:H8	1.71	0.55
54:S2:1123:C:C2	54:S2:1124:C:C6	2.95	0.55
54:S2:1233:G:C6	54:S2:1234:C:C4	2.95	0.55
54:S2:1293:A:C2	86:Sf:151:ASN:HA	2.42	0.55
54:S2:1402:A:N6	54:S2:1441:U:C2	2.74	0.55
54:S2:1414:A:N1	54:S2:1415:C:C4	2.74	0.55
54:S2:1754:G:H2'	54:S2:1755:C:O4'	2.07	0.55
55:SA:53:ARG:HD3	66:SV:82:ASN:HB3	1.87	0.55
57:SC:199:PRO:HD2	57:SC:223:TYR:OH	2.05	0.55
58:SE:158:ASP:OD1	58:SE:158:ASP:N	2.39	0.55
79:SR:114:LEU:O	79:SR:115:SER:HB3	2.06	0.55
87:Sg:36:ARG:HA	87:Sg:65:PHE:HA	1.88	0.55
9:O:109:PRO:CA	32:5:4910:G:N2	2.69	0.55
9:O:109:PRO:O	9:O:113:ASP:OD1	2.25	0.55
23:e:108:ARG:NH2	32:5:2326:G:OP1	2.40	0.55
32:5:12:A:C2	32:5:14:C:C4	2.95	0.55
32:5:31:U:O2'	32:5:32:G:H5'	2.06	0.55
32:5:153:G:N2	32:5:154:G:C4	2.74	0.55
32:5:154:G:N1	32:5:155:C:C4	2.74	0.55
32:5:288:G:H2'	32:5:289:C:H6	1.72	0.55
32:5:321:U:C2	32:5:322:C:C5	2.93	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:483:G:N2	32:5:484:U:C4	2.74	0.55
32:5:737:C:N3	32:5:738:C:C5	2.75	0.55
32:5:1240:G:C6	32:5:1241:C:C4	2.94	0.55
32:5:1279:A:H3'	32:5:1280:C:C6	2.41	0.55
32:5:1318:C:N4	32:5:1319:U:O2	2.39	0.55
32:5:1346:C:C2	32:5:1347:G:C8	2.94	0.55
32:5:1367:C:C4	32:5:1369:C:OP2	2.59	0.55
32:5:1412:G:C4	32:5:1413:C:C5	2.94	0.55
32:5:1486:C:H2'	32:5:1487:G:O4'	2.06	0.55
32:5:1488:G:C4	32:5:1489:G:C8	2.93	0.55
32:5:1751:A:C2	32:5:1752:G:H1'	2.42	0.55
32:5:1752:G:C6	32:5:1753:G:C5	2.94	0.55
32:5:1912:G:N3	32:5:1913:C:C6	2.74	0.55
32:5:1949:U:C2	32:5:1950:U:H5	2.25	0.55
32:5:2279:A:H2'	32:5:2280:G:C8	2.41	0.55
32:5:2400:G:N1	32:5:2401:A:N7	2.54	0.55
32:5:2438:A:C5	32:5:2441:C:N4	2.75	0.55
32:5:2557:G:C2	32:5:2571:C:C2	2.94	0.55
32:5:2658:G:N1	32:5:2675:G:C6	2.74	0.55
32:5:2857:A:C2	32:5:2858:A:C4	2.94	0.55
32:5:3724:A:C2	32:5:3725:G:C4	2.95	0.55
32:5:3861:A:C2	32:5:3862:A:N9	2.74	0.55
32:5:3879:G:O6	32:5:3882:C:C4	2.59	0.55
32:5:4276:G:O6	32:5:4277:G:N7	2.35	0.55
32:5:4755:G:C6	32:5:4876:U:O4	2.60	0.55
34:8:83:C:H4'	34:8:85:U:C2	2.41	0.55
36:C:103:ALA:O	36:C:104:PRO:C	2.49	0.55
48:z:381:SER:HB3	51:4:207:C:H1'	1.89	0.55
50:3:5:C:C2	50:3:6:C:C6	2.94	0.55
54:S2:295:C:H2'	54:S2:296:U:O4'	2.06	0.55
54:S2:597:G:H2'	54:S2:598:G:O4'	2.06	0.55
54:S2:694:G:N3	54:S2:695:C:C5	2.75	0.55
54:S2:1022:U:H1'	64:SN:128:TYR:CE2	2.41	0.55
54:S2:1114:U:N3	54:S2:1119:A:C6	2.74	0.55
54:S2:1134:G:N1	54:S2:1135:C:C5	2.75	0.55
54:S2:1278:A:C2	54:S2:1320:G:C2	2.94	0.55
54:S2:1292:C:C6	86:Sf:149:CYS:CA	2.89	0.55
54:S2:1293:A:C1'	86:Sf:150:PHE:HB3	2.36	0.55
54:S2:1442:U:H2'	54:S2:1442:U:O2	2.05	0.55
54:S2:1591:C:C4	54:S2:1592:C:C6	2.95	0.55
54:S2:1654:G:H2'	54:S2:1655:C:O4'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1730:U:N3	54:S2:1731:A:C8	2.75	0.55
54:S2:1775:U:O2	54:S2:1776:G:C8	2.58	0.55
55:SA:203:PHE:N	55:SA:203:PHE:CD1	2.75	0.55
60:SH:152:ARG:HB3	60:SH:152:ARG:NH1	2.21	0.55
61:SI:87:ASN:OD1	61:SI:88:ASN:N	2.40	0.55
74:SF:102:LEU:CD1	83:SZ:110:THR:CG2	2.81	0.55
80:SS:26:ILE:CD1	80:SS:54:LYS:HB2	2.34	0.55
1:A:85:GLY:N	32:5:4121:G:N2	2.54	0.55
3:G:227:ASN:N	3:G:227:ASN:HD22	2.03	0.55
21:c:31:TYR:OH	21:c:59:GLU:OE1	2.24	0.55
23:e:35:TRP:N	32:5:2321:G:OP1	2.40	0.55
32:5:82:U:C4	32:5:83:C:C5	2.93	0.55
32:5:290:U:C2'	32:5:291:U:O5'	2.54	0.55
32:5:499:G:H2'	32:5:499:G:N3	2.22	0.55
32:5:669:C:C2	32:5:670:G:C8	2.95	0.55
32:5:753:C:C2	32:5:754:U:H6	2.24	0.55
32:5:1085:C:C2	32:5:1086:C:C6	2.95	0.55
32:5:1268:G:H5''	32:5:2109:G:O5'	2.07	0.55
32:5:1370:G:H4'	32:5:1371:A:H4'	1.89	0.55
32:5:1545:G:C4	32:5:1546:C:C5	2.95	0.55
32:5:1661:C:H1'	32:5:2345:G:C2	2.42	0.55
32:5:1995:G:C6	32:5:1996:C:C4	2.95	0.55
32:5:2436:U:C5	32:5:2783:A:C1'	2.90	0.55
32:5:2641:A:H2'	32:5:2642:A:O4'	2.07	0.55
32:5:2737:C:O2	32:5:2738:C:C6	2.59	0.55
32:5:2909:C:C2	32:5:3586:G:C2	2.95	0.55
32:5:3595:U:OP1	32:5:3596:A:C8	2.59	0.55
32:5:3698:G:N2	32:5:3699:C:C2	2.75	0.55
32:5:3790:U:H3	32:5:3792:G:C1'	2.19	0.55
32:5:3874:G:C6	32:5:3875:G:C4	2.95	0.55
32:5:3944:G:N3	32:5:3945:A:C8	2.75	0.55
32:5:4303:C:O2	32:5:4303:C:H3'	2.07	0.55
32:5:4677:U:O2	32:5:4677:U:C2'	2.54	0.55
32:5:4750:G:O6	32:5:4949:G:C6	2.59	0.55
32:5:4891:G:N2	32:5:4929:C:C2	2.74	0.55
32:5:5044:A:HO2'	32:5:5045:G:H5'	1.68	0.55
33:7:82:G:C2	33:7:95:C:C2	2.95	0.55
47:q:22:ASP:OD1	47:q:66:ARG:NE	2.36	0.55
50:3:39:G:N2	50:3:40:C:C1'	2.69	0.55
51:4:293:C:H2'	51:4:293:C:O2	2.06	0.55
54:S2:18:C:H4'	54:S2:1194:A:H62	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:28:U:OP1	54:S2:484:A:H4'	2.07	0.55
54:S2:297:A:C5	54:S2:298:G:C8	2.95	0.55
54:S2:909:G:C6	54:S2:910:G:N7	2.74	0.55
54:S2:933:G:C2	54:S2:1000:C:C2	2.94	0.55
54:S2:951:C:O2	54:S2:952:G:C8	2.60	0.55
54:S2:1552:G:H5'	54:S2:1557:C:H5	1.71	0.55
54:S2:1572:C:O2	54:S2:1572:C:H2'	2.07	0.55
54:S2:1708:C:N3	54:S2:1709:G:C8	2.75	0.55
54:S2:1709:G:C4	54:S2:1710:C:C6	2.95	0.55
54:S2:1728:U:N3	54:S2:1729:U:C6	2.75	0.55
54:S2:1812:U:O2	54:S2:1812:U:H2'	2.05	0.55
56:SB:81:PHE:HB3	56:SB:109:LYS:HB2	1.88	0.55
57:SC:170:TRP:CZ3	67:SW:97:ARG:HD3	2.41	0.55
60:SH:73:GLN:OE1	60:SH:135:PHE:CD2	2.60	0.55
62:SJ:128:VAL:HG12	62:SJ:132:GLN:HG3	1.88	0.55
74:SF:130:ARG:HD2	74:SF:135:ARG:HB2	1.87	0.55
76:SM:99:ASN:N	76:SM:99:ASN:HD22	2.04	0.55
82:SU:47:ASN:HD22	82:SU:47:ASN:H	1.54	0.55
1:A:211:PHE:CZ	1:A:221:LYS:HD3	2.42	0.55
6:L:99:ASP:OD1	6:L:101:ARG:N	2.40	0.55
6:L:167:ARG:NH1	6:L:173:GLU:OE1	2.40	0.55
12:S:90:THR:HG23	13:T:156:TYR:CD2	2.41	0.55
21:c:44:LYS:HA	21:c:69:THR:HG23	1.89	0.55
22:d:22:THR:HG22	22:d:89:SER:HB2	1.89	0.55
22:d:29:ILE:CD1	22:d:84:ILE:HD12	2.37	0.55
23:e:7:LEU:O	32:5:701:G:O2'	2.23	0.55
25:g:41:ALA:O	25:g:52:ARG:NH1	2.40	0.55
26:h:91:MET:HG3	26:h:94:ARG:NE	2.22	0.55
32:5:14:C:O2	32:5:15:A:C8	2.60	0.55
32:5:66:A:C8	32:5:328:A:H1'	2.42	0.55
32:5:70:A:C6	32:5:4355:G:O4'	2.60	0.55
32:5:248:C:C2	32:5:249:C:C5	2.94	0.55
32:5:1269:G:C8	32:5:2111:G:C5	2.94	0.55
32:5:1467:C:H2'	32:5:1467:C:O2	2.06	0.55
32:5:1620:U:O2	32:5:1621:A:N7	2.40	0.55
32:5:1756:U:H3	32:5:1775:A:H2	1.53	0.55
32:5:2104:G:C6	32:5:2105:A:N7	2.75	0.55
32:5:2307:A:H2'	32:5:2308:A:O5'	2.07	0.55
32:5:2341:A:C6	32:5:2342:G:N7	2.75	0.55
32:5:2382:A:H62	32:5:2830:G:C1'	2.20	0.55
32:5:2448:G:O2'	32:5:2449:A:C8	2.60	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2627:C:O2	32:5:2627:C:O4'	2.25	0.55
32:5:3717:A:C5	32:5:3736:A:C6	2.95	0.55
32:5:3871:A:C5	32:5:3885:G:N2	2.74	0.55
32:5:3911:C:O2'	32:5:3912:U:O5'	2.23	0.55
32:5:3945:A:C2	32:5:3946:G:C8	2.95	0.55
32:5:4108:G:C2	32:5:4109:G:C8	2.94	0.55
32:5:4362:A:C2	32:5:4363:A:C8	2.94	0.55
32:5:4497:U:C5	32:5:4498:U:C6	2.95	0.55
32:5:4550:G:N2	32:5:4551:U:H1'	2.22	0.55
32:5:4607:A:C5	32:5:4608:G:H1'	2.42	0.55
32:5:4896:G:C2	32:5:4897:G:C5	2.95	0.55
32:5:5043:A:H2'	32:5:5044:A:C8	2.41	0.55
33:7:93:G:N2	33:7:94:C:C2	2.75	0.55
33:7:110:G:C4	33:7:111:C:C5	2.94	0.55
34:8:89:U:H2'	34:8:90:C:C6	2.41	0.55
41:W:55:TYR:C	41:W:55:TYR:HD1	2.14	0.55
46:K:134:GLY:O	46:K:137:GLN:HG3	2.06	0.55
48:z:42:ALA:O	48:z:43:ASP:HB2	2.07	0.55
54:S2:19:A:O3'	54:S2:620:G:H8	1.90	0.55
54:S2:118:C:H1'	54:S2:445:A:N1	2.19	0.55
54:S2:349:A:H4'	61:SI:27:TYR:CZ	2.41	0.55
54:S2:387:C:O2	54:S2:387:C:H2'	2.07	0.55
54:S2:788:G:H2'	54:S2:789:G:C8	2.42	0.55
54:S2:792:C:C2	54:S2:793:G:H8	2.23	0.55
54:S2:870:A:H4'	54:S2:871:U:O5'	2.07	0.55
54:S2:1117:C:O4'	54:S2:1117:C:O2	2.25	0.55
54:S2:1182:A:C8	54:S2:1183:A:H1'	2.42	0.55
54:S2:1221:G:C2'	54:S2:1222:G:O5'	2.55	0.55
54:S2:1368:U:H3	54:S2:1370:A:P	2.30	0.55
54:S2:1524:G:C2	54:S2:1525:C:N1	2.74	0.55
54:S2:1729:U:O2	54:S2:1730:U:H5	1.90	0.55
54:S2:1860:A:C5	54:S2:1862:G:N7	2.75	0.55
55:SA:200:ASP:HA	55:SA:203:PHE:CZ	2.42	0.55
56:SB:49:VAL:HG22	56:SB:62:LEU:HD22	1.88	0.55
57:SC:133:TYR:CD1	57:SC:216:MET:HA	2.41	0.55
74:SF:142:SER:O	74:SF:144:LEU:N	2.40	0.55
2:D:119:TYR:N	2:D:119:TYR:CD1	2.73	0.55
9:O:12:ARG:HD3	9:O:37:ARG:NH2	2.22	0.55
10:Q:28:LEU:HB3	36:C:284:MET:HE3	1.89	0.55
25:g:112:GLN:NE2	32:5:4096:C:O2'	2.33	0.55
32:5:68:U:N3	32:5:69:A:H1'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:330:G:N2	32:5:331:G:N9	2.54	0.55
32:5:370:U:C5	32:5:1637:A:C2	2.94	0.55
32:5:438:G:C5	32:5:439:G:N7	2.75	0.55
32:5:495:C:C4	32:5:496:G:N7	2.75	0.55
32:5:1447:C:H1'	32:5:2098:G:N2	2.21	0.55
32:5:1475:G:N2	32:5:1476:C:C6	2.73	0.55
32:5:1522:G:C5	32:5:1653:A:N6	2.75	0.55
32:5:1609:U:N3	32:5:1610:C:C5	2.74	0.55
32:5:1770:A:C6	32:5:1771:U:C4	2.95	0.55
32:5:1948:G:C5	32:5:1949:U:C5	2.94	0.55
32:5:2361:G:N2	32:5:3859:G:H3'	2.22	0.55
32:5:2441:C:N3	32:5:2442:G:N7	2.55	0.55
32:5:2713:C:N3	32:5:2714:G:N7	2.55	0.55
32:5:2725:A:H2'	32:5:2726:G:H5''	1.89	0.55
32:5:3717:A:O2'	32:5:3718:A:C5'	2.55	0.55
32:5:4081:G:N1	32:5:4082:G:N7	2.55	0.55
32:5:4097:G:C2	32:5:4098:A:C5	2.95	0.55
32:5:4200:G:N2	32:5:4201:G:H1'	2.20	0.55
32:5:4208:U:O2'	32:5:4275:G:H1'	2.07	0.55
32:5:4271:A:C4	32:5:4272:G:C2	2.95	0.55
32:5:4299:U:O2	32:5:4300:U:C6	2.60	0.55
32:5:4476:C:O4'	32:5:4476:C:O2	2.21	0.55
32:5:4477:A:C2	32:5:4604:G:O4'	2.60	0.55
32:5:4481:U:C2'	32:5:4482:U:C6	2.83	0.55
32:5:4737:G:C5	32:5:4738:C:C4	2.94	0.55
32:5:5000:G:H2'	32:5:5001:U:O5'	2.04	0.55
32:5:5020:G:C2	32:5:5021:C:C2	2.94	0.55
33:7:43:U:N3	33:7:44:C:C6	2.68	0.55
34:8:33:G:H4'	34:8:34:U:C4	2.41	0.55
34:8:34:U:C2	34:8:34:U:C5'	2.89	0.55
34:8:39:G:N3	34:8:39:G:H2'	2.21	0.55
48:z:297:MET:C	48:z:353:PRO:N	2.65	0.55
48:z:297:MET:CB	48:z:353:PRO:CA	2.83	0.55
54:S2:291:G:O5'	54:S2:291:G:C8	2.60	0.55
54:S2:312:G:O2'	54:S2:313:A:P	2.65	0.55
54:S2:426:A:H2	54:S2:427:U:C5'	2.20	0.55
54:S2:438:G:O2'	54:S2:439:A:H5'	2.07	0.55
54:S2:1049:A:C2	54:S2:1070:A:C2	2.94	0.55
54:S2:1093:A:C2	54:S2:1094:C:C6	2.94	0.55
54:S2:1137:U:O2'	54:S2:1138:C:OP1	2.25	0.55
54:S2:1212:G:N2	54:S2:1688:C:C2	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1287:A:C6	54:S2:1314:U:N3	2.75	0.55
54:S2:1371:U:O2	54:S2:1371:U:C2'	2.54	0.55
54:S2:1409:A:P	54:S2:1409:A:H8	2.30	0.55
54:S2:1410:C:C2	54:S2:1411:G:N7	2.75	0.55
54:S2:1411:G:C8	54:S2:1412:C:H1'	2.41	0.55
54:S2:1574:C:O2	54:S2:1575:G:C8	2.60	0.55
54:S2:1622:U:C6	54:S2:1622:U:O5'	2.60	0.55
55:SA:200:ASP:CG	79:SR:85:VAL:HG12	2.31	0.55
60:SH:186:ASN:OD1	60:SH:186:ASN:N	2.40	0.55
67:SW:17:ALA:HB2	67:SW:25:VAL:HG11	1.89	0.55
2:D:62:CYS:HB3	2:D:105:LEU:HD22	1.88	0.55
9:O:34:VAL:HG11	9:O:112:TYR:CE1	2.42	0.55
11:R:23:TRP:CZ3	11:R:51:ILE:HD12	2.41	0.55
19:a:103:VAL:HG12	19:a:108:TYR:HB2	1.89	0.55
32:5:95:G:H2'	32:5:96:U:C5'	2.37	0.55
32:5:152:U:N3	32:5:153:G:C8	2.76	0.55
32:5:342:G:O2'	42:j:71:TYR:HE2	1.89	0.55
32:5:488:G:C6	32:5:489:C:C4	2.95	0.55
32:5:709:C:N3	32:5:710:G:N7	2.54	0.55
32:5:754:U:N3	32:5:755:C:C6	2.75	0.55
32:5:920:C:C4	32:5:921:C:C5	2.95	0.55
32:5:957:G:H5'	32:5:1284:G:N2	2.21	0.55
32:5:994:G:C6	32:5:995:C:C4	2.95	0.55
32:5:1238:A:HO2'	32:5:1239:C:C5'	2.17	0.55
32:5:1303:A:N1	32:5:1304:C:C4	2.75	0.55
32:5:1365:C:H4'	32:5:1366:G:OP1	2.06	0.55
32:5:1383:G:C5	32:5:1384:C:C4	2.95	0.55
32:5:1583:A:N7	32:5:1584:G:N7	2.55	0.55
32:5:1756:U:O4	32:5:1776:A:C2	2.59	0.55
32:5:1826:G:N2	32:5:1827:C:H1'	2.21	0.55
32:5:1925:G:C4	32:5:1926:C:C6	2.95	0.55
32:5:1995:G:C2	32:5:1996:C:C2	2.95	0.55
32:5:2076:G:O6	32:5:2077:C:C4	2.60	0.55
32:5:2644:G:C2	32:5:2645:G:C8	2.95	0.55
32:5:2669:C:O2'	32:5:2670:C:C6	2.60	0.55
32:5:2756:G:H2'	32:5:2757:A:C8	2.42	0.55
32:5:3725:G:H2'	32:5:3726:A:H2'	1.88	0.55
32:5:3820:G:C5	32:5:3821:A:C8	2.95	0.55
32:5:3859:G:C4'	40:P:139:TYR:CZ	2.90	0.55
32:5:3859:G:N3	32:5:3859:G:H2'	2.21	0.55
32:5:3867:A:H3'	32:5:3868:G:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4240:G:C2	32:5:4241:C:C2	2.95	0.55
32:5:4473:A:C2	32:5:4474:A:C4	2.95	0.55
32:5:4879:C:O2	32:5:4880:C:C6	2.60	0.55
32:5:4919:G:C6	32:5:4920:C:C4	2.95	0.55
32:5:4939:C:N4	37:E:215:LYS:HD2	2.22	0.55
32:5:5055:G:C2	32:5:5056:A:N7	2.75	0.55
34:8:102:G:H2'	34:8:104:A:C8	2.42	0.55
44:p:85:ARG:HH11	44:p:85:ARG:HG2	1.72	0.55
46:K:103:ASN:C	46:K:104:ILE:HG13	2.32	0.55
48:z:406:VAL:HG12	48:z:417:VAL:HG22	1.88	0.55
51:4:3:C:C2	51:4:45:G:C2	2.95	0.55
51:4:57:G:C6	51:4:289:A:N6	2.74	0.55
54:S2:46:A:C2	54:S2:99:A:N9	2.75	0.55
54:S2:310:C:H2'	54:S2:311:C:H6	1.63	0.55
54:S2:533:A:C6	54:S2:534:G:C8	2.94	0.55
54:S2:805:U:O2	54:S2:806:U:C6	2.60	0.55
54:S2:899:U:C4	54:S2:900:C:C5	2.96	0.55
54:S2:993:G:N1	54:S2:994:C:C6	2.74	0.55
54:S2:1161:U:C4	54:S2:1162:C:C5	2.95	0.55
54:S2:1292:C:H1'	86:Sf:148:TYR:HB3	1.89	0.55
54:S2:1302:G:O2'	86:Sf:146:LEU:HD13	2.07	0.55
54:S2:1308:U:C4	54:S2:1309:C:N4	2.74	0.55
54:S2:1438:A:H2'	54:S2:1439:A:O4'	2.07	0.55
54:S2:1797:U:C2	54:S2:1798:C:C5	2.95	0.55
54:S2:1835:A:N6	70:Sa:79:ILE:HG22	2.22	0.55
60:SH:57:ARG:HA	60:SH:57:ARG:CZ	2.37	0.55
76:SM:33:ARG:HH11	76:SM:33:ARG:HG2	1.72	0.55
79:SR:100:PRO:HA	79:SR:117:LEU:HD13	1.88	0.55
79:SR:109:LEU:HB3	79:SR:111:PHE:HD2	1.71	0.55
2:D:164:LYS:O	2:D:168:ASP:HB2	2.06	0.54
7:M:107:PHE:HD1	37:E:266:TYR:CD2	2.25	0.54
9:O:113:ASP:OD1	9:O:113:ASP:N	2.40	0.54
18:Z:49:TYR:HB3	18:Z:50:PRO:CD	2.37	0.54
32:5:144:G:N2	32:5:145:G:C4	2.75	0.54
32:5:296:A:O5'	32:5:296:A:H8	1.89	0.54
32:5:458:C:N3	32:5:459:C:C5	2.74	0.54
32:5:655:C:N3	32:5:656:C:C5	2.75	0.54
32:5:1079:C:C4	32:5:1080:C:C5	2.95	0.54
32:5:1203:G:C5	32:5:1204:C:C5	2.95	0.54
32:5:1218:G:C6	32:5:1219:G:C1'	2.90	0.54
32:5:1278:C:H3'	32:5:1279:A:C4'	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1602:U:C2	32:5:1603:C:C5	2.95	0.54
32:5:1625:G:C8	32:5:1642:A:C2	2.94	0.54
32:5:1671:U:O4	32:5:1853:G:C2'	2.55	0.54
32:5:1806:G:N1	32:5:1807:C:C5	2.75	0.54
32:5:1866:U:C5	32:5:4405:G:O4'	2.60	0.54
32:5:2035:C:C2	32:5:2036:C:C5	2.94	0.54
32:5:2089:G:C5	32:5:2262:G:C2'	2.88	0.54
32:5:2122:G:O2'	32:5:2123:C:OP1	2.25	0.54
32:5:2678:A:C2	32:5:2679:G:C4	2.95	0.54
32:5:3663:A:N6	32:5:4080:C:O4'	2.40	0.54
32:5:4070:U:C4	32:5:4071:U:C5	2.94	0.54
32:5:4136:G:C4	32:5:4137:C:C6	2.95	0.54
32:5:4189:U:H1'	32:5:4380:A:N3	2.22	0.54
32:5:4318:C:N3	32:5:4319:C:C5	2.76	0.54
32:5:4700:A:H2'	32:5:4700:A:N3	2.21	0.54
32:5:4885:U:C2	32:5:4886:C:C5	2.94	0.54
34:8:10:G:N3	34:8:11:C:H1'	2.22	0.54
34:8:35:C:C2'	34:8:36:G:O5'	2.54	0.54
34:8:138:C:N3	34:8:139:G:N7	2.55	0.54
34:8:144:U:C2	34:8:145:C:C5	2.94	0.54
34:8:145:C:C2	34:8:146:U:C6	2.95	0.54
37:E:145:ILE:HD11	37:E:267:LEU:HD21	1.88	0.54
48:z:69:LEU:O	48:z:71:LYS:N	2.38	0.54
51:4:50:G:C6	51:4:51:G:N7	2.73	0.54
54:S2:52:G:C2	54:S2:53:C:N1	2.75	0.54
54:S2:56:G:O2'	54:S2:57:U:C5'	2.55	0.54
54:S2:376:A:C5	54:S2:377:G:C8	2.95	0.54
54:S2:832:G:O6	54:S2:833:C:C4	2.60	0.54
54:S2:976:G:C4	54:S2:977:C:C6	2.95	0.54
54:S2:996:A:N1	64:SN:113:PHE:CZ	2.75	0.54
54:S2:1021:U:H4'	54:S2:1022:U:O4'	2.07	0.54
54:S2:1052:A:N3	54:S2:1053:C:C6	2.75	0.54
54:S2:1143:A:H2'	54:S2:1144:A:O4'	2.07	0.54
54:S2:1265:A:N3	54:S2:1266:C:H6	2.05	0.54
54:S2:1314:U:N3	54:S2:1315:U:C1'	2.69	0.54
54:S2:1407:U:C2'	54:S2:1408:U:C6	2.86	0.54
54:S2:1427:C:H2'	54:S2:1428:G:H8	1.72	0.54
54:S2:1554:C:O4'	54:S2:1554:C:O2	2.24	0.54
54:S2:1599:U:H4'	54:S2:1599:U:OP1	2.07	0.54
54:S2:1736:G:H2'	54:S2:1737:G:O4'	2.07	0.54
54:S2:1775:U:N3	54:S2:1776:G:N7	2.54	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SH:115:LYS:O	60:SH:116:ARG:HB2	2.06	0.54
61:SI:8:TRP:CD1	61:SI:8:TRP:C	2.85	0.54
84:Sc:34:PHE:HB3	84:Sc:37:ASP:O	2.07	0.54
87:Sg:244:ASN:HD21	87:Sg:245:ARG:NH1	2.06	0.54
4:H:59:LYS:HB2	4:H:70:VAL:HG22	1.89	0.54
5:J:15:LEU:HB3	5:J:165:TRP:CD1	2.42	0.54
5:J:74:VAL:C	5:J:75:ARG:CG	2.80	0.54
8:N:120:TRP:HZ3	32:5:280:G:H8	1.55	0.54
25:g:5:LEU:HD21	25:g:22:LEU:HD12	1.89	0.54
32:5:29:G:C8	32:5:54:G:N2	2.76	0.54
32:5:98:A:H1'	32:5:292:G:O6	2.08	0.54
32:5:245:C:O2	32:5:245:C:O4'	2.26	0.54
32:5:425:U:C4	34:8:9:A:N1	2.74	0.54
32:5:471:A:N6	32:5:472:C:C6	2.75	0.54
32:5:710:G:H2'	32:5:711:A:C8	2.43	0.54
32:5:728:U:C2'	32:5:729:G:OP1	2.55	0.54
32:5:984:C:C2	32:5:1070:G:N2	2.76	0.54
32:5:1076:C:N3	32:5:1077:C:C5	2.75	0.54
32:5:1247:U:N3	32:5:1248:C:C6	2.72	0.54
32:5:1280:C:C6	32:5:1280:C:H5''	2.43	0.54
32:5:1335:G:C6	32:5:1336:G:C5	2.95	0.54
32:5:1466:G:C4	32:5:1467:C:C5	2.95	0.54
32:5:1516:G:N7	32:5:1518:A:C8	2.76	0.54
32:5:1763:C:N4	32:5:1764:G:C4	2.75	0.54
32:5:1774:C:N3	32:5:1775:A:N7	2.55	0.54
32:5:1826:G:C6	32:5:1827:C:C4	2.96	0.54
32:5:2056:G:C6	32:5:2058:G:C4	2.94	0.54
32:5:2059:C:C2	32:5:2060:G:H8	2.20	0.54
32:5:2082:G:C2	32:5:2275:G:C2	2.96	0.54
32:5:2128:G:H2'	32:5:2129:C:O4'	2.06	0.54
32:5:2263:A:H1'	32:5:2265:G:C5	2.42	0.54
32:5:2270:G:N1	32:5:2271:C:N4	2.54	0.54
32:5:2361:G:O6	40:P:25:HIS:HB3	2.07	0.54
32:5:2575:U:O2	32:5:2758:G:N2	2.40	0.54
32:5:2612:G:N1	32:5:2613:C:C2	2.75	0.54
32:5:2832:A:H2'	32:5:2833:A:C5'	2.30	0.54
32:5:3629:A:C2	32:5:3630:A:H1'	2.42	0.54
32:5:3854:C:C4	32:5:3855:C:C5	2.95	0.54
32:5:3910:C:H2'	32:5:3911:C:C6	2.42	0.54
32:5:4549:G:N2	32:5:4550:G:N9	2.55	0.54
32:5:4593:C:C2	32:5:4594:U:C5	2.94	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4730:C:H2'	32:5:4965:U:H3	1.73	0.54
32:5:4963:G:H3'	32:5:4964:C:H5''	1.88	0.54
51:4:51:G:C2	51:4:52:C:N1	2.75	0.54
54:S2:86:C:N4	54:S2:87:U:C4	2.76	0.54
54:S2:316:G:N3	54:S2:317:C:C5	2.75	0.54
54:S2:341:C:C2	54:S2:342:C:C6	2.94	0.54
54:S2:386:C:O2	54:S2:386:C:H2'	2.07	0.54
54:S2:387:C:O2	54:S2:388:U:C5	2.55	0.54
54:S2:449:A:H2'	54:S2:449:A:N3	2.21	0.54
54:S2:551:U:H2'	54:S2:552:G:H8	1.72	0.54
54:S2:553:U:N3	54:S2:554:A:C5	2.74	0.54
54:S2:634:A:C2	54:S2:635:G:N9	2.75	0.54
54:S2:883:U:C2	54:S2:884:C:C6	2.96	0.54
54:S2:893:U:C2	54:S2:894:G:C8	2.95	0.54
54:S2:1018:U:C2	54:S2:1019:C:H5	2.20	0.54
54:S2:1092:G:C2	54:S2:1093:A:C8	2.94	0.54
54:S2:1416:C:H2'	54:S2:1417:C:C5	2.42	0.54
54:S2:1715:A:C2	54:S2:1819:A:C2	2.96	0.54
54:S2:1760:G:N2	54:S2:1773:C:C2	2.76	0.54
55:SA:12:GLU:OE1	79:SR:111:PHE:CG	2.52	0.54
55:SA:198:MET:HG2	55:SA:199:PRO:HD2	1.90	0.54
59:SG:224:ARG:HA	59:SG:227:GLN:HB2	1.89	0.54
65:SO:137:SER:C	65:SO:138:ASP:OD1	2.51	0.54
80:SS:10:GLN:HE21	80:SS:10:GLN:N	2.05	0.54
83:SZ:103:HIS:O	83:SZ:104:ARG:C	2.50	0.54
87:Sg:187:ASN:N	87:Sg:187:ASN:HD22	2.05	0.54
2:D:43:LYS:HB3	2:D:46:THR:CG2	2.38	0.54
3:G:162:ASP:HB3	3:G:163:PRO:CD	2.38	0.54
8:N:6:TYR:OH	27:i:40:VAL:HG22	2.08	0.54
8:N:119:TYR:HE1	8:N:131:GLU:HG3	1.73	0.54
12:S:83:ARG:HH21	12:S:83:ARG:HG3	1.72	0.54
15:V:20:LEU:HD21	15:V:101:ASN:HD22	1.73	0.54
26:h:27:GLU:OE2	48:z:21:THR:O	2.25	0.54
32:5:29:G:N1	32:5:30:C:C4	2.76	0.54
32:5:69:A:O5'	32:5:100:C:O2'	2.25	0.54
32:5:250:C:H2'	32:5:251:C:O4'	2.07	0.54
32:5:307:A:H3'	32:5:308:G:N2	2.22	0.54
32:5:442:G:C2'	32:5:443:G:O5'	2.55	0.54
32:5:466:A:N1	32:5:467:U:C5	2.76	0.54
32:5:671:G:N3	32:5:672:C:C6	2.75	0.54
32:5:677:G:N2	32:5:678:C:C2	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1395:U:O2'	32:5:1396:G:H5'	2.06	0.54
32:5:1438:U:C2	32:5:2099:G:O6	2.60	0.54
32:5:1625:G:C5	32:5:1642:A:C2	2.95	0.54
32:5:1752:G:C4	32:5:1753:G:C8	2.95	0.54
32:5:2077:C:N3	32:5:2078:C:C6	2.76	0.54
32:5:2567:G:C6	32:5:2568:C:C4	2.96	0.54
32:5:2606:G:C2	32:5:2607:C:C5	2.95	0.54
32:5:3631:U:C2	32:5:3632:C:C6	2.95	0.54
32:5:3742:G:C2	32:5:3743:G:N7	2.75	0.54
32:5:3853:U:O2'	32:5:4979:A:H1'	2.06	0.54
32:5:4091:G:N1	32:5:4159:C:C4	2.75	0.54
32:5:4223:C:H2'	32:5:4223:C:O2	2.06	0.54
32:5:4640:C:C4	32:5:4641:U:C5	2.96	0.54
32:5:4666:G:C5	32:5:4667:C:C5	2.95	0.54
32:5:4683:U:C4	32:5:4707:A:C6	2.96	0.54
32:5:4700:A:N6	32:5:4701:A:C6	2.75	0.54
34:8:44:A:C2	34:8:45:C:C2	2.96	0.54
34:8:44:A:C6	34:8:45:C:C4	2.95	0.54
34:8:53:G:C6	34:8:54:C:C4	2.96	0.54
34:8:80:A:C8	34:8:81:C:H1'	2.43	0.54
34:8:139:G:C5	34:8:140:C:C5	2.95	0.54
48:z:297:MET:HB2	48:z:353:PRO:HA	1.88	0.54
48:z:297:MET:HE1	48:z:355:PHE:CG	2.39	0.54
54:S2:410:G:N1	54:S2:411:G:C5	2.76	0.54
54:S2:445:A:N6	54:S2:446:G:C2	2.75	0.54
54:S2:447:A:N6	54:S2:449:A:C4	2.75	0.54
54:S2:646:G:C6	54:S2:647:U:C5	2.96	0.54
54:S2:744:G:H1'	60:SH:107:LYS:HB3	1.89	0.54
54:S2:956:G:N2	54:S2:957:A:C4	2.75	0.54
54:S2:1123:C:N4	54:S2:1124:C:C5	2.75	0.54
54:S2:1131:G:N3	54:S2:1132:C:C6	2.75	0.54
54:S2:1221:G:O2'	54:S2:1222:G:C5'	2.55	0.54
54:S2:1251:A:C6	54:S2:1252:C:C4	2.95	0.54
54:S2:1289:U:C1'	54:S2:1314:U:C5	2.90	0.54
54:S2:1293:A:H62	86:Sf:139:HIS:C	2.14	0.54
54:S2:1307:U:O2'	86:Sf:132:MET:C	2.51	0.54
54:S2:1362:U:O2	54:S2:1362:U:O5'	2.24	0.54
54:S2:1551:U:H2'	54:S2:1552:G:H1'	1.87	0.54
54:S2:1575:G:N3	54:S2:1576:G:N7	2.56	0.54
54:S2:1596:U:C2	54:S2:1597:C:C6	2.96	0.54
54:S2:1756:C:C2	54:S2:1777:G:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1813:A:C4	54:S2:1814:G:C8	2.96	0.54
67:SW:11:LEU:HD21	67:SW:37:PHE:CZ	2.42	0.54
84:Sc:14:VAL:HG13	84:Sc:31:ARG:CA	2.36	0.54
6:L:103:ARG:CZ	32:5:75:G:O6	2.56	0.54
12:S:62:VAL:HG11	38:F:83:PHE:CD2	2.42	0.54
19:a:131:ARG:O	19:a:134:GLU:HB3	2.08	0.54
20:b:28:ARG:HB2	32:5:1805:A:C8	2.42	0.54
32:5:102:G:H2'	32:5:103:G:O5'	2.07	0.54
32:5:127:G:C6	32:5:128:C:C4	2.95	0.54
32:5:162:A:C2	32:5:274:C:N3	2.75	0.54
32:5:448:G:C2	32:5:449:C:H1'	2.43	0.54
32:5:449:C:C4	32:5:450:G:N7	2.76	0.54
32:5:471:A:C6	32:5:472:C:N1	2.76	0.54
32:5:748:G:O6	32:5:918:G:H1'	2.08	0.54
32:5:1215:C:N3	32:5:1216:C:H5	2.03	0.54
32:5:1269:G:N7	32:5:2111:G:C5	2.75	0.54
32:5:1326:A:H2'	32:5:1327:C:H6	1.70	0.54
32:5:1447:C:N3	32:5:2097:U:O4	2.40	0.54
32:5:1976:G:OP1	32:5:1977:C:OP2	2.26	0.54
32:5:1989:G:N2	32:5:1990:A:C5	2.76	0.54
32:5:2257:C:O2'	32:5:2258:C:O5'	2.25	0.54
32:5:2279:A:H2'	32:5:2280:G:H8	1.72	0.54
32:5:2413:U:C2	32:5:2414:G:C8	2.94	0.54
32:5:2567:G:C2	32:5:2568:C:N1	2.76	0.54
32:5:2723:U:C2	32:5:2724:G:C8	2.96	0.54
32:5:3608:A:N3	32:5:3609:G:C8	2.76	0.54
32:5:3668:C:C2	32:5:3669:G:C8	2.95	0.54
32:5:3870:C:C2	32:5:3886:G:C2	2.96	0.54
32:5:3907:G:H1'	32:5:4449:A:C4	2.37	0.54
32:5:3911:C:N3	32:5:3912:U:C5	2.75	0.54
32:5:4097:G:N2	32:5:4098:A:C4	2.76	0.54
32:5:4215:C:N3	32:5:4216:G:C5	2.75	0.54
32:5:4242:U:O2	32:5:4279:A:C2	2.59	0.54
32:5:4273:A:C2'	32:5:4274:A:O4'	2.48	0.54
32:5:4577:U:O2'	32:5:4967:A:O2'	2.21	0.54
32:5:4748:U:H2'	32:5:4749:C:O4'	2.08	0.54
32:5:5020:G:H2'	32:5:5021:C:O4'	2.07	0.54
32:5:5047:C:C1'	32:5:5048:A:C2	2.91	0.54
32:5:5051:C:N3	32:5:5052:C:C6	2.75	0.54
33:7:42:A:N6	33:7:43:U:C4	2.75	0.54
34:8:34:U:C2	34:8:34:U:H5'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:43:A:C2	34:8:44:A:C5	2.95	0.54
34:8:70:G:C4	34:8:87:G:N2	2.76	0.54
34:8:138:C:O2	34:8:139:G:C8	2.61	0.54
51:4:183:A:O2'	51:4:184:A:H5'	2.07	0.54
54:S2:52:G:C6	54:S2:53:C:C4	2.96	0.54
54:S2:165:G:O2'	54:S2:166:A:C5'	2.55	0.54
54:S2:364:A:C2	54:S2:397:G:C2	2.95	0.54
54:S2:667:U:C4	54:S2:1144:A:N1	2.75	0.54
54:S2:804:U:O2	54:S2:805:U:C6	2.61	0.54
54:S2:862:A:N3	54:S2:863:U:C6	2.75	0.54
54:S2:898:U:N3	54:S2:899:U:C5	2.75	0.54
54:S2:1108:G:H2'	54:S2:1109:C:H3'	1.89	0.54
54:S2:1231:C:H3'	54:S2:1232:U:H6	1.71	0.54
54:S2:1459:G:C6	54:S2:1460:C:C4	2.95	0.54
54:S2:1537:A:H3'	54:S2:1538:C:H6	1.72	0.54
54:S2:1776:G:C2	54:S2:1777:G:C5	2.95	0.54
55:SA:50:ASN:N	79:SR:105:MET:HE3	2.21	0.54
56:SB:62:LEU:HD13	56:SB:65:ARG:NE	2.23	0.54
61:SI:6:ASP:HB3	61:SI:28:GLU:HG2	1.88	0.54
62:SJ:115:PHE:C	62:SJ:115:PHE:CD1	2.86	0.54
64:SN:128:TYR:CD1	64:SN:129:TYR:N	2.75	0.54
68:SX:68:LYS:HB3	68:SX:91:LEU:HD22	1.89	0.54
81:ST:52:TRP:CE3	81:ST:53:PHE:HB3	2.42	0.54
4:H:63:ASN:N	4:H:66:GLU:OE2	2.40	0.54
4:H:177:ASP:N	4:H:177:ASP:OD1	2.40	0.54
5:J:60:PHE:CZ	32:5:4256:A:N7	2.76	0.54
8:N:120:TRP:CZ3	32:5:280:G:H8	2.25	0.54
18:Z:78:ASN:OD1	18:Z:78:ASN:N	2.41	0.54
19:a:21:ARG:NH1	32:5:1317:U:OP1	2.40	0.54
26:h:89:ARG:HH11	26:h:89:ARG:HG2	1.72	0.54
32:5:33:A:H5''	32:5:33:A:H8	1.71	0.54
32:5:126:C:C2	32:5:127:G:N7	2.73	0.54
32:5:320:C:H2'	32:5:321:U:O4'	2.06	0.54
32:5:345:C:C2	32:5:346:G:C8	2.95	0.54
32:5:747:A:C2	32:5:918:G:C6	2.96	0.54
32:5:1048:G:C2	32:5:1049:C:C2	2.96	0.54
32:5:1293:G:H5''	32:5:1293:G:H8	1.73	0.54
32:5:1309:C:N3	32:5:1310:C:C6	2.75	0.54
32:5:1344:C:C2	32:5:1345:A:C8	2.96	0.54
32:5:1358:G:H3'	32:5:1358:G:H8	1.73	0.54
32:5:1374:G:C6	32:5:1375:C:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1650:A:H2	36:C:100:ARG:NH2	2.02	0.54
32:5:1743:A:C6	32:5:1744:U:C6	2.95	0.54
32:5:1870:C:O2	32:5:1870:C:H2'	2.08	0.54
32:5:1877:G:C6	32:5:1878:G:C5	2.95	0.54
32:5:1937:C:C3'	32:5:1938:C:H2'	2.37	0.54
32:5:1983:A:N7	32:5:1987:C:H5'	2.22	0.54
32:5:2065:G:C4	32:5:2066:C:C6	2.96	0.54
32:5:2315:G:C2	32:5:2316:G:C4	2.96	0.54
32:5:2506:G:H4'	32:5:2507:A:OP1	2.07	0.54
32:5:2569:G:C6	32:5:2570:U:C4	2.95	0.54
32:5:2726:G:N1	32:5:2727:C:N4	2.56	0.54
32:5:2818:C:H2'	32:5:2818:C:O2	2.07	0.54
32:5:3687:A:C6	32:5:3688:U:C5	2.95	0.54
32:5:4194:U:C5	32:5:4197:G:H5''	2.43	0.54
32:5:4233:A:C8	32:5:4235:G:C8	2.96	0.54
32:5:4292:A:C2	32:5:4330:G:C4	2.95	0.54
32:5:4397:A:O4'	50:3:76:A:N3	2.41	0.54
32:5:4667:C:C4	32:5:4668:U:C5	2.95	0.54
32:5:4758:U:O2	32:5:4758:U:O4'	2.24	0.54
32:5:4975:G:H2'	32:5:4977:A:N7	2.23	0.54
34:8:10:G:C6	34:8:11:C:C4	2.94	0.54
45:r:45:HIS:NE2	45:r:103:ARG:NH1	2.56	0.54
46:K:117:ARG:N	46:K:117:ARG:HE	2.06	0.54
48:z:377:THR:CG2	51:4:193:G:O2'	2.54	0.54
54:S2:54:A:C4	54:S2:451:G:N2	2.76	0.54
54:S2:222:U:H2'	54:S2:222:U:O2	2.07	0.54
54:S2:583:C:C4	54:S2:584:G:C8	2.95	0.54
54:S2:604:A:C2	54:S2:605:A:C5	2.95	0.54
54:S2:619:A:H2'	54:S2:619:A:N3	2.22	0.54
54:S2:1016:U:O2	71:Sb:28:PRO:HG3	2.07	0.54
54:S2:1130:G:N2	54:S2:1131:G:C8	2.76	0.54
54:S2:1132:C:C4	54:S2:1133:A:N7	2.68	0.54
54:S2:1643:U:N3	54:S2:1644:C:N4	2.54	0.54
54:S2:1721:U:H5'	54:S2:1721:U:C6	2.43	0.54
54:S2:1862:G:H1	70:Sa:75:VAL:HB	1.73	0.54
62:SJ:83:ARG:HD3	62:SJ:150:ARG:HH21	1.72	0.54
13:T:19:PHE:O	13:T:21:LYS:N	2.41	0.54
16:X:60:TYR:OH	32:5:17:A:OP2	2.18	0.54
18:Z:29:ILE:HB	18:Z:40:HIS:O	2.08	0.54
24:f:68:ARG:HH22	32:5:443:G:P	2.31	0.54
32:5:99:A:N1	32:5:100:C:C2	2.75	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:120:A:C5	32:5:149:A:C6	2.95	0.54
32:5:126:C:O2	32:5:127:G:H8	1.89	0.54
32:5:259:C:C2	32:5:260:C:C6	2.95	0.54
32:5:272:U:O2	32:5:273:U:C6	2.58	0.54
32:5:313:U:H2'	32:5:314:G:O4'	2.08	0.54
32:5:325:U:H2'	32:5:326:C:H6	1.71	0.54
32:5:1075:G:C4	32:5:1076:C:C5	2.95	0.54
32:5:1440:U:O2	32:5:1440:U:C2'	2.54	0.54
32:5:1554:A:C2	32:5:1555:G:H1'	2.42	0.54
32:5:1776:A:C4	32:5:1777:C:C6	2.95	0.54
32:5:1850:A:C2'	32:5:1851:G:O5'	2.56	0.54
32:5:1857:C:N3	32:5:1858:A:N7	2.55	0.54
32:5:1983:A:N7	32:5:1987:C:OP2	2.41	0.54
32:5:2065:G:C5	32:5:2066:C:C5	2.95	0.54
32:5:2103:G:C6	32:5:2104:G:C5	2.95	0.54
32:5:2478:C:N3	32:5:2479:G:C5	2.76	0.54
32:5:2547:G:N2	32:5:2548:C:C2	2.75	0.54
32:5:2734:U:O2	32:5:2734:U:H2'	2.08	0.54
32:5:2898:G:C6	32:5:2899:C:C4	2.96	0.54
32:5:3711:A:C8	32:5:3712:A:H4'	2.43	0.54
32:5:3891:A:H2'	32:5:3892:U:O4'	2.07	0.54
32:5:3893:C:N3	32:5:4568:A:C2	2.75	0.54
32:5:3938:G:O6	32:5:4077:A:C2	2.61	0.54
32:5:4093:G:C3'	32:5:4094:G:C5'	2.85	0.54
32:5:4142:C:C5	32:5:4143:G:C6	2.95	0.54
32:5:4257:A:C2'	32:5:4258:C:H6	2.20	0.54
32:5:4269:G:C2	32:5:4270:C:H1'	2.42	0.54
32:5:4287:G:C2	32:5:4288:C:N3	2.75	0.54
32:5:4455:G:C2	32:5:4456:C:N1	2.76	0.54
32:5:4455:G:C6	32:5:4456:C:C4	2.96	0.54
32:5:4502:C:C4	32:5:4503:A:N7	2.75	0.54
32:5:4510:A:O2'	32:5:4511:A:C8	2.50	0.54
32:5:5021:C:N3	32:5:5022:U:C5	2.75	0.54
34:8:28:C:N3	34:8:29:G:C8	2.76	0.54
34:8:118:C:O2	34:8:118:C:H2'	2.06	0.54
36:C:209:ILE:HD13	36:C:221:PHE:CD2	2.43	0.54
37:E:277:ILE:C	37:E:278:TYR:CD2	2.86	0.54
48:z:51:GLN:HA	48:z:54:GLU:HG2	1.90	0.54
48:z:71:LYS:O	48:z:74:MET:N	2.39	0.54
54:S2:30:C:O2'	54:S2:31:U:C5'	2.55	0.54
54:S2:341:C:O2	54:S2:342:C:H1'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:372:U:C2	54:S2:373:G:C8	2.96	0.54
54:S2:458:A:C5	54:S2:459:C:C6	2.90	0.54
54:S2:615:C:C2'	54:S2:616:A:O4'	2.56	0.54
54:S2:918:U:H2'	54:S2:919:A:C4	2.42	0.54
54:S2:951:C:N3	54:S2:952:G:N7	2.55	0.54
54:S2:1140:G:H2'	54:S2:1141:G:O4'	2.08	0.54
54:S2:1466:G:C4	54:S2:1467:C:C5	2.95	0.54
54:S2:1514:G:H2'	54:S2:1515:G:O4'	2.08	0.54
54:S2:1608:U:C2	54:S2:1609:C:C6	2.96	0.54
54:S2:1839:U:N3	54:S2:1840:U:C5	2.76	0.54
54:S2:1863:A:OP2	70:Sa:4:LYS:NZ	2.40	0.54
61:SI:25:ARG:HB2	61:SI:27:TYR:HD2	1.72	0.54
64:SN:55:ARG:NH1	71:Sb:47:PHE:CE2	2.76	0.54
69:SY:76:TYR:CE2	69:SY:86:GLU:HG2	2.42	0.54
73:SD:11:PHE:CE2	82:SU:84:ILE:HD13	2.43	0.54
80:SS:31:THR:O	80:SS:36:VAL:CG1	2.55	0.54
80:SS:38:ARG:HH21	81:ST:45:LEU:HD13	1.73	0.54
87:Sg:16:GLY:N	87:Sg:305:ASN:OD1	2.40	0.54
6:L:176:PHE:C	6:L:176:PHE:HD1	2.15	0.54
8:N:120:TRP:HE3	32:5:280:G:C5'	2.21	0.54
11:R:149:LYS:O	11:R:153:LYS:N	2.32	0.54
11:R:151:ARG:NH1	63:SL:118:ARG:CD	2.63	0.54
12:S:34:ALA:HB1	12:S:35:PRO:CD	2.37	0.54
14:U:99:TRP:CD1	14:U:99:TRP:N	2.75	0.54
23:e:95:TYR:HE2	45:r:23:GLN:HG2	1.72	0.54
27:i:30:ARG:NH2	32:5:277:G:O2'	2.40	0.54
32:5:21:G:H3'	32:5:21:G:C8	2.42	0.54
32:5:38:A:C6	32:5:41:C:H5	2.24	0.54
32:5:47:A:C8	32:5:49:U:C4	2.96	0.54
32:5:90:G:N3	32:5:95:G:C2	2.75	0.54
32:5:219:G:OP1	32:5:219:G:H4'	2.07	0.54
32:5:466:A:C2	32:5:467:U:C4	2.95	0.54
32:5:660:A:C2	32:5:661:C:C5	2.95	0.54
32:5:675:C:N3	32:5:676:C:C5	2.76	0.54
32:5:685:C:C2'	32:5:685:C:O2	2.56	0.54
32:5:693:C:C2	32:5:694:C:C5	2.95	0.54
32:5:967:C:H2'	32:5:969:C:OP1	2.07	0.54
32:5:1544:G:C2	32:5:1545:G:N7	2.76	0.54
32:5:1545:G:N2	32:5:1546:C:C2	2.75	0.54
32:5:1563:A:C5	54:S2:677:G:O2'	2.58	0.54
32:5:1811:G:N1	32:5:1812:C:C5	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1987:C:N4	32:5:1988:G:N7	2.56	0.54
32:5:2522:G:C2	32:5:2534:C:N3	2.76	0.54
32:5:2605:G:C2	32:5:2606:G:N7	2.76	0.54
32:5:2744:A:H2'	32:5:2745:A:C8	2.43	0.54
32:5:2818:C:C2'	32:5:4644:G:O2'	2.56	0.54
32:5:3736:A:C2	32:5:3737:A:C2	2.94	0.54
32:5:4147:G:C6	32:5:4148:C:C4	2.95	0.54
32:5:4406:U:N3	32:5:4407:G:C8	2.76	0.54
32:5:4548:A:C4'	32:5:4549:G:OP2	2.56	0.54
33:7:104:C:C2	33:7:105:C:C6	2.95	0.54
35:B:314:ILE:HD13	35:B:326:VAL:HG12	1.90	0.54
38:F:95:ILE:HG22	38:F:96:ARG:O	2.08	0.54
45:r:49:VAL:HG11	45:r:97:ILE:HD11	1.89	0.54
47:q:32:ALA:HA	47:q:187:LEU:HD23	1.80	0.54
54:S2:173:A:C2	54:S2:174:C:C6	2.95	0.54
54:S2:298:G:C6	54:S2:299:A:N7	2.76	0.54
54:S2:311:C:H3'	54:S2:312:G:C4'	2.38	0.54
54:S2:470:G:H2'	54:S2:471:G:C8	2.43	0.54
54:S2:656:G:C5'	54:S2:662:G:N2	2.71	0.54
54:S2:694:G:N2	54:S2:695:C:N1	2.54	0.54
54:S2:751:G:C6	54:S2:792:C:N3	2.75	0.54
54:S2:870:A:C8	54:S2:915:G:N7	2.64	0.54
54:S2:875:A:H2'	54:S2:876:C:C5'	2.37	0.54
54:S2:947:G:C5	54:S2:948:C:C5	2.96	0.54
54:S2:1098:C:O2	54:S2:1098:C:H2'	2.08	0.54
54:S2:1131:G:C6	54:S2:1132:C:C5	2.95	0.54
54:S2:1315:U:O4	54:S2:1316:C:C2	2.60	0.54
54:S2:1381:G:C2	54:S2:1382:A:C8	2.96	0.54
54:S2:1551:U:O4	54:S2:1577:G:H2'	2.07	0.54
54:S2:1753:C:O2	54:S2:1754:G:C8	2.61	0.54
54:S2:1773:C:C2	54:S2:1774:C:C5	2.96	0.54
55:SA:2:SER:O	55:SA:4:ALA:N	2.40	0.54
56:SB:150:ILE:HD13	79:SR:129:LYS:CG	2.24	0.54
63:SL:126:VAL:HG23	63:SL:145:VAL:HG22	1.89	0.54
64:SN:54:LEU:HB3	64:SN:60:VAL:HG22	1.89	0.54
67:SW:118:ARG:CZ	67:SW:118:ARG:HB2	2.38	0.54
80:SS:16:LEU:O	80:SS:16:LEU:HG	2.07	0.54
83:SZ:56:ASP:O	83:SZ:60:LYS:CG	2.55	0.54
89:S4:85:ASN:N	89:S4:85:ASN:HD22	2.05	0.54
4:H:61:TRP:CH2	7:M:33:GLN:HG2	2.43	0.54
32:5:91:G:C8	32:5:93:G:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:109:G:N2	32:5:333:U:C2	2.76	0.54
32:5:370:U:C4	32:5:1637:A:C5	2.95	0.54
32:5:936:C:O4'	32:5:936:C:O2	2.26	0.54
32:5:978:G:C2	32:5:979:C:C2	2.96	0.54
32:5:1187:G:H21	32:5:1188:C:H41	1.56	0.54
32:5:1214:C:C4'	32:5:1215:C:O5'	2.52	0.54
32:5:1302:U:O2	32:5:1302:U:H2'	2.06	0.54
32:5:1753:G:N3	32:5:1755:C:H5''	2.22	0.54
32:5:1834:U:H2'	32:5:1834:U:O2	2.08	0.54
32:5:1898:C:C5	32:5:2279:A:C1'	2.91	0.54
32:5:1925:G:C6	32:5:1926:C:C5	2.95	0.54
32:5:2000:G:H3'	32:5:2000:G:N3	2.23	0.54
32:5:2107:C:C4	32:5:2126:G:C2	2.95	0.54
32:5:2245:G:C6	32:5:2246:C:C4	2.95	0.54
32:5:2340:C:C4	32:5:2341:A:N7	2.76	0.54
32:5:2406:G:N2	32:5:2785:C:C2	2.76	0.54
32:5:2455:G:H2'	32:5:2456:G:C5'	2.37	0.54
32:5:2466:G:H2'	32:5:2467:U:H1'	1.90	0.54
32:5:3714:G:H2'	32:5:3714:G:N3	2.21	0.54
32:5:3802:U:H2'	32:5:3802:U:O2	2.06	0.54
32:5:4075:U:O2	32:5:4076:G:N7	2.41	0.54
32:5:4077:A:C2	32:5:4170:A:C6	2.96	0.54
32:5:4132:C:C2	32:5:4133:C:C6	2.95	0.54
32:5:4152:G:C2	32:5:4153:C:C6	2.96	0.54
32:5:4363:A:C2	32:5:4364:G:C8	2.96	0.54
32:5:4713:G:C5	32:5:4714:C:C5	2.96	0.54
32:5:4901:G:C2	32:5:4921:C:N3	2.76	0.54
32:5:5039:U:H5''	32:5:5040:U:H2'	1.90	0.54
34:8:115:G:C6	34:8:116:C:C4	2.95	0.54
34:8:139:G:C2	34:8:140:C:C2	2.96	0.54
50:3:11:U:H2'	50:3:12:G:C8	2.42	0.54
54:S2:381:C:N4	61:SI:49:ARG:NE	2.56	0.54
54:S2:399:C:H4'	68:SI:11:ARG:NH1	2.23	0.54
54:S2:794:A:N6	54:S2:795:A:C6	2.76	0.54
54:S2:926:A:C6	54:S2:927:C:C4	2.95	0.54
54:S2:1122:A:C6	54:S2:1123:C:C6	2.96	0.54
54:S2:1309:C:H2'	86:Sf:143:LYS:HD3	1.89	0.54
54:S2:1318:G:C6	54:S2:1319:U:C4	2.95	0.54
54:S2:1578:U:C6	73:SD:6:SER:N	2.76	0.54
54:S2:1590:C:C5	54:S2:1591:C:N1	2.76	0.54
54:S2:1754:G:C2	54:S2:1755:C:C2	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1862:G:O6	70:Sa:34:LYS:HE2	2.07	0.54
55:SA:39:TYR:HH	79:SR:104:GLU:CB	1.89	0.54
63:SL:13:GLN:NE2	63:SL:13:GLN:HA	2.22	0.54
63:SL:44:PHE:CE2	63:SL:143:LEU:HD23	2.43	0.54
1:A:186:TYR:CA	1:A:196:TRP:HZ3	2.20	0.54
2:D:31:TYR:CD1	2:D:31:TYR:C	2.85	0.54
2:D:266:TRP:CH2	33:7:22:A:C4	2.95	0.54
4:H:126:VAL:HG11	4:H:161:ILE:HG22	1.89	0.54
4:H:156:ASN:OD1	4:H:156:ASN:C	2.50	0.54
5:J:22:LEU:HD22	5:J:130:PHE:CD1	2.42	0.54
6:L:65:ARG:HB2	19:a:69:PHE:CG	2.43	0.54
6:L:186:ARG:HH12	32:5:1394:G:H5''	1.73	0.54
8:N:120:TRP:HZ3	32:5:280:G:C8	2.26	0.54
12:S:80:ILE:HG22	12:S:95:ARG:O	2.08	0.54
20:b:15:LYS:C	20:b:17:HIS:N	2.66	0.54
32:5:2:G:N2	32:5:3:C:C2	2.76	0.54
32:5:145:G:C4	32:5:146:G:C8	2.95	0.54
32:5:230:G:C2	32:5:239:C:C2	2.95	0.54
32:5:489:C:C4	32:5:490:C:C5	2.96	0.54
32:5:659:G:N1	32:5:660:A:C5	2.76	0.54
32:5:735:G:C4	32:5:736:C:C5	2.96	0.54
32:5:752:G:O6	32:5:753:C:C4	2.61	0.54
32:5:916:C:N4	32:5:917:A:N7	2.56	0.54
32:5:964:A:H1'	45:r:98:ARG:NH1	2.22	0.54
32:5:986:C:C4	32:5:1068:G:N1	2.76	0.54
32:5:1176:C:C2	32:5:1177:U:C6	2.96	0.54
32:5:1368:A:HO2'	32:5:1369:C:P	2.31	0.54
32:5:1776:A:C6	32:5:1777:C:C5	2.96	0.54
32:5:1778:C:C2	32:5:1779:U:H5	2.26	0.54
32:5:1813:U:H2'	32:5:1814:C:C6	2.43	0.54
32:5:1858:A:C2	32:5:1859:C:C6	2.96	0.54
32:5:1924:C:N4	32:5:1925:G:N7	2.56	0.54
32:5:2085:G:C2	32:5:2273:G:C6	2.96	0.54
32:5:2361:G:O2'	32:5:2362:U:P	2.66	0.54
32:5:2424:G:N2	32:5:2426:U:O2	2.41	0.54
32:5:2479:G:C2	32:5:2480:G:C4	2.96	0.54
32:5:2528:G:H5''	32:5:2529:A:OP2	2.07	0.54
32:5:3655:C:C2	32:5:3656:A:H8	2.24	0.54
32:5:3656:A:N1	32:5:3657:U:C4	2.76	0.54
32:5:3783:A:H2	32:5:3789:C:N4	2.02	0.54
32:5:4091:G:C2	32:5:4092:G:H1'	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4175:G:C6	32:5:4176:C:C5	2.96	0.54
32:5:4283:G:C5	32:5:4284:C:C5	2.96	0.54
33:7:62:U:O2	33:7:64:G:C8	2.61	0.54
34:8:3:A:C4	34:8:4:C:C5	2.96	0.54
35:B:321:VAL:HG12	35:B:322:HIS:HB2	1.88	0.54
37:E:47:VAL:O	37:E:48:ARG:C	2.51	0.54
37:E:280:HIS:CE1	37:E:281:LYS:HB2	2.43	0.54
48:z:346:SER:HG	48:z:369:MET:CE	2.19	0.54
51:4:58:G:O6	51:4:289:A:C5	2.61	0.54
51:4:59:A:N6	51:4:288:G:C4	2.76	0.54
54:S2:62:G:H1'	54:S2:172:U:O2	2.06	0.54
54:S2:311:C:H3'	54:S2:312:G:H4'	1.88	0.54
54:S2:549:C:N4	54:S2:550:C:C5	2.76	0.54
54:S2:573:U:H2'	54:S2:574:A:H2'	1.90	0.54
54:S2:606:G:C5	54:S2:608:C:C5	2.96	0.54
54:S2:859:G:C6	54:S2:860:G:N7	2.75	0.54
54:S2:961:G:H2'	54:S2:961:G:N3	2.23	0.54
54:S2:1283:C:C4	76:SM:103:VAL:HA	2.43	0.54
54:S2:1293:A:C4'	86:Sf:151:ASN:H	2.21	0.54
54:S2:1508:A:N6	54:S2:1510:G:N9	2.56	0.54
54:S2:1526:G:C5	54:S2:1527:C:C5	2.96	0.54
54:S2:1573:G:C5	54:S2:1574:C:C6	2.96	0.54
54:S2:1668:U:C2	54:S2:1669:G:N7	2.76	0.54
54:S2:1711:U:C2	54:S2:1712:A:N7	2.76	0.54
54:S2:1744:G:C2	54:S2:1789:G:C2	2.96	0.54
54:S2:1866:A:C2	70:Sa:87:ARG:NH2	2.76	0.54
55:SA:130:ASP:OD1	55:SA:130:ASP:N	2.40	0.54
56:SB:53:GLN:HG2	56:SB:56:LYS:HE2	1.90	0.54
57:SC:170:TRP:HD1	57:SC:198:ALA:C	2.16	0.54
59:SG:162:LEU:HD11	59:SG:165:GLU:CD	2.33	0.54
63:SL:17:PHE:CZ	63:SL:19:ASN:HB2	2.43	0.54
64:SN:18:TYR:CZ	67:SW:56:HIS:HB2	2.43	0.54
65:SO:64:ALA:O	65:SO:66:ARG:N	2.40	0.54
67:SW:11:LEU:HD21	67:SW:37:PHE:CE2	2.42	0.54
74:SF:141:VAL:O	84:Sc:56:LEU:HD11	2.00	0.54
8:N:202:ARG:HE	36:C:112:HIS:CE1	2.26	0.54
10:Q:11:ARG:NH2	32:5:1690:C:OP2	2.41	0.54
11:R:131:VAL:HG23	11:R:132:PHE:CZ	2.43	0.54
22:d:83:ARG:NH2	32:5:5046:U:OP1	2.40	0.54
32:5:138:G:C3'	32:5:139:G:H5'	2.37	0.54
32:5:193:G:C6	32:5:194:C:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:294:G:C5'	32:5:296:A:C5'	2.60	0.54
32:5:397:G:N2	40:P:22:LEU:HD22	2.23	0.54
32:5:737:C:C2	32:5:738:C:C6	2.95	0.54
32:5:1085:C:N3	32:5:1086:C:C5	2.76	0.54
32:5:1234:G:H2'	32:5:1235:G:C8	2.42	0.54
32:5:1268:G:H4'	32:5:1269:G:OP1	2.08	0.54
32:5:1321:G:C2	32:5:3876:A:C2	2.95	0.54
32:5:1359:G:C2'	32:5:1360:G:O4'	2.54	0.54
32:5:1479:G:O2'	32:5:1480:C:O5'	2.26	0.54
32:5:1692:C:C4	32:5:1693:U:C5	2.95	0.54
32:5:1796:U:N3	32:5:1797:G:C8	2.77	0.54
32:5:1857:C:C2	32:5:1858:A:N7	2.76	0.54
32:5:1877:G:C2	32:5:1878:G:N9	2.76	0.54
32:5:1944:A:C6	32:5:1945:G:C8	2.96	0.54
32:5:1964:A:C6	32:5:1965:G:C5	2.96	0.54
32:5:2277:C:N3	32:5:2278:G:N7	2.56	0.54
32:5:2395:A:C2'	32:5:2806:A:HO2'	2.17	0.54
32:5:2468:U:C2	32:5:2473:A:N6	2.75	0.54
32:5:2607:C:H2'	32:5:2608:G:H8	1.73	0.54
32:5:2816:G:C5	32:5:2817:C:C5	2.96	0.54
32:5:2825:A:H4'	32:5:2826:U:O5'	2.07	0.54
32:5:2830:G:C2	32:5:2831:G:C5	2.95	0.54
32:5:3846:C:C4	32:5:3847:C:C5	2.96	0.54
32:5:3857:G:C2	32:5:3858:C:N1	2.76	0.54
32:5:4142:C:H2'	32:5:4143:G:C1'	2.37	0.54
32:5:4293:U:O4	32:5:4329:G:H8	1.90	0.54
32:5:4320:G:H2'	32:5:4321:U:O4'	2.08	0.54
32:5:4322:G:C2	32:5:4326:G:C6	2.96	0.54
32:5:4652:G:C2	32:5:4653:C:C4	2.96	0.54
32:5:4868:G:H3'	32:5:4869:U:H5''	1.89	0.54
33:7:59:G:C2	33:7:60:G:C8	2.95	0.54
34:8:33:G:O4'	34:8:34:U:O4	2.26	0.54
34:8:70:G:O2'	34:8:88:A:N6	2.40	0.54
34:8:85:U:H2'	34:8:87:G:C8	2.43	0.54
47:q:63:LYS:HD2	47:q:82:ILE:HD11	1.90	0.54
48:z:140:PHE:HE1	48:z:194:ARG:NE	2.05	0.54
50:3:38:C:N4	50:3:39:G:N7	2.54	0.54
51:4:140:C:H2'	51:4:141:C:C6	2.43	0.54
54:S2:42:A:C1'	54:S2:426:A:N7	2.65	0.54
54:S2:84:A:C6	54:S2:85:A:C5	2.95	0.54
54:S2:222:U:O2	54:S2:223:C:C6	2.61	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:505:G:H2'	54:S2:506:G:O4'	2.07	0.54
54:S2:579:C:C5	54:S2:580:U:C5	2.96	0.54
54:S2:752:G:O6	54:S2:791:C:N3	2.41	0.54
54:S2:828:G:C5	54:S2:829:C:C5	2.96	0.54
54:S2:984:C:O2	65:SO:138:ASP:OD2	2.25	0.54
54:S2:1045:U:H2'	54:S2:1045:U:O2	2.07	0.54
54:S2:1100:A:C5	54:S2:1101:U:C5	2.95	0.54
54:S2:1356:G:H2'	54:S2:1357:A:C8	2.43	0.54
54:S2:1412:C:O2'	54:S2:1413:G:C8	2.61	0.54
54:S2:1528:G:C2	54:S2:1529:C:N3	2.76	0.54
54:S2:1568:C:C2'	54:S2:1569:A:C8	2.91	0.54
54:S2:1723:G:C2	54:S2:1724:A:C8	2.96	0.54
56:SB:120:VAL:HG11	56:SB:122:GLU:OE1	2.08	0.54
57:SC:94:ILE:HD11	57:SC:98:LEU:HD12	1.90	0.54
76:SM:85:LEU:HA	76:SM:88:TRP:HH2	1.67	0.54
81:ST:31:PRO:HB2	81:ST:33:TRP:CZ3	2.42	0.54
83:SZ:50:PHE:CZ	83:SZ:79:ILE:HD13	2.43	0.54
85:Sd:23:VAL:HG21	85:Sd:42:CYS:HB3	1.90	0.54
10:Q:68:ARG:NH1	32:5:1501:C:O2'	2.40	0.53
23:e:58:ILE:C	23:e:60:TYR:H	2.11	0.53
32:5:43:U:O4	32:5:44:A:H1'	2.08	0.53
32:5:181:C:C4	32:5:256:G:N1	2.76	0.53
32:5:672:C:N3	32:5:673:C:C5	2.76	0.53
32:5:717:U:C4	32:5:718:C:C6	2.96	0.53
32:5:720:G:C6	32:5:721:G:N7	2.76	0.53
32:5:964:A:H8	32:5:964:A:H5''	1.71	0.53
32:5:975:C:H2'	32:5:976:G:C1'	2.38	0.53
32:5:976:G:H3'	32:5:977:C:H6	1.72	0.53
32:5:1049:C:O2	32:5:1050:C:C6	2.60	0.53
32:5:1212:G:N1	32:5:1213:G:C5	2.77	0.53
32:5:1268:G:O4'	32:5:2111:G:C8	2.61	0.53
32:5:1334:A:N1	32:5:1335:G:C5	2.76	0.53
32:5:1349:G:C6	32:5:1350:C:C4	2.96	0.53
32:5:1367:C:N3	32:5:1369:C:OP2	2.41	0.53
32:5:1534:A:C2'	32:5:1637:A:C2	2.91	0.53
32:5:1590:C:H5''	32:5:1591:U:O5'	2.09	0.53
32:5:1684:A:C4	32:5:1685:G:C8	2.96	0.53
32:5:1761:G:C6	32:5:1762:C:C4	2.95	0.53
32:5:1893:C:C2	32:5:1894:C:C5	2.96	0.53
32:5:1906:U:H2'	32:5:1907:A:H5'	1.89	0.53
32:5:2081:C:C2	32:5:2082:G:N7	2.75	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2316:G:C2	32:5:2317:C:N3	2.76	0.53
32:5:2367:A:N3	32:5:2368:A:C8	2.77	0.53
32:5:2590:G:N2	32:5:2754:G:O2'	2.40	0.53
32:5:3662:A:C6	32:5:3680:U:O4	2.51	0.53
32:5:3696:C:N3	32:5:3697:U:C5	2.76	0.53
32:5:3795:A:C4	32:5:3796:U:C6	2.96	0.53
32:5:4171:C:H2'	32:5:4172:A:O4'	2.08	0.53
32:5:4343:U:N3	32:5:4344:U:C4	2.73	0.53
32:5:4486:C:H2'	32:5:4487:A:O4'	2.08	0.53
32:5:4879:C:N3	32:5:4880:C:C5	2.76	0.53
32:5:4939:C:C4	37:E:215:LYS:HD3	2.43	0.53
32:5:4985:U:O2	35:B:174:ARG:NH1	2.42	0.53
32:5:4998:G:N2	32:5:4999:G:N9	2.57	0.53
32:5:5047:C:N3	32:5:5048:A:N6	2.57	0.53
36:C:144:ILE:HD11	36:C:249:PHE:CD1	2.42	0.53
38:F:197:TYR:C	38:F:199:VAL:H	2.16	0.53
39:I:171:TRP:CB	39:I:181:PHE:CE2	2.91	0.53
42:j:20:ARG:HD3	42:j:39:TYR:OH	2.08	0.53
50:3:65:G:C6	50:3:66:C:C4	2.96	0.53
54:S2:84:A:C2	54:S2:85:A:C8	2.97	0.53
54:S2:100:U:O2	54:S2:100:U:C2'	2.57	0.53
54:S2:200:G:C6	54:S2:201:C:C4	2.96	0.53
54:S2:338:G:H3'	54:S2:339:A:H8	1.74	0.53
54:S2:599:A:C4'	54:S2:605:A:C2	2.90	0.53
54:S2:673:G:H1'	54:S2:1084:A:C2	2.42	0.53
54:S2:797:C:OP1	60:SH:111:LYS:HA	2.08	0.53
54:S2:875:A:N1	54:S2:876:C:C2	2.76	0.53
54:S2:998:A:C8	54:S2:998:A:H3'	2.43	0.53
54:S2:1022:U:H1'	64:SN:128:TYR:CD2	2.42	0.53
54:S2:1146:C:H2'	54:S2:1147:C:H6	1.73	0.53
54:S2:1250:A:H2	54:S2:1339:U:HO2'	0.63	0.53
58:SE:48:LEU:HD21	58:SE:70:ILE:CD1	2.38	0.53
63:SL:77:VAL:HG22	63:SL:86:ILE:HD12	1.89	0.53
64:SN:122:ILE:HD13	64:SN:141:TYR:CE2	2.44	0.53
76:SM:22:LEU:HD23	76:SM:111:VAL:HG22	1.90	0.53
80:SS:11:HIS:C	80:SS:12:ILE:HD12	2.33	0.53
80:SS:12:ILE:HA	80:SS:22:GLY:N	2.21	0.53
8:N:138:PHE:HB3	8:N:143:ARG:NH2	2.19	0.53
9:O:83:THR:HG22	32:5:2052:G:OP1	2.08	0.53
32:5:504:G:O6	32:5:654:C:N3	2.41	0.53
32:5:908:G:C2	32:5:909:A:C8	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1267:C:C5'	32:5:2110:C:O2'	2.57	0.53
32:5:1296:G:HO2'	32:5:1297:U:P	2.30	0.53
32:5:1379:C:O3'	32:5:1380:G:H8	1.91	0.53
32:5:1463:C:N3	32:5:1464:C:C5	2.76	0.53
32:5:1629:G:C5	32:5:1631:A:N6	2.76	0.53
32:5:1632:A:C6	32:5:1634:A:C1'	2.92	0.53
32:5:1682:A:C4	32:5:1683:U:C6	2.96	0.53
32:5:1751:A:C2	32:5:1752:G:C1'	2.91	0.53
32:5:1907:A:H2'	32:5:1908:A:C8	2.43	0.53
32:5:1916:G:H21	32:5:2067:C:H1'	1.73	0.53
32:5:2065:G:C6	32:5:2066:C:C4	2.95	0.53
32:5:2290:C:C4	32:5:2291:G:N7	2.77	0.53
32:5:2334:C:H2'	32:5:2334:C:O2	2.09	0.53
32:5:2678:A:N3	32:5:2679:G:C8	2.76	0.53
32:5:2688:G:C2	32:5:2689:C:C5	2.97	0.53
32:5:2827:G:H2'	32:5:2827:G:N3	2.23	0.53
32:5:2844:A:O2'	32:5:4631:G:H4'	2.07	0.53
32:5:2880:U:N3	32:5:3625:G:C8	2.76	0.53
32:5:3603:G:H2'	32:5:3604:A:N3	2.24	0.53
32:5:3722:G:N1	32:5:3723:A:C5	2.76	0.53
32:5:3782:C:C4	32:5:3809:G:C5	2.96	0.53
32:5:3833:C:O2	32:5:3834:C:C6	2.61	0.53
32:5:4079:C:N3	32:5:4080:C:C6	2.76	0.53
32:5:4322:G:N2	32:5:4326:G:C5	2.77	0.53
42:j:16:HIS:HA	42:j:27:TYR:O	2.08	0.53
48:z:383:ASN:HB2	51:4:209:G:OP1	2.09	0.53
48:z:404:GLN:HG3	52:9:72:TRP:CZ2	2.34	0.53
54:S2:46:A:C5	54:S2:473:A:C2	2.96	0.53
54:S2:118:C:C4	54:S2:119:U:C5	2.95	0.53
54:S2:379:C:O2	54:S2:380:G:C8	2.61	0.53
54:S2:403:G:N3	54:S2:403:G:H2'	2.22	0.53
54:S2:452:G:C6	54:S2:453:C:N4	2.77	0.53
54:S2:656:G:H21	54:S2:663:C:C5'	2.20	0.53
54:S2:794:A:N6	54:S2:795:A:N6	2.56	0.53
54:S2:886:A:H2'	54:S2:887:U:O4'	2.08	0.53
54:S2:1293:A:N6	86:Sf:140:TYR:HA	2.22	0.53
54:S2:1294:G:H1'	86:Sf:152:LYS:C	2.33	0.53
54:S2:1317:C:C2	54:S2:1318:G:H8	2.25	0.53
54:S2:1409:A:H8	54:S2:1409:A:O5'	1.91	0.53
54:S2:1804:U:N3	54:S2:1805:G:N7	2.55	0.53
55:SA:200:ASP:CG	79:SR:85:VAL:CG1	2.79	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SF:140:ASP:CG	84:Sc:56:LEU:CD2	2.80	0.53
77:SP:42:ARG:CZ	77:SP:42:ARG:HB2	2.38	0.53
80:SS:6:PRO:HB2	83:SZ:49:LEU:HD13	1.89	0.53
4:H:60:TRP:CE3	4:H:60:TRP:HA	2.43	0.53
9:O:66:PRO:HD2	35:B:264:PHE:HD2	1.73	0.53
13:T:70:HIS:N	13:T:70:HIS:CD2	2.77	0.53
22:d:118:GLN:HA	22:d:118:GLN:OE1	2.08	0.53
23:e:35:TRP:CH2	23:e:56:PRO:HD3	2.43	0.53
32:5:93:G:N2	32:5:94:A:C2	2.76	0.53
32:5:174:C:C2	32:5:263:G:N2	2.77	0.53
32:5:279:A:H3'	32:5:279:A:OP1	2.08	0.53
32:5:319:A:H2'	32:5:320:C:O4'	2.09	0.53
32:5:348:G:N1	32:5:350:C:C4	2.76	0.53
32:5:431:G:O4'	32:5:3889:G:N2	2.41	0.53
32:5:909:A:N1	32:5:910:G:C5	2.76	0.53
32:5:1272:C:H3'	32:5:2122:G:O2'	2.08	0.53
32:5:1279:A:C4	32:5:1280:C:C4	2.96	0.53
32:5:1329:G:C2	32:5:3865:A:H1'	2.44	0.53
32:5:1466:G:C6	32:5:1467:C:C4	2.96	0.53
32:5:1617:G:N2	32:5:1618:G:H1'	2.23	0.53
32:5:1629:G:N2	32:5:1631:A:C4	2.77	0.53
32:5:1836:G:N1	32:5:1837:A:N7	2.56	0.53
32:5:1894:C:C2'	32:5:1895:G:O5'	2.57	0.53
32:5:1896:A:C6	38:F:101:ASN:ND2	2.76	0.53
32:5:1900:C:C4	32:5:1901:C:C5	2.96	0.53
32:5:1945:G:N1	32:5:1946:G:C8	2.76	0.53
32:5:1958:A:C2	32:5:2026:A:C6	2.96	0.53
32:5:2058:G:H21	32:5:2059:C:H1'	1.73	0.53
32:5:2128:G:C2	32:5:2129:C:C2	2.96	0.53
32:5:2312:U:O2	32:5:2312:U:H2'	2.07	0.53
32:5:2463:G:N1	32:5:2464:C:N4	2.56	0.53
32:5:2479:G:C5	32:5:2480:G:N7	2.76	0.53
32:5:2706:G:O2'	32:5:2709:C:N4	2.42	0.53
32:5:2811:G:N2	32:5:2813:A:H8	2.06	0.53
32:5:3656:A:O2'	32:5:3747:A:O2'	2.27	0.53
32:5:3740:G:O6	32:5:3741:C:C4	2.60	0.53
32:5:3856:A:C6	32:5:3857:G:C5	2.97	0.53
32:5:3898:G:C2'	32:5:3899:G:H5'	2.38	0.53
32:5:4131:G:C6	32:5:4132:C:C4	2.96	0.53
32:5:4174:U:O2	32:5:4174:U:C2'	2.56	0.53
32:5:4316:G:C6	32:5:4317:A:N7	2.75	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4400:G:C6	32:5:4401:G:N7	2.76	0.53
32:5:4414:A:O2'	32:5:4428:A:N6	2.42	0.53
32:5:4579:U:N3	32:5:4580:U:C4	2.77	0.53
32:5:4608:G:C6	32:5:4609:G:C4	2.96	0.53
32:5:5020:G:C4	32:5:5021:C:C6	2.97	0.53
33:7:21:G:N1	33:7:58:A:C2	2.77	0.53
33:7:24:C:H2'	33:7:25:G:O5'	2.09	0.53
34:8:78:G:H2'	34:8:79:G:O4'	2.08	0.53
34:8:131:G:N2	34:8:132:G:C1'	2.69	0.53
39:I:112:GLN:C	39:I:113:THR:HG1	2.05	0.53
50:3:62:C:C2	50:3:63:G:C8	2.96	0.53
54:S2:70:G:N2	54:S2:80:G:N3	2.57	0.53
54:S2:202:G:C2	54:S2:203:G:C8	2.97	0.53
54:S2:443:U:O4	54:S2:444:G:C5	2.61	0.53
54:S2:858:A:N1	54:S2:859:G:N7	2.56	0.53
54:S2:881:G:C2	54:S2:882:U:C6	2.96	0.53
54:S2:926:A:C4	54:S2:927:C:C6	2.96	0.53
54:S2:1068:G:O2'	54:S2:1069:U:H6	1.91	0.53
54:S2:1105:G:C6	54:S2:1106:C:C4	2.97	0.53
54:S2:1180:C:O2	54:S2:1180:C:C2'	2.56	0.53
54:S2:1202:U:N3	54:S2:1203:G:N7	2.56	0.53
54:S2:1238:U:O2	54:S2:1520:G:C2	2.61	0.53
54:S2:1289:U:H1'	54:S2:1314:U:C5	2.43	0.53
54:S2:1299:A:OP2	77:SP:59:ARG:NH1	2.41	0.53
54:S2:1335:G:H2'	54:S2:1336:C:O4'	2.08	0.53
54:S2:1415:C:H2'	54:S2:1416:C:C4'	2.39	0.53
54:S2:1526:G:C2	54:S2:1527:C:N1	2.77	0.53
54:S2:1553:C:H5'	54:S2:1556:A:H61	1.72	0.53
54:S2:1791:A:C5	54:S2:1792:G:H1'	2.43	0.53
54:S2:1792:G:C2	54:S2:1793:A:C8	2.95	0.53
56:SB:58:ALA:C	56:SB:61:GLY:H	2.10	0.53
56:SB:125:VAL:HG22	56:SB:169:MET:HG3	1.89	0.53
56:SB:148:ASN:O	56:SB:148:ASN:CG	2.51	0.53
63:SL:117:PHE:CZ	63:SL:144:LYS:HA	2.42	0.53
80:SS:132:ARG:O	80:SS:134:GLN:N	2.40	0.53
84:Sc:11:LEU:O	84:Sc:35:MET:CG	2.56	0.53
87:Sg:59:LEU:HB3	87:Sg:90:TRP:CE3	2.44	0.53
87:Sg:112:ALA:HB1	87:Sg:156:PHE:HB2	1.89	0.53
12:S:39:VAL:HG12	38:F:230:VAL:HA	1.90	0.53
16:X:70:LYS:HD3	34:8:60:G:OP1	2.08	0.53
25:g:50:PRO:HG3	32:5:2652:G:C2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:124:C:N3	32:5:125:C:C6	2.77	0.53
32:5:177:G:C5	32:5:178:C:C5	2.96	0.53
32:5:292:G:H1'	32:5:293:G:H5'	1.90	0.53
32:5:405:U:H5'	32:5:406:C:OP2	2.08	0.53
32:5:435:A:H2'	32:5:435:A:N3	2.23	0.53
32:5:642:G:C2	32:5:643:C:C5	2.96	0.53
32:5:1079:C:C2	32:5:1080:C:C6	2.96	0.53
32:5:1291:G:C4	32:5:1292:C:C5	2.97	0.53
32:5:1483:C:H2'	32:5:1483:C:OP2	2.07	0.53
32:5:1550:G:C2	32:5:1579:C:O2	2.61	0.53
32:5:1581:G:C6	32:5:1610:C:C4	2.97	0.53
32:5:1609:U:C2	32:5:1610:C:C6	2.96	0.53
32:5:1682:A:C5	32:5:1683:U:C6	2.96	0.53
32:5:1685:G:C2	32:5:1686:C:C2	2.96	0.53
32:5:1744:U:C4	32:5:1745:G:N7	2.76	0.53
32:5:1750:G:N1	32:5:1751:A:C5	2.76	0.53
32:5:1777:C:N3	32:5:1778:C:C5	2.76	0.53
32:5:2351:C:N3	32:5:2352:U:C5	2.77	0.53
32:5:2482:C:C2	32:5:2483:G:C8	2.96	0.53
32:5:2485:U:N3	32:5:2486:G:N7	2.57	0.53
32:5:2555:G:O6	32:5:2572:C:N4	2.42	0.53
32:5:2668:G:C2'	32:5:2669:C:H5'	2.34	0.53
32:5:2698:G:C6	32:5:2699:C:C4	2.97	0.53
32:5:2843:U:O2	32:5:2843:U:H2'	2.08	0.53
32:5:2884:G:O2'	54:S2:1731:A:C2'	2.48	0.53
32:5:2891:U:O2	32:5:3611:A:C2	2.60	0.53
32:5:3615:G:H1'	41:W:44:ARG:HD3	1.90	0.53
32:5:3621:A:N7	32:5:4642:U:O2'	2.34	0.53
32:5:3665:G:N2	32:5:3685:C:O2'	2.42	0.53
32:5:3740:G:C5	32:5:3741:C:C5	2.95	0.53
32:5:3773:U:HO2'	32:5:3774:A:P	2.30	0.53
32:5:3839:G:N1	32:5:3842:C:N4	2.57	0.53
32:5:4467:A:O2'	32:5:4510:A:N3	2.34	0.53
32:5:4652:G:C2	32:5:4653:C:C6	2.96	0.53
32:5:4975:G:C6	32:5:4977:A:C6	2.95	0.53
33:7:56:G:H2'	33:7:57:C:C6	2.43	0.53
33:7:58:A:C5	33:7:59:G:N7	2.76	0.53
34:8:53:G:C5	34:8:54:C:C5	2.96	0.53
34:8:82:A:N3	34:8:82:A:C2'	2.71	0.53
54:S2:38:A:N1	54:S2:515:G:N2	2.55	0.53
54:S2:43:U:O2	54:S2:484:A:C2	2.61	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:166:A:C2	54:S2:167:G:C5	2.96	0.53
54:S2:299:A:C2	54:S2:300:U:C6	2.97	0.53
54:S2:328:U:H2'	54:S2:329:G:C8	2.43	0.53
54:S2:387:C:C2	54:S2:388:U:C6	2.91	0.53
54:S2:402:C:N4	54:S2:403:G:C5	2.76	0.53
54:S2:415:A:C2'	54:S2:416:U:O5'	2.56	0.53
54:S2:601:G:N1	54:S2:622:C:C2	2.77	0.53
54:S2:637:U:H2'	54:S2:638:C:O5'	2.08	0.53
54:S2:1310:U:C4'	86:Sf:143:LYS:HE3	2.39	0.53
54:S2:1393:G:N1	54:S2:1394:G:C5	2.76	0.53
54:S2:1455:A:N1	54:S2:1456:G:C5	2.76	0.53
54:S2:1842:C:C2'	54:S2:1843:G:O5'	2.56	0.53
54:S2:1852:C:N3	54:S2:1853:C:C5	2.77	0.53
59:SG:64:LYS:HG2	59:SG:97:VAL:HG11	1.90	0.53
60:SH:146:VAL:HG21	67:SW:50:PHE:CZ	2.43	0.53
78:SQ:41:MET:HE3	81:ST:10:ASN:OD1	2.08	0.53
1:A:24:LYS:HG3	1:A:49:ILE:HG21	1.91	0.53
2:D:204:VAL:HG12	2:D:236:MET:HE1	1.90	0.53
7:M:3:PHE:CE2	32:5:4763:U:O2	2.62	0.53
12:S:68:PHE:CE1	32:5:728:U:C4	2.96	0.53
32:5:288:G:C2	32:5:289:C:C4	2.96	0.53
32:5:506:C:C2	32:5:507:G:N7	2.77	0.53
32:5:688:U:C2	32:5:689:U:C6	2.96	0.53
32:5:1080:C:C2	32:5:1221:G:N2	2.76	0.53
32:5:1171:G:C4	32:5:1172:C:C6	2.96	0.53
32:5:1264:C:H2'	32:5:1265:G:H5'	1.89	0.53
32:5:1398:A:H61	32:5:1419:G:C2'	2.22	0.53
32:5:1466:G:C6	32:5:1467:C:C5	2.97	0.53
32:5:1473:U:C2	32:5:1474:C:C6	2.96	0.53
32:5:1521:C:C4	32:5:1522:G:C8	2.97	0.53
32:5:1584:G:C4	32:5:1585:C:C5	2.96	0.53
32:5:1811:G:C2	32:5:1812:C:C4	2.97	0.53
32:5:1893:C:O2	32:5:1894:C:C5	2.62	0.53
32:5:1967:A:N1	32:5:1968:G:C5	2.77	0.53
32:5:2081:C:C2	32:5:2082:G:C8	2.97	0.53
32:5:2351:C:C2	32:5:2352:U:C5	2.97	0.53
32:5:2576:G:C6	32:5:2577:C:C4	2.97	0.53
32:5:2826:U:O2	32:5:2826:U:H2'	2.08	0.53
32:5:3672:G:N7	32:5:3674:G:O4'	2.41	0.53
32:5:3938:G:N3	32:5:3938:G:C5'	2.72	0.53
32:5:4109:G:C5	32:5:4110:C:C5	2.96	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4124:G:H2'	32:5:4124:G:N3	2.24	0.53
32:5:4224:A:N6	32:5:4225:G:C5	2.77	0.53
32:5:4260:U:H2'	32:5:4261:C:C6	2.43	0.53
32:5:4355:G:N2	32:5:4356:G:C8	2.76	0.53
32:5:4416:G:C6	32:5:4417:C:C5	2.96	0.53
32:5:4547:C:N3	32:5:4549:G:N7	2.57	0.53
32:5:4563:U:C2	32:5:4564:A:C8	2.97	0.53
32:5:4583:C:C4	32:5:4718:G:C2	2.96	0.53
32:5:4700:A:C2	32:5:4701:A:C8	2.97	0.53
32:5:4746:C:C4	32:5:4747:C:C5	2.96	0.53
33:7:42:A:C4	33:7:43:U:C5	2.97	0.53
34:8:131:G:C2	34:8:132:G:C1'	2.92	0.53
36:C:213:GLU:N	36:C:213:GLU:OE1	2.42	0.53
45:r:16:PHE:N	45:r:16:PHE:CD1	2.75	0.53
54:S2:53:C:C2	54:S2:54:A:H8	2.26	0.53
54:S2:90:G:C6	54:S2:91:A:C4	2.97	0.53
54:S2:212:C:N3	54:S2:213:G:C8	2.76	0.53
54:S2:289:G:N2	54:S2:295:C:C2	2.77	0.53
54:S2:339:A:C2'	54:S2:340:C:C6	2.85	0.53
54:S2:442:C:H5'	54:S2:443:U:OP2	2.08	0.53
54:S2:447:A:C6	54:S2:449:A:C5	2.97	0.53
54:S2:499:G:N2	54:S2:504:G:N1	2.57	0.53
54:S2:947:G:C6	54:S2:948:C:C4	2.96	0.53
54:S2:992:A:C2	54:S2:993:G:C8	2.96	0.53
54:S2:1025:U:H2'	54:S2:1026:C:O4'	2.08	0.53
54:S2:1292:C:O5'	86:Sf:149:CYS:O	2.26	0.53
54:S2:1319:U:H2'	54:S2:1320:G:C8	2.44	0.53
54:S2:1405:A:C6	54:S2:1406:G:C6	2.97	0.53
54:S2:1533:A:N1	54:S2:1537:A:H1'	2.24	0.53
54:S2:1538:C:O5'	54:S2:1538:C:C6	2.61	0.53
54:S2:1673:U:C5	54:S2:1674:G:C8	2.97	0.53
55:SA:147:LEU:HD11	55:SA:174:MET:HB3	1.91	0.53
64:SN:89:TYR:C	64:SN:89:TYR:CD1	2.87	0.53
73:SD:35:SER:HB2	73:SD:91:VAL:HG21	1.90	0.53
74:SF:99:ILE:CG2	83:SZ:67:LEU:HD23	2.39	0.53
79:SR:72:LYS:O	79:SR:76:GLU:HG3	2.08	0.53
80:SS:12:ILE:HG22	80:SS:13:LEU:N	2.24	0.53
1:A:180:LEU:HG	44:p:18:TYR:CE1	2.44	0.53
8:N:6:TYR:CZ	27:i:40:VAL:HG22	2.43	0.53
11:R:81:ARG:HG3	11:R:88:ARG:NE	2.23	0.53
18:Z:123:LYS:O	18:Z:124:THR:HG23	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d:71:ALA:HB3	22:d:108:TYR:HE2	1.70	0.53
23:e:77:PHE:HE2	45:r:25:TYR:CD2	2.27	0.53
32:5:1:C:C5	32:5:2:G:C8	2.97	0.53
32:5:246:G:N2	32:5:247:G:C5	2.76	0.53
32:5:258:G:C6	32:5:259:C:C4	2.96	0.53
32:5:469:C:O2	32:5:688:U:C1'	2.40	0.53
32:5:512:U:C3'	32:5:513:U:H5''	2.39	0.53
32:5:1075:G:C2	32:5:1076:C:C2	2.96	0.53
32:5:1092:G:C6	32:5:1093:C:C4	2.96	0.53
32:5:1358:G:H3'	32:5:1358:G:C8	2.44	0.53
32:5:1483:C:OP2	32:5:1484:G:N1	2.42	0.53
32:5:1816:C:H2'	32:5:1817:U:H5'	1.90	0.53
32:5:1928:C:H1'	32:5:1929:A:C6	2.44	0.53
32:5:1936:C:N3	32:5:1937:C:C6	2.77	0.53
32:5:2082:G:C2	32:5:2083:C:N3	2.77	0.53
32:5:2465:C:O2'	32:5:2466:G:O4'	2.25	0.53
32:5:2468:U:H2'	32:5:2506:G:O6	2.08	0.53
32:5:2480:G:C4	32:5:2481:G:C8	2.97	0.53
32:5:2614:C:C2	32:5:2726:G:C2	2.96	0.53
32:5:2841:G:C2	32:5:2842:G:C8	2.97	0.53
32:5:3830:A:C2	32:5:3831:U:C6	2.97	0.53
32:5:4281:A:C4	32:5:4283:G:N7	2.76	0.53
32:5:4479:A:N7	32:5:4480:A:C8	2.76	0.53
32:5:4490:C:O2	32:5:4490:C:C2'	2.56	0.53
32:5:4531:U:C5	49:2:127:MET:HB2	2.43	0.53
32:5:4579:U:O2	32:5:4580:U:C6	2.61	0.53
32:5:4758:U:C2'	32:5:4759:C:O5'	2.56	0.53
33:7:43:U:N3	33:7:44:C:H5	1.93	0.53
35:B:323:TYR:CD1	35:B:324:GLY:N	2.77	0.53
36:C:112:HIS:CD2	36:C:112:HIS:N	2.76	0.53
37:E:280:HIS:ND1	37:E:281:LYS:N	2.56	0.53
46:K:16:ARG:HH12	46:K:28:LEU:C	2.17	0.53
49:2:119:MET:O	49:2:120:SER:HB2	2.09	0.53
54:S2:149:A:H2'	54:S2:150:A:O4'	2.07	0.53
54:S2:418:A:C5	54:S2:419:G:N7	2.77	0.53
54:S2:431:G:N1	54:S2:432:G:N7	2.56	0.53
54:S2:898:U:C4	54:S2:899:U:C5	2.97	0.53
54:S2:917:U:O2'	54:S2:918:U:O5'	2.18	0.53
54:S2:1063:C:C2'	54:S2:1838:U:C5	2.87	0.53
54:S2:1122:A:N1	54:S2:1123:C:C5	2.75	0.53
54:S2:1593:C:N3	54:S2:1594:A:N7	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1669:G:C4	54:S2:1670:C:C5	2.96	0.53
69:SY:20:ARG:NH1	69:SY:74:MET:HE2	2.22	0.53
2:D:20:PHE:HD2	2:D:30:TYR:OH	1.92	0.53
6:L:5:ARG:HA	19:a:48:TYR:CE2	2.43	0.53
11:R:98:ARG:NH1	11:R:133:LYS:HB2	2.24	0.53
23:e:80:HIS:HB3	23:e:84:GLU:OE2	2.09	0.53
31:o:26:TYR:HE2	32:5:4368:G:H21	1.56	0.53
32:5:31:U:O2	32:5:52:G:N2	2.42	0.53
32:5:42:A:C6	32:5:4379:A:N1	2.77	0.53
32:5:65:A:H61	32:5:75:G:H1'	1.73	0.53
32:5:127:G:C4	32:5:128:C:C5	2.96	0.53
32:5:163:A:C6	32:5:164:G:N7	2.77	0.53
32:5:247:G:C2	32:5:248:C:C6	2.97	0.53
32:5:388:A:C6	32:5:411:G:C5	2.97	0.53
32:5:1203:G:C6	32:5:1204:C:C4	2.97	0.53
32:5:1254:A:H2'	32:5:1256:G:N7	2.24	0.53
32:5:1322:A:C6	32:5:1326:A:C8	2.97	0.53
32:5:1439:C:C5'	38:F:36:ARG:NH1	2.72	0.53
32:5:1448:G:H2'	32:5:1449:C:C6	2.43	0.53
32:5:1858:A:C2	32:5:1859:C:C4	2.97	0.53
32:5:1886:G:C5	32:5:1887:G:C8	2.97	0.53
32:5:2034:G:C6	32:5:2035:C:C6	2.97	0.53
32:5:2107:C:O2'	32:5:2107:C:O2	2.26	0.53
32:5:2307:A:O2'	32:5:2308:A:H5'	2.08	0.53
32:5:2367:A:N3	32:5:2368:A:N7	2.56	0.53
32:5:2440:U:N3	32:5:2519:U:C5	2.77	0.53
32:5:2521:G:N1	32:5:2535:G:C2	2.76	0.53
32:5:2593:C:C2	32:5:2594:C:C5	2.96	0.53
32:5:2866:C:C4	32:5:2867:C:C5	2.97	0.53
32:5:3590:G:C2	32:5:3591:C:N1	2.76	0.53
32:5:3653:A:H2'	32:5:3653:A:N3	2.21	0.53
32:5:3667:C:H2'	32:5:3667:C:O2	2.08	0.53
32:5:3867:A:C2	32:5:3868:G:C4	2.97	0.53
32:5:3874:G:C5	32:5:3875:G:C8	2.97	0.53
32:5:4069:U:O2	32:5:4069:U:H2'	2.08	0.53
32:5:4100:C:O2	32:5:4101:C:C6	2.61	0.53
32:5:4221:C:N3	39:I:116:ARG:HD3	2.24	0.53
32:5:4269:G:C4	32:5:4270:C:C6	2.97	0.53
32:5:4333:C:O2'	32:5:4334:U:H5'	2.08	0.53
32:5:4452:U:C2	32:5:4452:U:H5''	2.43	0.53
32:5:4569:U:H1'	40:P:69:ARG:NH2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4749:C:O4'	32:5:4749:C:O2	2.25	0.53
32:5:4898:G:C2	32:5:4923:C:C2	2.96	0.53
32:5:4974:C:H2'	32:5:4975:G:C1'	2.38	0.53
34:8:139:G:C4	34:8:140:C:C6	2.97	0.53
38:F:149:LEU:CA	38:F:197:TYR:OH	2.57	0.53
46:K:131:GLU:O	46:K:135:THR:HG23	2.09	0.53
48:z:377:THR:HB	51:4:193:G:H2'	1.91	0.53
50:3:31:C:C2'	50:3:32:C:O4'	2.52	0.53
51:4:57:G:C2	51:4:290:C:O2	2.62	0.53
54:S2:27:A:N3	54:S2:28:U:C6	2.76	0.53
54:S2:193:C:C2	54:S2:207:G:C2	2.96	0.53
54:S2:339:A:N1	54:S2:340:C:N4	2.56	0.53
54:S2:427:U:H5''	54:S2:428:U:OP1	2.08	0.53
54:S2:695:C:C4	54:S2:696:G:N7	2.76	0.53
54:S2:949:G:C6	54:S2:950:C:C5	2.96	0.53
54:S2:962:A:C2	54:S2:963:A:N9	2.76	0.53
54:S2:995:G:N2	54:S2:997:A:O5'	2.41	0.53
54:S2:1094:C:C2	54:S2:1095:U:C6	2.96	0.53
54:S2:1098:C:N3	54:S2:1099:G:C8	2.77	0.53
54:S2:1271:C:C4	54:S2:1272:C:C6	2.97	0.53
54:S2:1290:G:H3'	86:Sf:146:LEU:CG	2.37	0.53
54:S2:1364:U:O2	54:S2:1364:U:O4'	2.27	0.53
54:S2:1390:U:H2'	54:S2:1391:C:O4'	2.09	0.53
54:S2:1409:A:N1	54:S2:1438:A:N1	2.56	0.53
56:SB:79:VAL:HG21	56:SB:81:PHE:CE1	2.43	0.53
57:SC:68:ARG:O	57:SC:72:ASP:OD1	2.27	0.53
68:SX:19:ASP:OD1	68:SX:19:ASP:N	2.42	0.53
68:SX:21:LYS:HD2	68:SX:27:TYR:CZ	2.43	0.53
73:SD:167:TYR:OH	73:SD:202:LYS:O	2.25	0.53
87:Sg:83:TRP:CH2	87:Sg:125:ARG:NH2	2.75	0.53
1:A:186:TYR:CD2	32:5:1613:A:H4'	2.44	0.53
6:L:59:VAL:HG13	32:5:74:G:C5'	2.38	0.53
9:O:49:ARG:HH22	32:5:1929:A:H2'	1.73	0.53
32:5:70:A:N6	32:5:314:G:O2'	2.42	0.53
32:5:198:A:H1'	32:5:222:C:H1'	1.91	0.53
32:5:207:G:N2	32:5:383:A:C8	2.76	0.53
32:5:275:C:O2'	32:5:276:C:OP1	2.26	0.53
32:5:294:G:C3'	32:5:296:A:C5'	2.54	0.53
32:5:347:A:C2	32:5:348:G:N7	2.77	0.53
32:5:423:G:C5	32:5:424:U:C5	2.97	0.53
32:5:754:U:O2	32:5:755:C:C6	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1066:G:C2	32:5:1067:G:C4	2.96	0.53
32:5:1092:G:C5	32:5:1093:C:C5	2.96	0.53
32:5:1367:C:H6	32:5:1367:C:H5''	1.73	0.53
32:5:1758:G:C2	32:5:1759:G:C8	2.97	0.53
32:5:1827:C:C2	32:5:1828:C:C5	2.96	0.53
32:5:2076:G:C6	32:5:2077:C:C4	2.97	0.53
32:5:2115:G:H8	32:5:2116:C:C6	2.27	0.53
32:5:2279:A:C2	32:5:2280:G:C4	2.94	0.53
32:5:2367:A:N9	32:5:2798:A:C2	2.77	0.53
32:5:2463:G:C2	32:5:2464:C:C5	2.96	0.53
32:5:2592:U:C4	32:5:2593:C:C6	2.97	0.53
32:5:2736:G:C6	32:5:2737:C:C5	2.97	0.53
32:5:2904:U:O2	32:5:2905:C:C6	2.61	0.53
32:5:3663:A:H5'	32:5:3663:A:C4	2.43	0.53
32:5:3862:A:N1	32:5:3863:C:H1'	2.23	0.53
32:5:3875:G:H2'	32:5:3875:G:N3	2.24	0.53
32:5:3879:G:C5	32:5:3882:C:N4	2.76	0.53
32:5:4082:G:C2	32:5:4083:U:C4	2.96	0.53
32:5:4167:G:N2	32:5:4168:G:H1'	2.23	0.53
32:5:4222:G:C6	32:5:4223:C:C4	2.96	0.53
32:5:4355:G:N1	32:5:4356:G:C5	2.77	0.53
32:5:4381:A:C2	32:5:4382:G:C8	2.97	0.53
32:5:4381:A:C6	32:5:4382:G:N7	2.77	0.53
32:5:4474:A:H2'	32:5:4474:A:N3	2.24	0.53
32:5:4737:G:C6	32:5:4963:G:N2	2.77	0.53
32:5:4998:G:N3	32:5:4999:G:C8	2.77	0.53
34:8:121:G:H2'	34:8:122:G:O5'	2.08	0.53
34:8:135:C:C4	34:8:136:U:C4	2.97	0.53
48:z:341:LYS:O	48:z:345:PHE:CE1	2.62	0.53
51:4:231[B]:A:H3'	51:4:232[B]:G:O4'	2.09	0.53
54:S2:356:C:O4'	54:S2:356:C:O2	2.26	0.53
54:S2:379:C:N3	54:S2:380:G:N7	2.57	0.53
54:S2:837:A:H62	69:SY:47:MET:HB3	1.72	0.53
54:S2:906:U:O2	54:S2:907:G:C8	2.62	0.53
54:S2:956:G:C2	54:S2:957:A:N7	2.76	0.53
54:S2:1041:G:C6	54:S2:1042:A:N7	2.77	0.53
54:S2:1212:G:C2	54:S2:1688:C:C2	2.96	0.53
54:S2:1316:C:O2	54:S2:1316:C:H2'	2.09	0.53
54:S2:1393:G:N1	54:S2:1394:G:N7	2.57	0.53
54:S2:1455:A:C6	54:S2:1456:G:C8	2.95	0.53
54:S2:1508:A:C6	54:S2:1510:G:N9	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1708:C:C2	54:S2:1709:G:C8	2.96	0.53
55:SA:55:TRP:O	55:SA:58:LEU:N	2.42	0.53
57:SC:254:ASP:OD2	66:SV:1:MET:HG3	2.09	0.53
61:SI:104:ILE:O	61:SI:170:LYS:HA	2.09	0.53
73:SD:76:ARG:CZ	75:SK:66:HIS:CE1	2.91	0.53
74:SF:152:TRP:O	74:SF:156:THR:N	2.42	0.53
79:SR:88:VAL:HG12	79:SR:91:LEU:H	1.74	0.53
79:SR:98:VAL:HB	79:SR:117:LEU:CD2	2.39	0.53
4:H:69:THR:HG22	32:5:4700:A:H2	1.74	0.53
5:J:107:PHE:CE1	5:J:130:PHE:HB3	2.43	0.53
12:S:15:ARG:HH21	13:T:141:VAL:HG13	1.74	0.53
22:d:87:ARG:CZ	22:d:109:VAL:HG22	2.39	0.53
23:e:58:ILE:HG23	23:e:59:GLY:N	2.23	0.53
32:5:978:G:C5	32:5:979:C:C5	2.96	0.53
32:5:981:C:C4	37:E:69:TYR:CE1	2.97	0.53
32:5:1209:U:O3'	38:F:72:ARG:NH1	2.42	0.53
32:5:1264:C:H2'	32:5:1265:G:O4'	2.08	0.53
32:5:1404:G:C6	32:5:1405:C:C4	2.96	0.53
32:5:1448:G:H2'	32:5:1449:C:H6	1.74	0.53
32:5:1466:G:C2	32:5:1467:C:N1	2.77	0.53
32:5:1644:C:C2	32:5:1645:C:C5	2.96	0.53
32:5:1865:G:N2	32:5:1867:A:H3'	2.23	0.53
32:5:1899:G:C4	32:5:1900:C:C6	2.93	0.53
32:5:2400:G:N1	32:5:2401:A:C5	2.77	0.53
32:5:2442:G:H2'	32:5:2443:G:H5''	1.90	0.53
32:5:2481:G:C4	32:5:2482:C:C6	2.97	0.53
32:5:2559:G:C6	32:5:2560:C:C4	2.96	0.53
32:5:2562:G:H22	32:5:2564:G:H3'	1.74	0.53
32:5:3692:A:C6	32:5:3693:U:N1	2.76	0.53
32:5:3845:A:H2'	32:5:3845:A:N3	2.24	0.53
32:5:4090:G:C6	32:5:4091:G:C5	2.97	0.53
32:5:4161:G:H2'	32:5:4162:C:H3'	1.90	0.53
32:5:4194:U:O4'	32:5:4194:U:O2	2.25	0.53
32:5:4342:C:O2	32:5:4342:C:H2'	2.08	0.53
32:5:4464:A:H5'	32:5:4464:A:C4	2.44	0.53
32:5:4467:A:C5	32:5:4468:U:C5	2.97	0.53
32:5:4599:A:N6	32:5:4610:A:C8	2.77	0.53
32:5:4747:C:H2'	32:5:4748:U:C5	2.43	0.53
32:5:4872:G:O2'	32:5:4873:G:OP1	2.22	0.53
32:5:4979:A:C2'	32:5:4980:C:O5'	2.57	0.53
32:5:4998:G:N2	32:5:4999:G:H1'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:5035:U:O2	32:5:5035:U:H2'	2.08	0.53
32:5:5042:A:N3	32:5:5043:A:C8	2.77	0.53
32:5:5055:G:N2	32:5:5056:A:C5	2.77	0.53
34:8:12:G:N3	34:8:13:G:C8	2.70	0.53
37:E:129:PHE:O	37:E:132:HIS:HB2	2.09	0.53
47:q:50:LYS:NZ	47:q:93:GLU:OE2	2.34	0.53
47:q:108:PRO:HA	47:q:109:ALA:CB	2.28	0.53
48:z:410:SER:CB	51:4:194:G:O2'	2.56	0.53
51:4:20:G:C6	51:4:21:C:C4	2.97	0.53
51:4:166:U:H5	53:6:142:ARG:NH2	2.07	0.53
54:S2:344:U:C2	54:S2:345:U:C6	2.97	0.53
54:S2:349:A:H2'	54:S2:350:C:C6	2.43	0.53
54:S2:549:C:C4	54:S2:550:C:C5	2.97	0.53
54:S2:581:U:N3	54:S2:582:C:C6	2.77	0.53
54:S2:917:U:H2'	54:S2:918:U:C6	2.44	0.53
54:S2:923:G:N1	54:S2:924:G:C5	2.77	0.53
54:S2:957:A:H4'	54:S2:973:C:O2'	2.08	0.53
54:S2:1304:U:O2	54:S2:1304:U:H2'	2.06	0.53
54:S2:1405:A:C2'	54:S2:1406:G:O4'	2.41	0.53
54:S2:1743:G:H2'	54:S2:1744:G:C8	2.44	0.53
55:SA:138:SER:HB3	55:SA:156:TYR:CE1	2.44	0.53
62:SJ:29:LEU:HD11	72:Se:37:GLN:HG2	1.91	0.53
63:SL:13:GLN:O	63:SL:16:ILE:HD13	2.08	0.53
63:SL:99:TYR:O	63:SL:101:ARG:N	2.41	0.53
73:SD:40:ARG:NH2	82:SU:107:GLU:O	2.37	0.53
74:SF:50:PRO:HB2	74:SF:73:THR:HG21	1.90	0.53
1:A:40:TYR:CE1	32:5:4117:U:C2	2.94	0.53
1:A:128:ARG:HD3	32:5:3681:G:OP2	2.08	0.53
3:G:102:TYR:OH	3:G:207:VAL:CA	2.57	0.53
6:L:90:VAL:HG12	6:L:94:ILE:HD12	1.91	0.53
8:N:63:ARG:HG3	8:N:131:GLU:CB	2.39	0.53
13:T:19:PHE:O	13:T:20:ARG:C	2.52	0.53
21:c:28:VAL:HG13	21:c:33:GLN:HB3	1.90	0.53
26:h:7:ARG:CZ	34:8:86:U:O4	2.57	0.53
32:5:29:G:O6	32:5:54:G:C4	2.62	0.53
32:5:38:A:C2	32:5:41:C:N4	2.76	0.53
32:5:112:C:C2	32:5:113:A:C8	2.97	0.53
32:5:319:A:H1'	32:5:3726:A:C2	2.44	0.53
32:5:963:G:N3	32:5:963:G:H2'	2.24	0.53
32:5:1169:G:C2	32:5:1193:C:C2	2.97	0.53
32:5:1509:C:N3	32:5:1510:G:N7	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1569:U:C2	32:5:1570:G:C8	2.97	0.53
32:5:1687:U:O2	32:5:1850:A:N1	2.41	0.53
32:5:1759:G:C2	32:5:1760:G:N9	2.77	0.53
32:5:1925:G:N2	32:5:1926:C:H1'	2.23	0.53
32:5:2037:C:N3	32:5:2038:U:C5	2.77	0.53
32:5:2615:C:O2	32:5:2615:C:H2'	2.08	0.53
32:5:2639:U:H2'	32:5:2694:G:H1	1.73	0.53
32:5:2702:C:O2	32:5:2715:G:C2	2.62	0.53
32:5:2715:G:C6	32:5:2716:C:C4	2.97	0.53
32:5:2851:G:O6	32:5:2852:U:H1'	2.09	0.53
32:5:2891:U:C2	32:5:3611:A:C2	2.97	0.53
32:5:3801:U:O2'	32:5:3802:U:H5'	2.08	0.53
32:5:3869:C:O2	32:5:3870:C:C6	2.62	0.53
32:5:3927:U:C4	32:5:4182:G:N2	2.77	0.53
32:5:4142:C:C2	32:5:4143:G:C2	2.97	0.53
32:5:4364:G:C4	32:5:4365:C:C5	2.97	0.53
32:5:4509:U:H2'	32:5:4510:A:C2'	2.38	0.53
32:5:4997:G:C4	32:5:4998:G:C8	2.97	0.53
32:5:5019:A:C2	32:5:5020:G:C5	2.97	0.53
34:8:54:C:C4	34:8:55:U:C5	2.97	0.53
34:8:64:U:O2	34:8:64:U:C2'	2.57	0.53
34:8:116:C:N4	34:8:117:C:C5	2.77	0.53
34:8:118:C:N3	34:8:119:C:C6	2.76	0.53
34:8:134:G:N2	34:8:135:C:H1'	2.24	0.53
34:8:135:C:C2	34:8:136:U:C6	2.97	0.53
36:C:339:THR:HA	36:C:342:ARG:HB3	1.90	0.53
45:r:103:ARG:NH2	45:r:106:LEU:HD21	2.24	0.53
51:4:148:G:H4'	52:9:15:PHE:O	2.09	0.53
54:S2:2:A:H1'	54:S2:3:C:OP1	2.08	0.53
54:S2:5:U:O2	54:S2:5:U:H2'	2.09	0.53
54:S2:68:A:C4	54:S2:69:C:C5	2.97	0.53
54:S2:92:A:N6	54:S2:447:A:C4	2.77	0.53
54:S2:462:C:C4	54:S2:463:C:C5	2.97	0.53
54:S2:534:G:C2	54:S2:535:G:C8	2.97	0.53
54:S2:796:G:N3	60:SH:111:LYS:HE2	2.23	0.53
54:S2:875:A:H2'	54:S2:876:C:O4'	2.09	0.53
54:S2:978:G:C6	54:S2:979:C:C4	2.97	0.53
54:S2:1008:A:H1'	64:SN:101:HIS:CE1	2.44	0.53
54:S2:1124:C:OP1	56:SB:150:ILE:HG22	2.09	0.53
54:S2:1251:A:C2	54:S2:1252:C:C6	2.97	0.53
54:S2:1290:G:N1	54:S2:1291:A:C8	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1293:A:N3	86:Sf:151:ASN:C	2.67	0.53
54:S2:1448:A:C2	54:S2:1449:G:C1'	2.91	0.53
54:S2:1492:U:O2'	82:SU:70:CYS:SG	2.46	0.53
54:S2:1565:C:N3	54:S2:1571:G:C2	2.77	0.53
56:SB:53:GLN:CG	56:SB:56:LYS:CE	2.85	0.53
62:SJ:147:PHE:C	62:SJ:147:PHE:CD1	2.87	0.53
68:SX:84:PHE:C	68:SX:84:PHE:CD1	2.86	0.53
73:SD:218:LEU:HD23	73:SD:218:LEU:O	2.09	0.53
3:G:169:PHE:CE2	8:N:6:TYR:HB3	2.44	0.52
7:M:109:ARG:HH21	7:M:109:ARG:CB	2.20	0.52
9:O:84:VAL:HG11	9:O:102:LEU:HD22	1.91	0.52
32:5:65:A:O2'	32:5:66:A:H4'	2.10	0.52
32:5:111:C:C2	32:5:331:G:C2	2.97	0.52
32:5:255:C:O2	32:5:255:C:C2'	2.57	0.52
32:5:711:A:N3	32:5:712:C:C5	2.77	0.52
32:5:742:G:C2	32:5:743:G:C5	2.97	0.52
32:5:1342:A:C4	32:5:1343:A:C8	2.98	0.52
32:5:1448:G:C4	32:5:1449:C:C5	2.97	0.52
32:5:1761:G:C4	32:5:1762:C:C5	2.97	0.52
32:5:1829:G:N1	32:5:1830:G:C5	2.77	0.52
32:5:2035:C:N4	32:5:2036:C:H41	2.00	0.52
32:5:2104:G:C4	32:5:2105:A:C8	2.97	0.52
32:5:2244:C:O2	32:5:2245:G:C8	2.62	0.52
32:5:2468:U:C4	32:5:2473:A:N6	2.77	0.52
32:5:2490:U:H2'	32:5:2491:C:C6	2.45	0.52
32:5:2743:A:C2	32:5:2744:A:C8	2.94	0.52
32:5:3635:A:C5	32:5:3636:C:C6	2.97	0.52
32:5:3696:C:C2	32:5:3697:U:C6	2.97	0.52
32:5:3795:A:C6	32:5:3796:U:C4	2.98	0.52
32:5:4167:G:N1	32:5:4168:G:C5	2.76	0.52
32:5:4194:U:C4	32:5:4197:G:H5''	2.44	0.52
32:5:4276:G:H2'	32:5:4276:G:N3	2.23	0.52
32:5:4277:G:C6	32:5:4278:C:C4	2.97	0.52
32:5:4283:G:N2	32:5:4284:C:C5	2.60	0.52
32:5:4635:A:C2	32:5:4664:A:C4	2.97	0.52
32:5:4896:G:C2	32:5:4897:G:C8	2.97	0.52
32:5:4937:C:H5'	37:E:179:ARG:HD2	1.91	0.52
33:7:51:G:C4	33:7:52:C:C5	2.97	0.52
35:B:62:ARG:HH11	35:B:62:ARG:HG3	1.74	0.52
38:F:124:PHE:HD2	38:F:196:ILE:HG23	1.75	0.52
39:I:9:TYR:CD1	39:I:9:TYR:N	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:I:101:LYS:HZ1	39:I:121:LYS:HG2	1.56	0.52
48:z:360:MET:CA	48:z:365:GLU:CB	2.86	0.52
48:z:381:SER:O	51:4:207:C:H2'	2.07	0.52
51:4:292:C:C2	51:4:293:C:C6	2.98	0.52
53:6:111:THR:OG1	53:6:112:ASP:N	2.42	0.52
54:S2:75:G:O2'	54:S2:76:U:H6	1.89	0.52
54:S2:333:G:C6	54:S2:334:C:C4	2.97	0.52
54:S2:426:A:C2	54:S2:427:U:C5'	2.92	0.52
54:S2:436:G:C5	54:S2:458:A:C2	2.98	0.52
54:S2:452:G:C2	54:S2:453:C:N3	2.76	0.52
54:S2:533:A:C6	54:S2:534:G:C5	2.97	0.52
54:S2:569:A:C6	54:S2:570:C:C5	2.97	0.52
54:S2:635:G:N2	54:S2:636:C:C2	2.78	0.52
54:S2:659:G:N3	54:S2:659:G:H2'	2.23	0.52
54:S2:667:U:N3	54:S2:1144:A:H2	2.06	0.52
54:S2:672:A:H3'	54:S2:673:G:H5''	1.91	0.52
54:S2:793:G:C6	54:S2:794:A:C5	2.96	0.52
54:S2:821:G:O6	62:SJ:150:ARG:CD	2.50	0.52
54:S2:999:G:N1	54:S2:1000:C:C4	2.76	0.52
54:S2:1097:G:C6	54:S2:1098:C:C4	2.97	0.52
54:S2:1126:G:C2	54:S2:1127:C:C6	2.97	0.52
54:S2:1292:C:O4'	86:Sf:148:TYR:CA	2.58	0.52
54:S2:1294:G:N3	86:Sf:137:ASP:OD2	2.42	0.52
54:S2:1624:U:O2	54:S2:1624:U:O4'	2.25	0.52
57:SC:209:VAL:HG21	57:SC:233:LEU:HD13	1.90	0.52
87:Sg:49:GLU:N	87:Sg:49:GLU:OE1	2.42	0.52
2:D:29:ASP:OD1	32:5:4280:A:N6	2.38	0.52
3:G:73:ARG:HH11	3:G:73:ARG:HB2	1.75	0.52
3:G:74:LEU:HG	32:5:4076:G:N2	2.24	0.52
9:O:87:MET:SD	32:5:1912:G:N2	2.82	0.52
10:Q:152:PHE:CE2	32:5:1847:C:C4'	2.91	0.52
17:Y:4:ASN:OD1	17:Y:4:ASN:C	2.52	0.52
24:f:43:LEU:HD22	24:f:76:ARG:HA	1.90	0.52
32:5:37:U:O4	32:5:38:A:C5	2.62	0.52
32:5:66:A:C6	32:5:328:A:C5	2.97	0.52
32:5:273:U:O2'	32:5:274:C:O5'	2.21	0.52
32:5:460:C:C2	32:5:461:G:C8	2.97	0.52
32:5:472:C:O2	32:5:473:C:C6	2.61	0.52
32:5:473:C:C2	32:5:474:C:C6	2.97	0.52
32:5:737:C:H2'	32:5:738:C:O4'	2.09	0.52
32:5:751:G:N2	32:5:752:G:C4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:951:G:C2	32:5:952:G:C5	2.98	0.52
32:5:1249:C:N3	32:5:1250:C:C6	2.77	0.52
32:5:1279:A:H2'	32:5:1280:C:C6	2.43	0.52
32:5:1447:C:O2	32:5:2098:G:C2	2.62	0.52
32:5:1910:G:C2	32:5:1911:C:C4	2.96	0.52
32:5:2015:U:N3	32:5:2016:C:C5	2.77	0.52
32:5:2401:A:C2	32:5:2402:G:C5	2.98	0.52
32:5:2422:C:N3	32:5:2423:A:C8	2.77	0.52
32:5:2524:U:H5''	32:5:2711:G:C2	2.43	0.52
32:5:2590:G:N2	32:5:2754:G:C2	2.78	0.52
32:5:2643:G:C6	32:5:2644:G:N7	2.78	0.52
32:5:2714:G:C2	32:5:2715:G:C5	2.97	0.52
32:5:3621:A:C2	32:5:3622:C:C1'	2.93	0.52
32:5:3711:A:H3'	32:5:3712:A:H4'	1.92	0.52
32:5:3720:G:C5	32:5:3721:U:C5	2.97	0.52
32:5:3757:G:C5	32:5:3758:U:C5	2.97	0.52
32:5:3906:A:C6	36:C:75:ARG:NH1	2.77	0.52
32:5:3946:G:C2	32:5:3947:A:C8	2.98	0.52
32:5:4159:C:C2	32:5:4160:C:C5	2.97	0.52
32:5:4215:C:O2	32:5:4215:C:H2'	2.09	0.52
32:5:4223:C:H4'	39:I:119:PHE:CD2	2.44	0.52
32:5:4283:G:N2	32:5:4284:C:N3	2.56	0.52
32:5:4364:G:C6	32:5:4365:C:C4	2.97	0.52
32:5:4368:G:C6	32:5:4369:A:C8	2.96	0.52
32:5:4383:U:C2	32:5:4384:U:C5	2.98	0.52
32:5:4482:U:O2	32:5:4483:C:C5	2.63	0.52
32:5:4501:U:C4	32:5:4502:C:H1'	2.45	0.52
32:5:4885:U:O2	32:5:4886:C:C6	2.62	0.52
33:7:18:C:H42	33:7:19:C:H41	1.58	0.52
33:7:58:A:C4	33:7:59:G:C8	2.98	0.52
34:8:82:A:C2	34:8:83:C:H5''	2.44	0.52
34:8:117:C:N4	34:8:118:C:C5	2.77	0.52
34:8:130:C:N4	34:8:131:G:N7	2.58	0.52
35:B:19:ARG:NE	35:B:235:TRP:CZ3	2.77	0.52
47:q:99:ARG:HE	47:q:103:ARG:NH2	2.07	0.52
48:z:140:PHE:HE1	48:z:194:ARG:CZ	2.22	0.52
51:4:58:G:O6	51:4:288:G:N3	2.42	0.52
54:S2:104:A:C5	54:S2:105:U:C5	2.96	0.52
54:S2:412:G:C2	54:S2:429:C:C2	2.97	0.52
54:S2:437:G:N1	54:S2:457:C:C2	2.77	0.52
54:S2:445:A:H2'	54:S2:446:G:C5'	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:474:G:N1	54:S2:475:C:C5	2.77	0.52
54:S2:563:G:H2'	54:S2:563:G:N3	2.24	0.52
54:S2:751:G:O6	54:S2:791:C:C4	2.63	0.52
54:S2:819:G:H22	54:S2:828:G:H22	1.57	0.52
54:S2:883:U:N3	54:S2:884:C:C5	2.77	0.52
54:S2:986:G:H2'	54:S2:986:G:N3	2.24	0.52
54:S2:1109:C:C2	54:S2:1110:G:O4'	2.62	0.52
54:S2:1294:G:N2	54:S2:1295:A:N9	2.57	0.52
54:S2:1301:A:H2'	54:S2:1303:C:O2	2.08	0.52
54:S2:1613:G:C2	54:S2:1627:C:C2	2.96	0.52
54:S2:1777:G:C5	54:S2:1778:C:C5	2.98	0.52
61:SI:66:SER:HB3	61:SI:73:THR:HB	1.90	0.52
62:SJ:115:PHE:C	62:SJ:115:PHE:HD1	2.17	0.52
63:SL:93:LEU:HB3	63:SL:102:PHE:HB3	1.91	0.52
81:ST:38:LYS:NZ	81:ST:43:LYS:O	2.42	0.52
1:A:209:HIS:CE1	1:A:235:VAL:HG11	2.44	0.52
1:A:211:PHE:CD1	1:A:219:ILE:HG23	2.45	0.52
8:N:138:PHE:N	8:N:138:PHE:HD1	2.06	0.52
12:S:81:TRP:HZ2	12:S:94:TYR:CE1	2.27	0.52
19:a:59:ARG:NH2	31:o:36:GLN:OE1	2.42	0.52
32:5:317:A:C2	32:5:4361:U:H1'	2.44	0.52
32:5:744:G:H2'	32:5:745:G:C8	2.42	0.52
32:5:750:U:N3	32:5:751:G:N7	2.56	0.52
32:5:977:C:C2	32:5:978:G:N7	2.51	0.52
32:5:990:C:C2	32:5:991:C:C6	2.97	0.52
32:5:1179:U:C4	32:5:1181:C:OP2	2.62	0.52
32:5:1203:G:C2	32:5:1204:C:N1	2.77	0.52
32:5:1233:G:C2	32:5:1234:G:C8	2.98	0.52
32:5:1558:A:C2	32:5:1559:G:C4	2.97	0.52
32:5:1925:G:C2	32:5:1926:C:C6	2.97	0.52
32:5:1949:U:O2	32:5:1949:U:H2'	2.09	0.52
32:5:2044:U:O2	32:5:2044:U:H2'	2.08	0.52
32:5:2103:G:C6	32:5:2104:G:N7	2.77	0.52
32:5:2295:C:O2	32:5:2296:G:N7	2.41	0.52
32:5:2325:C:O2	32:5:2326:G:H8	1.91	0.52
32:5:2352:U:N3	32:5:2353:U:C5	2.77	0.52
32:5:2480:G:C2	32:5:2481:G:N9	2.78	0.52
32:5:2497:C:N3	32:5:2498:C:H5	1.98	0.52
32:5:2617:G:C6	32:5:2618:G:C8	2.97	0.52
32:5:2633:U:C4	32:5:2634:C:C5	2.97	0.52
32:5:3593:C:C4'	32:5:3594:C:OP2	2.55	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3635:A:C8	32:5:3635:A:H3'	2.44	0.52
32:5:3773:U:O2	32:5:3776:G:C4	2.62	0.52
32:5:3831:U:N3	32:5:3832:U:C5	2.78	0.52
32:5:4089:G:H2'	32:5:4090:G:O4'	2.08	0.52
32:5:4298:A:C6	32:5:4299:U:C5	2.98	0.52
32:5:4527:G:C5	32:5:4556:U:C4	2.97	0.52
32:5:4677:U:O2'	35:B:352:LEU:CD1	2.57	0.52
32:5:4982:A:N3	32:5:4982:A:H2'	2.25	0.52
32:5:5031:G:N3	32:5:5032:C:C6	2.77	0.52
32:5:5042:A:N3	32:5:5042:A:H2'	2.25	0.52
34:8:40:A:C8	34:8:102:G:N2	2.76	0.52
34:8:41:A:N7	34:8:42:G:C8	2.77	0.52
36:C:104:PRO:O	36:C:106:LYS:HD2	2.09	0.52
38:F:139:GLU:OE2	38:F:228:HIS:NE2	2.42	0.52
39:I:99:ILE:HG22	39:I:123:GLN:HB2	1.90	0.52
40:P:23:ARG:HH11	40:P:23:ARG:HG2	1.75	0.52
42:j:39:TYR:HB3	42:j:40:PRO:CD	2.39	0.52
54:S2:1:U:O4'	54:S2:1:U:O2	2.24	0.52
54:S2:75:G:O2'	54:S2:76:U:H3'	2.09	0.52
54:S2:300:U:N3	54:S2:301:A:N7	2.57	0.52
54:S2:350:C:N3	54:S2:351:G:C8	2.78	0.52
54:S2:443:U:H4'	59:SG:90:GLY:HA3	1.91	0.52
54:S2:501:C:O2	54:S2:501:C:C3'	2.57	0.52
54:S2:618:C:N3	54:S2:619:A:N9	2.58	0.52
54:S2:891:G:C6	54:S2:892:U:C5	2.96	0.52
54:S2:910:G:C4	54:S2:911:C:C5	2.96	0.52
54:S2:1118:C:O4'	54:S2:1118:C:O2	2.26	0.52
54:S2:1241:A:H2'	54:S2:1242:U:O4'	2.08	0.52
54:S2:1420:G:O2'	81:ST:4:VAL:N	2.39	0.52
54:S2:1474:A:O2'	54:S2:1475:G:O5'	2.26	0.52
54:S2:1596:U:C4	54:S2:1597:C:C4	2.96	0.52
54:S2:1739:C:C2	54:S2:1740:C:C6	2.97	0.52
59:SG:217:MET:O	59:SG:221:LYS:N	2.42	0.52
61:SI:193:LYS:O	61:SI:194:GLU:C	2.51	0.52
79:SR:120:THR:HG22	79:SR:121:GLN:N	2.24	0.52
80:SS:124:ARG:HH11	80:SS:124:ARG:HG2	1.75	0.52
3:G:199:CYS:SG	3:G:201:THR:O	2.68	0.52
4:H:117:PHE:CD1	4:H:118:LEU:HB2	2.44	0.52
7:M:104:MET:HE2	9:O:199:HIS:HB2	1.90	0.52
8:N:8:GLN:HE21	8:N:50:ARG:NH2	2.07	0.52
9:O:109:PRO:N	32:5:4910:G:N2	2.57	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:d:33:ILE:HD11	22:d:45:ALA:HB2	1.90	0.52
23:e:46:ARG:NH2	32:5:2281:U:H4'	2.25	0.52
25:g:49:CYS:HG	25:g:83:CYS:HG	1.57	0.52
32:5:69:A:H3'	32:5:70:A:C8	2.43	0.52
32:5:149:A:H4'	32:5:151:G:C8	2.45	0.52
32:5:258:G:N2	32:5:259:C:C2	2.77	0.52
32:5:303:C:N3	32:5:304:C:C5	2.77	0.52
32:5:467:U:C2	32:5:468:U:C6	2.97	0.52
32:5:474:C:C2	32:5:475:G:C8	2.97	0.52
32:5:517:C:C2	32:5:645:G:N2	2.78	0.52
32:5:661:C:C4	32:5:662:C:C4	2.98	0.52
32:5:916:C:N4	32:5:917:A:C5	2.78	0.52
32:5:945:U:C5	38:F:67:TYR:CZ	2.98	0.52
32:5:973:G:O6	32:5:1282:G:N3	2.42	0.52
32:5:1168:G:C2	32:5:1169:G:C5	2.98	0.52
32:5:1308:C:C2	32:5:1309:C:C5	2.97	0.52
32:5:1373:A:OP1	36:C:47:ASN:ND2	2.43	0.52
32:5:1547:A:C6	32:5:1582:U:H1'	2.43	0.52
32:5:1561:G:C2'	32:5:1562:G:H5'	2.40	0.52
32:5:1918:U:C2	32:5:1920:C:C5	2.98	0.52
32:5:1989:G:C2	32:5:1990:A:C5	2.98	0.52
32:5:2091:C:OP2	32:5:2259:G:C8	2.63	0.52
32:5:2401:A:N1	32:5:2402:G:C5	2.78	0.52
32:5:2547:G:C2	32:5:2548:C:C6	2.97	0.52
32:5:2643:G:C6	32:5:2644:G:C5	2.98	0.52
32:5:3710:G:C4	32:5:3711:A:N1	2.77	0.52
32:5:3846:C:C4	32:5:3847:C:H5	2.28	0.52
32:5:3910:C:N3	32:5:3911:C:C5	2.76	0.52
32:5:4113:U:C2'	32:5:4114:C:O4'	2.47	0.52
32:5:4229:U:H3'	32:5:4230:C:C6	2.45	0.52
32:5:4274:A:H2'	32:5:4275:G:O4'	2.09	0.52
32:5:4323:A:N1	32:5:4324:A:C5	2.78	0.52
32:5:4333:C:O2	32:5:4334:U:C5	2.62	0.52
32:5:4423:U:O2	32:5:4423:U:H3'	2.10	0.52
32:5:4948:C:O2'	32:5:4949:G:H5'	2.09	0.52
34:8:94:G:C4'	34:8:95:A:OP1	2.56	0.52
35:B:57:VAL:HG22	35:B:73:VAL:HG12	1.90	0.52
37:E:158:VAL:HG22	37:E:180:VAL:HG21	1.91	0.52
48:z:408:ARG:O	51:4:205:A:H2	1.92	0.52
54:S2:18:C:O2	54:S2:18:C:H2'	2.08	0.52
54:S2:88:G:N2	54:S2:500:A:C4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:218:U:C2	54:S2:219:U:C5	2.98	0.52
54:S2:344:U:N3	54:S2:345:U:C5	2.78	0.52
54:S2:404:G:C2	54:S2:405:G:N7	2.77	0.52
54:S2:552:G:C2	54:S2:553:U:C4	2.98	0.52
54:S2:752:G:C6	54:S2:790:C:C4	2.97	0.52
54:S2:878:G:C6	54:S2:879:C:C5	2.98	0.52
54:S2:1017:U:O2'	64:SN:52:VAL:N	2.41	0.52
54:S2:1029:G:N2	54:S2:1030:A:H1'	2.25	0.52
54:S2:1292:C:C3'	86:Sf:150:PHE:HD1	2.22	0.52
54:S2:1524:G:C6	54:S2:1525:C:C4	2.98	0.52
55:SA:111:GLN:HA	55:SA:116:PHE:CE2	2.43	0.52
1:A:18:ALA:O	1:A:20:VAL:HG13	2.09	0.52
4:H:41:ILE:HD11	4:H:69:THR:CG2	2.40	0.52
10:Q:4:ASP:CG	38:F:100:ILE:HG13	2.35	0.52
17:Y:18:HIS:HB3	17:Y:19:PHE:CE1	2.45	0.52
32:5:33:A:C6	32:5:50:C:N3	2.78	0.52
32:5:83:C:O2	32:5:83:C:H2'	2.08	0.52
32:5:120:A:O4'	32:5:121:A:C6	2.62	0.52
32:5:126:C:O2	32:5:126:C:H2'	2.10	0.52
32:5:244:G:C2	32:5:246:G:N9	2.78	0.52
32:5:296:A:C5'	32:5:296:A:C8	2.93	0.52
32:5:303:C:C2	32:5:304:C:C6	2.97	0.52
32:5:450:G:N2	32:5:1294:A:H2'	2.25	0.52
32:5:515:C:O2	32:5:515:C:H2'	2.09	0.52
32:5:718:C:N3	32:5:719:C:C5	2.78	0.52
32:5:1215:C:H2'	32:5:1215:C:O2	2.08	0.52
32:5:1290:G:N2	32:5:1291:G:C5	2.78	0.52
32:5:1380:G:C2	32:5:1382:G:C2	2.96	0.52
32:5:1440:U:O2	32:5:1441:C:C5	2.63	0.52
32:5:1555:G:C2	32:5:1556:C:H1'	2.44	0.52
32:5:1693:U:N3	32:5:1694:C:C6	2.78	0.52
32:5:1812:C:H2'	32:5:1812:C:O2	2.09	0.52
32:5:2441:C:C2	32:5:2442:G:C8	2.87	0.52
32:5:2448:G:O6	32:5:2511:A:C5	2.63	0.52
32:5:2450:G:O6	32:5:2451:A:C5	2.63	0.52
32:5:3656:A:O4'	32:5:3747:A:H2	1.91	0.52
32:5:4123:C:N4	32:5:4124:G:N7	2.57	0.52
32:5:4205:A:C2	32:5:4206:C:C6	2.97	0.52
32:5:4269:G:N1	32:5:4270:C:C2	2.78	0.52
32:5:4524:G:N3	35:B:252:ALA:HB1	2.25	0.52
32:5:4623:G:H4'	35:B:16:PHE:CE2	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4651:A:C5	32:5:4652:G:C8	2.97	0.52
32:5:4691:A:C6	32:5:4692:A:N7	2.77	0.52
33:7:22:A:N1	33:7:23:A:C6	2.77	0.52
33:7:60:G:C6	33:7:61:G:C8	2.97	0.52
34:8:28:C:N3	34:8:29:G:N7	2.57	0.52
37:E:54:SER:O	37:E:57:ALA:N	2.43	0.52
37:E:174:PRO:O	37:E:176:VAL:N	2.43	0.52
43:n:21:ARG:HD2	54:S2:1718:G:OP1	2.09	0.52
48:z:140:PHE:CE2	48:z:194:ARG:HG3	2.45	0.52
48:z:381:SER:HB3	51:4:207:C:C2'	2.40	0.52
48:z:407:ALA:HA	48:z:412:VAL:CG1	2.40	0.52
50:3:49:C:N3	50:3:50:C:C5	2.77	0.52
51:4:59:A:C5	51:4:60:U:C6	2.98	0.52
54:S2:80:G:C6	54:S2:81:U:C4	2.98	0.52
54:S2:211:G:C2	54:S2:212:C:C2	2.97	0.52
54:S2:221:A:C5	54:S2:222:U:C5	2.97	0.52
54:S2:552:G:N2	54:S2:553:U:C2	2.77	0.52
54:S2:992:A:N1	54:S2:993:G:N9	2.57	0.52
54:S2:1046:U:C4	54:S2:1047:C:C4	2.98	0.52
54:S2:1093:A:C6	54:S2:1094:C:C6	2.98	0.52
54:S2:1135:C:C2	54:S2:1136:U:C6	2.98	0.52
54:S2:1291:A:HI'	86:Sf:142:GLY:HA2	1.91	0.52
54:S2:1511:U:C4	54:S2:1512:C:C5	2.97	0.52
54:S2:1512:C:C2	54:S2:1513:C:H5	2.27	0.52
54:S2:1644:C:O2'	54:S2:1645:C:H5'	2.07	0.52
54:S2:1757:G:N1	54:S2:1758:G:C5	2.78	0.52
69:SY:77:ASP:OD1	69:SY:77:ASP:N	2.43	0.52
80:SS:55:ARG:CD	80:SS:55:ARG:N	2.73	0.52
2:D:287:PHE:C	2:D:287:PHE:CD1	2.87	0.52
4:H:96:TYR:CZ	4:H:100:PRO:HA	2.44	0.52
8:N:150:TRP:HE3	8:N:150:TRP:C	2.17	0.52
19:a:132:ARG:CG	19:a:132:ARG:NH1	2.72	0.52
31:o:26:TYR:HD1	31:o:27:LYS:N	2.07	0.52
32:5:86:U:C4	32:5:97:G:N1	2.77	0.52
32:5:102:G:C2	32:5:103:G:C5	2.97	0.52
32:5:261:G:H2'	32:5:262:G:O4'	2.10	0.52
32:5:423:G:H2'	40:P:118:GLN:HE21	1.75	0.52
32:5:479:G:C2	32:5:480:C:N1	2.78	0.52
32:5:647:G:C5	32:5:648:G:C8	2.97	0.52
32:5:919:C:H2'	32:5:920:C:C5'	2.39	0.52
32:5:1092:G:C4	32:5:1093:C:C6	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1168:G:C2	32:5:1169:G:C8	2.97	0.52
32:5:1275:G:C6	32:5:1276:C:C4	2.98	0.52
32:5:1339:U:O2	32:5:1339:U:C2'	2.57	0.52
32:5:1354:A:C8	32:5:1503:A:N1	2.78	0.52
32:5:1355:G:H2'	32:5:1356:U:C6	2.45	0.52
32:5:1411:C:O2	32:5:1411:C:H2'	2.09	0.52
32:5:1487:G:N1	32:5:1488:G:C8	2.78	0.52
32:5:1740:C:H1'	32:5:1742:A:N6	2.25	0.52
32:5:1827:C:O2	32:5:1827:C:H2'	2.09	0.52
32:5:1910:G:C2	32:5:1911:C:C6	2.98	0.52
32:5:2093:A:H5''	32:5:2093:A:N3	2.24	0.52
32:5:2314:G:C2	32:5:2315:G:C8	2.76	0.52
32:5:2396:A:O5'	32:5:2806:A:N1	2.43	0.52
32:5:2439:G:C2	32:5:2440:U:C5	2.97	0.52
32:5:2577:C:N3	32:5:2578:G:C8	2.77	0.52
32:5:2844:A:C2	32:5:3839:G:C5	2.98	0.52
32:5:3586:G:C6	32:5:3587:C:C4	2.97	0.52
32:5:3703:G:C5	32:5:3704:U:C5	2.98	0.52
32:5:3734:U:H2'	32:5:3735:G:C8	2.45	0.52
32:5:3879:G:N1	32:5:3882:C:C5	2.77	0.52
32:5:3938:G:N1	32:5:4077:A:C2	2.78	0.52
32:5:4095:G:N2	32:5:4096:C:C5	2.71	0.52
32:5:4236:G:O2'	32:5:4237:C:O5'	2.26	0.52
32:5:4395:U:H2'	32:5:4395:U:O2	2.08	0.52
32:5:4593:C:O2	32:5:4594:U:C6	2.63	0.52
32:5:4627:U:H2'	35:B:55:HIS:NE2	2.24	0.52
32:5:4713:G:C4	32:5:4714:C:C6	2.97	0.52
32:5:4916:G:C6	32:5:4917:C:C4	2.98	0.52
34:8:13:G:H2'	34:8:14:U:O5'	2.10	0.52
34:8:53:G:C4	34:8:54:C:C6	2.98	0.52
34:8:68:G:N1	34:8:91:A:C2	2.76	0.52
36:C:48:ASN:O	36:C:48:ASN:OD1	2.26	0.52
47:q:65:ILE:HA	47:q:68:HIS:HD2	1.74	0.52
48:z:120:LYS:HD3	48:z:282:PHE:CE2	2.44	0.52
48:z:413:SER:HA	52:9:74:ARG:HE	1.70	0.52
50:3:74:C:H2'	50:3:74:C:O2	2.09	0.52
51:4:59:A:C6	51:4:288:G:C2	2.97	0.52
54:S2:70:G:H3'	54:S2:71:G:H8	1.74	0.52
54:S2:377:G:N3	54:S2:378:U:C6	2.77	0.52
54:S2:832:G:N1	54:S2:843:C:C4	2.78	0.52
54:S2:957:A:O2'	54:S2:958:G:C2	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:978:G:C5	54:S2:979:C:C5	2.98	0.52
54:S2:1082:A:C5	54:S2:1084:A:H1'	2.45	0.52
54:S2:1224:G:C2	54:S2:1643:U:N3	2.76	0.52
54:S2:1272:C:C2	54:S2:1273:C:C6	2.97	0.52
54:S2:1315:U:C4	54:S2:1316:C:C5	2.94	0.52
54:S2:1448:A:C2	54:S2:1449:G:H1'	2.43	0.52
54:S2:1518:C:O4'	54:S2:1518:C:O2	2.25	0.52
54:S2:1552:G:OP2	73:SD:9:ARG:NH2	2.42	0.52
54:S2:1589:A:H2'	54:S2:1590:C:O5'	2.09	0.52
54:S2:1596:U:OP2	83:SZ:85:ARG:NH1	2.43	0.52
54:S2:1687:C:C2	54:S2:1688:C:C5	2.97	0.52
54:S2:1820:G:H2'	54:S2:1821:U:O4'	2.09	0.52
54:S2:1841:C:N3	54:S2:1842:C:C5	2.77	0.52
63:SL:44:PHE:HE2	63:SL:143:LEU:HD23	1.75	0.52
69:SY:20:ARG:HB3	69:SY:76:TYR:HD1	1.71	0.52
84:Sc:20:ARG:CG	84:Sc:28:THR:HG22	2.37	0.52
1:A:97:ASN:OD1	1:A:97:ASN:N	2.42	0.52
4:H:65:LYS:HG2	32:5:4700:A:O2'	2.09	0.52
16:X:45:THR:HG23	32:5:4085:A:OP1	2.10	0.52
20:b:17:HIS:ND1	32:5:1724:G:C8	2.63	0.52
24:f:96:ALA:O	24:f:99:HIS:HB2	2.08	0.52
25:g:13:TYR:N	25:g:13:TYR:CD1	2.77	0.52
32:5:98:A:C2	32:5:99:A:H1'	2.45	0.52
32:5:146:G:N2	32:5:147:A:C5	2.77	0.52
32:5:917:A:C2	32:5:919:C:C4	2.97	0.52
32:5:951:G:H2'	32:5:952:G:H5''	1.92	0.52
32:5:1206:C:C2	32:5:1207:C:C5	2.97	0.52
32:5:1261:G:N1	32:5:1262:G:N7	2.58	0.52
32:5:1379:C:O2	32:5:1380:G:N7	2.42	0.52
32:5:1661:C:C2	32:5:1662:C:H5	2.25	0.52
32:5:1723:A:N1	32:5:1838:A:N1	2.57	0.52
32:5:1869:G:C8	32:5:3877:A:C6	2.97	0.52
32:5:2058:G:C5	32:5:2059:C:C5	2.96	0.52
32:5:2076:G:C2	32:5:2077:C:H1'	2.45	0.52
32:5:2260:C:H2'	32:5:2261:G:C8	2.45	0.52
32:5:2446:C:O2'	32:5:2447:U:H5'	2.09	0.52
32:5:2581:A:H1'	32:5:2654:C:O2'	2.10	0.52
32:5:2645:G:C2	32:5:2646:C:N1	2.77	0.52
32:5:2658:G:O6	32:5:2675:G:C6	2.63	0.52
32:5:2683:C:C2'	32:5:2684:C:O5'	2.57	0.52
32:5:2723:U:H2'	32:5:2724:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2818:C:O2'	32:5:4644:G:O2'	2.26	0.52
32:5:3632:C:C2	32:5:3633:C:C6	2.98	0.52
32:5:3887:C:O2	32:5:3888:G:C8	2.63	0.52
32:5:4139:G:C6	32:5:4140:C:C4	2.98	0.52
32:5:4168:G:C2'	32:5:4169:G:O5'	2.58	0.52
32:5:4275:G:C5	32:5:4276:G:C8	2.98	0.52
32:5:4287:G:O2'	32:5:4288:C:O5'	2.27	0.52
32:5:4433:G:N2	32:5:4434:C:C2	2.78	0.52
32:5:4527:G:C6	32:5:4556:U:C5	2.98	0.52
32:5:4579:U:H2'	32:5:4580:U:C6	2.45	0.52
32:5:4601:U:H2'	32:5:4601:U:O2	2.09	0.52
33:7:30:C:C4	33:7:48:G:N1	2.78	0.52
39:I:111:LEU:N	39:I:111:LEU:CD2	2.73	0.52
41:W:31:PHE:CD2	41:W:37:GLU:HA	2.45	0.52
45:r:2:SER:O	45:r:6:GLN:HG2	2.09	0.52
51:4:45:G:C6	51:4:46:C:C5	2.97	0.52
51:4:58:G:C6	51:4:289:A:N3	2.78	0.52
54:S2:118:C:C2	54:S2:445:A:C2	2.97	0.52
54:S2:191:A:P	61:SI:141:ARG:HD2	2.50	0.52
54:S2:341:C:H2'	54:S2:342:C:O4'	2.09	0.52
54:S2:344:U:C2	54:S2:345:U:C5	2.98	0.52
54:S2:378:U:O2	54:S2:378:U:H2'	2.09	0.52
54:S2:386:C:C4	54:S2:387:C:H5	2.24	0.52
54:S2:574:A:H4'	69:SY:89:HIS:HB3	1.91	0.52
54:S2:633:C:C4	54:S2:634:A:N7	2.78	0.52
54:S2:832:G:C2	54:S2:843:C:C4	2.98	0.52
54:S2:1229:G:C6	54:S2:1230:C:C4	2.98	0.52
54:S2:1402:A:H2'	54:S2:1405:A:H62	1.73	0.52
54:S2:1419:C:N3	54:S2:1429:G:C2	2.78	0.52
54:S2:1450:G:O2'	87:Sg:64:HIS:HE1	1.92	0.52
54:S2:1589:A:O2'	54:S2:1590:C:O4'	2.28	0.52
55:SA:42:LYS:HD2	79:SR:99:ASP:OD2	2.02	0.52
57:SC:198:ALA:HB3	57:SC:221:ASP:HB2	1.92	0.52
58:SE:43:PRO:O	58:SE:44:LEU:C	2.52	0.52
58:SE:112:HIS:CD2	58:SE:112:HIS:C	2.87	0.52
70:Sa:87:ARG:HD3	70:Sa:92:ARG:HA	1.92	0.52
73:SD:24:PHE:CZ	73:SD:25:LEU:HD22	2.45	0.52
78:SQ:47:LEU:O	78:SQ:49:TYR:N	2.42	0.52
86:Sf:138:ARG:NH2	86:Sf:149:CYS:SG	2.82	0.52
3:G:77:PRO:HA	3:G:237:TRP:CE3	2.44	0.52
4:H:41:ILE:HG21	4:H:73:ILE:HD11	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Q:37:ARG:HH11	32:5:2087:C:H5	1.54	0.52
19:a:73:VAL:CG2	19:a:108:TYR:CG	2.93	0.52
20:b:42:ASN:ND2	20:b:42:ASN:C	2.67	0.52
32:5:211:G:N2	32:5:212:A:N9	2.58	0.52
32:5:247:G:C2	32:5:248:C:C4	2.98	0.52
32:5:330:G:N1	32:5:331:G:C5	2.78	0.52
32:5:437:G:C6	32:5:438:G:N7	2.77	0.52
32:5:734:G:H22	32:5:929:A:H61	1.58	0.52
32:5:910:G:C6	32:5:911:U:C4	2.97	0.52
32:5:1189:G:C6	32:5:1190:C:C5	2.97	0.52
32:5:1261:G:C4	32:5:1262:G:C8	2.98	0.52
32:5:1262:G:C2	32:5:1263:A:N7	2.78	0.52
32:5:1380:G:N1	32:5:1382:G:C2	2.77	0.52
32:5:1491:A:N1	32:5:1492:G:C6	2.77	0.52
32:5:1760:G:N2	32:5:1761:G:H1'	2.24	0.52
32:5:1885:G:H2'	32:5:1886:G:O4'	2.10	0.52
32:5:2104:G:H2'	32:5:2105:A:O4'	2.09	0.52
32:5:2243:C:C2	32:5:2244:C:C5	2.98	0.52
32:5:2335:C:O2	32:5:2336:G:C8	2.63	0.52
32:5:2362:U:C5	32:5:3859:G:C2	2.96	0.52
32:5:2417:A:N1	32:5:2418:A:C5	2.78	0.52
32:5:2658:G:N2	32:5:2675:G:N2	2.58	0.52
32:5:2823:G:C2	32:5:2824:C:N1	2.78	0.52
32:5:3702:A:C8	32:5:3774:A:N9	2.78	0.52
32:5:3872:A:O2'	32:5:3873:G:H5'	2.10	0.52
32:5:4484:A:C2	32:5:4485:C:C4	2.98	0.52
32:5:4490:C:O2	32:5:4491:G:C8	2.63	0.52
32:5:4534:G:O6	32:5:4535:A:C4	2.63	0.52
32:5:4592:C:H2'	32:5:4592:C:O2	2.10	0.52
32:5:4699:U:O2	32:5:4701:A:C5	2.63	0.52
32:5:4712:C:O2	32:5:4712:C:H2'	2.08	0.52
32:5:4730:C:O2	32:5:4730:C:O4'	2.26	0.52
32:5:5042:A:N1	32:5:5043:A:C5	2.78	0.52
34:8:64:U:H3	34:8:65:A:N6	2.08	0.52
35:B:235:TRP:HA	35:B:235:TRP:CE3	2.45	0.52
46:K:37:LEU:HD23	46:K:37:LEU:C	2.16	0.52
51:4:62:G:C6	51:4:63:C:C4	2.97	0.52
51:4:196:C:H1'	51:4:204:G:N2	2.24	0.52
54:S2:85:A:N3	54:S2:86:C:C5	2.78	0.52
54:S2:154:U:O2	54:S2:154:U:H2'	2.09	0.52
54:S2:474:G:C6	54:S2:475:C:C5	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:499:G:C2	54:S2:504:G:C2	2.98	0.52
54:S2:875:A:N6	54:S2:876:C:N4	2.57	0.52
54:S2:923:G:C2	54:S2:924:G:C4	2.98	0.52
54:S2:932:G:C2	54:S2:934:G:C8	2.98	0.52
54:S2:1100:A:C6	54:S2:1101:U:C4	2.98	0.52
54:S2:1184:G:C6	54:S2:1185:C:C4	2.97	0.52
54:S2:1524:G:C5	54:S2:1525:C:C5	2.98	0.52
54:S2:1540:G:N2	54:S2:1541:G:N9	2.56	0.52
54:S2:1593:C:O2	54:S2:1593:C:C2'	2.58	0.52
54:S2:1617:G:C5	54:S2:1619:A:OP2	2.63	0.52
54:S2:1622:U:C4	80:SS:120:HIS:CE1	2.96	0.52
54:S2:1694:U:H2'	54:S2:1696:C:H5	1.73	0.52
54:S2:1740:C:C2	54:S2:1741:U:C6	2.98	0.52
56:SB:33:VAL:HG11	56:SB:67:PHE:CZ	2.45	0.52
56:SB:141:GLY:HA3	56:SB:168:MET:HE1	1.91	0.52
57:SC:188:CYS:SG	57:SC:235:ASN:HB3	2.50	0.52
80:SS:12:ILE:HD12	80:SS:12:ILE:N	2.25	0.52
80:SS:33:ILE:O	80:SS:36:VAL:CG1	2.45	0.52
85:Sd:45:GLN:HB3	85:Sd:46:TYR:CD1	2.45	0.52
88:S1:7:TRP:C	88:S1:9:GLU:H	2.18	0.52
6:L:179:PHE:CE2	19:a:131:ARG:HB2	2.45	0.52
10:Q:56:THR:HB	10:Q:146:ARG:HH21	1.75	0.52
12:S:91:HIS:CE1	32:5:2032:U:O2'	2.62	0.52
12:S:120:ARG:HB2	12:S:122:HIS:CD2	2.43	0.52
13:T:89:ILE:HG22	32:5:4300:U:H4'	1.92	0.52
16:X:72:ASP:OD1	16:X:72:ASP:N	2.43	0.52
18:Z:4:PHE:CZ	21:c:67:ALA:HB2	2.45	0.52
21:c:28:VAL:HG11	21:c:33:GLN:HB3	1.91	0.52
32:5:425:U:O2	32:5:425:U:H2'	2.09	0.52
32:5:667:A:H2'	32:5:668:C:O4'	2.09	0.52
32:5:696:C:H5''	32:5:697:G:H5'	1.91	0.52
32:5:731:G:C6	32:5:732:A:H1'	2.44	0.52
32:5:1213:G:C6	32:5:1215:C:C5	2.98	0.52
32:5:1313:C:O2	32:5:1323:A:H1'	2.10	0.52
32:5:1375:C:N3	32:5:1376:C:C5	2.78	0.52
32:5:1442:C:O2	32:5:1443:A:C8	2.61	0.52
32:5:1474:C:N3	32:5:1475:G:C5	2.78	0.52
32:5:1904:G:C2	32:5:2073:C:C2	2.98	0.52
32:5:1987:C:C4	32:5:1988:G:N7	2.77	0.52
32:5:2283:G:O2'	32:5:2284:G:H5'	2.10	0.52
32:5:2496:G:C6	32:5:2497:C:C5	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2752:G:C2	32:5:2753:G:H1'	2.45	0.52
32:5:2831:G:C2	32:5:2832:A:C5	2.98	0.52
32:5:3635:A:N1	32:5:3636:C:H1'	2.25	0.52
32:5:3729:U:C2	32:5:3730:U:C6	2.98	0.52
32:5:3856:A:N6	32:5:3857:G:C5	2.78	0.52
32:5:3867:A:C3'	32:5:3868:G:H8	2.23	0.52
32:5:4091:G:N1	32:5:4092:G:C4	2.78	0.52
32:5:4133:C:C2	32:5:4134:C:C5	2.98	0.52
32:5:4478:G:H2'	32:5:4479:A:O4'	2.09	0.52
32:5:4952:G:H5''	32:5:4952:G:C8	2.45	0.52
34:8:106:G:C2	34:8:107:C:N3	2.77	0.52
34:8:115:G:C2	34:8:116:C:N1	2.78	0.52
35:B:89:ILE:CD1	35:B:153:MET:HE1	2.40	0.52
38:F:149:LEU:HB2	38:F:197:TYR:HH	1.72	0.52
46:K:142:ASN:OD1	46:K:143:VAL:HG23	2.10	0.52
48:z:120:LYS:CD	48:z:282:PHE:HE2	2.23	0.52
48:z:407:ALA:C	48:z:412:VAL:O	2.52	0.52
50:3:21:A:H2'	50:3:22:U:H5''	1.91	0.52
54:S2:53:C:O2	54:S2:53:C:C2'	2.55	0.52
54:S2:478:G:H2'	54:S2:479:C:H6	1.74	0.52
54:S2:494:C:N3	54:S2:495:U:C5	2.78	0.52
54:S2:608:C:O2	54:S2:608:C:H2'	2.10	0.52
54:S2:636:C:O2	54:S2:637:U:C6	2.63	0.52
54:S2:862:A:N1	54:S2:863:U:C5	2.77	0.52
54:S2:870:A:C6	54:S2:915:G:N9	2.63	0.52
54:S2:1015:U:O2'	64:SN:55:ARG:NH2	2.39	0.52
54:S2:1233:G:C2	54:S2:1234:C:N1	2.78	0.52
54:S2:1259:A:H5''	54:S2:1260:A:OP2	2.10	0.52
54:S2:1507:G:O2'	54:S2:1508:A:H5'	2.10	0.52
54:S2:1540:G:C5	54:S2:1541:G:N7	2.77	0.52
54:S2:1794:C:N3	54:S2:1795:G:N7	2.58	0.52
55:SA:199:PRO:O	55:SA:201:LEU:N	2.42	0.52
56:SB:53:GLN:CG	56:SB:56:LYS:NZ	2.73	0.52
58:SE:15:PRO:HB2	58:SE:18:TRP:CZ2	2.44	0.52
61:SI:113:TYR:HD2	61:SI:121:LEU:HD21	1.74	0.52
61:SI:134:GLU:HA	61:SI:137:LEU:HB2	1.92	0.52
73:SD:163:PRO:HA	73:SD:166:TYR:CE1	2.45	0.52
76:SM:51:VAL:HG12	76:SM:109:VAL:HG22	1.91	0.52
80:SS:8:LYS:N	80:SS:8:LYS:CE	2.73	0.52
84:Sc:11:LEU:CB	84:Sc:55:VAL:CG1	2.80	0.52
84:Sc:14:VAL:HG13	84:Sc:31:ARG:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:193:ARG:HD3	32:5:27:C:OP1	2.10	0.52
9:O:108:ILE:CD1	9:O:117:ARG:HE	2.23	0.52
10:Q:3:VAL:C	10:Q:4:ASP:OD2	2.53	0.52
11:R:173:ARG:NH2	54:S2:910:G:OP2	2.43	0.52
27:i:15:HIS:CG	32:5:72:C:O2	2.63	0.52
32:5:45:U:C2	32:5:46:U:C5	2.98	0.52
32:5:87:A:H2'	32:5:87:A:N3	2.24	0.52
32:5:101:A:C5	32:5:102:G:N7	2.78	0.52
32:5:142:G:N1	32:5:144:G:C8	2.78	0.52
32:5:153:G:N3	32:5:154:G:N7	2.56	0.52
32:5:472:C:H2'	32:5:473:C:O4'	2.10	0.52
32:5:1203:G:N2	32:5:1204:C:C2	2.77	0.52
32:5:1235:G:C2	32:5:1236:C:C6	2.99	0.52
32:5:1266:G:H22	32:5:2111:G:N2	2.06	0.52
32:5:1270:A:C8	32:5:1271:G:C8	2.98	0.52
32:5:1391:A:C8	32:5:1392:A:N7	2.77	0.52
32:5:1549:G:C2	32:5:1580:C:C2	2.98	0.52
32:5:1556:C:O2	32:5:1557:C:H6	1.80	0.52
32:5:1675:C:C2	32:5:1681:G:N2	2.78	0.52
32:5:1965:G:C4	32:5:1966:C:C5	2.97	0.52
32:5:2104:G:C6	32:5:2105:A:C5	2.98	0.52
32:5:2245:G:C2	32:5:2246:C:C2	2.98	0.52
32:5:2307:A:C8	32:5:2332:A:C2	2.97	0.52
32:5:2507:A:N6	32:5:2508:U:C2	2.78	0.52
32:5:2784:C:N3	32:5:2785:C:C4	2.78	0.52
32:5:2874:U:H4'	32:5:2875:C:OP2	2.10	0.52
32:5:3742:G:N3	32:5:3743:G:C8	2.77	0.52
32:5:3754:G:C8	32:5:3754:G:C5'	2.85	0.52
32:5:3847:C:C4	32:5:3848:U:H5	2.28	0.52
32:5:4082:G:C4	32:5:4083:U:C5	2.97	0.52
32:5:4146:G:N3	32:5:4147:G:C8	2.78	0.52
32:5:4175:G:C5	32:5:4176:C:C5	2.98	0.52
32:5:4239:A:N1	32:5:4240:G:N9	2.57	0.52
32:5:4297:G:N3	32:5:4297:G:H2'	2.25	0.52
32:5:4382:G:C6	32:5:4383:U:C4	2.98	0.52
32:5:4581:G:N2	32:5:4582:C:C5	2.79	0.52
32:5:4737:G:C2	32:5:4738:C:C2	2.98	0.52
32:5:4950:U:N3	32:5:4952:G:H1'	2.25	0.52
33:7:115:A:H5'	33:7:115:A:H8	1.75	0.52
35:B:103:LYS:HD3	35:B:149:ASP:OD1	2.10	0.52
36:C:100:ARG:HD3	36:C:100:ARG:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:E:54:SER:O	37:E:56:SER:N	2.43	0.52
41:W:4:GLU:CD	41:W:30:GLN:HE21	2.17	0.52
47:q:99:ARG:NE	47:q:103:ARG:HH21	2.08	0.52
50:3:27:U:H2'	50:3:28:U:H6	1.75	0.52
51:4:18:G:C2	51:4:19:C:C4	2.98	0.52
51:4:136:G:N2	51:4:161:C:O2	2.43	0.52
54:S2:127:C:OP1	54:S2:180:G:N2	2.43	0.52
54:S2:153:G:H2'	59:SG:13:GLN:HE22	1.74	0.52
54:S2:196:C:C2	54:S2:204:G:C2	2.98	0.52
54:S2:217:A:C2	54:S2:218:U:O4'	2.63	0.52
54:S2:403:G:C4	54:S2:404:G:C8	2.98	0.52
54:S2:851:C:H5''	54:S2:852:G:H5'	1.92	0.52
54:S2:909:G:N2	54:S2:910:G:C8	2.77	0.52
54:S2:1126:G:N3	54:S2:1127:C:C6	2.78	0.52
54:S2:1276:A:C2	54:S2:1277:C:H1'	2.44	0.52
54:S2:1291:A:N1	86:Sf:140:TYR:CD2	2.78	0.52
54:S2:1292:C:H2'	86:Sf:150:PHE:CD1	2.45	0.52
54:S2:1435:C:H2'	54:S2:1436:C:O4'	2.10	0.52
54:S2:1500:G:C4	54:S2:1501:C:C6	2.98	0.52
54:S2:1523:C:N4	80:SS:137:LYS:O	2.43	0.52
54:S2:1594:A:N3	54:S2:1594:A:H2'	2.24	0.52
59:SG:213:LEU:O	59:SG:217:MET:N	2.43	0.52
65:SO:42:VAL:O	65:SO:55:ARG:O	2.28	0.52
65:SO:44:VAL:HG11	65:SO:85:CYS:SG	2.50	0.52
79:SR:120:THR:HG22	79:SR:121:GLN:HG2	1.92	0.52
1:A:211:PHE:HE1	1:A:219:ILE:HG23	1.71	0.51
3:G:169:PHE:CD2	8:N:6:TYR:CB	2.92	0.51
12:S:90:THR:HG23	13:T:156:TYR:CE2	2.45	0.51
18:Z:15:ALA:HB3	18:Z:79:HIS:HB3	1.92	0.51
18:Z:74:VAL:HG23	18:Z:101:PHE:CE2	2.45	0.51
32:5:423:G:H2'	40:P:118:GLN:NE2	2.26	0.51
32:5:726:G:H2'	32:5:727:C:O4'	2.09	0.51
32:5:733:A:C5	32:5:734:G:N7	2.79	0.51
32:5:945:U:C5	38:F:67:TYR:CE2	2.98	0.51
32:5:951:G:N2	32:5:952:G:C8	2.78	0.51
32:5:1213:G:H3'	32:5:1215:C:O4'	2.10	0.51
32:5:1281:G:C4	32:5:1281:G:O5'	2.63	0.51
32:5:1355:G:H2'	32:5:1356:U:O5'	2.10	0.51
32:5:1617:G:C2	32:5:1618:G:C4	2.98	0.51
32:5:1758:G:C2	32:5:1759:G:N7	2.79	0.51
32:5:1970:A:C2	32:5:2016:C:C4	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1985:G:H2'	32:5:1986:U:C6	2.45	0.51
32:5:2085:G:N2	32:5:2273:G:C5	2.78	0.51
32:5:2450:G:C6	32:5:2451:A:N7	2.77	0.51
32:5:2534:C:O2'	32:5:2535:G:C5'	2.54	0.51
32:5:2555:G:C2	32:5:2573:A:C2	2.98	0.51
32:5:2607:C:C2	32:5:2608:G:C8	2.98	0.51
32:5:2612:G:C6	32:5:2613:C:N3	2.78	0.51
32:5:2837:U:C4	32:5:2838:G:C8	2.98	0.51
32:5:2839:U:C2	32:5:2840:A:C8	2.98	0.51
32:5:3672:G:C8	32:5:3674:G:O4'	2.63	0.51
32:5:3739:C:N4	32:5:3740:G:C5	2.64	0.51
32:5:3756:A:H2'	32:5:3757:G:O4'	2.10	0.51
32:5:4073:A:C6	32:5:4074:C:N4	2.78	0.51
32:5:4093:G:H2'	32:5:4094:G:H5'	1.90	0.51
32:5:4152:G:C4	32:5:4153:C:C5	2.98	0.51
32:5:4215:C:C2	32:5:4216:G:N7	2.72	0.51
32:5:4230:C:O2	32:5:4230:C:C2'	2.57	0.51
32:5:4313:A:C2	32:5:4314:C:N1	2.78	0.51
32:5:4455:G:N2	32:5:4456:C:C2	2.77	0.51
32:5:4561:C:N3	32:5:4562:C:C5	2.78	0.51
32:5:4644:G:N2	32:5:4654:C:C2	2.78	0.51
32:5:4743:G:C2	32:5:4744:A:N7	2.79	0.51
32:5:4773:C:C2	32:5:4863:G:C2	2.97	0.51
32:5:4966:A:H2'	32:5:4967:A:C8	2.46	0.51
32:5:4989:U:O2	32:5:4989:U:O4'	2.26	0.51
34:8:111:U:H2'	34:8:112:G:OP2	2.10	0.51
35:B:116:ARG:HB3	35:B:177:LYS:HA	1.92	0.51
38:F:201:LYS:C	38:F:202:ARG:HD2	2.35	0.51
48:z:381:SER:C	51:4:207:C:O2'	2.49	0.51
50:3:38:C:N4	50:3:39:G:C5	2.78	0.51
51:4:52:C:H2'	51:4:52:C:O2	2.10	0.51
54:S2:70:G:C2	54:S2:80:G:N2	2.77	0.51
54:S2:74:G:O6	59:SG:171:THR:OG1	2.26	0.51
54:S2:75:G:H21	54:S2:77:A:P	2.27	0.51
54:S2:92:A:H5''	54:S2:92:A:N3	2.25	0.51
54:S2:394:G:C2	54:S2:395:G:C5	2.97	0.51
54:S2:436:G:N2	54:S2:437:G:C5	2.78	0.51
54:S2:616:A:N7	54:S2:617:G:C1'	2.73	0.51
54:S2:638:C:C2'	54:S2:639:C:O5'	2.57	0.51
54:S2:647:U:O2	54:S2:647:U:C2'	2.58	0.51
54:S2:832:G:N3	54:S2:833:C:H1'	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:996:A:O2'	54:S2:997:A:O5'	2.28	0.51
54:S2:1087:A:N6	54:S2:1861:G:N7	2.58	0.51
54:S2:1306:U:C4	54:S2:1307:U:C6	2.98	0.51
54:S2:1351:G:H4'	55:SA:110:ASN:ND2	2.24	0.51
54:S2:1431:G:H5''	54:S2:1432:U:OP2	2.10	0.51
54:S2:1728:U:C4	54:S2:1729:U:C6	2.98	0.51
57:SC:163:VAL:HB	57:SC:164:PRO:HD2	1.92	0.51
59:SG:218:LYS:HA	59:SG:221:LYS:HB2	1.92	0.51
63:SL:99:TYR:CE2	68:SX:13:LEU:HB3	2.45	0.51
70:Sa:41:ILE:HG12	70:Sa:41:ILE:O	2.09	0.51
80:SS:124:ARG:HD3	80:SS:131:VAL:HA	1.92	0.51
84:Sc:31:ARG:HG2	84:Sc:31:ARG:NH1	2.14	0.51
87:Sg:171:ASP:O	87:Sg:172:LYS:HB3	2.09	0.51
3:G:53:ARG:NH2	32:5:4088:C:C4	2.78	0.51
4:H:113:GLU:OE2	4:H:124:ARG:O	2.29	0.51
5:J:142:ALA:HB2	5:J:151:ILE:HD11	1.93	0.51
7:M:3:PHE:HZ	32:5:4763:U:H1'	1.75	0.51
17:Y:121:ARG:CZ	17:Y:121:ARG:HB3	2.40	0.51
24:f:57:THR:HG21	24:f:68:ARG:HD3	1.91	0.51
26:h:77:LYS:HA	32:5:136:C:H41	1.75	0.51
30:m:110:CYS:SG	30:m:111:ARG:N	2.83	0.51
32:5:32:G:N7	32:5:48:G:C2	2.78	0.51
32:5:50:C:O2'	32:5:51:A:H5'	2.10	0.51
32:5:182:G:H1	32:5:254:G:H1	1.58	0.51
32:5:437:G:N3	32:5:438:G:C8	2.78	0.51
32:5:484:U:O4	32:5:486:C:C4	2.64	0.51
32:5:660:A:N3	32:5:661:C:C6	2.78	0.51
32:5:1374:G:C5	32:5:1375:C:C5	2.98	0.51
32:5:1552:G:O2'	32:5:1574:G:N2	2.43	0.51
32:5:1563:A:H2'	32:5:1564:A:C8	2.44	0.51
32:5:1584:G:C5	32:5:1585:C:C5	2.99	0.51
32:5:1671:U:O2	32:5:1672:U:H6	1.92	0.51
32:5:1689:G:C6	32:5:1690:C:C4	2.98	0.51
32:5:1855:G:C6	32:5:1856:C:C5	2.98	0.51
32:5:1961:G:OP2	47:q:57:LYS:HD2	2.11	0.51
32:5:2089:G:HO2'	32:5:2090:U:P	2.32	0.51
32:5:2299:G:C6	32:5:2301:G:C8	2.98	0.51
32:5:2301:G:C2	32:5:2302:C:N1	2.77	0.51
32:5:2315:G:C4	32:5:2316:G:C8	2.98	0.51
32:5:2332:A:N3	32:5:2333:G:H1'	2.24	0.51
32:5:2669:C:O2'	32:5:2670:C:P	2.68	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3650:C:H2'	32:5:3651:A:O4'	2.10	0.51
32:5:4240:G:H1	32:5:4283:G:H22	1.58	0.51
32:5:4369:A:C2	32:5:4370:G:C5	2.98	0.51
32:5:4455:G:N1	32:5:4456:C:C4	2.77	0.51
32:5:4525:C:OP1	35:B:246:ARG:NH2	2.43	0.51
32:5:4565:C:H1'	35:B:262:VAL:CG2	2.39	0.51
32:5:4667:C:N4	32:5:4668:U:C4	2.78	0.51
32:5:4956:A:C6	32:5:4957:C:C6	2.97	0.51
32:5:5017:G:C6	32:5:5018:C:C4	2.98	0.51
32:5:5034:A:C2	32:5:5035:U:C6	2.98	0.51
33:7:54:A:N3	33:7:55:A:H8	2.01	0.51
34:8:81:C:O2	34:8:83:C:OP1	2.28	0.51
43:n:11:ARG:HH12	54:S2:1844:U:H5''	1.76	0.51
46:K:117:ARG:NE	46:K:117:ARG:HA	2.25	0.51
47:q:99:ARG:HD3	47:q:103:ARG:HH21	1.74	0.51
48:z:56:VAL:HG22	48:z:82:GLU:HG3	1.92	0.51
48:z:194:ARG:HD2	48:z:195:HIS:NE2	2.24	0.51
54:S2:18:C:N3	54:S2:19:A:C8	2.78	0.51
54:S2:70:G:C2	54:S2:71:G:C4	2.99	0.51
54:S2:194:C:C2	54:S2:206:G:C2	2.98	0.51
54:S2:343:A:C6	54:S2:344:U:C5	2.99	0.51
54:S2:386:C:C2	54:S2:387:C:H6	2.20	0.51
54:S2:460:A:H2'	54:S2:460:A:N3	2.24	0.51
54:S2:622:C:C4	54:S2:623:G:C1'	2.93	0.51
54:S2:623:G:C2	54:S2:624:C:N1	2.78	0.51
54:S2:637:U:C2	54:S2:638:C:C6	2.98	0.51
54:S2:818:A:H2'	54:S2:818:A:N3	2.24	0.51
54:S2:823:U:H5	54:S2:824:C:C5	2.27	0.51
54:S2:908:A:C2	54:S2:909:G:C5	2.97	0.51
54:S2:975:G:C2	54:S2:976:G:C8	2.98	0.51
54:S2:1189:A:H2'	54:S2:1190:A:C8	2.46	0.51
54:S2:1250:A:C2	54:S2:1339:U:C2'	2.94	0.51
54:S2:1409:A:C5'	78:SQ:24:HIS:CE1	2.93	0.51
54:S2:1478:U:C2	54:S2:1479:G:C8	2.99	0.51
54:S2:1511:U:C2	54:S2:1512:C:H6	2.27	0.51
54:S2:1524:G:C4	54:S2:1525:C:C6	2.98	0.51
54:S2:1589:A:C2'	54:S2:1590:C:O5'	2.58	0.51
54:S2:1608:U:C4	54:S2:1609:C:C5	2.98	0.51
56:SB:158:HIS:CD2	56:SB:158:HIS:C	2.87	0.51
78:SQ:138:ARG:HG3	78:SQ:138:ARG:HH11	1.74	0.51
80:SS:81:ASP:O	80:SS:87:GLN:NE2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
85:Sd:45:GLN:HB3	85:Sd:46:TYR:CE1	2.44	0.51
87:Sg:18:VAL:HG21	87:Sg:307:VAL:HG22	1.92	0.51
4:H:41:ILE:HD11	4:H:69:THR:OG1	2.10	0.51
9:O:168:TYR:OH	9:O:172:LYS:HD3	2.09	0.51
10:Q:32:TYR:O	10:Q:48:LEU:HD13	2.11	0.51
15:V:82:ILE:CD1	15:V:104:VAL:HG13	2.41	0.51
24:f:110:ILE:HD12	37:E:191:ILE:HG23	1.92	0.51
25:g:4:ARG:NH2	32:5:2397:G:O6	2.38	0.51
27:i:29:ARG:HG3	27:i:29:ARG:O	2.10	0.51
32:5:30:C:O2'	32:5:31:U:H5'	2.10	0.51
32:5:164:G:C6	32:5:165:A:C5	2.98	0.51
32:5:165:A:H3'	32:5:166:C:C6	2.45	0.51
32:5:219:G:C8	32:5:220:C:H5	2.27	0.51
32:5:297:U:C4	32:5:298:G:C8	2.98	0.51
32:5:370:U:C5	32:5:1637:A:C5	2.99	0.51
32:5:388:A:N6	32:5:411:G:C4	2.79	0.51
32:5:950:G:C2	32:5:951:G:C5	2.99	0.51
32:5:977:C:O2	32:5:977:C:C2'	2.59	0.51
32:5:977:C:C2'	32:5:978:G:H5'	2.40	0.51
32:5:1189:G:C2	32:5:1190:C:N1	2.78	0.51
32:5:1341:U:N3	32:5:1342:A:N7	2.58	0.51
32:5:1558:A:C2	32:5:1559:G:C5	2.98	0.51
32:5:1912:G:C6	32:5:1913:C:N4	2.78	0.51
32:5:2538:U:C2	32:5:2539:C:C5	2.98	0.51
32:5:2606:G:H2'	32:5:2607:C:H6	1.75	0.51
32:5:2895:A:C2	32:5:2896:G:N9	2.78	0.51
32:5:3754:G:N2	32:5:3755:G:C4	2.79	0.51
32:5:3913:G:N1	32:5:4390:A:C2	2.78	0.51
32:5:4172:A:N3	32:5:4173:G:C8	2.78	0.51
32:5:4530:U:H2'	32:5:4530:U:O2	2.09	0.51
32:5:4747:C:O2'	32:5:4748:U:H5'	2.10	0.51
34:8:134:G:C2	34:8:135:C:C2	2.98	0.51
36:C:76:ILE:HG22	36:C:77:PRO:HD2	1.92	0.51
37:E:276:GLY:C	37:E:278:TYR:HE2	2.19	0.51
43:n:8:LYS:CE	54:S2:1845:A:N7	2.73	0.51
48:z:273:ILE:CD1	48:z:285:PHE:HE1	2.20	0.51
48:z:360:MET:CB	48:z:365:GLU:CB	2.86	0.51
54:S2:53:C:C2	54:S2:54:A:C8	2.97	0.51
54:S2:77:A:O2'	59:SG:175:LYS:CA	2.58	0.51
54:S2:547:G:O2'	54:S2:548:C:O4'	2.20	0.51
54:S2:936:G:C6	54:S2:937:C:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1393:G:C4	54:S2:1394:G:C8	2.98	0.51
54:S2:1406:G:C2	54:S2:1407:U:C2	2.98	0.51
54:S2:1551:U:C6	54:S2:1577:G:C2	2.98	0.51
54:S2:1795:G:N1	54:S2:1796:G:C5	2.78	0.51
54:S2:1839:U:H2'	54:S2:1840:U:C6	2.45	0.51
60:SH:144:ILE:HB	67:SW:52:ILE:HG12	1.92	0.51
60:SH:154:ILE:HB	60:SH:185:VAL:HG22	1.92	0.51
61:SI:112:TRP:O	61:SI:116:HIS:HB2	2.11	0.51
61:SI:113:TYR:HE2	61:SI:121:LEU:HD11	1.74	0.51
71:Sb:19:HIS:HB3	71:Sb:22:LYS:HG3	1.92	0.51
81:ST:13:GLU:HA	81:ST:16:ARG:HG3	1.92	0.51
2:D:177:THR:HB	2:D:190:PHE:CZ	2.46	0.51
3:G:29:ASN:HB3	3:G:32:PHE:CZ	2.45	0.51
3:G:34:LYS:O	32:5:4128:A:N3	2.43	0.51
4:H:88:PHE:CZ	4:H:151:ILE:HB	2.46	0.51
7:M:107:PHE:HA	37:E:266:TYR:CE2	2.45	0.51
8:N:204:ARG:NH1	32:5:1342:A:OP1	2.43	0.51
18:Z:92:ASP:OD1	18:Z:92:ASP:C	2.53	0.51
23:e:59:GLY:HA3	32:5:1899:G:H1'	1.93	0.51
32:5:29:G:N7	32:5:54:G:C2	2.78	0.51
32:5:298:G:C4	32:5:299:C:C6	2.98	0.51
32:5:313:U:C2	32:5:314:G:C8	2.98	0.51
32:5:484:U:O4	32:5:486:C:C5	2.61	0.51
32:5:505:G:C4	32:5:506:C:C5	2.99	0.51
32:5:1189:G:C2	32:5:1190:C:C2	2.97	0.51
32:5:1213:G:C2	32:5:1215:C:O2	2.63	0.51
32:5:1367:C:N1	32:5:1370:G:H2'	2.25	0.51
32:5:1380:G:H4'	32:5:1381:U:OP1	2.10	0.51
32:5:1466:G:C5	32:5:1467:C:C5	2.98	0.51
32:5:1634:A:C6	32:5:1635:C:N4	2.78	0.51
32:5:1683:U:C2	32:5:1684:A:N7	2.78	0.51
32:5:1770:A:C2	32:5:1771:U:C2	2.99	0.51
32:5:1925:G:C6	32:5:1926:C:C4	2.99	0.51
32:5:2108:G:H2'	32:5:2109:G:H4'	1.91	0.51
32:5:2290:C:N3	32:5:2291:G:N7	2.58	0.51
32:5:2391:G:N1	32:5:2392:C:C4	2.78	0.51
32:5:2577:C:C2	32:5:2578:G:C8	2.98	0.51
32:5:3718:A:C2'	32:5:3719:A:O4'	2.45	0.51
32:5:3734:U:O2'	32:5:3735:G:C5'	2.58	0.51
32:5:3775:A:H3'	32:5:3776:G:O4'	2.09	0.51
32:5:3791:C:C2	32:5:3802:U:C6	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4413:C:O4'	32:5:4413:C:O2	2.25	0.51
32:5:4462:C:H2'	32:5:4463:U:O4'	2.11	0.51
32:5:4698:C:O2	32:5:4698:C:C2'	2.59	0.51
32:5:5047:C:C1'	32:5:5048:A:N1	2.73	0.51
33:7:92:C:C2	33:7:93:G:C8	2.97	0.51
34:8:129:C:C4	34:8:130:C:C5	2.98	0.51
35:B:41:VAL:HG12	35:B:187:GLY:HA3	1.93	0.51
35:B:258:HIS:O	35:B:259:PRO:C	2.49	0.51
46:K:37:LEU:CD2	46:K:68:GLN:OE1	2.49	0.51
51:4:6:G:C2	51:4:22:C:C2	2.98	0.51
52:9:68:TYR:HB3	52:9:71:GLU:HB2	1.92	0.51
54:S2:188:C:N3	54:S2:189:U:C6	2.79	0.51
54:S2:378:U:O4	54:S2:379:C:C4	2.61	0.51
54:S2:518:G:N1	54:S2:519:A:N7	2.59	0.51
54:S2:552:G:N3	54:S2:553:U:C6	2.78	0.51
54:S2:616:A:N7	54:S2:617:G:N9	2.58	0.51
54:S2:641:A:H2'	54:S2:642:U:O4'	2.09	0.51
54:S2:831:G:C2	54:S2:844:U:O4	2.64	0.51
54:S2:862:A:H2'	67:SW:105:THR:OG1	2.11	0.51
54:S2:910:G:C4	54:S2:911:C:C6	2.98	0.51
54:S2:999:G:N2	54:S2:1000:C:C2	2.79	0.51
54:S2:1079:C:H2'	54:S2:1080:A:O4'	2.11	0.51
54:S2:1156:U:C2'	54:S2:1157:G:H21	2.24	0.51
54:S2:1203:G:C3'	54:S2:1204:A:H8	2.22	0.51
54:S2:1302:G:C4	86:Sf:140:TYR:CE2	2.98	0.51
54:S2:1315:U:O4'	54:S2:1315:U:O2	2.28	0.51
54:S2:1741:U:N3	54:S2:1742:C:C5	2.77	0.51
54:S2:1868:U:O5'	54:S2:1869:A:OP2	2.29	0.51
55:SA:32:PHE:C	55:SA:32:PHE:HD1	2.18	0.51
57:SC:253:PRO:HA	57:SC:256:TRP:CG	2.45	0.51
59:SG:141:ILE:HG21	59:SG:153:VAL:HG13	1.92	0.51
79:SR:71:ILE:HG22	79:SR:72:LYS:N	2.26	0.51
80:SS:8:LYS:N	80:SS:8:LYS:CD	2.73	0.51
84:Sc:20:ARG:CD	84:Sc:28:THR:HG22	2.41	0.51
1:A:186:TYR:CE2	32:5:1613:A:H4'	2.45	0.51
17:Y:8:THR:O	32:5:347:A:OP1	2.29	0.51
19:a:17:HIS:CE1	32:5:1338:G:C8	2.99	0.51
24:f:74:VAL:HG13	24:f:84:VAL:CG1	2.41	0.51
26:h:52:LYS:NZ	34:8:62:A:OP1	2.36	0.51
32:5:73:A:C2	32:5:74:G:C5	2.98	0.51
32:5:290:U:H2'	32:5:291:U:O5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:341:G:N2	32:5:342:G:C1'	2.73	0.51
32:5:370:U:N3	32:5:1637:A:N6	2.58	0.51
32:5:486:C:N3	32:5:487:G:C5	2.78	0.51
32:5:497:G:H3'	32:5:498:C:H5''	1.91	0.51
32:5:708:G:C6	32:5:709:C:C5	2.98	0.51
32:5:939:G:H2'	32:5:939:G:N3	2.25	0.51
32:5:952:G:N2	32:5:953:C:C2	2.79	0.51
32:5:987:C:C2	32:5:1067:G:N2	2.78	0.51
32:5:1168:G:C2	32:5:1169:G:N7	2.77	0.51
32:5:1210:C:H2'	32:5:1210:C:O2	2.09	0.51
32:5:1260:G:C2	32:5:1261:G:C4	2.98	0.51
32:5:1280:C:C2	32:5:1282:G:C8	2.98	0.51
32:5:1336:G:H2'	32:5:1337:A:C8	2.45	0.51
32:5:1448:G:N2	32:5:1449:C:C2	2.78	0.51
32:5:1522:G:C6	32:5:1653:A:C5	2.99	0.51
32:5:1534:A:O2'	32:5:1637:A:C2	2.58	0.51
32:5:1780:A:N6	32:5:1781:U:C5	2.78	0.51
32:5:1818:G:H8	32:5:1821:G:C6	2.29	0.51
32:5:2058:G:N2	32:5:2059:C:C1'	2.72	0.51
32:5:2124:G:N2	38:F:32:ILE:HG13	2.26	0.51
32:5:2519:U:H1'	32:5:2520:C:C6	2.46	0.51
32:5:2569:G:C4	32:5:2570:U:C5	2.99	0.51
32:5:2627:C:C5	32:5:2628:U:C5	2.99	0.51
32:5:2726:G:C2	32:5:2727:C:N3	2.77	0.51
32:5:2757:A:O2'	32:5:2758:G:O5'	2.27	0.51
32:5:2829:U:C4	32:5:2830:G:N7	2.79	0.51
32:5:3712:A:N6	32:5:3737:A:P	2.82	0.51
32:5:3909:C:H1'	49:2:127:MET:HE2	1.92	0.51
32:5:4173:G:C5	32:5:4174:U:C5	2.98	0.51
32:5:4216:G:C6	32:5:4217:G:C5	2.99	0.51
32:5:4238:G:C6	32:5:4239:A:C5	2.99	0.51
32:5:4287:G:O2'	32:5:4288:C:H6	1.93	0.51
32:5:4336:A:H5'	32:5:4337:C:O5'	2.11	0.51
32:5:4474:A:C5	32:5:4476:C:C2	2.99	0.51
32:5:4629:U:H2'	32:5:4630:G:O4'	2.11	0.51
32:5:4652:G:C6	32:5:4653:C:N4	2.79	0.51
32:5:4709:U:C4	32:5:4710:C:C4	2.99	0.51
32:5:4754:G:N1	32:5:4880:C:C4	2.79	0.51
32:5:4891:G:C2	32:5:4929:C:C2	2.99	0.51
34:8:145:C:N3	34:8:146:U:C5	2.79	0.51
37:E:102:VAL:HG23	37:E:103:VAL:HG22	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:E:277:ILE:HD11	37:E:282:LEU:HD22	1.91	0.51
45:r:17:LEU:HD12	45:r:36:ASN:HD21	1.75	0.51
48:z:140:PHE:CE2	48:z:192:SER:HB2	2.46	0.51
50:3:18:G:H4'	50:3:60:A:N1	2.26	0.51
50:3:41:G:C2	50:3:42:A:C8	2.99	0.51
51:4:8:G:C6	51:4:9:C:C4	2.98	0.51
51:4:14:G:N2	51:4:37:C:C4	2.78	0.51
54:S2:29:G:C5	54:S2:646:G:C2	2.99	0.51
54:S2:81:U:O4	54:S2:82:G:C5	2.64	0.51
54:S2:294:U:H4'	54:S2:295:C:OP2	2.10	0.51
54:S2:351:G:C2	54:S2:352:U:C6	2.99	0.51
54:S2:372:U:C2'	54:S2:373:G:O5'	2.57	0.51
54:S2:403:G:N2	54:S2:404:G:C1'	2.73	0.51
54:S2:443:U:C4	54:S2:444:G:C5	2.99	0.51
54:S2:584:G:C6	54:S2:585:C:C4	2.98	0.51
54:S2:1111:U:N3	54:S2:1112:U:C5	2.69	0.51
54:S2:1136:U:C2	54:S2:1137:U:C5	2.98	0.51
54:S2:1139:C:O4'	54:S2:1139:C:O2	2.26	0.51
54:S2:1287:A:H2'	54:S2:1315:U:C6	2.45	0.51
54:S2:1339:U:O2	54:S2:1340:U:C6	2.63	0.51
54:S2:1354:G:H5'	54:S2:1355:C:OP2	2.10	0.51
54:S2:1466:G:C2	54:S2:1467:C:C4	2.99	0.51
54:S2:1533:A:C2	54:S2:1537:A:O4'	2.64	0.51
54:S2:1707:U:C5	54:S2:1708:C:C5	2.99	0.51
54:S2:1781:A:C2	54:S2:1782:G:N7	2.79	0.51
55:SA:38:ILE:C	55:SA:50:ASN:HD21	2.18	0.51
55:SA:134:LEU:HD22	55:SA:144:THR:HG21	1.92	0.51
56:SB:145:LYS:HE3	79:SR:128:PHE:HE2	1.73	0.51
60:SH:115:LYS:O	60:SH:116:ARG:CB	2.58	0.51
70:Sa:95:ARG:O	70:Sa:95:ARG:HG2	2.10	0.51
76:SM:56:CYS:SG	76:SM:62:VAL:HG13	2.50	0.51
80:SS:16:LEU:HD22	80:SS:71:MET:CE	2.36	0.51
80:SS:63:GLU:N	80:SS:63:GLU:OE1	2.43	0.51
83:SZ:48:VAL:HG12	83:SZ:83:LEU:CD1	2.36	0.51
2:D:249:GLU:OE1	2:D:250:ASN:N	2.44	0.51
8:N:89:VAL:CG1	32:5:3928:A:H5'	2.41	0.51
25:g:13:TYR:OH	32:5:2802:C:O2	2.27	0.51
32:5:166:C:C2	32:5:167:C:C5	2.98	0.51
32:5:189:G:C2	32:5:190:G:C8	2.98	0.51
32:5:342:G:N2	32:5:343:C:C2	2.78	0.51
32:5:505:G:C6	32:5:506:C:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:719:C:O2	32:5:720:G:C8	2.63	0.51
32:5:924:C:O2	32:5:925:C:C6	2.64	0.51
32:5:1260:G:N3	32:5:1261:G:C8	2.79	0.51
32:5:1358:G:C6	32:5:1379:C:N3	2.78	0.51
32:5:1380:G:H2'	32:5:1382:G:N7	2.25	0.51
32:5:1442:C:C2	32:5:1443:A:H8	2.28	0.51
32:5:1570:G:C6	32:5:1571:G:C5	2.99	0.51
32:5:1584:G:N3	32:5:1585:C:C6	2.79	0.51
32:5:1691:G:C6	32:5:1692:C:C6	2.98	0.51
32:5:1840:G:O3'	32:5:1842:G:P	2.69	0.51
32:5:1843:A:N1	32:5:1844:G:N7	2.59	0.51
32:5:1899:G:N2	32:5:1900:C:C4	2.77	0.51
32:5:2270:G:C2	32:5:2271:C:C2	2.99	0.51
32:5:2287:G:C6	32:5:2288:G:C8	2.98	0.51
32:5:2316:G:N2	32:5:2317:C:N3	2.58	0.51
32:5:2336:G:C6	32:5:2337:C:C4	2.98	0.51
32:5:2393:C:H1'	32:5:2398:U:C2	2.46	0.51
32:5:2456:G:O2'	32:5:2457:G:H5'	2.10	0.51
32:5:2603:C:N3	32:5:2604:C:C6	2.78	0.51
32:5:3727:A:O2'	32:5:3728:A:O4'	2.29	0.51
32:5:3754:G:N2	32:5:3755:G:H1'	2.26	0.51
32:5:3804:G:C5	32:5:3805:U:C5	2.98	0.51
32:5:3925:U:H2'	32:5:3926:C:O4'	2.10	0.51
32:5:4479:A:N1	32:5:4480:A:H1'	2.26	0.51
32:5:4483:C:C4	32:5:4484:A:N7	2.79	0.51
32:5:4549:G:C2	32:5:4550:G:N9	2.76	0.51
32:5:4592:C:C2	32:5:4593:C:C5	2.98	0.51
32:5:4683:U:C5	32:5:4707:A:C6	2.98	0.51
32:5:4734:A:C2	32:5:4735:G:N9	2.79	0.51
32:5:4896:G:N3	32:5:4897:G:C8	2.79	0.51
32:5:4981:G:C6	32:5:4982:A:C4	2.99	0.51
32:5:5043:A:O2'	32:5:5044:A:O5'	2.28	0.51
33:7:42:A:C2	33:7:43:U:N1	2.78	0.51
33:7:110:G:C6	33:7:111:C:C5	2.98	0.51
34:8:39:G:C2	34:8:104:A:N1	2.79	0.51
37:E:54:SER:O	37:E:55:ARG:C	2.53	0.51
37:E:129:PHE:CD1	37:E:129:PHE:C	2.89	0.51
37:E:279:PRO:C	37:E:281:LYS:H	2.19	0.51
44:p:33:GLN:HG2	44:p:34:HIS:NE2	2.26	0.51
48:z:84:VAL:CA	48:z:291:ILE:HD13	2.40	0.51
51:4:2:C:O2	51:4:3:C:C6	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:59:A:OP1	88:S1:52:LYS:NZ	2.44	0.51
51:4:199:A:OP1	51:4:199:A:H8	1.94	0.51
54:S2:201:C:C5	54:S2:202:G:C8	2.98	0.51
54:S2:414:A:N1	54:S2:424:C:N3	2.58	0.51
54:S2:849:A:H2'	54:S2:850:C:H6	1.76	0.51
54:S2:929:G:N2	54:S2:1104:G:H4'	2.25	0.51
54:S2:1050:A:C6	54:S2:1051:G:C1'	2.92	0.51
54:S2:1110:G:H3'	54:S2:1111:U:C6	2.29	0.51
54:S2:1113:A:H2'	54:S2:1114:U:C2'	2.40	0.51
54:S2:1332:A:O2'	73:SD:141:LYS:NZ	2.31	0.51
54:S2:1345:G:O5'	54:S2:1371:U:O4	2.29	0.51
54:S2:1381:G:N1	54:S2:1382:A:C8	2.79	0.51
54:S2:1394:G:H2'	54:S2:1394:G:N3	2.26	0.51
54:S2:1414:A:C2	54:S2:1415:C:C4	2.99	0.51
54:S2:1456:G:C4	54:S2:1457:U:C5	2.99	0.51
54:S2:1542:C:O2'	54:S2:1543:U:H6	1.91	0.51
54:S2:1563:G:C2	54:S2:1564:C:C2	2.98	0.51
54:S2:1613:G:OP2	77:SP:39:ALA:HB2	2.10	0.51
54:S2:1772:C:O2	54:S2:1773:C:C6	2.64	0.51
56:SB:59:SER:O	56:SB:91:VAL:HG21	2.09	0.51
57:SC:170:TRP:CD1	57:SC:198:ALA:C	2.89	0.51
57:SC:260:VAL:O	57:SC:261:PHE:HB2	2.10	0.51
69:SY:81:TYR:O	69:SY:84:LYS:HB3	2.10	0.51
84:Sc:44:ARG:CZ	84:Sc:58:LEU:HD22	2.20	0.51
87:Sg:31:ILE:HG23	87:Sg:43:TRP:HB2	1.92	0.51
87:Sg:166:VAL:HB	87:Sg:198:VAL:HG11	1.93	0.51
2:D:22:ARG:HE	2:D:27:LYS:HD3	1.76	0.51
11:R:120:TYR:O	11:R:121:HIS:C	2.52	0.51
18:Z:17:ARG:NH2	32:5:2577:C:C4	2.79	0.51
23:e:43:ASN:HD21	23:e:45:VAL:HB	1.74	0.51
26:h:77:LYS:HA	32:5:136:C:N4	2.26	0.51
28:k:22:SER:O	28:k:24:LYS:N	2.44	0.51
32:5:84:A:C5	32:5:86:U:C5	2.99	0.51
32:5:84:A:C5	32:5:86:U:C6	2.99	0.51
32:5:96:U:C6	32:5:97:G:C8	2.99	0.51
32:5:130:C:C2	32:5:139:G:N2	2.79	0.51
32:5:190:G:C2	32:5:252:C:C2	2.98	0.51
32:5:292:G:H1'	32:5:293:G:C5'	2.41	0.51
32:5:483:G:N2	32:5:484:U:C2	2.79	0.51
32:5:642:G:N3	32:5:643:C:C6	2.79	0.51
32:5:674:G:C6	32:5:675:C:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:709:C:C4	32:5:710:G:N7	2.78	0.51
32:5:712:C:C2	32:5:713:C:C6	2.98	0.51
32:5:985:C:C2	32:5:1069:G:N2	2.79	0.51
32:5:1076:C:C2	32:5:1077:C:C6	2.98	0.51
32:5:1086:C:H2'	32:5:1086:C:O2	2.10	0.51
32:5:1198:G:N2	32:5:1199:G:C6	2.79	0.51
32:5:1214:C:O2'	32:5:2114:G:C6	2.54	0.51
32:5:1404:G:C6	32:5:1405:C:C5	2.98	0.51
32:5:1416:G:C6	32:5:1417:C:C4	2.98	0.51
32:5:1616:U:O2	32:5:1616:U:H2'	2.10	0.51
32:5:1617:G:N3	32:5:1618:G:C8	2.79	0.51
32:5:1797:G:N2	32:5:1798:G:C4	2.79	0.51
32:5:1946:G:N1	32:5:2037:C:N4	2.50	0.51
32:5:1965:G:C6	32:5:1966:C:C4	2.98	0.51
32:5:2090:U:H1'	36:C:305:PRO:HG2	1.92	0.51
32:5:2315:G:N3	32:5:2316:G:C8	2.79	0.51
32:5:2395:A:OP1	32:5:2395:A:H4'	2.10	0.51
32:5:2465:C:C2'	32:5:2466:G:O4'	2.59	0.51
32:5:2483:G:C6	32:5:2484:A:N7	2.79	0.51
32:5:2555:G:C6	32:5:2573:A:C6	2.99	0.51
32:5:2851:G:C6	32:5:2852:U:H1'	2.46	0.51
32:5:3819:G:C2	32:5:3820:G:N7	2.79	0.51
32:5:4136:G:C2	32:5:4137:C:C2	2.99	0.51
32:5:4599:A:H4'	32:5:4600:G:OP1	2.11	0.51
32:5:4697:U:H5'	32:5:4698:C:OP2	2.11	0.51
33:7:22:A:N3	33:7:22:A:H2'	2.25	0.51
33:7:55:A:C2	33:7:56:G:C8	2.99	0.51
34:8:42:G:N1	34:8:43:A:C5	2.79	0.51
34:8:60:G:C1'	34:8:61:A:P	2.98	0.51
34:8:132:G:C2	34:8:133:G:C4	2.98	0.51
37:E:197:ILE:HD11	37:E:256:ARG:HB2	1.93	0.51
39:I:85:PHE:C	39:I:85:PHE:HD1	2.17	0.51
48:z:134:LEU:HB2	48:z:159:PHE:CE1	2.45	0.51
50:3:39:G:C2	50:3:40:C:C2	2.95	0.51
51:4:193:G:H2'	51:4:194:G:O4'	2.11	0.51
54:S2:42:A:C5	54:S2:43:U:C5	2.98	0.51
54:S2:166:A:C2	54:S2:167:G:N7	2.79	0.51
54:S2:350:C:O2'	54:S2:383:G:N1	2.43	0.51
54:S2:476:A:C6	54:S2:477:G:C5	2.98	0.51
54:S2:582:C:H4'	69:SY:33:ALA:HB2	1.93	0.51
54:S2:828:G:C4	54:S2:829:C:C6	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:876:C:N4	54:S2:878:G:C8	2.78	0.51
54:S2:932:G:N2	54:S2:934:G:C8	2.78	0.51
54:S2:955:A:N6	54:S2:969:U:C5'	2.70	0.51
54:S2:967:C:C6	54:S2:967:C:H3'	2.45	0.51
54:S2:989:C:O2	54:S2:1001:A:C6	2.63	0.51
54:S2:1093:A:C5	54:S2:1094:C:C5	2.98	0.51
54:S2:1157:G:C6	67:SW:75:ILE:HD12	2.46	0.51
54:S2:1293:A:H1'	86:Sf:150:PHE:HD2	1.75	0.51
54:S2:1332:A:C2	54:S2:1500:G:H1'	2.46	0.51
54:S2:1335:G:C6	54:S2:1336:C:C4	2.99	0.51
54:S2:1457:U:C2	54:S2:1458:G:N7	2.79	0.51
54:S2:1475:G:H1'	54:S2:1476:A:C5'	2.40	0.51
54:S2:1610:G:H2'	54:S2:1611:G:O4'	2.11	0.51
54:S2:1711:U:O2	54:S2:1712:A:C8	2.64	0.51
55:SA:85:ARG:NH2	79:SR:82:ASP:O	2.43	0.51
79:SR:33:ARG:HH12	87:Sg:83:TRP:HZ3	1.57	0.51
1:A:174:ARG:HB3	1:A:174:ARG:NH1	2.26	0.51
3:G:55:VAL:CB	3:G:57:TRP:HE1	2.21	0.51
3:G:77:PRO:HA	3:G:237:TRP:CZ3	2.46	0.51
5:J:22:LEU:HD22	5:J:130:PHE:CE1	2.46	0.51
32:5:54:G:C5	32:5:55:G:C8	2.93	0.51
32:5:166:C:C2	32:5:167:C:H5	2.29	0.51
32:5:965:G:N2	37:E:85:LEU:O	2.44	0.51
32:5:1263:A:C2	32:5:1264:C:N1	2.79	0.51
32:5:1391:A:C2	32:5:4364:G:N3	2.79	0.51
32:5:1483:C:OP2	32:5:1484:G:C6	2.63	0.51
32:5:1570:G:C2	32:5:1571:G:H1'	2.45	0.51
32:5:1811:G:C4	32:5:1812:C:C5	2.98	0.51
32:5:1848:C:H5'	32:5:1849:U:OP2	2.11	0.51
32:5:2059:C:N3	32:5:2060:G:C8	2.70	0.51
32:5:2339:G:C2	32:5:2340:C:N1	2.79	0.51
32:5:2773:G:C2	32:5:2774:C:C6	2.99	0.51
32:5:3769:C:H5'	32:5:3770:U:OP2	2.11	0.51
32:5:3857:G:N1	32:5:3858:C:C2	2.79	0.51
32:5:3939:G:N2	32:5:4075:U:C2	2.79	0.51
32:5:4183:G:H2'	32:5:4183:G:N3	2.25	0.51
32:5:4271:A:C2	32:5:4272:G:C4	2.99	0.51
32:5:4283:G:N2	32:5:4284:C:C4	2.78	0.51
32:5:4583:C:N3	32:5:4718:G:N2	2.58	0.51
32:5:4713:G:C6	32:5:4714:C:C4	2.98	0.51
36:C:92:PHE:C	36:C:100:ARG:NH1	2.69	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:C:122:TYR:HB2	36:C:280:PRO:HG3	1.92	0.51
39:I:101:LYS:C	39:I:102:MET:SD	2.94	0.51
40:P:42:ARG:HH11	40:P:42:ARG:HG3	1.75	0.51
51:4:119[B]:A:N1	51:4:233[B]:U:N3	2.58	0.51
54:S2:52:G:H22	54:S2:474:G:H22	1.59	0.51
54:S2:142:C:O4'	54:S2:142:C:O2	2.28	0.51
54:S2:458:A:C2	54:S2:459:C:C6	2.97	0.51
54:S2:476:A:C5	54:S2:477:G:C8	2.98	0.51
54:S2:478:G:C4	54:S2:479:C:C5	2.99	0.51
54:S2:601:G:C2	54:S2:622:C:O2	2.64	0.51
54:S2:1083:A:C8	54:S2:1861:G:C6	2.98	0.51
54:S2:1115:U:O4'	54:S2:1115:U:O2	2.26	0.51
54:S2:1139:C:N4	54:S2:1148:A:C5	2.78	0.51
54:S2:1287:A:C4	54:S2:1313:A:C6	2.99	0.51
54:S2:1291:A:O2'	86:Sf:148:TYR:O	2.27	0.51
54:S2:1294:G:H1'	86:Sf:137:ASP:OD2	2.11	0.51
54:S2:1422:G:H22	54:S2:1424:G:H3'	1.75	0.51
54:S2:1432:U:C2'	54:S2:1433:C:O5'	2.59	0.51
54:S2:1574:C:O2	54:S2:1574:C:C2'	2.55	0.51
54:S2:1588:A:HO2'	54:S2:1589:A:H8	1.52	0.51
54:S2:1777:G:C2	54:S2:1778:C:C2	2.99	0.51
66:SV:9:VAL:HG12	66:SV:10:ASP:H	1.76	0.51
67:SW:43:LYS:HB2	67:SW:44:HIS:CE1	2.46	0.51
75:SK:21:MET:HE1	75:SK:49:MET:HG3	1.91	0.51
6:L:56:ARG:NH1	32:5:107:G:N1	2.58	0.51
8:N:81:TYR:OH	32:5:1625:G:H2'	2.11	0.51
12:S:28:TYR:HB3	13:T:149:GLU:O	2.11	0.51
13:T:142:ARG:HB3	38:F:82:ASN:HD21	1.76	0.51
32:5:21:G:C2	34:8:36:G:C2	2.99	0.51
32:5:206:U:O2	32:5:208:A:C8	2.63	0.51
32:5:237:G:O2'	32:5:238:C:OP2	2.27	0.51
32:5:246:G:N2	32:5:247:G:N9	2.59	0.51
32:5:435:A:N6	32:5:436:C:C5	2.79	0.51
32:5:483:G:N1	32:5:484:U:C5	2.78	0.51
32:5:674:G:C2	32:5:675:C:C5	2.99	0.51
32:5:962:C:OP1	32:5:2264:C:N4	2.43	0.51
32:5:1092:G:C2	32:5:1093:C:N1	2.78	0.51
32:5:1448:G:C2	32:5:1449:C:C2	2.99	0.51
32:5:1543:G:H1'	32:5:2513:A:C2	2.46	0.51
32:5:1555:G:C6	32:5:1556:C:C4	2.99	0.51
32:5:1598:C:C4	32:5:2798:A:N7	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1901:C:O2	32:5:1902:G:N7	2.43	0.51
32:5:1946:G:N2	32:5:1948:G:C8	2.79	0.51
32:5:2126:G:O3'	32:5:2127:C:O4'	2.29	0.51
32:5:2557:G:C5	32:5:2558:C:C5	2.99	0.51
32:5:3711:A:H1'	54:S2:970:G:C6	2.46	0.51
32:5:4173:G:C6	32:5:4174:U:C4	2.98	0.51
32:5:4289:U:H2'	32:5:4290:U:C6	2.46	0.51
32:5:4415:A:N1	32:5:4416:G:H1'	2.25	0.51
32:5:4510:A:C2	32:5:4511:A:C2	2.99	0.51
32:5:4530:U:H3'	32:5:4531:U:H2'	1.92	0.51
32:5:4585:U:C2	32:5:4586:G:C8	2.99	0.51
32:5:4619:U:N3	32:5:4620:U:C5	2.79	0.51
32:5:4707:A:C2'	32:5:4708:A:O5'	2.58	0.51
32:5:4878:C:N3	32:5:4879:C:C5	2.79	0.51
32:5:5006:U:O4'	32:5:5042:A:N6	2.43	0.51
32:5:5050:C:H1'	35:B:374:PHE:CD2	2.46	0.51
33:7:11:A:C2	33:7:67:C:O4'	2.64	0.51
33:7:58:A:N6	33:7:59:G:C6	2.79	0.51
35:B:240:LEU:HB3	35:B:244:THR:HG21	1.92	0.51
37:E:184:ARG:HD3	37:E:213:PHE:CB	2.40	0.51
41:W:8:PHE:C	41:W:8:PHE:HD1	2.19	0.51
48:z:271:ILE:C	48:z:285:PHE:CD2	2.89	0.51
50:3:38:C:N3	50:3:39:G:C5	2.77	0.51
50:3:64:G:H2'	50:3:65:G:O4'	2.10	0.51
54:S2:88:G:H2'	54:S2:89:C:O4'	2.10	0.51
54:S2:302:A:O2'	61:SI:64:ASN:ND2	2.43	0.51
54:S2:381:C:C6	54:S2:381:C:H5'	2.46	0.51
54:S2:449:A:N1	54:S2:452:G:C5	2.64	0.51
54:S2:531:A:C5	54:S2:532:C:C6	2.98	0.51
54:S2:551:U:H2'	54:S2:552:G:C8	2.46	0.51
54:S2:610:G:C6	54:S2:611:G:N7	2.79	0.51
54:S2:830:A:H2'	54:S2:831:G:O4'	2.10	0.51
54:S2:1034:A:C5	54:S2:1082:A:C6	2.98	0.51
54:S2:1045:U:O2	54:S2:1046:U:C6	2.63	0.51
54:S2:1058:A:C2	54:S2:1059:G:C6	2.99	0.51
54:S2:1126:G:C6	54:S2:1127:C:C4	2.99	0.51
54:S2:1134:G:C2	54:S2:1135:C:C2	2.99	0.51
54:S2:1234:C:C2	54:S2:1235:G:C8	2.99	0.51
54:S2:1531:A:H2'	54:S2:1532:C:O4'	2.11	0.51
56:SB:55:THR:C	56:SB:56:LYS:HG3	2.36	0.51
56:SB:157:GLN:HB2	56:SB:160:GLN:HG3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SI:101:ILE:HG13	61:SI:198:TYR:CD2	2.45	0.51
83:SZ:57:LYS:O	83:SZ:61:GLU:CB	2.58	0.51
1:A:64:ARG:HD3	32:5:4124:G:O6	2.11	0.51
1:A:193:ARG:HH22	32:5:3686:G:P	2.33	0.51
2:D:82:GLU:OE2	2:D:108:ARG:NH1	2.44	0.51
3:G:55:VAL:HG22	16:X:44:PRO:HA	1.92	0.51
24:f:48:ALA:HB2	24:f:71:TRP:CZ3	2.46	0.51
32:5:126:C:N3	32:5:127:G:C8	2.77	0.51
32:5:145:G:N1	32:5:146:G:N7	2.59	0.51
32:5:290:U:N3	32:5:291:U:C4	2.79	0.51
32:5:674:G:C6	32:5:675:C:C5	2.99	0.51
32:5:692:A:N3	32:5:693:C:C5	2.79	0.51
32:5:754:U:C2	32:5:755:C:C5	2.99	0.51
32:5:1186:U:C2	32:5:1187:G:C8	2.98	0.51
32:5:1454:G:C2	32:5:1455:G:C8	2.99	0.51
32:5:1819:G:C6	32:5:1820:C:C4	2.99	0.51
32:5:1875:C:H2'	32:5:1876:U:O4'	2.11	0.51
32:5:2339:G:C6	32:5:2340:C:C4	2.99	0.51
32:5:2438:A:N1	32:5:2441:C:C6	2.79	0.51
32:5:2440:U:O2'	32:5:2441:C:P	2.69	0.51
32:5:2576:G:N1	32:5:2577:C:C5	2.79	0.51
32:5:2702:C:C2	32:5:2715:G:C2	2.99	0.51
32:5:3648:A:N9	32:5:3785:A:N6	2.58	0.51
32:5:3655:C:C4	32:5:3656:A:C8	2.99	0.51
32:5:3848:U:C2	32:5:3849:A:N7	2.79	0.51
32:5:3893:C:C4	32:5:4568:A:C2	2.99	0.51
32:5:4101:C:C4	32:5:4102:C:C5	2.99	0.51
32:5:4239:A:N1	32:5:4240:G:C8	2.78	0.51
32:5:4271:A:N6	32:5:4336:A:H61	2.08	0.51
32:5:4279:A:C1'	32:5:4281:A:C5	2.94	0.51
32:5:4349:C:H3'	32:5:4350:C:C5'	2.40	0.51
32:5:4399:U:N3	32:5:4400:G:C8	2.78	0.51
32:5:4538:G:C5	32:5:4539:U:C5	2.99	0.51
32:5:4600:G:C2	32:5:4609:G:C6	2.99	0.51
32:5:4651:A:C6	32:5:4652:G:N7	2.79	0.51
32:5:4932:U:H2'	32:5:4933:C:C1'	2.41	0.51
32:5:5035:U:N3	32:5:5036:C:C5	2.79	0.51
32:5:5042:A:N1	32:5:5043:A:C6	2.79	0.51
33:7:93:G:N1	33:7:94:C:C4	2.79	0.51
34:8:63:U:O2	34:8:63:U:H2'	2.11	0.51
34:8:141:C:H2'	34:8:142:U:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:142:U:N3	34:8:143:G:C8	2.79	0.51
36:C:219:LYS:HA	36:C:222:ARG:HH11	1.76	0.51
38:F:229:PHE:CD2	38:F:238:ARG:HB3	2.46	0.51
39:I:14:ASN:N	39:I:14:ASN:OD1	2.44	0.51
42:j:39:TYR:HB3	42:j:40:PRO:HD3	1.93	0.51
48:z:135:ILE:HD12	48:z:189:VAL:HG22	1.92	0.51
54:S2:81:U:C4	54:S2:82:G:N7	2.79	0.51
54:S2:381:C:O2'	54:S2:382:C:O5'	2.28	0.51
54:S2:394:G:N2	54:S2:395:G:C8	2.79	0.51
54:S2:547:G:H2'	54:S2:548:C:H5''	1.92	0.51
54:S2:581:U:C2	54:S2:582:C:C6	3.00	0.51
54:S2:599:A:C1'	54:S2:605:A:N3	2.73	0.51
54:S2:793:G:C6	54:S2:794:A:C4	2.99	0.51
54:S2:956:G:C2	54:S2:957:A:C6	2.99	0.51
54:S2:992:A:C5	54:S2:993:G:C8	2.98	0.51
54:S2:1000:C:O2	54:S2:1000:C:C2'	2.44	0.51
54:S2:1024:A:H2'	54:S2:1025:U:O4'	2.11	0.51
54:S2:1032:C:C4	54:S2:1033:G:N7	2.79	0.51
54:S2:1040:G:C2	54:S2:1041:G:N9	2.79	0.51
54:S2:1189:A:H2'	54:S2:1190:A:H8	1.76	0.51
54:S2:1379:A:H2'	54:S2:1380:C:C6	2.46	0.51
54:S2:1404:U:H5'	54:S2:1404:U:C6	2.46	0.51
54:S2:1419:C:C2	54:S2:1429:G:C2	2.98	0.51
54:S2:1466:G:C6	54:S2:1467:C:N4	2.78	0.51
54:S2:1495:G:C2	54:S2:1496:U:H1'	2.46	0.51
54:S2:1510:G:N1	54:S2:1511:U:C6	2.79	0.51
54:S2:1596:U:N3	54:S2:1597:C:C5	2.79	0.51
57:SC:183:LYS:HG2	67:SW:95:PRO:HA	1.93	0.51
58:SE:121:TYR:HB2	58:SE:161:GLN:HE21	1.74	0.51
61:SI:65:PHE:CZ	61:SI:104:ILE:HG21	2.46	0.51
68:SX:93:PHE:CZ	68:SX:133:LEU:HB3	2.46	0.51
69:SY:88:LYS:CE	69:SY:97:TYR:OH	2.59	0.51
80:SS:20:ILE:HG22	80:SS:21:ASP:N	2.26	0.51
87:Sg:16:GLY:HA3	87:Sg:36:ARG:HB2	1.92	0.51
88:S1:7:TRP:CG	88:S1:8:GLU:H	2.28	0.51
1:A:207:VAL:CG1	32:5:3919:C:H5'	2.41	0.50
3:G:162:ASP:HB3	3:G:163:PRO:HD3	1.93	0.50
4:H:61:TRP:HE1	12:S:152:PHE:HD2	1.59	0.50
6:L:34:ARG:HD3	34:8:31:G:OP1	2.12	0.50
7:M:36:ALA:HB2	7:M:52:PHE:HE1	1.75	0.50
11:R:95:TRP:CG	11:R:99:MET:HE2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:U:56:LEU:HD13	14:U:61:VAL:HG23	1.93	0.50
19:a:63:LEU:C	19:a:63:LEU:CD2	2.78	0.50
19:a:110:LYS:CG	19:a:128:PHE:O	2.55	0.50
21:c:89:TYR:CZ	32:5:2673:G:N1	2.79	0.50
32:5:98:A:C5	32:5:99:A:C8	2.99	0.50
32:5:99:A:N6	32:5:100:C:C4	2.79	0.50
32:5:142:G:C6	32:5:144:G:N7	2.80	0.50
32:5:275:C:H2'	32:5:276:C:H5''	1.94	0.50
32:5:368:C:C2	32:5:374:G:C2	2.99	0.50
32:5:405:U:O4	32:5:407:A:OP2	2.29	0.50
32:5:735:G:C6	32:5:736:C:C4	2.99	0.50
32:5:1069:G:C5	32:5:1070:G:C8	2.99	0.50
32:5:1288:G:O2'	37:E:128:PRO:HB2	2.10	0.50
32:5:1325:C:O2'	32:5:3879:G:OP2	2.27	0.50
32:5:1367:C:H3'	32:5:1368:A:H5''	1.93	0.50
32:5:1394:G:C2'	32:5:1395:U:O5'	2.58	0.50
32:5:1397:A:O2'	32:5:1398:A:C5'	2.59	0.50
32:5:1550:G:N2	32:5:1579:C:H1'	2.26	0.50
32:5:1585:C:N3	32:5:1586:G:C8	2.80	0.50
32:5:1685:G:C2	32:5:1686:C:C4	3.00	0.50
32:5:1940:G:H2'	32:5:1941:A:H5''	1.93	0.50
32:5:1972:G:C2	32:5:1973:G:C5	2.99	0.50
32:5:1987:C:O2	32:5:1987:C:C2'	2.57	0.50
32:5:2311:C:O2	32:5:2311:C:H2'	2.11	0.50
32:5:2318:G:N2	32:5:2322:G:N3	2.59	0.50
32:5:2609:G:N1	32:5:2731:C:C2	2.79	0.50
32:5:2743:A:H2'	32:5:2744:A:C8	2.46	0.50
32:5:3703:G:C4	32:5:3704:U:C5	2.99	0.50
32:5:3855:C:H2'	32:5:3855:C:O2	2.10	0.50
32:5:4142:C:C4	32:5:4143:G:C6	3.00	0.50
32:5:4234:A:H4'	32:5:4235:G:OP1	2.11	0.50
32:5:4251:A:H2'	32:5:4252:C:C6	2.46	0.50
32:5:4401:G:C6	32:5:4402:C:C4	2.99	0.50
32:5:4538:G:C6	32:5:4539:U:C4	2.99	0.50
32:5:4734:A:N1	32:5:4735:G:C4	2.79	0.50
32:5:5011:A:C2	32:5:5012:G:C8	2.99	0.50
34:8:13:G:C2'	34:8:14:U:O5'	2.59	0.50
35:B:256:ALA:C	35:B:258:HIS:H	2.19	0.50
41:W:50:ASN:OD1	41:W:50:ASN:N	2.43	0.50
43:n:2:ARG:CD	54:S2:1842:C:OP2	2.57	0.50
50:3:10:G:C2	50:3:11:U:C5	2.98	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:51:G:N2	51:4:52:C:H1'	2.26	0.50
54:S2:70:G:N2	54:S2:71:G:H1'	2.26	0.50
54:S2:187:G:C6	54:S2:188:C:C4	2.99	0.50
54:S2:418:A:H2'	54:S2:418:A:N3	2.25	0.50
54:S2:443:U:C5	54:S2:444:G:N7	2.79	0.50
54:S2:522:A:O2'	62:SJ:131:ARG:NH2	2.44	0.50
54:S2:569:A:C6	54:S2:570:C:C4	2.99	0.50
54:S2:579:C:H2'	54:S2:579:C:O2	2.10	0.50
54:S2:676:C:N4	54:S2:677:G:C6	2.79	0.50
54:S2:1111:U:O2	54:S2:1112:U:H6	1.91	0.50
54:S2:1116:C:O2	54:S2:1116:C:O4'	2.27	0.50
54:S2:1180:C:H2'	54:S2:1181:A:C8	2.46	0.50
54:S2:1226:G:N2	54:S2:1639:G:C5	2.79	0.50
54:S2:1291:A:N3	86:Sf:140:TYR:CD2	2.78	0.50
54:S2:1302:G:C5	86:Sf:138:ARG:NH1	2.79	0.50
54:S2:1310:U:O2	54:S2:1310:U:C2'	2.59	0.50
54:S2:1408:U:O4	54:S2:1439:A:C6	2.62	0.50
54:S2:1526:G:C6	54:S2:1527:C:C4	2.99	0.50
54:S2:1535:U:O2'	74:SF:88:MET:SD	2.65	0.50
54:S2:1574:C:N3	54:S2:1575:G:C8	2.79	0.50
56:SB:76:ASN:O	56:SB:77:ASP:OD1	2.29	0.50
63:SL:112:HIS:HB3	63:SL:141:ASN:OD1	2.10	0.50
65:SO:128:ARG:HA	70:Sa:62:TYR:OH	2.11	0.50
68:SX:67:ARG:HG2	68:SX:115:ILE:HD13	1.91	0.50
84:Sc:46:VAL:HG22	84:Sc:56:LEU:CD2	2.41	0.50
3:G:74:LEU:HG	32:5:4076:G:H21	1.76	0.50
7:M:42:CYS:HG	7:M:77:TRP:CG	2.28	0.50
23:e:124:ASN:OD1	23:e:124:ASN:N	2.44	0.50
25:g:83:CYS:O	25:g:85:LYS:N	2.44	0.50
29:l:2:SER:N	32:5:2406:G:N7	2.59	0.50
32:5:118:C:H42	32:5:121:A:H62	1.57	0.50
32:5:271:C:C2	32:5:272:U:H6	2.24	0.50
32:5:273:U:C2'	32:5:274:C:O5'	2.60	0.50
32:5:500:G:N2	32:5:504:G:C5	2.79	0.50
32:5:1171:G:C6	32:5:1172:C:C5	2.99	0.50
32:5:1190:C:C4	32:5:1191:C:C5	3.00	0.50
32:5:1266:G:H4'	32:5:2112:G:C4	2.46	0.50
32:5:1268:G:C1'	32:5:2111:G:C5	2.94	0.50
32:5:1272:C:O3'	32:5:1273:G:O4'	2.28	0.50
32:5:1360:G:H2'	32:5:1361:G:O4'	2.12	0.50
32:5:1404:G:N1	32:5:1414:C:C4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1509:C:C2	32:5:1510:G:C8	2.99	0.50
32:5:1566:C:H2'	32:5:1567:U:H6	1.76	0.50
32:5:1666:C:H2'	32:5:1667:G:O5'	2.11	0.50
32:5:1671:U:O2	32:5:1672:U:C6	2.64	0.50
32:5:1672:U:N3	32:5:1673:U:C4	2.78	0.50
32:5:1776:A:N3	32:5:1777:C:C6	2.79	0.50
32:5:1785:C:OP1	39:I:133:GLN:NE2	2.44	0.50
32:5:1839:U:H3'	32:5:1840:G:N2	2.26	0.50
32:5:1867:A:H2'	32:5:1868:A:C8	2.47	0.50
32:5:1871:A:C6	32:5:1872:G:C5	3.00	0.50
32:5:2065:G:C6	32:5:2066:C:C5	2.99	0.50
32:5:2326:G:N2	32:5:2327:G:H1'	2.26	0.50
32:5:2521:G:C2	32:5:2535:G:N2	2.80	0.50
32:5:2555:G:H2'	32:5:2556:G:O4'	2.12	0.50
32:5:2589:C:C4	32:5:2590:G:C4	2.99	0.50
32:5:2613:C:N4	32:5:2614:C:C5	2.79	0.50
32:5:3847:C:H2'	32:5:3847:C:O2	2.11	0.50
32:5:4165:C:O2	32:5:4165:C:C2'	2.59	0.50
32:5:4166:G:N1	32:5:4167:G:C8	2.51	0.50
32:5:4479:A:C6	32:5:4480:A:H1'	2.46	0.50
32:5:4687:A:C8	32:5:4698:C:C6	2.99	0.50
32:5:4734:A:N3	32:5:4735:G:C8	2.80	0.50
32:5:4978:G:O2'	32:5:4979:A:O5'	2.22	0.50
32:5:4999:G:C5	32:5:5000:G:N7	2.77	0.50
34:8:64:U:O2	34:8:65:A:C5	2.60	0.50
34:8:64:U:C4	34:8:65:A:N6	2.78	0.50
34:8:84:A:H5'	34:8:85:U:C6	2.46	0.50
35:B:115:LYS:HB3	35:B:119:TYR:OH	2.11	0.50
37:E:177:LEU:HD11	37:E:257:ILE:HD12	1.93	0.50
38:F:194:HIS:C	38:F:196:ILE:H	2.18	0.50
43:n:7:LYS:NZ	54:S2:1843:G:C5'	2.46	0.50
46:K:126:SER:O	46:K:128:THR:N	2.44	0.50
48:z:126:GLN:HE22	48:z:157:ILE:CG1	2.24	0.50
50:3:65:G:C2	50:3:66:C:C6	2.99	0.50
51:4:45:G:C4	51:4:46:C:C6	2.99	0.50
52:9:33:ARG:NH1	52:9:35:ILE:O	2.42	0.50
54:S2:51:U:O2	54:S2:52:G:C8	2.63	0.50
54:S2:88:G:N3	54:S2:500:A:C2	2.80	0.50
54:S2:367:U:O2'	54:S2:371:A:C5	2.48	0.50
54:S2:570:C:C2	54:S2:571:U:C5	2.98	0.50
54:S2:1105:G:C5	54:S2:1106:C:C5	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1292:C:O4'	86:Sf:149:CYS:N	2.44	0.50
54:S2:1341:C:H4'	54:S2:1342:U:OP1	2.11	0.50
54:S2:1590:C:H3'	54:S2:1591:C:H6	1.76	0.50
54:S2:1753:C:C2	54:S2:1754:G:C8	2.99	0.50
54:S2:1793:A:C2	54:S2:1794:C:C4	2.99	0.50
55:SA:53:ARG:HD3	66:SV:82:ASN:CB	2.41	0.50
56:SB:56:LYS:CD	56:SB:57:ILE:N	2.73	0.50
77:SP:43:ARG:HD3	77:SP:47:ARG:HG3	1.93	0.50
78:SQ:102:GLU:OE2	78:SQ:102:GLU:N	2.45	0.50
83:SZ:51:ASP:OD1	83:SZ:51:ASP:N	2.28	0.50
87:Sg:32:LEU:HD13	87:Sg:92:LEU:HD11	1.93	0.50
87:Sg:60:ARG:O	87:Sg:62:HIS:N	2.44	0.50
5:J:107:PHE:CZ	5:J:130:PHE:CD2	3.00	0.50
5:J:127:GLY:O	32:5:4251:A:N6	2.44	0.50
11:R:95:TRP:O	11:R:97:ARG:N	2.45	0.50
26:h:89:ARG:HA	26:h:92:ARG:HH21	1.76	0.50
30:m:111:ARG:NH2	32:5:4698:C:C2	2.79	0.50
32:5:209:U:O2	32:5:233:U:C2	2.65	0.50
32:5:291:U:O2	32:5:293:G:H3'	2.12	0.50
32:5:450:G:C6	32:5:1295:C:N3	2.79	0.50
32:5:747:A:O2'	32:5:748:G:OP2	2.22	0.50
32:5:1072:C:C2'	32:5:1072:C:O2	2.60	0.50
32:5:1098:G:C2	32:5:1099:C:C2	2.99	0.50
32:5:1170:G:N1	32:5:1171:G:C5	2.79	0.50
32:5:1196:G:C2	32:5:1197:C:C2	2.99	0.50
32:5:1280:C:O2	32:5:1282:G:C8	2.65	0.50
32:5:1362:G:C6	32:5:1363:C:C4	2.99	0.50
32:5:1446:C:C4	32:5:1447:C:C5	2.99	0.50
32:5:1993:C:N3	32:5:1994:C:C5	2.79	0.50
32:5:2080:U:C4	32:5:2081:C:N4	2.79	0.50
32:5:2087:C:H3'	32:5:2087:C:C6	2.46	0.50
32:5:2507:A:N7	32:5:2508:U:C5	2.80	0.50
32:5:2783:A:C5	32:5:2784:C:C4	3.00	0.50
32:5:2857:A:C6	32:5:2858:A:C6	3.00	0.50
32:5:3805:U:N3	32:5:3806:G:C8	2.79	0.50
32:5:4093:G:C5	32:5:4094:G:N7	2.79	0.50
32:5:4239:A:N6	32:5:4240:G:C6	2.79	0.50
32:5:4278:C:H1'	32:5:4282:A:N3	2.27	0.50
32:5:4323:A:C4	32:5:4324:A:C8	2.99	0.50
32:5:4405:G:C5	32:5:4406:U:C6	2.99	0.50
32:5:4735:G:C6	32:5:4736:C:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4881:U:O2'	32:5:4882:U:C6	2.64	0.50
34:8:68:G:C2	34:8:91:A:N3	2.78	0.50
34:8:80:A:C5	34:8:81:C:C6	2.99	0.50
34:8:145:C:C2	34:8:146:U:C5	3.00	0.50
46:K:147:HIS:N	46:K:147:HIS:CD2	2.79	0.50
51:4:51:G:N2	51:4:296:C:C2	2.79	0.50
51:4:60:U:C2	51:4:61:C:C6	3.00	0.50
54:S2:46:A:C2	54:S2:99:A:C8	3.00	0.50
54:S2:310:C:C2	54:S2:311:C:C4	3.00	0.50
54:S2:336:A:C6	54:S2:337:C:C4	2.99	0.50
54:S2:339:A:N3	54:S2:340:C:C4	2.77	0.50
54:S2:1067:C:H2'	54:S2:1067:C:O2	2.10	0.50
54:S2:1234:C:O2	54:S2:1234:C:C2'	2.55	0.50
54:S2:1284:A:C6	76:SM:109:VAL:HG12	2.47	0.50
54:S2:1319:U:H2'	54:S2:1320:G:O4'	2.10	0.50
54:S2:1333:U:H2'	54:S2:1333:U:O2	2.11	0.50
54:S2:1433:C:C2'	54:S2:1434:C:C1'	2.86	0.50
54:S2:1643:U:N3	54:S2:1644:C:C4	2.80	0.50
54:S2:1859:A:C6	54:S2:1860:A:N7	2.80	0.50
54:S2:1859:A:C4	54:S2:1860:A:C8	3.00	0.50
56:SB:67:PHE:HB3	56:SB:86:LEU:O	2.11	0.50
61:SI:25:ARG:HB2	61:SI:27:TYR:CD2	2.46	0.50
74:SF:128:ILE:HD13	84:Sc:68:LEU:HB2	1.78	0.50
74:SF:194:ASP:OD1	74:SF:194:ASP:C	2.54	0.50
76:SM:16:THR:HA	76:SM:19:GLN:CG	2.40	0.50
79:SR:91:LEU:HD12	79:SR:91:LEU:C	2.36	0.50
83:SZ:46:ASN:HD21	83:SZ:78:LYS:CD	2.23	0.50
87:Sg:131:LEU:HD22	87:Sg:139:LYS:HB3	1.92	0.50
87:Sg:239:LEU:HD23	87:Sg:250:ALA:HA	1.93	0.50
88:S1:4:TYR:HB2	88:S1:10:PHE:HB2	1.93	0.50
89:S4:92:ASP:OD1	89:S4:92:ASP:N	2.44	0.50
3:G:53:ARG:HG3	34:8:150:C:N4	2.26	0.50
9:O:66:PRO:HD2	35:B:264:PHE:CD2	2.47	0.50
11:R:8:LYS:HG3	11:R:22:VAL:HG11	1.93	0.50
12:S:13:VAL:HG22	12:S:63:TYR:HB3	1.94	0.50
12:S:166:ARG:HB2	32:5:1919:G:N2	2.25	0.50
23:e:6:PRO:HA	23:e:74:PHE:HE1	1.75	0.50
25:g:64:LEU:HD23	32:5:2749:C:O2'	2.11	0.50
28:k:11:PHE:HZ	28:k:56:LEU:HD11	1.76	0.50
30:m:97:ARG:HD2	30:m:122:ARG:HD2	1.94	0.50
32:5:45:U:N3	32:5:46:U:C4	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:78:U:N3	32:5:336:A:N6	2.59	0.50
32:5:292:G:HO2'	32:5:293:G:P	2.29	0.50
32:5:385:A:C2	32:5:386:A:C5	2.99	0.50
32:5:476:G:C6	32:5:477:C:C4	2.99	0.50
32:5:677:G:C6	32:5:678:C:N4	2.79	0.50
32:5:720:G:C2	32:5:721:G:C8	3.00	0.50
32:5:961:G:C4'	32:5:962:C:OP1	2.60	0.50
32:5:1200:G:C6	32:5:1201:U:C4	2.99	0.50
32:5:1218:G:C6	32:5:1219:G:H1'	2.46	0.50
32:5:1260:G:C6	32:5:1261:G:N7	2.79	0.50
32:5:1325:C:O4'	32:5:3901:A:N1	2.44	0.50
32:5:1464:C:C4	32:5:1465:G:C8	3.00	0.50
32:5:1806:G:N2	32:5:1807:C:N1	2.60	0.50
32:5:1963:C:C4	32:5:1964:A:N7	2.79	0.50
32:5:2046:G:O2'	32:5:2047:A:OP2	2.29	0.50
32:5:2128:G:C5	32:5:2129:C:C5	3.00	0.50
32:5:2363:A:O2'	32:5:4560:C:N4	2.45	0.50
32:5:2368:A:N1	32:5:2788:U:C4	2.80	0.50
32:5:2440:U:O2'	32:5:2441:C:OP1	2.24	0.50
32:5:2479:G:C2	32:5:2480:G:C8	3.00	0.50
32:5:2482:C:N3	32:5:2483:G:N7	2.60	0.50
32:5:2496:G:C2	32:5:2497:C:N1	2.79	0.50
32:5:2591:A:H62	32:5:2753:G:N2	2.09	0.50
32:5:2595:C:N3	32:5:2596:G:N7	2.59	0.50
32:5:2759:G:H2'	32:5:2760:G:H1'	1.92	0.50
32:5:2844:A:N1	32:5:3839:G:C5	2.80	0.50
32:5:2908:U:N3	32:5:2909:C:C5	2.80	0.50
32:5:3604:A:C5	32:5:3605:C:C6	3.00	0.50
32:5:3796:U:C2	32:5:3797:C:C5	2.99	0.50
32:5:3862:A:C5	32:5:3863:C:C5	3.00	0.50
32:5:4236:G:C2	32:5:4289:U:O2	2.65	0.50
32:5:4551:U:H2'	32:5:4552:U:H6	1.77	0.50
32:5:4591:U:H2'	32:5:4592:C:C6	2.47	0.50
32:5:4628:U:O2	32:5:4629:U:C6	2.65	0.50
32:5:4771:C:H6	32:5:4772:C:C6	2.29	0.50
32:5:4904:G:N1	32:5:4905:C:C4	2.80	0.50
32:5:5050:C:C2	32:5:5051:C:C6	3.00	0.50
33:7:69:U:N3	33:7:70:G:N7	2.59	0.50
34:8:70:G:N3	34:8:87:G:N2	2.59	0.50
34:8:79:G:N2	34:8:80:A:C6	2.79	0.50
34:8:137:A:C2	34:8:138:C:C6	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:C:41:HIS:C	36:C:41:HIS:CD2	2.89	0.50
40:P:57:CYS:HB3	40:P:72:GLN:HB2	1.92	0.50
42:j:58:THR:O	42:j:59:THR:C	2.54	0.50
47:q:96:THR:HG22	47:q:97:GLU:H	1.76	0.50
50:3:9:A:O4'	50:3:46:G:N2	2.45	0.50
50:3:65:G:N1	50:3:66:C:C4	2.79	0.50
51:4:45:G:C2	51:4:46:C:N1	2.80	0.50
54:S2:27:A:C2	54:S2:28:U:C1'	2.94	0.50
54:S2:29:G:C4	54:S2:30:C:C5	2.99	0.50
54:S2:31:U:O2	54:S2:644:G:C2	2.65	0.50
54:S2:83:A:C5	54:S2:84:A:C8	3.00	0.50
54:S2:339:A:H2'	54:S2:340:C:H6	1.73	0.50
54:S2:399:C:O4'	68:SX:11:ARG:NH1	2.38	0.50
54:S2:497:C:N3	54:S2:506:G:N2	2.59	0.50
54:S2:498:C:H2'	54:S2:499:G:O4'	2.11	0.50
54:S2:519:A:N3	54:S2:520:A:C8	2.80	0.50
54:S2:525:A:N6	54:S2:588:G:H22	2.09	0.50
54:S2:648:A:C2	54:S2:649:U:N1	2.77	0.50
54:S2:869:A:C5	60:SH:114:GLN:HB3	2.46	0.50
54:S2:962:A:C4	54:S2:963:A:C8	3.00	0.50
54:S2:978:G:C4	54:S2:979:C:C6	2.98	0.50
54:S2:1018:U:C2	54:S2:1019:C:C6	2.93	0.50
54:S2:1110:G:HO2'	79:SR:122:PRO:CB	2.21	0.50
54:S2:1123:C:H2'	54:S2:1123:C:O2	2.11	0.50
54:S2:1224:G:C6	54:S2:1225:U:N1	2.79	0.50
54:S2:1232:U:C2	54:S2:1233:G:C8	2.93	0.50
54:S2:1372:U:C2	54:S2:1373:C:C5	2.99	0.50
54:S2:1431:G:C5	54:S2:1432:U:C5	3.00	0.50
56:SB:145:LYS:CE	79:SR:128:PHE:CE2	2.79	0.50
74:SF:91:ARG:O	74:SF:92:ILE:C	2.54	0.50
80:SS:71:MET:HE3	80:SS:99:LEU:HD13	1.94	0.50
87:Sg:87:LEU:HD11	87:Sg:122:SER:HB3	1.94	0.50
1:A:216:HIS:CD2	1:A:216:HIS:N	2.78	0.50
9:O:133:ARG:HD2	32:5:1928:C:N3	2.27	0.50
13:T:140:PHE:HE2	38:F:77:ALA:HB2	1.77	0.50
16:X:117:TYR:O	16:X:118:ASP:C	2.53	0.50
17:Y:75:ARG:HD2	34:8:73:U:P	2.51	0.50
23:e:57:ASN:ND2	32:5:1899:G:O2'	2.44	0.50
23:e:81:ASN:OD1	23:e:81:ASN:C	2.54	0.50
25:g:97:ILE:CA	32:5:4120:U:O4	2.58	0.50
26:h:118:LYS:C	26:h:119:PHE:CD1	2.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:77:U:H3	32:5:335:A:N6	2.04	0.50
32:5:211:G:N3	32:5:211:G:H2'	2.26	0.50
32:5:254:G:C6	32:5:255:C:C5	2.99	0.50
32:5:268:G:C6	32:5:269:G:N7	2.80	0.50
32:5:370:U:C4	32:5:371:A:C6	3.00	0.50
32:5:455:C:N3	32:5:456:C:C6	2.79	0.50
32:5:671:G:C6	32:5:672:C:C4	3.00	0.50
32:5:739:G:N1	32:5:740:G:C5	2.80	0.50
32:5:918:G:H2'	32:5:918:G:N3	2.27	0.50
32:5:1197:C:C2	32:5:1198:G:C8	2.99	0.50
32:5:1289:C:C4	32:5:1290:G:N7	2.80	0.50
32:5:1311:G:C4	32:5:1312:A:C8	2.99	0.50
32:5:2342:G:N2	32:5:2344:U:O4'	2.45	0.50
32:5:2368:A:N6	32:5:2827:G:O2'	2.45	0.50
32:5:2391:G:C4	32:5:2392:C:C5	2.99	0.50
32:5:2452:G:N2	32:5:2467:U:N3	2.59	0.50
32:5:2453:A:C5	32:5:2507:A:C8	2.99	0.50
32:5:2454:U:N3	32:5:2455:G:C8	2.79	0.50
32:5:2503:G:H5'	32:5:2504:C:O5'	2.12	0.50
32:5:2539:C:C2	32:5:2540:C:C6	2.99	0.50
32:5:2594:C:O2	32:5:2595:C:C6	2.64	0.50
32:5:2603:C:C2	32:5:2604:C:C6	2.99	0.50
32:5:2895:A:C6	32:5:2896:G:N7	2.80	0.50
32:5:3621:A:C2	32:5:3622:C:H1'	2.45	0.50
32:5:3621:A:C8	32:5:4642:U:O2	2.64	0.50
32:5:3689:G:C6	32:5:3690:U:C5	3.00	0.50
32:5:3733:A:C6	32:5:3734:U:C4	2.98	0.50
32:5:3858:C:N3	32:5:3859:G:N9	2.59	0.50
32:5:3878:C:C2	32:5:4518:A:C6	2.99	0.50
32:5:3899:G:C5'	35:B:257:TRP:HD1	2.25	0.50
32:5:4324:A:C6	32:5:4325:A:N6	2.79	0.50
32:5:4526:U:H2'	32:5:4527:G:O4'	2.11	0.50
32:5:4950:U:C5	32:5:4952:G:C8	2.99	0.50
33:7:30:C:C4	33:7:48:G:C2	3.00	0.50
33:7:110:G:C6	33:7:111:C:C4	3.00	0.50
34:8:103:A:N7	34:8:104:A:N7	2.58	0.50
35:B:254:ILE:HG23	35:B:266:VAL:HG11	1.93	0.50
39:I:75:TYR:CE2	39:I:150:GLU:HB3	2.46	0.50
47:q:24:TYR:HB3	47:q:90:PHE:HB3	1.92	0.50
47:q:32:ALA:HB2	47:q:187:LEU:CD2	2.40	0.50
48:z:88:ASP:OD2	48:z:287:THR:HG22	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:274:GLY:HA2	48:z:282:PHE:CD1	2.47	0.50
50:3:25:C:C4	50:3:26:G:C8	3.00	0.50
51:4:30:C:C2	51:4:42:G:C2	3.00	0.50
54:S2:74:G:H5'	54:S2:75:G:OP2	2.11	0.50
54:S2:141:A:N6	54:S2:177:G:N2	2.60	0.50
54:S2:328:U:H2'	54:S2:329:G:O4'	2.11	0.50
54:S2:413:G:H2'	54:S2:414:A:O5'	2.12	0.50
54:S2:803:C:O2	54:S2:803:C:H2'	2.10	0.50
54:S2:832:G:N2	54:S2:833:C:H1'	2.27	0.50
54:S2:947:G:C4	54:S2:948:C:C6	2.99	0.50
54:S2:1181:A:O2'	54:S2:1182:A:C8	2.57	0.50
54:S2:1184:G:C5	54:S2:1185:C:C5	2.99	0.50
54:S2:1291:A:O2'	86:Sf:148:TYR:C	2.55	0.50
54:S2:1309:C:H2'	86:Sf:143:LYS:HG2	1.91	0.50
54:S2:1466:G:N1	54:S2:1467:C:C4	2.79	0.50
54:S2:1784:G:C6	54:S2:1785:C:C4	3.00	0.50
57:SC:209:VAL:HG21	57:SC:233:LEU:CD1	2.42	0.50
58:SE:72:ILE:HG22	58:SE:73:ASP:OD1	2.11	0.50
59:SG:57:ASP:HB3	59:SG:58:LYS:O	2.11	0.50
60:SH:19:PHE:CZ	60:SH:50:GLU:HB2	2.46	0.50
78:SQ:34:VAL:O	78:SQ:36:GLY:N	2.45	0.50
79:SR:18:GLU:CG	79:SR:70:SER:HB2	2.42	0.50
83:SZ:58:LEU:HA	83:SZ:62:VAL:HG23	1.93	0.50
83:SZ:85:ARG:O	83:SZ:89:GLN:OE1	2.29	0.50
1:A:64:ARG:NH1	32:5:4124:G:C2	2.80	0.50
1:A:182:ALA:HB2	32:5:3652:A:O2'	2.11	0.50
11:R:4:LEU:HD21	11:R:33:ALA:HB2	1.93	0.50
14:U:113:ARG:NH1	32:5:2703:G:OP1	2.44	0.50
27:i:38:LYS:O	27:i:42:ASP:OD1	2.29	0.50
32:5:30:C:H2'	32:5:31:U:O5'	2.12	0.50
32:5:57:G:N2	32:5:58:G:N2	2.59	0.50
32:5:218:A:N7	36:C:181:LYS:HG2	2.25	0.50
32:5:244:G:N1	32:5:246:G:N7	2.57	0.50
32:5:298:G:C2	32:5:299:C:N1	2.80	0.50
32:5:722:G:N2	36:C:343:GLN:HE22	2.08	0.50
32:5:1097:C:H42	32:5:1198:G:H1	1.60	0.50
32:5:1374:G:C4	32:5:1375:C:C6	3.00	0.50
32:5:1609:U:C4	32:5:1610:C:C4	3.00	0.50
32:5:1895:G:H2'	32:5:1896:A:O5'	2.12	0.50
32:5:1895:G:C6	32:5:1896:A:C2	2.99	0.50
32:5:1906:U:C2'	32:5:1907:A:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1943:A:C5	32:5:1944:A:H1'	2.47	0.50
32:5:2082:G:C6	32:5:2083:C:N4	2.80	0.50
32:5:2273:G:C2	32:5:2274:C:C2	3.00	0.50
32:5:2399:G:N2	32:5:2400:G:C4	2.80	0.50
32:5:2408:U:N1	32:5:2409:U:O4	2.44	0.50
32:5:2495:U:C2	32:5:2496:G:N7	2.78	0.50
32:5:2645:G:C5	32:5:2646:C:C5	3.00	0.50
32:5:2656:U:C4	32:5:2657:G:C5	3.00	0.50
32:5:2674:A:H3'	32:5:2675:G:O4'	2.11	0.50
32:5:2711:G:H5''	32:5:2712:G:H5''	1.92	0.50
32:5:3597:G:C2	32:5:3598:C:C2	3.00	0.50
32:5:3645:U:OP1	32:5:3646:A:OP2	2.30	0.50
32:5:3717:A:N1	32:5:3736:A:N1	2.59	0.50
32:5:3722:G:C6	32:5:3723:A:C5	2.99	0.50
32:5:4139:G:C2	32:5:4140:C:N1	2.79	0.50
32:5:4269:G:C6	32:5:4270:C:C4	3.00	0.50
32:5:4649:G:H2'	32:5:4650:G:O4'	2.12	0.50
32:5:4653:C:C2	32:5:4654:C:C6	2.85	0.50
32:5:4977:A:C4	32:5:4978:G:C2	2.99	0.50
34:8:9:A:N3	34:8:10:G:C8	2.80	0.50
38:F:161:TYR:HE2	38:F:168:ARG:NH2	2.04	0.50
39:I:171:TRP:HE3	39:I:181:PHE:HB2	1.77	0.50
40:P:67:VAL:HG13	40:P:82:ARG:HG3	1.92	0.50
46:K:117:ARG:HE	46:K:117:ARG:CA	2.25	0.50
46:K:162:CYS:N	46:K:163:PRO:HD3	2.27	0.50
48:z:24:ASN:OD1	48:z:24:ASN:C	2.54	0.50
48:z:90:GLY:O	48:z:287:THR:HG21	2.12	0.50
48:z:283:GLU:OE2	48:z:347:GLN:HB2	2.11	0.50
51:4:50:G:C4	51:4:51:G:C8	3.00	0.50
51:4:140:C:H2'	51:4:141:C:H6	1.76	0.50
51:4:173:A:H2'	51:4:173:A:OP2	2.11	0.50
54:S2:377:G:C5	54:S2:378:U:C5	3.00	0.50
54:S2:452:G:C2'	54:S2:453:C:O5'	2.59	0.50
54:S2:664:A:C2	54:S2:665:G:C8	3.00	0.50
54:S2:952:G:H2'	54:S2:953:C:O4'	2.12	0.50
54:S2:962:A:N3	54:S2:963:A:C8	2.79	0.50
54:S2:1029:G:C6	54:S2:1030:A:N7	2.79	0.50
54:S2:1107:G:C2	54:S2:1108:G:C8	2.99	0.50
54:S2:1404:U:C4'	54:S2:1581:C:O2	2.60	0.50
54:S2:1410:C:C4	54:S2:1411:G:C5	2.99	0.50
54:S2:1573:G:C2	54:S2:1574:C:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1771:G:N1	54:S2:1772:C:C4	2.80	0.50
54:S2:1797:U:H2'	54:S2:1798:C:H6	1.76	0.50
54:S2:1828:C:C2'	54:S2:1829:G:O4'	2.56	0.50
58:SE:54:TYR:CD1	69:SY:17:LEU:HD11	2.46	0.50
76:SM:19:GLN:CG	76:SM:88:TRP:HB3	2.42	0.50
79:SR:85:VAL:HG12	79:SR:86:PRO:N	2.27	0.50
79:SR:103:LYS:CG	79:SR:117:LEU:HD11	2.41	0.50
84:Sc:45:ASN:HD22	84:Sc:68:LEU:CD2	2.13	0.50
3:G:61:ILE:O	3:G:62:ARG:C	2.54	0.50
5:J:154:LYS:O	5:J:155:HIS:HB2	2.11	0.50
6:L:74:ARG:NH2	32:5:76:A:C8	2.80	0.50
7:M:3:PHE:CZ	32:5:4763:U:H1'	2.47	0.50
11:R:151:ARG:HH12	63:SL:118:ARG:CD	2.23	0.50
32:5:112:C:N3	32:5:113:A:C8	2.80	0.50
32:5:208:A:C4'	32:5:232:G:H22	2.20	0.50
32:5:265:C:H4'	32:5:266:C:OP1	2.12	0.50
32:5:449:C:N3	32:5:450:G:N7	2.59	0.50
32:5:467:U:C4	32:5:468:U:C5	2.99	0.50
32:5:986:C:H2'	32:5:987:C:O4'	2.11	0.50
32:5:994:G:C2	32:5:995:C:C2	3.00	0.50
32:5:1168:G:N2	32:5:1169:G:C4	2.80	0.50
32:5:1290:G:C2	32:5:1291:G:C8	3.00	0.50
32:5:1359:G:H2'	32:5:1360:G:N9	2.26	0.50
32:5:1395:U:H2'	32:5:1396:G:O5'	2.10	0.50
32:5:1412:G:C2	32:5:1413:C:C2	3.00	0.50
32:5:1427:A:H2'	32:5:1428:U:O5'	2.12	0.50
32:5:1441:C:H2'	32:5:1442:C:O4'	2.12	0.50
32:5:1491:A:C2	32:5:1492:G:C8	3.00	0.50
32:5:1751:A:N6	32:5:1752:G:C8	2.79	0.50
32:5:1816:C:O2	32:5:1816:C:C2'	2.60	0.50
32:5:1938:C:H4'	32:5:1939:A:O5'	2.11	0.50
32:5:2110:C:C6	32:5:2110:C:P	3.05	0.50
32:5:2529:A:C8	32:5:2532:C:N4	2.80	0.50
32:5:2644:G:C2	32:5:2645:G:N9	2.80	0.50
32:5:2645:G:C4	32:5:2646:C:C6	3.00	0.50
32:5:2783:A:C2	32:5:2784:C:N1	2.80	0.50
32:5:3711:A:H2'	32:5:3713:U:OP2	2.11	0.50
32:5:3741:C:N3	32:5:3742:G:C5	2.78	0.50
32:5:3755:G:N1	32:5:3770:U:C2	2.68	0.50
32:5:3862:A:C2	32:5:3863:C:C1'	2.94	0.50
32:5:3936:A:C6	32:5:3937:C:C5	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4066:U:H2'	32:5:4067:U:O4'	2.12	0.50
32:5:4098:A:C6	32:5:4099:G:N7	2.80	0.50
32:5:4314:C:H2'	32:5:4314:C:O2	2.12	0.50
32:5:4723:A:C4	32:5:4724:A:C8	2.99	0.50
32:5:5023:C:O4'	32:5:5023:C:O2	2.26	0.50
32:5:5035:U:N3	32:5:5036:C:C6	2.80	0.50
34:8:5:U:H2'	34:8:6:C:C6	2.47	0.50
35:B:314:ILE:HD12	35:B:314:ILE:N	2.27	0.50
54:S2:84:A:C4	54:S2:85:A:C8	3.00	0.50
54:S2:316:G:C2	54:S2:317:C:C6	3.00	0.50
54:S2:351:G:N1	54:S2:352:U:C5	2.79	0.50
54:S2:452:G:H2'	54:S2:453:C:O5'	2.12	0.50
54:S2:457:C:C4	54:S2:458:A:C5	3.00	0.50
54:S2:527:C:H2'	54:S2:528:A:H8	1.77	0.50
54:S2:828:G:C6	54:S2:829:C:C4	3.00	0.50
54:S2:869:A:N7	60:SH:115:LYS:HB3	2.25	0.50
54:S2:902:G:C2	54:S2:903:A:C4	3.00	0.50
54:S2:990:A:H2'	54:S2:990:A:N3	2.27	0.50
54:S2:999:G:N2	54:S2:1000:C:N1	2.59	0.50
54:S2:1039:C:O2	54:S2:1039:C:H2'	2.12	0.50
54:S2:1045:U:C2	54:S2:1046:U:C6	2.99	0.50
54:S2:1058:A:N3	54:S2:1058:A:H2'	2.26	0.50
54:S2:1064:C:N3	54:S2:1065:G:C8	2.79	0.50
54:S2:1077:A:C2	54:S2:1078:C:C6	3.00	0.50
54:S2:1109:C:H1'	54:S2:1110:G:O5'	2.12	0.50
54:S2:1500:G:C5	54:S2:1501:C:C5	3.00	0.50
54:S2:1508:A:C6	54:S2:1510:G:H1'	2.46	0.50
54:S2:1679:A:OP1	74:SF:60:ARG:NH2	2.41	0.50
58:SE:11:ARG:HH21	58:SE:20:LEU:HB3	1.77	0.50
62:SJ:130:ILE:HG12	62:SJ:135:ILE:HD11	1.94	0.50
83:SZ:49:LEU:HA	83:SZ:83:LEU:HD13	1.92	0.50
84:Sc:13:ARG:N	84:Sc:13:ARG:CD	2.73	0.50
84:Sc:13:ARG:HG3	84:Sc:54:ASP:O	2.09	0.50
84:Sc:60:GLU:HG2	84:Sc:63:ARG:HD3	1.89	0.50
88:S1:48:CYS:C	88:S1:49:LEU:CD2	2.71	0.50
1:A:242:ARG:HH11	1:A:242:ARG:HB2	1.77	0.50
7:M:46:ARG:NH1	32:5:936:C:H2'	2.25	0.50
7:M:116:ARG:NH2	9:O:201:PHE:CE2	2.80	0.50
8:N:120:TRP:HE1	8:N:122:GLY:C	2.19	0.50
11:R:130:ASN:O	11:R:130:ASN:CG	2.54	0.50
11:R:166:THR:HG23	54:S2:872:A:C2'	2.34	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Y:49:ILE:HD13	17:Y:80:ILE:HD13	1.93	0.50
18:Z:127:ASN:N	18:Z:127:ASN:ND2	2.58	0.50
20:b:28:ARG:HB3	32:5:1805:A:C8	2.46	0.50
32:5:57:G:C2'	32:5:58:G:O5'	2.59	0.50
32:5:139:G:H2'	32:5:140:G:O4'	2.12	0.50
32:5:144:G:N2	32:5:145:G:C5	2.79	0.50
32:5:423:G:C2'	40:P:118:GLN:HE21	2.24	0.50
32:5:518:G:C6	32:5:519:C:C4	3.00	0.50
32:5:731:G:C6	32:5:732:A:C4	3.00	0.50
32:5:917:A:N1	32:5:919:C:C5	2.75	0.50
32:5:1247:U:O2	32:5:1248:C:C6	2.64	0.50
32:5:1262:G:N3	32:5:1263:A:C8	2.80	0.50
32:5:1276:C:O2	32:5:1276:C:H2'	2.12	0.50
32:5:1368:A:O2'	32:5:1369:C:P	2.70	0.50
32:5:1378:C:H5''	32:5:1379:C:C3'	2.42	0.50
32:5:1390:G:H3'	32:5:1390:G:C8	2.47	0.50
32:5:1394:G:H2'	32:5:1395:U:C5	2.47	0.50
32:5:1435:G:C6	32:5:1436:C:C4	2.99	0.50
32:5:1492:G:C2	32:5:1493:G:C4	3.00	0.50
32:5:1609:U:O4	32:5:1610:C:C4	2.65	0.50
32:5:1829:G:C4	32:5:1830:G:C8	3.00	0.50
32:5:1848:C:H5''	32:5:1848:C:C6	2.46	0.50
32:5:1993:C:O2'	46:K:135:THR:HG21	2.12	0.50
32:5:2021:G:C2	32:5:2022:C:N1	2.80	0.50
32:5:2083:C:H3'	32:5:2084:C:H5''	1.94	0.50
32:5:2267:U:H3'	32:5:2268:A:H5''	1.94	0.50
32:5:2325:C:C2	32:5:2326:G:C8	2.98	0.50
32:5:2446:C:O2'	32:5:2447:U:C5'	2.60	0.50
32:5:2509:C:N3	32:5:2510:G:C6	2.79	0.50
32:5:2644:G:N2	32:5:2645:G:H1'	2.26	0.50
32:5:2646:C:O2	32:5:2646:C:C2'	2.59	0.50
32:5:2712:G:C6	32:5:2713:C:C5	3.00	0.50
32:5:2805:C:C4	32:5:2806:A:C5	3.00	0.50
32:5:2884:G:HO2'	54:S2:1731:A:C1'	2.23	0.50
32:5:3837:C:H2'	32:5:3838:U:C1'	2.42	0.50
32:5:4107:G:C2	32:5:4108:G:C8	3.00	0.50
32:5:4275:G:C6	32:5:4276:G:N7	2.80	0.50
32:5:4287:G:C4	32:5:4288:C:C5	3.00	0.50
32:5:4565:C:H1'	35:B:262:VAL:HG21	1.93	0.50
32:5:4981:G:N1	32:5:4982:A:C5	2.79	0.50
33:7:114:U:H2'	33:7:115:A:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:80:A:C5	34:8:81:C:C5	2.98	0.50
34:8:123:U:O2	34:8:125:C:O2	2.29	0.50
38:F:124:PHE:CD2	38:F:196:ILE:CG2	2.95	0.50
51:4:51:G:N3	51:4:52:C:C6	2.80	0.50
51:4:54:G:N2	51:4:293:C:H1'	2.26	0.50
54:S2:43:U:C2	54:S2:484:A:H2	2.30	0.50
54:S2:104:A:C6	54:S2:105:U:C6	2.99	0.50
54:S2:142:C:N3	59:SG:185:LEU:HD22	2.27	0.50
54:S2:662:G:O5'	54:S2:662:G:C8	2.65	0.50
54:S2:909:G:N3	54:S2:910:G:C8	2.78	0.50
54:S2:998:A:OP2	54:S2:999:G:C8	2.64	0.50
54:S2:1039:C:C4	54:S2:1040:G:N7	2.80	0.50
54:S2:1083:A:N7	54:S2:1861:G:C6	2.80	0.50
54:S2:1184:G:C6	54:S2:1185:C:C5	2.99	0.50
54:S2:1310:U:H4'	86:Sf:143:LYS:HG3	1.94	0.50
54:S2:1405:A:H1'	54:S2:1580:A:N1	2.26	0.50
54:S2:1449:G:C2	54:S2:1450:G:C4	3.00	0.50
54:S2:1594:A:C2	54:S2:1595:U:N1	2.79	0.50
54:S2:1840:U:C4	54:S2:1841:C:C5	2.98	0.50
55:SA:11:LYS:O	79:SR:111:PHE:CE1	2.65	0.50
58:SE:224:ASN:OD1	58:SE:224:ASN:N	2.45	0.50
67:SW:78:ARG:HD3	67:SW:126:LEU:CD2	2.41	0.50
73:SD:103:GLU:OE1	73:SD:106:ARG:NH2	2.45	0.50
74:SF:166:ILE:O	74:SF:166:ILE:CG2	2.60	0.50
6:L:38:ALA:O	6:L:39:ARG:C	2.54	0.50
6:L:69:LYS:HA	6:L:159:ASN:HD21	1.76	0.50
9:O:140:ARG:HH21	9:O:140:ARG:HG3	1.76	0.50
9:O:168:TYR:CG	32:5:4758:U:C2	3.00	0.50
32:5:98:A:C6	32:5:99:A:N9	2.80	0.50
32:5:101:A:N1	32:5:102:G:C4	2.79	0.50
32:5:371:A:H2'	32:5:372:A:C8	2.47	0.50
32:5:471:A:C5	32:5:472:C:C5	2.99	0.50
32:5:698:G:C6	32:5:699:C:C5	2.99	0.50
32:5:738:C:O2	32:5:739:G:C8	2.65	0.50
32:5:1098:G:C6	32:5:1099:C:C4	2.99	0.50
32:5:1268:G:H1'	32:5:2111:G:C6	2.47	0.50
32:5:1372:A:H2'	32:5:1372:A:N3	2.27	0.50
32:5:1430:C:C4	32:5:1431:C:C5	2.99	0.50
32:5:1575:A:H2'	32:5:1576:G:C8	2.47	0.50
32:5:1620:U:C2	32:5:1621:A:N7	2.80	0.50
32:5:1621:A:O2'	32:5:1622:U:H5'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1627:G:C5	32:5:1628:C:C6	3.00	0.50
32:5:1692:C:C4	32:5:1693:U:H5	2.29	0.50
32:5:1826:G:C2	32:5:1827:C:N1	2.79	0.50
32:5:1860:U:N3	32:5:1861:U:C5	2.80	0.50
32:5:1895:G:C5	32:5:1896:A:N3	2.79	0.50
32:5:2313:A:N7	34:8:9:A:O2'	2.36	0.50
32:5:2382:A:N3	32:5:2382:A:C2'	2.74	0.50
32:5:2458:C:H1'	32:5:3672:G:H21	1.76	0.50
32:5:2529:A:C4	32:5:2532:C:C5	2.99	0.50
32:5:2556:G:C2	32:5:2572:C:N3	2.79	0.50
32:5:2613:C:C4	32:5:2614:C:H5	2.25	0.50
32:5:2664:G:C2	32:5:2671:C:N3	2.80	0.50
32:5:2704:C:H2'	32:5:2704:C:O2	2.12	0.50
32:5:3655:C:N4	32:5:3656:A:N7	2.60	0.50
32:5:3692:A:N1	32:5:3693:U:H1'	2.27	0.50
32:5:4082:G:N1	32:5:4083:U:C4	2.80	0.50
32:5:4175:G:N1	32:5:4176:C:C4	2.79	0.50
32:5:4238:G:N2	32:5:4287:G:C5	2.80	0.50
32:5:4269:G:C5	32:5:4270:C:C5	2.98	0.50
32:5:4323:A:C2	32:5:4324:A:C5	2.99	0.50
32:5:4456:C:H2'	32:5:4456:C:O2	2.11	0.50
32:5:4731:G:N7	32:5:4732:G:C6	2.80	0.50
32:5:4879:C:C2	32:5:4880:C:C6	3.00	0.50
32:5:4915:G:C2	32:5:4916:G:C8	3.00	0.50
34:8:95:A:C2	34:8:96:C:N1	2.80	0.50
34:8:143:G:C6	34:8:144:U:C5	2.99	0.50
36:C:180:ILE:O	36:C:184:TYR:HB2	2.12	0.50
39:I:109:ASP:CG	39:I:110:ARG:N	2.63	0.50
46:K:21:GLU:OE2	46:K:21:GLU:HA	2.12	0.50
48:z:134:LEU:HD23	48:z:188:ILE:HB	1.93	0.50
49:2:128:VAL:O	50:3:76:A:H4'	2.11	0.50
54:S2:59:U:H2'	54:S2:60:A:H2'	1.94	0.50
54:S2:122:G:N1	54:S2:123:G:C5	2.80	0.50
54:S2:306:C:H3'	54:S2:307:G:H5'	1.94	0.50
54:S2:309:G:C2	54:S2:310:C:C2	3.00	0.50
54:S2:337:C:O2	54:S2:338:G:H8	1.86	0.50
54:S2:402:C:H2'	54:S2:402:C:O2	2.10	0.50
54:S2:466:G:H3'	54:S2:466:G:N3	2.26	0.50
54:S2:673:G:C6	54:S2:674:C:C4	3.00	0.50
54:S2:923:G:N2	54:S2:924:G:C4	2.80	0.50
54:S2:957:A:O2'	54:S2:958:G:N2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:970:G:H4'	54:S2:971:G:OP2	2.10	0.50
54:S2:1082:A:H2'	54:S2:1084:A:O5'	2.12	0.50
54:S2:1083:A:N3	54:S2:1859:A:C2'	2.75	0.50
54:S2:1107:G:N1	54:S2:1108:G:C5	2.80	0.50
54:S2:1182:A:H2'	54:S2:1183:A:O4'	2.12	0.50
54:S2:1292:C:C5	86:Sf:150:PHE:N	2.79	0.50
54:S2:1481:G:H2'	54:S2:1482:C:O4'	2.12	0.50
54:S2:1520:G:OP2	54:S2:1520:G:C8	2.65	0.50
54:S2:1551:U:H3'	54:S2:1552:G:C8	2.47	0.50
54:S2:1710:C:C4	54:S2:1711:U:C5	3.00	0.50
54:S2:1715:A:N1	54:S2:1819:A:C2	2.80	0.50
63:SL:89:ARG:HE	63:SL:106:HIS:CD2	2.30	0.50
74:SF:112:LEU:HA	74:SF:177:LEU:HD22	1.93	0.50
75:SK:81:ASP:OD1	75:SK:81:ASP:C	2.54	0.50
1:A:242:ARG:CG	1:A:243:THR:N	2.73	0.49
8:N:93:LYS:NZ	32:5:4177:C:OP1	2.43	0.49
8:N:181:HIS:CE1	32:5:99:A:H4'	2.47	0.49
9:O:58:LEU:HD11	9:O:145:VAL:HG13	1.94	0.49
19:a:73:VAL:CG2	19:a:108:TYR:CD2	2.95	0.49
20:b:10:HIS:N	20:b:12:GLN:HG3	2.27	0.49
20:b:13:SER:HA	20:b:16:TRP:CZ2	2.47	0.49
21:c:31:TYR:HE1	21:c:35:LEU:HD22	1.76	0.49
28:k:11:PHE:HA	28:k:14:THR:HG22	1.94	0.49
30:m:98:LYS:HD3	30:m:118:THR:HG21	1.93	0.49
32:5:68:U:C4	32:5:69:A:N9	2.80	0.49
32:5:144:G:N2	32:5:145:G:N9	2.60	0.49
32:5:331:G:N2	32:5:332:C:C4	2.79	0.49
32:5:479:G:C6	32:5:480:C:C4	3.00	0.49
32:5:1048:G:C5	32:5:1049:C:C5	3.00	0.49
32:5:1049:C:C4	32:5:1050:C:C5	3.00	0.49
32:5:1266:G:C5'	32:5:2112:G:C2	2.94	0.49
32:5:1268:G:N1	32:5:1270:A:C5	2.79	0.49
32:5:1290:G:N2	32:5:1291:G:C8	2.80	0.49
32:5:1392:A:H2'	32:5:1393:G:H8	1.77	0.49
32:5:1522:G:H2'	32:5:1522:G:N3	2.27	0.49
32:5:1541:C:H1'	32:5:2449:A:N3	2.27	0.49
32:5:1725:U:C4	32:5:1726:U:C5	3.00	0.49
32:5:1777:C:C4	32:5:1778:C:C5	3.00	0.49
32:5:1895:G:C6	32:5:1896:A:N3	2.80	0.49
32:5:1910:G:N3	32:5:1911:C:C6	2.79	0.49
32:5:2020:U:O2	32:5:2020:U:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2095:A:H61	38:F:41:GLN:HG2	1.77	0.49
32:5:2319:C:H2'	32:5:2320:G:H5'	1.94	0.49
32:5:2507:A:H2'	32:5:2507:A:N3	2.26	0.49
32:5:2602:G:C4	32:5:2603:C:C6	3.00	0.49
32:5:2678:A:C6	32:5:2679:G:N7	2.80	0.49
32:5:2853:C:H5'	32:5:4500:U:OP1	2.11	0.49
32:5:3651:A:H2'	32:5:3652:A:O4'	2.12	0.49
32:5:3668:C:C4	32:5:3669:G:C8	3.00	0.49
32:5:3780:G:O6	32:5:3815:G:C2	2.65	0.49
32:5:3907:G:C5	32:5:3909:C:N4	2.80	0.49
32:5:4109:G:C4	32:5:4110:C:C6	3.00	0.49
32:5:4133:C:O2	32:5:4133:C:H2'	2.11	0.49
32:5:4194:U:O4	32:5:4197:G:H5''	2.12	0.49
32:5:4296:U:C4	32:5:4297:G:N7	2.80	0.49
32:5:4463:U:C5	32:5:4488:A:N7	2.80	0.49
32:5:4562:C:O2	32:5:4563:U:C6	2.65	0.49
32:5:4735:G:C6	32:5:4736:C:C5	3.00	0.49
32:5:5006:U:C1'	32:5:5042:A:C5	2.91	0.49
32:5:5028:G:C2	32:5:5029:C:C4	3.00	0.49
32:5:5050:C:N3	32:5:5051:C:C6	2.80	0.49
33:7:8:G:C2	33:7:9:C:C6	3.00	0.49
34:8:118:C:C2	34:8:119:C:C5	2.99	0.49
35:B:314:ILE:HD13	35:B:326:VAL:CG1	2.43	0.49
39:I:4:ARG:NH2	39:I:9:TYR:OH	2.43	0.49
39:I:12:CYS:SG	39:I:59:GLN:HG2	2.52	0.49
39:I:61:SER:HA	39:I:126:VAL:HG22	1.92	0.49
39:I:171:TRP:HB3	39:I:181:PHE:CE2	2.47	0.49
47:q:18:ILE:CG1	47:q:66:ARG:HD3	2.42	0.49
51:4:20:G:C2	51:4:21:C:C2	3.00	0.49
53:6:203:PHE:HB3	53:6:236:ILE:HG12	1.94	0.49
54:S2:30:C:O2'	54:S2:31:U:H5'	2.11	0.49
54:S2:30:C:H2'	54:S2:31:U:C6	2.47	0.49
54:S2:70:G:C6	54:S2:71:G:C6	3.00	0.49
54:S2:299:A:C6	54:S2:300:U:C5	2.99	0.49
54:S2:373:G:H4'	63:SL:85:THR:HG21	1.93	0.49
54:S2:474:G:N2	54:S2:475:C:N1	2.60	0.49
54:S2:609:U:O2	54:S2:609:U:H2'	2.11	0.49
54:S2:631:U:H5'	54:S2:631:U:C6	2.47	0.49
54:S2:751:G:N1	54:S2:791:C:C2	2.80	0.49
54:S2:828:G:C6	54:S2:829:C:C6	2.99	0.49
54:S2:849:A:C4	54:S2:850:C:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:973:C:N3	54:S2:974:C:C6	2.80	0.49
54:S2:1270:G:C2	54:S2:1271:C:C6	3.00	0.49
54:S2:1292:C:O5'	86:Sf:149:CYS:CA	2.59	0.49
54:S2:1435:C:C2	54:S2:1436:C:C6	3.00	0.49
54:S2:1678:A:C5	54:S2:1679:A:C8	3.00	0.49
54:S2:1771:G:C6	54:S2:1772:C:C4	3.00	0.49
62:SJ:67:ASP:OD1	62:SJ:67:ASP:C	2.55	0.49
68:SX:61:GLN:CD	68:SX:61:GLN:C	2.80	0.49
80:SS:12:ILE:CG2	80:SS:13:LEU:N	2.74	0.49
81:ST:33:TRP:N	81:ST:33:TRP:CE3	2.80	0.49
1:A:209:HIS:HE1	1:A:211:PHE:HD2	1.58	0.49
4:H:54:ARG:HG3	4:H:54:ARG:HH11	1.76	0.49
11:R:172:ARG:HH11	54:S2:908:A:H5''	1.77	0.49
32:5:12:A:N3	32:5:14:C:C5	2.80	0.49
32:5:43:U:C6	32:5:44:A:H8	2.23	0.49
32:5:88:A:N6	32:5:97:G:H21	2.07	0.49
32:5:101:A:N1	32:5:102:G:N7	2.60	0.49
32:5:141:C:C2	32:5:142:G:C8	3.00	0.49
32:5:164:G:C6	32:5:165:A:N7	2.80	0.49
32:5:314:G:C2	32:5:4355:G:C5	2.99	0.49
32:5:467:U:H2'	32:5:467:U:O2	2.12	0.49
32:5:978:G:C4	32:5:979:C:C6	3.00	0.49
32:5:983:C:C2	32:5:984:C:H6	2.10	0.49
32:5:1218:G:C6	32:5:1219:G:C8	3.00	0.49
32:5:1390:G:C2	32:5:1394:G:O6	2.63	0.49
32:5:1391:A:C4	32:5:1392:A:C8	3.00	0.49
32:5:1549:G:N2	32:5:1580:C:C2	2.79	0.49
32:5:1550:G:N1	32:5:1579:C:C2	2.80	0.49
32:5:1617:G:N3	32:5:1617:G:H2'	2.26	0.49
32:5:1667:G:C6	32:5:2280:G:N3	2.80	0.49
32:5:1697:G:C4'	32:5:1698:C:OP1	2.59	0.49
32:5:1876:U:H2'	32:5:1876:U:O2	2.12	0.49
32:5:1958:A:N1	32:5:2026:A:C6	2.80	0.49
32:5:2021:G:C6	32:5:2022:C:C5	3.00	0.49
32:5:2606:G:C6	32:5:2607:C:N4	2.80	0.49
32:5:2634:C:O2	32:5:2635:U:C6	2.65	0.49
32:5:2678:A:C4	32:5:2679:G:C8	3.00	0.49
32:5:3652:A:C3'	32:5:3653:A:C8	2.95	0.49
32:5:3692:A:N6	32:5:3693:U:C2	2.80	0.49
32:5:4096:C:C4	32:5:4097:G:N9	2.80	0.49
32:5:4281:A:N3	32:5:4283:G:C5	2.79	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4454:G:N3	32:5:4454:G:H2'	2.27	0.49
32:5:4527:G:C5	32:5:4556:U:C5	3.00	0.49
32:5:4723:A:H2'	32:5:4724:A:H8	1.78	0.49
32:5:4881:U:O2'	32:5:4882:U:O5'	2.30	0.49
32:5:4907:G:C2	32:5:4915:G:C2	3.00	0.49
32:5:4950:U:O4'	32:5:4950:U:O2	2.29	0.49
32:5:5052:C:N3	32:5:5053:U:C6	2.80	0.49
33:7:36:C:C2	33:7:37:G:C8	3.00	0.49
33:7:66:G:C6	33:7:67:C:C4	3.01	0.49
34:8:46:G:C4	34:8:47:C:C5	3.00	0.49
38:F:181:LEU:HD21	38:F:206:ALA:HA	1.94	0.49
40:P:114:ILE:HD11	40:P:117:ILE:HD12	1.93	0.49
41:W:4:GLU:OE2	41:W:30:GLN:NE2	2.45	0.49
43:n:4:LYS:H	54:S2:1842:C:P	2.35	0.49
46:K:121:LEU:CD1	46:K:129:ILE:HD13	2.39	0.49
48:z:152:ALA:CB	48:z:159:PHE:CE2	2.83	0.49
50:3:31:C:C4	50:3:32:C:C5	3.00	0.49
54:S2:10:G:N2	54:S2:11:A:H1'	2.27	0.49
54:S2:43:U:O2	54:S2:484:A:H2	1.95	0.49
54:S2:47:G:C6	54:S2:48:C:C4	3.00	0.49
54:S2:321:C:H2'	54:S2:322:C:C6	2.47	0.49
54:S2:439:A:H4'	54:S2:1799:G:H4'	1.94	0.49
54:S2:440:G:C2	54:S2:454:U:N3	2.80	0.49
54:S2:477:G:N2	54:S2:478:G:C4	2.79	0.49
54:S2:569:A:C5	54:S2:570:C:C5	3.00	0.49
54:S2:900:C:C2	54:S2:901:G:C8	3.00	0.49
54:S2:905:C:H2'	54:S2:906:U:O4'	2.12	0.49
54:S2:922:A:OP1	67:SW:28:ARG:CZ	2.60	0.49
54:S2:1040:G:N1	54:S2:1041:G:C5	2.80	0.49
54:S2:1053:C:C2	54:S2:1054:G:N7	2.80	0.49
54:S2:1315:U:C5	54:S2:1316:C:H1'	2.47	0.49
54:S2:1408:U:O4	54:S2:1439:A:C2	2.55	0.49
54:S2:1860:A:C4	54:S2:1862:G:N7	2.81	0.49
58:SE:195:ILE:O	58:SE:196:THR:CB	2.59	0.49
58:SE:253:ASP:OD1	58:SE:253:ASP:C	2.55	0.49
61:SI:70:GLU:HB3	61:SI:112:TRP:HH2	1.77	0.49
62:SJ:158:ASP:OD1	62:SJ:159:PHE:N	2.45	0.49
65:SO:103:ASN:HB3	65:SO:142:ARG:HB2	1.94	0.49
80:SS:6:PRO:HD2	83:SZ:50:PHE:O	2.11	0.49
2:D:109:LEU:HD21	2:D:142:PHE:CZ	2.48	0.49
3:G:136:LEU:HD21	3:G:204:PHE:CE1	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:J:119:TYR:CE1	80:SS:12:ILE:HG12	2.40	0.49
15:V:14:PHE:CE2	15:V:91:LYS:HG3	2.47	0.49
32:5:25:A:C5	32:5:341:G:C8	3.00	0.49
32:5:125:C:N3	32:5:126:C:H5	2.09	0.49
32:5:176:G:H2'	32:5:177:G:O4'	2.12	0.49
32:5:179:G:C2	32:5:180:C:C2	3.01	0.49
32:5:288:G:C4	32:5:289:C:C6	3.00	0.49
32:5:943:A:H4'	32:5:944:A:OP2	2.12	0.49
32:5:970:G:H2'	32:5:971:U:C4'	2.42	0.49
32:5:1065:G:C2	32:5:1066:G:C4	3.01	0.49
32:5:1090:G:C2	32:5:1091:C:C2	3.01	0.49
32:5:1205:G:N2	32:5:1206:C:C2	2.81	0.49
32:5:1217:G:N3	32:5:1218:G:N7	2.60	0.49
32:5:1234:G:C2	32:5:1235:G:C4	3.01	0.49
32:5:1260:G:C2	32:5:1261:G:N9	2.81	0.49
32:5:1309:C:C2	32:5:1310:C:C5	2.99	0.49
32:5:1334:A:H2'	32:5:1334:A:N3	2.26	0.49
32:5:1479:G:O2'	32:5:1480:C:H5'	2.12	0.49
32:5:1519:C:HO2'	36:C:102:PHE:HZ	1.58	0.49
32:5:1522:G:O6	32:5:1653:A:C5	2.65	0.49
32:5:1696:C:O2'	32:5:2084:C:N4	2.45	0.49
32:5:1755:C:C3'	32:5:1756:U:H5''	2.38	0.49
32:5:1886:G:C2	32:5:1894:C:C2	2.92	0.49
32:5:2385:U:H2'	32:5:2386:U:C6	2.47	0.49
32:5:2496:G:N3	32:5:2497:C:C6	2.80	0.49
32:5:2768:C:O2	32:5:2768:C:O4'	2.29	0.49
32:5:2772:C:C2	32:5:2773:G:C8	3.00	0.49
32:5:3596:A:C6	63:SL:2:ALA:CB	2.80	0.49
32:5:3657:U:C4	32:5:3658:C:C5	2.99	0.49
32:5:3811:G:C2	32:5:3814:U:C4	3.00	0.49
32:5:3842:C:H3'	32:5:3843:C:H2'	1.93	0.49
32:5:3847:C:O2	32:5:3848:U:C6	2.65	0.49
32:5:4209:G:C6	32:5:4210:U:C5	3.00	0.49
32:5:4238:G:O2'	32:5:4322:G:H4'	2.13	0.49
32:5:4405:G:H4'	39:I:4:ARG:HD3	1.92	0.49
32:5:4700:A:C6	32:5:4701:A:C5	2.99	0.49
33:7:33:U:O2	33:7:34:C:C6	2.65	0.49
34:8:85:U:C5	34:8:87:G:C5	3.00	0.49
34:8:108:A:N3	34:8:112:G:N1	2.60	0.49
34:8:134:G:N2	34:8:135:C:N1	2.60	0.49
35:B:46:PHE:HD1	35:B:47:LEU:N	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:E:129:PHE:C	37:E:129:PHE:HD1	2.20	0.49
48:z:270:ILE:HG22	48:z:285:PHE:CD2	2.46	0.49
54:S2:2:A:C8	57:SC:223:TYR:HB2	2.47	0.49
54:S2:195:C:C2	54:S2:205:G:C2	3.00	0.49
54:S2:394:G:N3	54:S2:394:G:H2'	2.27	0.49
54:S2:502:C:H2'	54:S2:503:C:C5	2.48	0.49
54:S2:681:U:H2'	54:S2:682:U:O4'	2.12	0.49
54:S2:694:G:C6	54:S2:695:C:N4	2.80	0.49
54:S2:837:A:H61	69:SY:47:MET:C	2.20	0.49
54:S2:1112:U:C4	54:S2:1113:A:C4	3.00	0.49
54:S2:1351:G:C2	54:S2:1379:A:C5	3.00	0.49
54:S2:1374:C:O2'	54:S2:1375:G:H5'	2.12	0.49
54:S2:1510:G:C6	54:S2:1511:U:C6	3.00	0.49
55:SA:189:ILE:HD11	55:SA:195:TRP:CZ2	2.48	0.49
61:SI:55:TYR:CD2	61:SI:55:TYR:N	2.81	0.49
65:SO:121:ARG:HH11	65:SO:121:ARG:HG2	1.77	0.49
74:SF:115:ALA:O	74:SF:119:SER:N	2.46	0.49
80:SS:10:GLN:N	80:SS:10:GLN:NE2	2.60	0.49
3:G:137:ARG:O	3:G:202:VAL:HA	2.13	0.49
7:M:72:TYR:CD2	32:5:920:C:H5''	2.47	0.49
13:T:141:VAL:HG12	13:T:142:ARG:N	2.27	0.49
16:X:122:ALA:HB3	16:X:139:ARG:HG3	1.94	0.49
21:c:50:ASN:OD1	21:c:76:GLY:C	2.55	0.49
22:d:34:HIS:CD2	32:5:5048:A:N9	2.79	0.49
22:d:34:HIS:CG	32:5:5048:A:C8	3.00	0.49
25:g:66:ARG:HH11	25:g:66:ARG:HG2	1.78	0.49
32:5:222:C:H2'	32:5:223:G:O4'	2.11	0.49
32:5:247:G:C2	32:5:248:C:C5	3.00	0.49
32:5:468:U:O2	32:5:469:C:C1'	2.60	0.49
32:5:504:G:O6	32:5:654:C:C4	2.64	0.49
32:5:642:G:C2	32:5:643:C:C6	3.00	0.49
32:5:981:C:C2	37:E:69:TYR:CE2	3.01	0.49
32:5:1085:C:O2	32:5:1213:G:C2	2.66	0.49
32:5:1090:G:C5	32:5:1091:C:C5	3.00	0.49
32:5:1092:G:H2'	32:5:1093:C:O4'	2.11	0.49
32:5:1257:A:C6	32:5:1258:G:C4	3.00	0.49
32:5:1449:C:H2'	32:5:1450:C:O4'	2.12	0.49
32:5:1517:G:N2	32:5:1650:A:C6	2.81	0.49
32:5:1780:A:N3	39:I:198:LYS:NZ	2.61	0.49
32:5:1811:G:C6	32:5:1812:C:C5	3.00	0.49
32:5:1832:C:O2	32:5:1832:C:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1871:A:N1	32:5:1872:G:C5	2.81	0.49
32:5:1998:A:C2	32:5:2019:C:O2'	2.55	0.49
32:5:1999:A:C2'	32:5:2000:G:O4'	2.60	0.49
32:5:2115:G:C8	32:5:2116:C:C1'	2.96	0.49
32:5:2250:C:C2	32:5:2253:A:C6	3.00	0.49
32:5:2455:G:C2'	32:5:2456:G:O5'	2.60	0.49
32:5:2503:G:H3'	32:5:2504:C:C4'	2.42	0.49
32:5:2599:G:N2	32:5:2747:U:C4	2.81	0.49
32:5:2686:G:H5'	32:5:2687:U:OP1	2.12	0.49
32:5:2710:C:H3'	32:5:2711:G:C5'	2.42	0.49
32:5:2853:C:N4	32:5:2854:G:C2	2.80	0.49
32:5:3629:A:C5	32:5:3630:A:C8	3.01	0.49
32:5:3642:A:C4	42:j:3:LYS:HB3	2.46	0.49
32:5:3785:A:H2	32:5:4536:C:C1'	2.20	0.49
32:5:3923:A:C8	32:5:4381:A:C4	3.00	0.49
32:5:4104:G:H3'	32:5:4105:A:C8	2.48	0.49
32:5:4543:G:O2'	32:5:4544:A:O5'	2.29	0.49
32:5:4581:G:N2	32:5:4582:C:C4	2.80	0.49
32:5:4682:U:H2'	32:5:4682:U:O2	2.12	0.49
32:5:4767:C:H4'	32:5:4874:A:C2	2.47	0.49
32:5:4897:G:C4	32:5:4898:G:C8	3.00	0.49
32:5:4982:A:C2	32:5:4983:C:N1	2.79	0.49
33:7:7:G:C6	33:7:8:G:N7	2.81	0.49
33:7:24:C:C2'	33:7:25:G:O5'	2.60	0.49
36:C:212:ASN:HD22	36:C:255:SER:HB2	1.77	0.49
38:F:155:LEU:HD23	38:F:250:ASN:HD21	1.77	0.49
46:K:14:TYR:CD2	46:K:63:THR:OG1	2.65	0.49
48:z:283:GLU:OE2	48:z:347:GLN:CB	2.61	0.49
48:z:344:PRO:C	48:z:346:SER:CB	2.85	0.49
48:z:405:ARG:NH1	51:4:185:C:OP2	2.45	0.49
50:3:39:G:C4	50:3:40:C:C6	2.99	0.49
51:4:201:A:C5	51:4:202:C:H1'	2.46	0.49
53:6:218:THR:OG1	53:6:221:GLN:OE1	2.24	0.49
54:S2:64:A:N6	54:S2:82:G:C4	2.80	0.49
54:S2:164:A:C2	54:S2:165:G:C4	3.00	0.49
54:S2:185:G:C2	54:S2:186:C:C4	3.00	0.49
54:S2:219:U:C4	54:S2:220:U:C5	3.01	0.49
54:S2:381:C:O5'	54:S2:381:C:H6	1.95	0.49
54:S2:635:G:C2	54:S2:636:C:C6	3.00	0.49
54:S2:828:G:N1	54:S2:829:C:C6	2.80	0.49
54:S2:834:C:H5'	54:S2:835:C:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:976:G:C2	54:S2:977:C:C2	3.00	0.49
54:S2:1049:A:C5	54:S2:1070:A:C2	3.00	0.49
54:S2:1220:A:H2'	54:S2:1221:G:H5''	1.95	0.49
54:S2:1249:C:C4	54:S2:1250:A:C5	3.01	0.49
54:S2:1327:G:C2	54:S2:1503:C:C2	2.99	0.49
54:S2:1398:G:N2	54:S2:1399:C:C5	2.75	0.49
54:S2:1495:G:C5	54:S2:1496:U:C6	3.00	0.49
54:S2:1551:U:H4'	54:S2:1558:C:H1'	1.94	0.49
54:S2:1589:A:C2'	54:S2:1590:C:O4'	2.60	0.49
54:S2:1610:G:C2	54:S2:1611:G:C8	3.00	0.49
54:S2:1629:C:N3	54:S2:1630:A:C8	2.80	0.49
54:S2:1782:G:C2	54:S2:1784:G:C8	3.00	0.49
55:SA:158:ASP:OD1	55:SA:158:ASP:C	2.56	0.49
60:SH:130:LEU:HD11	60:SH:177:TYR:OH	2.12	0.49
69:SY:82:ALA:O	69:SY:86:GLU:HB2	2.11	0.49
79:SR:69:ILE:HG12	79:SR:70:SER:N	2.28	0.49
80:SS:26:ILE:CD1	80:SS:54:LYS:O	2.55	0.49
81:ST:52:TRP:HE3	81:ST:53:PHE:H	1.60	0.49
81:ST:92:PHE:CD1	81:ST:92:PHE:C	2.90	0.49
17:Y:18:HIS:C	17:Y:20:ASN:H	2.21	0.49
22:d:23:ARG:NH2	32:5:5057:C:O3'	2.44	0.49
32:5:2:G:C4	32:5:3:C:C5	3.00	0.49
32:5:31:U:O2'	32:5:32:G:O4'	2.26	0.49
32:5:52:G:H3'	32:5:52:G:C8	2.48	0.49
32:5:62:A:O2'	32:5:63:G:C5'	2.61	0.49
32:5:120:A:H1'	32:5:121:A:H2	1.67	0.49
32:5:247:G:C6	32:5:248:C:C4	3.00	0.49
32:5:293:G:C1'	32:5:297:U:O4'	2.61	0.49
32:5:422:C:O2	32:5:422:C:C2'	2.50	0.49
32:5:472:C:N3	32:5:473:C:C4	2.81	0.49
32:5:1196:G:C6	32:5:1197:C:C4	3.01	0.49
32:5:1233:G:N2	32:5:1234:G:C4	2.80	0.49
32:5:1248:C:C4	32:5:1249:C:C5	2.99	0.49
32:5:1366:G:N7	32:5:1367:C:O3'	2.45	0.49
32:5:1390:G:O2'	32:5:1470:G:H4'	2.13	0.49
32:5:1516:G:C6	32:5:1518:A:C4	3.01	0.49
32:5:1522:G:C6	32:5:1653:A:N6	2.81	0.49
32:5:1570:G:N2	32:5:1571:G:H1'	2.27	0.49
32:5:1598:C:O2	32:5:1599:A:C8	2.47	0.49
32:5:1770:A:H2'	32:5:1771:U:O4'	2.12	0.49
32:5:1776:A:C2	32:5:1777:C:N1	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1899:G:C4	32:5:1900:C:H5	2.25	0.49
32:5:1946:G:C6	32:5:2037:C:C4	2.97	0.49
32:5:1948:G:C4	32:5:1949:U:C5	3.01	0.49
32:5:2089:G:C6	32:5:2262:G:O2'	2.61	0.49
32:5:2090:U:O4'	32:5:2090:U:OP2	2.29	0.49
32:5:2253:A:H2	32:5:2260:C:N4	2.09	0.49
32:5:2289:C:O2	45:r:22:LYS:HD2	2.12	0.49
32:5:2438:A:N6	32:5:2441:C:C5	2.76	0.49
32:5:2645:G:C6	32:5:2646:C:C4	3.01	0.49
32:5:2674:A:C3'	32:5:2675:G:H5'	2.43	0.49
32:5:2733:C:C4	32:5:2734:U:C5	2.99	0.49
32:5:3705:G:C2	32:5:3706:C:C2	3.01	0.49
32:5:3723:A:N3	32:5:3724:A:C5	2.70	0.49
32:5:3755:G:N1	32:5:3770:U:C6	2.81	0.49
32:5:3879:G:O6	32:5:3882:C:C5	2.64	0.49
32:5:4122:G:H2'	32:5:4122:G:N3	2.26	0.49
32:5:4202:U:O2	32:5:4204:C:C4	2.65	0.49
32:5:4236:G:H22	32:5:4289:U:H1'	1.77	0.49
32:5:4517:A:OP2	35:B:2:SER:N	2.46	0.49
32:5:4594:U:O2	32:5:4595:G:C8	2.66	0.49
32:5:4665:A:C5	32:5:4666:G:C8	3.01	0.49
32:5:4683:U:C4	32:5:4707:A:C5	3.01	0.49
32:5:4884:G:H2'	32:5:4884:G:N3	2.28	0.49
32:5:5001:U:H2'	32:5:5002:U:O4'	2.11	0.49
32:5:5028:G:C2	32:5:5029:C:C2	3.01	0.49
34:8:2:G:C6	34:8:3:A:N7	2.81	0.49
34:8:45:C:C2'	34:8:46:G:O5'	2.60	0.49
44:p:33:GLN:CG	44:p:34:HIS:NE2	2.75	0.49
46:K:78:SER:HB2	46:K:133:LEU:HD22	1.93	0.49
47:q:100:ASP:HA	47:q:103:ARG:NE	2.26	0.49
48:z:237:LYS:HZ2	48:z:266:THR:HG1	1.53	0.49
48:z:374:LYS:CE	51:4:195:U:OP1	2.55	0.49
48:z:380:ASP:O	51:4:192:A:N6	2.45	0.49
50:3:16:U:C2	50:3:60:A:C2	3.01	0.49
50:3:65:G:N3	50:3:66:C:C6	2.80	0.49
51:4:17:C:O2	51:4:18:G:C8	2.64	0.49
51:4:235:G:O2'	51:4:236:U:P	2.71	0.49
54:S2:41:G:C8	54:S2:485:A:C8	3.01	0.49
54:S2:360:A:C2	54:S2:363:A:N7	2.80	0.49
54:S2:381:C:H5'	61:SI:49:ARG:HB3	1.94	0.49
54:S2:496:C:O2'	54:S2:497:C:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:499:G:N1	54:S2:501:C:H1'	2.27	0.49
54:S2:551:U:O2'	72:Se:44:ASN:CG	2.51	0.49
54:S2:616:A:N3	72:Se:12:VAL:HG21	2.27	0.49
54:S2:828:G:C5	54:S2:829:C:C6	3.00	0.49
54:S2:999:G:N2	54:S2:1000:C:H1'	2.28	0.49
54:S2:1123:C:P	56:SB:205:TYR:HH	2.26	0.49
54:S2:1126:G:C4	54:S2:1127:C:C5	3.01	0.49
54:S2:1232:U:C2	54:S2:1233:G:N7	2.80	0.49
54:S2:1253:A:N3	54:S2:1666:C:O4'	2.46	0.49
54:S2:1294:G:N2	54:S2:1295:A:C8	2.80	0.49
54:S2:1406:G:C4	54:S2:1407:U:C1'	2.93	0.49
54:S2:1449:G:C4	54:S2:1450:G:C8	3.00	0.49
54:S2:1821:U:H2'	54:S2:1822:A:O4'	2.13	0.49
57:SC:133:TYR:HD1	57:SC:216:MET:HA	1.77	0.49
57:SC:142:LYS:HB3	57:SC:154:ALA:HB2	1.94	0.49
58:SE:11:ARG:NH1	58:SE:24:THR:OG1	2.45	0.49
60:SH:35:ASP:OD1	60:SH:35:ASP:C	2.56	0.49
67:SW:14:ILE:HD11	67:SW:41:MET:HE1	1.95	0.49
68:SX:28:LYS:HG2	68:SX:32:LEU:HD12	1.94	0.49
69:SY:27:VAL:HB	69:SY:69:THR:HG23	1.94	0.49
76:SM:64:LEU:HD21	86:Sf:108:VAL:HG22	1.95	0.49
79:SR:106:LEU:O	79:SR:109:LEU:HB2	2.12	0.49
1:A:34:PHE:O	1:A:35:ALA:C	2.55	0.49
2:D:21:ARG:HA	2:D:24:ARG:HE	1.78	0.49
3:G:78:PRO:HD3	3:G:237:TRP:CE3	2.47	0.49
4:H:60:TRP:NE1	12:S:153:PRO:CG	2.75	0.49
17:Y:100:HIS:HD2	32:5:231:U:H4'	1.76	0.49
19:a:109:TYR:O	19:a:110:LYS:CB	2.61	0.49
22:d:116:ASN:ND2	22:d:116:ASN:C	2.70	0.49
27:i:30:ARG:NH1	32:5:328:A:OP2	2.46	0.49
32:5:209:U:C6	32:5:211:G:N7	2.81	0.49
32:5:218:A:N7	36:C:181:LYS:CG	2.75	0.49
32:5:262:G:C6	32:5:263:G:N7	2.80	0.49
32:5:322:C:C4	32:5:323:C:C5	3.01	0.49
32:5:436:C:O2	32:5:437:G:H8	1.94	0.49
32:5:471:A:C5	32:5:472:C:H6	2.28	0.49
32:5:710:G:C2	32:5:711:A:C5	3.01	0.49
32:5:722:G:H2'	32:5:723:A:C8	2.47	0.49
32:5:909:A:C6	32:5:910:G:C8	3.00	0.49
32:5:986:C:C4	32:5:1068:G:C2	2.99	0.49
32:5:1212:G:N2	32:5:1213:G:C4	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1237:C:O4'	32:5:1237:C:O2	2.27	0.49
32:5:1250:C:C2	32:5:1261:G:N2	2.80	0.49
32:5:1367:C:C2	32:5:1370:G:C2'	2.92	0.49
32:5:1529:G:C6	32:5:1530:G:N7	2.81	0.49
32:5:1547:A:C5	32:5:1582:U:H1'	2.47	0.49
32:5:1632:A:H3'	32:5:1632:A:N3	2.27	0.49
32:5:1684:A:N1	32:5:1685:G:C8	2.79	0.49
32:5:1735:U:O2	32:5:1735:U:C2'	2.53	0.49
32:5:1965:G:C5	32:5:1966:C:C5	3.01	0.49
32:5:2041:A:HO2'	32:5:4464:A:H2	1.60	0.49
32:5:2353:U:C2	32:5:2354:G:C8	3.01	0.49
32:5:2367:A:C8	32:5:2798:A:C4	3.00	0.49
32:5:2453:A:N1	32:5:2454:U:C5	2.77	0.49
32:5:2478:C:H2'	32:5:2479:G:C8	2.47	0.49
32:5:2594:C:C2	32:5:2595:C:C6	3.01	0.49
32:5:2617:G:C5	32:5:2618:G:C8	3.00	0.49
32:5:3590:G:C5	32:5:3591:C:C6	3.01	0.49
32:5:3629:A:O4'	54:S2:1721:U:N3	2.42	0.49
32:5:3652:A:C5	32:5:3691:G:N2	2.81	0.49
32:5:3709:U:C3'	32:5:3710:G:C5'	2.88	0.49
32:5:3731:C:O2	32:5:3731:C:C2'	2.61	0.49
32:5:4154:G:N2	32:5:4155:C:C2	2.80	0.49
32:5:4159:C:H2'	32:5:4160:C:C6	2.47	0.49
32:5:4222:G:C5	32:5:4223:C:C5	3.01	0.49
32:5:4283:G:C5	32:5:4284:C:H5	2.30	0.49
32:5:4337:C:O2'	32:5:4338:G:C5'	2.61	0.49
32:5:4578:G:C2	32:5:4579:U:C6	3.01	0.49
32:5:4602:A:H2'	32:5:4602:A:N3	2.27	0.49
32:5:4979:A:H2'	32:5:4980:C:O4'	2.13	0.49
32:5:5021:C:C2	32:5:5022:U:C5	3.00	0.49
33:7:33:U:C2	33:7:34:C:C5	3.00	0.49
34:8:72:A:N7	34:8:73:U:C6	2.80	0.49
34:8:73:U:O4	34:8:74:U:C2	2.65	0.49
34:8:79:G:H2'	34:8:80:A:N3	2.27	0.49
34:8:129:C:N3	34:8:130:C:C5	2.81	0.49
35:B:89:ILE:HG21	35:B:197:ALA:HB1	1.93	0.49
35:B:208:ASN:OD1	35:B:208:ASN:N	2.42	0.49
36:C:178:ASN:N	36:C:178:ASN:HD22	2.09	0.49
36:C:341:LEU:HD11	37:E:52:ARG:CD	2.40	0.49
48:z:383:ASN:HB3	51:4:209:G:P	2.51	0.49
50:3:30:G:OP1	54:S2:1524:G:O2'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:6:54:ILE:HB	53:6:177:GLU:HB3	1.95	0.49
54:S2:74:G:C2	54:S2:75:G:H1'	2.48	0.49
54:S2:187:G:C2	54:S2:188:C:C2	3.00	0.49
54:S2:522:A:O3'	62:SJ:131:ARG:NH2	2.45	0.49
54:S2:803:C:N3	54:S2:804:U:C5	2.80	0.49
54:S2:827:A:N7	54:S2:828:G:N7	2.60	0.49
54:S2:1058:A:C2	54:S2:1059:G:C4	3.00	0.49
54:S2:1101:U:H2'	54:S2:1102:G:C8	2.46	0.49
54:S2:1205:C:O2	54:S2:1205:C:O4'	2.29	0.49
54:S2:1249:C:N4	54:S2:1250:A:C5	2.81	0.49
54:S2:1292:C:C6	86:Sf:150:PHE:N	2.81	0.49
54:S2:1652:G:N1	54:S2:1673:U:C2	2.81	0.49
54:S2:1735:A:C4	54:S2:1800:A:C2	3.01	0.49
54:S2:1779:G:C2	54:S2:1780:G:C8	3.00	0.49
54:S2:1841:C:O2	54:S2:1841:C:C2'	2.60	0.49
55:SA:70:ASN:HB3	55:SA:73:ASP:OD1	2.12	0.49
56:SB:30:TRP:HD1	65:SO:19:PRO:CD	2.25	0.49
57:SC:60:TRP:CZ2	57:SC:92:GLU:CB	2.95	0.49
58:SE:54:TYR:O	69:SY:15:ASN:ND2	2.45	0.49
58:SE:99:PHE:N	58:SE:99:PHE:CD1	2.78	0.49
64:SN:128:TYR:HD1	64:SN:129:TYR:N	2.08	0.49
69:SY:20:ARG:CZ	69:SY:74:MET:HE2	2.42	0.49
74:SF:165:ASN:OD1	74:SF:167:LYS:N	2.46	0.49
80:SS:11:HIS:C	80:SS:12:ILE:CD1	2.85	0.49
84:Sc:11:LEU:O	84:Sc:35:MET:HG2	2.13	0.49
87:Sg:244:ASN:HD21	87:Sg:245:ARG:HH12	1.59	0.49
2:D:155:THR:OG1	2:D:179:ARG:NH1	2.46	0.49
2:D:284:LYS:HD2	39:I:209:TRP:HZ3	1.78	0.49
9:O:130:LYS:HG3	9:O:131:PRO:HD2	1.95	0.49
12:S:44:PHE:C	12:S:44:PHE:HD1	2.21	0.49
15:V:48:ARG:HH21	15:V:48:ARG:HG3	1.77	0.49
20:b:11:ASN:O	20:b:13:SER:N	2.45	0.49
24:f:34:TYR:HA	24:f:81:SER:O	2.13	0.49
32:5:187:U:C5	32:5:245:C:C4	3.01	0.49
32:5:738:C:N3	32:5:739:G:C5	2.81	0.49
32:5:952:G:C6	32:5:953:C:C4	3.01	0.49
32:5:976:G:C2	32:5:977:C:C2	3.01	0.49
32:5:1310:C:N4	32:5:1311:G:N7	2.59	0.49
32:5:1421:G:N1	32:5:1422:G:N7	2.59	0.49
32:5:1444:G:N2	32:5:1445:U:C4	2.80	0.49
32:5:1475:G:N3	32:5:1476:C:C6	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1692:C:C2	32:5:1693:U:C5	3.01	0.49
32:5:1755:C:O2'	32:5:1755:C:O2	2.30	0.49
32:5:1878:G:C6	32:5:1879:C:C4	3.01	0.49
32:5:2043:A:N3	32:5:4516:G:H1'	2.28	0.49
32:5:2104:G:N1	32:5:2105:A:C5	2.81	0.49
32:5:2314:G:N1	32:5:2326:G:C8	2.80	0.49
32:5:2342:G:C2	32:5:2344:U:C5	3.00	0.49
32:5:2445:C:O2	32:5:2446:C:C5	2.66	0.49
32:5:2720:C:N3	32:5:2721:G:C8	2.81	0.49
32:5:3739:C:C6	32:5:3739:C:C4'	2.94	0.49
32:5:3751:G:C6	32:5:3752:C:C4	3.01	0.49
32:5:4164:C:O2	32:5:4164:C:H2'	2.13	0.49
32:5:4175:G:N2	32:5:4176:C:C2	2.80	0.49
32:5:4269:G:H22	32:5:4277:G:N2	2.04	0.49
32:5:4430:G:O2'	39:I:158:LYS:O	2.26	0.49
32:5:4463:U:C4	32:5:4488:A:C6	3.00	0.49
32:5:4484:A:O2'	32:5:4485:C:H5'	2.12	0.49
32:5:4627:U:O2'	35:B:54:THR:HA	2.12	0.49
32:5:4723:A:O2'	35:B:101:THR:HG23	2.12	0.49
32:5:4724:A:H4'	35:B:102:PHE:O	2.12	0.49
32:5:4768:G:H3'	32:5:4769:G:H8	1.77	0.49
32:5:4942:C:O2	32:5:4942:C:O4'	2.30	0.49
32:5:4987:C:H2'	35:B:123:HIS:CD2	2.47	0.49
33:7:17:C:N3	33:7:18:C:H5	2.02	0.49
33:7:55:A:H2'	33:7:56:G:O5'	2.13	0.49
33:7:62:U:N3	33:7:64:G:N7	2.61	0.49
33:7:70:G:N1	33:7:71:G:C5	2.81	0.49
34:8:34:U:O2	42:j:74:PHE:CB	2.61	0.49
34:8:54:C:C5	34:8:55:U:C5	3.01	0.49
35:B:256:ALA:O	35:B:258:HIS:N	2.45	0.49
35:B:288:GLY:HA3	35:B:330:PHE:CZ	2.48	0.49
40:P:64:ASN:HB2	40:P:80:GLN:OE1	2.13	0.49
48:z:413:SER:N	52:9:74:ARG:NE	2.60	0.49
51:4:58:G:C8	51:4:289:A:C2	3.01	0.49
54:S2:312:G:O2'	54:S2:313:A:OP2	2.27	0.49
54:S2:340:C:O2	54:S2:341:C:C6	2.66	0.49
54:S2:403:G:C5	54:S2:404:G:C8	3.00	0.49
54:S2:437:G:H2'	54:S2:438:G:N3	2.28	0.49
54:S2:452:G:C6	54:S2:453:C:C4	3.00	0.49
54:S2:583:C:O2	54:S2:583:C:H2'	2.13	0.49
54:S2:658:U:H1'	68:SX:17:ARG:NH2	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:691:G:C6	54:S2:692:G:N7	2.80	0.49
54:S2:805:U:N3	54:S2:806:U:H5	2.10	0.49
54:S2:1038:U:C2	54:S2:1039:C:C5	3.00	0.49
54:S2:1075:C:C2	54:S2:1076:G:C8	3.00	0.49
54:S2:1293:A:P	86:Sf:150:PHE:HA	2.53	0.49
54:S2:1298:G:O2'	54:S2:1299:A:O5'	2.30	0.49
54:S2:1405:A:C6	54:S2:1406:G:C5	3.01	0.49
54:S2:1410:C:O2	54:S2:1410:C:C2'	2.60	0.49
54:S2:1667:U:C4	54:S2:1668:U:O4	2.66	0.49
56:SB:50:THR:O	56:SB:58:ALA:HB2	2.12	0.49
57:SC:267:GLN:HE21	66:SV:50:PHE:HE2	1.60	0.49
58:SE:159:THR:HG23	58:SE:227:VAL:HG22	1.95	0.49
60:SH:61:ILE:CD1	60:SH:93:VAL:HG13	2.40	0.49
68:SX:61:GLN:O	68:SX:63:ASN:N	2.46	0.49
71:Sb:47:PHE:C	71:Sb:47:PHE:CD1	2.90	0.49
74:SF:193:LYS:O	74:SF:197:GLU:HG3	2.11	0.49
80:SS:8:LYS:N	80:SS:8:LYS:HD3	2.27	0.49
84:Sc:14:VAL:HG21	84:Sc:30:VAL:CB	2.40	0.49
2:D:282:GLN:HE21	32:5:1185:G:N2	2.09	0.49
3:G:29:ASN:OD1	3:G:31:LEU:HD22	2.13	0.49
7:M:29:ASP:OD1	7:M:30:VAL:N	2.46	0.49
10:Q:88:ASP:OD2	10:Q:108:ARG:HD3	2.12	0.49
12:S:81:TRP:CD2	12:S:81:TRP:N	2.81	0.49
13:T:102:ARG:O	13:T:105:PHE:O	2.30	0.49
17:Y:22:PRO:HD2	17:Y:25:ILE:HD12	1.94	0.49
18:Z:36:ARG:HG3	18:Z:36:ARG:HH11	1.78	0.49
24:f:18:LEU:HB2	32:5:1916:G:O6	2.13	0.49
27:i:39:PHE:CZ	27:i:43:MET:HG2	2.47	0.49
31:o:3:ASN:OD1	31:o:4:VAL:N	2.46	0.49
32:5:29:G:C2	32:5:30:C:C2	3.00	0.49
32:5:66:A:C5	32:5:328:A:C8	3.01	0.49
32:5:133:C:H2'	32:5:133:C:O2	2.12	0.49
32:5:293:G:H4'	32:5:294:G:O4'	2.13	0.49
32:5:328:A:C2	32:5:329:A:C6	3.01	0.49
32:5:331:G:N3	32:5:332:C:C5	2.81	0.49
32:5:368:C:C2	32:5:374:G:N2	2.81	0.49
32:5:424:U:O2	32:5:424:U:C2'	2.61	0.49
32:5:479:G:C5	32:5:480:C:C5	3.01	0.49
32:5:704:C:C6	32:5:704:C:H5''	2.48	0.49
32:5:1261:G:N3	32:5:1262:G:C8	2.81	0.49
32:5:1349:G:C5	32:5:1350:C:C5	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1372:A:C2	32:5:1373:A:C1'	2.96	0.49
32:5:1445:U:N3	32:5:1446:C:C6	2.80	0.49
32:5:1541:C:N4	32:5:1542:U:C4	2.81	0.49
32:5:1735:U:N3	32:5:1736:A:N7	2.61	0.49
32:5:1745:G:C6	32:5:1746:A:N7	2.80	0.49
32:5:1858:A:N3	32:5:1859:C:C6	2.81	0.49
32:5:1871:A:C6	32:5:1872:G:N7	2.81	0.49
32:5:2009:A:O2'	32:5:2010:A:OP1	2.27	0.49
32:5:2263:A:H4'	32:5:2264:C:OP1	2.11	0.49
32:5:2273:G:C2'	32:5:2274:C:O5'	2.61	0.49
32:5:2279:A:C4	32:5:2280:G:N7	2.80	0.49
32:5:2293:U:O2	32:5:2293:U:C2'	2.61	0.49
32:5:2314:G:C5	32:5:2326:G:C5	3.00	0.49
32:5:2454:U:C2	32:5:2455:G:C8	3.00	0.49
32:5:2529:A:H61	32:5:2532:C:H1'	1.78	0.49
32:5:2570:U:O2	32:5:2571:C:C6	2.66	0.49
32:5:2623:A:C8	32:5:2623:A:H5''	2.48	0.49
32:5:2831:G:N3	32:5:2832:A:C8	2.81	0.49
32:5:2907:G:H2'	32:5:2908:U:O4'	2.13	0.49
32:5:3710:G:N2	32:5:3711:A:C6	2.80	0.49
32:5:4143:G:C8	32:5:4145:C:C5	3.01	0.49
32:5:4159:C:H2'	32:5:4160:C:H6	1.76	0.49
32:5:4481:U:C2	32:5:4482:U:C4	2.99	0.49
32:5:4564:A:H2'	32:5:4565:C:H6	1.77	0.49
32:5:4651:A:C2	32:5:4652:G:C1'	2.96	0.49
32:5:4660:G:C2	32:5:4661:G:C8	3.00	0.49
33:7:58:A:C5	33:7:59:G:C8	3.00	0.49
34:8:9:A:C6	34:8:10:G:C5	3.00	0.49
34:8:27:U:N3	34:8:28:C:C5	2.81	0.49
34:8:37:A:C4'	34:8:39:G:H1'	2.43	0.49
34:8:44:A:C5	34:8:45:C:C5	3.01	0.49
39:I:36:LEU:HD22	39:I:73:ASN:HD21	1.76	0.49
48:z:408:ARG:HD2	51:4:206:G:C4'	2.39	0.49
51:4:8:G:H2'	51:4:9:C:O4'	2.12	0.49
54:S2:29:G:C2	54:S2:30:C:C5	3.01	0.49
54:S2:192:C:H4'	54:S2:192:C:OP1	2.12	0.49
54:S2:320:G:N2	54:S2:321:C:H1'	2.28	0.49
54:S2:367:U:C2'	54:S2:371:A:C8	2.96	0.49
54:S2:555:A:C2	54:S2:557:U:C4	3.00	0.49
54:S2:563:G:N1	54:S2:564:A:N7	2.60	0.49
54:S2:641:A:C5	54:S2:642:U:H1'	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:658:U:N3	68:SX:20:HIS:O	2.46	0.49
54:S2:669:A:C2	54:S2:670:A:C6	3.01	0.49
54:S2:696:G:N2	54:S2:735:C:H1'	2.28	0.49
54:S2:1131:G:C6	54:S2:1132:C:C4	3.00	0.49
54:S2:1142:G:N2	54:S2:1145:A:OP2	2.46	0.49
54:S2:1234:C:N3	54:S2:1235:G:C8	2.81	0.49
54:S2:1278:A:C5	54:S2:1279:C:C5	3.00	0.49
54:S2:1404:U:H4'	54:S2:1581:C:O2	2.12	0.49
54:S2:1528:G:H2'	54:S2:1529:C:H6	1.78	0.49
54:S2:1590:C:H5'	81:ST:82:ARG:HD3	1.94	0.49
54:S2:1610:G:N2	54:S2:1611:G:C4	2.81	0.49
54:S2:1662:U:H5''	54:S2:1663:A:OP2	2.13	0.49
54:S2:1786:U:O2	54:S2:1787:G:C8	2.65	0.49
54:S2:1810:U:N3	54:S2:1811:C:C5	2.81	0.49
60:SH:76:GLN:HB3	60:SH:135:PHE:CE2	2.48	0.49
76:SM:19:GLN:CG	76:SM:88:TRP:CB	2.91	0.49
88:S1:7:TRP:HZ3	88:S1:10:PHE:HD2	1.61	0.49
1:A:89:TYR:CB	1:A:100:ASN:HD21	2.25	0.49
1:A:186:TYR:CA	1:A:196:TRP:CZ3	2.95	0.49
5:J:12:MET:HE1	33:7:29:C:H4'	1.94	0.49
7:M:36:ALA:HB2	7:M:52:PHE:CZ	2.47	0.49
11:R:163:ARG:CG	54:S2:871:U:O2'	2.60	0.49
12:S:35:PRO:HD2	12:S:39:VAL:HG21	1.94	0.49
13:T:127:GLN:OE1	13:T:127:GLN:HA	2.11	0.49
18:Z:4:PHE:CE2	21:c:66:LEU:HB3	2.47	0.49
19:a:85:GLN:NE2	32:5:510:U:O4'	2.45	0.49
25:g:69:LYS:HG3	25:g:73:HIS:CE1	2.48	0.49
31:o:61:LYS:NZ	32:5:4373:G:N7	2.61	0.49
32:5:189:G:N2	32:5:190:G:C4	2.81	0.49
32:5:212:A:C4	32:5:213:G:N7	2.81	0.49
32:5:301:G:C2	32:5:302:C:C2	3.00	0.49
32:5:435:A:C6	32:5:436:C:C5	3.01	0.49
32:5:474:C:C2	32:5:475:G:N7	2.80	0.49
32:5:992:C:C2	32:5:993:G:N7	2.81	0.49
32:5:1075:G:N3	32:5:1076:C:C6	2.80	0.49
32:5:1079:C:C5	32:5:1233:G:C2	3.00	0.49
32:5:1214:C:N3	32:5:2116:C:N4	2.60	0.49
32:5:1492:G:C4	32:5:1493:G:C8	3.00	0.49
32:5:1843:A:N1	32:5:1844:G:C8	2.81	0.49
32:5:1877:G:N1	32:5:1878:G:C8	2.81	0.49
32:5:1899:G:C6	32:5:1900:C:C4	2.99	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2023:C:H3'	32:5:2024:G:C8	2.48	0.49
32:5:2052:G:N2	32:5:2053:C:C2	2.81	0.49
32:5:2071:A:C2	32:5:2072:C:C5	3.00	0.49
32:5:2079:G:C4	32:5:2080:U:C5	3.00	0.49
32:5:2123:C:O2'	32:5:2124:G:OP2	2.16	0.49
32:5:2315:G:N1	32:5:2316:G:C5	2.81	0.49
32:5:2491:C:H2'	32:5:2492:C:O4'	2.13	0.49
32:5:2509:C:O2'	32:5:2510:G:H5'	2.10	0.49
32:5:2792:C:O2	42:j:8:PHE:O	2.31	0.49
32:5:3721:U:N3	32:5:3722:G:N7	2.52	0.49
32:5:3804:G:H2'	32:5:3804:G:N3	2.28	0.49
32:5:3845:A:C2	32:5:3846:C:C6	3.01	0.49
32:5:3911:C:H2'	32:5:3912:U:O5'	2.12	0.49
32:5:4098:A:C2	32:5:4099:G:C4	3.00	0.49
32:5:4106:G:C5	32:5:4107:G:H1'	2.47	0.49
32:5:4222:G:C5	32:5:4223:C:C6	3.00	0.49
32:5:4234:A:N1	32:5:4271:A:H1'	2.28	0.49
32:5:4278:C:O2	32:5:4278:C:H2'	2.13	0.49
32:5:4399:U:O2'	32:5:4518:A:H1'	2.12	0.49
32:5:4416:G:C2	32:5:4417:C:C4	3.00	0.49
32:5:4433:G:C4	32:5:4434:C:C5	3.01	0.49
32:5:4519:C:H5''	32:5:4520:G:OP1	2.13	0.49
32:5:5036:C:C2	32:5:5037:U:C6	3.01	0.49
33:7:29:C:O2	33:7:30:C:C5	2.66	0.49
34:8:29:G:C2	34:8:30:U:C6	3.01	0.49
34:8:115:G:C5	34:8:116:C:C5	3.00	0.49
34:8:117:C:C2	34:8:118:C:H6	2.31	0.49
35:B:45:ALA:HB3	35:B:183:ILE:HG23	1.95	0.49
36:C:35:ASP:OD1	36:C:36:ILE:N	2.46	0.49
39:I:99:ILE:CG1	39:I:100:ASN:O	2.61	0.49
39:I:101:LYS:C	39:I:102:MET:CG	2.85	0.49
50:3:40:C:C2	50:3:41:G:C8	3.01	0.49
54:S2:92:A:C5	54:S2:447:A:C2	3.00	0.49
54:S2:649:U:O2	54:S2:650:A:H8	1.94	0.49
54:S2:682:U:O2'	54:S2:1159:G:H4'	2.13	0.49
54:S2:752:G:C2	54:S2:790:C:C4	3.00	0.49
54:S2:794:A:C4	54:S2:795:A:N7	2.80	0.49
54:S2:887:U:O4'	54:S2:887:U:O2	2.29	0.49
54:S2:1005:G:C6	54:S2:1006:C:C4	3.01	0.49
54:S2:1309:C:H5''	76:SM:36:ARG:CZ	2.42	0.49
54:S2:1432:U:H2'	54:S2:1433:C:O5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1496:U:H2'	54:S2:1496:U:O2	2.12	0.49
54:S2:1520:G:N3	54:S2:1520:G:H2'	2.27	0.49
65:SO:149:ARG:HH11	65:SO:149:ARG:HG2	1.78	0.49
80:SS:30:ILE:CD1	80:SS:45:LEU:CG	2.91	0.49
81:ST:112:MET:HA	81:ST:127:GLY:HA3	1.94	0.49
83:SZ:50:PHE:CZ	83:SZ:79:ILE:CD1	2.96	0.49
83:SZ:52:LYS:HD3	83:SZ:53:ALA:N	2.28	0.49
2:D:111:ASN:C	2:D:111:ASN:ND2	2.71	0.49
2:D:279:ARG:HA	2:D:282:GLN:HB2	1.95	0.49
7:M:5:ARG:NH2	7:M:59:ASP:OD1	2.42	0.49
8:N:94:PHE:CZ	32:5:2460:A:H1'	2.48	0.49
10:Q:125:GLN:NE2	36:C:285:LEU:HD12	2.28	0.49
11:R:95:TRP:HZ2	32:5:1572:U:C5'	2.24	0.49
11:R:130:ASN:C	11:R:131:VAL:HG22	2.38	0.49
17:Y:59:ARG:HG3	17:Y:103:LYS:HD2	1.94	0.49
24:f:74:VAL:HG13	24:f:84:VAL:HG13	1.95	0.49
27:i:43:MET:HA	27:i:46:GLU:OE2	2.12	0.49
28:k:31:ASN:O	28:k:47:ILE:O	2.31	0.49
32:5:31:U:O2'	32:5:32:G:C5'	2.60	0.49
32:5:84:A:C8	32:5:84:A:C5'	2.96	0.49
32:5:95:G:C6	32:5:96:U:C2	3.01	0.49
32:5:113:A:C2	32:5:114:G:H1'	2.48	0.49
32:5:153:G:N2	32:5:154:G:C5	2.81	0.49
32:5:196:C:O2	32:5:196:C:C2'	2.60	0.49
32:5:289:C:H2'	32:5:289:C:O2	2.12	0.49
32:5:481:G:C2	32:5:482:G:N7	2.80	0.49
32:5:675:C:C2	32:5:676:C:C6	3.01	0.49
32:5:677:G:H2'	32:5:678:C:C6	2.48	0.49
32:5:692:A:N1	32:5:693:C:C4	2.81	0.49
32:5:719:C:N3	32:5:720:G:C8	2.79	0.49
32:5:993:G:N1	32:5:994:G:C5	2.81	0.49
32:5:1205:G:C6	32:5:1206:C:C4	3.01	0.49
32:5:1360:G:C6	32:5:1361:G:C4	3.00	0.49
32:5:1374:G:C2	32:5:1375:C:C2	3.01	0.49
32:5:1438:U:O2	32:5:2099:G:C6	2.64	0.49
32:5:1476:C:C4	32:5:1477:C:H5	2.26	0.49
32:5:1491:A:C6	32:5:1492:G:C5	3.01	0.49
32:5:1541:C:N3	32:5:1542:U:C6	2.81	0.49
32:5:1577:G:H3'	32:5:1577:G:N3	2.28	0.49
32:5:1602:U:N3	32:5:1603:C:C5	2.81	0.49
32:5:1656:U:C2	32:5:1657:G:C8	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1943:A:C8	32:5:1944:A:C1'	2.96	0.49
32:5:1983:A:C2	32:5:2008:U:C5	2.95	0.49
32:5:1994:C:C2	32:5:1995:G:N7	2.81	0.49
32:5:2108:G:C4	32:5:2109:G:H1'	2.48	0.49
32:5:2126:G:C1'	32:5:2127:C:C5	2.96	0.49
32:5:2129:C:C2	32:5:2130:G:C8	3.00	0.49
32:5:2292:C:C4	32:5:2293:U:C5	3.01	0.49
32:5:2366:A:H2'	32:5:2367:A:H5''	1.95	0.49
32:5:2515:G:O6	32:5:2516:G:C5	2.65	0.49
32:5:2546:G:O2'	32:5:2547:G:C5'	2.60	0.49
32:5:2606:G:C2	32:5:2607:C:C2	3.01	0.49
32:5:3701:C:N4	32:5:3745:U:H2'	2.27	0.49
32:5:3811:G:H4'	32:5:3812:C:OP2	2.13	0.49
32:5:3813:A:C2	32:5:4539:U:C1'	2.96	0.49
32:5:3861:A:N3	32:5:3862:A:C8	2.81	0.49
32:5:3871:A:C6	32:5:3885:G:N2	2.81	0.49
32:5:3945:A:H5'	56:SB:54:GLY:HA3	1.95	0.49
32:5:4114:C:H3'	32:5:4115:G:C4'	2.43	0.49
32:5:4266:G:C6	32:5:4279:A:C5	3.01	0.49
32:5:4458:C:C2	32:5:4459:U:C5	3.00	0.49
32:5:4595:G:C6	32:5:4596:C:C4	3.01	0.49
32:5:4724:A:C4	32:5:4725:C:C5	3.01	0.49
32:5:4997:G:N1	32:5:4998:G:C4	2.81	0.49
32:5:5004:C:C3'	32:5:5005:G:O4'	2.61	0.49
32:5:5031:G:C4	32:5:5032:C:C5	3.00	0.49
32:5:5042:A:C6	32:5:5043:A:N6	2.81	0.49
32:5:5055:G:N2	32:5:5056:A:C4	2.81	0.49
33:7:21:G:C6	33:7:58:A:N1	2.80	0.49
33:7:23:A:O2'	33:7:24:C:O5'	2.31	0.49
33:7:93:G:C4	33:7:94:C:C5	3.01	0.49
51:4:292:C:N3	51:4:293:C:C5	2.80	0.49
51:4:235:G:H2'	51:4:236:U:C6	2.48	0.49
54:S2:517:C:N4	54:S2:518:G:C5	2.81	0.49
54:S2:532:C:C2	54:S2:533:A:N7	2.80	0.49
54:S2:595:U:H5'	54:S2:595:U:C6	2.48	0.49
54:S2:994:C:C2	54:S2:995:G:H8	2.23	0.49
54:S2:1630:A:C6	54:S2:1631:U:C5	3.01	0.49
54:S2:1670:C:H2'	54:S2:1671:G:C8	2.47	0.49
54:S2:1752:C:C2	54:S2:1753:C:C6	3.01	0.49
54:S2:1771:G:N3	54:S2:1772:C:C6	2.81	0.49
54:S2:1839:U:H2'	54:S2:1840:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1860:A:N6	54:S2:1862:G:O6	2.46	0.49
60:SH:135:PHE:CD1	60:SH:136:PRO:N	2.69	0.49
67:SW:11:LEU:HD11	67:SW:37:PHE:HE2	1.78	0.49
67:SW:11:LEU:HD22	67:SW:72:CYS:SG	2.52	0.49
77:SP:56:LEU:HD22	77:SP:78:THR:HG22	1.95	0.49
80:SS:80:PRO:HG2	80:SS:82:TRP:CD1	2.48	0.49
87:Sg:219:TRP:N	87:Sg:219:TRP:CD1	2.80	0.49
1:A:40:TYR:CE2	32:5:4118:U:C2	3.01	0.48
3:G:100:HIS:HA	3:G:103:ARG:HD2	1.94	0.48
6:L:49:ARG:HA	26:h:119:PHE:O	2.13	0.48
6:L:176:PHE:CE1	6:L:178:ALA:HA	2.48	0.48
9:O:12:ARG:NH1	12:S:171:ARG:NH2	2.61	0.48
13:T:121:GLU:OE2	13:T:122:LYS:HG3	2.13	0.48
21:c:91:VAL:O	21:c:91:VAL:HG23	2.12	0.48
23:e:58:ILE:O	23:e:60:TYR:N	2.41	0.48
28:k:41:TYR:HB3	28:k:43:TYR:CE1	2.47	0.48
32:5:106:A:C1'	32:5:336:A:C8	2.88	0.48
32:5:145:G:C2	32:5:146:G:C4	3.01	0.48
32:5:247:G:C2	32:5:248:C:C2	3.00	0.48
32:5:296:A:C5'	32:5:296:A:H8	2.25	0.48
32:5:296:A:C8	32:5:296:A:P	3.06	0.48
32:5:470:A:C6	32:5:471:A:N7	2.75	0.48
32:5:668:C:C2	32:5:669:C:C6	3.00	0.48
32:5:1327:C:H4'	32:5:4448:G:H2'	1.94	0.48
32:5:1421:G:C2	32:5:1422:G:C4	3.00	0.48
32:5:1543:G:N2	32:5:1544:G:N9	2.61	0.48
32:5:1669:A:H1'	32:5:1852:U:O2'	2.13	0.48
32:5:1748:U:H2'	32:5:1749:A:O4'	2.13	0.48
32:5:1758:G:N1	32:5:1759:G:C5	2.81	0.48
32:5:1918:U:O2	32:5:1920:C:C5	2.66	0.48
32:5:1991:A:C3'	32:5:1992:U:C5'	2.85	0.48
32:5:2037:C:C2	32:5:2038:U:C5	3.00	0.48
32:5:2095:A:C2	38:F:41:GLN:OE1	2.61	0.48
32:5:2368:A:N6	32:5:2827:G:C1'	2.76	0.48
32:5:2563:C:H2'	32:5:2564:G:C8	2.48	0.48
32:5:2732:G:H2'	32:5:2733:C:O4'	2.13	0.48
32:5:2752:G:C4	32:5:2753:G:C8	3.01	0.48
32:5:2796:G:H4'	32:5:2797:C:OP2	2.12	0.48
32:5:2832:A:C2'	32:5:2833:A:H5''	2.31	0.48
32:5:2842:G:C5	32:5:2843:U:C5	3.01	0.48
32:5:2909:C:O2	32:5:3586:G:C2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3721:U:C2	32:5:3722:G:H8	2.23	0.48
32:5:3832:U:C4	32:5:3833:C:C5	3.00	0.48
32:5:3859:G:C4'	40:P:139:TYR:HE1	2.24	0.48
32:5:3914:U:N3	32:5:4378:A:C6	2.77	0.48
32:5:4074:C:O2'	32:5:4075:U:C5'	2.61	0.48
32:5:4518:A:C3'	32:5:4519:C:H5'	2.43	0.48
32:5:4592:C:O2	32:5:4593:C:C6	2.66	0.48
32:5:5004:C:O2	32:5:5044:A:C2	2.66	0.48
32:5:5031:G:C2	32:5:5032:C:C5	3.01	0.48
34:8:18:U:H2'	34:8:19:C:O4'	2.13	0.48
34:8:73:U:C4	34:8:74:U:C1'	2.95	0.48
34:8:112:G:H2'	34:8:113:C:O5'	2.13	0.48
34:8:141:C:H2'	34:8:142:U:C6	2.48	0.48
35:B:74:GLU:HG2	35:B:334:LYS:HE3	1.95	0.48
35:B:102:PHE:HB3	35:B:103:LYS:HB2	1.95	0.48
37:E:197:ILE:CD1	37:E:257:ILE:HG23	2.43	0.48
38:F:168:ARG:HD2	38:F:211:TRP:HD1	1.77	0.48
39:I:101:LYS:HE2	39:I:121:LYS:N	2.27	0.48
39:I:184:MET:HB3	39:I:190:LEU:HD12	1.95	0.48
39:I:209:TRP:HE1	39:I:213:HIS:CD2	2.31	0.48
50:3:38:C:C4	50:3:39:G:C5	3.00	0.48
51:4:6:G:C6	51:4:7:C:C4	3.01	0.48
51:4:57:G:C6	51:4:289:A:N1	2.81	0.48
54:S2:20:G:C4'	54:S2:620:G:N7	2.75	0.48
54:S2:60:A:O2'	54:S2:61:A:H5''	2.11	0.48
54:S2:72:C:O2	54:S2:73:C:N1	2.46	0.48
54:S2:217:A:C2	54:S2:218:U:C6	3.01	0.48
54:S2:436:G:N3	54:S2:437:G:C8	2.81	0.48
54:S2:447:A:C6	54:S2:449:A:N9	2.80	0.48
54:S2:452:G:N1	54:S2:453:C:N4	2.61	0.48
54:S2:477:G:C2	54:S2:478:G:N7	2.81	0.48
54:S2:673:G:C8	54:S2:1084:A:C6	3.01	0.48
54:S2:1105:G:C2	54:S2:1128:C:C2	3.01	0.48
54:S2:1156:U:H2'	54:S2:1157:G:H21	1.77	0.48
54:S2:1217:A:H2'	54:S2:1218:C:H6	1.77	0.48
54:S2:1271:C:N3	54:S2:1272:C:C6	2.81	0.48
54:S2:1306:U:C5	54:S2:1307:U:C6	3.01	0.48
54:S2:1478:U:O2	54:S2:1478:U:H2'	2.13	0.48
54:S2:1758:G:C2	54:S2:1759:G:C8	3.01	0.48
54:S2:1838:U:H2'	54:S2:1838:U:O5'	2.13	0.48
56:SB:150:ILE:CD1	79:SR:129:LYS:CE	2.86	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:SW:101:PHE:HB2	67:SW:129:PHE:CE1	2.47	0.48
79:SR:114:LEU:O	79:SR:115:SER:CB	2.61	0.48
84:Sc:11:LEU:HB3	84:Sc:55:VAL:HG12	1.86	0.48
87:Sg:17:TRP:CB	87:Sg:303:THR:HG22	2.43	0.48
1:A:202:VAL:HG23	32:5:3689:G:OP1	2.13	0.48
3:G:48:LYS:HB3	16:X:42:THR:HG23	1.93	0.48
4:H:54:ARG:HH11	4:H:54:ARG:CG	2.26	0.48
6:L:22:VAL:CG1	8:N:200:LEU:HD12	2.43	0.48
7:M:46:ARG:NE	32:5:938:C:H5	2.12	0.48
9:O:36:VAL:HG11	9:O:108:ILE:HD12	1.95	0.48
9:O:74:ARG:NH2	32:5:4712:C:OP1	2.45	0.48
11:R:117:ARG:HH22	32:5:2663:G:H4'	1.78	0.48
13:T:34:TYR:HD1	13:T:98:HIS:CE1	2.31	0.48
18:Z:18:TYR:CE2	18:Z:47:ASP:OD1	2.65	0.48
24:f:14:TYR:OH	24:f:94:ALA:HB2	2.14	0.48
31:o:89:LYS:O	31:o:90:HIS:HB2	2.13	0.48
32:5:168:C:N3	32:5:268:G:C2	2.81	0.48
32:5:193:G:C5	32:5:194:C:C5	3.02	0.48
32:5:247:G:C5	32:5:248:C:C5	3.01	0.48
32:5:300:A:N1	32:5:301:G:O6	2.47	0.48
32:5:446:C:C4	32:5:447:C:C5	3.00	0.48
32:5:712:C:C4	32:5:713:C:C5	3.01	0.48
32:5:950:G:N2	32:5:951:G:C4	2.81	0.48
32:5:976:G:H1	32:5:1277:G:H1	1.60	0.48
32:5:981:C:N4	37:E:69:TYR:CE1	2.81	0.48
32:5:1066:G:C4	32:5:1067:G:C8	3.01	0.48
32:5:1303:A:C2	32:5:1304:C:C4	3.01	0.48
32:5:1395:U:C2'	32:5:1396:G:O5'	2.61	0.48
32:5:1439:C:H5'	38:F:36:ARG:NH1	2.16	0.48
32:5:1477:C:N4	32:5:1478:C:C5	2.81	0.48
32:5:1533:A:N6	32:5:1627:G:O2'	2.46	0.48
32:5:2082:G:C2	32:5:2083:C:C2	3.01	0.48
32:5:2102:G:N1	32:5:2103:G:C5	2.81	0.48
32:5:2567:G:C2	32:5:2568:C:C5	3.00	0.48
32:5:2586:G:C8	32:5:2770:C:H1'	2.48	0.48
32:5:2645:G:N1	32:5:2646:C:C5	2.81	0.48
32:5:2689:C:O2	32:5:2690:C:H6	1.97	0.48
32:5:2703:G:C6	32:5:2704:C:C4	3.02	0.48
32:5:2738:C:O2	32:5:2741:U:C5	2.66	0.48
32:5:2786:C:H5''	32:5:2787:A:OP1	2.13	0.48
32:5:3702:A:N7	32:5:3774:A:C4	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3876:A:O2'	32:5:3877:A:P	2.71	0.48
32:5:4088:C:H2'	32:5:4089:G:C8	2.48	0.48
32:5:4238:G:H2'	32:5:4239:A:O4'	2.13	0.48
32:5:4239:A:H5'	32:5:4240:G:OP2	2.13	0.48
32:5:4480:A:N1	32:5:4481:U:N1	2.61	0.48
32:5:4655:A:N6	32:5:4658:G:C8	2.81	0.48
32:5:5031:G:C2	32:5:5032:C:C6	3.02	0.48
34:8:117:C:O2	34:8:117:C:H2'	2.13	0.48
35:B:29:VAL:HG23	35:B:346:THR:HG21	1.93	0.48
38:F:219:ARG:HH11	38:F:219:ARG:HB3	1.77	0.48
47:q:107:VAL:O	47:q:109:ALA:HB3	2.13	0.48
48:z:97:THR:HB	48:z:102:ASN:HD22	1.77	0.48
48:z:197:GLN:CD	48:z:201:LEU:HD12	2.37	0.48
48:z:219:TYR:CE1	48:z:236:PHE:CD1	3.01	0.48
54:S2:54:A:N3	54:S2:451:G:C2	2.81	0.48
54:S2:438:G:C2'	54:S2:439:A:O5'	2.61	0.48
54:S2:596:U:O2'	54:S2:597:G:C5'	2.61	0.48
54:S2:693:A:H2'	54:S2:694:G:O4'	2.13	0.48
54:S2:828:G:N2	54:S2:829:C:H1'	2.28	0.48
54:S2:921:G:C6	67:SW:28:ARG:HG3	2.48	0.48
54:S2:1154:U:O4'	54:S2:1154:U:O2	2.29	0.48
54:S2:1207:G:C2	54:S2:1837:G:N7	2.81	0.48
54:S2:1215:C:C4	54:S2:1645:C:C6	3.01	0.48
54:S2:1222:G:C2'	54:S2:1223:A:O4'	2.60	0.48
54:S2:1501:C:O2	54:S2:1502:C:C6	2.66	0.48
54:S2:1630:A:H5''	80:SS:36:VAL:O	2.12	0.48
54:S2:1666:C:O2	54:S2:1666:C:H2'	2.13	0.48
54:S2:1741:U:N3	54:S2:1742:C:C6	2.80	0.48
54:S2:1748:G:O6	54:S2:1786:U:O4	2.31	0.48
54:S2:1845:A:C2	54:S2:1855:G:C6	3.01	0.48
56:SB:126:ASP:OD1	56:SB:136:ARG:HG3	2.13	0.48
59:SG:216:ARG:HA	59:SG:219:GLU:HB2	1.95	0.48
78:SQ:27:ARG:HH11	78:SQ:27:ARG:HG3	1.79	0.48
79:SR:119:VAL:O	79:SR:119:VAL:HG23	2.13	0.48
87:Sg:17:TRP:CH2	87:Sg:36:ARG:HD2	2.48	0.48
4:H:18:ILE:HG22	4:H:27:VAL:HG22	1.94	0.48
4:H:89:ARG:HG3	4:H:145:ILE:HG23	1.94	0.48
6:L:148:THR:O	26:h:120:ALA:HB1	2.14	0.48
9:O:114:LYS:HA	32:5:4757:C:C2	2.42	0.48
13:T:87:LYS:HZ1	32:5:4301:U:P	2.35	0.48
17:Y:61:HIS:ND1	17:Y:62:TYR:HB3	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:Z:4:PHE:HE2	21:c:66:LEU:HB3	1.77	0.48
26:h:70:ARG:NH1	32:5:134:G:C6	2.76	0.48
27:i:26:HIS:O	27:i:26:HIS:CD2	2.66	0.48
32:5:29:G:N3	32:5:30:C:C6	2.81	0.48
32:5:49:U:C2'	32:5:50:C:O5'	2.61	0.48
32:5:94:A:H2'	32:5:95:G:C5'	2.43	0.48
32:5:127:G:C2	32:5:128:C:C5	3.02	0.48
32:5:233:U:O2'	32:5:234:G:N2	2.46	0.48
32:5:258:G:N1	32:5:259:C:C4	2.81	0.48
32:5:287:U:O2	32:5:287:U:H2'	2.13	0.48
32:5:301:G:C4	32:5:302:C:C6	3.01	0.48
32:5:966:A:C2	37:E:84:VAL:HB	2.48	0.48
32:5:1308:C:O2	32:5:1308:C:H2'	2.13	0.48
32:5:1398:A:C4	32:5:1399:G:C8	3.01	0.48
32:5:1770:A:C5	32:5:1771:U:C5	3.01	0.48
32:5:1840:G:O2'	32:5:1842:G:O5'	2.26	0.48
32:5:2058:G:C4	32:5:2059:C:C6	3.00	0.48
32:5:2082:G:C2'	32:5:2083:C:O5'	2.61	0.48
32:5:2266:C:H4'	32:5:2267:U:O5'	2.14	0.48
32:5:2297:G:N2	32:5:2338:C:C2	2.81	0.48
32:5:2315:G:C2	32:5:2316:G:N9	2.82	0.48
32:5:2391:G:C6	32:5:2392:C:C4	3.01	0.48
32:5:2439:G:N1	32:5:2440:U:C4	2.82	0.48
32:5:2581:A:H2'	32:5:2582:A:C8	2.48	0.48
32:5:2658:G:C2	32:5:2675:G:N1	2.77	0.48
32:5:2678:A:C2	32:5:2679:G:C5	3.00	0.48
32:5:2684:C:H2'	32:5:2685:C:O4'	2.12	0.48
32:5:2724:G:N1	32:5:2726:G:C5	2.82	0.48
32:5:2817:C:N3	32:5:2818:C:C5	2.82	0.48
32:5:2823:G:C4	32:5:2824:C:C6	3.01	0.48
32:5:3770:U:OP1	50:3:24:A:O2'	2.29	0.48
32:5:3877:A:O2'	32:5:4400:G:N2	2.46	0.48
32:5:3878:C:H5	32:5:4400:G:H4'	1.78	0.48
32:5:4095:G:H2'	32:5:4096:C:C6	2.48	0.48
32:5:4238:G:C5	32:5:4239:A:C8	3.02	0.48
32:5:4293:U:O2	32:5:4293:U:H2'	2.12	0.48
32:5:4346:U:C2'	32:5:4347:G:O5'	2.61	0.48
32:5:4422:A:H2'	32:5:4423:U:O4'	2.13	0.48
32:5:4474:A:C6	32:5:4476:C:O4'	2.66	0.48
32:5:4547:C:O2	32:5:4549:G:C8	2.66	0.48
32:5:4564:A:H2'	32:5:4565:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4758:U:H2'	32:5:4759:C:O5'	2.14	0.48
34:8:27:U:C2	34:8:28:C:C6	3.01	0.48
34:8:106:G:N3	34:8:107:C:C5	2.81	0.48
35:B:85:ILE:HB	35:B:165:HIS:CD2	2.48	0.48
50:3:73:A:O5'	50:3:74:C:OP1	2.31	0.48
51:4:195:U:H2'	51:4:196:C:H6	1.74	0.48
54:S2:50:A:C6	54:S2:51:U:H1'	2.48	0.48
54:S2:69:C:H2'	54:S2:70:G:O4'	2.13	0.48
54:S2:323:C:H3'	54:S2:324:C:C5'	2.43	0.48
54:S2:616:A:C5	54:S2:617:G:C1'	2.93	0.48
54:S2:648:A:N1	54:S2:649:U:C4	2.81	0.48
54:S2:825:A:O2'	54:S2:826:A:H5'	2.13	0.48
54:S2:962:A:C6	54:S2:963:A:C5	3.02	0.48
54:S2:963:A:C6	54:S2:964:A:C6	3.01	0.48
54:S2:1050:A:C5	54:S2:1051:G:N9	2.81	0.48
54:S2:1224:G:O6	54:S2:1225:U:C2	2.66	0.48
54:S2:1229:G:C5	54:S2:1230:C:C5	3.01	0.48
54:S2:1238:U:O2	54:S2:1520:G:N2	2.46	0.48
54:S2:1248:U:C5	54:S2:1249:C:N3	2.81	0.48
54:S2:1263:U:O4	54:S2:1517:G:O6	2.30	0.48
54:S2:1381:G:N2	54:S2:1382:A:H1'	2.27	0.48
56:SB:33:VAL:HG21	56:SB:67:PHE:HZ	1.78	0.48
59:SG:215:LYS:HA	59:SG:218:LYS:HB2	1.94	0.48
65:SO:103:ASN:OD1	65:SO:103:ASN:N	2.44	0.48
66:SV:20:SER:HB3	66:SV:59:ILE:HD11	1.94	0.48
77:SP:18:ARG:NH1	80:SS:90:VAL:HG22	2.28	0.48
81:ST:14:PHE:CE2	81:ST:135:ALA:HB2	2.49	0.48
87:Sg:68:ASP:HB2	87:Sg:110:SER:HA	1.95	0.48
87:Sg:247:TRP:HE1	87:Sg:267:VAL:HG21	1.78	0.48
1:A:209:HIS:HE1	1:A:211:PHE:CD2	2.31	0.48
2:D:20:PHE:CD1	33:7:10:C:C2	3.01	0.48
2:D:43:LYS:N	2:D:44:TYR:CE1	2.81	0.48
3:G:43:GLN:O	32:5:4124:G:N2	2.46	0.48
10:Q:4:ASP:OD1	38:F:117:ARG:C	2.56	0.48
12:S:160:ARG:HB2	32:5:1921:C:H1'	1.95	0.48
18:Z:28:ASN:O	18:Z:28:ASN:CG	2.56	0.48
24:f:21:GLN:HE22	32:5:1309:C:H2'	1.78	0.48
24:f:36:ARG:HH11	24:f:36:ARG:HG2	1.78	0.48
32:5:29:G:C5	32:5:54:G:N3	2.82	0.48
32:5:165:A:C5	32:5:166:C:C5	3.02	0.48
32:5:291:U:C2'	32:5:292:G:C2'	2.74	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:356:G:O2'	34:8:25:G:N3	2.46	0.48
32:5:479:G:N2	32:5:480:C:C2	2.81	0.48
32:5:518:G:H2'	32:5:519:C:O4'	2.12	0.48
32:5:713:C:N4	32:5:955:G:H1	2.11	0.48
32:5:1177:U:H2'	32:5:1178:G:C8	2.48	0.48
32:5:1339:U:N3	32:5:1340:C:H5	2.00	0.48
32:5:1388:A:N6	32:5:1396:G:H22	2.06	0.48
32:5:1423:U:C2	32:5:1424:G:C8	3.02	0.48
32:5:1455:G:C2	32:5:1456:C:C6	3.00	0.48
32:5:1477:C:C2	32:5:1478:C:C6	2.99	0.48
32:5:1488:G:C2	32:5:1489:G:C8	3.01	0.48
32:5:1545:G:H2'	32:5:1546:C:C6	2.48	0.48
32:5:1584:G:C2	32:5:1585:C:C2	3.01	0.48
32:5:1806:G:C6	32:5:1807:C:C5	3.00	0.48
32:5:1838:A:C2	32:5:1839:U:C5	3.02	0.48
32:5:2126:G:H1'	32:5:2127:C:C5	2.47	0.48
32:5:2439:G:N7	32:5:2777:G:C6	2.82	0.48
32:5:2481:G:C2	32:5:2482:C:C2	3.01	0.48
32:5:2496:G:C2	32:5:2497:C:C6	3.02	0.48
32:5:2497:C:N3	32:5:2498:C:C4	2.78	0.48
32:5:2560:C:C4	32:5:2561:C:C5	3.02	0.48
32:5:2567:G:C4	32:5:2568:C:C5	3.02	0.48
32:5:2753:G:H3'	32:5:2754:G:O4'	2.14	0.48
32:5:3591:C:O2	32:5:3591:C:C2'	2.59	0.48
32:5:3709:U:O2	32:5:3709:U:O2'	2.24	0.48
32:5:3734:U:O2'	32:5:3735:G:O5'	2.31	0.48
32:5:3754:G:H2'	32:5:3755:G:H5''	1.95	0.48
32:5:4482:U:O2	32:5:4482:U:C2'	2.61	0.48
32:5:4652:G:C6	32:5:4653:C:C4	3.00	0.48
32:5:4895:C:O2	32:5:4896:G:N7	2.46	0.48
32:5:4898:G:C2	32:5:4899:G:C5	3.01	0.48
32:5:5004:C:C5	32:5:5005:G:C4	3.01	0.48
34:8:3:A:C6	34:8:4:C:C4	3.01	0.48
35:B:106:PHE:CD2	35:B:130:PHE:CE2	3.01	0.48
36:C:94:ASN:HA	36:C:100:ARG:O	2.13	0.48
48:z:297:MET:C	48:z:353:PRO:CG	2.87	0.48
48:z:373:LYS:O	48:z:377:THR:HG23	2.13	0.48
51:4:143:C:N4	51:4:154:G:H1	2.09	0.48
54:S2:10:G:C6	54:S2:1697:A:H2	2.32	0.48
54:S2:11:A:N1	54:S2:12:U:C6	2.80	0.48
54:S2:58:C:C2	54:S2:500:A:N7	2.82	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:118:C:C1'	54:S2:445:A:C4	2.95	0.48
54:S2:453:C:HO2'	54:S2:454:U:P	2.34	0.48
54:S2:576:A:H2'	54:S2:577:U:O4'	2.12	0.48
54:S2:634:A:C4	54:S2:635:G:C8	3.01	0.48
54:S2:857:U:N3	54:S2:858:A:N7	2.62	0.48
54:S2:957:A:C5	54:S2:958:G:O6	2.66	0.48
54:S2:961:G:N2	54:S2:962:A:H1'	2.28	0.48
54:S2:974:C:C4	54:S2:975:G:N7	2.81	0.48
54:S2:1052:A:C6	54:S2:1053:C:C4	3.01	0.48
54:S2:1094:C:O2	54:S2:1094:C:H2'	2.13	0.48
54:S2:1135:C:O2	54:S2:1136:U:C6	2.66	0.48
54:S2:1190:A:H2'	54:S2:1191:C:O4'	2.13	0.48
54:S2:1203:G:C5	54:S2:1204:A:C5	3.01	0.48
54:S2:1278:A:C6	54:S2:1279:C:C4	3.00	0.48
54:S2:1420:G:O2'	81:ST:4:VAL:CA	2.62	0.48
54:S2:1812:U:O2	54:S2:1813:A:H8	1.95	0.48
58:SE:98:ASN:OD1	58:SE:98:ASN:N	2.45	0.48
59:SG:162:LEU:HD11	59:SG:165:GLU:OE1	2.13	0.48
62:SJ:36:GLY:O	62:SJ:111:GLN:NE2	2.46	0.48
62:SJ:147:PHE:C	62:SJ:147:PHE:HD1	2.21	0.48
70:Sa:34:LYS:O	70:Sa:35:ALA:HB3	2.12	0.48
70:Sa:51:ARG:HH12	84:Sc:40:ARG:HD2	1.69	0.48
73:SD:115:VAL:CG2	73:SD:142:LEU:HD11	2.41	0.48
76:SM:31:LEU:HD12	76:SM:33:ARG:HB3	1.94	0.48
81:ST:53:PHE:C	81:ST:53:PHE:CD1	2.91	0.48
6:L:103:ARG:NH1	32:5:75:G:O6	2.46	0.48
9:O:108:ILE:HG22	9:O:157:GLU:OE1	2.14	0.48
9:O:192:PHE:N	9:O:192:PHE:CD1	2.82	0.48
10:Q:33:ARG:O	10:Q:34:PHE:C	2.57	0.48
12:S:68:PHE:N	12:S:68:PHE:CD1	2.81	0.48
13:T:19:PHE:HB3	13:T:20:ARG:HG3	1.95	0.48
27:i:63:VAL:O	27:i:64:SER:C	2.57	0.48
31:o:45:GLN:HA	31:o:45:GLN:NE2	2.26	0.48
32:5:28:C:O2	32:5:28:C:C2'	2.62	0.48
32:5:98:A:N6	32:5:99:A:C5	2.82	0.48
32:5:116:G:C6	32:5:117:C:C4	3.01	0.48
32:5:208:A:H1'	32:5:232:G:N3	2.28	0.48
32:5:212:A:C2	32:5:213:G:C6	3.02	0.48
32:5:226:G:C4	32:5:236:G:C8	3.01	0.48
32:5:438:G:C2	32:5:439:G:N9	2.82	0.48
32:5:708:G:N2	32:5:709:C:H1'	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:961:G:C6	32:5:969:C:C6	3.00	0.48
32:5:1268:G:C2	32:5:2111:G:C2	3.02	0.48
32:5:1268:G:N2	32:5:1270:A:C1'	2.76	0.48
32:5:1444:G:C2'	32:5:1445:U:C6	2.88	0.48
32:5:1478:C:O2	32:5:1478:C:H2'	2.13	0.48
32:5:1581:G:N7	32:5:1610:C:N4	2.60	0.48
32:5:1594:C:N4	32:5:1595:G:C5	2.81	0.48
32:5:1674:C:C4	32:5:1675:C:C5	3.01	0.48
32:5:1754:U:O4'	32:5:1754:U:O2	2.30	0.48
32:5:1840:G:OP1	38:F:115:ARG:HD3	2.13	0.48
32:5:1899:G:H1	32:5:2076:G:H1	1.60	0.48
32:5:1955:G:C5	32:5:1956:A:C8	3.01	0.48
32:5:2089:G:C8	32:5:2262:G:H3'	2.48	0.48
32:5:2091:C:H1'	32:5:2092:G:H2'	1.96	0.48
32:5:2099:G:N2	32:5:2100:A:N9	2.62	0.48
32:5:2263:A:O3'	32:5:2264:C:H2'	2.13	0.48
32:5:2281:U:O2	32:5:2282:A:C8	2.66	0.48
32:5:2314:G:C2	32:5:2315:G:C5	2.78	0.48
32:5:2495:U:O2	32:5:2495:U:H2'	2.13	0.48
32:5:2605:G:C2	32:5:2606:G:C4	3.01	0.48
32:5:2712:G:C6	32:5:2713:C:C4	3.02	0.48
32:5:2736:G:C2'	32:5:2737:C:H5'	2.44	0.48
32:5:2744:A:HO2'	32:5:2745:A:H8	1.58	0.48
32:5:3594:C:O2	32:5:3594:C:C2'	2.62	0.48
32:5:3653:A:H8	32:5:3653:A:P	2.37	0.48
32:5:3714:G:C4	32:5:3715:U:O2	2.66	0.48
32:5:4068:U:C4	32:5:4069:U:C6	3.01	0.48
32:5:4094:G:H2'	32:5:4095:G:C1'	2.40	0.48
32:5:4147:G:N2	32:5:4148:C:C2	2.82	0.48
32:5:4172:A:C2	32:5:4173:G:N9	2.81	0.48
32:5:4283:G:H1	32:5:4284:C:N4	2.09	0.48
32:5:4453:C:H1'	32:5:4529:G:N2	2.29	0.48
32:5:4505:C:H2'	32:5:4506:C:H6	1.78	0.48
32:5:4635:A:N1	32:5:4664:A:C4	2.82	0.48
34:8:133:G:C2	34:8:134:G:C5	2.99	0.48
35:B:122:TRP:CD1	35:B:122:TRP:C	2.91	0.48
46:K:63:THR:HA	46:K:71:ILE:O	2.14	0.48
46:K:118:HIS:O	46:K:118:HIS:CG	2.66	0.48
48:z:407:ALA:HB1	48:z:413:SER:C	2.38	0.48
49:2:81:LEU:O	49:2:85:LEU:HG	2.12	0.48
54:S2:25:A:C4	54:S2:650:A:N6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:47:G:H2'	54:S2:48:C:O4'	2.14	0.48
54:S2:176:U:H2'	54:S2:177:G:C8	2.49	0.48
54:S2:309:G:C2	54:S2:310:C:N3	2.81	0.48
54:S2:624:C:N4	68:SX:63:ASN:OD1	2.46	0.48
54:S2:661:U:O2	54:S2:661:U:H2'	2.13	0.48
54:S2:684:G:H2'	54:S2:685:A:O4'	2.13	0.48
54:S2:793:G:N1	54:S2:794:A:H1'	2.28	0.48
54:S2:841:G:N1	54:S2:842:C:C5	2.65	0.48
54:S2:848:U:H2'	54:S2:849:A:C8	2.49	0.48
54:S2:933:G:C8	54:S2:1001:A:C4	3.01	0.48
54:S2:945:U:H2'	54:S2:946:U:O4'	2.13	0.48
54:S2:1074:C:O2	54:S2:1075:C:C5	2.56	0.48
54:S2:1093:A:N6	54:S2:1094:C:C4	2.82	0.48
54:S2:1103:C:C2	54:S2:1104:G:C8	3.01	0.48
54:S2:1109:C:C1'	54:S2:1110:G:P	3.00	0.48
54:S2:1124:C:O2'	79:SR:123:THR:O	2.31	0.48
54:S2:1316:C:C2	54:S2:1317:C:C6	2.90	0.48
54:S2:1557:C:O4'	54:S2:1557:C:O2	2.30	0.48
54:S2:1641:A:C2	54:S2:1642:U:C6	3.02	0.48
54:S2:1648:G:C8	78:SQ:125:ARG:CB	2.96	0.48
54:S2:1696:C:O2	54:S2:1697:A:C8	2.67	0.48
59:SG:120:ASP:OD1	59:SG:120:ASP:N	2.45	0.48
2:D:66:TYR:CD1	2:D:66:TYR:C	2.91	0.48
11:R:69:ALA:HB1	11:R:74:ARG:HB2	1.95	0.48
19:a:79:TRP:CZ2	19:a:101:ILE:HD11	2.48	0.48
22:d:25:TYR:CZ	22:d:119:THR:HG22	2.49	0.48
22:d:87:ARG:NH1	22:d:87:ARG:CB	2.76	0.48
26:h:110:LYS:NZ	32:5:111:C:OP1	2.45	0.48
27:i:20:ASN:OD1	27:i:20:ASN:C	2.56	0.48
32:5:3:C:C2	32:5:4:G:C8	3.02	0.48
32:5:125:C:O2	32:5:125:C:C2'	2.62	0.48
32:5:166:C:O2	32:5:166:C:C2'	2.61	0.48
32:5:216:C:O4'	32:5:216:C:OP2	2.31	0.48
32:5:294:G:N3	32:5:294:G:C2'	2.76	0.48
32:5:328:A:C6	32:5:329:A:N6	2.82	0.48
32:5:479:G:C4	32:5:480:C:C6	3.01	0.48
32:5:677:G:C4	32:5:678:C:C5	3.02	0.48
32:5:1194:G:C2	32:5:1195:G:C8	3.02	0.48
32:5:1362:G:C2	32:5:1363:C:C6	3.02	0.48
32:5:1378:C:H5''	32:5:1379:C:H3'	1.95	0.48
32:5:1560:A:H2'	32:5:1561:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1838:A:C2	32:5:1839:U:C6	3.01	0.48
32:5:1885:G:C6	32:5:1895:G:C2	3.01	0.48
32:5:2092:G:N1	36:C:305:PRO:O	2.44	0.48
32:5:2095:A:C6	38:F:41:GLN:OE1	2.64	0.48
32:5:2249:C:H2'	32:5:2249:C:O2	2.12	0.48
32:5:2341:A:C2	32:5:2342:G:N9	2.81	0.48
32:5:2347:A:C2	32:5:2348:G:C2	3.01	0.48
32:5:2478:C:H2'	32:5:2479:G:O4'	2.14	0.48
32:5:2494:U:N3	32:5:2495:U:C5	2.82	0.48
32:5:2556:G:N2	32:5:2572:C:N3	2.61	0.48
32:5:4189:U:O4'	32:5:4380:A:C2	2.65	0.48
32:5:4248:A:H2'	32:5:4249:G:O4'	2.13	0.48
32:5:4338:G:O2'	32:5:4372:U:O4	2.31	0.48
32:5:4510:A:C4	32:5:4511:A:C6	3.01	0.48
32:5:4627:U:O2	32:5:4627:U:C2'	2.60	0.48
32:5:4754:G:C2	32:5:4880:C:C2	3.02	0.48
32:5:4871:C:H4'	32:5:4872:G:O5'	2.13	0.48
32:5:4877:G:O2'	32:5:4878:C:P	2.72	0.48
32:5:4919:G:C4	32:5:4920:C:C5	3.01	0.48
33:7:59:G:C2	33:7:60:G:C4	3.01	0.48
33:7:83:A:N1	33:7:85:G:C8	2.82	0.48
46:K:126:SER:C	46:K:130:LYS:HG3	2.38	0.48
47:q:99:ARG:CZ	47:q:103:ARG:CZ	2.91	0.48
50:3:39:G:C2	50:3:40:C:C4	2.98	0.48
51:4:12:U:C4	51:4:14:G:OP2	2.66	0.48
51:4:56:A:N1	51:4:57:G:C5	2.82	0.48
51:4:196:C:N4	51:4:197:G:O6	2.47	0.48
52:9:24:ASN:HD21	52:9:43:ASN:HA	1.78	0.48
53:6:117:LEU:O	53:6:121:MET:HG2	2.13	0.48
54:S2:27:A:H2	54:S2:28:U:H1'	1.77	0.48
54:S2:307:G:OP2	54:S2:307:G:O3'	2.31	0.48
54:S2:477:G:N3	54:S2:478:G:C8	2.82	0.48
54:S2:493:A:N3	54:S2:493:A:H2'	2.29	0.48
54:S2:497:C:O2'	54:S2:498:C:C5'	2.61	0.48
54:S2:987:A:H2	56:SB:114:VAL:HG21	1.78	0.48
54:S2:987:A:H2'	54:S2:988:C:O4'	2.14	0.48
54:S2:1130:G:H2'	54:S2:1130:G:N3	2.29	0.48
54:S2:1226:G:O6	54:S2:1638:G:C8	2.55	0.48
54:S2:1236:G:O6	80:SS:137:LYS:HE3	2.14	0.48
54:S2:1287:A:N1	54:S2:1314:U:C2	2.82	0.48
54:S2:1352:G:C6	54:S2:1353:A:N7	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1545:A:C2	54:S2:1546:G:C2	3.01	0.48
54:S2:1561:A:N1	54:S2:1562:C:H1'	2.29	0.48
61:SI:62:VAL:HG12	61:SI:77:ARG:HA	1.96	0.48
88:S1:7:TRP:CG	88:S1:8:GLU:N	2.81	0.48
8:N:135:ILE:CG2	8:N:142:ILE:HD13	2.44	0.48
9:O:130:LYS:HD3	32:5:2055:G:H1'	1.95	0.48
17:Y:121:ARG:HB3	17:Y:121:ARG:NH1	2.29	0.48
31:o:40:ARG:HH21	31:o:40:ARG:HB3	1.78	0.48
32:5:59:A:C5	32:5:60:G:C8	3.02	0.48
32:5:77:U:N3	32:5:336:A:C6	2.81	0.48
32:5:99:A:C4	32:5:100:C:O2	2.67	0.48
32:5:157:U:O2'	32:5:158:A:C8	2.63	0.48
32:5:455:C:C4	32:5:456:C:C5	3.01	0.48
32:5:1048:G:C4	32:5:1049:C:C6	3.01	0.48
32:5:1200:G:C5	32:5:1201:U:C5	3.01	0.48
32:5:1203:G:C2	32:5:1204:C:C2	3.01	0.48
32:5:1213:G:C6	32:5:1215:C:C4	3.01	0.48
32:5:1377:G:H3'	32:5:1377:G:C8	2.49	0.48
32:5:1477:C:O2	32:5:1478:C:C1'	2.59	0.48
32:5:1487:G:O5'	32:5:1487:G:C8	2.67	0.48
32:5:1567:U:C2	32:5:1568:C:C5	3.01	0.48
32:5:1658:G:H4'	32:5:2348:G:O2'	2.14	0.48
32:5:1819:G:C2	32:5:1820:C:C6	3.02	0.48
32:5:1949:U:C2	32:5:1950:U:C6	2.94	0.48
32:5:1953:U:H2'	32:5:1954:U:C6	2.48	0.48
32:5:1966:C:N3	32:5:1967:A:N7	2.61	0.48
32:5:1984:A:H62	32:5:2011:C:C2'	2.26	0.48
32:5:2417:A:H2'	32:5:2417:A:N3	2.27	0.48
32:5:2445:C:N3	32:5:2446:C:C5	2.82	0.48
32:5:2480:G:N2	32:5:2499:C:C2	2.82	0.48
32:5:2540:C:N3	32:5:2541:G:N7	2.62	0.48
32:5:2612:G:C5	32:5:2613:C:C6	3.01	0.48
32:5:2688:G:C4	32:5:2689:C:C5	3.02	0.48
32:5:2732:G:C6	32:5:2733:C:C4	3.02	0.48
32:5:3630:A:C6	32:5:3631:U:C5	3.01	0.48
32:5:3669:G:C2	32:5:3671:G:OP2	2.65	0.48
32:5:3767:C:H5''	54:S2:1849:G:N7	2.09	0.48
32:5:3782:C:C5	32:5:3809:G:C6	3.01	0.48
32:5:3907:G:C2	32:5:3909:C:C5	3.01	0.48
32:5:4489:G:C5	32:5:4490:C:C5	3.02	0.48
32:5:4581:G:C2	32:5:4582:C:C6	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4617:G:OP1	35:B:65:SER:HB2	2.14	0.48
32:5:4627:U:O4	32:5:4672:A:H2	1.96	0.48
32:5:4628:U:O2	32:5:4628:U:H2'	2.13	0.48
32:5:4933:C:C2	32:5:4934:A:C8	3.00	0.48
32:5:4982:A:C2	32:5:4983:C:H1'	2.47	0.48
32:5:5010:U:N3	32:5:5011:A:N7	2.62	0.48
32:5:5017:G:OP1	61:SI:92:ARG:HG2	2.14	0.48
34:8:65:A:C2	34:8:66:A:C4	3.00	0.48
34:8:73:U:C4	34:8:74:U:H1'	2.48	0.48
34:8:95:A:H2'	34:8:95:A:N3	2.29	0.48
34:8:119:C:O2	34:8:119:C:H2'	2.12	0.48
34:8:142:U:C4	34:8:143:G:N7	2.82	0.48
39:I:86:HIS:HD2	39:I:139:ARG:HH12	1.61	0.48
48:z:360:MET:CG	48:z:365:GLU:CB	2.86	0.48
51:4:284:G:N3	51:4:285:C:C6	2.81	0.48
54:S2:51:U:C4	54:S2:52:G:N7	2.81	0.48
54:S2:81:U:C4	54:S2:82:G:C5	3.02	0.48
54:S2:217:A:N3	54:S2:217:A:H2'	2.28	0.48
54:S2:569:A:C2	54:S2:570:C:C6	3.02	0.48
54:S2:678:U:N3	54:S2:679:A:N7	2.62	0.48
54:S2:818:A:H5'	54:S2:819:G:OP2	2.14	0.48
54:S2:825:A:H2'	54:S2:826:A:C8	2.48	0.48
54:S2:896:U:H2'	54:S2:897:U:O4'	2.13	0.48
54:S2:1225:U:C4	54:S2:1226:G:C5	2.99	0.48
54:S2:1293:A:C1'	86:Sf:150:PHE:HD2	2.25	0.48
54:S2:1459:G:C2	54:S2:1468:C:C2	3.01	0.48
54:S2:1510:G:O6	54:S2:1511:U:C4	2.66	0.48
54:S2:1810:U:H2'	54:S2:1811:C:O4'	2.14	0.48
55:SA:39:TYR:CE2	79:SR:105:MET:HA	2.41	0.48
55:SA:204:TYR:C	55:SA:204:TYR:CD1	2.91	0.48
62:SJ:44:TRP:HA	62:SJ:47:LYS:HB3	1.95	0.48
79:SR:73:LEU:HD23	79:SR:76:GLU:OE1	2.13	0.48
79:SR:121:GLN:HA	79:SR:121:GLN:NE2	2.28	0.48
84:Sc:34:PHE:O	84:Sc:35:MET:CB	2.61	0.48
2:D:52:ILE:HG23	2:D:54:ARG:NH2	2.29	0.48
8:N:120:TRP:CD1	8:N:120:TRP:C	2.91	0.48
10:Q:37:ARG:HD3	32:5:2087:C:OP2	2.13	0.48
23:e:98:GLU:CD	23:e:123:THR:HG1	2.12	0.48
32:5:40:G:C6	32:5:4378:A:C4	3.02	0.48
32:5:55:G:N1	32:5:56:A:C5	2.81	0.48
32:5:77:U:O4	32:5:335:A:C6	2.62	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:85:G:C2	32:5:97:G:C5	3.00	0.48
32:5:98:A:N6	32:5:99:A:C4	2.81	0.48
32:5:172:C:C4	32:5:173:C:C5	3.01	0.48
32:5:243:A:C6	32:5:244:G:C4	3.02	0.48
32:5:273:U:H2'	32:5:274:C:O4'	2.13	0.48
32:5:388:A:C5	32:5:411:G:N1	2.82	0.48
32:5:497:G:N1	32:5:499:G:C5	2.82	0.48
32:5:505:G:C2	32:5:506:C:C2	3.01	0.48
32:5:744:G:C2	32:5:921:C:O2	2.67	0.48
32:5:907:C:N3	32:5:908:G:N7	2.62	0.48
32:5:958:G:H2'	32:5:959:G:O4'	2.13	0.48
32:5:1174:G:C2	32:5:1175:A:N7	2.67	0.48
32:5:1219:G:N3	32:5:1220:G:C8	2.81	0.48
32:5:1260:G:C4	32:5:1261:G:C8	3.01	0.48
32:5:1277:G:C6	32:5:1278:C:C4	3.01	0.48
32:5:1544:G:N3	32:5:1545:G:C8	2.82	0.48
32:5:1642:A:N3	32:5:1642:A:C2'	2.77	0.48
32:5:1643:A:C5	32:5:1644:C:C5	3.01	0.48
32:5:1667:G:C2	32:5:2283:G:C6	3.01	0.48
32:5:2089:G:C2	32:5:2263:A:C6	2.98	0.48
32:5:2324:C:H2'	32:5:2324:C:O2	2.13	0.48
32:5:2391:G:C4	32:5:2392:C:C6	3.02	0.48
32:5:2417:A:N3	32:5:2418:A:C8	2.81	0.48
32:5:2479:G:C2	32:5:2480:G:N9	2.82	0.48
32:5:2535:G:H2'	32:5:2536:A:O4'	2.13	0.48
32:5:2567:G:N1	32:5:2568:C:C5	2.82	0.48
32:5:2605:G:N2	32:5:2606:G:N9	2.62	0.48
32:5:3829:G:N3	32:5:3829:G:H2'	2.28	0.48
32:5:4114:C:H2'	32:5:4115:G:H1'	1.96	0.48
32:5:4153:C:O2	32:5:4154:G:C8	2.66	0.48
32:5:4461:C:O2	32:5:4516:G:C2	2.66	0.48
32:5:4518:A:O2'	35:B:257:TRP:CZ3	2.56	0.48
32:5:4627:U:O4'	35:B:53:MET:HB2	2.13	0.48
32:5:4683:U:H2'	32:5:4684:A:O5'	2.14	0.48
32:5:4702:G:C6	32:5:4703:U:C6	3.02	0.48
32:5:4746:C:C2	32:5:4747:C:C6	3.01	0.48
32:5:4981:G:O2'	40:P:69:ARG:HB3	2.14	0.48
33:7:8:G:C2	33:7:9:C:C2	3.02	0.48
33:7:75:G:N2	33:7:100:A:OP2	2.44	0.48
34:8:103:A:H3'	34:8:104:A:C5'	2.44	0.48
48:z:194:ARG:CD	48:z:195:HIS:CE1	2.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:380:ASP:CB	51:4:192:A:N1	2.51	0.48
49:2:127:MET:SD	49:2:127:MET:N	2.85	0.48
50:3:49:C:O2	50:3:50:C:C5	2.66	0.48
50:3:56:C:HO3'	50:3:57:G:P	2.36	0.48
54:S2:29:G:C8	54:S2:646:G:N2	2.81	0.48
54:S2:91:A:C6	59:SG:88:ARG:NH2	2.82	0.48
54:S2:105:U:O2	54:S2:105:U:C2'	2.62	0.48
54:S2:118:C:N3	54:S2:119:U:C1'	2.77	0.48
54:S2:122:G:C6	54:S2:123:G:C8	3.02	0.48
54:S2:403:G:O6	54:S2:404:G:C6	2.66	0.48
54:S2:418:A:N6	54:S2:419:G:C6	2.81	0.48
54:S2:431:G:C4	54:S2:432:G:C8	3.02	0.48
54:S2:474:G:H5''	54:S2:474:G:C8	2.49	0.48
54:S2:478:G:H1'	89:S4:81:MET:SD	2.54	0.48
54:S2:551:U:O2	54:S2:551:U:C2'	2.56	0.48
54:S2:665:G:O4'	54:S2:670:A:C2	2.67	0.48
54:S2:978:G:C2	54:S2:979:C:C2	3.02	0.48
54:S2:1169:G:N2	54:S2:1191:C:N4	2.61	0.48
54:S2:1302:G:O2'	86:Sf:146:LEU:CD1	2.61	0.48
54:S2:1496:U:C4	54:S2:1498:A:N7	2.81	0.48
54:S2:1570:G:C6	54:S2:1571:G:N7	2.81	0.48
54:S2:1594:A:N1	54:S2:1595:U:C4	2.81	0.48
54:S2:1781:A:N3	54:S2:1782:G:N7	2.62	0.48
54:S2:1793:A:N1	54:S2:1794:C:C4	2.82	0.48
56:SB:32:ASP:HB2	56:SB:94:LYS:O	2.14	0.48
59:SG:209:TYR:O	59:SG:213:LEU:N	2.46	0.48
59:SG:210:ALA:O	59:SG:214:ALA:HB3	2.12	0.48
64:SN:89:TYR:C	64:SN:89:TYR:HD1	2.22	0.48
76:SM:77:ILE:HG23	76:SM:78:LYS:H	1.79	0.48
87:Sg:88:ARG:HG2	87:Sg:100:ARG:HB2	1.96	0.48
88:S1:28:VAL:HG22	88:S1:41:LYS:HB3	1.95	0.48
2:D:16:TYR:CE2	2:D:18:VAL:HA	2.48	0.48
8:N:125:SER:HB3	32:5:3937:C:H1'	1.94	0.48
12:S:176:PHE:CD2	32:5:4871:C:C5	3.02	0.48
13:T:19:PHE:CG	13:T:20:ARG:HG3	2.49	0.48
19:a:70:CYS:HA	19:a:109:TYR:HB2	1.95	0.48
32:5:60:G:N1	32:5:61:A:C5	2.82	0.48
32:5:238:C:C2	32:5:239:C:C5	3.02	0.48
32:5:661:C:N4	32:5:662:C:N4	2.62	0.48
32:5:735:G:C2	32:5:736:C:C2	3.01	0.48
32:5:1092:G:C2	32:5:1093:C:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1203:G:N3	32:5:1204:C:C6	2.82	0.48
32:5:1212:G:N1	32:5:1213:G:N7	2.61	0.48
32:5:1269:G:O5'	32:5:2111:G:O6	2.32	0.48
32:5:1358:G:OP1	32:5:1506:G:O2'	2.31	0.48
32:5:1391:A:C5	32:5:1392:A:C8	3.02	0.48
32:5:1411:C:C2	32:5:1412:G:C8	3.02	0.48
32:5:1453:G:C2	32:5:1454:G:C8	3.02	0.48
32:5:1534:A:C6	42:j:14:LYS:HA	2.48	0.48
32:5:1655:C:H2'	32:5:1655:C:O2	2.13	0.48
32:5:1967:A:N3	32:5:1968:G:C8	2.81	0.48
32:5:2247:C:H5''	32:5:2248:C:O5'	2.14	0.48
32:5:2326:G:N2	32:5:2327:G:C1'	2.77	0.48
32:5:2391:G:C5	32:5:2392:C:C5	3.02	0.48
32:5:2408:U:C1'	32:5:2409:U:C4	2.96	0.48
32:5:2591:A:N6	32:5:2753:G:H21	2.12	0.48
32:5:2606:G:C2	32:5:2607:C:C6	3.02	0.48
32:5:2632:U:N3	32:5:2633:U:C5	2.81	0.48
32:5:2643:G:C6	32:5:2644:G:C8	3.02	0.48
32:5:2792:C:C2	32:5:2793:G:C8	3.02	0.48
32:5:3919:C:N3	32:5:3920:U:C5	2.82	0.48
32:5:4152:G:C6	32:5:4153:C:C4	3.02	0.48
32:5:4210:U:C4	32:5:4211:C:N4	2.81	0.48
32:5:4284:C:O2	32:5:4285:U:H6	1.91	0.48
32:5:4342:C:C2	32:5:4343:U:H6	2.27	0.48
32:5:4416:G:N2	32:5:4417:C:C6	2.79	0.48
32:5:4743:G:N3	32:5:4744:A:C8	2.82	0.48
32:5:4983:C:O2	32:5:4983:C:H2'	2.14	0.48
32:5:5017:G:H2'	32:5:5018:C:O4'	2.13	0.48
34:8:13:G:C5	34:8:14:U:O4	2.67	0.48
34:8:73:U:C5	34:8:74:U:C5	3.00	0.48
35:B:224:LYS:HG3	35:B:340:THR:HB	1.96	0.48
37:E:53:TYR:CE2	37:E:61:ARG:CZ	2.96	0.48
48:z:406:VAL:HG12	48:z:417:VAL:CG2	2.43	0.48
50:3:50:C:C2	50:3:65:G:C2	3.02	0.48
51:4:127:A:O2'	51:4:173:A:N1	2.42	0.48
54:S2:167:G:C6	54:S2:168:C:C5	3.02	0.48
54:S2:380:G:N2	54:S2:382:C:C3'	2.71	0.48
54:S2:380:G:N2	54:S2:382:C:H2'	2.28	0.48
54:S2:413:G:N2	54:S2:425:G:H1'	2.29	0.48
54:S2:438:G:H2'	54:S2:439:A:O5'	2.14	0.48
54:S2:443:U:C4	54:S2:444:G:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:443:U:C4	54:S2:444:G:N9	2.82	0.48
54:S2:600:G:C4	54:S2:631:U:O4	2.66	0.48
54:S2:905:C:C4	54:S2:906:U:C5	3.02	0.48
54:S2:951:C:O2	54:S2:951:C:H2'	2.12	0.48
54:S2:1016:U:O2	54:S2:1016:U:O4'	2.31	0.48
54:S2:1052:A:C2	54:S2:1053:C:N1	2.82	0.48
54:S2:1141:G:N1	54:S2:1147:C:C4	2.82	0.48
54:S2:1294:G:C6	54:S2:1295:A:N7	2.82	0.48
54:S2:1394:G:H3'	54:S2:1394:G:C4	2.49	0.48
54:S2:1450:G:H2'	54:S2:1451:G:O4'	2.14	0.48
54:S2:1526:G:C4	54:S2:1527:C:C5	3.02	0.48
54:S2:1553:C:O2	54:S2:1553:C:O4'	2.29	0.48
54:S2:1561:A:C5	54:S2:1562:C:C5	3.02	0.48
54:S2:1795:G:N3	54:S2:1796:G:C8	2.82	0.48
54:S2:1858:G:C6	54:S2:1859:A:N7	2.81	0.48
60:SH:135:PHE:HD1	60:SH:136:PRO:CA	2.26	0.48
67:SW:30:CYS:SG	67:SW:31:SER:N	2.86	0.48
73:SD:68:GLU:OE1	75:SK:70:TYR:CD1	2.67	0.48
76:SM:21:VAL:HG22	76:SM:121:LYS:HG3	1.96	0.48
77:SP:42:ARG:CZ	77:SP:42:ARG:CB	2.92	0.48
78:SQ:62:ARG:HH11	78:SQ:62:ARG:HA	1.77	0.48
81:ST:78:ILE:HG23	81:ST:79:TYR:CE1	2.49	0.48
83:SZ:51:ASP:N	83:SZ:54:THR:OG1	2.47	0.48
1:A:67:TYR:HE1	32:5:4086:G:C8	2.24	0.48
1:A:83:HIS:C	1:A:83:HIS:CD2	2.92	0.48
3:G:136:LEU:HD21	3:G:204:PHE:HE1	1.77	0.48
10:Q:37:ARG:NH1	32:5:2087:C:H5	2.10	0.48
17:Y:10:ASP:OD1	36:C:198:ASN:OD1	2.31	0.48
17:Y:91:ASN:OD1	17:Y:91:ASN:N	2.45	0.48
19:a:25:HIS:CE1	32:5:1338:G:H22	2.32	0.48
22:d:34:HIS:HB3	32:5:5048:A:H1'	1.96	0.48
31:o:40:ARG:NH1	32:5:92:C:N4	2.61	0.48
32:5:120:A:N7	32:5:149:A:C6	2.82	0.48
32:5:247:G:C4	32:5:248:C:C6	3.01	0.48
32:5:259:C:N3	32:5:260:C:C5	2.81	0.48
32:5:268:G:C2	32:5:269:G:N9	2.82	0.48
32:5:328:A:N1	32:5:329:A:C6	2.82	0.48
32:5:438:G:N3	32:5:439:G:C8	2.81	0.48
32:5:471:A:C2	32:5:472:C:H1'	2.48	0.48
32:5:908:G:C2	32:5:909:A:N9	2.82	0.48
32:5:976:G:C2	32:5:977:C:C6	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1084:C:H2'	32:5:1084:C:O2	2.13	0.48
32:5:1093:C:N3	32:5:1094:G:N7	2.61	0.48
32:5:1172:C:O2	32:5:1172:C:H2'	2.13	0.48
32:5:1251:C:C2	32:5:1252:C:C5	3.02	0.48
32:5:1358:G:H2'	32:5:1359:G:H8	1.78	0.48
32:5:1392:A:N1	32:5:1393:G:O6	2.46	0.48
32:5:1395:U:O2'	32:5:1396:G:C5'	2.62	0.48
32:5:1402:C:C2	32:5:1416:G:C2	3.02	0.48
32:5:1444:G:N2	32:5:1445:U:O4	2.46	0.48
32:5:1557:C:C2	32:5:1558:A:C8	3.01	0.48
32:5:1663:C:O2'	32:5:1664:U:H5'	2.13	0.48
32:5:1829:G:C2	32:5:1830:G:C5	3.02	0.48
32:5:1990:A:C2'	32:5:1991:A:O4'	2.61	0.48
32:5:2043:A:C2	32:5:4516:G:O4'	2.67	0.48
32:5:2363:A:O4'	32:5:4560:C:C5	2.67	0.48
32:5:2409:U:O4	32:5:2783:A:N1	2.47	0.48
32:5:2804:C:C4	32:5:2805:C:C5	3.02	0.48
32:5:2823:G:H2'	32:5:2824:C:O4'	2.14	0.48
32:5:2852:U:O2	32:5:2852:U:H2'	2.14	0.48
32:5:3718:A:N1	32:5:3933:G:O2'	2.43	0.48
32:5:3806:G:C6	32:5:3807:A:C5	3.02	0.48
32:5:3856:A:C5	32:5:3857:G:C8	3.01	0.48
32:5:4095:G:C2	32:5:4096:C:N4	2.82	0.48
32:5:4152:G:C2	32:5:4153:C:C5	3.02	0.48
32:5:4269:G:N2	32:5:4277:G:H22	2.05	0.48
32:5:4276:G:C6	32:5:4277:G:C4	3.02	0.48
32:5:4321:U:H2'	32:5:4322:G:O4'	2.13	0.48
32:5:4377:G:OP2	32:5:4378:A:OP1	2.32	0.48
32:5:4394:A:H3'	32:5:4395:U:H5'	1.96	0.48
32:5:4397:A:C5'	50:3:76:A:N1	2.76	0.48
32:5:4425:G:C6	32:5:4426:C:C5	3.02	0.48
32:5:4474:A:N7	32:5:4476:C:C2	2.82	0.48
32:5:4568:A:H4'	35:B:21:ARG:HH21	1.78	0.48
32:5:5028:G:C6	32:5:5029:C:C4	3.02	0.48
33:7:31:G:C2	33:7:47:G:C2	3.02	0.48
34:8:64:U:C2	34:8:65:A:C5	3.01	0.48
38:F:146:TYR:CE2	38:F:239:GLU:HA	2.48	0.48
38:F:194:HIS:O	38:F:196:ILE:N	2.46	0.48
40:P:54:GLN:HB3	40:P:83:TRP:HD1	1.73	0.48
47:q:65:ILE:HA	47:q:68:HIS:CD2	2.49	0.48
47:q:68:HIS:O	47:q:70:GLU:N	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:125:TYR:HB2	48:z:132:THR:HG21	1.95	0.48
50:3:55:U:O2	50:3:57:G:C8	2.67	0.48
50:3:65:G:N2	50:3:66:C:C2	2.82	0.48
52:9:53:CYS:HB3	52:9:60:VAL:HG11	1.95	0.48
54:S2:29:G:N2	54:S2:30:C:N3	2.62	0.48
54:S2:42:A:C5	54:S2:426:A:N6	2.78	0.48
54:S2:106:C:H2'	54:S2:107:A:H8	1.78	0.48
54:S2:172:U:O2	54:S2:172:U:H2'	2.12	0.48
54:S2:200:G:C2	54:S2:201:C:C2	3.01	0.48
54:S2:380:G:H21	54:S2:382:C:H6	1.62	0.48
54:S2:432:G:H2'	54:S2:432:G:N3	2.29	0.48
54:S2:448:A:H4'	54:S2:449:A:H5'	1.96	0.48
54:S2:522:A:H4'	62:SJ:131:ARG:HH22	1.79	0.48
54:S2:533:A:N1	54:S2:534:G:C4	2.82	0.48
54:S2:591:U:H5''	54:S2:593:C:H5	1.79	0.48
54:S2:634:A:C2	54:S2:635:G:C5	3.00	0.48
54:S2:646:G:N1	54:S2:647:U:H1'	2.29	0.48
54:S2:1113:A:O2'	54:S2:1114:U:H5'	2.14	0.48
54:S2:1123:C:N4	54:S2:1124:C:N4	2.62	0.48
54:S2:1291:A:O3'	86:Sf:148:TYR:C	2.57	0.48
54:S2:1376:A:N6	54:S2:1377:U:H1'	2.27	0.48
54:S2:1545:A:C4	54:S2:1546:G:C5	3.02	0.48
54:S2:1594:A:OP2	83:SZ:104:ARG:CB	2.60	0.48
54:S2:1643:U:C4	54:S2:1644:C:N4	2.82	0.48
54:S2:1648:G:N3	54:S2:1674:G:C6	2.82	0.48
54:S2:1728:U:H5'	54:S2:1729:U:OP2	2.14	0.48
54:S2:1784:G:N1	54:S2:1785:C:C4	2.82	0.48
54:S2:1813:A:C6	54:S2:1814:G:C5	3.01	0.48
57:SC:69:LEU:HG	57:SC:273:LEU:HD21	1.95	0.48
74:SF:165:ASN:CG	74:SF:166:ILE:N	2.71	0.48
76:SM:75:ASN:CG	76:SM:76:LEU:N	2.72	0.48
87:Sg:191:HIS:CG	87:Sg:195:LEU:HD21	2.49	0.48
3:G:108:GLN:O	3:G:112:GLN:NE2	2.47	0.47
6:L:60:ARG:CD	32:5:72:C:C5	2.96	0.47
12:S:15:ARG:HH21	13:T:141:VAL:HG22	1.79	0.47
15:V:48:ARG:HD2	15:V:51:ARG:NH2	2.29	0.47
20:b:14:ARG:HA	32:5:1724:G:O6	2.14	0.47
23:e:44:ARG:O	23:e:47:ARG:O	2.32	0.47
29:l:44:TRP:NE1	32:5:2409:U:O4'	2.46	0.47
32:5:295:A:O3'	32:5:296:A:N7	2.47	0.47
32:5:322:C:O2	32:5:4356:G:C2	2.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:394:G:C6	32:5:396:A:OP2	2.67	0.47
32:5:489:C:N3	32:5:490:C:C5	2.81	0.47
32:5:506:C:C2	32:5:507:G:C8	3.02	0.47
32:5:701:G:N1	32:5:702:U:C6	2.82	0.47
32:5:739:G:C5	32:5:740:G:C8	3.02	0.47
32:5:975:C:H2'	32:5:976:G:H1'	1.96	0.47
32:5:1265:G:C3'	32:5:1266:G:H5'	2.44	0.47
32:5:1316:G:O4'	32:5:2348:G:C2	2.63	0.47
32:5:1380:G:C2	32:5:1382:G:C4	3.01	0.47
32:5:1625:G:C4	32:5:1642:A:C2	3.01	0.47
32:5:1759:G:N1	32:5:1760:G:C8	2.81	0.47
32:5:1759:G:N1	32:5:1760:G:C5	2.82	0.47
32:5:1774:C:N3	32:5:1775:A:C8	2.82	0.47
32:5:1835:G:O2'	32:5:1836:G:OP2	2.26	0.47
32:5:1896:A:O5'	32:5:1896:A:H8	1.97	0.47
32:5:2019:C:C4	32:5:2020:U:C5	3.02	0.47
32:5:2086:G:N1	32:5:2087:C:C2	2.82	0.47
32:5:2095:A:N6	38:F:41:GLN:HG2	2.29	0.47
32:5:2319:C:O2	32:5:2319:C:C2'	2.62	0.47
32:5:2399:G:C2	32:5:2400:G:N9	2.82	0.47
32:5:2567:G:C2	32:5:2568:C:C2	3.02	0.47
32:5:2618:G:C2	32:5:2619:G:C8	3.02	0.47
32:5:2805:C:O2	32:5:2805:C:H2'	2.14	0.47
32:5:3621:A:N3	32:5:3622:C:C6	2.82	0.47
32:5:3820:G:C4	32:5:3821:A:C8	3.02	0.47
32:5:3837:C:H2'	32:5:3838:U:O4'	2.14	0.47
32:5:4091:G:C4	32:5:4092:G:C8	3.02	0.47
32:5:4092:G:C5	32:5:4093:G:C2	3.02	0.47
32:5:4216:G:N3	32:5:4217:G:C8	2.81	0.47
32:5:4287:G:C2	32:5:4288:C:C2	3.02	0.47
32:5:4602:A:H3'	32:5:4603:C:H6	1.79	0.47
32:5:4659:G:C2	32:5:4660:G:C4	3.02	0.47
32:5:4723:A:H2'	32:5:4724:A:C8	2.49	0.47
32:5:4725:C:O2	32:5:4725:C:H2'	2.14	0.47
33:7:15:C:C2	33:7:16:A:C8	3.02	0.47
34:8:30:U:C2	34:8:31:G:C8	3.02	0.47
34:8:46:G:N2	34:8:47:C:C2	2.82	0.47
34:8:74:U:O2	34:8:74:U:C2'	2.56	0.47
34:8:86:U:C6	34:8:86:U:C3'	2.88	0.47
34:8:131:G:O6	34:8:132:G:C5	2.67	0.47
34:8:132:G:C4	34:8:133:G:C8	3.01	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:11:ARG:CZ	45:r:11:ARG:HB2	2.44	0.47
54:S2:69:C:C2	54:S2:70:G:N7	2.82	0.47
54:S2:103:A:OP2	54:S2:356:C:N4	2.47	0.47
54:S2:121:U:N3	54:S2:122:G:C5	2.81	0.47
54:S2:122:G:C6	54:S2:123:G:C5	3.02	0.47
54:S2:418:A:C4	54:S2:419:G:C8	3.02	0.47
54:S2:454:U:OP1	59:SG:94:ARG:N	2.46	0.47
54:S2:467:G:C2	54:S2:468:A:H1'	2.49	0.47
54:S2:496:C:O2'	54:S2:497:C:C5'	2.62	0.47
54:S2:552:G:N1	54:S2:553:U:C4	2.82	0.47
54:S2:830:A:N1	54:S2:844:U:C4	2.79	0.47
54:S2:993:G:C6	54:S2:994:C:C6	2.98	0.47
54:S2:1097:G:C5	54:S2:1098:C:C5	3.02	0.47
54:S2:1293:A:N3	86:Sf:151:ASN:HA	2.24	0.47
54:S2:1293:A:H2'	86:Sf:151:ASN:C	2.38	0.47
54:S2:1393:G:N1	54:S2:1394:G:C8	2.81	0.47
54:S2:1432:U:C2	54:S2:1433:C:C5	3.02	0.47
54:S2:1534:C:H1'	54:S2:1536:G:C4	2.49	0.47
54:S2:1560:U:O2	54:S2:1560:U:H2'	2.13	0.47
54:S2:1571:G:C2	54:S2:1572:C:C2	3.02	0.47
54:S2:1576:G:C6	54:S2:1577:G:N7	2.82	0.47
54:S2:1718:G:C6	54:S2:1814:G:C6	3.03	0.47
55:SA:82:THR:HA	55:SA:204:TYR:CD2	2.49	0.47
56:SB:70:SER:HA	56:SB:83:LYS:HA	1.95	0.47
75:SK:53:LYS:N	75:SK:58:VAL:HG12	2.29	0.47
79:SR:83:ASN:ND2	79:SR:83:ASN:O	2.47	0.47
80:SS:30:ILE:HB	80:SS:41:ALA:HB1	1.95	0.47
5:J:42:GLN:OE1	5:J:117:ILE:HG23	2.14	0.47
19:a:63:LEU:HD23	19:a:64:LYS:N	2.29	0.47
30:m:79:GLU:OE1	30:m:81:SER:N	2.47	0.47
32:5:177:G:C4	32:5:178:C:C6	3.01	0.47
32:5:687:U:C5	32:5:688:U:C5	3.03	0.47
32:5:969:C:C2'	32:5:970:G:N3	2.77	0.47
32:5:978:G:H5''	37:E:41:SER:O	2.13	0.47
32:5:1189:G:C2	32:5:1190:C:C6	3.02	0.47
32:5:1203:G:N1	32:5:1204:C:C4	2.82	0.47
32:5:1204:C:O2	32:5:1204:C:H2'	2.13	0.47
32:5:1280:C:C4	32:5:1282:G:C6	3.01	0.47
32:5:1912:G:C2	32:5:1913:C:C5	3.01	0.47
32:5:2081:C:O2'	32:5:2082:G:C5'	2.61	0.47
32:5:2438:A:H1'	32:5:2531:C:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2439:G:C8	32:5:2777:G:C5	3.02	0.47
32:5:2549:G:N1	32:5:2770:C:N4	2.62	0.47
32:5:2602:G:C4	32:5:2742:G:C6	3.02	0.47
32:5:2677:G:O6	32:5:2678:A:C5	2.67	0.47
32:5:2703:G:H1'	32:5:2714:G:N2	2.28	0.47
32:5:2740:U:O4'	32:5:2740:U:O2	2.31	0.47
32:5:2905:C:N3	32:5:3590:G:C2	2.82	0.47
32:5:3633:C:N3	32:5:3634:G:N7	2.63	0.47
32:5:3723:A:H2	32:5:3724:A:C6	2.21	0.47
32:5:3832:U:C2	32:5:3833:C:C5	3.01	0.47
32:5:3907:G:C5	32:5:3909:C:C4	3.03	0.47
32:5:4097:G:N2	32:5:4098:A:N9	2.62	0.47
32:5:4147:G:N1	32:5:4148:C:C4	2.81	0.47
32:5:4269:G:O6	32:5:4277:G:O6	2.31	0.47
32:5:4342:C:N4	32:5:4343:U:C5	2.83	0.47
32:5:4480:A:N6	32:5:4481:U:C4	2.83	0.47
32:5:4499:G:H3'	32:5:4500:U:H5''	1.96	0.47
32:5:4677:U:O2'	35:B:352:LEU:HD12	2.14	0.47
32:5:4880:C:O2'	32:5:4881:U:C5'	2.62	0.47
32:5:4992:G:H2'	32:5:4993:G:C8	2.49	0.47
32:5:5063:G:C2	32:5:5064:G:N7	2.82	0.47
33:7:22:A:N1	33:7:23:A:N6	2.62	0.47
33:7:28:C:O2	33:7:28:C:H2'	2.14	0.47
33:7:43:U:C4	33:7:44:C:H5	2.30	0.47
34:8:41:A:C6	34:8:42:G:H1'	2.48	0.47
34:8:42:G:N1	34:8:43:A:C8	2.81	0.47
35:B:367:PHE:CZ	35:B:369:ASP:CA	2.97	0.47
44:p:68:ALA:HB1	44:p:69:TRP:CE3	2.48	0.47
47:q:99:ARG:CD	47:q:103:ARG:HH21	2.27	0.47
48:z:115:THR:HG21	48:z:144:ALA:HB1	1.95	0.47
51:4:50:G:C6	51:4:51:G:C5	3.02	0.47
51:4:130:A:H1'	51:4:168:G:N2	2.29	0.47
54:S2:29:G:C6	54:S2:30:C:N4	2.83	0.47
54:S2:193:C:C2	54:S2:207:G:N2	2.82	0.47
54:S2:478:G:C6	54:S2:479:C:C4	3.02	0.47
54:S2:818:A:C6	54:S2:819:G:N7	2.81	0.47
54:S2:863:U:O2	54:S2:863:U:H2'	2.15	0.47
54:S2:897:U:N3	54:S2:898:U:C6	2.82	0.47
54:S2:902:G:C5	54:S2:903:A:C2	3.02	0.47
54:S2:1047:C:H2'	54:S2:1048:G:O4'	2.13	0.47
54:S2:1110:G:C4	54:S2:1111:U:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1157:G:H1'	68:SX:5:ARG:HE	1.79	0.47
54:S2:1175:G:C6	54:S2:1176:G:N7	2.82	0.47
54:S2:1406:G:N1	54:S2:1407:U:C2	2.82	0.47
54:S2:1563:G:C8	54:S2:1563:G:H5''	2.49	0.47
54:S2:1588:A:H4'	81:ST:92:PHE:CE2	2.49	0.47
64:SN:18:TYR:CE1	67:SW:56:HIS:HB2	2.49	0.47
64:SN:54:LEU:HB3	64:SN:60:VAL:CG2	2.45	0.47
73:SD:24:PHE:CE2	73:SD:25:LEU:HD22	2.49	0.47
76:SM:17:ALA:HB1	76:SM:124:ILE:CG2	2.45	0.47
84:Sc:14:VAL:HG21	84:Sc:31:ARG:CA	2.36	0.47
1:A:40:TYR:HE1	32:5:4117:U:N3	2.06	0.47
2:D:55:VAL:HG21	2:D:158:LYS:HB2	1.96	0.47
10:Q:31:LEU:O	10:Q:31:LEU:HD23	2.15	0.47
11:R:45:ILE:HG12	11:R:50:ILE:HD11	1.97	0.47
12:S:33:PHE:CE2	12:S:106:VAL:HB	2.49	0.47
12:S:81:TRP:CE2	12:S:94:TYR:HD1	2.33	0.47
15:V:20:LEU:HB2	15:V:55:ALA:O	2.14	0.47
18:Z:88:ASP:OD1	18:Z:88:ASP:N	2.46	0.47
21:c:89:TYR:CD1	32:5:2673:G:C2	3.02	0.47
32:5:49:U:H2'	32:5:50:C:O5'	2.14	0.47
32:5:69:A:N1	32:5:70:A:C6	2.82	0.47
32:5:120:A:C5	32:5:149:A:N6	2.83	0.47
32:5:158:A:N1	32:5:277:G:C5	2.83	0.47
32:5:169:G:C2	32:5:170:C:C2	3.02	0.47
32:5:295:A:N6	32:5:4362:A:C1'	2.77	0.47
32:5:297:U:C4	32:5:298:G:N7	2.82	0.47
32:5:358:C:O2	32:5:359:A:C8	2.67	0.47
32:5:448:G:C6	32:5:449:C:C6	3.01	0.47
32:5:910:G:C4	32:5:911:U:C6	3.02	0.47
32:5:933:G:C2	32:5:939:G:N1	2.82	0.47
32:5:956:A:H3'	32:5:957:G:C5	2.50	0.47
32:5:1240:G:C5	32:5:1241:C:C5	3.02	0.47
32:5:1264:C:HO2'	32:5:2114:G:P	2.36	0.47
32:5:1265:G:N2	32:5:2111:G:O3'	2.48	0.47
32:5:1482:G:H21	32:5:1484:G:N2	2.09	0.47
32:5:1498:G:C2	32:5:1499:C:C5	3.02	0.47
32:5:1572:U:O2	32:5:1572:U:H2'	2.14	0.47
32:5:1744:U:N3	32:5:1745:G:N7	2.61	0.47
32:5:1771:U:N3	32:5:1772:C:C6	2.83	0.47
32:5:1811:G:H2'	32:5:1812:C:H6	1.79	0.47
32:5:1983:A:H2	32:5:2008:U:C5	2.33	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2110:C:C4	32:5:2120:G:C5	3.03	0.47
32:5:2294:G:C6	32:5:2295:C:C4	3.03	0.47
32:5:2301:G:H21	32:5:2302:C:H1'	1.79	0.47
32:5:2341:A:C2	32:5:2342:G:C4	3.03	0.47
32:5:2396:A:N3	32:5:2396:A:O4'	2.47	0.47
32:5:2409:U:C4	32:5:2783:A:C6	3.02	0.47
32:5:2712:G:C5	32:5:2713:C:C5	3.02	0.47
32:5:3594:C:O2	32:5:3594:C:H2'	2.13	0.47
32:5:3604:A:C6	32:5:3605:C:C5	3.02	0.47
32:5:3860:A:C2	32:5:3861:A:C1'	2.95	0.47
32:5:3935:C:C4	32:5:3936:A:C8	3.02	0.47
32:5:4356:G:C2	32:5:4357:G:C8	3.02	0.47
32:5:4518:A:H3'	32:5:4519:C:H5'	1.95	0.47
32:5:4737:G:O2'	32:5:4738:C:O4'	2.30	0.47
32:5:5006:U:O2	32:5:5042:A:C8	2.67	0.47
33:7:66:G:C2	33:7:67:C:C2	3.02	0.47
35:B:235:TRP:HA	35:B:235:TRP:HE3	1.79	0.47
36:C:269:LYS:O	36:C:278:ASN:ND2	2.47	0.47
39:I:78:LYS:O	39:I:80:CYS:N	2.48	0.47
39:I:178:ALA:C	39:I:180:GLU:H	2.23	0.47
40:P:41:ILE:HD11	40:P:150:LEU:CD1	2.42	0.47
40:P:82:ARG:HA	40:P:83:TRP:HE3	1.77	0.47
43:n:2:ARG:CG	54:S2:1842:C:OP2	2.60	0.47
47:q:10:LYS:C	47:q:14:PHE:CE1	2.93	0.47
48:z:272:PHE:C	48:z:285:PHE:CE2	2.92	0.47
48:z:297:MET:C	48:z:353:PRO:CB	2.88	0.47
51:4:3:C:C2	51:4:45:G:N2	2.83	0.47
54:S2:43:U:H3	54:S2:484:A:H2	1.62	0.47
54:S2:119:U:C4	54:S2:120:U:H5	2.31	0.47
54:S2:415:A:C2'	54:S2:416:U:O4'	2.63	0.47
54:S2:459:C:C4	54:S2:460:A:C5	2.97	0.47
54:S2:478:G:N1	54:S2:479:C:C4	2.81	0.47
54:S2:524:U:O2	54:S2:594:A:N7	2.47	0.47
54:S2:682:U:O2	54:S2:1024:A:C2	2.68	0.47
54:S2:862:A:C4	54:S2:863:U:C6	3.02	0.47
54:S2:1022:U:H6	64:SN:128:TYR:HE2	1.62	0.47
54:S2:1154:U:H1'	54:S2:1156:U:O4	2.14	0.47
54:S2:1157:G:N7	67:SW:75:ILE:HG23	2.29	0.47
54:S2:1496:U:N3	54:S2:1498:A:N7	2.63	0.47
54:S2:1508:A:N6	54:S2:1510:G:H1'	2.29	0.47
54:S2:1541:G:C2	54:S2:1542:C:C6	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1563:G:C6	54:S2:1564:C:N4	2.82	0.47
56:SB:172:MET:HE3	56:SB:212:VAL:HG12	1.96	0.47
69:SY:97:TYR:C	69:SY:97:TYR:CD1	2.92	0.47
73:SD:97:CYS:SG	73:SD:98:ALA:N	2.87	0.47
76:SM:90:GLY:C	76:SM:91:LEU:HG	2.38	0.47
79:SR:41:ILE:HG21	79:SR:47:ARG:HA	1.96	0.47
79:SR:85:VAL:CG1	79:SR:86:PRO:CD	2.91	0.47
84:Sc:60:GLU:CD	84:Sc:60:GLU:N	2.73	0.47
86:Sf:130:VAL:HG21	86:Sf:141:CYS:SG	2.54	0.47
8:N:65:ARG:HH21	8:N:127:TYR:HE2	1.63	0.47
9:O:66:PRO:CD	35:B:264:PHE:HD2	2.28	0.47
12:S:161:ARG:HD2	12:S:164:LYS:HB2	1.97	0.47
15:V:52:LEU:HD21	32:5:2850:A:O2'	2.14	0.47
15:V:95:PHE:CZ	32:5:4629:U:O4'	2.67	0.47
20:b:57:MET:HE3	32:5:1812:C:H1'	1.96	0.47
25:g:13:TYR:CE2	32:5:2513:A:N7	2.82	0.47
25:g:21:ARG:NH2	32:5:2641:A:OP1	2.47	0.47
25:g:25:THR:HB	25:g:26:PRO:HD2	1.96	0.47
32:5:218:A:C8	36:C:181:LYS:CG	2.97	0.47
32:5:370:U:C6	32:5:1637:A:C2	3.03	0.47
32:5:418:A:N6	34:8:16:G:O2'	2.48	0.47
32:5:423:G:H22	34:8:10:G:H22	1.62	0.47
32:5:483:G:N1	32:5:484:U:O4	2.47	0.47
32:5:504:G:N2	32:5:654:C:H1'	2.29	0.47
32:5:512:U:H3'	32:5:513:U:H5''	1.97	0.47
32:5:910:G:C2	32:5:911:U:C6	3.02	0.47
32:5:1092:G:C2	32:5:1093:C:C6	3.02	0.47
32:5:1094:G:C2	32:5:1095:A:C8	3.02	0.47
32:5:1213:G:C2	32:5:1215:C:C2	3.02	0.47
32:5:1216:C:H2'	32:5:1217:G:O4'	2.14	0.47
32:5:1241:C:O2	32:5:1241:C:H2'	2.13	0.47
32:5:1268:G:H1'	32:5:2111:G:C5	2.49	0.47
32:5:1280:C:H5'	32:5:1280:C:H6	1.79	0.47
32:5:1465:G:C6	32:5:1466:G:N7	2.82	0.47
32:5:1667:G:H2'	32:5:2280:G:H22	1.79	0.47
32:5:1760:G:C6	32:5:1761:G:C8	3.02	0.47
32:5:1831:G:C6	32:5:1832:C:C5	3.02	0.47
32:5:1886:G:C6	32:5:1894:C:N4	2.82	0.47
32:5:2071:A:N3	32:5:2072:C:C5	2.83	0.47
32:5:2104:G:C5	32:5:2105:A:C8	3.02	0.47
32:5:2248:C:OP1	38:F:26:ASN:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2367:A:H62	32:5:2798:A:C4'	2.27	0.47
32:5:2457:G:N1	32:5:2465:C:N4	2.62	0.47
32:5:2622:G:N1	32:5:2623:A:C8	2.82	0.47
32:5:2833:A:O2'	32:5:2834:C:C4'	2.61	0.47
32:5:3671:G:O2'	32:5:3672:G:O4'	2.31	0.47
32:5:3715:U:C2'	32:5:3716:C:O5'	2.62	0.47
32:5:3719:A:C5	32:5:3720:G:C8	3.02	0.47
32:5:3738:G:N1	32:5:3739:C:H1'	2.29	0.47
32:5:3927:U:N3	32:5:4182:G:N2	2.63	0.47
32:5:4095:G:C2	32:5:4096:C:C4	2.96	0.47
32:5:4574:U:O2	32:5:4574:U:H2'	2.14	0.47
32:5:4583:C:O2	32:5:4719:G:O6	2.32	0.47
32:5:4771:C:C5	32:5:4772:C:C6	3.01	0.47
32:5:4896:G:C4	32:5:4897:G:C8	3.03	0.47
33:7:7:G:H2'	33:7:7:G:N3	2.29	0.47
33:7:82:G:N1	33:7:95:C:C4	2.83	0.47
34:8:68:G:C6	34:8:91:A:N1	2.82	0.47
34:8:127:U:O2'	34:8:128:C:O4'	2.33	0.47
34:8:131:G:N1	34:8:132:G:C4	2.82	0.47
35:B:67:VAL:HG12	35:B:67:VAL:O	2.14	0.47
37:E:184:ARG:HD3	37:E:213:PHE:HB3	1.95	0.47
43:n:21:ARG:HH22	54:S2:1175:G:P	2.38	0.47
45:r:10:VAL:HG12	45:r:10:VAL:O	2.14	0.47
46:K:117:ARG:HG3	46:K:133:LEU:HD11	1.95	0.47
48:z:140:PHE:HZ	48:z:194:ARG:HE	1.58	0.47
50:3:51:C:H2'	50:3:52:G:C8	2.50	0.47
51:4:28:U:C2	51:4:29:C:C5	3.02	0.47
54:S2:26:U:C2	54:S2:26:U:H3'	2.49	0.47
54:S2:747:U:H3'	54:S2:748:C:C6	2.48	0.47
54:S2:824:C:H2'	54:S2:825:A:C8	2.48	0.47
54:S2:862:A:C2	54:S2:863:U:H1'	2.49	0.47
54:S2:978:G:N3	54:S2:979:C:C6	2.82	0.47
54:S2:1016:U:C5	71:Sb:32:PHE:CE1	3.01	0.47
54:S2:1123:C:N4	54:S2:1124:C:C4	2.82	0.47
54:S2:1220:A:C6	54:S2:1221:G:C6	3.02	0.47
54:S2:1290:G:C4	86:Sf:146:LEU:HD23	2.49	0.47
54:S2:1537:A:H3'	54:S2:1538:C:C6	2.49	0.47
54:S2:1563:G:N1	54:S2:1564:C:C4	2.83	0.47
54:S2:1576:G:C2	54:S2:1577:G:C4	3.01	0.47
54:S2:1685:U:H2'	54:S2:1686:G:O4'	2.14	0.47
54:S2:1819:A:H2'	54:S2:1820:G:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1869:A:C6	56:SB:115:LYS:CG	2.85	0.47
56:SB:118:GLN:HG3	56:SB:142:PHE:CZ	2.50	0.47
62:SJ:13:TYR:C	62:SJ:13:TYR:CD1	2.92	0.47
73:SD:72:VAL:HG13	75:SK:68:TYR:CE2	2.47	0.47
78:SQ:8:GLN:HG3	78:SQ:99:TYR:CZ	2.49	0.47
79:SR:85:VAL:HG12	79:SR:86:PRO:O	2.14	0.47
79:SR:94:GLU:O	79:SR:95:ILE:CB	2.62	0.47
83:SZ:46:ASN:HB3	83:SZ:78:LYS:O	2.15	0.47
84:Sc:44:ARG:HD2	84:Sc:65:ALA:H	1.78	0.47
85:Sd:8:TRP:HA	85:Sd:8:TRP:CE3	2.49	0.47
87:Sg:297:THR:HG23	87:Sg:311:GLN:HG2	1.97	0.47
1:A:140:ASN:OD1	1:A:142:GLU:O	2.32	0.47
1:A:209:HIS:CE1	1:A:211:PHE:HD2	2.32	0.47
6:L:60:ARG:NH1	6:L:70:VAL:HG22	2.30	0.47
11:R:124:TYR:C	11:R:124:TYR:CD1	2.92	0.47
12:S:33:PHE:CZ	12:S:106:VAL:HB	2.49	0.47
15:V:57:VAL:HG23	15:V:84:GLN:CG	2.41	0.47
17:Y:121:ARG:NH2	32:5:194:C:O2'	2.47	0.47
25:g:76:ARG:NH1	32:5:2582:A:OP1	2.47	0.47
29:l:27:ILE:O	29:l:33:ASN:ND2	2.47	0.47
32:5:68:U:O4	32:5:69:A:C4	2.67	0.47
32:5:177:G:C2	32:5:178:C:C2	3.03	0.47
32:5:296:A:H8	32:5:296:A:P	2.36	0.47
32:5:364:G:N7	42:j:55:ARG:NH2	2.63	0.47
32:5:423:G:H3'	32:5:424:U:C6	2.50	0.47
32:5:483:G:N2	32:5:484:U:N3	2.62	0.47
32:5:504:G:O2'	32:5:505:G:O4'	2.31	0.47
32:5:746:A:O2'	32:5:747:A:O5'	2.29	0.47
32:5:924:C:C4	32:5:925:C:C5	3.01	0.47
32:5:1079:C:N3	32:5:1080:C:C6	2.82	0.47
32:5:1214:C:O2	32:5:1214:C:H2'	2.15	0.47
32:5:1240:G:OP1	32:5:1271:G:O2'	2.25	0.47
32:5:1280:C:C5'	32:5:1280:C:H6	2.27	0.47
32:5:1324:A:H2'	32:5:1326:A:N7	2.30	0.47
32:5:1478:C:H2'	32:5:1479:G:C8	2.50	0.47
32:5:1479:G:H2'	32:5:1480:C:C6	2.49	0.47
32:5:1566:C:O2'	32:5:1567:U:H5'	2.13	0.47
32:5:1573:G:H2'	32:5:1574:G:C8	2.49	0.47
32:5:1582:U:H5	32:5:1610:C:O2	1.97	0.47
32:5:1626:G:C2	32:5:1627:G:H1'	2.49	0.47
32:5:1739:G:C2'	32:5:1740:C:O4'	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2399:G:N2	32:5:2400:G:N9	2.63	0.47
32:5:2509:C:N3	32:5:2510:G:C5	2.82	0.47
32:5:2576:G:C5	32:5:2577:C:C5	3.03	0.47
32:5:2600:A:C1'	32:5:2601:A:C6	2.98	0.47
32:5:2658:G:N2	32:5:2675:G:N3	2.62	0.47
32:5:2735:G:C6	32:5:2736:G:N7	2.83	0.47
32:5:3706:C:H2'	32:5:3707:U:O4'	2.14	0.47
32:5:4175:G:C2	32:5:4176:C:C6	3.02	0.47
32:5:4216:G:C6	32:5:4217:G:N7	2.83	0.47
32:5:4595:G:C4	32:5:4596:C:C5	3.02	0.47
32:5:4744:A:C2	32:5:4745:G:C8	3.03	0.47
32:5:4762:A:C3'	32:5:4763:U:C5'	2.92	0.47
32:5:4895:C:C2	32:5:4896:G:N7	2.83	0.47
33:7:111:C:O2	33:7:111:C:C2'	2.62	0.47
34:8:70:G:O6	34:8:87:G:C6	2.68	0.47
34:8:75:G:N1	34:8:76:C:C4	2.82	0.47
34:8:112:G:C2'	34:8:113:C:O5'	2.63	0.47
39:I:171:TRP:CE3	39:I:181:PHE:HB2	2.49	0.47
48:z:140:PHE:CE1	48:z:194:ARG:CG	2.97	0.47
48:z:344:PRO:O	48:z:345:PHE:C	2.53	0.47
50:3:39:G:H21	50:3:40:C:C1'	2.27	0.47
50:3:75:C:C6	50:3:75:C:C3'	2.98	0.47
51:4:16:G:C2	51:4:33:G:O6	2.68	0.47
54:S2:168:C:O2'	59:SG:133:LEU:O	2.27	0.47
54:S2:302:A:N3	54:S2:303:C:C6	2.82	0.47
54:S2:323:C:H3'	54:S2:324:C:H5''	1.96	0.47
54:S2:436:G:O6	54:S2:458:A:N1	2.47	0.47
54:S2:444:G:H5''	54:S2:445:A:OP2	2.14	0.47
54:S2:563:G:C2	54:S2:564:A:N7	2.83	0.47
54:S2:853:C:O2	54:S2:853:C:O4'	2.32	0.47
54:S2:976:G:C6	54:S2:977:C:C5	3.02	0.47
54:S2:1036:A:C5	54:S2:1037:G:C8	3.02	0.47
54:S2:1309:C:C2	86:Sf:143:LYS:CE	2.97	0.47
54:S2:1433:C:C4	54:S2:1434:C:C5	3.02	0.47
54:S2:1440:C:H2'	54:S2:1441:U:C6	2.49	0.47
54:S2:1502:C:C2	54:S2:1503:C:C6	3.02	0.47
54:S2:1524:G:C2	54:S2:1525:C:C2	3.03	0.47
54:S2:1541:G:N2	54:S2:1542:C:C5	2.82	0.47
54:S2:1595:U:O2	54:S2:1595:U:C2'	2.62	0.47
54:S2:1601:A:H61	54:S2:1635:C:H3'	1.78	0.47
54:S2:1610:G:C6	54:S2:1611:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1677:U:C2	54:S2:1678:A:C2	3.02	0.47
54:S2:1739:C:O2	54:S2:1739:C:H2'	2.13	0.47
58:SE:18:TRP:HB3	58:SE:46:ILE:HD13	1.96	0.47
63:SL:57:ASP:OD2	63:SL:60:CYS:N	2.47	0.47
67:SW:81:VAL:HG22	67:SW:89:TRP:HE1	1.79	0.47
76:SM:17:ALA:HB1	76:SM:124:ILE:HG23	1.97	0.47
79:SR:61:ILE:HA	79:SR:64:GLY:O	2.14	0.47
81:ST:132:ASP:O	81:ST:135:ALA:HB3	2.14	0.47
84:Sc:42:ILE:N	84:Sc:42:ILE:CD1	2.76	0.47
87:Sg:294:ASP:HB3	87:Sg:296:GLN:HB3	1.96	0.47
1:A:21:LYS:NZ	32:5:2448:G:O3'	2.46	0.47
1:A:182:ALA:O	1:A:183:GLY:C	2.56	0.47
4:H:60:TRP:NE1	12:S:153:PRO:HG3	2.29	0.47
6:L:82:ARG:O	6:L:83:VAL:HG23	2.15	0.47
8:N:31:ARG:NH1	8:N:124:ASP:OD2	2.47	0.47
8:N:63:ARG:HA	8:N:131:GLU:HB2	1.95	0.47
15:V:97:TYR:CZ	41:W:21:TYR:HD1	2.22	0.47
18:Z:100:VAL:CG1	18:Z:107:LYS:HA	2.45	0.47
32:5:54:G:N3	32:5:54:G:H2'	2.29	0.47
32:5:111:C:O2	32:5:331:G:C2	2.67	0.47
32:5:145:G:N2	32:5:146:G:C4	2.83	0.47
32:5:154:G:C2	32:5:155:C:C4	3.02	0.47
32:5:460:C:C2	32:5:461:G:N7	2.83	0.47
32:5:512:U:H2'	32:5:513:U:H5''	1.95	0.47
32:5:686:A:C3'	32:5:687:U:H5'	2.43	0.47
32:5:913:U:O2	32:5:914:U:C5	2.67	0.47
32:5:952:G:N1	32:5:953:C:C4	2.82	0.47
32:5:1262:G:C6	32:5:1263:A:N7	2.83	0.47
32:5:1268:G:C2	32:5:2111:G:N2	2.83	0.47
32:5:1381:U:O2	32:5:1381:U:O4'	2.33	0.47
32:5:1465:G:N1	32:5:1466:G:N9	2.63	0.47
32:5:1484:G:O4'	32:5:1485:C:P	2.72	0.47
32:5:1522:G:N1	32:5:1653:A:C6	2.83	0.47
32:5:1554:A:N6	32:5:1555:G:C4	2.83	0.47
32:5:1665:C:H2'	32:5:1666:C:O5'	2.15	0.47
32:5:1725:U:O2'	38:F:110:VAL:HG22	2.14	0.47
32:5:1857:C:C1'	32:5:1892:A:C2	2.97	0.47
32:5:1862:U:H2'	32:5:1863:U:C6	2.49	0.47
32:5:1864:G:C6	32:5:1865:G:C4	3.02	0.47
32:5:1975:G:O4'	32:5:1976:G:OP2	2.33	0.47
32:5:2282:A:O2'	32:5:2283:G:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2294:G:C5	32:5:2295:C:C5	3.03	0.47
32:5:2759:G:H2'	32:5:2760:G:C1'	2.45	0.47
32:5:2844:A:N1	32:5:3839:G:N7	2.63	0.47
32:5:3751:G:H21	32:5:3775:A:H8	1.62	0.47
32:5:3911:C:C2	32:5:3912:U:C6	3.03	0.47
32:5:3928:A:H3'	32:5:3929:G:H8	1.80	0.47
32:5:4078:C:N4	32:5:4079:C:C4	2.82	0.47
32:5:4092:G:N3	32:5:4092:G:H2'	2.30	0.47
32:5:4142:C:C2	32:5:4143:G:N2	2.83	0.47
32:5:4433:G:H2'	32:5:4434:C:H6	1.79	0.47
32:5:4536:C:N3	32:5:4537:C:C6	2.78	0.47
32:5:4687:A:N1	32:5:4688:C:C4	2.83	0.47
32:5:4885:U:C4	32:5:4886:C:C5	3.03	0.47
32:5:4981:G:O4'	32:5:4981:G:N3	2.48	0.47
32:5:5062:G:H2'	32:5:5062:G:N3	2.29	0.47
33:7:27:G:C6	33:7:28:C:C4	3.03	0.47
33:7:56:G:C2'	33:7:57:C:O4'	2.62	0.47
34:8:144:U:C2	34:8:145:C:C6	3.02	0.47
35:B:44:THR:HG21	35:B:186:ASN:ND2	2.30	0.47
38:F:41:GLN:HE21	38:F:41:GLN:CA	2.28	0.47
38:F:63:TYR:HD2	38:F:149:LEU:HD21	1.78	0.47
38:F:168:ARG:HB2	38:F:211:TRP:NE1	2.30	0.47
39:I:101:LYS:CG	39:I:121:LYS:HG3	2.44	0.47
41:W:1:MET:HE1	41:W:3:VAL:HG13	1.95	0.47
45:r:31:ASN:CG	45:r:32:LEU:N	2.72	0.47
46:K:10:ILE:HG22	46:K:65:GLN:C	2.40	0.47
46:K:35:LEU:HD23	51:4:36:A:N6	2.29	0.47
46:K:81:ILE:O	46:K:85:LEU:N	2.48	0.47
51:4:12:U:O2	51:4:14:G:C8	2.68	0.47
54:S2:87:U:O2'	54:S2:88:G:H5'	2.14	0.47
54:S2:159:A:O2'	54:S2:160:U:H5'	2.14	0.47
54:S2:454:U:H2'	54:S2:455:A:O5'	2.15	0.47
54:S2:618:C:C5	54:S2:619:A:N7	2.81	0.47
54:S2:637:U:O2	54:S2:638:C:C6	2.68	0.47
54:S2:878:G:C6	54:S2:879:C:C6	3.02	0.47
54:S2:988:C:C4	54:S2:989:C:C4	3.03	0.47
54:S2:993:G:N3	54:S2:993:G:H2'	2.30	0.47
54:S2:998:A:H8	54:S2:999:G:O4'	1.88	0.47
54:S2:1038:U:N3	54:S2:1039:C:C5	2.82	0.47
54:S2:1045:U:C2	54:S2:1046:U:C5	3.03	0.47
54:S2:1287:A:H2'	54:S2:1315:U:C5	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1292:C:O4'	86:Sf:148:TYR:HB3	2.14	0.47
54:S2:1310:U:O5'	86:Sf:143:LYS:CG	2.63	0.47
54:S2:1363:C:O5'	54:S2:1363:C:H6	1.97	0.47
54:S2:1386:A:H3'	54:S2:1387:G:H8	1.79	0.47
54:S2:1387:G:N1	73:SD:206:ASP:OD2	2.43	0.47
54:S2:1432:U:O2	54:S2:1433:C:C6	2.67	0.47
54:S2:1578:U:H6	73:SD:6:SER:N	2.11	0.47
54:S2:1683:C:N3	54:S2:1684:C:H5	2.10	0.47
54:S2:1796:G:C4	54:S2:1797:U:C5	3.02	0.47
55:SA:24:HIS:HB3	55:SA:51:LEU:HD21	1.96	0.47
55:SA:53:ARG:NH1	55:SA:53:ARG:HB2	2.28	0.47
56:SB:30:TRP:CE3	56:SB:48:LEU:HB3	2.49	0.47
58:SE:86:PHE:HE2	58:SE:87:MET:HE2	1.80	0.47
65:SO:116:LEU:HD22	70:Sa:53:ILE:CD1	2.45	0.47
66:SV:24:ILE:HD11	66:SV:56:CYS:HA	1.96	0.47
73:SD:162:ASP:N	73:SD:163:PRO:HD2	2.29	0.47
74:SF:194:ASP:OD1	74:SF:195:GLU:OE1	2.31	0.47
79:SR:120:THR:O	79:SR:121:GLN:HB2	2.14	0.47
80:SS:7:GLU:HA	80:SS:9:PHE:CE2	2.50	0.47
1:A:34:PHE:CE2	32:5:4087:G:C6	3.03	0.47
2:D:94:ASN:O	2:D:95:TYR:C	2.57	0.47
2:D:142:PHE:HD2	32:5:1819:G:C8	2.33	0.47
3:G:140:VAL:HG12	8:N:3:ALA:HB2	1.97	0.47
3:G:165:GLU:OE1	8:N:19:MET:HE1	2.14	0.47
4:H:117:PHE:HD1	4:H:118:LEU:HB2	1.80	0.47
7:M:91:TRP:HE1	32:5:4871:C:C3'	2.27	0.47
8:N:28:TRP:CE3	8:N:29:GLN:HA	2.50	0.47
9:O:63:ASN:HB3	32:5:2044:U:O2'	2.15	0.47
13:T:12:ARG:HD2	32:5:4275:G:H4'	1.95	0.47
15:V:48:ARG:HG3	15:V:49:LEU:N	2.29	0.47
20:b:44:ARG:HG2	20:b:44:ARG:HH11	1.80	0.47
23:e:31:ILE:HD11	32:5:2347:A:N7	2.30	0.47
23:e:47:ARG:O	23:e:49:PHE:N	2.48	0.47
25:g:5:LEU:HD21	25:g:22:LEU:CD1	2.43	0.47
32:5:27:C:O2	32:5:27:C:C2'	2.43	0.47
32:5:101:A:N3	32:5:102:G:C8	2.81	0.47
32:5:288:G:C6	32:5:289:C:N4	2.83	0.47
32:5:302:C:C2	32:5:303:C:C6	3.02	0.47
32:5:310:G:H2'	32:5:311:G:O5'	2.15	0.47
32:5:320:C:N4	32:5:321:U:C4	2.83	0.47
32:5:342:G:C2	32:5:343:C:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:505:G:N2	32:5:506:C:C2	2.82	0.47
32:5:723:A:N1	32:5:943:A:N1	2.62	0.47
32:5:940:C:H2'	32:5:941:C:C6	2.50	0.47
32:5:951:G:N2	32:5:952:G:C5	2.82	0.47
32:5:964:A:C8	32:5:964:A:C4'	2.98	0.47
32:5:1183:C:N3	32:5:1184:A:C8	2.83	0.47
32:5:1243:C:H2'	32:5:1244:G:N7	2.30	0.47
32:5:1260:G:N2	32:5:1261:G:C4	2.83	0.47
32:5:1266:G:H5''	32:5:2112:G:N2	2.29	0.47
32:5:1272:C:O2'	32:5:1273:G:C4	2.65	0.47
32:5:1357:C:HO2'	32:5:1506:G:H4'	1.79	0.47
32:5:1358:G:N2	32:5:1359:G:C6	2.82	0.47
32:5:1382:G:O2'	32:5:1383:G:C5'	2.62	0.47
32:5:1413:C:O2	32:5:1414:C:C6	2.68	0.47
32:5:1429:C:N3	32:5:1430:C:C5	2.83	0.47
32:5:1468:C:H2'	32:5:1469:C:C6	2.48	0.47
32:5:1473:U:N3	32:5:1474:C:C5	2.83	0.47
32:5:1541:C:C4	32:5:1542:U:C4	3.03	0.47
32:5:1582:U:O4	32:5:1583:A:N7	2.47	0.47
32:5:1660:U:N3	32:5:2345:G:OP1	2.32	0.47
32:5:1664:U:C2	32:5:1665:C:C5	3.03	0.47
32:5:1721:G:C2	32:5:1722:C:C2	3.03	0.47
32:5:1743:A:N6	32:5:1744:U:C4	2.83	0.47
32:5:1862:U:H2'	32:5:1863:U:H6	1.80	0.47
32:5:1889:U:H3'	32:5:1890:G:C8	2.49	0.47
32:5:2036:C:H2'	32:5:2036:C:O2	2.14	0.47
32:5:2244:C:C2	32:5:2245:G:C8	3.03	0.47
32:5:2290:C:H1'	32:5:2321:G:H1'	1.97	0.47
32:5:2294:G:N2	32:5:2295:C:N1	2.63	0.47
32:5:2311:C:N3	32:5:2312:U:C6	2.82	0.47
32:5:2324:C:C4	32:5:2325:C:C6	3.02	0.47
32:5:2340:C:C2	32:5:2341:A:C8	3.03	0.47
32:5:2413:U:N3	32:5:2414:G:N7	2.62	0.47
32:5:2453:A:H1'	32:5:2507:A:C5	2.49	0.47
32:5:2461:G:N2	32:5:2462:C:C5	2.83	0.47
32:5:2509:C:C2	32:5:2510:G:C5	3.02	0.47
32:5:2543:A:H2	32:5:2773:G:N1	2.12	0.47
32:5:2550:G:C2	32:5:2551:A:C8	3.02	0.47
32:5:2614:C:O2	32:5:2614:C:C2'	2.63	0.47
32:5:2852:U:H3'	32:5:2852:U:C2	2.49	0.47
32:5:3597:G:P	32:5:3597:G:O4'	2.72	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3621:A:H3'	32:5:3622:C:C6	2.49	0.47
32:5:3636:C:O2	32:5:3636:C:C2'	2.60	0.47
32:5:3702:A:N1	32:5:3703:G:C5	2.79	0.47
32:5:3709:U:H4'	32:5:3710:G:OP2	2.15	0.47
32:5:3761:C:O2	32:5:3761:C:O4'	2.29	0.47
32:5:3878:C:C5	32:5:4400:G:H4'	2.50	0.47
32:5:3894:A:H4'	32:5:4979:A:C2	2.50	0.47
32:5:3944:G:N2	32:5:3945:A:C8	2.81	0.47
32:5:4068:U:N3	32:5:4069:U:H1'	2.29	0.47
32:5:4070:U:C2	32:5:4071:U:C5	3.02	0.47
32:5:4093:G:C2'	32:5:4094:G:C5'	2.92	0.47
32:5:4413:C:H4'	39:I:157:PHE:CD2	2.49	0.47
32:5:4458:C:OP1	35:B:11:HIS:NE2	2.48	0.47
32:5:4525:C:O2'	35:B:244:THR:HG22	2.14	0.47
32:5:4620:U:N3	32:5:4621:C:C5	2.82	0.47
32:5:4653:C:N3	32:5:4654:C:C4	2.82	0.47
32:5:4659:G:N1	32:5:4660:G:C5	2.83	0.47
32:5:4745:G:O2'	32:5:4746:C:C6	2.45	0.47
32:5:4862:G:C6	32:5:4863:G:N7	2.82	0.47
32:5:4933:C:C4	32:5:4934:A:N7	2.83	0.47
32:5:4958:C:O2	32:5:4958:C:C2'	2.63	0.47
32:5:4979:A:H2'	32:5:4980:C:O5'	2.15	0.47
32:5:4996:C:N4	32:5:4997:G:C5	2.82	0.47
32:5:5017:G:H5'	61:SI:92:ARG:HG3	1.97	0.47
32:5:5031:G:C2	32:5:5032:C:C4	3.02	0.47
33:7:28:C:C4	33:7:29:C:C5	3.02	0.47
33:7:38:U:C2	33:7:40:U:OP2	2.68	0.47
33:7:50:A:C6	33:7:51:G:N7	2.82	0.47
33:7:93:G:N2	33:7:94:C:N1	2.62	0.47
33:7:110:G:C4	33:7:111:C:C6	3.03	0.47
33:7:114:U:H2'	33:7:115:A:H5''	1.96	0.47
34:8:59:A:O3'	34:8:60:G:H3'	2.14	0.47
34:8:69:U:H2'	34:8:70:G:O4'	2.15	0.47
34:8:101:C:N4	34:8:102:G:C6	2.82	0.47
34:8:112:G:H2'	34:8:113:C:O4'	2.14	0.47
34:8:116:C:O2	34:8:116:C:C2'	2.63	0.47
34:8:118:C:C4	34:8:119:C:H5	2.31	0.47
34:8:120:G:N1	34:8:121:G:C5	2.83	0.47
34:8:132:G:C2	34:8:133:G:C5	3.00	0.47
36:C:33:ARG:HH11	36:C:122:TYR:HH	1.61	0.47
36:C:326:LEU:HD11	36:C:333:LYS:HG2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:P:126:ARG:HA	40:P:140:MET:HG2	1.96	0.47
47:q:50:LYS:HG2	47:q:99:ARG:CD	2.44	0.47
48:z:293:LYS:HE2	48:z:351:MET:HB2	1.66	0.47
49:2:128:VAL:O	50:3:76:A:O2'	2.32	0.47
50:3:31:C:C5'	54:S2:1640:A:C2	2.94	0.47
50:3:65:G:C4	50:3:66:C:C5	3.02	0.47
51:4:18:G:C6	51:4:19:C:C4	3.02	0.47
51:4:18:G:N1	51:4:19:C:C4	2.83	0.47
51:4:56:A:H61	51:4:290:C:H42	1.62	0.47
51:4:215:A:H2'	51:4:216:A:O4'	2.14	0.47
54:S2:68:A:C2	54:S2:69:C:C2	3.03	0.47
54:S2:68:A:H2'	54:S2:69:C:O4'	2.15	0.47
54:S2:181:A:OP2	54:S2:182:C:OP1	2.33	0.47
54:S2:223:C:C2	54:S2:224:A:C8	3.03	0.47
54:S2:292:A:O2'	54:S2:293:C:OP2	2.22	0.47
54:S2:308:G:H5'	54:S2:309:G:H5'	1.97	0.47
54:S2:318:A:C2	54:S2:333:G:C2	3.03	0.47
54:S2:352:U:H5''	63:SL:139:ARG:HD3	1.95	0.47
54:S2:355:G:C5'	54:S2:356:C:OP2	2.63	0.47
54:S2:379:C:N4	54:S2:380:G:C6	2.83	0.47
54:S2:447:A:C4	54:S2:449:A:C1'	2.98	0.47
54:S2:475:C:O2'	54:S2:507:G:N3	2.41	0.47
54:S2:511:U:C2	54:S2:512:A:C8	3.02	0.47
54:S2:524:U:C2	54:S2:594:A:C6	2.97	0.47
54:S2:550:C:H2'	54:S2:550:C:O2	2.15	0.47
54:S2:554:A:H2'	54:S2:555:A:C8	2.49	0.47
54:S2:604:A:C6	54:S2:605:A:C6	3.03	0.47
54:S2:849:A:C6	54:S2:850:C:N4	2.83	0.47
54:S2:856:C:H2'	54:S2:856:C:O2	2.15	0.47
54:S2:873:G:H2'	54:S2:874:G:C8	2.50	0.47
54:S2:880:G:C8	54:S2:881:G:N7	2.79	0.47
54:S2:929:G:C6	54:S2:930:C:C4	3.02	0.47
54:S2:952:G:C6	54:S2:953:C:C4	3.03	0.47
54:S2:978:G:N2	54:S2:979:C:C2	2.83	0.47
54:S2:1110:G:O2'	79:SR:122:PRO:HB2	2.09	0.47
54:S2:1122:A:C5	54:S2:1123:C:C5	3.02	0.47
54:S2:1284:A:N6	76:SM:33:ARG:CD	2.77	0.47
54:S2:1284:A:N6	76:SM:33:ARG:HD3	2.30	0.47
54:S2:1306:U:H2'	54:S2:1307:U:H5'	1.95	0.47
54:S2:1308:U:H2'	54:S2:1308:U:O2	2.14	0.47
54:S2:1308:U:O2'	86:Sf:131:PHE:O	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1315:U:C2	54:S2:1316:C:C6	3.03	0.47
54:S2:1341:C:H42	54:S2:1484:A:N6	2.13	0.47
54:S2:1348:G:H2'	54:S2:1348:G:N3	2.29	0.47
54:S2:1450:G:C6	54:S2:1451:G:C5	3.02	0.47
54:S2:1527:C:O2	54:S2:1527:C:C2'	2.62	0.47
54:S2:1551:U:C3'	54:S2:1552:G:O4'	2.63	0.47
54:S2:1563:G:C5	54:S2:1564:C:C5	3.02	0.47
54:S2:1568:C:O2'	54:S2:1569:A:C8	2.64	0.47
54:S2:1661:A:H2'	54:S2:1662:U:O4'	2.15	0.47
54:S2:1685:U:C2	54:S2:1686:G:C8	3.03	0.47
54:S2:1701:C:O2	54:S2:1701:C:C2'	2.61	0.47
56:SB:27:LYS:HB3	56:SB:51:ARG:HH12	1.79	0.47
56:SB:58:ALA:C	56:SB:60:ASP:N	2.72	0.47
56:SB:100:PHE:C	56:SB:100:PHE:CD2	2.92	0.47
56:SB:137:LEU:CD1	56:SB:176:VAL:HG21	2.45	0.47
57:SC:134:ASN:HD22	57:SC:134:ASN:C	2.21	0.47
57:SC:192:LEU:HD12	57:SC:192:LEU:C	2.40	0.47
58:SE:28:ALA:HB1	58:SE:29:PRO:HD3	1.96	0.47
58:SE:84:ALA:HB1	58:SE:101:LEU:CD1	2.45	0.47
62:SJ:39:ASN:OD1	62:SJ:39:ASN:C	2.58	0.47
63:SL:84:ARG:HH12	63:SL:115:PRO:HG3	1.80	0.47
63:SL:96:ILE:HD12	63:SL:96:ILE:N	2.30	0.47
77:SP:30:TYR:CD1	77:SP:30:TYR:C	2.92	0.47
79:SR:126:MET:O	79:SR:127:ASN:ND2	2.47	0.47
80:SS:14:ARG:NH1	80:SS:18:THR:C	2.73	0.47
80:SS:55:ARG:N	80:SS:55:ARG:HD3	2.30	0.47
87:Sg:129:ILE:HG23	87:Sg:154:VAL:HG11	1.96	0.47
87:Sg:170:TRP:CD1	87:Sg:194:TYR:HB2	2.50	0.47
1:A:10:LYS:HE2	1:A:16:PHE:CE2	2.50	0.47
1:A:226:ARG:HH12	1:A:229:ALA:HA	1.80	0.47
2:D:72:ASP:N	33:7:7:G:O2'	2.47	0.47
2:D:233:PRO:O	2:D:235:MET:N	2.46	0.47
6:L:94:ILE:HG22	6:L:94:ILE:O	2.15	0.47
12:S:101:THR:O	12:S:102:THR:C	2.58	0.47
23:e:28:TYR:HB2	23:e:31:ILE:HD12	1.96	0.47
24:f:49:TYR:C	24:f:49:TYR:CD1	2.91	0.47
32:5:20:U:C5	34:8:37:A:N1	2.83	0.47
32:5:62:A:C2	32:5:77:U:O2	2.67	0.47
32:5:112:C:C4	32:5:157:U:C4	3.02	0.47
32:5:181:C:N4	32:5:256:G:C6	2.83	0.47
32:5:214:G:C6	32:5:215:C:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:270:U:C2	32:5:271:C:C6	2.92	0.47
32:5:289:C:O2	32:5:290:U:C6	2.68	0.47
32:5:300:A:N3	32:5:301:G:C8	2.83	0.47
32:5:342:G:C6	32:5:343:C:C4	3.03	0.47
32:5:497:G:N1	32:5:657:C:C4	2.83	0.47
32:5:731:G:C6	32:5:732:A:C1'	2.98	0.47
32:5:731:G:C2	32:5:732:A:H1'	2.49	0.47
32:5:1090:G:H2'	32:5:1091:C:O4'	2.15	0.47
32:5:1185:G:C6	32:5:1186:U:C5	3.03	0.47
32:5:1806:G:C2	32:5:1807:C:C4	3.02	0.47
32:5:1872:G:C2	32:5:1873:A:N7	2.82	0.47
32:5:1933:G:H2'	32:5:1934:A:C1'	2.44	0.47
32:5:2367:A:H62	32:5:2798:A:C1'	2.28	0.47
32:5:2390:G:C6	32:5:2391:G:N7	2.83	0.47
32:5:2424:G:H2'	32:5:2426:U:C4	2.49	0.47
32:5:2496:G:N2	32:5:2497:C:C2	2.83	0.47
32:5:2547:G:N1	32:5:2548:C:C4	2.83	0.47
32:5:2606:G:N3	32:5:2607:C:C5	2.83	0.47
32:5:2712:G:C4	32:5:2713:C:C6	3.03	0.47
32:5:2743:A:H2'	32:5:2744:A:H8	1.78	0.47
32:5:2766:A:H5''	32:5:2766:A:N3	2.30	0.47
32:5:2835:A:H1'	32:5:4979:A:H5'	1.97	0.47
32:5:3653:A:C2	32:5:3692:A:C4'	2.97	0.47
32:5:3666:C:C4	32:5:3667:C:C6	3.03	0.47
32:5:3710:G:N1	32:5:3711:A:N6	2.60	0.47
32:5:3740:G:C2	32:5:3741:C:O4'	2.68	0.47
32:5:3794:C:O2	32:5:3794:C:H2'	2.15	0.47
32:5:4135:G:N1	32:5:4136:G:C5	2.82	0.47
32:5:4299:U:N3	32:5:4300:U:C5	2.82	0.47
32:5:4406:U:C4	32:5:4407:G:N7	2.82	0.47
32:5:4465:U:C4	32:5:4487:A:C6	3.03	0.47
32:5:4510:A:N6	32:5:4592:C:O2'	2.36	0.47
32:5:4699:U:C4	32:5:4702:G:C5	3.02	0.47
32:5:4956:A:N1	32:5:4957:C:C6	2.83	0.47
33:7:93:G:H21	33:7:94:C:H1'	1.79	0.47
35:B:388:PHE:HE2	41:W:11:TYR:CD1	2.33	0.47
36:C:22:VAL:HG13	36:C:258:ARG:HE	1.78	0.47
36:C:102:PHE:O	36:C:103:ALA:C	2.58	0.47
42:j:17:THR:HG21	42:j:29:LEU:HD21	1.96	0.47
48:z:359:PHE:CD2	48:z:360:MET:CG	2.91	0.47
51:4:284:G:C6	51:4:285:C:C4	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:6:112:ASP:OD1	53:6:114:ARG:NH1	2.47	0.47
54:S2:64:A:N1	54:S2:82:G:C2	2.82	0.47
54:S2:171:A:N7	54:S2:173:A:C5	2.83	0.47
54:S2:349:A:H4'	61:SI:27:TYR:CE1	2.50	0.47
54:S2:583:C:C4	54:S2:584:G:N7	2.83	0.47
54:S2:693:A:C4	54:S2:694:G:C8	3.03	0.47
54:S2:751:G:C6	54:S2:792:C:C4	3.02	0.47
54:S2:910:G:N3	54:S2:911:C:C6	2.83	0.47
54:S2:955:A:C6	54:S2:969:U:H5''	2.49	0.47
54:S2:1031:A:C6	54:S2:1032:C:C4	3.03	0.47
54:S2:1131:G:C5	54:S2:1132:C:C5	3.02	0.47
54:S2:1203:G:H2'	54:S2:1204:A:C8	2.50	0.47
54:S2:1289:U:H5'	54:S2:1315:U:O2'	2.15	0.47
54:S2:1294:G:C5	86:Sf:138:ARG:CD	2.95	0.47
62:SJ:136:ARG:CD	62:SJ:160:SER:HA	2.45	0.47
63:SL:13:GLN:N	63:SL:13:GLN:CD	2.73	0.47
70:Sa:91:ALA:O	70:Sa:92:ARG:C	2.58	0.47
82:SU:82:MET:HE3	85:Sd:52:PHE:CE1	2.50	0.47
87:Sg:18:VAL:HG21	87:Sg:307:VAL:CG2	2.44	0.47
7:M:3:PHE:CZ	32:5:4763:U:O2	2.67	0.47
7:M:15:VAL:HG22	7:M:50:MET:HE1	1.96	0.47
11:R:39:GLN:NE2	32:5:2710:C:OP1	2.45	0.47
11:R:107:ARG:HH11	11:R:107:ARG:HB3	1.80	0.47
12:S:175:PHE:C	12:S:175:PHE:CD1	2.92	0.47
19:a:62:HIS:HB2	32:5:315:G:C6	2.50	0.47
25:g:12:SER:C	25:g:13:TYR:CD1	2.93	0.47
25:g:75:SER:C	25:g:76:ARG:HG2	2.39	0.47
29:l:44:TRP:CE3	29:l:45:ARG:HB2	2.49	0.47
29:l:44:TRP:HE3	29:l:45:ARG:N	2.13	0.47
32:5:95:G:H2'	32:5:96:U:C4'	2.45	0.47
32:5:365:U:H2'	32:5:365:U:O2	2.14	0.47
32:5:431:G:C4	32:5:3889:G:C6	3.02	0.47
32:5:656:C:C2	32:5:657:C:C6	3.03	0.47
32:5:668:C:H2'	32:5:669:C:O4'	2.15	0.47
32:5:934:C:H4'	32:5:935:A:OP2	2.15	0.47
32:5:1436:C:O5'	32:5:1437:C:OP2	2.33	0.47
32:5:1529:G:C2'	42:j:47:TYR:OH	2.63	0.47
32:5:1567:U:C2	32:5:1568:C:C6	3.03	0.47
32:5:1626:G:C5	32:5:1627:G:C8	3.02	0.47
32:5:1627:G:C3'	32:5:1628:C:H6	2.28	0.47
32:5:1667:G:C4	32:5:2280:G:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1778:C:O2	32:5:1778:C:C2'	2.62	0.47
32:5:1826:G:C5	32:5:1827:C:C5	3.03	0.47
32:5:1854:G:C5	32:5:4394:A:C6	3.02	0.47
32:5:1993:C:C2	32:5:1994:C:C6	3.03	0.47
32:5:1995:G:C5	32:5:1996:C:C4	3.02	0.47
32:5:2032:U:H2'	32:5:2033:A:O4'	2.15	0.47
32:5:2515:G:C6	32:5:2516:G:N9	2.83	0.47
32:5:2549:G:N2	32:5:2550:G:H1'	2.30	0.47
32:5:2676:A:C6	32:5:2677:G:C4	3.03	0.47
32:5:2866:C:C2	32:5:2867:C:C6	3.03	0.47
32:5:3630:A:C2	32:5:3631:U:C5	3.03	0.47
32:5:3753:G:N7	32:5:3776:G:C4	2.83	0.47
32:5:3775:A:H2'	32:5:3776:G:C1'	2.45	0.47
32:5:3775:A:H2'	32:5:3776:G:H1'	1.97	0.47
32:5:3843:C:O2	32:5:3844:U:H1'	2.14	0.47
32:5:4091:G:C6	32:5:4092:G:N7	2.82	0.47
32:5:4205:A:N3	32:5:4206:C:C6	2.83	0.47
32:5:4470:G:C2	32:5:4486:C:N3	2.83	0.47
32:5:4478:G:O2'	32:5:4602:A:N1	2.47	0.47
32:5:4566:U:O2'	35:B:234:ARG:NH2	2.48	0.47
32:5:4692:A:H3'	32:5:4693:C:H2'	1.97	0.47
32:5:4724:A:C2	32:5:4725:C:C2	3.03	0.47
32:5:4916:G:C2	32:5:4917:C:C2	3.03	0.47
33:7:55:A:C2	33:7:56:G:N7	2.83	0.47
34:8:46:G:C6	34:8:47:C:N4	2.83	0.47
36:C:58:ALA:O	36:C:60:HIS:HB2	2.13	0.47
36:C:186:SER:O	36:C:188:ARG:NH1	2.48	0.47
36:C:325:MET:HE1	38:F:157:TYR:CZ	2.50	0.47
39:I:9:TYR:CD2	39:I:97:ILE:HG12	2.36	0.47
48:z:95:THR:N	48:z:96:PRO:CD	2.78	0.47
48:z:408:ARG:CG	52:9:72:TRP:HD1	2.26	0.47
50:3:34:A:H4'	54:S2:1248:U:H1'	1.96	0.47
50:3:34:A:C6	54:S2:1701:C:C6	3.03	0.47
50:3:38:C:C2'	50:3:39:G:O5'	2.63	0.47
51:4:59:A:H2'	51:4:60:U:O4'	2.15	0.47
51:4:143:C:N3	51:4:154:G:N2	2.58	0.47
53:6:150:ARG:HH12	53:6:153:LYS:NZ	2.13	0.47
54:S2:25:A:H1'	54:S2:650:A:N1	2.30	0.47
54:S2:120:U:C4	54:S2:121:U:C4	3.02	0.47
54:S2:149:A:H2'	54:S2:150:A:C8	2.50	0.47
54:S2:387:C:O2	54:S2:388:U:H6	1.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:499:G:C6	54:S2:501:C:C1'	2.95	0.47
54:S2:521:A:H2'	54:S2:522:A:O4'	2.15	0.47
54:S2:533:A:C2	54:S2:534:G:H1'	2.50	0.47
54:S2:665:G:C2	54:S2:671:A:C5	3.03	0.47
54:S2:732:U:N3	54:S2:733:C:C5	2.83	0.47
54:S2:752:G:C6	54:S2:791:C:C2	3.02	0.47
54:S2:832:G:N1	54:S2:833:C:N1	2.63	0.47
54:S2:834:C:H3'	54:S2:835:C:C4'	2.45	0.47
54:S2:842:C:C2	54:S2:843:C:C6	3.01	0.47
54:S2:875:A:C3'	54:S2:876:C:H5''	2.45	0.47
54:S2:991:G:C6	70:Sa:95:ARG:NH2	2.83	0.47
54:S2:999:G:N1	54:S2:1000:C:C6	2.83	0.47
54:S2:1099:G:C6	54:S2:1100:A:C5	3.03	0.47
54:S2:1107:G:C6	54:S2:1108:G:N7	2.83	0.47
54:S2:1141:G:C2	54:S2:1147:C:C2	3.03	0.47
54:S2:1208:A:H2'	54:S2:1209:A:O4'	2.15	0.47
54:S2:1227:G:N3	54:S2:1227:G:H2'	2.30	0.47
54:S2:1275:G:H5'	54:S2:1276:A:C5'	2.45	0.47
54:S2:1293:A:N6	86:Sf:140:TYR:CA	2.78	0.47
54:S2:1293:A:H2'	86:Sf:152:LYS:HB2	1.97	0.47
54:S2:1293:A:C2'	86:Sf:152:LYS:HB2	2.45	0.47
54:S2:1302:G:C4	86:Sf:140:TYR:CZ	3.02	0.47
54:S2:1456:G:C6	54:S2:1457:U:C4	3.03	0.47
54:S2:1649:U:O2	54:S2:1650:A:C8	2.68	0.47
54:S2:1690:U:O3'	54:S2:1691:U:P	2.73	0.47
57:SC:130:ILE:HG22	57:SC:158:ALA:HB1	1.96	0.47
57:SC:223:TYR:N	57:SC:223:TYR:CD1	2.80	0.47
58:SE:11:ARG:O	58:SE:12:VAL:CB	2.63	0.47
59:SG:212:LEU:O	59:SG:216:ARG:N	2.41	0.47
60:SH:60:ILE:CG2	60:SH:92:VAL:HG22	2.45	0.47
60:SH:133:LEU:HD22	60:SH:173:PHE:HD1	1.79	0.47
64:SN:128:TYR:O	64:SN:131:THR:N	2.47	0.47
76:SM:113:ASP:O	76:SM:115:GLY:N	2.47	0.47
79:SR:84:TYR:C	79:SR:85:VAL:HG23	2.40	0.47
79:SR:91:LEU:HD12	79:SR:93:GLN:N	2.23	0.47
5:J:154:LYS:NZ	33:7:55:A:OP1	2.47	0.47
7:M:11:ARG:HG2	7:M:57:LEU:HB2	1.97	0.47
8:N:11:TRP:CZ3	8:N:19:MET:HE2	2.50	0.47
9:O:36:VAL:CG1	9:O:108:ILE:HB	2.44	0.47
19:a:52:TYR:C	19:a:52:TYR:CD1	2.93	0.47
21:c:18:LEU:HD23	21:c:22:MET:HE3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:c:83:THR:HG21	64:SN:147:SER:OG	2.15	0.47
22:d:83:ARG:HB3	22:d:114:PHE:CE2	2.50	0.47
28:k:19:ASP:OD1	28:k:19:ASP:C	2.58	0.47
32:5:153:G:N1	32:5:154:G:C5	2.82	0.47
32:5:341:G:H2'	32:5:341:G:N3	2.30	0.47
32:5:446:C:C2	32:5:447:C:C6	3.02	0.47
32:5:1507:C:O2	32:5:1508:A:C8	2.67	0.47
32:5:1540:C:N3	32:5:1541:C:C6	2.83	0.47
32:5:1556:C:H2'	32:5:1557:C:H6	1.80	0.47
32:5:1629:G:N3	32:5:1631:A:C5	2.83	0.47
32:5:1650:A:C3'	32:5:1651:G:H5''	2.45	0.47
32:5:2293:U:C2	32:5:2294:G:N7	2.82	0.47
32:5:2297:G:C2	32:5:2338:C:C2	3.03	0.47
32:5:2487:G:C2'	32:5:2488:C:OP1	2.63	0.47
32:5:2509:C:C4	32:5:2510:G:O6	2.68	0.47
32:5:2512:A:H3'	32:5:2513:A:C5'	2.43	0.47
32:5:2538:U:O2	32:5:2539:C:C6	2.67	0.47
32:5:2597:G:C6	32:5:2749:C:N3	2.83	0.47
32:5:2844:A:C6	32:5:3839:G:N7	2.80	0.47
32:5:3654:G:C6	32:5:3655:C:C5	3.03	0.47
32:5:3791:C:O2	32:5:3791:C:O4'	2.30	0.47
32:5:4082:G:C2	32:5:4083:U:C5	3.02	0.47
32:5:4129:G:C6	32:5:4130:C:C4	3.03	0.47
32:5:4145:C:C2	32:5:4146:G:N7	2.83	0.47
32:5:4229:U:C2	32:5:4230:C:H6	2.30	0.47
32:5:4240:G:N3	32:5:4241:C:H1'	2.30	0.47
32:5:4518:A:H2'	35:B:257:TRP:CZ3	2.50	0.47
32:5:4534:G:N7	32:5:4535:A:C8	2.82	0.47
32:5:4535:A:C2	32:5:4536:C:C6	3.02	0.47
32:5:4966:A:C2	32:5:5067:U:N3	2.80	0.47
32:5:5044:A:H2'	32:5:5045:G:H5'	1.90	0.47
34:8:10:G:N3	34:8:10:G:H2'	2.28	0.47
36:C:78:ARG:HH11	36:C:78:ARG:CG	2.26	0.47
36:C:122:TYR:CB	36:C:280:PRO:HG3	2.45	0.47
38:F:124:PHE:HD2	38:F:196:ILE:CG2	2.27	0.47
38:F:197:TYR:C	38:F:199:VAL:N	2.73	0.47
46:K:29:ALA:N	46:K:30:PRO:HD2	2.30	0.47
46:K:123:ARG:CB	46:K:129:ILE:CD1	2.88	0.47
47:q:63:LYS:CD	47:q:82:ILE:HD11	2.45	0.47
50:3:26:G:C5	50:3:27:U:C5	3.02	0.47
51:4:117:U:H2'	51:4:118[B]:A:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:196:C:O2'	52:9:69:SER:HA	2.14	0.47
54:S2:56:G:H2'	54:S2:57:U:C6	2.50	0.47
54:S2:310:C:C4	54:S2:311:C:N4	2.83	0.47
54:S2:424:C:H2'	54:S2:425:G:O4'	2.15	0.47
54:S2:518:G:N2	54:S2:519:A:C8	2.83	0.47
54:S2:591:U:H5''	54:S2:593:C:C5	2.50	0.47
54:S2:694:G:C6	54:S2:695:C:C4	3.03	0.47
54:S2:950:C:C2	54:S2:951:C:C6	3.02	0.47
54:S2:957:A:C2	54:S2:958:G:N7	2.84	0.47
54:S2:1008:A:H1'	64:SN:101:HIS:ND1	2.30	0.47
54:S2:1028:A:N7	54:S2:1029:G:C8	2.83	0.47
54:S2:1031:A:C4	54:S2:1032:C:C6	3.02	0.47
54:S2:1119:A:C5	54:S2:1120:U:H1'	2.50	0.47
54:S2:1272:C:OP1	54:S2:1303:C:O4'	2.32	0.47
54:S2:1306:U:C5	54:S2:1307:U:C5	3.03	0.47
54:S2:1348:G:C2	54:S2:1349:G:N7	2.83	0.47
54:S2:1399:C:O2	54:S2:1400:U:C6	2.68	0.47
54:S2:1442:U:O2	54:S2:1443:C:C5	2.67	0.47
54:S2:1526:G:C2	54:S2:1527:C:C2	3.03	0.47
54:S2:1545:A:C5	54:S2:1546:G:C6	3.03	0.47
54:S2:1645:C:O2'	54:S2:1646:C:O5'	2.32	0.47
54:S2:1864:U:C4	70:Sa:9:GLY:HA3	2.50	0.47
56:SB:60:ASP:OD1	56:SB:63:LYS:CD	2.63	0.47
57:SC:183:LYS:HE2	67:SW:94:LEU:O	2.14	0.47
60:SH:158:LEU:HD11	60:SH:187:PHE:CD2	2.50	0.47
64:SN:56:ASP:O	71:Sb:46:VAL:HA	2.15	0.47
74:SF:92:ILE:O	74:SF:96:ALA:N	2.46	0.47
76:SM:104:VAL:HG13	76:SM:105:GLY:N	2.30	0.47
79:SR:100:PRO:O	79:SR:103:LYS:HB3	2.15	0.47
17:Y:10:ASP:HB3	17:Y:13:LYS:HB2	1.96	0.46
18:Z:40:HIS:C	18:Z:77:TYR:OH	2.59	0.46
18:Z:135:ARG:HB3	32:5:4123:C:O2'	2.15	0.46
19:a:43:ILE:HG23	32:5:4304:A:C2	2.49	0.46
19:a:52:TYR:C	19:a:52:TYR:HD1	2.22	0.46
22:d:64:ILE:HG13	22:d:68:LEU:HD23	1.97	0.46
24:f:60:PRO:CD	32:5:4945:G:O6	2.63	0.46
31:o:105:GLN:OE1	31:o:105:GLN:N	2.46	0.46
32:5:29:G:C5	32:5:30:C:C5	3.03	0.46
32:5:88:A:H2'	32:5:89:C:O5'	2.14	0.46
32:5:97:G:H5'	32:5:292:G:OP1	2.15	0.46
32:5:289:C:N3	32:5:290:U:C6	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:293:G:H1'	32:5:297:U:O4'	2.15	0.46
32:5:325:U:C2	32:5:326:C:C5	3.03	0.46
32:5:462:G:C2	32:5:694:C:C2	3.03	0.46
32:5:475:G:H2'	32:5:476:G:O4'	2.15	0.46
32:5:481:G:N1	32:5:482:G:N7	2.64	0.46
32:5:747:A:C2'	32:5:749:G:C8	2.97	0.46
32:5:952:G:C8	32:5:952:G:H5'	2.50	0.46
32:5:1187:G:HO2'	32:5:1188:C:H6	1.62	0.46
32:5:1198:G:C2'	32:5:1199:G:C8	2.89	0.46
32:5:1289:C:O2	32:5:1290:G:C8	2.68	0.46
32:5:1355:G:O2'	32:5:1356:U:H5'	2.14	0.46
32:5:1448:G:C6	32:5:1449:C:C4	3.02	0.46
32:5:1491:A:C5	32:5:1492:G:N7	2.84	0.46
32:5:1666:C:H2'	32:5:1667:G:C5'	2.45	0.46
32:5:1840:G:C2'	32:5:1842:G:O5'	2.63	0.46
32:5:1955:G:C6	32:5:1956:A:C5	3.03	0.46
32:5:1986:U:O2	32:5:2007:G:O6	2.33	0.46
32:5:2015:U:C2	32:5:2016:C:C6	3.03	0.46
32:5:2128:G:C4	32:5:2129:C:C6	3.02	0.46
32:5:2243:C:O2	32:5:2243:C:H2'	2.15	0.46
32:5:2301:G:C6	32:5:2302:C:C4	3.02	0.46
32:5:2314:G:N3	32:5:2314:G:C2'	2.76	0.46
32:5:2448:G:C2'	32:5:2449:A:C8	2.98	0.46
32:5:2559:G:H1	32:5:2567:G:H1	1.63	0.46
32:5:2632:U:C2'	32:5:2633:U:H6	2.27	0.46
32:5:2767:U:H3'	32:5:2769:U:H6	1.80	0.46
32:5:2851:G:O2'	32:5:3841:C:O4'	2.30	0.46
32:5:3600:G:C6	32:5:3601:C:C4	3.03	0.46
32:5:3611:A:N3	32:5:5016:A:H8	2.13	0.46
32:5:3699:C:H2'	32:5:3699:C:O2	2.15	0.46
32:5:4241:C:C4	32:5:4242:U:H5	2.33	0.46
32:5:4341:C:O2	32:5:4341:C:H2'	2.15	0.46
32:5:4405:G:C5	32:5:4406:U:C5	3.03	0.46
32:5:4458:C:H2'	32:5:4459:U:C6	2.49	0.46
32:5:4677:U:C6	32:5:4677:U:H5''	2.49	0.46
32:5:4876:U:O2	32:5:4876:U:O4'	2.30	0.46
32:5:5047:C:O2'	32:5:5050:C:OP2	2.30	0.46
33:7:51:G:N3	33:7:52:C:C6	2.83	0.46
34:8:3:A:N3	34:8:4:C:C6	2.83	0.46
34:8:85:U:C4	34:8:87:G:C4	3.03	0.46
34:8:106:G:C8	34:8:136:U:N3	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:146:U:H2'	34:8:147:G:O4'	2.15	0.46
35:B:78:ILE:CD1	35:B:320:PHE:CE1	2.98	0.46
35:B:315:ASN:HA	35:B:320:PHE:CE2	2.50	0.46
37:E:113:PRO:O	45:r:112:ARG:NE	2.38	0.46
39:I:12:CYS:HB2	39:I:57:TYR:HE2	1.81	0.46
51:4:15:C:O2	51:4:34:C:O2	2.33	0.46
51:4:33:G:C6	51:4:34:C:C4	3.03	0.46
51:4:295:U:O2	51:4:296:C:C6	2.68	0.46
53:6:194:GLN:HB3	53:6:196:TRP:CZ2	2.49	0.46
54:S2:321:C:H2'	54:S2:322:C:H6	1.80	0.46
54:S2:429:C:O2'	54:S2:811:A:N1	2.43	0.46
54:S2:970:G:C3'	54:S2:971:G:H5'	2.44	0.46
54:S2:973:C:O2	54:S2:973:C:H2'	2.15	0.46
54:S2:996:A:N6	64:SN:113:PHE:CD2	2.83	0.46
54:S2:1261:C:C5	54:S2:1262:C:C4	3.02	0.46
54:S2:1408:U:H2'	54:S2:1409:A:O4'	2.15	0.46
54:S2:1410:C:N4	54:S2:1411:G:C6	2.82	0.46
54:S2:1426:U:O2	54:S2:1427:C:C6	2.68	0.46
54:S2:1539:U:O2	54:S2:1539:U:C2'	2.61	0.46
54:S2:1577:G:O2'	54:S2:1579:A:N3	2.42	0.46
54:S2:1595:U:N3	54:S2:1596:U:H6	2.13	0.46
55:SA:24:HIS:NE2	79:SR:102:THR:HG21	2.30	0.46
55:SA:186:ARG:HD2	55:SA:187:GLY:HA2	1.97	0.46
56:SB:55:THR:C	56:SB:57:ILE:N	2.72	0.46
57:SC:256:TRP:CZ2	67:SW:68:ARG:HB3	2.50	0.46
62:SJ:39:ASN:CG	62:SJ:40:LYS:N	2.73	0.46
62:SJ:125:HIS:O	62:SJ:129:LEU:N	2.42	0.46
65:SO:142:ARG:HB3	70:Sa:22:ARG:HH22	1.80	0.46
79:SR:91:LEU:HD12	79:SR:92:ASP:H	1.72	0.46
83:SZ:46:ASN:CG	83:SZ:78:LYS:HB3	2.40	0.46
87:Sg:129:ILE:HD12	87:Sg:142:VAL:HG11	1.95	0.46
1:A:196:TRP:CZ2	32:5:3653:A:OP1	2.68	0.46
4:H:180:TYR:CD2	4:H:180:TYR:N	2.83	0.46
8:N:143:ARG:HB3	26:h:99:GLU:OE1	2.16	0.46
11:R:129:GLY:HA3	32:5:1558:A:H1'	1.98	0.46
16:X:76:ILE:CD1	16:X:108:GLN:HB3	2.45	0.46
16:X:146:ALA:HA	16:X:149:VAL:HG12	1.97	0.46
20:b:40:LEU:O	20:b:41:ARG:C	2.57	0.46
26:h:93:ARG:CG	26:h:93:ARG:HH11	2.28	0.46
32:5:10:A:H1'	32:5:2472:A:C6	2.50	0.46
32:5:181:C:C4	32:5:256:G:C2	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:348:G:C4	32:5:350:C:C5	3.03	0.46
32:5:468:U:O2	32:5:468:U:H2'	2.15	0.46
32:5:474:C:N3	32:5:475:G:N7	2.63	0.46
32:5:489:C:C2	32:5:490:C:C6	3.04	0.46
32:5:657:C:C2	32:5:658:C:C6	3.04	0.46
32:5:671:G:C2	32:5:672:C:C5	3.02	0.46
32:5:912:G:N1	32:5:913:U:C4	2.83	0.46
32:5:979:C:C2	32:5:980:U:C6	3.03	0.46
32:5:982:U:C5'	37:E:69:TYR:OH	2.63	0.46
32:5:1339:U:O2	32:5:1340:C:H6	1.92	0.46
32:5:1484:G:O3'	32:5:1485:C:H4'	2.15	0.46
32:5:1492:G:C2	32:5:1493:G:C5	3.03	0.46
32:5:1584:G:C4	32:5:1585:C:C6	3.03	0.46
32:5:1663:C:H2'	32:5:1664:U:H6	1.78	0.46
32:5:1674:C:O2'	32:5:1675:C:H5'	2.16	0.46
32:5:1694:C:O2	32:5:1694:C:H2'	2.14	0.46
32:5:1761:G:C2	32:5:1762:C:C2	3.03	0.46
32:5:1812:C:N3	32:5:1813:U:C5	2.83	0.46
32:5:1846:G:C2	32:5:1847:C:N3	2.83	0.46
32:5:2034:G:N2	32:5:2035:C:H1'	2.30	0.46
32:5:2060:G:C6	32:5:2061:U:C4	3.03	0.46
32:5:2384:U:C2	32:5:2385:U:C6	3.04	0.46
32:5:2613:C:N4	32:5:2614:C:N4	2.63	0.46
32:5:2644:G:N1	32:5:2645:G:C5	2.84	0.46
32:5:2662:G:H2'	32:5:2663:G:O5'	2.15	0.46
32:5:2726:G:C6	32:5:2727:C:C4	3.02	0.46
32:5:3586:G:C4	32:5:3587:C:C5	3.03	0.46
32:5:3687:A:C6	32:5:3688:U:C6	3.04	0.46
32:5:4109:G:C2	32:5:4110:C:C2	3.03	0.46
32:5:4147:G:N3	32:5:4148:C:C6	2.83	0.46
32:5:4323:A:N3	32:5:4323:A:H2'	2.31	0.46
32:5:4564:A:H2'	32:5:4565:C:O4'	2.15	0.46
32:5:4695:C:O2'	32:5:4696:C:H5'	2.15	0.46
32:5:4978:G:C2'	32:5:4979:A:O5'	2.62	0.46
32:5:4981:G:O6	32:5:4982:A:N9	2.46	0.46
32:5:4986:G:C2	32:5:4987:C:C2	3.04	0.46
32:5:5004:C:C5	32:5:5005:G:N9	2.83	0.46
32:5:5011:A:N1	32:5:5012:G:C5	2.83	0.46
33:7:93:G:N2	33:7:94:C:H1'	2.29	0.46
34:8:9:A:N3	34:8:9:A:H2'	2.29	0.46
34:8:53:G:C2	34:8:54:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B:320:PHE:O	35:B:321:VAL:C	2.58	0.46
51:4:38:U:O2	51:4:38:U:C2'	2.64	0.46
51:4:58:G:C6	51:4:289:A:C5	3.03	0.46
51:4:183:A:C4'	51:4:184:A:P	2.98	0.46
54:S2:77:A:H1'	59:SG:176:ILE:HD12	1.97	0.46
54:S2:122:G:C4	54:S2:123:G:C8	3.02	0.46
54:S2:221:A:C2	54:S2:222:U:C6	3.03	0.46
54:S2:443:U:N3	54:S2:444:G:N9	2.63	0.46
54:S2:555:A:N1	54:S2:557:U:C5	2.83	0.46
54:S2:582:C:H2'	54:S2:582:C:O2	2.15	0.46
54:S2:618:C:N4	68:SX:114:ASP:OD2	2.48	0.46
54:S2:637:U:N3	54:S2:638:C:C4	2.83	0.46
54:S2:842:C:O2	54:S2:843:C:C5	2.65	0.46
54:S2:959:G:O6	65:SO:65:ASP:HB3	2.16	0.46
54:S2:1041:G:N2	54:S2:1075:C:C2	2.83	0.46
54:S2:1102:G:C2	54:S2:1103:C:C6	3.04	0.46
54:S2:1243:U:C2	54:S2:1265:A:N1	2.83	0.46
54:S2:1267:C:C2	54:S2:1268:C:C5	3.03	0.46
54:S2:1290:G:C4	86:Sf:146:LEU:CD2	2.98	0.46
54:S2:1336:C:H2'	54:S2:1337:C:O4'	2.15	0.46
54:S2:1349:G:H2'	54:S2:1350:U:O4'	2.15	0.46
54:S2:1360:U:O2'	54:S2:1379:A:OP1	2.33	0.46
54:S2:1449:G:C2	54:S2:1450:G:N9	2.83	0.46
54:S2:1457:U:O2	54:S2:1458:G:C8	2.67	0.46
54:S2:1709:G:C4	54:S2:1710:C:C5	3.03	0.46
54:S2:1722:G:C6	54:S2:1723:G:C8	3.03	0.46
54:S2:1811:C:C2	54:S2:1812:U:C6	3.03	0.46
58:SE:80:ILE:HG13	58:SE:81:THR:HG23	1.97	0.46
73:SD:70:THR:HG22	73:SD:86:LEU:HD13	1.97	0.46
74:SF:137:GLN:HE21	74:SF:137:GLN:HA	1.80	0.46
79:SR:120:THR:CG2	79:SR:121:GLN:N	2.79	0.46
3:G:39:PHE:CE2	3:G:47:PRO:HG3	2.50	0.46
4:H:61:TRP:HZ2	12:S:152:PHE:CE2	2.24	0.46
6:L:60:ARG:HD2	32:5:72:C:C5	2.50	0.46
6:L:60:ARG:NE	32:5:72:C:C4	2.83	0.46
6:L:146:LEU:CD1	26:h:120:ALA:HB3	2.45	0.46
7:M:86:TRP:NE1	7:M:92:ALA:HB2	2.30	0.46
11:R:124:TYR:CZ	32:5:2665:U:O4	2.67	0.46
22:d:69:ASN:ND2	32:5:2373:C:H1'	2.31	0.46
26:h:98:HIS:CE1	32:5:176:G:H5''	2.51	0.46
32:5:25:A:C6	32:5:341:G:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:46:U:H3'	32:5:47:A:H2'	1.98	0.46
32:5:66:A:N7	32:5:328:A:H1'	2.30	0.46
32:5:244:G:N2	32:5:246:G:C1'	2.74	0.46
32:5:458:C:C2	32:5:459:C:C5	3.03	0.46
32:5:962:C:N4	45:r:112:ARG:HD2	2.30	0.46
32:5:994:G:C5	32:5:995:C:C5	3.03	0.46
32:5:1217:G:C2'	32:5:1218:G:C8	2.97	0.46
32:5:1279:A:C3'	32:5:1280:C:C5	2.96	0.46
32:5:1340:C:C4	32:5:1341:U:C5	3.02	0.46
32:5:1410:U:C4	32:5:1815:G:N2	2.83	0.46
32:5:1452:A:C2	32:5:1453:G:H1'	2.50	0.46
32:5:1682:A:H3'	32:5:1683:U:C6	2.47	0.46
32:5:1685:G:C6	32:5:1686:C:C4	3.03	0.46
32:5:1693:U:C2	32:5:1694:C:C6	3.04	0.46
32:5:1697:G:H8	38:F:165:ASN:HA	1.81	0.46
32:5:1721:G:C6	32:5:1722:C:C4	3.03	0.46
32:5:1727:U:N3	32:5:1728:U:C5	2.83	0.46
32:5:1813:U:H2'	32:5:1814:C:H6	1.79	0.46
32:5:1886:G:O2'	32:5:1909:G:O2'	2.16	0.46
32:5:1964:A:C6	32:5:1965:G:C4	3.03	0.46
32:5:1992:U:O4	32:5:2002:A:H3'	2.15	0.46
32:5:2076:G:C5	32:5:2077:C:C5	3.02	0.46
32:5:2288:G:C2	32:5:2290:C:N1	2.82	0.46
32:5:2327:G:C4	32:5:2328:G:C8	3.02	0.46
32:5:2336:G:C4	32:5:2337:C:C5	3.03	0.46
32:5:2632:U:C2	32:5:2633:U:C4	3.02	0.46
32:5:3702:A:C8	32:5:3774:A:C1'	2.98	0.46
32:5:3802:U:H3	32:5:4498:U:C2'	2.28	0.46
32:5:3804:G:C6	32:5:3805:U:C5	3.03	0.46
32:5:3858:C:C5	32:5:3859:G:N7	2.82	0.46
32:5:4166:G:N2	32:5:4167:G:C1'	2.78	0.46
32:5:4167:G:H21	32:5:4168:G:C1'	2.28	0.46
32:5:4223:C:H5'	39:I:119:PHE:CD2	2.43	0.46
32:5:4364:G:C2	32:5:4365:C:C2	3.03	0.46
32:5:4433:G:C6	32:5:4434:C:N4	2.83	0.46
32:5:4509:U:C2'	32:5:4510:A:H2'	2.43	0.46
32:5:4563:U:H2'	32:5:4564:A:C8	2.50	0.46
32:5:4660:G:N2	32:5:4661:G:C5	2.84	0.46
32:5:4688:C:C2	32:5:4689:U:C6	3.03	0.46
32:5:4690:G:N2	32:5:4691:A:N7	2.63	0.46
32:5:4726:G:C4'	35:B:130:PHE:CE1	2.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4737:G:C5	32:5:4738:C:N4	2.84	0.46
34:8:86:U:OP1	34:8:87:G:OP1	2.33	0.46
39:I:86:HIS:HD2	39:I:139:ARG:NH1	2.14	0.46
47:q:10:LYS:O	47:q:14:PHE:CD1	2.68	0.46
48:z:339:ILE:CG2	49:2:83:LEU:CD1	2.92	0.46
50:3:75:C:H6	50:3:75:C:H3'	1.79	0.46
51:4:149:A:P	52:9:101:ARG:HH21	2.38	0.46
54:S2:380:G:OP2	61:SI:181:GLN:NE2	2.49	0.46
54:S2:443:U:C4	54:S2:444:G:N7	2.83	0.46
54:S2:444:G:N3	54:S2:444:G:C2'	2.78	0.46
54:S2:478:G:N2	54:S2:479:C:C2	2.84	0.46
54:S2:519:A:N1	54:S2:520:A:N7	2.63	0.46
54:S2:552:G:H2'	54:S2:553:U:C6	2.50	0.46
54:S2:554:A:C2	54:S2:555:A:C6	3.04	0.46
54:S2:623:G:C6	54:S2:624:C:C4	3.03	0.46
54:S2:671:A:C6	54:S2:1089:G:C8	3.03	0.46
54:S2:839:C:C6	54:S2:841:G:C5	3.03	0.46
54:S2:914:U:O2	54:S2:914:U:O4'	2.31	0.46
54:S2:1017:U:H5'	54:S2:1018:U:OP2	2.16	0.46
54:S2:1049:A:C2	54:S2:1070:A:C4	3.03	0.46
54:S2:1123:C:O2'	56:SB:148:ASN:ND2	2.48	0.46
54:S2:1134:G:C2	54:S2:1135:C:N1	2.83	0.46
54:S2:1294:G:O2'	86:Sf:137:ASP:CG	2.59	0.46
54:S2:1327:G:N1	54:S2:1328:G:C5	2.84	0.46
54:S2:1366:G:H2'	54:S2:1367:U:O4'	2.14	0.46
54:S2:1514:G:C2'	54:S2:1515:G:O4'	2.63	0.46
54:S2:1563:G:C2	54:S2:1564:C:C6	3.04	0.46
54:S2:1594:A:H5''	83:SZ:104:ARG:HG2	1.95	0.46
56:SB:52:THR:CG2	56:SB:57:ILE:HB	2.41	0.46
56:SB:191:ASP:OD1	56:SB:191:ASP:N	2.48	0.46
76:SM:36:ARG:HD3	86:Sf:143:LYS:HZ1	1.80	0.46
79:SR:101:ASP:O	79:SR:104:GLU:HB2	2.15	0.46
2:D:190:PHE:HB3	2:D:192:ALA:N	2.31	0.46
7:M:113:MET:HG3	32:5:4882:U:C4	2.51	0.46
8:N:88:GLY:HA3	31:o:48:TYR:HD2	1.81	0.46
8:N:192:TRP:C	8:N:192:TRP:HE3	2.24	0.46
9:O:156:LEU:HD13	32:5:4910:G:C8	2.51	0.46
9:O:199:HIS:ND1	9:O:199:HIS:N	2.64	0.46
19:a:132:ARG:HB2	32:5:1397:A:OP1	2.14	0.46
23:e:23:HIS:CD2	23:e:24:GLN:HG3	2.51	0.46
23:e:35:TRP:HE1	23:e:36:ARG:C	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:m:111:ARG:NH2	32:5:4698:C:N3	2.63	0.46
32:5:30:C:C2'	32:5:31:U:O5'	2.63	0.46
32:5:61:A:C6	32:5:62:A:C5	3.03	0.46
32:5:289:C:C4	32:5:290:U:C4	3.04	0.46
32:5:417:G:H1'	34:8:17:A:N6	2.29	0.46
32:5:659:G:C2	32:5:660:A:N9	2.84	0.46
32:5:717:U:N3	32:5:718:C:C6	2.84	0.46
32:5:753:C:O2	32:5:754:U:C6	2.67	0.46
32:5:985:C:N3	32:5:986:C:C5	2.84	0.46
32:5:1250:C:C2	32:5:1251:C:C6	3.04	0.46
32:5:1323:A:N3	32:5:1324:A:C8	2.83	0.46
32:5:1426:G:O2'	32:5:1459:A:N6	2.46	0.46
32:5:1528:U:H2'	32:5:1529:G:O4'	2.15	0.46
32:5:1596:U:O2'	40:P:131:ARG:NH2	2.47	0.46
32:5:1696:C:O2'	32:5:1697:G:OP2	2.29	0.46
32:5:1750:G:N1	32:5:1751:A:C8	2.83	0.46
32:5:1761:G:C5	32:5:1762:C:C5	3.04	0.46
32:5:1821:G:O2'	32:5:1822:U:OP1	2.33	0.46
32:5:1999:A:H2'	32:5:2000:G:N3	2.30	0.46
32:5:2089:G:O6	32:5:2263:A:O5'	2.32	0.46
32:5:2103:G:C4	32:5:2104:G:C8	3.03	0.46
32:5:2322:G:C6	32:5:2323:C:C4	3.04	0.46
32:5:2391:G:C2	32:5:2392:C:C2	3.03	0.46
32:5:2590:G:C6	32:5:2754:G:C6	3.03	0.46
32:5:2671:C:O2'	32:5:2672:C:H5'	2.15	0.46
32:5:4147:G:C4	32:5:4148:C:C5	3.03	0.46
32:5:4208:U:O2'	32:5:4274:A:N3	2.44	0.46
32:5:4275:G:C6	32:5:4276:G:C8	3.03	0.46
32:5:4284:C:C2	32:5:4285:U:C6	2.87	0.46
32:5:4451:G:H2'	32:5:4522:G:C2	2.49	0.46
32:5:4462:C:N3	32:5:4515:G:C2	2.83	0.46
32:5:4487:A:O2'	32:5:4708:A:N1	2.46	0.46
32:5:4505:C:C2	32:5:4506:C:C5	3.03	0.46
32:5:4690:G:C6	32:5:4697:U:C5	3.04	0.46
34:8:97:A:C6	34:8:98:C:C4	3.03	0.46
34:8:115:G:C2	34:8:116:C:C6	3.03	0.46
34:8:154:G:C6	34:8:155:C:C4	3.03	0.46
35:B:369:ASP:OD1	35:B:369:ASP:C	2.58	0.46
43:n:5:TRP:CZ3	54:S2:1844:U:O4	2.68	0.46
51:4:282:U:C2	51:4:283:A:C8	3.03	0.46
54:S2:185:G:C4	54:S2:186:C:C5	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:201:C:N3	54:S2:202:G:H1'	2.30	0.46
54:S2:340:C:C2'	54:S2:341:C:H6	2.25	0.46
54:S2:572:U:H2'	54:S2:573:U:O4'	2.16	0.46
54:S2:599:A:C1'	54:S2:605:A:C2	2.99	0.46
54:S2:821:G:C5'	54:S2:821:G:C4	2.98	0.46
54:S2:934:G:C2	54:S2:935:G:C8	3.03	0.46
54:S2:955:A:N6	54:S2:971:G:O4'	2.47	0.46
54:S2:1050:A:C5	54:S2:1051:G:C1'	2.98	0.46
54:S2:1100:A:C4	54:S2:1101:U:C6	3.03	0.46
54:S2:1122:A:C6	54:S2:1123:C:C4	3.03	0.46
54:S2:1154:U:O2'	57:SC:194:ARG:HD2	2.16	0.46
54:S2:1185:C:O2	54:S2:1185:C:H2'	2.15	0.46
54:S2:1269:G:C2	54:S2:1514:G:C6	3.02	0.46
54:S2:1323:U:H2'	54:S2:1324:G:C8	2.50	0.46
54:S2:1427:C:H2'	54:S2:1428:G:C8	2.49	0.46
54:S2:1578:U:C4'	54:S2:1579:A:O5'	2.51	0.46
54:S2:1669:G:C2	54:S2:1670:C:C2	3.03	0.46
54:S2:1679:A:C8	54:S2:1679:A:O5'	2.68	0.46
54:S2:1712:A:H2'	54:S2:1713:C:C6	2.49	0.46
54:S2:1722:G:C2	54:S2:1723:G:C8	3.03	0.46
54:S2:1750:C:C4	54:S2:1751:C:C6	3.03	0.46
54:S2:1777:G:C4	54:S2:1778:C:C6	3.03	0.46
54:S2:1808:U:N3	54:S2:1809:A:N7	2.63	0.46
54:S2:1826:G:N3	54:S2:1826:G:H2'	2.31	0.46
55:SA:132:GLN:O	55:SA:135:THR:N	2.49	0.46
56:SB:53:GLN:HG2	56:SB:56:LYS:CE	2.45	0.46
56:SB:60:ASP:C	56:SB:62:LEU:N	2.73	0.46
56:SB:171:ILE:O	56:SB:175:GLU:OE2	2.34	0.46
59:SG:20:ASP:OD1	59:SG:20:ASP:N	2.47	0.46
59:SG:63:MET:HE3	59:SG:106:LEU:CD2	2.46	0.46
61:SI:47:ARG:NH1	61:SI:48:VAL:O	2.48	0.46
61:SI:66:SER:CB	61:SI:73:THR:HB	2.46	0.46
62:SJ:54:ARG:NH2	62:SJ:54:ARG:HB3	2.31	0.46
62:SJ:61:LEU:HA	62:SJ:70:ARG:HH22	1.80	0.46
73:SD:17:PHE:CE1	73:SD:21:LEU:HD11	2.50	0.46
74:SF:43:GLU:N	74:SF:43:GLU:OE1	2.48	0.46
74:SF:45:TYR:CE1	78:SQ:114:GLN:O	2.68	0.46
78:SQ:115:TYR:O	78:SQ:116:ASP:C	2.58	0.46
79:SR:56:HIS:O	79:SR:60:ARG:HG3	2.16	0.46
79:SR:74:GLN:O	79:SR:78:ARG:HG2	2.15	0.46
82:SU:48:LEU:CD2	82:SU:97:ILE:HD13	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:VAL:HG13	32:5:1539:G:H1'	1.98	0.46
1:A:68:ARG:C	3:G:45:ILE:HD11	2.40	0.46
1:A:117:GLU:OE1	1:A:122:ASP:N	2.48	0.46
2:D:219:TYR:O	2:D:220:LYS:CB	2.61	0.46
5:J:60:PHE:CE2	32:5:4257:A:C5	3.03	0.46
6:L:39:ARG:HB2	6:L:39:ARG:NH1	2.30	0.46
7:M:109:ARG:HB2	7:M:109:ARG:NH2	2.28	0.46
8:N:94:PHE:CE1	32:5:2460:A:C1'	2.99	0.46
13:T:41:ASP:OD1	13:T:41:ASP:N	2.48	0.46
23:e:20:PHE:CZ	23:e:60:TYR:OH	2.68	0.46
24:f:6:TRP:O	24:f:6:TRP:CD2	2.68	0.46
24:f:32:GLY:HA3	37:E:278:TYR:HB3	1.97	0.46
26:h:78:TYR:HE2	32:5:16:G:O3'	1.97	0.46
32:5:292:G:C2'	32:5:293:G:O5'	2.63	0.46
32:5:293:G:O2'	32:5:297:U:O4'	2.32	0.46
32:5:434:A:N7	32:5:435:A:C8	2.83	0.46
32:5:469:C:N3	32:5:687:U:O2	2.47	0.46
32:5:648:G:C2	32:5:649:A:C8	3.04	0.46
32:5:951:G:N3	32:5:952:G:C8	2.83	0.46
32:5:1086:C:H42	32:5:1211:G:H1	1.63	0.46
32:5:1237:C:C2	37:E:55:ARG:HD3	2.51	0.46
32:5:1322:A:C6	32:5:1326:A:N7	2.84	0.46
32:5:1330:A:C8	32:5:3864:C:C4	3.03	0.46
32:5:1355:G:H2'	32:5:1356:U:O4'	2.15	0.46
32:5:1444:G:C2	32:5:1445:U:C4	3.04	0.46
32:5:1490:G:C2	32:5:1491:A:C4	3.03	0.46
32:5:1517:G:H2'	32:5:1518:A:C8	2.50	0.46
32:5:1553:A:C8	32:5:1573:G:N2	2.83	0.46
32:5:1581:G:C5	32:5:1610:C:C4	3.03	0.46
32:5:1882:U:O2	32:5:1883:G:N7	2.48	0.46
32:5:1943:A:N7	32:5:1944:A:H1'	2.29	0.46
32:5:1977:C:OP1	46:K:79:ALA:HB3	2.16	0.46
32:5:1993:C:O2'	46:K:135:THR:CG2	2.64	0.46
32:5:1994:C:N3	32:5:1995:G:N7	2.64	0.46
32:5:2096:G:O2'	32:5:2097:U:OP2	2.28	0.46
32:5:2104:G:C2	32:5:2105:A:N9	2.83	0.46
32:5:2328:G:C6	32:5:2329:U:O4	2.69	0.46
32:5:2454:U:O2	32:5:2454:U:C2'	2.64	0.46
32:5:2506:G:H2'	32:5:2506:G:N3	2.30	0.46
32:5:2606:G:C4	32:5:2607:C:C6	3.03	0.46
32:5:2606:G:C6	32:5:2607:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2614:C:C2	32:5:2726:G:N1	2.83	0.46
32:5:2618:G:N2	32:5:2619:G:H1'	2.31	0.46
32:5:2698:G:C5	32:5:2699:C:C5	3.04	0.46
32:5:2703:G:C2	32:5:2704:C:N1	2.84	0.46
32:5:2805:C:N4	32:5:2806:A:C6	2.84	0.46
32:5:3621:A:C2	32:5:3622:C:N1	2.83	0.46
32:5:3629:A:C6	32:5:3630:A:N7	2.83	0.46
32:5:3693:U:O2	32:5:3693:U:H2'	2.15	0.46
32:5:3696:C:C4	32:5:3697:U:C4	3.04	0.46
32:5:3859:G:O5'	40:P:139:TYR:OH	2.33	0.46
32:5:4243:C:H1'	32:5:4268:A:C2	2.49	0.46
32:5:4255:A:C5	32:5:4256:A:C2	3.04	0.46
32:5:4269:G:C2	32:5:4270:C:C1'	2.98	0.46
32:5:4285:U:N3	32:5:4286:C:C4	2.83	0.46
32:5:4455:G:C4	32:5:4456:C:C5	3.03	0.46
32:5:4563:U:O4	32:5:4564:A:N6	2.49	0.46
32:5:4977:A:O2'	32:5:4978:G:H5'	2.15	0.46
32:5:5000:G:C2'	32:5:5001:U:O5'	2.64	0.46
32:5:5014:A:OP1	32:5:5014:A:H3'	2.15	0.46
33:7:117:G:C6	33:7:118:C:C4	3.03	0.46
34:8:62:A:H4'	34:8:63:U:O5'	2.16	0.46
34:8:97:A:C6	34:8:98:C:N4	2.84	0.46
34:8:100:U:N3	34:8:101:C:C6	2.83	0.46
34:8:135:C:C4	34:8:136:U:O4	2.69	0.46
36:C:122:TYR:HB2	36:C:280:PRO:CG	2.46	0.46
39:I:99:ILE:HG12	39:I:100:ASN:O	2.16	0.46
40:P:26:PHE:CD1	40:P:26:PHE:C	2.94	0.46
48:z:365:GLU:OE2	48:z:369:MET:HE2	2.16	0.46
48:z:405:ARG:HD2	51:4:207:C:C5'	2.41	0.46
51:4:235:G:HO2'	51:4:236:U:C5'	2.27	0.46
54:S2:4:C:H2'	54:S2:4:C:O2	2.15	0.46
54:S2:29:G:C2	54:S2:30:C:N3	2.83	0.46
54:S2:116:U:C2	54:S2:117:C:C6	3.03	0.46
54:S2:217:A:C6	54:S2:218:U:C6	3.03	0.46
54:S2:308:G:H5'	54:S2:309:G:C5'	2.46	0.46
54:S2:375:U:H2'	54:S2:376:A:O4'	2.16	0.46
54:S2:600:G:O2'	54:S2:601:G:H5'	2.15	0.46
54:S2:651:U:O2'	54:S2:652:U:C5'	2.63	0.46
54:S2:673:G:H2'	54:S2:674:C:O4'	2.16	0.46
54:S2:910:G:C2	54:S2:911:C:C2	3.03	0.46
54:S2:949:G:C2	54:S2:950:C:C2	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:952:G:C2	54:S2:953:C:C2	3.04	0.46
54:S2:964:A:N3	54:S2:965:U:C5	2.83	0.46
54:S2:978:G:C6	54:S2:979:C:C5	3.04	0.46
54:S2:1009:A:O2'	64:SN:114:ARG:HG3	2.16	0.46
54:S2:1065:G:C6	54:S2:1066:U:C5	3.03	0.46
54:S2:1201:U:C2	54:S2:1202:U:C6	3.04	0.46
54:S2:1289:U:C4	54:S2:1290:G:C4	3.04	0.46
54:S2:1292:C:O2	86:Sf:150:PHE:CD1	2.68	0.46
54:S2:1399:C:C2	54:S2:1400:U:C6	3.03	0.46
54:S2:1429:G:H2'	54:S2:1430:C:H6	1.79	0.46
54:S2:1495:G:H1'	85:Sd:41:GLN:CD	2.40	0.46
54:S2:1524:G:C2	54:S2:1525:C:C6	3.04	0.46
54:S2:1657:G:C5	54:S2:1658:G:C8	3.04	0.46
54:S2:1664:A:C6	54:S2:1666:C:C5	3.04	0.46
54:S2:1825:A:HO2'	54:S2:1826:G:P	2.34	0.46
55:SA:204:TYR:C	55:SA:204:TYR:HD1	2.24	0.46
56:SB:79:VAL:CG2	56:SB:81:PHE:CZ	2.98	0.46
56:SB:117:TRP:CE2	56:SB:152:LYS:HE3	2.50	0.46
56:SB:153:THR:HB	56:SB:155:TYR:CE1	2.50	0.46
57:SC:127:PHE:CZ	57:SC:234:GLY:HA2	2.50	0.46
64:SN:18:TYR:C	64:SN:18:TYR:CD2	2.94	0.46
74:SF:60:ARG:HD3	74:SF:61:PHE:CE2	2.50	0.46
76:SM:21:VAL:HG21	76:SM:124:ILE:HD11	1.98	0.46
76:SM:99:ASN:N	76:SM:99:ASN:ND2	2.63	0.46
78:SQ:63:PHE:N	78:SQ:63:PHE:CD1	2.83	0.46
79:SR:41:ILE:HG21	79:SR:47:ARG:CA	2.45	0.46
79:SR:83:ASN:ND2	79:SR:83:ASN:C	2.73	0.46
81:ST:30:VAL:HA	81:ST:53:PHE:CE2	2.50	0.46
1:A:49:ILE:HG22	1:A:50:HIS:N	2.30	0.46
3:G:82:GLN:HG3	3:G:83:PHE:CD1	2.51	0.46
4:H:31:ARG:HG3	4:H:85:THR:O	2.16	0.46
6:L:125:ILE:HD12	6:L:125:ILE:N	2.31	0.46
8:N:89:VAL:HG13	32:5:3928:A:H5'	1.97	0.46
12:S:115:ALA:HB1	32:5:1925:G:H2'	1.98	0.46
17:Y:10:ASP:O	17:Y:12:SER:N	2.49	0.46
32:5:169:G:C6	32:5:170:C:C4	3.04	0.46
32:5:313:U:C4	32:5:314:G:N7	2.83	0.46
32:5:317:A:N1	32:5:4361:U:H1'	2.30	0.46
32:5:453:G:H22	32:5:1294:A:H62	1.63	0.46
32:5:738:C:C4	32:5:739:G:N7	2.83	0.46
32:5:938:C:H2'	32:5:939:G:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1171:G:N2	32:5:1191:C:C2	2.84	0.46
32:5:1203:G:H2'	32:5:1204:C:O4'	2.15	0.46
32:5:1280:C:O2'	32:5:1282:G:P	2.74	0.46
32:5:1311:G:C6	32:5:1312:A:C5	3.04	0.46
32:5:1334:A:C5	32:5:1335:G:N7	2.83	0.46
32:5:1367:C:N3	32:5:1369:C:P	2.89	0.46
32:5:1584:G:N2	32:5:1585:C:C2	2.84	0.46
32:5:1620:U:O2	32:5:1621:A:C8	2.68	0.46
32:5:1684:A:N1	32:5:1685:G:C4	2.84	0.46
32:5:1695:U:C2'	32:5:1696:C:H5'	2.46	0.46
32:5:1797:G:N3	32:5:1798:G:C8	2.84	0.46
32:5:1904:G:C2	32:5:2073:C:N3	2.83	0.46
32:5:2093:A:H4'	32:5:2095:A:N7	2.31	0.46
32:5:2268:A:C8	32:5:2270:G:C5	3.03	0.46
32:5:2289:C:O2	32:5:2289:C:C2'	2.63	0.46
32:5:2361:G:O6	40:P:25:HIS:CB	2.63	0.46
32:5:2450:G:O6	32:5:2451:A:N7	2.49	0.46
32:5:2736:G:C6	32:5:2737:C:N4	2.83	0.46
32:5:2739:C:H4'	44:p:52:VAL:CG2	2.46	0.46
32:5:2746:A:H2'	32:5:2747:U:O5'	2.15	0.46
32:5:3715:U:H2'	32:5:3716:C:O5'	2.16	0.46
32:5:3723:A:N1	32:5:3729:U:O4	2.48	0.46
32:5:3791:C:C2	32:5:3802:U:H6	2.34	0.46
32:5:3847:C:C2	32:5:3848:U:H6	2.31	0.46
32:5:4201:G:C2	32:5:4202:U:C4	3.04	0.46
32:5:4237:C:H4'	32:5:4327:C:O2	2.16	0.46
32:5:4414:A:H3'	32:5:4422:A:C2	2.50	0.46
32:5:4691:A:C5	32:5:4692:A:C8	3.02	0.46
32:5:4920:C:C2	32:5:4921:C:C5	3.03	0.46
32:5:5017:G:C5	32:5:5018:C:C5	3.04	0.46
32:5:5048:A:N3	32:5:5048:A:O4'	2.48	0.46
36:C:47:ASN:OD1	36:C:47:ASN:N	2.48	0.46
36:C:322:LEU:O	36:C:325:MET:HB3	2.15	0.46
37:E:230:ASP:OD1	37:E:230:ASP:N	2.49	0.46
38:F:73:MET:O	38:F:76:MET:HB3	2.16	0.46
38:F:151:SER:OG	38:F:246:ILE:HD13	2.16	0.46
46:K:44:ASP:O	46:K:47:ALA:HB3	2.15	0.46
47:q:100:ASP:HA	47:q:103:ARG:CD	2.45	0.46
48:z:107:VAL:CG2	48:z:205:MET:HE2	2.46	0.46
48:z:148:LEU:O	48:z:152:ALA:HB2	2.15	0.46
50:3:14:A:C2	50:3:22:U:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:4:8:G:C2	51:4:9:C:C2	3.04	0.46
51:4:45:G:C2	51:4:46:C:C6	3.04	0.46
54:S2:50:A:C2	89:S4:81:MET:HE2	2.50	0.46
54:S2:51:U:O2	54:S2:51:U:H2'	2.16	0.46
54:S2:83:A:C6	54:S2:84:A:H1'	2.50	0.46
54:S2:300:U:N3	54:S2:301:A:C8	2.83	0.46
54:S2:462:C:N3	54:S2:463:C:C5	2.84	0.46
54:S2:529:A:N1	54:S2:555:A:N1	2.63	0.46
54:S2:793:G:N1	54:S2:794:A:N9	2.64	0.46
54:S2:832:G:C2	54:S2:833:C:C2	3.04	0.46
54:S2:839:C:C5	54:S2:841:G:N7	2.84	0.46
54:S2:996:A:C2	54:S2:997:A:C2	3.03	0.46
54:S2:1135:C:O2	54:S2:1135:C:H2'	2.16	0.46
54:S2:1174:U:N3	54:S2:1175:G:N7	2.64	0.46
54:S2:1190:A:H2'	54:S2:1191:C:O5'	2.15	0.46
54:S2:1371:U:OP2	54:S2:1372:U:C5	2.68	0.46
54:S2:1393:G:N3	54:S2:1393:G:H2'	2.31	0.46
54:S2:1431:G:C4	54:S2:1432:U:C6	3.04	0.46
54:S2:1540:G:C5	54:S2:1541:G:C8	3.03	0.46
54:S2:1553:C:H5'	54:S2:1556:A:N6	2.31	0.46
54:S2:1589:A:H2'	54:S2:1590:C:O4'	2.16	0.46
54:S2:1668:U:C2	54:S2:1669:G:C8	3.03	0.46
54:S2:1702:G:C6	54:S2:1703:C:C4	3.03	0.46
54:S2:1708:C:H2'	54:S2:1708:C:O2	2.14	0.46
54:S2:1784:G:C2	54:S2:1785:C:C6	3.04	0.46
59:SG:98:ARG:NH1	59:SG:101:ILE:O	2.46	0.46
73:SD:76:ARG:NH2	75:SK:66:HIS:NE2	2.63	0.46
74:SF:198:ARG:C	74:SF:198:ARG:CD	2.85	0.46
76:SM:51:VAL:HG22	76:SM:85:LEU:HD21	1.97	0.46
80:SS:30:ILE:HD11	80:SS:45:LEU:CG	2.45	0.46
83:SZ:50:PHE:CD1	83:SZ:79:ILE:HD13	2.50	0.46
84:Sc:31:ARG:HH12	84:Sc:41:SER:CB	2.16	0.46
84:Sc:56:LEU:HG	84:Sc:57:THR:N	2.31	0.46
86:Sf:88:PRO:O	86:Sf:90:LYS:N	2.49	0.46
87:Sg:226:HIS:CE1	87:Sg:228:TYR:HA	2.50	0.46
2:D:17:GLN:HG3	13:T:20:ARG:CA	2.43	0.46
2:D:226:TYR:CE2	2:D:236:MET:HE2	2.50	0.46
2:D:284:LYS:CB	39:I:209:TRP:CZ3	2.99	0.46
3:G:45:ILE:HG21	32:5:4125:C:H4'	1.97	0.46
4:H:153:LEU:HA	4:H:156:ASN:ND2	2.31	0.46
7:M:92:ALA:O	7:M:95:ILE:O	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:Q:68:ARG:CZ	10:Q:68:ARG:HB3	2.43	0.46
14:U:70:ILE:HD12	14:U:70:ILE:N	2.31	0.46
16:X:119:ILE:HD12	16:X:149:VAL:HG21	1.97	0.46
19:a:102:ASP:OD2	19:a:125:LYS:HD2	2.16	0.46
22:d:119:THR:HG23	32:5:4996:C:O2'	2.16	0.46
24:f:3:GLY:O	24:f:4:ARG:O	2.33	0.46
32:5:40:G:C4	32:5:4378:A:C6	3.03	0.46
32:5:79:C:C2	32:5:105:A:C2	3.04	0.46
32:5:88:A:O2'	32:5:89:C:C5'	2.63	0.46
32:5:123:C:N3	32:5:124:C:C6	2.84	0.46
32:5:254:G:C6	32:5:255:C:C4	3.03	0.46
32:5:278:G:H4'	32:5:279:A:OP2	2.16	0.46
32:5:290:U:H2'	32:5:291:U:C6	2.51	0.46
32:5:730:G:N2	32:5:939:G:C2	2.82	0.46
32:5:908:G:N2	32:5:909:A:H1'	2.31	0.46
32:5:1205:G:C2	32:5:1206:C:C2	3.04	0.46
32:5:1210:C:O2	32:5:1210:C:C2'	2.63	0.46
32:5:1214:C:H42	38:F:58:HIS:CE1	2.34	0.46
32:5:1268:G:O4'	32:5:2111:G:N7	2.49	0.46
32:5:1301:C:N4	32:5:1302:U:N1	2.63	0.46
32:5:1301:C:C2	32:5:1302:U:C5	3.04	0.46
32:5:1329:G:N2	32:5:3865:A:H1'	2.31	0.46
32:5:1397:A:N3	32:5:1499:C:C1'	2.77	0.46
32:5:1429:C:C2	32:5:1430:C:C6	3.04	0.46
32:5:1474:C:C4	32:5:1475:G:N7	2.84	0.46
32:5:1855:G:C2	32:5:1856:C:N1	2.84	0.46
32:5:1891:A:C2'	32:5:1892:A:C8	2.99	0.46
32:5:2034:G:O6	32:5:2035:C:C4	2.67	0.46
32:5:2270:G:H2'	32:5:2271:C:C6	2.51	0.46
32:5:2422:C:C4	32:5:2423:A:N7	2.83	0.46
32:5:2453:A:H2'	32:5:2453:A:N3	2.30	0.46
32:5:2481:G:N2	32:5:2498:C:C2	2.84	0.46
32:5:2494:U:N3	32:5:2495:U:C6	2.84	0.46
32:5:2614:C:H1'	32:5:2726:G:N2	2.30	0.46
32:5:2658:G:O6	32:5:2675:G:O6	2.34	0.46
32:5:2830:G:N1	32:5:2831:G:C5	2.84	0.46
32:5:3586:G:C2	32:5:3587:C:C2	3.03	0.46
32:5:3622:C:C2	32:5:3623:C:N3	2.83	0.46
32:5:3623:C:C5	32:5:3624:A:C5	2.98	0.46
32:5:3686:G:N3	32:5:3686:G:H2'	2.29	0.46
32:5:3861:A:C4	32:5:3862:A:C8	3.02	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3910:C:N3	32:5:3911:C:C4	2.84	0.46
32:5:4111:U:C4	32:5:4112:C:C5	3.04	0.46
32:5:4372:U:O2	32:5:4377:G:H1'	2.15	0.46
32:5:4524:G:N2	32:5:4525:C:C2	2.84	0.46
32:5:4640:C:C2	32:5:4641:U:C6	3.04	0.46
32:5:4667:C:C4	32:5:4668:U:C4	3.04	0.46
32:5:4688:C:N4	32:5:4699:U:H5	2.13	0.46
32:5:4982:A:C2	32:5:4983:C:H6	2.22	0.46
33:7:11:A:O2'	33:7:12:U:H5''	2.16	0.46
33:7:11:A:O2'	33:7:13:A:OP2	2.34	0.46
33:7:19:C:C2	33:7:60:G:C2	3.04	0.46
34:8:56:G:C2	34:8:57:C:C2	3.04	0.46
34:8:103:A:H3'	34:8:104:A:H5'	1.96	0.46
34:8:106:G:N1	34:8:107:C:N4	2.64	0.46
36:C:139:SER:HA	45:r:16:PHE:CZ	2.51	0.46
37:E:277:ILE:C	37:E:278:TYR:CE2	2.93	0.46
45:r:12:ASN:HD21	45:r:19:LYS:NZ	2.13	0.46
47:q:133:GLU:O	47:q:135:THR:N	2.48	0.46
48:z:44:VAL:HG22	48:z:261:SER:CB	2.45	0.46
48:z:48:LEU:HD11	48:z:86:LEU:HD22	1.98	0.46
50:3:9:A:H5'	50:3:46:G:N3	2.31	0.46
51:4:35:U:H4'	51:4:37:C:H5	1.80	0.46
54:S2:14:C:C2	54:S2:1198:G:C2	3.04	0.46
54:S2:341:C:O5'	54:S2:342:C:OP2	2.34	0.46
54:S2:474:G:C6	54:S2:475:C:C4	3.04	0.46
54:S2:602:G:N2	54:S2:621:C:C2	2.83	0.46
54:S2:839:C:C2'	54:S2:841:G:O4'	2.64	0.46
54:S2:859:G:C6	54:S2:860:G:C5	3.03	0.46
54:S2:1126:G:C2	54:S2:1127:C:C5	3.03	0.46
54:S2:1149:A:C2	54:S2:1151:G:C8	3.03	0.46
54:S2:1236:G:C4	54:S2:1237:C:C5	3.03	0.46
54:S2:1561:A:O4'	54:S2:1583:C:H4'	2.16	0.46
54:S2:1573:G:N3	54:S2:1574:C:H1'	2.30	0.46
54:S2:1776:G:N1	54:S2:1777:G:N7	2.64	0.46
54:S2:1866:A:C6	70:Sa:87:ARG:HD2	2.51	0.46
54:S2:1866:A:N6	70:Sa:87:ARG:HD2	2.30	0.46
56:SB:150:ILE:O	79:SR:129:LYS:HB2	2.15	0.46
56:SB:202:GLN:N	56:SB:203:PRO:HD2	2.30	0.46
59:SG:13:GLN:N	59:SG:13:GLN:OE1	2.48	0.46
60:SH:111:LYS:C	60:SH:112:ASN:ND2	2.73	0.46
74:SF:52:SER:O	74:SF:53:ALA:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:SF:141:VAL:HG21	74:SF:146:ARG:HG3	1.97	0.46
75:SK:61:GLN:OE1	75:SK:61:GLN:HA	2.14	0.46
76:SM:85:LEU:HD22	76:SM:107:SER:O	2.14	0.46
79:SR:99:ASP:N	79:SR:99:ASP:OD1	2.47	0.46
87:Sg:289:LEU:HA	87:Sg:300:ALA:HA	1.96	0.46
1:A:34:PHE:CZ	32:5:4087:G:C8	3.04	0.46
2:D:30:TYR:HA	2:D:33:ARG:HB2	1.98	0.46
2:D:157:ASN:HB2	33:7:45:U:O3'	2.16	0.46
3:G:81:ASN:ND2	3:G:238:GLY:HA3	2.30	0.46
3:G:220:GLU:CD	3:G:220:GLU:C	2.84	0.46
12:S:171:ARG:HH11	12:S:171:ARG:HG3	1.81	0.46
15:V:25:VAL:HB	15:V:36:ASN:HD22	1.80	0.46
18:Z:17:ARG:HG2	18:Z:18:TYR:CE1	2.51	0.46
32:5:29:G:C6	32:5:30:C:N4	2.84	0.46
32:5:489:C:N3	32:5:490:C:C6	2.83	0.46
32:5:661:C:N3	32:5:662:C:C6	2.83	0.46
32:5:687:U:C4	32:5:688:U:C5	3.04	0.46
32:5:742:G:N3	32:5:742:G:H2'	2.31	0.46
32:5:975:C:C2	36:C:323:ARG:NH1	2.84	0.46
32:5:982:U:H5''	37:E:69:TYR:OH	2.16	0.46
32:5:1189:G:N3	32:5:1190:C:C6	2.84	0.46
32:5:1246:G:H2'	32:5:1247:U:O4'	2.15	0.46
32:5:1358:G:N3	32:5:1359:G:N7	2.63	0.46
32:5:1380:G:N2	32:5:1382:G:C4	2.84	0.46
32:5:1394:G:C2	32:5:1395:U:C2	3.03	0.46
32:5:1443:A:C4	32:5:1444:G:C8	3.03	0.46
32:5:1466:G:C4	32:5:1467:C:C6	3.04	0.46
32:5:1475:G:C2	32:5:1476:C:C6	2.98	0.46
32:5:1516:G:C6	32:5:1518:A:C8	3.04	0.46
32:5:1583:A:C8	32:5:1584:G:C8	3.04	0.46
32:5:1627:G:C2	32:5:1628:C:H1'	2.50	0.46
32:5:1778:C:C2	32:5:1779:U:C5	3.00	0.46
32:5:1953:U:H2'	32:5:1954:U:O4'	2.15	0.46
32:5:2076:G:C2	32:5:2077:C:N1	2.83	0.46
32:5:2294:G:C4	32:5:2295:C:C6	3.04	0.46
32:5:2305:U:H5'	32:5:2305:U:C6	2.51	0.46
32:5:2347:A:C2	32:5:2348:G:C6	3.03	0.46
32:5:2347:A:C4	32:5:2348:G:O6	2.68	0.46
32:5:2371:U:O4	32:5:2825:A:C2	2.65	0.46
32:5:2539:C:N3	32:5:2540:C:C5	2.84	0.46
32:5:2752:G:H3'	32:5:2753:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2823:G:C5	32:5:2824:C:C5	3.02	0.46
32:5:2866:C:N3	32:5:2867:C:C5	2.84	0.46
32:5:3802:U:O2	32:5:4498:U:C4'	2.64	0.46
32:5:3820:G:C5	32:5:3821:A:N7	2.83	0.46
32:5:3834:C:N3	32:5:3835:C:C5	2.83	0.46
32:5:3901:A:H5'	32:5:3901:A:N3	2.30	0.46
32:5:3913:G:C2	32:5:4390:A:N3	2.84	0.46
32:5:4271:A:C5	32:5:4272:G:C2	3.03	0.46
32:5:4342:C:C4	32:5:4343:U:H5	2.26	0.46
32:5:4401:G:N1	32:5:4402:C:C4	2.84	0.46
32:5:4575:G:C8	32:5:5069:U:H1'	2.51	0.46
32:5:4637:G:H2'	32:5:4638:U:O4'	2.16	0.46
32:5:4659:G:C6	32:5:4660:G:C5	3.04	0.46
33:7:110:G:C2	33:7:111:C:N1	2.82	0.46
34:8:5:U:OP2	40:P:62:ARG:CZ	2.64	0.46
34:8:68:G:N1	34:8:91:A:N1	2.64	0.46
34:8:73:U:O4	34:8:74:U:N1	2.48	0.46
35:B:19:ARG:HB2	35:B:234:ARG:HH12	1.79	0.46
36:C:144:ILE:HD11	36:C:249:PHE:CG	2.50	0.46
38:F:93:PHE:CB	38:F:124:PHE:CD1	2.98	0.46
48:z:138:ASP:OD2	48:z:148:LEU:HD11	2.16	0.46
48:z:359:PHE:CE2	48:z:365:GLU:HG3	2.50	0.46
50:3:39:G:H21	50:3:40:C:H1'	1.81	0.46
51:4:14:G:C6	51:4:15:C:C4	3.03	0.46
51:4:62:G:C2	51:4:63:C:C2	3.04	0.46
54:S2:19:A:C4	54:S2:20:G:C8	3.03	0.46
54:S2:453:C:O2'	54:S2:454:U:C5'	2.64	0.46
54:S2:596:U:O2'	54:S2:597:G:O4'	2.27	0.46
54:S2:616:A:C4	54:S2:617:G:H1'	2.51	0.46
54:S2:632:C:O2	54:S2:633:C:C6	2.68	0.46
54:S2:992:A:H62	70:Sa:15:ARG:HH11	1.62	0.46
54:S2:998:A:N7	54:S2:999:G:C4'	2.78	0.46
54:S2:1066:U:N3	54:S2:1067:C:C5	2.82	0.46
54:S2:1120:U:C4	54:S2:1121:G:C4	3.04	0.46
54:S2:1220:A:H2'	54:S2:1221:G:C5'	2.46	0.46
54:S2:1228:A:H2'	54:S2:1229:G:C8	2.51	0.46
54:S2:1284:A:C6	76:SM:33:ARG:HD3	2.50	0.46
54:S2:1798:C:H2'	54:S2:1799:G:O4'	2.15	0.46
59:SG:67:VAL:HG23	59:SG:99:GLY:HA2	1.98	0.46
60:SH:109:ARG:HG3	60:SH:110:THR:N	2.30	0.46
70:Sa:38:LYS:O	70:Sa:71:LEU:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:SM:85:LEU:C	76:SM:88:TRP:CH2	2.94	0.46
81:ST:6:VAL:HG21	81:ST:65:TYR:CD2	2.51	0.46
81:ST:113:VAL:HA	81:ST:123:LEU:HA	1.97	0.46
86:Sf:119:ARG:HH11	86:Sf:119:ARG:HG3	1.80	0.46
1:A:186:TYR:CD1	1:A:186:TYR:C	2.94	0.46
2:D:22:ARG:HH12	33:7:7:G:C5'	2.29	0.46
2:D:98:ALA:HB1	2:D:162:ALA:HB2	1.97	0.46
6:L:25:TRP:CZ3	32:5:1360:G:H5''	2.51	0.46
8:N:140:LYS:HB3	8:N:144:ARG:HE	1.81	0.46
8:N:150:TRP:C	8:N:150:TRP:CE3	2.94	0.46
9:O:62:MET:HG2	32:5:2045:G:O6	2.15	0.46
9:O:64:THR:O	35:B:264:PHE:N	2.47	0.46
11:R:117:ARG:HB2	11:R:117:ARG:HH21	1.81	0.46
15:V:97:TYR:OH	41:W:37:GLU:CG	2.64	0.46
22:d:87:ARG:NH1	22:d:109:VAL:HG22	2.31	0.46
23:e:58:ILE:HD12	32:5:2319:C:H41	1.81	0.46
24:f:100:ARG:HG3	32:5:4751:G:H5'	1.97	0.46
32:5:54:G:N1	32:5:55:G:C4	2.83	0.46
32:5:111:C:C2	32:5:331:G:N1	2.83	0.46
32:5:516:C:C4	32:5:646:G:N1	2.84	0.46
32:5:735:G:C6	32:5:736:C:N4	2.84	0.46
32:5:1171:G:C2	32:5:1172:C:C2	3.04	0.46
32:5:1218:G:C6	32:5:1219:G:N9	2.84	0.46
32:5:1277:G:C5	32:5:1278:C:C5	3.04	0.46
32:5:1348:U:C2	32:5:1349:G:C8	3.03	0.46
32:5:1540:C:O2	32:5:1540:C:H2'	2.15	0.46
32:5:1603:C:H2'	32:5:1604:G:H8	1.80	0.46
32:5:1611:C:O4'	32:5:1612:G:N7	2.48	0.46
32:5:1612:G:C8	32:5:1612:G:H5''	2.51	0.46
32:5:1691:G:C2	32:5:1692:C:H1'	2.51	0.46
32:5:1818:G:N7	32:5:1821:G:O6	2.47	0.46
32:5:1819:G:C4	32:5:1820:C:C5	3.04	0.46
32:5:1842:G:C6	32:5:1843:A:N7	2.84	0.46
32:5:1991:A:C8	32:5:1992:U:O2	2.69	0.46
32:5:2019:C:N3	32:5:2020:U:C6	2.84	0.46
32:5:2077:C:C4	32:5:2078:C:H5	2.32	0.46
32:5:2245:G:C5	32:5:2246:C:C5	3.04	0.46
32:5:2347:A:O5'	32:5:2347:A:H2'	2.16	0.46
32:5:2393:C:OP2	32:5:2394:G:N7	2.49	0.46
32:5:2551:A:H2'	32:5:2552:G:H5'	1.96	0.46
32:5:2656:U:C4	32:5:2657:G:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2708:U:H2'	32:5:2709:C:C6	2.51	0.46
32:5:2848:G:C2	32:5:3838:U:C4	3.04	0.46
32:5:3714:G:C4	32:5:3715:U:C2	3.04	0.46
32:5:3806:G:C4	32:5:3807:A:C8	3.04	0.46
32:5:3879:G:C5	32:5:3882:C:C4	3.04	0.46
32:5:3930:U:C2	32:5:3931:C:C5	3.04	0.46
32:5:4095:G:N3	32:5:4096:C:H5	2.12	0.46
32:5:4129:G:H2'	32:5:4130:C:O4'	2.16	0.46
32:5:4147:G:C2	32:5:4148:C:C2	3.04	0.46
32:5:4175:G:C4	32:5:4176:C:C6	3.04	0.46
32:5:4202:U:O2	32:5:4204:C:C5	2.69	0.46
32:5:4250:G:N2	32:5:4259:C:C2	2.84	0.46
32:5:4367:G:C6	32:5:4368:G:N7	2.84	0.46
32:5:4461:C:C2	32:5:4516:G:C2	3.04	0.46
32:5:4480:A:H2'	32:5:4480:A:N3	2.30	0.46
32:5:4608:G:H3'	32:5:4609:G:H8	1.81	0.46
32:5:4743:G:C2	32:5:4744:A:C5	3.04	0.46
32:5:4982:A:C4	32:5:4983:C:C6	3.04	0.46
33:7:43:U:O2	33:7:44:C:H6	1.96	0.46
33:7:70:G:C2	33:7:71:G:C8	3.04	0.46
34:8:10:G:C5	34:8:11:C:C5	2.88	0.46
34:8:56:G:C6	34:8:57:C:C4	3.04	0.46
34:8:130:C:N3	34:8:131:G:N7	2.61	0.46
34:8:146:U:C2	34:8:147:G:C8	3.04	0.46
35:B:323:TYR:CD1	35:B:323:TYR:C	2.93	0.46
36:C:26:ALA:O	36:C:27:VAL:C	2.57	0.46
38:F:194:HIS:C	38:F:196:ILE:N	2.73	0.46
41:W:8:PHE:HE1	41:W:51:TRP:CZ3	2.34	0.46
46:K:16:ARG:HG3	46:K:17:CYS:N	2.31	0.46
46:K:160:VAL:HG12	46:K:160:VAL:O	2.15	0.46
51:4:6:G:H2'	51:4:7:C:H6	1.78	0.46
51:4:283:A:C2	51:4:284:G:C8	3.04	0.46
52:9:52:VAL:HG11	52:9:112:ILE:HA	1.98	0.46
54:S2:491:C:H1'	54:S2:574:A:H62	1.78	0.46
54:S2:820:U:O2	54:S2:820:U:H2'	2.14	0.46
54:S2:870:A:N6	54:S2:915:G:N9	2.55	0.46
54:S2:978:G:C2	54:S2:979:C:C6	3.03	0.46
54:S2:1542:C:H3'	81:ST:62:ARG:NH1	2.31	0.46
54:S2:1576:G:N2	54:S2:1577:G:C4	2.84	0.46
54:S2:1648:G:N2	54:S2:1674:G:C5	2.84	0.46
54:S2:1668:U:O2	54:S2:1669:G:C8	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1804:U:C4	54:S2:1805:G:N7	2.84	0.46
61:SI:60:LEU:HD23	61:SI:185:ALA:HB2	1.97	0.46
65:SO:41:PHE:N	65:SO:41:PHE:CD1	2.83	0.46
73:SD:28:GLU:OE1	73:SD:28:GLU:HA	2.15	0.46
80:SS:80:PRO:HG2	80:SS:82:TRP:NE1	2.31	0.46
83:SZ:50:PHE:HZ	83:SZ:79:ILE:HG21	1.80	0.46
6:L:80:GLU:HG2	6:L:110:LEU:HD12	1.97	0.46
8:N:182:HIS:CD2	8:N:182:HIS:H	2.34	0.46
10:Q:55:ARG:HH22	32:5:1352:C:N4	2.15	0.46
16:X:79:PHE:N	16:X:79:PHE:CD1	2.84	0.46
19:a:130:SER:HA	32:5:1396:G:OP2	2.16	0.46
31:o:104:ILE:HB	50:3:56:C:C4	2.51	0.46
32:5:36:U:C4	32:5:37:U:C5	3.04	0.46
32:5:90:G:C5	32:5:92:C:C1'	2.94	0.46
32:5:95:G:H3'	32:5:95:G:C8	2.50	0.46
32:5:154:G:C6	32:5:155:C:N4	2.83	0.46
32:5:180:C:C2	32:5:181:C:C5	3.03	0.46
32:5:225:G:C2	32:5:243:A:C2	3.04	0.46
32:5:422:C:N3	32:5:423:G:N7	2.63	0.46
32:5:667:A:C2	32:5:668:C:C5	3.04	0.46
32:5:677:G:C2	32:5:678:C:C2	3.03	0.46
32:5:739:G:C6	32:5:740:G:C8	3.04	0.46
32:5:957:G:P	32:5:1284:G:C2	3.09	0.46
32:5:984:C:C4	32:5:1070:G:N1	2.83	0.46
32:5:1218:G:N1	32:5:1219:G:C1'	2.77	0.46
32:5:1400:G:C2	32:5:1418:C:C2	3.04	0.46
32:5:1545:G:C5	32:5:1546:C:N4	2.83	0.46
32:5:1620:U:OP2	42:j:30:GLN:HG2	2.16	0.46
32:5:1637:A:H2	42:j:11:ARG:HH22	1.64	0.46
32:5:1759:G:N1	32:5:1760:G:N7	2.64	0.46
32:5:1804:A:O4'	32:5:1806:G:C8	2.68	0.46
32:5:1842:G:N1	32:5:1843:A:C5	2.84	0.46
32:5:1912:G:N3	32:5:1913:C:C5	2.84	0.46
32:5:2085:G:C2	32:5:2273:G:N1	2.84	0.46
32:5:2104:G:C2	32:5:2105:A:C4	3.04	0.46
32:5:2295:C:C2	32:5:2296:G:N7	2.84	0.46
32:5:2643:G:O6	32:5:2644:G:C5	2.69	0.46
32:5:2666:U:C6	32:5:2669:C:N4	2.84	0.46
32:5:3621:A:C4	32:5:3622:C:C5	3.04	0.46
32:5:3623:C:C5	32:5:3624:A:C4	3.04	0.46
32:5:3642:A:C2	42:j:3:LYS:HB3	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4092:G:C6	32:5:4093:G:N2	2.84	0.46
32:5:4189:U:H2'	32:5:4190:U:O4'	2.16	0.46
32:5:4200:G:C6	32:5:4201:G:C5	3.04	0.46
32:5:4271:A:C6	32:5:4272:G:C6	3.04	0.46
32:5:4661:G:C6	32:5:4662:C:C4	3.04	0.46
32:5:4735:G:C2	32:5:4736:C:N1	2.84	0.46
32:5:4737:G:H2'	32:5:4738:C:H6	1.81	0.46
32:5:4966:A:H2'	32:5:4967:A:C1'	2.46	0.46
32:5:4986:G:C6	32:5:4987:C:C4	3.04	0.46
32:5:5006:U:O4	41:W:50:ASN:O	2.33	0.46
33:7:112:U:O2	33:7:112:U:C2'	2.62	0.46
34:8:65:A:C4	34:8:66:A:C8	3.04	0.46
37:E:148:ILE:HD13	37:E:185:THR:HG21	1.98	0.46
38:F:98:ARG:HD2	38:F:141:TYR:CD2	2.51	0.46
51:4:57:G:N2	51:4:290:C:H1'	2.31	0.46
51:4:151:C:OP1	51:4:204:G:H4'	2.16	0.46
51:4:183:A:C3'	51:4:184:A:O5'	2.63	0.46
52:9:23:LEU:HB2	52:9:44:PRO:HG3	1.98	0.46
54:S2:29:G:N7	54:S2:646:G:C2	2.84	0.46
54:S2:119:U:C2	54:S2:120:U:H6	2.29	0.46
54:S2:302:A:C4	54:S2:303:C:C5	3.04	0.46
54:S2:431:G:N3	54:S2:431:G:H2'	2.30	0.46
54:S2:458:A:C2	54:S2:459:C:O4'	2.69	0.46
54:S2:554:A:N1	54:S2:555:A:C6	2.85	0.46
54:S2:664:A:N1	54:S2:665:G:C5	2.84	0.46
54:S2:750:C:O2	54:S2:751:G:N7	2.49	0.46
54:S2:993:G:N2	54:S2:994:C:C1'	2.79	0.46
54:S2:1053:C:O2	54:S2:1053:C:C2'	2.63	0.46
54:S2:1306:U:C6	86:Sf:135:HIS:CE1	3.04	0.46
54:S2:1351:G:N2	54:S2:1352:G:H1'	2.31	0.46
54:S2:1709:G:C2	54:S2:1710:C:C2	3.04	0.46
54:S2:1826:G:N1	54:S2:1827:U:C4	2.84	0.46
55:SA:32:PHE:CE1	55:SA:33:GLN:NE2	2.83	0.46
57:SC:72:ASP:OD1	57:SC:72:ASP:N	2.49	0.46
60:SH:111:LYS:O	60:SH:112:ASN:ND2	2.49	0.46
61:SI:87:ASN:OD1	61:SI:87:ASN:C	2.59	0.46
62:SJ:31:LEU:HD21	62:SJ:103:GLU:OE2	2.16	0.46
80:SS:40:TYR:OH	80:SS:71:MET:O	2.34	0.46
81:ST:65:TYR:CD2	81:ST:65:TYR:C	2.94	0.46
84:Sc:30:VAL:HG12	84:Sc:32:VAL:HG13	1.94	0.46
87:Sg:150:TRP:HB2	87:Sg:170:TRP:CB	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
88:S1:18:TYR:OH	88:S1:73:MET:HG2	2.16	0.46
2:D:138:GLN:OE1	2:D:138:GLN:HA	2.15	0.45
2:D:193:GLU:HA	2:D:196:ARG:HB2	1.97	0.45
8:N:192:TRP:O	8:N:193:ARG:C	2.56	0.45
9:O:65:ASN:ND2	9:O:67:SER:OG	2.49	0.45
11:R:3:MET:HE3	32:5:2426:U:H5''	1.98	0.45
14:U:82:TYR:HE1	32:5:2631:U:O4'	1.95	0.45
25:g:23:SER:OG	25:g:33:LEU:HD12	2.16	0.45
32:5:127:G:C2	32:5:128:C:C2	3.04	0.45
32:5:184:U:C2	32:5:254:G:C2	3.05	0.45
32:5:211:G:N2	32:5:212:A:C4	2.84	0.45
32:5:345:C:C2	32:5:346:G:N7	2.84	0.45
32:5:462:G:N2	32:5:694:C:C2	2.84	0.45
32:5:700:G:C6	32:5:701:G:N7	2.84	0.45
32:5:720:G:N1	32:5:721:G:C5	2.84	0.45
32:5:1355:G:N1	32:5:1385:G:C2	2.84	0.45
32:5:1431:C:C2	32:5:1454:G:C2	3.04	0.45
32:5:1570:G:C2	32:5:1571:G:C4	3.04	0.45
32:5:1570:G:N1	32:5:1571:G:C5	2.85	0.45
32:5:1597:G:O2'	32:5:1598:C:C4	2.69	0.45
32:5:1671:U:O4	32:5:1853:G:C1'	2.64	0.45
32:5:1761:G:N3	32:5:1762:C:C6	2.84	0.45
32:5:1836:G:C2	32:5:1837:A:N7	2.84	0.45
32:5:1899:G:N7	32:5:2278:G:O6	2.48	0.45
32:5:1926:C:O2	32:5:1927:U:H6	1.95	0.45
32:5:2432:U:H2'	32:5:2433:G:O4'	2.16	0.45
32:5:2566:G:N3	32:5:2567:G:C8	2.84	0.45
32:5:2744:A:C2'	32:5:2745:A:C8	3.00	0.45
32:5:3794:C:C4	32:5:3795:A:N7	2.83	0.45
32:5:4099:G:C2	32:5:4100:C:N1	2.84	0.45
32:5:4140:C:O2	32:5:4140:C:H2'	2.15	0.45
32:5:4211:C:O5'	32:5:4211:C:H6	1.99	0.45
32:5:4336:A:C8	32:5:4336:A:C3'	2.98	0.45
32:5:4344:U:O2	32:5:4344:U:C2'	2.65	0.45
32:5:4479:A:C5	32:5:4480:A:N9	2.85	0.45
32:5:4590:A:C5	32:5:4591:U:C5	3.04	0.45
32:5:4592:C:H2'	32:5:4593:C:H6	1.80	0.45
32:5:4733:C:C5	32:5:4734:A:O4'	2.69	0.45
32:5:4871:C:O2	32:5:4871:C:H5''	2.16	0.45
32:5:5030:U:C2	32:5:5031:G:N7	2.84	0.45
32:5:5050:C:O2'	35:B:321:VAL:HA	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:E:218:LEU:HD21	37:E:230:ASP:OD2	2.15	0.45
38:F:146:TYR:HE2	38:F:239:GLU:HB3	1.81	0.45
39:I:76:MET:HB3	39:I:85:PHE:CD2	2.50	0.45
45:r:37:SER:OG	45:r:38:PHE:N	2.49	0.45
46:K:117:ARG:NE	46:K:117:ARG:CA	2.79	0.45
48:z:147:GLN:O	48:z:151:ASN:ND2	2.49	0.45
48:z:202:PHE:CZ	48:z:236:PHE:CZ	3.03	0.45
48:z:271:ILE:HG22	48:z:272:PHE:CD2	2.50	0.45
48:z:404:GLN:NE2	48:z:414:THR:HG21	2.30	0.45
51:4:284:G:C2	51:4:285:C:C6	3.04	0.45
54:S2:39:A:C8	54:S2:517:C:C4	3.04	0.45
54:S2:105:U:C5	54:S2:106:C:C6	3.02	0.45
54:S2:167:G:C5	54:S2:168:C:C5	3.04	0.45
54:S2:403:G:O6	54:S2:404:G:C5	2.69	0.45
54:S2:445:A:C2'	54:S2:446:G:O4'	2.57	0.45
54:S2:660:C:C5	54:S2:661:U:C5	3.04	0.45
54:S2:693:A:C2	54:S2:694:G:C5	3.04	0.45
54:S2:746:C:C4	54:S2:747:U:C5	3.04	0.45
54:S2:839:C:C6	54:S2:841:G:C8	3.04	0.45
54:S2:869:A:N7	60:SH:115:LYS:N	2.64	0.45
54:S2:953:C:OP1	56:SB:28:ARG:NH2	2.49	0.45
54:S2:1105:G:C4	54:S2:1106:C:C6	3.03	0.45
54:S2:1402:A:N7	54:S2:1441:U:C4	2.85	0.45
54:S2:1859:A:C6	54:S2:1860:A:C5	3.04	0.45
57:SC:187:ARG:HB3	57:SC:192:LEU:HB2	1.98	0.45
58:SE:102:ILE:HG23	58:SE:182:MET:HE1	1.98	0.45
60:SH:111:LYS:CG	60:SH:112:ASN:HD22	2.21	0.45
61:SI:65:PHE:HB2	61:SI:187:GLY:N	2.31	0.45
71:Sb:31:TYR:CD2	71:Sb:81:ARG:CZ	2.99	0.45
80:SS:33:ILE:HD12	80:SS:71:MET:HE1	1.97	0.45
84:Sc:34:PHE:HB2	84:Sc:40:ARG:HB2	1.98	0.45
88:S1:55:GLN:O	88:S1:57:GLN:N	2.44	0.45
11:R:172:ARG:HG3	54:S2:909:G:OP1	2.03	0.45
12:S:13:VAL:HG12	12:S:29:ARG:HA	1.98	0.45
18:Z:18:TYR:CD2	18:Z:47:ASP:OD1	2.69	0.45
27:i:72:PHE:CD2	27:i:72:PHE:C	2.94	0.45
32:5:12:A:C4	32:5:14:C:C5	3.04	0.45
32:5:46:U:OP2	32:5:47:A:O2'	2.31	0.45
32:5:134:G:H5'	32:5:134:G:C8	2.51	0.45
32:5:173:C:N3	32:5:174:C:H5	2.03	0.45
32:5:673:C:O2	32:5:674:G:C8	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:689:U:C2	32:5:690:C:C6	3.04	0.45
32:5:933:G:N1	32:5:940:C:C6	2.84	0.45
32:5:1070:G:N3	32:5:1071:C:C6	2.85	0.45
32:5:1201:U:O2	32:5:1202:C:C6	2.69	0.45
32:5:1292:C:H3'	32:5:1293:G:H5''	1.97	0.45
32:5:1362:G:C5	32:5:1363:C:C5	3.04	0.45
32:5:1368:A:H2'	32:5:1369:C:C6	2.51	0.45
32:5:1444:G:C2	32:5:1445:U:O4	2.68	0.45
32:5:1584:G:C2	32:5:1585:C:C6	3.03	0.45
32:5:1634:A:C2	32:5:1635:C:C2	3.04	0.45
32:5:1743:A:C5	32:5:1744:U:C6	3.05	0.45
32:5:1857:C:H2'	32:5:1858:A:H8	1.81	0.45
32:5:1942:A:H5''	33:7:88:A:C5	2.51	0.45
32:5:2013:A:H2'	32:5:2014:C:O4'	2.16	0.45
32:5:2056:G:N1	32:5:2058:G:C6	2.84	0.45
32:5:2086:G:C2	32:5:2087:C:C2	3.05	0.45
32:5:2436:U:C4	32:5:2783:A:C1'	2.99	0.45
32:5:2443:G:H2'	32:5:2444:U:O4'	2.15	0.45
32:5:2446:C:H2'	32:5:2447:U:C5	2.48	0.45
32:5:2453:A:H1'	32:5:2507:A:C4	2.51	0.45
32:5:2557:G:C4	32:5:2558:C:C6	3.04	0.45
32:5:2569:G:C5	32:5:2570:U:C5	3.04	0.45
32:5:2657:G:C2	32:5:2658:G:C4	3.04	0.45
32:5:2891:U:H2'	32:5:2892:C:O4'	2.16	0.45
32:5:3597:G:C6	32:5:3598:C:C4	3.04	0.45
32:5:3621:A:N3	32:5:3621:A:H2'	2.30	0.45
32:5:3710:G:C2	32:5:3711:A:C5	3.04	0.45
32:5:3724:A:C2	32:5:3729:U:O2	2.69	0.45
32:5:3725:G:N2	32:5:3727:A:H3'	2.31	0.45
32:5:3736:A:C5	32:5:3737:A:C6	3.04	0.45
32:5:3750:G:C2	32:5:3751:G:C8	3.04	0.45
32:5:3877:A:C2	32:5:4444:C:H1'	2.51	0.45
32:5:4074:C:O2'	32:5:4075:U:O4'	2.34	0.45
32:5:4099:G:H2'	32:5:4100:C:O4'	2.17	0.45
32:5:4106:G:C2	32:5:4107:G:C8	3.05	0.45
32:5:4119:C:O2	32:5:4119:C:O4'	2.35	0.45
32:5:4198:G:C5	32:5:4199:C:C5	3.04	0.45
32:5:4425:G:N2	32:5:4426:C:H1'	2.32	0.45
32:5:4433:G:N1	32:5:4434:C:C4	2.84	0.45
32:5:4473:A:C4	32:5:4474:A:C8	3.04	0.45
32:5:4655:A:C6	32:5:4658:G:C8	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4744:A:C6	32:5:4745:G:O6	2.69	0.45
32:5:4969:C:C4	32:5:4970:C:C5	3.04	0.45
32:5:4981:G:H5'	32:5:4982:A:OP2	2.17	0.45
33:7:44:C:N3	33:7:45:U:C5	2.84	0.45
34:8:33:G:C4'	34:8:34:U:O4	2.64	0.45
34:8:35:C:O2'	34:8:36:G:O5'	2.33	0.45
34:8:95:A:N3	34:8:96:C:C6	2.84	0.45
35:B:116:ARG:HD3	35:B:122:TRP:CZ3	2.52	0.45
37:E:268:ARG:HH11	37:E:268:ARG:HB3	1.81	0.45
40:P:82:ARG:HA	40:P:83:TRP:CE3	2.50	0.45
42:j:74:PHE:O	42:j:77:GLY:N	2.49	0.45
46:K:9:GLU:CD	46:K:11:LYS:CB	2.89	0.45
48:z:194:ARG:HB2	48:z:195:HIS:NE2	2.31	0.45
49:2:76:LEU:O	49:2:80:LEU:HB2	2.17	0.45
53:6:79:CYS:HB3	53:6:125:ARG:HG3	1.98	0.45
54:S2:164:A:C5	54:S2:165:G:C2	3.04	0.45
54:S2:444:G:N2	54:S2:447:A:OP2	2.49	0.45
54:S2:518:G:H2'	54:S2:518:G:N3	2.30	0.45
54:S2:750:C:O2	54:S2:751:G:H8	1.95	0.45
54:S2:939:U:C2	54:S2:940:U:C5	3.04	0.45
54:S2:1123:C:C2'	56:SB:148:ASN:HD21	2.28	0.45
54:S2:1125:C:C2	54:S2:1126:G:C8	3.05	0.45
54:S2:1137:U:C2'	54:S2:1138:C:H5''	2.46	0.45
54:S2:1290:G:C3'	86:Sf:146:LEU:HG	2.41	0.45
54:S2:1291:A:H2'	86:Sf:149:CYS:HB3	1.98	0.45
54:S2:1588:A:C6	54:S2:1589:A:N6	2.85	0.45
54:S2:1828:C:H2'	54:S2:1829:G:C1'	2.47	0.45
55:SA:155:ARG:HB3	55:SA:156:TYR:HD2	1.81	0.45
64:SN:55:ARG:HD3	64:SN:56:ASP:OD2	2.16	0.45
78:SQ:32:ILE:HG21	78:SQ:39:LEU:HD11	1.97	0.45
78:SQ:35:ASN:OD1	78:SQ:35:ASN:N	2.49	0.45
1:A:34:PHE:CZ	32:5:4087:G:C5	3.04	0.45
24:f:18:LEU:HD11	32:5:1915:C:C6	2.51	0.45
24:f:33:VAL:HG23	24:f:38:GLU:HB3	1.97	0.45
26:h:10:ARG:NH2	34:8:65:A:O2'	2.50	0.45
31:o:10:THR:HA	31:o:18:HIS:CD2	2.51	0.45
32:5:62:A:H2	32:5:77:U:O2	1.99	0.45
32:5:199:G:C2	32:5:201:C:C4	3.05	0.45
32:5:257:C:C2	32:5:258:G:C8	3.04	0.45
32:5:273:U:N3	32:5:274:C:C4	2.84	0.45
32:5:298:G:C5	32:5:299:C:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:456:C:O2	32:5:456:C:H2'	2.16	0.45
32:5:672:C:N4	32:5:673:C:C5	2.85	0.45
32:5:711:A:N1	32:5:712:C:C5	2.85	0.45
32:5:1074:G:C2'	32:5:1075:G:O4'	2.63	0.45
32:5:1215:C:C2	32:5:1216:C:H6	2.34	0.45
32:5:1358:G:C3'	32:5:1358:G:C8	3.00	0.45
32:5:1359:G:C2'	32:5:1360:G:C8	2.89	0.45
32:5:1448:G:C6	32:5:1449:C:N4	2.85	0.45
32:5:1483:C:H5'	32:5:1483:C:H6	1.80	0.45
32:5:1491:A:C4	32:5:1492:G:N7	2.85	0.45
32:5:1572:U:H3'	32:5:1573:G:C8	2.48	0.45
32:5:1618:G:N3	32:5:1618:G:H2'	2.30	0.45
32:5:1699:A:P	38:F:179:ARG:HH22	2.39	0.45
32:5:1936:C:C4	32:5:1937:C:C5	3.04	0.45
32:5:2122:G:H1'	32:5:2123:C:OP2	2.17	0.45
32:5:2440:U:C2	32:5:2519:U:C6	3.04	0.45
32:5:2463:G:H2'	32:5:2464:C:C6	2.51	0.45
32:5:2606:G:C5	32:5:2607:C:C5	3.03	0.45
32:5:2614:C:H42	32:5:2724:G:H1	1.64	0.45
32:5:2756:G:O2'	32:5:2757:A:O5'	2.34	0.45
32:5:2783:A:C6	32:5:2784:C:C4	3.04	0.45
32:5:3600:G:C2	32:5:3601:C:C2	3.04	0.45
32:5:3722:G:C6	32:5:3723:A:N7	2.84	0.45
32:5:3864:C:O2'	32:5:3866:C:OP2	2.26	0.45
32:5:3871:A:H2'	32:5:3872:A:C8	2.51	0.45
32:5:3879:G:N2	32:5:3881:G:C8	2.85	0.45
32:5:4098:A:N1	32:5:4099:G:C6	2.83	0.45
32:5:4277:G:C2	32:5:4278:C:C5	3.04	0.45
32:5:4292:A:OP2	32:5:4330:G:O2'	2.32	0.45
32:5:4315:A:N1	32:5:4316:G:N7	2.65	0.45
32:5:4318:C:C2	32:5:4319:C:C6	3.04	0.45
32:5:4576:U:H2'	32:5:4577:U:O4'	2.16	0.45
32:5:4637:G:H2'	32:5:4638:U:C6	2.51	0.45
32:5:4744:A:C2	32:5:4745:G:N7	2.85	0.45
33:7:69:U:C2	33:7:70:G:C8	3.04	0.45
34:8:31:G:C6	34:8:32:C:C4	3.04	0.45
37:E:197:ILE:HD12	37:E:257:ILE:CG2	2.43	0.45
37:E:253:ILE:O	37:E:255:ARG:N	2.49	0.45
48:z:403:ILE:CG2	48:z:414:THR:HG23	2.42	0.45
51:4:9:C:C4	51:4:10:G:C8	3.04	0.45
54:S2:70:G:C5	54:S2:71:G:C5	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:217:A:C5	54:S2:218:U:C5	3.05	0.45
54:S2:383:G:H4'	63:SL:132:ARG:HD2	1.98	0.45
54:S2:646:G:C6	54:S2:647:U:N1	2.84	0.45
54:S2:947:G:C2	54:S2:948:C:C2	3.04	0.45
54:S2:957:A:N3	54:S2:958:G:C5	2.84	0.45
54:S2:1031:A:C6	54:S2:1032:C:C5	3.04	0.45
54:S2:1049:A:N1	54:S2:1070:A:N3	2.65	0.45
54:S2:1051:G:N3	54:S2:1052:A:C8	2.83	0.45
54:S2:1131:G:C4	54:S2:1132:C:C6	3.04	0.45
54:S2:1160:U:OP2	68:SX:4:CYS:O	2.34	0.45
54:S2:1203:G:C2'	54:S2:1204:A:C8	2.99	0.45
54:S2:1306:U:O4	86:Sf:140:TYR:HD1	1.95	0.45
54:S2:1310:U:H6	86:Sf:143:LYS:CE	2.30	0.45
54:S2:1338:G:C5	54:S2:1339:U:C5	3.04	0.45
54:S2:1410:C:N3	54:S2:1411:G:C5	2.84	0.45
54:S2:1421:A:H5'	81:ST:4:VAL:HG22	1.97	0.45
54:S2:1576:G:C2	54:S2:1577:G:C5	3.04	0.45
54:S2:1593:C:C4	54:S2:1594:A:N7	2.85	0.45
54:S2:1657:G:C6	54:S2:1658:G:C5	3.04	0.45
54:S2:1709:G:C2	54:S2:1710:C:C5	3.04	0.45
54:S2:1752:C:N3	54:S2:1753:C:C5	2.84	0.45
54:S2:1782:G:C2	54:S2:1784:G:C5	3.03	0.45
54:S2:1807:C:C2	54:S2:1808:U:C6	3.04	0.45
54:S2:1849:G:O2'	54:S2:1850:A:H5'	2.16	0.45
55:SA:12:GLU:OE1	79:SR:111:PHE:HB3	2.17	0.45
57:SC:61:MET:HE3	57:SC:61:MET:HA	1.98	0.45
59:SG:147:LEU:HD21	59:SG:156:TYR:CB	2.47	0.45
73:SD:200:PRO:C	73:SD:202:LYS:H	2.23	0.45
76:SM:98:GLY:C	76:SM:99:ASN:HD22	2.23	0.45
79:SR:18:GLU:CB	79:SR:70:SER:CB	2.89	0.45
4:H:68:ALA:O	32:5:4691:A:O2'	2.35	0.45
5:J:60:PHE:HE2	32:5:4257:A:C5	2.34	0.45
10:Q:175:GLU:HA	19:a:51:GLY:O	2.17	0.45
13:T:142:ARG:CB	38:F:82:ASN:HD21	2.30	0.45
15:V:49:LEU:HD11	35:B:6:PHE:HB3	1.97	0.45
21:c:31:TYR:HE2	21:c:56:ARG:HD2	1.80	0.45
25:g:63:VAL:HG22	25:g:66:ARG:NH2	2.31	0.45
27:i:12:ASN:ND2	27:i:12:ASN:O	2.50	0.45
29:l:38:ASN:C	29:l:38:ASN:OD1	2.60	0.45
32:5:45:U:C4	32:5:46:U:O4	2.69	0.45
32:5:171:U:O2	32:5:266:C:N4	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:269:G:N3	32:5:269:G:C2'	2.80	0.45
32:5:288:G:C6	32:5:289:C:C5	3.04	0.45
32:5:294:G:N2	32:5:316:U:O4'	2.49	0.45
32:5:322:C:C2	32:5:4356:G:C2	3.05	0.45
32:5:371:A:O2'	32:5:372:A:O5'	2.35	0.45
32:5:661:C:N4	32:5:662:C:C4	2.84	0.45
32:5:735:G:H2'	32:5:736:C:C6	2.51	0.45
32:5:1085:C:C2	32:5:1213:G:N1	2.84	0.45
32:5:1096:C:C2	32:5:1097:C:C6	3.04	0.45
32:5:1176:C:N3	32:5:1177:U:C5	2.85	0.45
32:5:1235:G:N3	32:5:1235:G:H2'	2.32	0.45
32:5:1300:G:O3'	32:5:1301:C:O2	2.34	0.45
32:5:1362:G:C6	32:5:1363:C:C5	3.03	0.45
32:5:1412:G:C6	32:5:1413:C:C4	3.04	0.45
32:5:1682:A:C2	32:5:1683:U:H1'	2.52	0.45
32:5:1682:A:N6	32:5:1683:U:C4	2.83	0.45
32:5:1752:G:C5	32:5:1753:G:C8	3.05	0.45
32:5:1758:G:C2	32:5:1759:G:C4	3.04	0.45
32:5:1856:C:O2	32:5:1856:C:C2'	2.65	0.45
32:5:1900:C:O2	32:5:1901:C:C6	2.70	0.45
32:5:1978:C:N3	32:5:1988:G:O6	2.50	0.45
32:5:2077:C:C2	32:5:2078:C:C6	3.04	0.45
32:5:2290:C:C1'	32:5:2321:G:N3	2.79	0.45
32:5:2436:U:O4	32:5:2783:A:N9	2.46	0.45
32:5:2436:U:C5	32:5:2783:A:H1'	2.52	0.45
32:5:2538:U:H2'	32:5:2539:C:H6	1.80	0.45
32:5:2586:G:C8	32:5:2587:A:C4	3.04	0.45
32:5:2793:G:C6	32:5:2797:C:N4	2.84	0.45
32:5:2805:C:C4	32:5:2806:A:C8	3.05	0.45
32:5:2857:A:C4	32:5:2858:A:N7	2.85	0.45
32:5:3604:A:C5	32:5:3605:C:C5	3.04	0.45
32:5:3635:A:C8	32:5:3635:A:C3'	3.00	0.45
32:5:3723:A:H2	32:5:3724:A:C5	2.21	0.45
32:5:3801:U:O2'	32:5:3802:U:C5'	2.64	0.45
32:5:3909:C:O2'	49:2:128:VAL:C	2.60	0.45
32:5:4082:G:C6	32:5:4083:U:O4	2.70	0.45
32:5:4104:G:O2'	32:5:4106:G:C6	2.68	0.45
32:5:4176:C:H2'	32:5:4177:C:H6	1.82	0.45
32:5:4281:A:N3	32:5:4283:G:N7	2.64	0.45
32:5:4292:A:O4'	32:5:4330:G:H1'	2.16	0.45
32:5:4408:G:C6	32:5:4409:C:C4	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4617:G:N2	32:5:4618:G:H1'	2.32	0.45
32:5:4707:A:O2'	32:5:4708:A:O5'	2.33	0.45
32:5:4916:G:C5	32:5:4917:C:C5	3.04	0.45
32:5:4996:C:O2	32:5:4996:C:H2'	2.16	0.45
32:5:5006:U:C5	41:W:50:ASN:ND2	2.83	0.45
32:5:5019:A:C2	32:5:5020:G:N7	2.85	0.45
33:7:25:G:C6	33:7:26:C:C4	3.04	0.45
33:7:50:A:N1	33:7:51:G:C8	2.84	0.45
33:7:55:A:N3	33:7:56:G:C8	2.85	0.45
33:7:55:A:N1	33:7:56:G:C5	2.85	0.45
42:j:20:ARG:CD	42:j:39:TYR:OH	2.63	0.45
46:K:10:ILE:HB	46:K:67:ARG:H	1.80	0.45
47:q:40:MET:O	47:q:44:ARG:HG2	2.16	0.45
47:q:161:ILE:HD13	47:q:167:VAL:HG22	1.98	0.45
48:z:340:MET:O	48:z:343:GLY:N	2.48	0.45
48:z:357:THR:HG22	48:z:358:ASP:CG	2.41	0.45
48:z:427:PHE:O	48:z:431:VAL:HG23	2.17	0.45
49:2:122:LEU:HD22	49:2:124:ILE:HD13	1.98	0.45
51:4:13:G:H2'	51:4:14:G:O4'	2.16	0.45
51:4:18:G:H2'	51:4:19:C:H6	1.80	0.45
51:4:38:U:O2	51:4:38:U:H2'	2.15	0.45
51:4:236:U:H2'	51:4:237:U:H6	1.81	0.45
54:S2:37:C:C4	54:S2:38:A:C5	3.04	0.45
54:S2:200:G:C5	54:S2:201:C:C5	3.04	0.45
54:S2:220:U:C4	54:S2:221:A:N7	2.84	0.45
54:S2:457:C:N3	54:S2:458:A:C8	2.85	0.45
54:S2:501:C:H3'	54:S2:501:C:C2	2.51	0.45
54:S2:746:C:C2'	60:SH:111:LYS:NZ	2.69	0.45
54:S2:870:A:N3	54:S2:915:G:N7	2.53	0.45
54:S2:998:A:C8	54:S2:998:A:C3'	2.99	0.45
54:S2:1005:G:C2	54:S2:1006:C:C2	3.04	0.45
54:S2:1034:A:H2'	54:S2:1035:A:C5'	2.46	0.45
54:S2:1131:G:N1	54:S2:1132:C:C5	2.84	0.45
54:S2:1265:A:C2	54:S2:1266:C:C6	3.04	0.45
54:S2:1272:C:N3	54:S2:1273:C:C5	2.84	0.45
54:S2:1298:G:O2'	54:S2:1299:A:C8	2.64	0.45
54:S2:1327:G:C2	54:S2:1328:G:C8	3.03	0.45
54:S2:1380:C:H2'	54:S2:1381:G:O4'	2.17	0.45
54:S2:1412:C:O2	54:S2:1413:G:C5	2.63	0.45
54:S2:1414:A:N1	54:S2:1415:C:C5	2.85	0.45
55:SA:84:GLN:HE22	55:SA:101:GLY:HA2	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SI:82:VAL:HG11	61:SI:202:ILE:HD11	1.97	0.45
62:SJ:109:ARG:HH11	62:SJ:109:ARG:HB3	1.81	0.45
63:SL:82:MET:CB	63:SL:85:THR:HG23	2.46	0.45
64:SN:57:SER:HA	71:Sb:54:VAL:HG13	1.99	0.45
73:SD:17:PHE:CD1	73:SD:17:PHE:C	2.94	0.45
79:SR:109:LEU:O	79:SR:110:ASP:HB3	2.17	0.45
2:D:203:ASN:OD1	2:D:203:ASN:N	2.44	0.45
8:N:188:ARG:NH2	32:5:298:G:O2'	2.50	0.45
9:O:116:LYS:CE	12:S:169:THR:HG21	2.43	0.45
18:Z:41:ALA:HB2	18:Z:77:TYR:CE1	2.49	0.45
23:e:37:LYS:HB3	23:e:39:ARG:HH22	1.81	0.45
24:f:60:PRO:HD2	32:5:4945:G:O6	2.16	0.45
24:f:88:PHE:CE1	24:f:92:LEU:HD11	2.51	0.45
32:5:21:G:C4	34:8:36:G:N2	2.85	0.45
32:5:94:A:C2'	32:5:95:G:C4'	2.93	0.45
32:5:123:C:C4	32:5:124:C:C5	3.04	0.45
32:5:209:U:C6	32:5:211:G:C8	3.03	0.45
32:5:211:G:N1	32:5:212:A:N7	2.64	0.45
32:5:219:G:C8	32:5:220:C:C5	3.04	0.45
32:5:424:U:N3	32:5:425:U:H5	2.15	0.45
32:5:453:G:H2'	32:5:453:G:N3	2.31	0.45
32:5:746:A:N1	32:5:916:C:OP2	2.50	0.45
32:5:975:C:C2	36:C:323:ARG:CZ	3.00	0.45
32:5:1065:G:H2'	32:5:1066:G:C8	2.52	0.45
32:5:1075:G:C6	32:5:1076:C:N4	2.84	0.45
32:5:1171:G:C2	32:5:1172:C:N1	2.84	0.45
32:5:1279:A:H3'	32:5:1280:C:H5	1.75	0.45
32:5:1371:A:H61	34:8:28:C:C2'	2.29	0.45
32:5:1449:C:C2	32:5:1450:C:C6	3.04	0.45
32:5:1479:G:C6	32:5:1487:G:N3	2.84	0.45
32:5:1507:C:O2	32:5:1507:C:H2'	2.15	0.45
32:5:1552:G:N2	32:5:1574:G:C2	2.84	0.45
32:5:1598:C:C6	32:5:2798:A:C8	3.05	0.45
32:5:1806:G:C6	32:5:1807:C:C4	3.04	0.45
32:5:1899:G:N9	32:5:2278:G:N2	2.64	0.45
32:5:1913:C:H2'	32:5:1914:C:O5'	2.16	0.45
32:5:2074:C:H2'	32:5:2075:G:O4'	2.17	0.45
32:5:2261:G:O2'	32:5:2262:G:O4'	2.34	0.45
32:5:2371:U:C2'	32:5:2372:U:H5'	2.47	0.45
32:5:2371:U:H2'	32:5:2372:U:H5'	1.99	0.45
32:5:2505:C:O4'	32:5:2505:C:O2	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2585:C:N3	32:5:2588:C:N4	2.59	0.45
32:5:2609:G:C2	32:5:2731:C:O2	2.70	0.45
32:5:2736:G:C6	32:5:2737:C:C4	3.03	0.45
32:5:2811:G:H22	32:5:2813:A:C3'	2.28	0.45
32:5:2824:C:H3'	32:5:2825:A:H8	1.81	0.45
32:5:2830:G:N1	32:5:2831:G:N7	2.65	0.45
32:5:3590:G:C2	32:5:3591:C:C2	3.05	0.45
32:5:3611:A:H2'	32:5:3612:C:O4'	2.16	0.45
32:5:3695:U:C4	32:5:3696:C:H5	2.30	0.45
32:5:3841:C:O2	32:5:3841:C:H2'	2.17	0.45
32:5:4169:G:H4'	32:5:4171:C:C2	2.51	0.45
32:5:4251:A:O2'	32:5:4252:C:C5'	2.65	0.45
32:5:4337:C:O2'	32:5:4338:G:H5'	2.17	0.45
32:5:4425:G:C2	32:5:4426:C:C1'	2.96	0.45
32:5:4670:C:H5'	32:5:4670:C:C6	2.52	0.45
32:5:4687:A:C6	32:5:4688:C:C5	3.05	0.45
32:5:4714:C:O2	32:5:4714:C:C2'	2.64	0.45
32:5:5018:C:H6	32:5:5018:C:H5''	1.80	0.45
35:B:217:ILE:HD11	35:B:333:LEU:HD11	1.97	0.45
35:B:235:TRP:HD1	35:B:267:ALA:CA	2.29	0.45
41:W:8:PHE:CE1	41:W:51:TRP:CZ3	3.04	0.45
47:q:127:ASN:HB3	47:q:153:GLU:CG	2.46	0.45
48:z:16:SER:O	48:z:20:ALA:HB2	2.16	0.45
48:z:406:VAL:CG1	48:z:417:VAL:HG22	2.46	0.45
50:3:38:C:C4'	54:S2:1058:A:C8	2.89	0.45
54:S2:10:G:N1	54:S2:11:A:C5	2.85	0.45
54:S2:70:G:C5	54:S2:71:G:N7	2.85	0.45
54:S2:120:U:C2	54:S2:121:U:C5	3.01	0.45
54:S2:122:G:H2'	54:S2:123:G:C1'	2.47	0.45
54:S2:428:U:C5	62:SJ:7:TRP:CZ2	3.04	0.45
54:S2:468:A:H3'	54:S2:469:A:H8	1.81	0.45
54:S2:517:C:N4	54:S2:518:G:C4	2.85	0.45
54:S2:520:A:O2'	54:S2:825:A:H1'	2.16	0.45
54:S2:532:C:OP1	54:S2:532:C:C4'	2.63	0.45
54:S2:578:C:N4	54:S2:579:C:C5	2.85	0.45
54:S2:588:G:O4'	54:S2:589:G:N2	2.41	0.45
54:S2:646:G:H5'	54:S2:647:U:OP2	2.17	0.45
54:S2:797:C:C2	54:S2:798:A:O2'	2.55	0.45
54:S2:815:U:C4	54:S2:816:A:N7	2.85	0.45
54:S2:859:G:N1	54:S2:860:G:C5	2.85	0.45
54:S2:993:G:N2	54:S2:994:C:N1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1186:U:O2	54:S2:1186:U:H2'	2.15	0.45
54:S2:1219:C:C5	54:S2:1220:A:N6	2.85	0.45
54:S2:1280:G:N2	54:S2:1281:G:H1'	2.30	0.45
54:S2:1293:A:C2	86:Sf:151:ASN:N	2.75	0.45
54:S2:1397:U:C5	78:SQ:11:GLN:O	2.69	0.45
54:S2:1645:C:O2'	54:S2:1646:C:P	2.74	0.45
55:SA:30:LEU:HD21	55:SA:35:GLU:HG2	1.99	0.45
59:SG:145:PHE:N	59:SG:145:PHE:CD1	2.84	0.45
60:SH:114:GLN:O	60:SH:115:LYS:C	2.59	0.45
68:SX:46:HIS:N	68:SX:46:HIS:CD2	2.84	0.45
73:SD:23:GLU:O	73:SD:24:PHE:C	2.59	0.45
87:Sg:21:ILE:HG22	87:Sg:31:ILE:HD11	1.97	0.45
1:A:192:LYS:C	1:A:193:ARG:HD3	2.41	0.45
1:A:215:ASN:ND2	32:5:4545:G:N7	2.65	0.45
2:D:287:PHE:C	2:D:287:PHE:HD1	2.23	0.45
4:H:172:ILE:HD11	30:m:102:ARG:HH22	1.81	0.45
8:N:104:GLU:HA	8:N:160:GLU:HG2	1.98	0.45
11:R:88:ARG:HH11	11:R:88:ARG:HG2	1.80	0.45
23:e:20:PHE:HZ	23:e:60:TYR:OH	1.98	0.45
32:5:98:A:N9	32:5:292:G:O6	2.47	0.45
32:5:132:G:N2	32:5:133:C:H1'	2.31	0.45
32:5:288:G:H2'	32:5:289:C:C6	2.52	0.45
32:5:344:A:C6	32:5:345:C:C5	3.04	0.45
32:5:345:C:N3	32:5:346:G:N7	2.65	0.45
32:5:504:G:N1	32:5:505:G:C6	2.85	0.45
32:5:707:C:C2	32:5:708:G:C8	3.04	0.45
32:5:721:G:C2	32:5:948:C:C2	3.05	0.45
32:5:731:G:H5''	32:5:732:A:OP2	2.16	0.45
32:5:1277:G:C2	32:5:1278:C:N1	2.84	0.45
32:5:1282:G:N7	37:E:124:HIS:ND1	2.64	0.45
32:5:1393:G:C2'	32:5:1394:G:H5'	2.45	0.45
32:5:1442:C:C4	32:5:1443:A:N7	2.84	0.45
32:5:1513:U:H2'	32:5:1514:U:O4'	2.16	0.45
32:5:1521:C:C5	32:5:1522:G:C8	3.04	0.45
32:5:1554:A:C6	32:5:1555:G:C4	3.04	0.45
32:5:1555:G:C6	32:5:1556:C:C6	3.04	0.45
32:5:1594:C:C4	32:5:1595:G:N7	2.85	0.45
32:5:1687:U:H2'	32:5:1688:G:O5'	2.17	0.45
32:5:1726:U:O2	32:5:1726:U:H2'	2.16	0.45
32:5:1776:A:C2	32:5:1777:C:C2	3.05	0.45
32:5:2014:C:C4	32:5:2015:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2294:G:C6	32:5:2295:C:N4	2.85	0.45
32:5:2399:G:C2	32:5:2400:G:C4	3.05	0.45
32:5:2561:C:C4	32:5:2562:G:N7	2.85	0.45
32:5:2647:A:H2'	32:5:2648:G:H5'	1.99	0.45
32:5:2669:C:O2'	32:5:2670:C:OP2	2.31	0.45
32:5:2678:A:C2	32:5:2679:G:N9	2.85	0.45
32:5:2688:G:C6	32:5:2689:C:C4	3.04	0.45
32:5:2816:G:C4	32:5:2817:C:C6	3.04	0.45
32:5:2823:G:N2	32:5:2824:C:C2	2.84	0.45
32:5:3599:A:H2'	32:5:3600:G:C8	2.52	0.45
32:5:3607:U:H2'	32:5:3608:A:H8	1.82	0.45
32:5:3754:G:H21	32:5:3755:G:H1'	1.82	0.45
32:5:3802:U:O2	32:5:4498:U:H4'	2.17	0.45
32:5:3878:C:N4	32:5:4518:A:N3	2.64	0.45
32:5:4158:C:O2	32:5:4158:C:H2'	2.16	0.45
32:5:4219:A:O2'	32:5:4220:A:O5'	2.34	0.45
32:5:4270:C:O2	32:5:4270:C:C2'	2.64	0.45
32:5:4549:G:N3	32:5:4550:G:C8	2.82	0.45
32:5:4734:A:C6	32:5:4735:G:C6	3.04	0.45
32:5:4749:C:C5	32:5:4750:G:C2	3.04	0.45
32:5:4860:G:C2	32:5:4861:G:C8	3.05	0.45
32:5:4935:C:H3'	37:E:179:ARG:NH2	2.31	0.45
32:5:4997:G:C5	32:5:4998:G:N7	2.85	0.45
32:5:5003:U:N3	32:5:5045:G:N2	2.63	0.45
32:5:5063:G:N3	32:5:5064:G:C8	2.85	0.45
34:8:9:A:C2	34:8:10:G:N9	2.84	0.45
34:8:80:A:C3'	34:8:81:C:H4'	2.46	0.45
34:8:81:C:H3'	34:8:82:A:C4'	2.45	0.45
37:E:90:LYS:N	37:E:91:PRO:CD	2.79	0.45
38:F:94:VAL:HG22	38:F:144:TRP:HB3	1.99	0.45
38:F:161:TYR:CD1	38:F:170:ALA:HA	2.50	0.45
38:F:245:LEU:HD22	38:F:249:MET:SD	2.56	0.45
39:I:101:LYS:CE	39:I:121:LYS:N	2.80	0.45
45:r:39:ARG:HB3	45:r:40:TYR:CD1	2.52	0.45
46:K:123:ARG:HB2	46:K:129:ILE:CD1	2.47	0.45
48:z:74:MET:O	48:z:78:ALA:N	2.49	0.45
48:z:338:ASN:O	48:z:342:MET:CG	2.49	0.45
51:4:18:G:H2'	51:4:19:C:C6	2.52	0.45
52:9:29:ILE:HG13	52:9:33:ARG:NH2	2.32	0.45
54:S2:61:A:H2	54:S2:334:C:H2'	1.81	0.45
54:S2:99:A:C2	54:S2:100:U:C1'	3.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:153:G:C6	54:S2:154:U:C5	3.05	0.45
54:S2:310:C:C2	54:S2:311:C:C5	3.05	0.45
54:S2:337:C:O2	54:S2:337:C:H2'	2.16	0.45
54:S2:411:G:C2	54:S2:430:C:C2	3.04	0.45
54:S2:458:A:N3	54:S2:458:A:H2'	2.31	0.45
54:S2:555:A:N1	54:S2:557:U:C4	2.84	0.45
54:S2:598:G:N2	54:S2:639:C:N3	2.63	0.45
54:S2:976:G:H2'	54:S2:977:C:O4'	2.16	0.45
54:S2:1006:C:N3	54:S2:1007:C:C5	2.85	0.45
54:S2:1063:C:O2	54:S2:1063:C:H2'	1.99	0.45
54:S2:1076:G:C2	54:S2:1077:A:C8	3.05	0.45
54:S2:1233:G:C2	54:S2:1234:C:C2	3.05	0.45
54:S2:1276:A:N6	54:S2:1321:G:O2'	2.49	0.45
54:S2:1286:G:C2	76:SM:33:ARG:O	2.70	0.45
54:S2:1309:C:C3'	86:Sf:143:LYS:HE2	2.46	0.45
54:S2:1521:C:OP2	80:SS:136:THR:OG1	2.33	0.45
54:S2:1546:G:O2'	54:S2:1547:C:C5'	2.64	0.45
54:S2:1603:G:N1	81:ST:48:TYR:OH	2.49	0.45
54:S2:1673:U:C4	54:S2:1674:G:C4	3.05	0.45
54:S2:1729:U:O2	54:S2:1729:U:C2'	2.64	0.45
56:SB:43:ASN:OD1	56:SB:43:ASN:C	2.60	0.45
56:SB:139:CYS:HB2	56:SB:172:MET:HE1	1.98	0.45
61:SI:80:ASP:OD1	61:SI:80:ASP:C	2.59	0.45
63:SL:40:ILE:HG21	63:SL:62:PHE:HZ	1.82	0.45
68:SX:134:TYR:CD1	72:Se:13:ARG:NH2	2.79	0.45
73:SD:16:ILE:HD13	85:Sd:22:ARG:NH2	2.32	0.45
77:SP:82:ASP:OD1	77:SP:82:ASP:C	2.60	0.45
78:SQ:113:ILE:HG22	78:SQ:113:ILE:O	2.16	0.45
79:SR:66:VAL:CG2	79:SR:69:ILE:HD12	2.46	0.45
79:SR:70:SER:C	79:SR:71:ILE:HG13	2.42	0.45
81:ST:79:TYR:N	81:ST:79:TYR:CD1	2.84	0.45
83:SZ:66:LYS:O	83:SZ:110:THR:HA	2.17	0.45
1:A:67:TYR:CD1	32:5:4086:G:C5	3.04	0.45
1:A:174:ARG:HH22	32:5:3684:G:P	2.39	0.45
1:A:202:VAL:HG12	1:A:217:GLN:HG2	1.98	0.45
2:D:94:ASN:HD21	2:D:96:ALA:HB3	1.82	0.45
8:N:150:TRP:CD1	32:5:332:C:H4'	2.52	0.45
10:Q:154:LYS:O	10:Q:155:ALA:HB2	2.17	0.45
12:S:81:TRP:CZ2	12:S:94:TYR:CE1	3.04	0.45
13:T:34:TYR:CD1	13:T:98:HIS:CE1	3.05	0.45
13:T:80:VAL:HG21	32:5:4305:G:O6	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:e:6:PRO:CA	23:e:74:PHE:HE1	2.29	0.45
32:5:25:A:H2'	32:5:26:C:O5'	2.17	0.45
32:5:289:C:N4	32:5:290:U:C4	2.85	0.45
32:5:290:U:H2'	32:5:291:U:H6	1.81	0.45
32:5:447:C:C4	32:5:448:G:N7	2.85	0.45
32:5:990:C:N3	32:5:991:C:C6	2.84	0.45
32:5:1090:G:C4	32:5:1091:C:C6	3.04	0.45
32:5:1217:G:N2	32:5:1219:G:N7	2.65	0.45
32:5:1320:U:N3	32:5:1321:G:N7	2.65	0.45
32:5:1427:A:C8	32:5:1428:U:C1'	2.99	0.45
32:5:1665:C:C2'	32:5:1666:C:O5'	2.64	0.45
32:5:1822:U:O2	32:5:1822:U:O4'	2.35	0.45
32:5:1831:G:C2	32:5:1832:C:C2	3.05	0.45
32:5:1936:C:C4	33:7:84:U:H5	2.33	0.45
32:5:2082:G:O2'	32:5:2083:C:H5'	2.16	0.45
32:5:2087:C:C6	32:5:2087:C:C3'	3.00	0.45
32:5:2347:A:H2'	32:5:2347:A:P	2.57	0.45
32:5:2368:A:H2'	32:5:2369:U:OP1	2.17	0.45
32:5:2497:C:C4	32:5:2498:C:H5	2.35	0.45
32:5:2602:G:C2	32:5:2603:C:C2	3.04	0.45
32:5:2698:G:C2	32:5:2699:C:C2	3.05	0.45
32:5:2703:G:C5	32:5:2704:C:C5	3.05	0.45
32:5:2773:G:C6	32:5:2774:C:C4	3.05	0.45
32:5:3640:U:H3'	32:5:3646:A:N6	2.32	0.45
32:5:3724:A:C4	32:5:3725:G:C8	3.05	0.45
32:5:3733:A:C5	32:5:3734:U:C5	3.05	0.45
32:5:3759:A:H2	54:S2:1709:G:O4'	1.79	0.45
32:5:3869:C:C2	32:5:3870:C:C6	3.04	0.45
32:5:3871:A:H2'	32:5:3872:A:O5'	2.17	0.45
32:5:4090:G:C2	32:5:4091:G:H1'	2.52	0.45
32:5:4091:G:N1	32:5:4159:C:N4	2.65	0.45
32:5:4140:C:C5	32:5:4141:G:C8	3.04	0.45
32:5:4298:A:C2	32:5:4299:U:C6	3.04	0.45
32:5:4528:G:N3	32:5:4529:G:C8	2.85	0.45
32:5:4547:C:C2	32:5:4549:G:C8	3.05	0.45
32:5:4594:U:C2	32:5:4595:G:C8	3.05	0.45
32:5:4620:U:N3	32:5:4621:C:C6	2.84	0.45
32:5:4725:C:C2	32:5:4726:G:C8	2.98	0.45
32:5:4738:C:H2'	32:5:4739:C:O4'	2.16	0.45
32:5:4879:C:H2'	32:5:4880:C:H6	1.81	0.45
32:5:5001:U:H2'	32:5:5002:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:5006:U:H1'	32:5:5042:A:C8	2.51	0.45
32:5:5007:A:C5	32:5:5040:U:O4	2.69	0.45
33:7:110:G:C5	33:7:111:C:C5	3.05	0.45
34:8:118:C:O2	34:8:119:C:H6	1.97	0.45
34:8:137:A:C2	34:8:138:C:C4	3.04	0.45
35:B:100:ARG:HH21	35:B:101:THR:C	2.23	0.45
35:B:106:PHE:N	35:B:106:PHE:CD1	2.84	0.45
35:B:138:GLN:O	35:B:139:ASP:HB3	2.17	0.45
35:B:256:ALA:C	35:B:258:HIS:N	2.74	0.45
35:B:257:TRP:O	35:B:257:TRP:CD1	2.70	0.45
36:C:138:MET:O	36:C:141:GLY:N	2.49	0.45
38:F:98:ARG:HG3	38:F:141:TYR:HD2	1.82	0.45
39:I:171:TRP:CB	39:I:181:PHE:CD2	2.99	0.45
46:K:86:LYS:HA	46:K:104:ILE:HG12	1.97	0.45
47:q:69:LEU:HB3	47:q:71:ASN:HB2	1.98	0.45
47:q:205:ASP:O	47:q:206:ILE:HB	2.17	0.45
48:z:126:GLN:NE2	48:z:157:ILE:HG12	2.29	0.45
48:z:133:CYS:SG	48:z:184:PHE:CD1	3.10	0.45
48:z:420:LEU:HD23	48:z:420:LEU:C	2.42	0.45
51:4:6:G:C2	51:4:7:C:C2	3.04	0.45
54:S2:46:A:N1	54:S2:99:A:C8	2.85	0.45
54:S2:81:U:O4	54:S2:82:G:C4	2.70	0.45
54:S2:583:C:N4	54:S2:584:G:C5	2.85	0.45
54:S2:635:G:C2	54:S2:636:C:N1	2.85	0.45
54:S2:839:C:H2'	54:S2:841:G:O4'	2.17	0.45
54:S2:848:U:N3	54:S2:849:A:N7	2.64	0.45
54:S2:862:A:H2	54:S2:863:U:H1'	1.82	0.45
54:S2:957:A:C6	54:S2:967:C:O2	2.68	0.45
54:S2:963:A:N3	54:S2:964:A:N7	2.65	0.45
54:S2:979:C:O2	54:S2:979:C:H2'	2.17	0.45
54:S2:1019:C:OP2	64:SN:70:LYS:HD3	2.17	0.45
54:S2:1300:U:O2	54:S2:1300:U:O4'	2.33	0.45
54:S2:1417:C:O2	54:S2:1419:C:C6	2.68	0.45
54:S2:1497:G:O6	75:SK:25:LYS:NZ	2.50	0.45
54:S2:1537:A:O2'	54:S2:1604:G:C5'	2.65	0.45
54:S2:1541:G:N2	54:S2:1542:C:C4	2.84	0.45
54:S2:1610:G:N3	54:S2:1611:G:C8	2.85	0.45
54:S2:1788:A:H2'	54:S2:1789:G:O4'	2.17	0.45
56:SB:146:ARG:O	56:SB:148:ASN:N	2.49	0.45
60:SH:181:THR:OG1	60:SH:182:GLY:N	2.50	0.45
69:SY:60:PHE:HA	69:SY:70:THR:O	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SK:22:VAL:HG12	75:SK:68:TYR:CE2	2.52	0.45
77:SP:9:LYS:O	77:SP:10:ARG:HG3	2.16	0.45
78:SQ:53:GLU:OE2	78:SQ:117:ARG:NH2	2.50	0.45
79:SR:100:PRO:HD2	79:SR:119:VAL:HG12	1.87	0.45
80:SS:26:ILE:CD1	80:SS:54:LYS:C	2.90	0.45
83:SZ:50:PHE:CE2	83:SZ:79:ILE:CD1	2.97	0.45
83:SZ:98:LYS:HB2	83:SZ:113:THR:HG23	1.97	0.45
85:Sd:24:CYS:SG	85:Sd:39:CYS:SG	3.14	0.45
1:A:5:ILE:HG23	1:A:8:GLN:HG2	1.99	0.45
2:D:202:GLN:HA	2:D:205:ALA:HB3	1.98	0.45
3:G:53:ARG:NH2	3:G:54:PHE:CE2	2.83	0.45
8:N:127:TYR:CD1	8:N:127:TYR:N	2.85	0.45
9:O:65:ASN:HD21	9:O:67:SER:N	2.14	0.45
12:S:158:VAL:CG1	32:5:2055:G:O6	2.64	0.45
19:a:55:LYS:HZ3	32:5:92:C:H42	1.65	0.45
21:c:82:GLY:HA3	21:c:89:TYR:O	2.16	0.45
23:e:77:PHE:HE1	45:r:20:ARG:HD2	1.81	0.45
24:f:4:ARG:O	24:f:6:TRP:CD1	2.70	0.45
29:l:43:HIS:O	29:l:44:TRP:C	2.57	0.45
32:5:169:G:N2	32:5:170:C:C2	2.85	0.45
32:5:258:G:C2	32:5:259:C:C6	3.05	0.45
32:5:258:G:N3	32:5:259:C:C6	2.85	0.45
32:5:342:G:C4	32:5:343:C:C5	3.05	0.45
32:5:391:U:H2'	32:5:392:U:O4'	2.16	0.45
32:5:441:G:N2	32:5:442:G:C4	2.84	0.45
32:5:471:A:N6	32:5:472:C:C4	2.85	0.45
32:5:647:G:H2'	32:5:647:G:N3	2.31	0.45
32:5:957:G:P	32:5:1284:G:N3	2.90	0.45
32:5:1085:C:C2	32:5:1213:G:C2	3.05	0.45
32:5:1236:C:N3	32:5:1238:A:N6	2.65	0.45
32:5:1240:G:C2	32:5:1241:C:C2	3.04	0.45
32:5:1290:G:N2	32:5:1291:G:N7	2.65	0.45
32:5:1358:G:N1	32:5:1379:C:C2	2.85	0.45
32:5:1367:C:N3	32:5:1370:G:H3'	2.32	0.45
32:5:1411:C:N3	32:5:1412:G:N7	2.65	0.45
32:5:1619:G:C5	32:5:1620:U:C4	3.05	0.45
32:5:1662:C:H2'	32:5:1663:C:H6	1.82	0.45
32:5:1690:C:C4	32:5:1691:G:C8	3.04	0.45
32:5:1757:U:H2'	32:5:1758:G:O4'	2.17	0.45
32:5:1944:A:C6	32:5:1945:G:C5	3.05	0.45
32:5:1971:C:N3	32:5:1972:G:N7	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2021:G:C2	32:5:2022:C:C2	3.05	0.45
32:5:2301:G:C4	32:5:2302:C:C6	3.05	0.45
32:5:2600:A:H1'	32:5:2601:A:C6	2.52	0.45
32:5:2724:G:N2	32:5:2726:G:N9	2.64	0.45
32:5:3657:U:C2	32:5:3658:C:C5	3.04	0.45
32:5:3679:U:O2	32:5:3679:U:O4'	2.33	0.45
32:5:4131:G:C2	32:5:4132:C:C2	3.05	0.45
32:5:4544:A:N7	32:5:4545:G:H1'	2.31	0.45
32:5:4616:A:H2'	32:5:4617:G:O4'	2.17	0.45
32:5:4618:G:N1	32:5:4619:U:C5	2.85	0.45
32:5:4620:U:C2	32:5:4621:C:C6	3.05	0.45
32:5:4883:C:HO2'	32:5:4884:G:P	2.33	0.45
32:5:4922:C:C2	32:5:4923:C:C6	3.05	0.45
32:5:4939:C:C4	37:E:215:LYS:CD	3.00	0.45
32:5:4999:G:C2	32:5:5000:G:N9	2.82	0.45
33:7:114:U:C2'	33:7:115:A:H5''	2.46	0.45
34:8:99:U:C2	34:8:100:U:C6	3.04	0.45
37:E:182:LEU:O	37:E:183:ARG:O	2.34	0.45
47:q:108:PRO:HB2	47:q:184:SER:HB3	1.96	0.45
48:z:18:SER:O	48:z:19:ASN:HB3	2.17	0.45
49:2:76:LEU:O	49:2:80:LEU:HD12	2.17	0.45
50:3:38:C:H2'	50:3:39:G:O5'	2.16	0.45
51:4:60:U:C2	51:4:61:C:C5	3.05	0.45
51:4:284:G:C4	51:4:285:C:C5	3.05	0.45
51:4:163:A:H3'	51:4:164:G:C8	2.52	0.45
51:4:187:G:H8	51:4:187:G:O5'	1.99	0.45
54:S2:20:G:C5'	54:S2:620:G:N7	2.80	0.45
54:S2:49:C:O2	54:S2:478:G:C2	2.70	0.45
54:S2:66:G:C5	54:S2:68:A:N7	2.84	0.45
54:S2:140:C:O2	54:S2:141:A:C8	2.70	0.45
54:S2:185:G:C6	54:S2:186:C:C4	3.05	0.45
54:S2:413:G:C5	54:S2:425:G:C2	3.05	0.45
54:S2:501:C:O2	54:S2:501:C:H2'	2.17	0.45
54:S2:646:G:N3	54:S2:646:G:H2'	2.31	0.45
54:S2:732:U:C2	54:S2:733:C:C6	3.05	0.45
54:S2:849:A:H2'	54:S2:850:C:C6	2.52	0.45
54:S2:903:A:N7	54:S2:904:A:C8	2.85	0.45
54:S2:941:C:H2'	54:S2:942:G:H8	1.82	0.45
54:S2:998:A:C8	54:S2:999:G:C4'	3.00	0.45
54:S2:1335:G:C2	54:S2:1336:C:C2	3.04	0.45
54:S2:1367:U:H4'	54:S2:1465:A:C2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1410:C:N3	54:S2:1411:G:N7	2.64	0.45
54:S2:1478:U:C2	54:S2:1479:G:N7	2.85	0.45
54:S2:1500:G:C6	54:S2:1501:C:N3	2.85	0.45
54:S2:1562:C:O2	54:S2:1562:C:H2'	2.16	0.45
54:S2:1588:A:O2'	54:S2:1589:A:C8	2.68	0.45
55:SA:24:HIS:CD2	55:SA:25:LEU:HD12	2.52	0.45
56:SB:27:LYS:CB	56:SB:51:ARG:HH12	2.30	0.45
61:SI:8:TRP:NE1	61:SI:9:HIS:HB3	2.31	0.45
67:SW:106:THR:O	67:SW:108:ALA:N	2.49	0.45
74:SF:114:ASN:O	74:SF:181:ALA:HA	2.16	0.45
87:Sg:51:ASN:ND2	87:Sg:53:GLY:O	2.50	0.45
87:Sg:125:ARG:HD3	87:Sg:150:TRP:CD2	2.51	0.45
88:S1:48:CYS:C	88:S1:49:LEU:CG	2.90	0.45
1:A:209:HIS:NE2	1:A:235:VAL:HG11	2.32	0.45
3:G:62:ARG:HH22	32:5:4085:A:N6	2.15	0.45
4:H:41:ILE:CD1	4:H:69:THR:HG21	2.45	0.45
6:L:13:HIS:CE1	32:5:85:G:C5	3.05	0.45
7:M:107:PHE:CE2	7:M:111:LYS:CE	2.99	0.45
9:O:109:PRO:HG3	32:5:4911:A:H62	1.82	0.45
11:R:81:ARG:CG	11:R:88:ARG:NE	2.79	0.45
14:U:85:TYR:CE1	32:5:2632:U:C6	3.05	0.45
21:c:22:MET:SD	21:c:27:TYR:CE2	3.10	0.45
31:o:18:HIS:ND1	32:5:4318:C:O2'	2.45	0.45
31:o:40:ARG:NH1	32:5:92:C:H41	2.15	0.45
32:5:122:U:H2'	32:5:123:C:O4'	2.17	0.45
32:5:194:C:N4	32:5:195:C:C5	2.85	0.45
32:5:254:G:C2	32:5:255:C:C2	3.05	0.45
32:5:258:G:C2	32:5:259:C:C2	3.05	0.45
32:5:301:G:C4	32:5:302:C:C5	3.04	0.45
32:5:1211:G:N3	32:5:1212:G:C8	2.84	0.45
32:5:1214:C:H4'	32:5:1215:C:H4'	1.99	0.45
32:5:1258:G:N3	32:5:1259:G:C8	2.85	0.45
32:5:1507:C:C4	32:5:1508:A:N7	2.84	0.45
32:5:1568:C:H2'	32:5:1569:U:C6	2.52	0.45
32:5:1643:A:C6	32:5:1644:C:C4	3.04	0.45
32:5:1770:A:C4	32:5:1771:U:C6	3.05	0.45
32:5:1910:G:C4	32:5:1911:C:C5	3.05	0.45
32:5:1920:C:H3'	32:5:1921:C:H5''	1.99	0.45
32:5:1967:A:C2	32:5:1968:G:C5	3.04	0.45
32:5:1967:A:N1	32:5:1968:G:N7	2.64	0.45
32:5:2060:G:C5	32:5:2061:U:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2100:A:C8	32:5:2101:C:C6	3.04	0.45
32:5:2307:A:C2'	32:5:2308:A:O5'	2.65	0.45
32:5:2368:A:C2	32:5:2788:U:C5	3.05	0.45
32:5:2503:G:H22	32:5:4084:G:H5'	1.75	0.45
32:5:2557:G:N1	32:5:2558:C:C2	2.85	0.45
32:5:2576:G:N1	32:5:2577:C:C6	2.85	0.45
32:5:2599:G:C8	32:5:2600:A:C8	3.04	0.45
32:5:2773:G:N3	32:5:2774:C:C6	2.85	0.45
32:5:2856:C:N3	32:5:2857:A:C5	2.82	0.45
32:5:3693:U:C2	32:5:3694:U:C5	2.98	0.45
32:5:3710:G:H1	32:5:3711:A:N6	2.14	0.45
32:5:3738:G:N7	32:5:3739:C:C5	2.85	0.45
32:5:3740:G:H2'	32:5:3740:G:N3	2.30	0.45
32:5:3759:A:N6	54:S2:1709:G:H4'	2.22	0.45
32:5:3846:C:C2	32:5:3847:C:C5	3.00	0.45
32:5:3868:G:C5	32:5:4562:C:H1'	2.51	0.45
32:5:3868:G:N1	32:5:4562:C:H1'	2.31	0.45
32:5:4092:G:N1	32:5:4093:G:C4	2.85	0.45
32:5:4659:G:C4	32:5:4660:G:C8	3.04	0.45
32:5:4691:A:C2	32:5:4692:A:H1'	2.52	0.45
32:5:4744:A:C4	32:5:4745:G:N7	2.85	0.45
32:5:4936:G:C2	32:5:4938:A:C8	3.04	0.45
32:5:5031:G:C6	32:5:5032:C:C4	3.05	0.45
33:7:116:G:C2	33:7:117:G:C8	3.05	0.45
34:8:43:A:C2	34:8:44:A:N9	2.84	0.45
34:8:93:C:O3'	34:8:94:G:H8	2.00	0.45
34:8:101:C:N3	34:8:102:G:C8	2.85	0.45
36:C:209:ILE:HD13	36:C:221:PHE:CE2	2.52	0.45
39:I:9:TYR:N	39:I:9:TYR:HD1	2.14	0.45
39:I:100:ASN:HD22	39:I:100:ASN:C	2.24	0.45
39:I:146:GLU:N	39:I:146:GLU:OE2	2.50	0.45
47:q:14:PHE:CD1	47:q:14:PHE:N	2.83	0.45
48:z:109:LEU:CA	48:z:197:GLN:NE2	2.73	0.45
48:z:133:CYS:HB3	48:z:179:PHE:CD1	2.51	0.45
48:z:140:PHE:CE1	48:z:194:ARG:CZ	2.99	0.45
48:z:410:SER:CB	51:4:193:G:H22	2.05	0.45
48:z:412:VAL:O	48:z:412:VAL:HG13	2.17	0.45
51:4:130:A:H2'	51:4:131:A:H8	1.81	0.45
52:9:107:TYR:CZ	52:9:111:MET:HG3	2.51	0.45
54:S2:5:U:O2'	54:S2:602:G:H4'	2.16	0.45
54:S2:45:A:C2	54:S2:481:C:C1'	2.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:50:A:OP2	54:S2:472:C:N4	2.44	0.45
54:S2:71:G:O2'	54:S2:72:C:C2	2.70	0.45
54:S2:113:G:N3	54:S2:293:C:C4	2.85	0.45
54:S2:118:C:N4	54:S2:119:U:C2	2.84	0.45
54:S2:119:U:O2	54:S2:119:U:H2'	2.15	0.45
54:S2:297:A:C6	54:S2:298:G:N7	2.84	0.45
54:S2:298:G:N1	54:S2:299:A:N7	2.65	0.45
54:S2:457:C:C5	54:S2:458:A:N7	2.85	0.45
54:S2:478:G:H2'	54:S2:479:C:C6	2.52	0.45
54:S2:616:A:N6	54:S2:617:G:N3	2.64	0.45
54:S2:690:G:C2	54:S2:691:G:C8	3.05	0.45
54:S2:831:G:N2	54:S2:844:U:N3	2.65	0.45
54:S2:1037:G:H4'	54:S2:1845:A:H4'	1.99	0.45
54:S2:1044:G:N2	54:S2:1070:A:OP2	2.42	0.45
54:S2:1093:A:C6	54:S2:1094:C:C4	3.04	0.45
54:S2:1250:A:H1'	54:S2:1339:U:H4'	1.99	0.45
54:S2:1302:G:C6	86:Sf:140:TYR:CD1	3.04	0.45
54:S2:1311:C:H2'	54:S2:1312:G:O5'	2.17	0.45
54:S2:1341:C:N4	54:S2:1484:A:N6	2.65	0.45
54:S2:1358:U:C4	54:S2:1359:U:C5	3.05	0.45
54:S2:1379:A:OP2	54:S2:1379:A:C8	2.70	0.45
54:S2:1446:A:H5'	82:SU:57:PRO:HA	1.99	0.45
54:S2:1500:G:C4	54:S2:1501:C:C5	3.05	0.45
54:S2:1537:A:N3	54:S2:1537:A:H2'	2.32	0.45
54:S2:1551:U:C1'	54:S2:1558:C:O2	2.64	0.45
54:S2:1698:C:O2	54:S2:1698:C:O4'	2.35	0.45
54:S2:1714:U:H2'	54:S2:1715:A:C8	2.52	0.45
54:S2:1796:G:H2'	54:S2:1797:U:C6	2.52	0.45
56:SB:66:VAL:HG22	56:SB:87:ILE:HG22	1.97	0.45
61:SI:88:ASN:OD1	61:SI:205:ARG:NH1	2.49	0.45
64:SN:52:VAL:O	64:SN:53:ILE:C	2.59	0.45
74:SF:39:ILE:HG21	74:SF:113:VAL:HG23	1.98	0.45
75:SK:11:ILE:CD1	75:SK:45:VAL:HG22	2.46	0.45
80:SS:25:LYS:HB3	80:SS:28:PHE:CD1	2.52	0.45
83:SZ:55:TYR:CD2	83:SZ:55:TYR:C	2.95	0.45
86:Sf:133:ALA:CB	86:Sf:139:HIS:HA	2.41	0.45
1:A:186:TYR:HA	1:A:196:TRP:CE3	2.52	0.45
6:L:27:ASN:O	6:L:28:GLN:C	2.60	0.45
6:L:192:PHE:CD2	6:L:192:PHE:C	2.95	0.45
8:N:137:PRO:O	8:N:152:THR:HG22	2.17	0.45
16:X:42:THR:O	32:5:4086:G:N2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:a:111:VAL:C	19:a:112:LEU:HD23	2.41	0.45
20:b:12:GLN:C	20:b:16:TRP:HE1	2.25	0.45
24:f:18:LEU:HD21	32:5:1915:C:C5	2.52	0.45
27:i:15:HIS:ND1	32:5:72:C:O2	2.50	0.45
27:i:70:LEU:HB3	27:i:87:ARG:HD3	1.97	0.45
32:5:2:G:C2	32:5:3:C:C2	3.05	0.45
32:5:25:A:C2'	32:5:26:C:O5'	2.65	0.45
32:5:83:C:O5'	32:5:84:A:H2'	2.16	0.45
32:5:88:A:C6	32:5:97:G:N3	2.76	0.45
32:5:94:A:C2'	32:5:95:G:O4'	2.49	0.45
32:5:154:G:C4	32:5:155:C:C5	3.05	0.45
32:5:163:A:C5	32:5:164:G:C8	3.05	0.45
32:5:289:C:N3	32:5:290:U:C4	2.82	0.45
32:5:468:U:O4	32:5:685:C:N3	2.50	0.45
32:5:674:G:C5	32:5:675:C:C5	3.05	0.45
32:5:1435:G:C2	32:5:1436:C:C2	3.05	0.45
32:5:1509:C:C2	32:5:1510:G:N7	2.85	0.45
32:5:1563:A:N6	54:S2:1028:A:N6	2.58	0.45
32:5:1570:G:H2'	32:5:1571:G:O4'	2.17	0.45
32:5:1614:C:H3'	32:5:1614:C:C6	2.52	0.45
32:5:1629:G:N2	32:5:1631:A:N3	2.65	0.45
32:5:1932:A:H2'	32:5:1933:G:C8	2.51	0.45
32:5:2052:G:C6	32:5:2053:C:C4	3.04	0.45
32:5:2065:G:C2	32:5:2066:C:N1	2.85	0.45
32:5:2428:A:N7	32:5:2789:A:C2	2.84	0.45
32:5:2441:C:H2'	32:5:2442:G:C8	2.52	0.45
32:5:2509:C:N4	32:5:2510:G:O6	2.50	0.45
32:5:2552:G:N2	32:5:2764:A:N7	2.64	0.45
32:5:2576:G:N1	32:5:2577:C:C4	2.85	0.45
32:5:2649:G:N1	32:5:2685:C:C2	2.85	0.45
32:5:2724:G:N1	32:5:2726:G:N7	2.59	0.45
32:5:2746:A:C2'	32:5:2747:U:O5'	2.64	0.45
32:5:2791:C:O2	32:5:2792:C:C6	2.70	0.45
32:5:2851:G:N2	32:5:2856:C:C4	2.85	0.45
32:5:3695:U:O4	32:5:3696:C:C5	2.70	0.45
32:5:3714:G:OP2	32:5:3714:G:C8	2.70	0.45
32:5:4135:G:C4	32:5:4136:G:C8	3.04	0.45
32:5:4147:G:C2	32:5:4148:C:C6	3.05	0.45
32:5:4199:C:O5'	32:5:4199:C:H6	1.96	0.45
32:5:4343:U:C4	32:5:4344:U:C4	3.05	0.45
32:5:4401:G:N2	32:5:4402:C:C2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4506:C:H2'	32:5:4507:A:O4'	2.17	0.45
32:5:4862:G:C2	32:5:4863:G:N9	2.85	0.45
32:5:4890:G:C2	32:5:4930:C:C2	3.05	0.45
32:5:4919:G:C2	32:5:4920:C:C2	3.04	0.45
32:5:4957:C:O2	32:5:4957:C:C2'	2.65	0.45
33:7:22:A:C2	33:7:23:A:N7	2.84	0.45
33:7:22:A:C6	33:7:23:A:N6	2.85	0.45
33:7:27:G:C6	33:7:28:C:C5	3.05	0.45
33:7:71:G:C2	33:7:105:C:C2	3.05	0.45
34:8:10:G:C5	34:8:11:C:H6	2.27	0.45
34:8:101:C:C4	34:8:102:G:N7	2.85	0.45
34:8:106:G:N2	34:8:107:C:N3	2.65	0.45
34:8:143:G:C6	34:8:144:U:C4	3.05	0.45
35:B:88:GLY:O	35:B:163:ILE:N	2.50	0.45
48:z:126:GLN:NE2	48:z:132:THR:OG1	2.50	0.45
50:3:25:C:N3	50:3:26:G:C8	2.85	0.45
54:S2:10:G:H8	54:S2:1697:A:O2'	2.00	0.45
54:S2:118:C:N3	54:S2:119:U:H1'	2.32	0.45
54:S2:144:U:OP2	59:SG:139:SER:OG	2.33	0.45
54:S2:144:U:C2	54:S2:145:G:C8	3.05	0.45
54:S2:158:A:H2'	54:S2:159:A:C8	2.52	0.45
54:S2:309:G:C2	54:S2:310:C:C6	3.05	0.45
54:S2:313:A:O5'	59:SG:195:LYS:NZ	2.50	0.45
54:S2:333:G:C2	54:S2:334:C:C2	3.05	0.45
54:S2:404:G:N2	54:S2:405:G:N9	2.65	0.45
54:S2:523:A:OP2	62:SJ:38:ARG:HD3	2.18	0.45
54:S2:575:A:H2'	54:S2:576:A:O5'	2.17	0.45
54:S2:786:G:C8	59:SG:236:SER:O	2.70	0.45
54:S2:1301:A:P	85:Sd:7:TYR:OH	2.75	0.45
54:S2:1316:C:O2	54:S2:1317:C:H6	1.87	0.45
54:S2:1317:C:O2	54:S2:1318:G:H8	1.97	0.45
54:S2:1502:C:C2	54:S2:1503:C:C5	3.05	0.45
54:S2:1709:G:C2	54:S2:1710:C:N1	2.85	0.45
54:S2:1731:A:N1	54:S2:1732:G:C5	2.85	0.45
54:S2:1838:U:H6	54:S2:1838:U:C5'	2.30	0.45
55:SA:103:PHE:CE2	55:SA:104:THR:O	2.70	0.45
55:SA:109:THR:O	55:SA:110:ASN:HB2	2.17	0.45
59:SG:70:HIS:CD2	59:SG:103:ASP:OD2	2.69	0.45
59:SG:76:LEU:HD13	59:SG:92:ARG:HD2	1.99	0.45
60:SH:169:LYS:O	60:SH:171:GLU:N	2.49	0.45
67:SW:113:HIS:C	67:SW:113:HIS:CD2	2.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:SP:17:TYR:OH	77:SP:38:SER:HB3	2.16	0.45
79:SR:79:GLU:CD	79:SR:79:GLU:C	2.85	0.45
79:SR:103:LYS:CG	79:SR:117:LEU:CD1	2.94	0.45
87:Sg:35:SER:OG	87:Sg:36:ARG:N	2.50	0.45
87:Sg:184:LEU:HD13	87:Sg:187:ASN:HD21	1.82	0.45
1:A:15:VAL:HG13	32:5:1539:G:C1'	2.47	0.44
2:D:196:ARG:NH1	2:D:196:ARG:HA	2.32	0.44
2:D:249:GLU:OE1	2:D:249:GLU:C	2.60	0.44
11:R:50:ILE:HD12	11:R:50:ILE:C	2.43	0.44
23:e:35:TRP:CH2	23:e:55:MET:HA	2.52	0.44
32:5:2:G:C6	32:5:3:C:C4	3.04	0.44
32:5:96:U:C4	32:5:97:G:N9	2.85	0.44
32:5:246:G:N1	32:5:247:G:C5	2.85	0.44
32:5:272:U:O2	32:5:272:U:H2'	2.17	0.44
32:5:281:U:H2'	32:5:281:U:O2	2.17	0.44
32:5:473:C:O2	32:5:473:C:H2'	2.16	0.44
32:5:500:G:H5''	32:5:501:C:C6	2.52	0.44
32:5:691:C:H2'	32:5:692:A:C8	2.52	0.44
32:5:935:A:O2'	32:5:937:U:OP2	2.27	0.44
32:5:957:G:H3'	32:5:2077:C:OP1	2.17	0.44
32:5:1069:G:N3	32:5:1070:G:H1'	2.31	0.44
32:5:1273:G:H5'	32:5:2123:C:H4'	1.99	0.44
32:5:1394:G:N2	32:5:1395:U:O2	2.49	0.44
32:5:1453:G:N1	32:5:1454:G:C5	2.85	0.44
32:5:1563:A:C5	54:S2:678:U:H5'	2.52	0.44
32:5:1629:G:C2	32:5:1631:A:C2	3.05	0.44
32:5:1829:G:N2	32:5:1830:G:C4	2.85	0.44
32:5:1927:U:O2	32:5:1928:C:C6	2.70	0.44
32:5:2096:G:H3'	32:5:2096:G:N3	2.31	0.44
32:5:2290:C:O2	32:5:2290:C:H2'	2.15	0.44
32:5:2339:G:C5	32:5:2340:C:C5	3.05	0.44
32:5:2460:A:C6	32:5:2461:G:C4	3.05	0.44
32:5:2507:A:C5	32:5:2508:U:C5	3.04	0.44
32:5:2602:G:C1'	32:5:2742:G:C4	2.98	0.44
32:5:2618:G:C6	32:5:2619:G:N7	2.86	0.44
32:5:2666:U:C4	32:5:2669:C:C5	3.05	0.44
32:5:2773:G:C2	32:5:2774:C:C5	3.05	0.44
32:5:3657:U:O2	32:5:3657:U:H2'	2.17	0.44
32:5:3789:C:OP2	32:5:3790:U:O2'	2.23	0.44
32:5:3857:G:N2	32:5:3858:C:H1'	2.32	0.44
32:5:3943:A:C5	32:5:3944:G:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4094:G:C6	32:5:4095:G:C6	3.04	0.44
32:5:4498:U:C4	32:5:4500:U:OP2	2.70	0.44
32:5:4534:G:C5	32:5:4535:A:C8	3.05	0.44
32:5:4558:U:OP2	35:B:246:ARG:NH1	2.50	0.44
32:5:4562:C:C4	32:5:4563:U:H5	2.33	0.44
32:5:4686:G:C6	32:5:4687:A:N7	2.84	0.44
32:5:4699:U:C5	32:5:4702:G:O6	2.70	0.44
32:5:4704:C:C2	32:5:4705:A:C8	3.05	0.44
32:5:5028:G:N3	32:5:5029:C:C6	2.85	0.44
32:5:5042:A:C2	32:5:5043:A:C8	3.05	0.44
33:7:9:C:O2	33:7:9:C:C2'	2.62	0.44
33:7:19:C:C2	33:7:20:U:H5	2.35	0.44
33:7:22:A:N3	33:7:23:A:N7	2.64	0.44
33:7:117:G:C2	33:7:118:C:C2	3.05	0.44
34:8:13:G:N2	34:8:14:U:C2	2.84	0.44
34:8:81:C:O2	34:8:81:C:C2'	2.59	0.44
35:B:379:PHE:N	35:B:379:PHE:CD1	2.85	0.44
36:C:67:TRP:CD1	36:C:71:ARG:HE	2.36	0.44
38:F:39:PHE:C	38:F:41:GLN:N	2.73	0.44
39:I:6:ALA:O	39:I:7:ARG:C	2.60	0.44
41:W:27:LYS:HG3	41:W:29:PHE:CZ	2.53	0.44
48:z:134:LEU:HD23	48:z:188:ILE:CG2	2.47	0.44
48:z:366:GLN:CD	48:z:366:GLN:C	2.85	0.44
48:z:410:SER:HB2	51:4:194:G:H1'	1.99	0.44
50:3:26:G:N2	50:3:27:U:H1'	2.31	0.44
51:4:216:A:H8	51:4:216:A:O5'	2.01	0.44
54:S2:449:A:N7	54:S2:452:G:C6	2.81	0.44
54:S2:474:G:C2	54:S2:475:C:N1	2.84	0.44
54:S2:642:U:P	62:SJ:39:ASN:HD21	2.40	0.44
54:S2:825:A:O2'	54:S2:826:A:C5'	2.65	0.44
54:S2:898:U:C2	54:S2:899:U:C6	3.05	0.44
54:S2:987:A:C2	56:SB:114:VAL:HG21	2.52	0.44
54:S2:1050:A:C5	54:S2:1051:G:C8	3.05	0.44
54:S2:1067:C:N4	54:S2:1068:G:C5	2.86	0.44
54:S2:1248:U:H2'	54:S2:1249:C:O4'	2.16	0.44
54:S2:1301:A:OP1	85:Sd:7:TYR:OH	2.34	0.44
54:S2:1332:A:C2	54:S2:1333:U:H1'	2.52	0.44
54:S2:1439:A:O2'	54:S2:1440:C:O4'	2.33	0.44
54:S2:1455:A:C6	54:S2:1456:G:C5	3.04	0.44
54:S2:1538:C:O2	54:S2:1539:U:C5	2.70	0.44
54:S2:1606:G:N3	54:S2:1632:G:N2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1687:C:O2	54:S2:1688:C:C6	2.70	0.44
55:SA:59:LEU:HD23	55:SA:181:GLU:HG2	1.98	0.44
55:SA:132:GLN:O	55:SA:133:PRO:C	2.58	0.44
58:SE:139:LEU:HD13	58:SE:160:ILE:CD1	2.47	0.44
66:SV:47:ASN:HD22	66:SV:48:GLY:N	2.14	0.44
74:SF:39:ILE:HG23	74:SF:68:ILE:HG21	1.99	0.44
79:SR:17:ILE:HG23	79:SR:58:MET:HE1	1.98	0.44
79:SR:92:ASP:C	79:SR:93:GLN:CD	2.85	0.44
83:SZ:61:GLU:HA	83:SZ:64:ASN:ND2	2.33	0.44
84:Sc:27:CYS:HA	84:Sc:46:VAL:O	2.17	0.44
1:A:3:ARG:HH11	1:A:3:ARG:CG	2.29	0.44
2:D:123:VAL:HG22	2:D:248:ARG:NH2	2.31	0.44
7:M:110:TYR:HE2	37:E:262:GLN:HE22	1.65	0.44
8:N:30:TYR:CZ	8:N:63:ARG:HD2	2.50	0.44
8:N:127:TYR:HD1	8:N:127:TYR:N	2.15	0.44
18:Z:73:LYS:HA	18:Z:101:PHE:HZ	1.82	0.44
20:b:9:THR:C	20:b:12:GLN:HG3	2.42	0.44
24:f:93:PRO:O	24:f:94:ALA:HB3	2.16	0.44
25:g:60:ARG:HG3	25:g:61:PRO:HD2	1.99	0.44
32:5:33:A:C5	32:5:50:C:N3	2.86	0.44
32:5:44:A:N3	32:5:44:A:H2'	2.32	0.44
32:5:199:G:C2	32:5:220:C:O2	2.70	0.44
32:5:206:U:O2	32:5:206:U:H2'	2.17	0.44
32:5:254:G:C4	32:5:255:C:C6	3.05	0.44
32:5:261:G:C6	32:5:262:G:C5	3.06	0.44
32:5:449:C:O2	32:5:449:C:C2'	2.64	0.44
32:5:459:C:N3	32:5:460:C:C6	2.85	0.44
32:5:476:G:C2	32:5:477:C:C2	3.06	0.44
32:5:488:G:C2	32:5:489:C:N1	2.85	0.44
32:5:499:G:C2	32:5:656:C:N3	2.85	0.44
32:5:654:C:O2	32:5:654:C:H2'	2.18	0.44
32:5:1178:G:C5	32:5:1179:U:C6	3.05	0.44
32:5:1253:G:O2'	32:5:1257:A:N6	2.49	0.44
32:5:1349:G:C2	32:5:1350:C:C6	3.05	0.44
32:5:1448:G:C2	32:5:2097:U:C4	3.06	0.44
32:5:1559:G:N1	32:5:1560:A:C5	2.85	0.44
32:5:1590:C:H2'	32:5:1592:G:O4'	2.18	0.44
32:5:1780:A:C2	32:5:1781:U:C1'	3.00	0.44
32:5:1820:C:HO2'	32:5:1821:G:P	2.37	0.44
32:5:1867:A:O2'	32:5:1868:A:C5'	2.66	0.44
32:5:1912:G:C2	32:5:1913:C:C2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2041:A:C4	32:5:4464:A:C6	3.04	0.44
32:5:2282:A:C2'	32:5:2283:G:C5'	2.95	0.44
32:5:2347:A:C2'	32:5:2348:G:N7	2.78	0.44
32:5:2384:U:O2	32:5:2385:U:C6	2.70	0.44
32:5:2452:G:N3	32:5:2467:U:O4	2.48	0.44
32:5:2482:C:H2'	32:5:2482:C:O2	2.16	0.44
32:5:2483:G:N1	32:5:2484:A:C5	2.86	0.44
32:5:2557:G:C2	32:5:2558:C:C2	3.05	0.44
32:5:2569:G:C2	32:5:2570:U:C2	3.05	0.44
32:5:2578:G:N1	32:5:2579:G:C5	2.84	0.44
32:5:2613:C:O2	32:5:2613:C:H2'	2.17	0.44
32:5:2624:G:C5	32:5:2625:U:C5	3.06	0.44
32:5:2646:C:N4	32:5:2686:G:N7	2.61	0.44
32:5:2862:G:N3	32:5:3624:A:H2'	2.32	0.44
32:5:2898:G:C2	32:5:3602:C:C2	3.06	0.44
32:5:4142:C:C5	32:5:4143:G:C5	3.06	0.44
32:5:4153:C:C2	32:5:4154:G:C8	3.05	0.44
32:5:4230:C:C2	32:5:4231:C:C5	3.05	0.44
32:5:4232:U:H1'	32:5:4233:A:OP2	2.18	0.44
32:5:4281:A:C4	32:5:4283:G:C8	3.05	0.44
32:5:4323:A:C2	32:5:4324:A:C8	3.05	0.44
32:5:4479:A:C6	32:5:4480:A:C4	3.05	0.44
32:5:4628:U:H4'	41:W:17:HIS:HB3	2.00	0.44
32:5:4724:A:N3	32:5:4725:C:C6	2.86	0.44
32:5:4975:G:C6	32:5:4977:A:C5	3.05	0.44
34:8:65:A:N1	34:8:66:A:C6	2.85	0.44
34:8:135:C:N3	34:8:136:U:C5	2.84	0.44
38:F:92:ALA:HA	38:F:147:PRO:HD3	1.99	0.44
38:F:228:HIS:HE2	38:F:236:GLY:HA3	1.83	0.44
46:K:107:ASP:OD2	46:K:143:VAL:HG13	2.16	0.44
50:3:15:G:C2	50:3:59:A:N1	2.86	0.44
50:3:39:G:C6	50:3:40:C:N4	2.85	0.44
51:4:214:A:H5''	51:4:215:A:OP1	2.16	0.44
53:6:108:ASP:OD1	53:6:108:ASP:N	2.49	0.44
54:S2:22:A:C2	54:S2:653:A:N3	2.82	0.44
54:S2:92:A:C4	54:S2:446:G:C6	3.05	0.44
54:S2:182:C:O3'	54:S2:184:G:H1'	2.16	0.44
54:S2:191:A:H3'	54:S2:192:C:C5'	2.46	0.44
54:S2:316:G:N1	54:S2:317:C:N4	2.65	0.44
54:S2:476:A:C4	54:S2:477:G:C8	3.06	0.44
54:S2:579:C:N4	54:S2:580:U:C5	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:639:C:O2'	54:S2:640:A:C5'	2.66	0.44
54:S2:813:A:H2'	54:S2:814:U:O4'	2.18	0.44
54:S2:823:U:C2	69:SY:64:PHE:HD2	2.35	0.44
54:S2:841:G:HO2'	54:S2:842:C:H6	1.56	0.44
54:S2:882:U:C2	54:S2:883:U:C6	3.05	0.44
54:S2:923:G:C6	54:S2:924:G:C8	3.05	0.44
54:S2:963:A:H2'	54:S2:964:A:H8	1.80	0.44
54:S2:992:A:C2	54:S2:993:G:C1'	3.01	0.44
54:S2:1041:G:C2	54:S2:1075:C:C2	3.05	0.44
54:S2:1050:A:C6	54:S2:1069:U:C5	3.05	0.44
54:S2:1114:U:C4	54:S2:1119:A:N6	2.85	0.44
54:S2:1133:A:N3	54:S2:1134:G:H8	2.06	0.44
54:S2:1206:G:C2	54:S2:1208:A:C8	3.06	0.44
54:S2:1228:A:C2	54:S2:1531:A:C2	3.05	0.44
54:S2:1278:A:C4	54:S2:1279:C:C6	3.05	0.44
54:S2:1289:U:H3'	54:S2:1290:G:C8	2.36	0.44
54:S2:1418:C:C2	54:S2:1420:G:C8	3.03	0.44
54:S2:1441:U:H1'	54:S2:1442:U:O4	2.17	0.44
54:S2:1543:U:H4'	54:S2:1544:C:OP1	2.16	0.44
54:S2:1565:C:C4	54:S2:1571:G:N1	2.84	0.44
54:S2:1862:G:O2'	70:Sa:5:ARG:NH2	2.50	0.44
55:SA:111:GLN:HB3	57:SC:63:VAL:CG2	2.47	0.44
63:SL:37:TYR:CE2	63:SL:51:ILE:HG23	2.52	0.44
64:SN:69:ASN:H	64:SN:69:ASN:ND2	2.13	0.44
65:SO:146:ARG:O	65:SO:147:ARG:C	2.60	0.44
66:SV:53:TYR:OH	66:SV:72:LEU:HB3	2.17	0.44
68:SX:83:ALA:HA	68:SX:120:PHE:O	2.16	0.44
71:Sb:20:LYS:HA	71:Sb:23:ARG:HD2	1.98	0.44
73:SD:123:LEU:HD21	73:SD:154:ASP:CB	2.46	0.44
76:SM:77:ILE:HG23	76:SM:78:LYS:N	2.31	0.44
79:SR:109:LEU:HB3	79:SR:111:PHE:CD2	2.51	0.44
80:SS:26:ILE:HD11	80:SS:54:LYS:C	2.42	0.44
2:D:191:ASN:HB3	2:D:194:VAL:HG23	1.99	0.44
4:H:40:HIS:CD2	4:H:40:HIS:N	2.85	0.44
8:N:9:GLU:OE2	27:i:41:ARG:NE	2.48	0.44
9:O:65:ASN:ND2	9:O:65:ASN:C	2.76	0.44
9:O:134:LYS:O	9:O:135:PHE:HB3	2.17	0.44
9:O:192:PHE:N	9:O:192:PHE:HD1	2.15	0.44
12:S:34:ALA:HB3	12:S:40:ALA:HB2	2.00	0.44
13:T:17:ARG:HG3	13:T:18:PRO:CD	2.47	0.44
14:U:39:PHE:CD1	14:U:90:TYR:CE2	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:X:152:LYS:HB3	48:z:69:LEU:HD22	1.99	0.44
19:a:75:LEU:O	19:a:76:ASP:C	2.61	0.44
23:e:42:ASP:N	23:e:42:ASP:OD1	2.49	0.44
32:5:179:G:C5	32:5:180:C:C5	3.06	0.44
32:5:278:G:N1	32:5:330:G:C8	2.85	0.44
32:5:437:G:C2	32:5:438:G:N9	2.85	0.44
32:5:476:G:C2	32:5:679:C:C2	3.05	0.44
32:5:694:C:H2'	32:5:695:G:O4'	2.17	0.44
32:5:740:G:C2	32:5:925:C:C2	3.06	0.44
32:5:963:G:O3'	45:r:107:ARG:NH2	2.50	0.44
32:5:1317:U:H2'	32:5:1318:C:C6	2.53	0.44
32:5:1321:G:N1	32:5:3876:A:C2	2.85	0.44
32:5:1336:G:C2'	32:5:1337:A:C8	3.00	0.44
32:5:1543:G:N3	32:5:1544:G:C8	2.84	0.44
32:5:1684:A:H2	32:5:1685:G:H1'	1.78	0.44
32:5:1750:G:H2'	32:5:1750:G:N3	2.32	0.44
32:5:1795:A:C5	32:5:1796:U:C6	3.06	0.44
32:5:1859:C:C4	32:5:1860:U:C4	3.05	0.44
32:5:1899:G:C5	32:5:1900:C:H5	2.35	0.44
32:5:2291:G:N2	32:5:2292:C:C6	2.84	0.44
32:5:2361:G:C6	40:P:25:HIS:HD2	2.34	0.44
32:5:2555:G:C2	32:5:2573:A:N3	2.85	0.44
32:5:3604:A:N7	32:5:3605:C:C6	2.85	0.44
32:5:3656:A:H2'	32:5:3657:U:H6	1.82	0.44
32:5:3690:U:C4	32:5:3691:G:C5	3.06	0.44
32:5:3702:A:C6	32:5:3703:G:C8	2.89	0.44
32:5:3807:A:C6	32:5:3808:C:C5	3.05	0.44
32:5:3820:G:C6	32:5:3821:A:N7	2.85	0.44
32:5:3846:C:C2'	32:5:4632:U:O2'	2.66	0.44
32:5:3944:G:N2	32:5:3945:A:N9	2.66	0.44
32:5:3945:A:C2	32:5:3946:G:C4	3.06	0.44
32:5:4209:G:C5	32:5:4210:U:C5	3.05	0.44
32:5:4284:C:N3	32:5:4285:U:C4	2.82	0.44
32:5:4482:U:O2	32:5:4483:C:H6	1.97	0.44
32:5:4489:G:C2	32:5:4490:C:C2	3.05	0.44
32:5:4530:U:C2'	32:5:4531:U:C2	2.93	0.44
32:5:4595:G:C5	32:5:4596:C:C5	3.04	0.44
32:5:4655:A:C2	32:5:4658:G:H1'	2.52	0.44
32:5:4703:U:N3	32:5:4704:C:C5	2.85	0.44
33:7:8:G:N3	33:7:9:C:C6	2.85	0.44
33:7:60:G:H2'	33:7:60:G:N3	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:9:A:C2	34:8:10:G:N7	2.82	0.44
34:8:78:G:C2	34:8:79:G:C4	3.05	0.44
34:8:101:C:N4	34:8:102:G:C5	2.85	0.44
34:8:102:G:P	34:8:104:A:HO2'	2.31	0.44
34:8:115:G:C4	34:8:116:C:C6	3.04	0.44
37:E:271:PHE:O	37:E:272:ALA:HB2	2.18	0.44
42:j:39:TYR:O	42:j:40:PRO:C	2.58	0.44
47:q:18:ILE:HG13	47:q:66:ARG:HD3	1.99	0.44
48:z:271:ILE:HG22	48:z:272:PHE:CE2	2.52	0.44
53:6:151:LEU:HD23	53:6:189:LEU:HA	1.99	0.44
54:S2:4:C:C2	54:S2:5:U:C5	3.05	0.44
54:S2:42:A:C6	54:S2:43:U:C5	3.05	0.44
54:S2:71:G:H2'	54:S2:72:C:N1	2.32	0.44
54:S2:167:G:C6	54:S2:168:C:C4	3.05	0.44
54:S2:297:A:N6	54:S2:298:G:C5	2.85	0.44
54:S2:431:G:C2	54:S2:432:G:N7	2.86	0.44
54:S2:439:A:O2'	54:S2:440:G:H5'	2.17	0.44
54:S2:457:C:N4	54:S2:458:A:C6	2.85	0.44
54:S2:477:G:C2	54:S2:478:G:C5	3.06	0.44
54:S2:505:G:O2'	54:S2:506:G:H5'	2.16	0.44
54:S2:507:G:H4'	54:S2:509:G:N7	2.32	0.44
54:S2:550:C:C2	54:S2:551:U:C6	3.05	0.44
54:S2:793:G:N3	54:S2:793:G:H2'	2.32	0.44
54:S2:969:U:O2	54:S2:969:U:O2'	2.23	0.44
54:S2:1121:G:N2	54:S2:1122:A:H1'	2.32	0.44
54:S2:1175:G:C4	54:S2:1176:G:C8	3.05	0.44
54:S2:1208:A:H5'	54:S2:1208:A:H8	1.81	0.44
54:S2:1253:A:H4'	54:S2:1254:C:H5''	2.00	0.44
54:S2:1293:A:N6	86:Sf:139:HIS:C	2.76	0.44
54:S2:1857:G:C8	65:SO:146:ARG:NH2	2.68	0.44
61:SI:139:LYS:HD2	61:SI:145:ILE:HD12	2.00	0.44
61:SI:155:ASN:HB3	63:SL:22:ARG:HD3	2.00	0.44
65:SO:40:THR:HG21	65:SO:111:GLY:HA3	1.99	0.44
70:Sa:36:ILE:HD12	70:Sa:36:ILE:N	2.33	0.44
73:SD:202:LYS:O	73:SD:203:PRO:C	2.59	0.44
74:SF:56:TYR:CD2	74:SF:66:CYS:HB2	2.53	0.44
74:SF:140:ASP:CB	84:Sc:56:LEU:CD2	2.94	0.44
82:SU:40:ILE:HD11	82:SU:53:PRO:CG	2.47	0.44
82:SU:68:THR:HG22	82:SU:69:PRO:O	2.17	0.44
1:A:64:ARG:HD3	32:5:4124:G:C6	2.52	0.44
5:J:54:ARG:HH11	5:J:54:ARG:HG2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:74:ARG:NH2	32:5:76:A:N7	2.64	0.44
9:O:26:GLN:OE1	12:S:167:PHE:HZ	2.01	0.44
13:T:40:VAL:HG13	13:T:96:ILE:HG23	2.00	0.44
13:T:87:LYS:NZ	32:5:4301:U:P	2.90	0.44
16:X:117:TYR:O	16:X:119:ILE:CA	2.65	0.44
16:X:117:TYR:C	16:X:119:ILE:N	2.75	0.44
17:Y:11:ARG:CZ	36:C:200:ARG:HH12	2.30	0.44
21:c:50:ASN:O	21:c:51:ASN:HB2	2.18	0.44
23:e:35:TRP:CE3	23:e:56:PRO:HG3	2.53	0.44
23:e:43:ASN:C	23:e:43:ASN:ND2	2.65	0.44
31:o:26:TYR:HD2	31:o:82:MET:HE3	1.81	0.44
32:5:52:G:H8	32:5:52:G:O5'	1.99	0.44
32:5:84:A:N6	32:5:86:U:C4	2.85	0.44
32:5:435:A:C5	32:5:436:C:C6	3.06	0.44
32:5:450:G:O2'	32:5:453:G:OP1	2.34	0.44
32:5:506:C:O2	32:5:507:G:C8	2.70	0.44
32:5:514:U:C6	32:5:514:U:H3'	2.52	0.44
32:5:699:C:N3	32:5:700:G:N7	2.66	0.44
32:5:731:G:C5	32:5:732:A:N9	2.85	0.44
32:5:951:G:C2'	32:5:952:G:H5''	2.47	0.44
32:5:1269:G:C8	32:5:2111:G:O6	2.70	0.44
32:5:1349:G:C6	32:5:1350:C:C5	3.06	0.44
32:5:1355:G:C2'	32:5:1356:U:O5'	2.66	0.44
32:5:1379:C:O3'	32:5:1380:G:O4'	2.34	0.44
32:5:1383:G:H2'	32:5:1384:C:O4'	2.16	0.44
32:5:1396:G:H3'	32:5:1396:G:C8	2.52	0.44
32:5:1558:A:H2'	32:5:1559:G:C8	2.52	0.44
32:5:1575:A:H2	44:p:13:LYS:HA	1.81	0.44
32:5:1780:A:C5	32:5:1781:U:C6	3.06	0.44
32:5:1811:G:C4	32:5:1812:C:C6	3.04	0.44
32:5:1819:G:N3	32:5:1820:C:C6	2.86	0.44
32:5:1877:G:C4	32:5:1878:G:C8	3.06	0.44
32:5:2076:G:N1	32:5:2077:C:N1	2.66	0.44
32:5:2124:G:H22	38:F:32:ILE:CG1	2.30	0.44
32:5:2301:G:C5	32:5:2302:C:C5	3.05	0.44
32:5:2338:C:H5''	45:r:12:ASN:HD22	1.82	0.44
32:5:2397:G:N7	32:5:2399:G:N9	2.66	0.44
32:5:2445:C:C2	32:5:2446:C:H5	2.34	0.44
32:5:2559:G:C2	32:5:2560:C:N1	2.86	0.44
32:5:2573:A:H2'	32:5:2574:G:C5'	2.47	0.44
32:5:2677:G:C6	32:5:2678:A:N9	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2725:A:H2'	32:5:2726:G:C5'	2.48	0.44
32:5:3698:G:C6	32:5:3699:C:C4	3.05	0.44
32:5:3942:A:C2	32:5:3943:A:C4	3.04	0.44
32:5:4136:G:C2	32:5:4137:C:N1	2.86	0.44
32:5:4217:G:HO2'	32:5:4218:U:C5'	2.21	0.44
32:5:4277:G:C2	32:5:4278:C:C2	3.06	0.44
32:5:4311:A:C2	32:5:4312:U:C6	3.05	0.44
32:5:4666:G:C2	32:5:4667:C:C2	3.05	0.44
32:5:4741:C:H2'	32:5:4741:C:O2	2.18	0.44
32:5:4904:G:C6	32:5:4905:C:C4	3.04	0.44
32:5:4998:G:C4	32:5:4999:G:C8	3.05	0.44
32:5:5034:A:C5	32:5:5035:U:H1'	2.53	0.44
32:5:5036:C:C2	32:5:5037:U:C5	3.05	0.44
33:7:44:C:N3	33:7:45:U:C4	2.85	0.44
34:8:44:A:C4	34:8:45:C:C6	3.06	0.44
34:8:117:C:C4	34:8:118:C:H5	2.28	0.44
35:B:113:GLU:OE2	35:B:169:ARG:HB3	2.17	0.44
42:j:26:ALA:O	42:j:34:CYS:O	2.35	0.44
43:n:4:LYS:CE	54:S2:1844:U:C5	2.82	0.44
45:r:16:PHE:HD2	45:r:28:GLU:HB3	1.81	0.44
47:q:47:LEU:HD22	47:q:99:ARG:NH1	2.32	0.44
48:z:411:GLY:C	52:9:74:ARG:NH2	2.75	0.44
51:4:6:G:C4	51:4:7:C:C5	3.06	0.44
51:4:236:U:H2'	51:4:237:U:C6	2.53	0.44
54:S2:99:A:N3	54:S2:100:U:C6	2.84	0.44
54:S2:167:G:C4	54:S2:168:C:C6	3.05	0.44
54:S2:401:A:C5	54:S2:402:C:N1	2.86	0.44
54:S2:456:C:H2'	54:S2:457:C:O4'	2.18	0.44
54:S2:536:A:C6	54:S2:537:C:C5	3.04	0.44
54:S2:617:G:C6	54:S2:618:C:C5	3.06	0.44
54:S2:898:U:N3	54:S2:899:U:C6	2.85	0.44
54:S2:981:A:H2'	54:S2:982:G:O4'	2.17	0.44
54:S2:1037:G:C2	54:S2:1038:U:C6	3.06	0.44
54:S2:1131:G:C2	54:S2:1132:C:C5	3.05	0.44
54:S2:1293:A:H1'	86:Sf:150:PHE:CD2	2.51	0.44
54:S2:1466:G:N3	54:S2:1467:C:C6	2.85	0.44
54:S2:1508:A:C6	54:S2:1510:G:C1'	3.00	0.44
54:S2:1594:A:P	83:SZ:104:ARG:CG	3.05	0.44
54:S2:1612:G:N2	54:S2:1628:C:C2	2.86	0.44
54:S2:1648:G:N3	54:S2:1674:G:O6	2.50	0.44
54:S2:1710:C:C4	54:S2:1711:U:H5	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1722:G:N2	54:S2:1723:G:C1'	2.75	0.44
57:SC:82:TYR:CE1	57:SC:164:PRO:HD3	2.53	0.44
62:SJ:83:ARG:CD	62:SJ:150:ARG:HH21	2.31	0.44
63:SL:84:ARG:NH1	63:SL:115:PRO:HG3	2.32	0.44
64:SN:125:LEU:O	64:SN:126:ALA:C	2.60	0.44
68:SX:5:ARG:HH21	68:SX:5:ARG:HB2	1.83	0.44
87:Sg:11:LEU:HB3	87:Sg:43:TRP:CZ3	2.53	0.44
2:D:95:TYR:C	2:D:95:TYR:CD1	2.94	0.44
5:J:113:ILE:HG13	80:SS:14:ARG:HG3	2.00	0.44
7:M:6:PHE:N	7:M:6:PHE:CD2	2.86	0.44
10:Q:42:THR:HG21	32:5:1428:U:OP1	2.18	0.44
15:V:92:ASP:OD1	15:V:92:ASP:N	2.47	0.44
15:V:98:PHE:O	15:V:100:ASP:N	2.50	0.44
16:X:137:TYR:CD1	16:X:137:TYR:N	2.85	0.44
21:c:31:TYR:CE1	21:c:35:LEU:HD22	2.53	0.44
25:g:13:TYR:CD2	32:5:2513:A:C5	3.04	0.44
32:5:61:A:C2	32:5:62:A:C4	3.06	0.44
32:5:61:A:N3	32:5:62:A:C8	2.86	0.44
32:5:86:U:C2	32:5:87:A:N7	2.86	0.44
32:5:98:A:C1'	32:5:292:G:O6	2.66	0.44
32:5:165:A:C6	32:5:166:C:C4	3.06	0.44
32:5:324:A:C4	32:5:325:U:C5	3.05	0.44
32:5:447:C:N3	32:5:448:G:C8	2.82	0.44
32:5:672:C:H2'	32:5:673:C:O4'	2.17	0.44
32:5:689:U:C4	32:5:690:C:C5	3.06	0.44
32:5:698:G:N1	32:5:699:C:C6	2.86	0.44
32:5:984:C:N4	32:5:1070:G:C6	2.85	0.44
32:5:1084:C:N3	32:5:1085:C:H5	2.08	0.44
32:5:1236:C:O2'	32:5:1237:C:O5'	2.29	0.44
32:5:1404:G:H2'	32:5:1405:C:O4'	2.17	0.44
32:5:1458:C:O2	32:5:1458:C:C2'	2.65	0.44
32:5:1665:C:OP1	32:5:2278:G:H1'	2.17	0.44
32:5:1696:C:O2	32:5:1697:G:C5'	2.63	0.44
32:5:1806:G:C4	32:5:1807:C:C5	3.05	0.44
32:5:1941:A:O2'	32:5:1942:A:O5'	2.35	0.44
32:5:1972:G:C2	32:5:1973:G:C8	3.06	0.44
32:5:2108:G:C2	32:5:2125:C:C4	3.05	0.44
32:5:2314:G:C4	32:5:2326:G:C4	3.06	0.44
32:5:2392:C:C2	32:5:2393:C:C5	3.06	0.44
32:5:2420:A:N3	32:5:2427:G:C2	2.85	0.44
32:5:2423:A:C2	32:5:2424:G:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2468:U:O4	32:5:2473:A:C6	2.61	0.44
32:5:2546:G:H4'	32:5:2547:G:OP1	2.17	0.44
32:5:2697:A:C6	32:5:2698:G:N7	2.86	0.44
32:5:2898:G:C2	32:5:2899:C:C2	3.05	0.44
32:5:3621:A:C1'	32:5:4642:U:O2	2.66	0.44
32:5:3676:G:C2'	32:5:3677:U:O5'	2.66	0.44
32:5:3725:G:N2	32:5:3727:A:H2'	2.33	0.44
32:5:3856:A:N6	32:5:3857:G:C6	2.85	0.44
32:5:4154:G:N1	32:5:4155:C:C4	2.85	0.44
32:5:4340:U:C5	32:5:4341:C:C5	3.05	0.44
32:5:4381:A:C2	32:5:4382:G:N9	2.86	0.44
32:5:4415:A:OP2	32:5:4422:A:C2	2.70	0.44
32:5:4591:U:C2	32:5:4592:C:C5	3.06	0.44
33:7:16:A:C5	33:7:17:C:C5	3.06	0.44
33:7:110:G:C2	33:7:111:C:C2	3.05	0.44
34:8:13:G:N3	34:8:14:U:C6	2.85	0.44
34:8:41:A:C5	34:8:42:G:C8	3.05	0.44
34:8:83:C:H4'	34:8:85:U:O2	2.17	0.44
39:I:181:PHE:O	39:I:182:GLU:C	2.60	0.44
50:3:10:G:H2'	50:3:10:G:N3	2.33	0.44
54:S2:10:G:C5	54:S2:11:A:N7	2.86	0.44
54:S2:68:A:C6	54:S2:69:C:C4	3.06	0.44
54:S2:155:G:C6	54:S2:156:G:C8	3.06	0.44
54:S2:184:G:N3	54:S2:185:G:C8	2.85	0.44
54:S2:211:G:C5	54:S2:212:C:C5	3.06	0.44
54:S2:340:C:C4	54:S2:341:C:C5	3.05	0.44
54:S2:522:A:C3'	62:SJ:131:ARG:HH22	2.30	0.44
54:S2:831:G:C6	54:S2:832:G:C5	3.05	0.44
54:S2:847:A:C2	54:S2:848:U:C1'	2.95	0.44
54:S2:982:G:N3	54:S2:1045:U:H1'	2.33	0.44
54:S2:1032:C:N3	54:S2:1033:G:C8	2.85	0.44
54:S2:1293:A:O5'	86:Sf:150:PHE:CG	2.71	0.44
54:S2:1318:G:C5	54:S2:1319:U:C5	3.05	0.44
54:S2:1534:C:O2	54:S2:1536:G:C2	2.71	0.44
54:S2:1575:G:N1	54:S2:1576:G:C6	2.85	0.44
54:S2:1594:A:C2	54:S2:1595:U:C5	2.90	0.44
54:S2:1610:G:C2	54:S2:1611:G:C5	3.05	0.44
54:S2:1612:G:C2	54:S2:1613:G:C8	3.06	0.44
54:S2:1620:A:O2'	54:S2:1624:U:O2	2.31	0.44
54:S2:1644:C:O2'	54:S2:1645:C:C4'	2.64	0.44
54:S2:1654:G:N2	54:S2:1671:G:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1686:G:H3'	54:S2:1687:C:P	2.57	0.44
54:S2:1782:G:N3	54:S2:1784:G:C8	2.86	0.44
57:SC:170:TRP:CD1	57:SC:199:PRO:N	2.85	0.44
58:SE:86:PHE:CE2	58:SE:87:MET:HG2	2.52	0.44
63:SL:92:TYR:O	63:SL:104:LYS:HA	2.17	0.44
65:SO:26:ASN:N	65:SO:26:ASN:HD22	2.15	0.44
65:SO:146:ARG:C	65:SO:146:ARG:HD2	2.43	0.44
68:SX:34:THR:OG1	68:SX:35:ALA:N	2.50	0.44
73:SD:68:GLU:OE1	75:SK:70:TYR:HD1	2.01	0.44
74:SF:83:ASN:N	74:SF:83:ASN:ND2	2.61	0.44
77:SP:49:LEU:O	77:SP:50:ARG:C	2.61	0.44
80:SS:8:LYS:CD	83:SZ:49:LEU:HB2	2.43	0.44
80:SS:33:ILE:CD1	80:SS:71:MET:HE1	2.47	0.44
84:Sc:10:LYS:HA	84:Sc:36:ASP:OD2	2.17	0.44
84:Sc:60:GLU:OE2	84:Sc:60:GLU:N	2.51	0.44
1:A:218:HIS:ND1	1:A:218:HIS:C	2.74	0.44
2:D:33:ARG:HD2	33:7:7:G:OP1	2.18	0.44
2:D:99:TYR:CD1	2:D:165:GLY:HA2	2.52	0.44
6:L:191:LEU:O	6:L:192:PHE:C	2.60	0.44
10:Q:18:PRO:HD2	10:Q:26:ARG:NH2	2.32	0.44
19:a:63:LEU:HD23	19:a:63:LEU:O	2.17	0.44
24:f:48:ALA:HB2	24:f:71:TRP:HZ3	1.83	0.44
32:5:99:A:N3	32:5:99:A:H2'	2.31	0.44
32:5:290:U:O2	32:5:291:U:C5	2.68	0.44
32:5:488:G:N2	32:5:668:C:N3	2.66	0.44
32:5:488:G:C4	32:5:489:C:C5	3.06	0.44
32:5:660:A:C5	32:5:661:C:C5	3.05	0.44
32:5:663:G:H2'	32:5:664:G:H5''	2.00	0.44
32:5:691:C:N3	32:5:692:A:C5	2.85	0.44
32:5:973:G:H1	32:5:1282:G:H1'	1.82	0.44
32:5:975:C:C3'	32:5:976:G:O4'	2.66	0.44
32:5:980:U:C2	32:5:981:C:C5	3.06	0.44
32:5:1075:G:C2	32:5:1076:C:C6	3.06	0.44
32:5:1176:C:C4	32:5:1177:U:C5	3.06	0.44
32:5:1424:G:H2'	32:5:1425:G:O4'	2.18	0.44
32:5:1474:C:H2'	32:5:1475:G:O4'	2.17	0.44
32:5:1477:C:N3	32:5:1478:C:H6	2.04	0.44
32:5:1516:G:C4	32:5:1518:A:N7	2.85	0.44
32:5:1559:G:C2	32:5:1560:A:C8	3.06	0.44
32:5:1602:U:O2	32:5:1603:C:C6	2.71	0.44
32:5:1699:A:H4'	32:5:1718:C:P	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1796:U:O2	32:5:1796:U:H2'	2.18	0.44
32:5:1866:U:C5	32:5:4405:G:C1'	3.01	0.44
32:5:1960:A:N1	47:q:14:PHE:HD2	2.11	0.44
32:5:2065:G:C2	32:5:2066:C:C2	3.05	0.44
32:5:2125:C:HO2'	32:5:2126:G:C5'	2.25	0.44
32:5:2315:G:C6	32:5:2316:G:N7	2.86	0.44
32:5:2522:G:C2	32:5:2534:C:C2	3.06	0.44
32:5:2529:A:C8	32:5:2532:C:C4	3.04	0.44
32:5:2559:G:C2	32:5:2560:C:C2	3.05	0.44
32:5:2595:C:C2	32:5:2596:G:N7	2.86	0.44
32:5:2640:G:H2'	32:5:2641:A:C8	2.53	0.44
32:5:2711:G:P	32:5:2711:G:H8	2.41	0.44
32:5:2727:C:H2'	32:5:2728:U:C6	2.53	0.44
32:5:3585:G:C2	32:5:3586:G:C8	3.06	0.44
32:5:3705:G:C6	32:5:3706:C:C4	3.05	0.44
32:5:3794:C:O2	32:5:3795:A:C8	2.69	0.44
32:5:3851:U:C4	32:5:3852:A:C5	3.06	0.44
32:5:4109:G:C4	32:5:4110:C:C5	3.05	0.44
32:5:4154:G:C6	32:5:4155:C:C4	3.05	0.44
32:5:4240:G:C6	32:5:4241:C:C6	3.06	0.44
32:5:4241:C:N3	32:5:4242:U:C6	2.84	0.44
32:5:4276:G:O6	32:5:4277:G:C4	2.70	0.44
32:5:4404:U:C4	32:5:4436:U:C4	3.06	0.44
32:5:4544:A:C8	32:5:4545:G:C1'	3.00	0.44
32:5:4768:G:H3'	32:5:4769:G:C8	2.52	0.44
32:5:4887:C:O2'	32:5:4888:U:H5'	2.17	0.44
32:5:4982:A:C4	32:5:4983:C:H6	2.35	0.44
33:7:9:C:C4	33:7:10:C:C5	3.05	0.44
33:7:19:C:C2	33:7:60:G:N2	2.85	0.44
34:8:35:C:H6	34:8:35:C:O5'	2.01	0.44
34:8:65:A:N1	34:8:66:A:N7	2.63	0.44
34:8:133:G:N2	34:8:134:G:C4	2.86	0.44
36:C:210:ILE:HD13	36:C:252:TRP:CZ3	2.53	0.44
39:I:100:ASN:ND2	39:I:100:ASN:C	2.73	0.44
46:K:9:GLU:OE1	46:K:11:LYS:HD2	2.17	0.44
47:q:88:PHE:HB2	47:q:90:PHE:CZ	2.52	0.44
51:4:284:G:C2	51:4:285:C:C2	3.05	0.44
51:4:143:C:OP1	52:9:36:PRO:HG3	2.17	0.44
53:6:151:LEU:HB3	53:6:189:LEU:HD13	1.99	0.44
54:S2:152:U:C4	54:S2:153:G:C8	3.06	0.44
54:S2:167:G:C2	54:S2:168:C:C2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:448:A:H8	61:SI:25:ARG:C	2.26	0.44
54:S2:632:C:O2	54:S2:632:C:C2'	2.61	0.44
54:S2:832:G:H3'	54:S2:833:C:H5''	1.99	0.44
54:S2:892:U:C2	54:S2:893:U:C5	3.05	0.44
54:S2:977:C:C2	54:S2:978:G:H8	2.31	0.44
54:S2:1006:C:C2	54:S2:1007:C:C6	3.06	0.44
54:S2:1280:G:N1	54:S2:1281:G:C8	2.86	0.44
54:S2:1292:C:H5''	86:Sf:149:CYS:O	2.18	0.44
54:S2:1406:G:H2'	54:S2:1407:U:H1'	1.99	0.44
54:S2:1609:C:O2	54:S2:1609:C:C2'	2.64	0.44
54:S2:1629:C:C4	54:S2:1630:A:N7	2.86	0.44
54:S2:1710:C:C2	54:S2:1711:U:C6	3.05	0.44
54:S2:1758:G:C2	54:S2:1759:G:C4	3.06	0.44
59:SG:216:ARG:O	59:SG:220:ALA:HB3	2.18	0.44
67:SW:37:PHE:CD1	67:SW:103:VAL:HG11	2.53	0.44
69:SY:12:PHE:HD1	69:SY:23:MET:HB3	1.82	0.44
70:Sa:28:ARG:CG	70:Sa:28:ARG:NH1	2.78	0.44
73:SD:28:GLU:OE1	75:SK:61:GLN:NE2	2.45	0.44
74:SF:99:ILE:CG2	83:SZ:67:LEU:CD2	2.95	0.44
75:SK:39:ASN:HD22	75:SK:39:ASN:N	2.16	0.44
78:SQ:7:LEU:HD22	78:SQ:27:ARG:HB3	2.00	0.44
79:SR:100:PRO:HD2	79:SR:119:VAL:CG1	2.38	0.44
82:SU:24:LEU:HB3	82:SU:32:LEU:HD11	1.99	0.44
84:Sc:14:VAL:HG22	84:Sc:32:VAL:HA	1.96	0.44
2:D:44:TYR:HD2	32:5:1823:G:H4'	1.80	0.44
6:L:94:ILE:O	6:L:94:ILE:CG2	2.66	0.44
10:Q:55:ARG:HH22	32:5:1352:C:H41	1.66	0.44
11:R:15:LEU:HB3	11:R:52:ARG:NH2	2.32	0.44
11:R:32:ILE:O	11:R:33:ALA:HB3	2.18	0.44
11:R:95:TRP:CE2	32:5:1572:U:H4'	2.52	0.44
12:S:32:ILE:HG13	12:S:44:PHE:HB3	1.99	0.44
12:S:99:ASP:OD1	12:S:100:LEU:C	2.60	0.44
15:V:77:HIS:O	15:V:77:HIS:ND1	2.47	0.44
16:X:151:ASN:N	16:X:151:ASN:OD1	2.51	0.44
20:b:12:GLN:C	20:b:16:TRP:NE1	2.75	0.44
20:b:27:GLN:HA	32:5:1805:A:N6	2.33	0.44
22:d:63:ARG:HD3	22:d:103:TYR:CE1	2.53	0.44
32:5:59:A:C5	32:5:60:G:N7	2.85	0.44
32:5:88:A:O2'	32:5:89:C:H5'	2.17	0.44
32:5:134:G:H4'	32:5:135:G:O5'	2.17	0.44
32:5:258:G:C5	32:5:259:C:C5	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:292:G:H2'	32:5:292:G:O5'	2.17	0.44
32:5:330:G:N2	32:5:331:G:C5	2.86	0.44
32:5:346:G:C4	32:5:347:A:C8	3.05	0.44
32:5:741:C:N3	32:5:742:G:N7	2.65	0.44
32:5:940:C:H2'	32:5:941:C:H6	1.83	0.44
32:5:1201:U:C4	32:5:1202:C:C5	3.06	0.44
32:5:1387:A:H1'	32:5:1397:A:N6	2.33	0.44
32:5:1406:G:C2	32:5:1412:G:C5	3.05	0.44
32:5:1489:G:N3	32:5:1489:G:C2'	2.80	0.44
32:5:1583:A:C6	32:5:1584:G:C1'	3.00	0.44
32:5:1589:C:O2'	32:5:1590:C:O5'	2.31	0.44
32:5:1811:G:N2	32:5:1812:C:N1	2.65	0.44
32:5:1811:G:C6	32:5:1812:C:C4	3.05	0.44
32:5:1871:A:C2	32:5:1872:G:C8	3.05	0.44
32:5:2294:G:N1	32:5:2295:C:C5	2.78	0.44
32:5:2316:G:C2	32:5:2324:C:O2	2.70	0.44
32:5:2372:U:H2'	32:5:2373:C:H6	1.81	0.44
32:5:2390:G:N1	32:5:2391:G:C8	2.86	0.44
32:5:2448:G:C5	32:5:2511:A:C6	3.06	0.44
32:5:2448:G:H2'	32:5:2449:A:C8	2.53	0.44
32:5:2632:U:C2	32:5:2633:U:H5	2.22	0.44
32:5:2701:U:N3	32:5:2702:C:C5	2.86	0.44
32:5:2767:U:H3'	32:5:2769:U:C6	2.52	0.44
32:5:3603:G:H2'	32:5:3604:A:C2	2.53	0.44
32:5:3692:A:C6	32:5:3693:U:C6	3.05	0.44
32:5:3804:G:C6	32:5:3805:U:C4	3.05	0.44
32:5:3845:A:C5	32:5:3846:C:C5	3.05	0.44
32:5:3899:G:H5''	35:B:257:TRP:HD1	1.81	0.44
32:5:4094:G:H3'	32:5:4095:G:H8	1.82	0.44
32:5:4135:G:C2	32:5:4136:G:C4	3.05	0.44
32:5:4146:G:C2	32:5:4147:G:C5	3.06	0.44
32:5:4236:G:O2'	32:5:4237:C:O4'	2.28	0.44
32:5:4279:A:N3	32:5:4281:A:N6	2.66	0.44
32:5:4355:G:N2	32:5:4356:G:N9	2.66	0.44
32:5:4411:G:C6	32:5:4412:C:C4	3.06	0.44
32:5:4499:G:O2'	32:5:4528:G:N3	2.47	0.44
32:5:4520:G:O2'	35:B:256:ALA:HB1	2.18	0.44
32:5:4627:U:C2'	35:B:55:HIS:NE2	2.81	0.44
32:5:4869:U:H5'	32:5:4870:G:N2	2.33	0.44
32:5:4977:A:C2'	32:5:4978:G:H5'	2.48	0.44
33:7:30:C:O2'	33:7:31:G:O5'	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:51:G:C2	33:7:52:C:C6	3.06	0.44
33:7:59:G:C4	33:7:60:G:C8	3.06	0.44
33:7:93:G:N1	33:7:94:C:C5	2.86	0.44
34:8:82:A:H3'	34:8:82:A:C4	2.53	0.44
34:8:106:G:C4	34:8:107:C:C5	3.06	0.44
34:8:120:G:C2	34:8:121:G:N9	2.85	0.44
34:8:135:C:H2'	34:8:135:C:O2	2.18	0.44
36:C:47:ASN:HB3	36:C:112:HIS:HB3	2.00	0.44
39:I:98:ARG:HD3	39:I:119:PHE:CE1	2.37	0.44
40:P:116:HIS:ND1	40:P:116:HIS:C	2.75	0.44
46:K:110:VAL:HG12	46:K:114:ARG:HD3	2.00	0.44
47:q:47:LEU:HD22	47:q:99:ARG:HH12	1.83	0.44
48:z:208:VAL:HG13	48:z:212:ILE:HD12	1.99	0.44
48:z:297:MET:CE	48:z:355:PHE:HD1	1.87	0.44
48:z:360:MET:HG2	48:z:365:GLU:CD	2.41	0.44
48:z:378:ILE:HG23	48:z:406:VAL:CG1	2.47	0.44
50:3:57:G:H2'	50:3:58:A:H5'	1.99	0.44
51:4:234:A:H2'	51:4:235:G:H8	1.78	0.44
54:S2:27:A:C6	54:S2:28:U:C6	3.05	0.44
54:S2:71:G:C2'	54:S2:72:C:O4'	2.66	0.44
54:S2:98:C:C4	54:S2:409:C:C5	3.05	0.44
54:S2:140:C:O2	54:S2:141:A:N7	2.51	0.44
54:S2:459:C:N3	54:S2:460:A:N9	2.62	0.44
54:S2:600:G:C2'	54:S2:601:G:O5'	2.66	0.44
54:S2:635:G:N1	54:S2:636:C:C4	2.86	0.44
54:S2:745:C:H1'	60:SH:108:SER:HA	1.98	0.44
54:S2:793:G:N1	54:S2:794:A:C1'	2.81	0.44
54:S2:837:A:N3	54:S2:837:A:C2'	2.76	0.44
54:S2:975:G:C6	54:S2:976:G:C5	3.06	0.44
54:S2:990:A:N1	54:S2:992:A:C4	2.86	0.44
54:S2:1016:U:H5	71:Sb:32:PHE:CE1	2.36	0.44
54:S2:1293:A:N6	86:Sf:139:HIS:CB	2.80	0.44
54:S2:1405:A:C1'	54:S2:1580:A:N1	2.80	0.44
54:S2:1455:A:C2	54:S2:1456:G:N9	2.83	0.44
54:S2:1513:C:OP1	85:Sd:9:SER:N	2.49	0.44
54:S2:1561:A:N6	54:S2:1573:G:H1	2.15	0.44
54:S2:1592:C:N4	54:S2:1593:C:C5	2.85	0.44
54:S2:1630:A:C2	54:S2:1631:U:C5	3.06	0.44
54:S2:1728:U:C5'	54:S2:1729:U:OP2	2.66	0.44
54:S2:1735:A:C6	54:S2:1800:A:C4	3.06	0.44
58:SE:101:LEU:HD23	58:SE:101:LEU:HA	1.87	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:SH:76:GLN:HE22	60:SH:94:PHE:HB2	1.83	0.44
62:SJ:132:GLN:CB	62:SJ:134:HIS:HD2	2.29	0.44
68:SX:17:ARG:HA	68:SX:17:ARG:NE	2.32	0.44
70:Sa:86:ASN:O	70:Sa:86:ASN:CG	2.60	0.44
79:SR:84:TYR:CD2	79:SR:84:TYR:C	2.95	0.44
80:SS:111:LEU:HD13	80:SS:125:HIS:CD2	2.53	0.44
80:SS:120:HIS:CD2	80:SS:124:ARG:HD2	2.53	0.44
83:SZ:50:PHE:CD1	83:SZ:58:LEU:CD1	3.00	0.44
84:Sc:12:ALA:HB2	84:Sc:34:PHE:O	2.18	0.44
87:Sg:217:MET:HB2	87:Sg:219:TRP:HE1	1.83	0.44
1:A:7:GLY:O	32:5:3667:C:H4'	2.18	0.44
1:A:27:ALA:HB1	1:A:77:ILE:HG13	1.99	0.44
3:G:53:ARG:CB	3:G:54:PHE:CZ	2.95	0.44
5:J:75:ARG:HD2	33:7:40:U:O2	2.17	0.44
11:R:21:LYS:NZ	32:5:2821:U:OP1	2.34	0.44
12:S:163:HIS:HD2	12:S:166:ARG:HG3	1.81	0.44
15:V:128:LEU:HG	15:V:129:TRP:CD1	2.53	0.44
24:f:22:ARG:HG3	24:f:22:ARG:HH11	1.82	0.44
26:h:81:LEU:HA	26:h:84:ARG:HG3	2.00	0.44
26:h:93:ARG:HH11	26:h:93:ARG:HG3	1.82	0.44
32:5:21:G:C8	32:5:21:G:C3'	3.01	0.44
32:5:69:A:N1	32:5:70:A:C5	2.85	0.44
32:5:289:C:C4	32:5:290:U:H5	2.32	0.44
32:5:316:U:O4	32:5:4353:U:C1'	2.65	0.44
32:5:328:A:C6	32:5:329:A:C6	3.06	0.44
32:5:481:G:N2	32:5:482:G:C4	2.86	0.44
32:5:702:U:C2'	32:5:703:G:H4'	2.48	0.44
32:5:742:G:N1	32:5:743:G:C5	2.86	0.44
32:5:744:G:N1	32:5:921:C:C2	2.86	0.44
32:5:755:C:C4	32:5:756:G:N7	2.86	0.44
32:5:982:U:C2	32:5:983:C:C5	3.06	0.44
32:5:1185:G:C5	32:5:1186:U:C6	3.06	0.44
32:5:1214:C:OP1	32:5:1215:C:O2'	2.19	0.44
32:5:1277:G:C4	32:5:1278:C:C6	3.06	0.44
32:5:1372:A:C4	32:5:1373:A:C8	3.06	0.44
32:5:1463:C:O2	32:5:1463:C:H2'	2.17	0.44
32:5:1551:C:H3'	32:5:1552:G:O4'	2.17	0.44
32:5:1619:G:N3	32:5:1620:U:C6	2.86	0.44
32:5:1725:U:O2	32:5:1725:U:H2'	2.18	0.44
32:5:1819:G:N1	32:5:1820:C:C4	2.85	0.44
32:5:1960:A:C5	47:q:14:PHE:CE2	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1963:C:C4	32:5:1964:A:C8	3.06	0.44
32:5:2318:G:C2	32:5:2322:G:N3	2.86	0.44
32:5:2418:A:C6	32:5:2419:C:C4	3.06	0.44
32:5:2499:C:O2	32:5:2499:C:H2'	2.17	0.44
32:5:2577:C:O2	32:5:2577:C:C2'	2.64	0.44
32:5:2721:G:C2'	32:5:2722:G:H5'	2.47	0.44
32:5:3857:G:C6	32:5:3858:C:C6	3.06	0.44
32:5:3870:C:C4	32:5:3886:G:N1	2.86	0.44
32:5:3935:C:N3	32:5:3936:A:N7	2.66	0.44
32:5:4092:G:C6	32:5:4093:G:N3	2.86	0.44
32:5:4181:U:C4	32:5:4182:G:C5	3.05	0.44
32:5:4192:A:H2'	32:5:4193:C:O4'	2.17	0.44
32:5:4543:G:H2'	32:5:4544:A:C8	2.53	0.44
32:5:4635:A:H3'	32:5:4636:U:H4'	1.99	0.44
32:5:4686:G:N2	32:5:4687:A:H1'	2.33	0.44
32:5:4742:G:N1	32:5:4743:G:N7	2.65	0.44
32:5:4744:A:N3	32:5:4745:G:N7	2.66	0.44
32:5:4995:U:H2'	32:5:4996:C:O4'	2.18	0.44
33:7:82:G:N2	33:7:95:C:N1	2.65	0.44
34:8:69:U:H2'	34:8:70:G:C1'	2.48	0.44
34:8:85:U:C6	34:8:87:G:C8	3.06	0.44
40:P:115:GLU:HG3	40:P:116:HIS:N	2.32	0.44
46:K:37:LEU:CD2	46:K:37:LEU:C	2.81	0.44
48:z:381:SER:CB	51:4:207:C:O2'	2.55	0.44
50:3:50:C:C2	50:3:65:G:N2	2.86	0.44
51:4:33:G:C2	51:4:34:C:C2	3.05	0.44
54:S2:52:G:C2	54:S2:53:C:H1'	2.53	0.44
54:S2:338:G:C5	54:S2:339:A:N7	2.85	0.44
54:S2:339:A:C2'	54:S2:340:C:H6	2.30	0.44
54:S2:376:A:C6	54:S2:377:G:N7	2.86	0.44
54:S2:433:A:C2	54:S2:434:G:C5	3.06	0.44
54:S2:618:C:N4	54:S2:619:A:C6	2.85	0.44
54:S2:651:U:O2'	54:S2:652:U:H5'	2.18	0.44
54:S2:656:G:H22	54:S2:662:G:H4'	1.82	0.44
54:S2:666:U:O4'	54:S2:1088:U:O4	2.36	0.44
54:S2:674:C:C2	54:S2:675:U:C6	3.06	0.44
54:S2:693:A:C2	54:S2:694:G:C4	3.06	0.44
54:S2:867:G:H2'	54:S2:868:G:C8	2.52	0.44
54:S2:907:G:H3'	54:S2:908:A:C8	2.51	0.44
54:S2:936:G:C2	54:S2:937:C:C2	3.06	0.44
54:S2:958:G:H1'	54:S2:959:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:967:C:C6	54:S2:967:C:C3'	3.01	0.44
54:S2:968:U:O2	54:S2:968:U:H2'	2.18	0.44
54:S2:985:G:C2	54:S2:1002:U:C6	3.05	0.44
54:S2:1236:G:C2	54:S2:1237:C:C2	3.05	0.44
54:S2:1528:G:H2'	54:S2:1529:C:C6	2.53	0.44
54:S2:1538:C:C2	54:S2:1539:U:H5	2.26	0.44
54:S2:1559:C:O2	54:S2:1577:G:C2	2.71	0.44
54:S2:1563:G:C4	54:S2:1564:C:C6	3.06	0.44
54:S2:1588:A:O2'	54:S2:1589:A:P	2.76	0.44
54:S2:1591:C:N4	54:S2:1592:C:C5	2.86	0.44
54:S2:1644:C:HO2'	54:S2:1645:C:C1'	2.31	0.44
54:S2:1834:A:H2	54:S2:1837:G:N1	2.12	0.44
56:SB:65:ARG:HD3	65:SO:50:LYS:HE2	1.99	0.44
56:SB:158:HIS:O	56:SB:161:VAL:HB	2.17	0.44
74:SF:194:ASP:CG	74:SF:195:GLU:CD	2.85	0.44
78:SQ:41:MET:SD	78:SQ:41:MET:N	2.91	0.44
80:SS:30:ILE:CD1	80:SS:45:LEU:HG	2.48	0.44
80:SS:38:ARG:NH2	81:ST:45:LEU:HD22	2.28	0.44
89:S4:77:ASN:OD1	89:S4:77:ASN:N	2.50	0.44
1:A:128:ARG:HA	1:A:169:VAL:HG21	2.00	0.44
2:D:280:VAL:O	2:D:280:VAL:HG23	2.18	0.44
9:O:44:SER:HB3	9:O:129:LEU:HD11	2.00	0.44
11:R:52:ARG:CZ	11:R:52:ARG:HB2	2.48	0.44
19:a:73:VAL:HG22	19:a:108:TYR:CG	2.53	0.44
19:a:74:ASN:HB3	19:a:114:LYS:HB3	1.99	0.44
26:h:9:LEU:O	26:h:10:ARG:C	2.60	0.44
30:m:122:ARG:HE	32:5:4424:A:H5'	1.83	0.44
31:o:40:ARG:HH11	32:5:92:C:N4	2.16	0.44
32:5:43:U:C4	32:5:44:A:N9	2.85	0.44
32:5:154:G:C6	32:5:155:C:C4	3.05	0.44
32:5:278:G:N2	32:5:330:G:N9	2.66	0.44
32:5:405:U:H2'	32:5:407:A:N7	2.32	0.44
32:5:479:G:N1	32:5:480:C:C4	2.86	0.44
32:5:500:G:C2	32:5:655:C:C2	3.06	0.44
32:5:675:C:C2	32:5:676:C:C5	3.06	0.44
32:5:688:U:N3	32:5:689:U:C5	2.84	0.44
32:5:949:G:N1	32:5:950:G:N7	2.66	0.44
32:5:1100:U:O2	32:5:1167:C:C5	2.71	0.44
32:5:1372:A:C2	32:5:1373:A:H1'	2.52	0.44
32:5:1394:G:C4	32:5:1395:U:N3	2.86	0.44
32:5:1453:G:C2	32:5:1454:G:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1504:G:H2'	32:5:1505:C:C6	2.53	0.44
32:5:1568:C:OP2	44:p:2:ALA:HB3	2.17	0.44
32:5:1631:A:H5'	32:5:1632:A:C4	2.53	0.44
32:5:1632:A:H62	32:5:1634:A:H1'	1.82	0.44
32:5:1671:U:O4	32:5:1853:G:H1'	2.18	0.44
32:5:1895:G:C5	32:5:1896:A:C4	3.06	0.44
32:5:2526:C:O2'	32:5:2527:A:C8	2.60	0.44
32:5:2576:G:C6	32:5:2577:C:C6	3.06	0.44
32:5:2613:C:H42	32:5:2614:C:N4	2.16	0.44
32:5:2715:G:C5	32:5:2716:C:C5	3.05	0.44
32:5:2844:A:N1	32:5:3839:G:C8	2.83	0.44
32:5:3615:G:N3	32:5:3615:G:C2'	2.81	0.44
32:5:3621:A:C8	32:5:4642:U:C2'	3.01	0.44
32:5:3672:G:C6	32:5:3674:G:H1'	2.53	0.44
32:5:3711:A:C8	32:5:3712:A:O3'	2.70	0.44
32:5:3727:A:C2'	32:5:3728:A:C8	3.01	0.44
32:5:3741:C:C2	32:5:3742:G:H8	2.26	0.44
32:5:4364:G:C5	32:5:4365:C:C5	3.05	0.44
32:5:4369:A:C2	32:5:4370:G:N9	2.80	0.44
32:5:4404:U:C4	32:5:4436:U:N3	2.86	0.44
32:5:4455:G:N1	32:5:4456:C:C5	2.86	0.44
32:5:4666:G:C4	32:5:4667:C:C6	3.06	0.44
32:5:4754:G:C6	32:5:4880:C:N4	2.86	0.44
32:5:4892:A:C2	32:5:4893:A:H1'	2.53	0.44
32:5:4939:C:C2'	37:E:242:ARG:HH22	2.31	0.44
32:5:5000:G:C4	32:5:5001:U:C6	3.06	0.44
32:5:5022:U:O2	32:5:5022:U:H2'	2.16	0.44
33:7:34:C:N3	33:7:35:U:C5	2.86	0.44
33:7:42:A:C4	33:7:43:U:C6	3.06	0.44
33:7:69:U:O2	33:7:69:U:H2'	2.17	0.44
34:8:3:A:C5	34:8:4:C:C5	3.05	0.44
34:8:31:G:C2	34:8:32:C:C2	3.06	0.44
34:8:53:G:N3	34:8:54:C:C6	2.86	0.44
34:8:63:U:O2	34:8:63:U:H3'	2.18	0.44
36:C:237:ILE:H	36:C:237:ILE:HD12	1.82	0.44
38:F:144:TRP:CZ3	38:F:237:ASN:HB2	2.52	0.44
39:I:101:LYS:C	39:I:102:MET:HG2	2.43	0.44
46:K:10:ILE:HG22	46:K:65:GLN:O	2.18	0.44
46:K:94:LYS:HD3	46:K:96:LYS:HE3	1.99	0.44
48:z:273:ILE:CG1	48:z:285:PHE:CE1	3.01	0.44
48:z:405:ARG:HD2	51:4:207:C:C3'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:3:50:C:N3	50:3:65:G:C2	2.86	0.44
51:4:50:G:C2	51:4:51:G:C4	3.06	0.44
51:4:177:G:N2	51:4:221:C:HI'	2.33	0.44
54:S2:20:G:P	54:S2:620:G:H8	2.41	0.44
54:S2:43:U:N3	54:S2:484:A:H2	2.16	0.44
54:S2:394:G:N1	54:S2:395:G:C5	2.85	0.44
54:S2:478:G:C2	54:S2:479:C:C2	3.05	0.44
54:S2:483:C:C5	68:5X:44:ALA:HB1	2.53	0.44
54:S2:578:C:C5	54:S2:579:C:C6	3.06	0.44
54:S2:667:U:H5''	54:S2:1087:A:N1	2.31	0.44
54:S2:672:A:N1	54:S2:1162:C:H4'	2.33	0.44
54:S2:835:C:OP1	54:S2:835:C:H4'	2.18	0.44
54:S2:961:G:N3	54:S2:962:A:C8	2.85	0.44
54:S2:1010:G:H2'	54:S2:1011:A:H8	1.82	0.44
54:S2:1015:U:O2	54:S2:1017:U:C5	2.70	0.44
54:S2:1055:A:H2	54:S2:1063:C:H41	1.63	0.44
54:S2:1110:G:C5	54:S2:1111:U:C5	3.06	0.44
54:S2:1133:A:N3	54:S2:1133:A:H2'	2.33	0.44
54:S2:1232:U:O2'	54:S2:1253:A:C8	2.64	0.44
54:S2:1266:C:C2	54:S2:1267:C:H5	2.36	0.44
54:S2:1286:G:N2	76:5M:33:ARG:HD2	2.26	0.44
54:S2:1335:G:C5	54:S2:1336:C:C5	3.05	0.44
54:S2:1453:C:C6	79:5R:28:PHE:CE2	3.05	0.44
54:S2:1459:G:C2	54:S2:1460:C:C2	3.05	0.44
54:S2:1568:C:H2'	54:S2:1569:A:N7	2.32	0.44
54:S2:1630:A:C6	54:S2:1631:U:C4	3.06	0.44
54:S2:1860:A:C2	54:S2:1862:G:N9	2.85	0.44
54:S2:1862:G:N1	70:5a:75:VAL:HB	2.33	0.44
56:5B:79:VAL:HG21	56:5B:81:PHE:CZ	2.53	0.44
62:5J:29:LEU:HD22	72:5e:38:TYR:HB2	1.99	0.44
77:5P:28:MET:HE1	77:5P:36:LEU:CD1	2.48	0.44
77:5P:43:ARG:HB3	77:5P:47:ARG:HD3	2.00	0.44
79:5R:99:ASP:N	79:5R:102:THR:OG1	2.51	0.44
80:5S:10:GLN:NE2	80:5S:10:GLN:CA	2.80	0.44
80:5S:12:ILE:HA	80:5S:22:GLY:HA3	2.00	0.44
81:5T:14:PHE:HE2	81:5T:135:ALA:HB2	1.83	0.44
87:5g:120:ILE:HB	87:5g:132:TRP:O	2.18	0.44
87:5g:146:SER:HA	87:5g:177:TRP:CZ2	2.53	0.44
87:5g:202:PRO:HG3	87:5g:243:PRO:HA	2.00	0.44
3:G:107:LYS:O	3:G:108:GLN:HB2	2.18	0.43
3:G:108:GLN:HG3	32:5:143:C:O2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:180:PHE:CD2	8:N:180:PHE:N	2.86	0.43
8:N:192:TRP:HZ2	32:5:49:U:H5'	1.82	0.43
9:O:76:PRO:HB3	9:O:138:LEU:HD23	1.99	0.43
9:O:167:HIS:CD2	9:O:167:HIS:C	2.96	0.43
12:S:29:ARG:O	12:S:29:ARG:NH1	2.51	0.43
13:T:66:ASN:OD1	20:b:35:VAL:HA	2.18	0.43
14:U:104:ALA:HA	14:U:110:TYR:HD1	1.83	0.43
19:a:91:ALA:HB2	19:a:120:GLN:OE1	2.18	0.43
19:a:148:ALA:HA	27:i:8:ALA:HB2	1.99	0.43
21:c:32:LYS:HB3	32:5:2675:G:O6	2.17	0.43
32:5:101:A:N6	32:5:102:G:C5	2.85	0.43
32:5:129:C:C2	32:5:130:C:C5	3.06	0.43
32:5:145:G:N2	32:5:146:G:N9	2.66	0.43
32:5:254:G:C5	32:5:255:C:C5	3.06	0.43
32:5:272:U:N3	32:5:273:U:C4	2.86	0.43
32:5:423:G:C4	32:5:424:U:C6	3.06	0.43
32:5:426:A:C2	32:5:427:A:C6	3.06	0.43
32:5:1072:C:N4	32:5:1239:C:C4	2.86	0.43
32:5:1219:G:N1	32:5:1220:G:C5	2.85	0.43
32:5:1354:A:H4'	32:5:1355:G:O5'	2.17	0.43
32:5:2435:G:O4'	32:5:2527:A:C2	2.71	0.43
32:5:2463:G:N3	32:5:2464:C:C6	2.86	0.43
32:5:2666:U:C5	32:5:2668:G:OP2	2.70	0.43
32:5:2703:G:C4	32:5:2704:C:C6	3.06	0.43
32:5:2824:C:H3'	32:5:2825:A:C8	2.52	0.43
32:5:2840:A:C2	32:5:2841:G:C8	3.06	0.43
32:5:2852:U:C2	32:5:2852:U:C3'	3.01	0.43
32:5:3594:C:H2'	32:5:3597:G:H1'	2.00	0.43
32:5:3654:G:C5	32:5:3655:C:C5	3.06	0.43
32:5:3668:C:C4	32:5:3669:G:C5	3.05	0.43
32:5:4109:G:N3	32:5:4110:C:C6	2.85	0.43
32:5:4196:G:N3	32:5:4396:A:H1'	2.33	0.43
32:5:4209:G:C6	32:5:4210:U:C4	3.06	0.43
32:5:4479:A:C5	32:5:4480:A:C8	3.06	0.43
32:5:4550:G:N2	32:5:4551:U:C1'	2.81	0.43
32:5:4958:C:H2'	32:5:4959:U:OP1	2.17	0.43
34:8:49:G:C6	34:8:50:C:C4	3.06	0.43
37:E:277:ILE:N	37:E:278:TYR:HE2	2.12	0.43
39:I:39:LYS:HB3	39:I:86:HIS:CE1	2.53	0.43
41:W:50:ASN:CA	41:W:55:TYR:CE2	3.00	0.43
44:p:10:ILE:HG12	44:p:30:GLU:HB3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:z:232:GLN:HB3	48:z:236:PHE:HE2	1.83	0.43
48:z:383:ASN:HB3	51:4:209:G:OP2	2.17	0.43
51:4:50:G:C2	51:4:51:G:C8	3.06	0.43
51:4:58:G:N7	51:4:289:A:N1	2.65	0.43
54:S2:2:A:C1'	54:S2:3:C:OP1	2.66	0.43
54:S2:107:A:H2'	54:S2:108:G:O4'	2.17	0.43
54:S2:218:U:H2'	54:S2:219:U:H6	1.82	0.43
54:S2:302:A:N1	54:S2:303:C:C4	2.86	0.43
54:S2:381:C:C2'	54:S2:382:C:C5	3.01	0.43
54:S2:447:A:C2	54:S2:449:A:H1'	2.53	0.43
54:S2:493:A:N7	54:S2:574:A:N7	2.66	0.43
54:S2:841:G:O2'	54:S2:842:C:C6	2.65	0.43
54:S2:983:A:H2'	54:S2:984:C:C6	2.52	0.43
54:S2:1029:G:N1	54:S2:1030:A:C8	2.85	0.43
54:S2:1287:A:C6	54:S2:1313:A:N7	2.86	0.43
54:S2:1292:C:C5'	86:Sf:148:TYR:HA	2.47	0.43
54:S2:1328:G:N2	54:S2:1502:C:C2	2.86	0.43
54:S2:1335:G:C4	54:S2:1336:C:C6	3.06	0.43
54:S2:1425:G:C6	54:S2:1426:U:H1'	2.53	0.43
54:S2:1666:C:H2'	54:S2:1667:U:C6	2.53	0.43
55:SA:169:HIS:CD2	55:SA:203:PHE:CE2	3.06	0.43
57:SC:65:LYS:HB2	57:SC:273:LEU:HD22	2.00	0.43
57:SC:179:THR:OG1	57:SC:180:VAL:N	2.50	0.43
68:SX:7:LEU:HD13	68:SX:7:LEU:O	2.18	0.43
74:SF:91:ARG:O	74:SF:95:HIS:N	2.51	0.43
1:A:225:ILE:HD11	1:A:233:ARG:HB3	2.00	0.43
4:H:156:ASN:O	4:H:160:LEU:N	2.48	0.43
4:H:171:ASP:OD2	32:5:4476:C:C6	2.71	0.43
7:M:4:ARG:NH2	32:5:4870:G:O6	2.51	0.43
8:N:160:GLU:OE1	8:N:160:GLU:N	2.49	0.43
8:N:179:LYS:HD3	32:5:298:G:OP1	2.18	0.43
8:N:192:TRP:NE1	32:5:48:G:H5'	2.23	0.43
10:Q:178:ARG:NH1	32:5:4339:A:HO2'	2.07	0.43
12:S:28:TYR:CD1	12:S:28:TYR:N	2.86	0.43
17:Y:11:ARG:NH1	17:Y:15:ARG:HD2	2.18	0.43
20:b:18:ARG:NH1	32:5:1668:A:OP1	2.51	0.43
21:c:31:TYR:CD1	21:c:32:LYS:N	2.83	0.43
24:f:45:LYS:HA	24:f:107:PRO:HG2	2.00	0.43
28:k:17:ARG:NH1	32:5:2772:C:O2'	2.51	0.43
31:o:82:MET:CE	32:5:4345:C:H1'	2.48	0.43
32:5:55:G:N2	32:5:56:A:N9	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:98:A:H1'	32:5:292:G:C6	2.53	0.43
32:5:275:C:C2'	32:5:276:C:H5''	2.48	0.43
32:5:282:C:C4	32:5:283:G:C5	3.06	0.43
32:5:343:C:C2	32:5:344:A:C8	3.06	0.43
32:5:922:C:N3	32:5:923:C:C5	2.86	0.43
32:5:962:C:C5	45:r:112:ARG:NH2	2.85	0.43
32:5:1189:G:N2	32:5:1190:C:C2	2.86	0.43
32:5:1263:A:C6	32:5:1264:C:C5	3.06	0.43
32:5:1311:G:N2	32:5:1312:A:H1'	2.33	0.43
32:5:1466:G:N1	32:5:1467:C:C5	2.86	0.43
32:5:1552:G:HO2'	32:5:1575:A:N6	2.15	0.43
32:5:1851:G:H2'	32:5:1852:U:O4'	2.18	0.43
32:5:1859:C:C5	32:5:1860:U:C5	3.06	0.43
32:5:1878:G:C2	32:5:1879:C:C2	3.05	0.43
32:5:2050:G:C6	32:5:2051:C:C4	3.06	0.43
32:5:2305:U:H4'	32:5:2306:G:OP2	2.18	0.43
32:5:2786:C:C4'	32:5:2787:A:C8	3.01	0.43
32:5:2835:A:C1'	32:5:4979:A:H5'	2.48	0.43
32:5:3674:G:N3	32:5:3675:G:C8	2.85	0.43
32:5:3777:G:N2	32:5:3815:G:H2'	2.33	0.43
32:5:3785:A:C2	32:5:4536:C:O2'	2.65	0.43
32:5:3870:C:N3	32:5:3886:G:C2	2.86	0.43
32:5:3901:A:N7	32:5:4450:U:C6	2.86	0.43
32:5:4108:G:N1	32:5:4109:G:C5	2.86	0.43
32:5:4129:G:C2	32:5:4130:C:C2	3.06	0.43
32:5:4139:G:C2	32:5:4140:C:C6	3.05	0.43
32:5:4199:C:C3'	32:5:4199:C:C2	3.00	0.43
32:5:4251:A:O2'	32:5:4252:C:O5'	2.37	0.43
32:5:4316:G:C4	32:5:4317:A:C8	3.06	0.43
32:5:4361:U:N3	32:5:4362:A:N7	2.66	0.43
32:5:4452:U:N3	49:2:127:MET:SD	2.91	0.43
32:5:4480:A:C2	32:5:4481:U:H1'	2.50	0.43
32:5:4560:C:H5'	32:5:4560:C:C2	2.53	0.43
32:5:4741:C:N3	32:5:4742:G:H8	2.15	0.43
32:5:4878:C:O2	32:5:4878:C:C2'	2.64	0.43
32:5:4904:G:C2	32:5:4905:C:C2	3.06	0.43
32:5:4967:A:C2	32:5:4968:A:C5	3.06	0.43
32:5:4996:C:C2	32:5:4997:G:C8	3.06	0.43
32:5:5001:U:H2'	32:5:5002:U:O5'	2.17	0.43
32:5:5043:A:C2'	32:5:5044:A:O5'	2.66	0.43
34:8:139:G:H2'	34:8:140:C:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:B:254:ILE:HG21	35:B:262:VAL:CG1	2.48	0.43
35:B:285:TYR:CE2	35:B:334:LYS:HB2	2.53	0.43
35:B:367:PHE:HZ	35:B:369:ASP:CA	2.30	0.43
36:C:27:VAL:HG21	36:C:264:TYR:CE1	2.54	0.43
42:j:27:TYR:OH	42:j:39:TYR:HB3	2.19	0.43
47:q:99:ARG:O	47:q:103:ARG:HG3	2.18	0.43
48:z:407:ALA:O	48:z:412:VAL:O	2.36	0.43
51:4:33:G:C2	51:4:34:C:C6	3.06	0.43
54:S2:144:U:H2'	54:S2:145:G:H8	1.83	0.43
54:S2:601:G:O2'	54:S2:602:G:H8	1.88	0.43
54:S2:832:G:C6	54:S2:833:C:C2	3.05	0.43
54:S2:947:G:C6	54:S2:948:C:C5	3.06	0.43
54:S2:1016:U:OP2	64:SN:14:SER:HA	2.18	0.43
54:S2:1029:G:N1	54:S2:1030:A:N7	2.66	0.43
54:S2:1545:A:N6	54:S2:1588:A:C6	2.84	0.43
54:S2:1564:C:N3	54:S2:1565:C:H5	2.05	0.43
54:S2:1594:A:N3	54:S2:1595:U:C6	2.85	0.43
54:S2:1654:G:C2	54:S2:1655:C:C2	3.05	0.43
54:S2:1727:G:C5	54:S2:1728:U:C5	3.06	0.43
54:S2:1732:G:H2'	54:S2:1732:G:N3	2.32	0.43
54:S2:1808:U:C2	54:S2:1809:A:N7	2.86	0.43
54:S2:1825:A:O2'	54:S2:1826:G:P	2.76	0.43
56:SB:82:ARG:NH1	56:SB:188:LEU:O	2.52	0.43
62:SJ:102:ILE:O	62:SJ:103:GLU:C	2.61	0.43
69:SY:20:ARG:HE	69:SY:76:TYR:HE1	1.65	0.43
74:SF:102:LEU:HD13	83:SZ:110:THR:HG22	1.93	0.43
76:SM:50:CYS:SG	76:SM:51:VAL:N	2.90	0.43
78:SQ:23:ALA:HA	78:SQ:70:VAL:HA	2.00	0.43
80:SS:20:ILE:CG2	80:SS:21:ASP:N	2.81	0.43
2:D:210:TYR:C	2:D:210:TYR:CD1	2.92	0.43
2:D:284:LYS:HB2	39:I:209:TRP:CH2	2.53	0.43
4:H:64:ARG:HE	32:5:4692:A:HO2'	1.63	0.43
4:H:95:VAL:HG22	30:m:82:LEU:HD22	2.01	0.43
5:J:26:VAL:O	5:J:28:GLU:N	2.51	0.43
6:L:9:ILE:HD13	6:L:9:ILE:HA	1.93	0.43
7:M:17:PHE:CD1	32:5:1921:C:C5	3.02	0.43
7:M:39:ASP:OD1	7:M:39:ASP:C	2.60	0.43
8:N:34:SER:C	8:N:65:ARG:HH11	2.26	0.43
11:R:114:LYS:HG3	32:5:3595:U:O2'	2.18	0.43
12:S:13:VAL:HG12	12:S:29:ARG:N	2.33	0.43
18:Z:38:TYR:CE2	18:Z:76:ASN:CG	2.93	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:c:28:VAL:CG1	21:c:33:GLN:CB	2.94	0.43
22:d:25:TYR:CE2	22:d:119:THR:HG22	2.52	0.43
29:l:4:HIS:HB3	32:5:2512:A:C5	2.54	0.43
31:o:37:GLY:HA3	32:5:4343:U:OP1	2.18	0.43
32:5:69:A:C6	32:5:70:A:C6	3.06	0.43
32:5:136:C:O2'	32:5:137:G:H8	2.00	0.43
32:5:173:C:C4	32:5:174:C:C5	3.02	0.43
32:5:183:C:H1'	32:5:184:U:C4	2.54	0.43
32:5:458:C:C4	32:5:459:C:C4	3.06	0.43
32:5:487:G:C4	32:5:488:G:C8	3.06	0.43
32:5:944:A:C2'	36:C:335:MET:HE1	2.49	0.43
32:5:957:G:H5'	32:5:1284:G:H22	1.83	0.43
32:5:1167:C:H1'	32:5:1195:G:N2	2.33	0.43
32:5:1277:G:N2	32:5:1278:C:N1	2.67	0.43
32:5:1322:A:N1	32:5:1326:A:C8	2.86	0.43
32:5:1390:G:C8	32:5:1390:G:C3'	3.01	0.43
32:5:1474:C:H2'	32:5:1475:G:C8	2.54	0.43
32:5:1478:C:C2	32:5:1479:G:N7	2.67	0.43
32:5:1563:A:N6	54:S2:677:G:C2'	2.77	0.43
32:5:1570:G:C2	32:5:1571:G:C1'	3.01	0.43
32:5:1756:U:O4	32:5:1776:A:N1	2.51	0.43
32:5:1789:C:C2'	32:5:1790:U:O5'	2.66	0.43
32:5:1806:G:C2	32:5:1807:C:N1	2.86	0.43
32:5:1895:G:O6	32:5:1896:A:C2	2.71	0.43
32:5:1922:G:C2	32:5:1923:A:C8	3.06	0.43
32:5:2058:G:H21	32:5:2059:C:C1'	2.31	0.43
32:5:2060:G:C4	32:5:2061:U:C5	3.06	0.43
32:5:2276:A:C5	32:5:2277:C:C6	3.06	0.43
32:5:2322:G:C2	32:5:2323:C:C2	3.06	0.43
32:5:2325:C:C2	32:5:2326:G:H8	2.37	0.43
32:5:2330:G:H2'	32:5:2331:G:O4'	2.17	0.43
32:5:2431:A:C6	32:5:2432:U:C4	3.06	0.43
32:5:2533:C:O2'	32:5:2534:C:O5'	2.36	0.43
32:5:2624:G:C6	32:5:2625:U:C4	3.07	0.43
32:5:2898:G:C4	32:5:2899:C:C5	3.06	0.43
32:5:3711:A:H8	32:5:3712:A:O3'	2.01	0.43
32:5:3714:G:C5'	32:5:3715:U:OP2	2.66	0.43
32:5:3732:A:C4	32:5:3733:A:C8	3.06	0.43
32:5:3754:G:C2	32:5:3755:G:C4	3.06	0.43
32:5:3756:A:H2'	32:5:3757:G:C8	2.53	0.43
32:5:3868:G:N2	32:5:3899:G:H21	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3909:C:C4	32:5:3910:C:C5	2.91	0.43
32:5:4130:C:C2	32:5:4131:G:C8	3.06	0.43
32:5:4136:G:C2	32:5:4149:C:C2	3.06	0.43
32:5:4283:G:H21	32:5:4284:C:C1'	2.31	0.43
32:5:4530:U:C6	32:5:4530:U:H5''	2.53	0.43
32:5:4619:U:C2	32:5:4620:U:C5	3.06	0.43
32:5:4970:C:C2	32:5:4971:A:C8	3.06	0.43
32:5:4997:G:C5	32:5:4998:G:C8	3.06	0.43
32:5:5004:C:H3'	32:5:5005:G:O4'	2.18	0.43
33:7:20:U:C2	33:7:21:G:N7	2.87	0.43
34:8:13:G:C2	34:8:14:U:N3	2.86	0.43
35:B:56:ILE:O	35:B:73:VAL:HA	2.18	0.43
35:B:237:THR:HG22	35:B:238:LYS:H	1.83	0.43
36:C:335:MET:HE2	36:C:335:MET:HB3	1.84	0.43
37:E:212:TYR:HE1	37:E:242:ARG:HH11	1.66	0.43
38:F:73:MET:CB	38:F:84:TYR:HE2	2.28	0.43
39:I:36:LEU:HD11	39:I:69:ARG:HD2	2.00	0.43
39:I:46:PHE:CZ	39:I:85:PHE:HA	2.53	0.43
40:P:30:ARG:HH22	40:P:62:ARG:NH2	2.16	0.43
41:W:55:TYR:O	41:W:56:ARG:C	2.61	0.43
47:q:22:ASP:CG	47:q:66:ARG:HE	2.27	0.43
47:q:160:LEU:HD12	47:q:175:LEU:HD21	1.99	0.43
48:z:197:GLN:CG	48:z:201:LEU:HD12	2.49	0.43
48:z:343:GLY:C	48:z:346:SER:HB2	2.14	0.43
50:3:67:G:N1	50:3:68:G:C5	2.86	0.43
51:4:119[B]:A:H5''	53:6:78:TYR:HE1	1.83	0.43
51:4:201:A:H2'	51:4:202:C:O4'	2.18	0.43
54:S2:27:A:C4	54:S2:28:U:C6	3.06	0.43
54:S2:46:A:N1	54:S2:99:A:C5	2.87	0.43
54:S2:84:A:C2	54:S2:85:A:N9	2.86	0.43
54:S2:85:A:N1	54:S2:86:C:C5	2.86	0.43
54:S2:116:U:N3	54:S2:117:C:C5	2.87	0.43
54:S2:431:G:C2	54:S2:432:G:N9	2.86	0.43
54:S2:443:U:O4	54:S2:444:G:C4	2.71	0.43
54:S2:539:C:C4	54:S2:540:U:C5	3.06	0.43
54:S2:549:C:H2'	54:S2:549:C:O2	2.17	0.43
54:S2:637:U:C2'	54:S2:638:C:O5'	2.66	0.43
54:S2:818:A:C2	54:S2:819:G:C1'	3.01	0.43
54:S2:909:G:N3	54:S2:909:G:H2'	2.33	0.43
54:S2:942:G:H2'	54:S2:943:U:C6	2.53	0.43
54:S2:973:C:N3	65:SO:55:ARG:NH1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1040:G:C2	54:S2:1041:G:H1'	2.53	0.43
54:S2:1074:C:C2	54:S2:1075:C:H5	2.30	0.43
54:S2:1093:A:N1	54:S2:1094:C:C6	2.86	0.43
54:S2:1131:G:C2	54:S2:1132:C:N1	2.86	0.43
54:S2:1204:A:C2	54:S2:1205:C:N4	2.85	0.43
54:S2:1277:C:H5'	75:SK:51:SER:HA	2.00	0.43
54:S2:1284:A:N1	76:SM:33:ARG:O	2.50	0.43
54:S2:1310:U:C4'	86:Sf:143:LYS:CD	2.96	0.43
54:S2:1422:G:N3	54:S2:1422:G:H2'	2.33	0.43
54:S2:1654:G:C2	54:S2:1671:G:N1	2.86	0.43
54:S2:1784:G:C2	54:S2:1785:C:C2	3.06	0.43
54:S2:1784:G:C4	54:S2:1785:C:C5	3.06	0.43
56:SB:145:LYS:HZ3	79:SR:128:PHE:HZ	1.54	0.43
57:SC:108:LYS:HB3	57:SC:233:LEU:HD23	2.00	0.43
58:SE:56:LEU:HD11	69:SY:74:MET:HE1	2.00	0.43
58:SE:85:GLY:O	58:SE:86:PHE:C	2.60	0.43
58:SE:191:ARG:NE	58:SE:218:PHE:CD1	2.86	0.43
69:SY:22:GLN:HB2	69:SY:74:MET:HE3	2.00	0.43
75:SK:95:ARG:HA	75:SK:95:ARG:NE	2.17	0.43
80:SS:8:LYS:O	80:SS:11:HIS:CE1	2.70	0.43
83:SZ:45:ASN:OD1	83:SZ:45:ASN:N	2.51	0.43
87:Sg:241:PHE:CE1	87:Sg:248:LEU:HD13	2.54	0.43
5:J:119:TYR:HE1	80:SS:12:ILE:CG1	2.26	0.43
6:L:28:GLN:HG2	8:N:202:ARG:HH11	1.82	0.43
6:L:94:ILE:HA	26:h:119:PHE:CZ	2.53	0.43
8:N:4:TYR:CE2	8:N:49:ARG:HD3	2.53	0.43
8:N:68:ARG:HG3	32:5:302:C:OP1	2.18	0.43
11:R:93:VAL:HG12	11:R:97:ARG:HG3	2.00	0.43
11:R:124:TYR:CE2	32:5:2665:U:C5	3.07	0.43
11:R:166:THR:CG2	54:S2:872:A:O2'	2.66	0.43
12:S:39:VAL:O	12:S:43:ARG:N	2.49	0.43
12:S:168:THR:OG1	12:S:169:THR:N	2.50	0.43
15:V:97:TYR:OH	41:W:37:GLU:HG2	2.18	0.43
22:d:29:ILE:CG2	22:d:33:ILE:HD12	2.48	0.43
32:5:65:A:N7	32:5:67:C:C2	2.86	0.43
32:5:90:G:C8	32:5:92:C:C1'	3.01	0.43
32:5:127:G:C6	32:5:128:C:N4	2.86	0.43
32:5:145:G:N2	32:5:146:G:H1'	2.31	0.43
32:5:193:G:C5	32:5:194:C:C6	3.07	0.43
32:5:320:C:C5	32:5:321:U:C5	3.06	0.43
32:5:399:G:N2	40:P:101:ASN:OD1	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:735:G:C5	32:5:736:C:C4	3.06	0.43
32:5:951:G:N2	32:5:952:G:C4	2.86	0.43
32:5:1337:A:C2	32:5:1659:U:O4'	2.72	0.43
32:5:1627:G:N7	32:5:1628:C:C5	2.86	0.43
32:5:2065:G:N2	32:5:2066:C:H1'	2.33	0.43
32:5:2082:G:O2'	32:5:2083:C:C5'	2.66	0.43
32:5:2086:G:C6	32:5:2087:C:C4	3.07	0.43
32:5:2316:G:H2'	32:5:2317:C:H6	1.83	0.43
32:5:2406:G:H5''	32:5:2407:G:OP2	2.18	0.43
32:5:2481:G:C6	32:5:2482:C:C5	3.06	0.43
32:5:2496:G:C4	32:5:2497:C:C5	3.06	0.43
32:5:2581:A:HO2'	32:5:2582:A:C5'	2.32	0.43
32:5:2591:A:N6	32:5:2753:G:N2	2.66	0.43
32:5:2610:G:H2'	32:5:2611:A:O4'	2.17	0.43
32:5:2623:A:C2	32:5:2624:G:N7	2.86	0.43
32:5:2683:C:H2'	32:5:2684:C:O5'	2.17	0.43
32:5:2736:G:N1	32:5:2737:C:N4	2.62	0.43
32:5:2823:G:C6	32:5:2824:C:C4	3.06	0.43
32:5:3600:G:N2	32:5:3601:C:C2	2.86	0.43
32:5:3605:C:H2'	32:5:3605:C:O2	2.16	0.43
32:5:3615:G:H1'	41:W:44:ARG:CD	2.47	0.43
32:5:3703:G:N3	32:5:3704:U:C6	2.85	0.43
32:5:3722:G:N3	32:5:3723:A:C8	2.87	0.43
32:5:3754:G:N2	32:5:3755:G:N9	2.66	0.43
32:5:3792:G:C4	32:5:3793:U:C5	3.06	0.43
32:5:3803:A:H2'	32:5:3803:A:N3	2.32	0.43
32:5:3819:G:H2'	32:5:3819:G:N3	2.34	0.43
32:5:3946:G:N1	32:5:3947:A:C5	2.86	0.43
32:5:4094:G:C2	32:5:4095:G:C4	3.07	0.43
32:5:4131:G:C5	32:5:4132:C:C5	3.05	0.43
32:5:4277:G:N2	32:5:4278:C:N1	2.67	0.43
32:5:4298:A:C5	32:5:4299:U:C5	3.07	0.43
32:5:4314:C:N4	32:5:4315:A:N7	2.65	0.43
32:5:4414:A:H3'	32:5:4422:A:N1	2.33	0.43
32:5:4985:U:O2	32:5:4986:G:C8	2.72	0.43
32:5:5050:C:N1	35:B:374:PHE:CE2	2.86	0.43
33:7:23:A:O2'	33:7:24:C:P	2.77	0.43
34:8:4:C:C2	34:8:5:U:C6	3.06	0.43
34:8:108:A:N3	34:8:112:G:N2	2.66	0.43
35:B:371:THR:HG21	41:W:17:HIS:HE1	1.83	0.43
38:F:238:ARG:O	38:F:239:GLU:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K:1:MET:SD	46:K:1:MET:N	2.92	0.43
48:z:73:LYS:C	48:z:73:LYS:CD	2.85	0.43
48:z:346:SER:HG	48:z:369:MET:HE3	1.75	0.43
48:z:409:GLY:CA	51:4:194:G:N2	2.81	0.43
51:4:18:G:N3	51:4:19:C:C6	2.86	0.43
51:4:51:G:N1	51:4:52:C:C4	2.87	0.43
53:6:90:LEU:HD22	53:6:115:TYR:CE1	2.53	0.43
54:S2:104:A:N7	54:S2:105:U:C5	2.86	0.43
54:S2:145:G:N7	59:SG:178:ARG:NH1	2.67	0.43
54:S2:200:G:H2'	54:S2:201:C:O4'	2.18	0.43
54:S2:364:A:N1	54:S2:397:G:C2	2.86	0.43
54:S2:447:A:C6	54:S2:449:A:N3	2.85	0.43
54:S2:455:A:H2'	54:S2:456:C:C6	2.53	0.43
54:S2:666:U:C2	54:S2:667:U:C4	3.07	0.43
54:S2:683:G:H2'	54:S2:683:G:N3	2.33	0.43
54:S2:697:G:C2	54:S2:734:C:O2	2.71	0.43
54:S2:698:G:N1	54:S2:733:C:C2	2.87	0.43
54:S2:818:A:C6	54:S2:819:G:C5	3.06	0.43
54:S2:859:G:N2	54:S2:860:G:H1'	2.33	0.43
54:S2:862:A:C2	54:S2:863:U:C1'	3.01	0.43
54:S2:1034:A:C6	54:S2:1082:A:C5	3.06	0.43
54:S2:1236:G:C6	54:S2:1237:C:N4	2.87	0.43
54:S2:1277:C:H2'	54:S2:1278:A:C8	2.53	0.43
54:S2:1365:G:C6	54:S2:1375:G:N2	2.86	0.43
54:S2:1393:G:C6	54:S2:1394:G:C8	3.05	0.43
54:S2:1407:U:O2	54:S2:1408:U:C4	2.71	0.43
54:S2:1431:G:C6	54:S2:1432:U:C6	3.06	0.43
54:S2:1491:G:H2'	54:S2:1492:U:O4'	2.18	0.43
54:S2:1535:U:O2	54:S2:1535:U:O4'	2.37	0.43
54:S2:1668:U:C5'	82:SU:77:TRP:CH2	2.99	0.43
55:SA:138:SER:CB	55:SA:156:TYR:CE1	3.01	0.43
58:SE:67:GLN:CB	58:SE:69:PHE:CE2	3.00	0.43
58:SE:253:ASP:O	58:SE:257:ALA:N	2.49	0.43
60:SH:131:GLU:OE2	60:SH:139:ILE:HD12	2.18	0.43
60:SH:144:ILE:HG21	60:SH:152:ARG:HH12	1.83	0.43
61:SI:65:PHE:CE2	61:SI:104:ILE:HG21	2.54	0.43
73:SD:106:ARG:HH21	73:SD:107:TYR:HB2	1.83	0.43
76:SM:34:GLY:O	76:SM:36:ARG:N	2.52	0.43
87:Sg:17:TRP:HB3	87:Sg:303:THR:HG22	2.00	0.43
87:Sg:178:ASN:O	87:Sg:182:CYS:HA	2.17	0.43
87:Sg:226:HIS:HE1	87:Sg:228:TYR:HA	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
89:S4:9:PHE:CE1	89:S4:69:THR:HG22	2.53	0.43
1:A:158:ILE:CG2	1:A:162:ASN:OD1	2.67	0.43
10:Q:37:ARG:HH21	10:Q:37:ARG:CG	2.31	0.43
10:Q:93:GLN:CB	19:a:87:ARG:HH12	2.31	0.43
31:o:57:ARG:HH11	31:o:57:ARG:HG3	1.83	0.43
32:5:112:C:C5	32:5:157:U:O4	2.71	0.43
32:5:194:C:C4	32:5:195:C:C6	3.06	0.43
32:5:482:G:C2'	32:5:483:G:O4'	2.67	0.43
32:5:493:G:C6	32:5:494:U:C6	3.06	0.43
32:5:709:C:H4'	37:E:186:HIS:HE1	1.83	0.43
32:5:728:U:H5''	38:F:78:ARG:HD3	2.01	0.43
32:5:914:U:H2'	32:5:915:A:C1'	2.47	0.43
32:5:979:C:C4	32:5:980:U:C5	3.06	0.43
32:5:1218:G:H2'	32:5:1218:G:N3	2.34	0.43
32:5:1271:G:O6	32:5:2109:G:O6	2.37	0.43
32:5:1416:G:C2	32:5:1417:C:C2	3.06	0.43
32:5:1447:C:C2	32:5:2098:G:N1	2.86	0.43
32:5:1463:C:N3	32:5:1464:C:C6	2.86	0.43
32:5:1516:G:N1	32:5:1518:A:C5	2.87	0.43
32:5:1556:C:O2	32:5:1556:C:H2'	2.18	0.43
32:5:1676:C:C5	32:5:4374:U:O2	2.71	0.43
32:5:1758:G:N3	32:5:1758:G:H2'	2.33	0.43
32:5:2270:G:C6	32:5:2271:C:C4	3.05	0.43
32:5:2340:C:O2	32:5:2340:C:C2'	2.57	0.43
32:5:2363:A:C1'	32:5:4560:C:C5	2.99	0.43
32:5:2365:C:C2	32:5:2829:U:H5	2.34	0.43
32:5:2560:C:C2	32:5:2561:C:C6	3.06	0.43
32:5:2820:C:H2'	32:5:2820:C:O2	2.17	0.43
32:5:2832:A:N6	32:5:2833:A:N6	2.66	0.43
32:5:2835:A:N7	32:5:3852:A:C2	2.86	0.43
32:5:3593:C:H2'	32:5:3595:U:C5	2.53	0.43
32:5:3717:A:N6	32:5:3736:A:C4	2.86	0.43
32:5:4093:G:O6	32:5:4094:G:C5	2.72	0.43
32:5:4122:G:N7	32:5:4123:C:C5	2.86	0.43
32:5:4139:G:C2	32:5:4140:C:C2	3.06	0.43
32:5:4183:G:C4	32:5:4183:G:H5''	2.53	0.43
32:5:4198:G:N2	50:3:74:C:C5	2.87	0.43
32:5:4631:G:H2'	32:5:4632:U:O4'	2.19	0.43
32:5:4730:C:H2'	32:5:4965:U:N3	2.33	0.43
32:5:4950:U:C4	32:5:4952:G:H1'	2.54	0.43
33:7:44:C:C2	33:7:45:U:C6	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:53:G:C4	34:8:54:C:C5	3.06	0.43
34:8:116:C:C2	34:8:117:C:C6	3.06	0.43
34:8:148:A:H2'	34:8:149:G:C8	2.54	0.43
35:B:54:THR:OG1	35:B:55:HIS:N	2.50	0.43
35:B:288:GLY:HA3	35:B:330:PHE:CE2	2.53	0.43
38:F:59:TYR:CE2	38:F:194:HIS:CD2	3.06	0.43
48:z:381:SER:C	51:4:208:A:C4'	2.91	0.43
51:4:31:C:C2	51:4:41:G:C2	3.06	0.43
51:4:49:A:C4	51:4:50:G:C8	3.06	0.43
51:4:151:C:H41	52:9:34:ARG:NH2	2.17	0.43
52:9:14:ARG:HA	52:9:14:ARG:HD2	1.83	0.43
52:9:24:ASN:ND2	52:9:44:PRO:HD2	2.33	0.43
54:S2:18:C:C4	54:S2:19:A:N7	2.85	0.43
54:S2:164:A:C4	54:S2:165:G:C2	3.06	0.43
54:S2:173:A:C5	54:S2:174:C:C5	3.06	0.43
54:S2:322:C:H2'	54:S2:323:C:H6	1.83	0.43
54:S2:411:G:N2	54:S2:430:C:C2	2.87	0.43
54:S2:413:G:C4	54:S2:425:G:N2	2.86	0.43
54:S2:426:A:N3	54:S2:426:A:C3'	2.79	0.43
54:S2:449:A:C5	54:S2:452:G:C5	2.87	0.43
54:S2:533:A:C2	54:S2:534:G:N9	2.85	0.43
54:S2:571:U:C2	54:S2:572:U:C6	3.07	0.43
54:S2:583:C:N3	54:S2:584:G:C8	2.87	0.43
54:S2:615:C:O2'	54:S2:616:A:O4'	2.31	0.43
54:S2:623:G:C5	54:S2:624:C:C5	3.07	0.43
54:S2:662:G:H4'	54:S2:663:C:OP1	2.18	0.43
54:S2:672:A:C2'	54:S2:674:C:OP2	2.65	0.43
54:S2:673:G:C2	54:S2:674:C:C2	3.06	0.43
54:S2:841:G:C6	54:S2:842:C:C4	3.06	0.43
54:S2:948:C:C2	54:S2:949:G:N7	2.86	0.43
54:S2:1042:A:N3	54:S2:1042:A:H2'	2.32	0.43
54:S2:1172:U:C5	54:S2:1187:G:N2	2.87	0.43
54:S2:1307:U:N3	54:S2:1308:U:C6	2.86	0.43
54:S2:1310:U:C5'	86:Sf:143:LYS:CE	2.94	0.43
54:S2:1495:G:N9	85:Sd:41:GLN:HG2	2.33	0.43
54:S2:1514:G:O2'	54:S2:1515:G:O4'	2.37	0.43
54:S2:1607:A:N6	54:S2:1632:G:H1'	2.34	0.43
55:SA:105:PRO:O	55:SA:106:GLY:C	2.61	0.43
59:SG:52:ILE:O	59:SG:52:ILE:HG23	2.18	0.43
67:SW:66:THR:OG1	67:SW:68:ARG:HG3	2.18	0.43
74:SF:113:VAL:HG13	74:SF:114:ASN:ND2	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:SK:40:VAL:HG13	75:SK:40:VAL:O	2.19	0.43
76:SM:12:MET:HG2	76:SM:123:VAL:HG11	2.00	0.43
78:SQ:116:ASP:O	78:SQ:119:LEU:HD12	2.18	0.43
80:SS:14:ARG:HH11	80:SS:18:THR:C	2.26	0.43
83:SZ:51:ASP:CG	83:SZ:54:THR:CG2	2.91	0.43
3:G:41:ILE:O	3:G:43:GLN:N	2.52	0.43
6:L:179:PHE:CD2	19:a:131:ARG:HB2	2.54	0.43
8:N:54:LYS:O	8:N:56:LYS:N	2.52	0.43
11:R:124:TYR:OH	32:5:2665:U:C5	2.71	0.43
13:T:43:LYS:HA	13:T:58:HIS:CE1	2.53	0.43
14:U:56:LEU:HD13	14:U:61:VAL:CG2	2.49	0.43
16:X:127:LEU:HD21	16:X:135:LYS:HE3	2.01	0.43
20:b:44:ARG:HH11	20:b:44:ARG:CG	2.31	0.43
22:d:75:LYS:HB2	22:d:79:ASN:O	2.18	0.43
25:g:9:ARG:HE	32:5:2441:C:H5''	1.83	0.43
26:h:81:LEU:O	26:h:82:ASP:C	2.62	0.43
32:5:40:G:H4'	32:5:3914:U:H2'	2.00	0.43
32:5:210:C:C4	32:5:231:U:N3	2.86	0.43
32:5:424:U:O2	32:5:425:U:H6	1.92	0.43
32:5:469:C:C4	32:5:470:A:N7	2.86	0.43
32:5:642:G:C4	32:5:643:C:C5	3.07	0.43
32:5:674:G:C2	32:5:675:C:C2	3.07	0.43
32:5:688:U:C4	32:5:689:U:C6	3.04	0.43
32:5:695:G:H3'	32:5:696:C:C5'	2.47	0.43
32:5:723:A:H2	32:5:943:A:C2	2.36	0.43
32:5:952:G:C2	32:5:953:C:C2	3.06	0.43
32:5:1213:G:N9	32:5:1215:C:H1'	2.26	0.43
32:5:1492:G:N1	32:5:1493:G:C5	2.86	0.43
32:5:1644:C:C2	32:5:1645:C:C6	3.06	0.43
32:5:1808:C:N3	32:5:1809:C:C5	2.86	0.43
32:5:1819:G:C2	32:5:1820:C:C2	3.06	0.43
32:5:1870:C:C4	32:5:1871:A:N7	2.85	0.43
32:5:1877:G:N1	32:5:1878:G:N7	2.66	0.43
32:5:1983:A:C8	32:5:1987:C:C5	3.07	0.43
32:5:2084:C:H6	32:5:2084:C:OP1	2.02	0.43
32:5:2107:C:C5	32:5:2126:G:N1	2.86	0.43
32:5:2263:A:O3'	32:5:2264:C:C6	2.68	0.43
32:5:2326:G:C4	32:5:2327:G:C8	3.06	0.43
32:5:2340:C:N3	32:5:2341:A:N7	2.66	0.43
32:5:2395:A:OP1	32:5:2395:A:C4'	2.66	0.43
32:5:2542:G:C2	32:5:2775:C:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2559:G:H22	32:5:2567:G:H22	1.67	0.43
32:5:2617:G:C6	32:5:2618:G:N7	2.86	0.43
32:5:2645:G:C2	32:5:2646:C:C2	3.06	0.43
32:5:2765:A:H5''	32:5:2766:A:H2	1.83	0.43
32:5:2827:G:C4	32:5:2827:G:H5'	2.53	0.43
32:5:2889:G:C2	32:5:2890:C:C2	3.06	0.43
32:5:3605:C:N3	32:5:3606:U:C6	2.87	0.43
32:5:3805:U:O2	32:5:3806:G:C8	2.72	0.43
32:5:3883:U:O2'	32:5:3884:U:O4'	2.35	0.43
32:5:3899:G:H5''	35:B:257:TRP:CD1	2.53	0.43
32:5:4096:C:N4	32:5:4097:G:N9	2.66	0.43
32:5:4275:G:H3'	32:5:4275:G:C8	2.53	0.43
32:5:4281:A:N1	32:5:4283:G:C4	2.87	0.43
32:5:4293:U:C4	32:5:4294:C:C5	3.07	0.43
32:5:4413:C:H1'	39:I:157:PHE:HB3	2.00	0.43
32:5:4440:G:OP1	39:I:108:ALA:O	2.36	0.43
32:5:4727:A:C2'	32:5:4728:U:O5'	2.67	0.43
32:5:4899:G:C2	32:5:4922:C:C2	3.06	0.43
32:5:5018:C:H5''	32:5:5018:C:C6	2.53	0.43
35:B:26:ARG:HB2	35:B:344:VAL:HG11	2.01	0.43
35:B:78:ILE:HD11	35:B:320:PHE:CE1	2.54	0.43
38:F:98:ARG:CD	38:F:141:TYR:CD2	3.02	0.43
38:F:148:ASN:HB3	38:F:243:ASN:HD22	1.80	0.43
41:W:21:TYR:HB2	41:W:31:PHE:CE2	2.54	0.43
50:3:19:U:H3'	50:3:20:U:O4'	2.17	0.43
51:4:18:G:C2	51:4:19:C:C2	3.07	0.43
51:4:52:C:N3	51:4:53:U:C5	2.86	0.43
51:4:205:A:H2'	51:4:206:G:O4'	2.19	0.43
51:4:221:C:H6	51:4:221:C:O5'	2.02	0.43
53:6:150:ARG:HH11	53:6:153:LYS:HD3	1.82	0.43
54:S2:20:G:H5'	54:S2:620:G:N7	2.34	0.43
54:S2:56:G:O2'	54:S2:57:U:H5'	2.18	0.43
54:S2:145:G:C2	54:S2:146:G:C5	3.06	0.43
54:S2:222:U:C2	54:S2:223:C:C5	3.06	0.43
54:S2:341:C:H3'	54:S2:342:C:H5''	2.00	0.43
54:S2:343:A:C5	54:S2:344:U:C5	3.07	0.43
54:S2:380:G:H21	54:S2:382:C:H2'	1.83	0.43
54:S2:530:U:N3	54:S2:531:A:N7	2.66	0.43
54:S2:550:C:N3	54:S2:551:U:C5	2.86	0.43
54:S2:582:C:O2	54:S2:583:C:C6	2.72	0.43
54:S2:600:G:H2'	54:S2:601:G:O5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:616:A:C8	54:S2:617:G:C1'	3.01	0.43
54:S2:634:A:C2	54:S2:635:G:C4	3.06	0.43
54:S2:694:G:N1	54:S2:695:C:C5	2.80	0.43
54:S2:696:G:C2	54:S2:735:C:O2	2.71	0.43
54:S2:909:G:N2	54:S2:910:G:N9	2.65	0.43
54:S2:936:G:C5	54:S2:937:C:C5	3.06	0.43
54:S2:965:U:O2	54:S2:1066:U:H1'	2.18	0.43
54:S2:999:G:C2	54:S2:1000:C:C2	3.07	0.43
54:S2:1163:C:O2'	54:S2:1164:G:H5'	2.19	0.43
54:S2:1306:U:O4	86:Sf:140:TYR:CE1	2.71	0.43
54:S2:1380:C:H2'	54:S2:1381:G:C8	2.54	0.43
54:S2:1459:G:C5	54:S2:1460:C:C5	3.07	0.43
54:S2:1589:A:N3	54:S2:1653:U:O2'	2.50	0.43
54:S2:1784:G:N3	54:S2:1785:C:C6	2.86	0.43
54:S2:1838:U:O5'	54:S2:1838:U:C2'	2.67	0.43
62:SJ:120:ALA:O	62:SJ:121:LYS:CB	2.66	0.43
63:SL:89:ARG:NE	63:SL:106:HIS:CD2	2.87	0.43
67:SW:26:LEU:C	67:SW:26:LEU:HD12	2.43	0.43
2:D:72:ASP:OD1	33:7:7:G:H4'	2.19	0.43
2:D:265:ARG:HH11	2:D:265:ARG:CG	2.31	0.43
8:N:67:ARG:HD3	32:5:2458:C:H5'	2.00	0.43
8:N:196:ASN:N	8:N:196:ASN:ND2	2.62	0.43
9:O:167:HIS:O	9:O:168:TYR:C	2.61	0.43
22:d:34:HIS:CD2	32:5:5048:A:N7	2.83	0.43
24:f:21:GLN:HE22	32:5:1309:C:C2'	2.32	0.43
24:f:76:ARG:NE	24:f:85:ARG:HH21	2.15	0.43
32:5:87:A:C6	32:5:292:G:O6	2.71	0.43
32:5:92:C:O2	32:5:92:C:C2'	2.63	0.43
32:5:127:G:C2	32:5:128:C:C4	3.07	0.43
32:5:167:C:C4	32:5:269:G:N1	2.87	0.43
32:5:199:G:C2	32:5:201:C:C2	3.07	0.43
32:5:739:G:C2	32:5:740:G:N9	2.86	0.43
32:5:919:C:C4	32:5:920:C:C4	3.07	0.43
32:5:967:C:H5	32:5:968:C:O2	2.00	0.43
32:5:1084:C:O2	32:5:1085:C:C6	2.72	0.43
32:5:1199:G:C6	32:5:1200:G:C5	3.07	0.43
32:5:1240:G:H3'	32:5:1241:C:H6	1.84	0.43
32:5:1268:G:N2	32:5:1270:A:O4'	2.52	0.43
32:5:1268:G:N3	32:5:2111:G:N1	2.67	0.43
32:5:1269:G:N1	32:5:2111:G:N2	2.67	0.43
32:5:1334:A:N6	32:5:1335:G:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1400:G:H2'	32:5:1401:C:O4'	2.19	0.43
32:5:1590:C:C5'	32:5:1591:U:O5'	2.67	0.43
32:5:1608:G:C1'	32:5:3828:A:C2	3.02	0.43
32:5:1661:C:O2	32:5:1661:C:H2'	2.18	0.43
32:5:1682:A:C6	32:5:1683:U:C4	3.06	0.43
32:5:1887:G:O6	32:5:1890:G:C5	2.71	0.43
32:5:1912:G:C6	32:5:2057:A:C2	3.07	0.43
32:5:2347:A:N3	32:5:2348:G:N1	2.67	0.43
32:5:2402:G:C2	32:5:2403:A:C8	3.07	0.43
32:5:2417:A:C6	32:5:2418:A:N7	2.86	0.43
32:5:2529:A:N6	32:5:2532:C:N1	2.67	0.43
32:5:2614:C:O2'	32:5:2808:G:OP1	2.20	0.43
32:5:2707:U:H2'	32:5:2707:U:O2	2.18	0.43
32:5:2762:G:H1'	32:5:2763:U:O4'	2.19	0.43
32:5:2783:A:C2	32:5:2784:C:C6	3.07	0.43
32:5:3806:G:C6	32:5:3807:A:N7	2.87	0.43
32:5:3945:A:C2	32:5:3946:G:N7	2.87	0.43
32:5:4073:A:N1	32:5:4074:C:C4	2.87	0.43
32:5:4075:U:C4'	32:5:4076:G:OP1	2.67	0.43
32:5:4082:G:N3	32:5:4083:U:C5	2.86	0.43
32:5:4083:U:H2'	32:5:4084:G:H3'	2.01	0.43
32:5:4143:G:N7	32:5:4145:C:C4	2.86	0.43
32:5:4146:G:N1	32:5:4147:G:C5	2.87	0.43
32:5:4166:G:N2	32:5:4167:G:C4	2.87	0.43
32:5:4214:A:H8	32:5:4214:A:O5'	2.02	0.43
32:5:4401:G:C8	32:5:4401:G:H5''	2.54	0.43
32:5:4621:C:C2	32:5:4622:A:C8	3.06	0.43
32:5:4709:U:C2	32:5:4710:C:C6	3.07	0.43
32:5:4715:C:O2'	35:B:16:PHE:HE1	2.01	0.43
32:5:4882:U:O2'	32:5:4883:C:H2'	2.18	0.43
32:5:4899:G:C2	32:5:4922:C:O2	2.72	0.43
32:5:4941:G:C2	32:5:4942:C:N4	2.86	0.43
34:8:2:G:C2	34:8:3:A:C8	3.07	0.43
34:8:42:G:N1	34:8:43:A:N7	2.66	0.43
35:B:311:ASP:O	35:B:311:ASP:OD1	2.37	0.43
37:E:224:GLN:HA	37:E:229:PHE:HD1	1.84	0.43
38:F:95:ILE:HD13	38:F:249:MET:HE1	2.00	0.43
38:F:237:ASN:HD21	38:F:238:ARG:C	2.26	0.43
39:I:46:PHE:N	39:I:47:PRO:HD3	2.34	0.43
45:r:12:ASN:O	45:r:13:CYS:HB3	2.18	0.43
46:K:104:ILE:O	46:K:106:PHE:CD1	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:K:142:ASN:CG	46:K:143:VAL:N	2.66	0.43
48:z:218:VAL:HG11	48:z:246:ILE:CD1	2.48	0.43
48:z:360:MET:CA	48:z:365:GLU:HB2	2.33	0.43
48:z:383:ASN:CB	51:4:208:A:O3'	2.67	0.43
48:z:430:MET:HA	48:z:433:LYS:HB3	2.00	0.43
51:4:193:G:C6	51:4:194:G:C4	3.06	0.43
54:S2:17:C:O5'	54:S2:657:U:O2	2.35	0.43
54:S2:394:G:N1	54:S2:395:G:N7	2.67	0.43
54:S2:457:C:H4'	54:S2:1801:A:O3'	2.19	0.43
54:S2:524:U:C4	54:S2:594:A:C6	2.95	0.43
54:S2:967:C:N4	54:S2:968:U:N1	2.66	0.43
54:S2:1121:G:C6	54:S2:1122:A:N7	2.86	0.43
54:S2:1229:G:C4	54:S2:1230:C:C6	3.06	0.43
54:S2:1251:A:H2'	54:S2:1252:C:O5'	2.18	0.43
54:S2:1508:A:N6	54:S2:1510:G:C4	2.86	0.43
54:S2:1548:G:C8	54:S2:1656:G:O2'	2.71	0.43
56:SB:79:VAL:CG2	56:SB:81:PHE:CE1	3.02	0.43
58:SE:87:MET:CE	58:SE:236:ILE:HD13	2.47	0.43
58:SE:130:PHE:HB2	58:SE:138:HIS:HB2	2.00	0.43
59:SG:156:TYR:N	59:SG:156:TYR:CD1	2.86	0.43
61:SI:44:HIS:CD2	61:SI:58:LEU:HD11	2.54	0.43
72:Se:46:VAL:HG22	72:Se:46:VAL:O	2.18	0.43
83:SZ:68:ILE:O	83:SZ:69:THR:HG23	2.19	0.43
1:A:83:HIS:HD1	44:p:41:PHE:HE2	1.65	0.43
1:A:85:GLY:HA2	32:5:4121:G:C2	2.53	0.43
1:A:215:ASN:ND2	32:5:4546:A:N7	2.67	0.43
2:D:18:VAL:O	2:D:19:LYS:O	2.37	0.43
2:D:204:VAL:CG1	2:D:236:MET:HE1	2.48	0.43
5:J:54:ARG:HH11	5:J:54:ARG:CG	2.31	0.43
6:L:13:HIS:CE1	32:5:85:G:C6	3.06	0.43
7:M:34:ASN:ND2	7:M:34:ASN:N	2.66	0.43
11:R:15:LEU:HB3	11:R:52:ARG:HH21	1.83	0.43
16:X:48:ARG:HH22	32:5:11:G:H4'	1.84	0.43
16:X:72:ASP:HA	16:X:73:HIS:NE2	2.34	0.43
18:Z:17:ARG:NH2	32:5:2577:C:C5	2.86	0.43
22:d:73:TRP:HE1	32:5:2372:U:C1'	2.27	0.43
24:f:50:VAL:HG22	24:f:69:VAL:CG1	2.49	0.43
31:o:76:ASN:ND2	31:o:76:ASN:N	2.65	0.43
32:5:90:G:C6	32:5:92:C:H1'	2.54	0.43
32:5:209:U:C4	32:5:211:G:H1'	2.54	0.43
32:5:302:C:N3	32:5:303:C:C4	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:500:G:C2	32:5:504:G:C8	3.06	0.43
32:5:908:G:C6	32:5:909:A:C8	3.06	0.43
32:5:1092:G:N2	32:5:1093:C:C2	2.87	0.43
32:5:1215:C:O2	32:5:1216:C:H6	2.02	0.43
32:5:1291:G:C6	32:5:1292:C:C4	3.07	0.43
32:5:1321:G:C2	32:5:3876:A:N3	2.86	0.43
32:5:1348:U:N3	32:5:1349:G:N7	2.66	0.43
32:5:1404:G:C2	32:5:1405:C:C2	3.07	0.43
32:5:1560:A:H2'	32:5:1561:G:C8	2.53	0.43
32:5:1761:G:C2	32:5:1772:C:C2	3.07	0.43
32:5:1884:C:N4	32:5:1896:A:H2	2.00	0.43
32:5:1887:G:C6	32:5:1890:G:C5	3.07	0.43
32:5:2041:A:C2	32:5:4464:A:N6	2.87	0.43
32:5:2044:U:O2	32:5:2044:U:C2'	2.64	0.43
32:5:2101:C:N3	32:5:2102:G:N7	2.67	0.43
32:5:2106:G:C2	32:5:2107:C:H5	2.36	0.43
32:5:2107:C:O2	32:5:2107:C:C2'	2.66	0.43
32:5:2273:G:C5	32:5:2274:C:C4	3.07	0.43
32:5:2308:A:N3	34:8:19:C:O2'	2.45	0.43
32:5:2314:G:C2	32:5:2326:G:C8	3.07	0.43
32:5:2324:C:C4	32:5:2325:C:C5	3.06	0.43
32:5:2493:G:N2	32:5:2494:U:H1'	2.34	0.43
32:5:2502:G:H4'	32:5:2503:G:OP1	2.17	0.43
32:5:2559:G:C5	32:5:2560:C:C5	3.06	0.43
32:5:2569:G:H2'	32:5:2570:U:C6	2.53	0.43
32:5:2569:G:H2'	32:5:2570:U:H6	1.84	0.43
32:5:2649:G:C2	32:5:2685:C:O2	2.72	0.43
32:5:2677:G:N3	32:5:2677:G:H2'	2.34	0.43
32:5:2783:A:C2	32:5:2784:C:C2	3.07	0.43
32:5:2852:U:O2	32:5:2852:U:H3'	2.18	0.43
32:5:3645:U:C2	32:5:4534:G:H1'	2.53	0.43
32:5:3672:G:C5	32:5:3674:G:C1'	3.01	0.43
32:5:3776:G:N3	32:5:3776:G:O4'	2.51	0.43
32:5:3791:C:O2	32:5:3802:U:C1'	2.67	0.43
32:5:3857:G:C2	32:5:3858:C:H1'	2.53	0.43
32:5:3918:G:C5	32:5:3919:C:C5	3.07	0.43
32:5:4143:G:C6	32:5:4145:C:C6	3.06	0.43
32:5:4399:U:O4	32:5:4400:G:C5	2.71	0.43
32:5:4667:C:C2	32:5:4668:U:C6	3.06	0.43
32:5:4712:C:N3	32:5:4713:G:C8	2.87	0.43
33:7:34:C:H2'	33:7:34:C:O2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:7:93:G:C2	33:7:94:C:C2	3.06	0.43
34:8:49:G:C2	34:8:50:C:C2	3.07	0.43
35:B:82:PRO:HG3	35:B:171:LEU:HD21	2.00	0.43
48:z:338:ASN:O	48:z:342:MET:N	2.51	0.43
48:z:347:GLN:O	48:z:351:MET:HG3	2.18	0.43
48:z:402:ARG:HG3	51:4:185:C:P	2.33	0.43
50:3:75:C:C6	50:3:75:C:OP2	2.70	0.43
51:4:55:G:C2	51:4:56:A:C5	3.06	0.43
51:4:119[B]:A:O2'	51:4:120:G:OP1	2.32	0.43
51:4:122:U:H2'	51:4:123:C:C6	2.54	0.43
52:9:32:GLY:HA2	52:9:70:ARG:HH11	1.84	0.43
54:S2:39:A:H5'	62:SJ:7:TRP:HE1	1.83	0.43
54:S2:200:G:C4	54:S2:201:C:C6	3.07	0.43
54:S2:292:A:C4'	63:SL:40:ILE:O	2.67	0.43
54:S2:437:G:C6	54:S2:457:C:N3	2.87	0.43
54:S2:447:A:N1	54:S2:449:A:N3	2.66	0.43
54:S2:633:C:C2	54:S2:634:A:H8	2.35	0.43
54:S2:832:G:N3	54:S2:833:C:C1'	2.82	0.43
54:S2:862:A:C6	54:S2:863:U:C4	3.05	0.43
54:S2:892:U:C2	54:S2:893:U:C6	3.07	0.43
54:S2:950:C:O2	54:S2:950:C:C2'	2.62	0.43
54:S2:985:G:C6	54:S2:1002:U:C5	3.06	0.43
54:S2:999:G:N3	54:S2:999:G:H2'	2.33	0.43
54:S2:1067:C:N4	54:S2:1068:G:C6	2.87	0.43
54:S2:1112:U:C2	54:S2:1113:A:C8	3.07	0.43
54:S2:1176:G:C4	54:S2:1177:U:C6	3.07	0.43
54:S2:1204:A:N3	54:S2:1205:C:O2	2.51	0.43
54:S2:1236:G:N2	54:S2:1237:C:C2	2.87	0.43
54:S2:1315:U:C4	54:S2:1316:C:C2	3.07	0.43
54:S2:1347:U:C2	54:S2:1348:G:C8	3.07	0.43
54:S2:1449:G:N1	54:S2:1450:G:C5	2.86	0.43
54:S2:1528:G:C6	54:S2:1529:C:C4	3.06	0.43
54:S2:1735:A:C2'	54:S2:1736:G:O4'	2.66	0.43
54:S2:1740:C:C2	54:S2:1741:U:C5	3.07	0.43
54:S2:1842:C:O2'	54:S2:1843:G:H5'	2.19	0.43
55:SA:32:PHE:CD1	55:SA:33:GLN:N	2.87	0.43
56:SB:30:TRP:HD1	65:SO:19:PRO:HD2	1.84	0.43
56:SB:36:PRO:HA	56:SB:232:HIS:CE1	2.54	0.43
56:SB:52:THR:CG2	56:SB:57:ILE:CB	2.88	0.43
57:SC:204:ILE:CD1	57:SC:215:MET:HE3	2.49	0.43
58:SE:86:PHE:CD2	58:SE:87:MET:N	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:SO:95:ILE:HB	65:SO:129:ILE:HD13	2.00	0.43
75:SK:66:HIS:HB3	75:SK:68:TYR:HE1	1.84	0.43
78:SQ:63:PHE:N	78:SQ:63:PHE:HD1	2.17	0.43
79:SR:88:VAL:HG12	79:SR:91:LEU:N	2.33	0.43
84:Sc:26:GLN:HE21	84:Sc:26:GLN:HA	1.84	0.43
84:Sc:44:ARG:CG	84:Sc:44:ARG:NH2	2.72	0.43
86:Sf:118:ARG:HB2	86:Sf:131:PHE:CZ	2.52	0.43
87:Sg:152:SER:OG	87:Sg:195:LEU:O	2.36	0.43
1:A:185:ALA:O	1:A:186:TYR:C	2.59	0.43
2:D:29:ASP:CB	2:D:32:ALA:HB3	2.40	0.43
8:N:178:HIS:CD2	8:N:178:HIS:C	2.97	0.43
8:N:198:LEU:HD13	8:N:200:LEU:HD21	2.00	0.43
11:R:171:LYS:O	11:R:175:GLU:HB3	2.18	0.43
19:a:25:HIS:CE1	32:5:1338:G:N2	2.87	0.43
22:d:44:ARG:HH11	22:d:44:ARG:HG3	1.84	0.43
25:g:13:TYR:HE2	32:5:2513:A:H62	1.66	0.43
26:h:84:ARG:HB2	34:8:38:U:C5	2.54	0.43
28:k:19:ASP:OD1	28:k:20:ALA:N	2.52	0.43
29:l:44:TRP:CE3	29:l:45:ARG:N	2.86	0.43
30:m:122:ARG:HE	32:5:4424:A:C5'	2.32	0.43
31:o:75:PRO:C	31:o:76:ASN:ND2	2.76	0.43
32:5:21:G:H2'	32:5:22:G:O4'	2.19	0.43
32:5:170:C:H4'	32:5:171:U:OP1	2.18	0.43
32:5:187:U:H5	32:5:245:C:C4	2.36	0.43
32:5:192:G:N2	32:5:250:C:C2	2.87	0.43
32:5:270:U:O2	32:5:270:U:C2'	2.67	0.43
32:5:330:G:N2	32:5:331:G:C8	2.85	0.43
32:5:448:G:H3'	32:5:449:C:H4'	2.01	0.43
32:5:449:C:H3'	32:5:450:G:H5''	2.00	0.43
32:5:470:A:N6	32:5:471:A:C8	2.81	0.43
32:5:660:A:C6	32:5:661:C:C4	3.06	0.43
32:5:907:C:N3	32:5:908:G:C8	2.87	0.43
32:5:987:C:H2'	32:5:988:C:C6	2.54	0.43
32:5:1183:C:N3	32:5:1184:A:N7	2.66	0.43
32:5:1240:G:C4	32:5:1241:C:C6	3.07	0.43
32:5:1267:C:O2'	32:5:2109:G:N7	2.52	0.43
32:5:1285:U:C5	32:5:1286:C:C5	3.06	0.43
32:5:1288:G:HO2'	32:5:1289:C:P	2.42	0.43
32:5:1367:C:H2'	32:5:1368:A:O5'	2.19	0.43
32:5:1443:A:C5	32:5:1444:G:C5	3.07	0.43
32:5:1629:G:N1	32:5:1631:A:C6	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1631:A:O2'	32:5:3650:C:H4'	2.18	0.43
32:5:1635:C:H2'	32:5:1636:U:C5'	2.29	0.43
32:5:1673:U:N3	32:5:1674:C:N4	2.66	0.43
32:5:1744:U:H2'	32:5:1745:G:O4'	2.19	0.43
32:5:1811:G:C5	32:5:1812:C:C5	3.06	0.43
32:5:1817:U:C2'	32:5:1818:G:O5'	2.66	0.43
32:5:1842:G:C2	32:5:1843:A:C8	3.06	0.43
32:5:1846:G:C2	32:5:1847:C:C2	3.06	0.43
32:5:1885:G:C6	32:5:1895:G:N1	2.87	0.43
32:5:1965:G:H1	32:5:2021:G:H1	1.67	0.43
32:5:2034:G:C2	32:5:2035:C:C2	3.07	0.43
32:5:2256:C:H4'	32:5:2257:C:O5'	2.19	0.43
32:5:2288:G:C6	32:5:2290:C:C4	3.06	0.43
32:5:2339:G:C4	32:5:2340:C:C6	3.07	0.43
32:5:2399:G:C6	32:5:2400:G:C5	3.07	0.43
32:5:2427:G:O2'	32:5:2428:A:H2'	2.18	0.43
32:5:2547:G:C6	32:5:2548:C:C4	3.07	0.43
32:5:2566:G:N1	32:5:2567:G:C5	2.87	0.43
32:5:2586:G:C8	32:5:2587:A:C5	3.07	0.43
32:5:2622:G:N2	32:5:2623:A:H1'	2.34	0.43
32:5:2666:U:C5	32:5:2669:C:N4	2.87	0.43
32:5:2715:G:C2	32:5:2716:C:C2	3.07	0.43
32:5:2830:G:N2	32:5:2831:G:C4	2.87	0.43
32:5:2853:C:H2'	32:5:2854:G:O4'	2.18	0.43
32:5:2893:U:H2'	32:5:2894:A:O4'	2.19	0.43
32:5:3609:G:O2'	32:5:3610:A:H5'	2.19	0.43
32:5:3698:G:H1'	32:5:3778:U:C2	2.54	0.43
32:5:3757:G:C6	32:5:3758:U:C4	3.07	0.43
32:5:3831:U:H2'	32:5:3831:U:O2	2.19	0.43
32:5:4091:G:C2	32:5:4092:G:N9	2.87	0.43
32:5:4148:C:N3	32:5:4149:C:C5	2.87	0.43
32:5:4175:G:N3	32:5:4176:C:C6	2.87	0.43
32:5:4219:A:O2'	32:5:4220:A:C5'	2.67	0.43
32:5:4236:G:N2	32:5:4289:U:H1'	2.33	0.43
32:5:4595:G:C2	32:5:4596:C:C2	3.06	0.43
32:5:4742:G:N1	32:5:4743:G:C5	2.86	0.43
32:5:4873:G:C8	32:5:4875:G:C6	3.06	0.43
32:5:4949:G:H3'	32:5:4950:U:H5''	2.01	0.43
32:5:4959:U:O2	32:5:4959:U:H2'	2.18	0.43
33:7:17:C:C4	33:7:18:C:C5	3.04	0.43
34:8:13:G:H2'	34:8:14:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:60:G:H4'	34:8:61:A:OP2	2.19	0.43
34:8:69:U:H3'	34:8:70:G:C8	2.53	0.43
34:8:74:U:C2	34:8:74:U:H3'	2.53	0.43
34:8:137:A:N3	34:8:138:C:C6	2.87	0.43
35:B:117:ARG:HD2	35:B:178:ALA:O	2.19	0.43
35:B:367:PHE:CZ	35:B:368:ILE:C	2.97	0.43
36:C:26:ALA:HB3	36:C:266:THR:HA	2.01	0.43
39:I:59:GLN:HB3	39:I:126:VAL:HG11	2.01	0.43
39:I:98:ARG:HD2	39:I:119:PHE:CE1	2.53	0.43
41:W:31:PHE:HB3	41:W:36:CYS:HB2	2.01	0.43
45:r:39:ARG:HB3	45:r:40:TYR:HD1	1.84	0.43
46:K:55:GLY:O	46:K:56:LEU:HD23	2.19	0.43
46:K:111:ASN:HA	46:K:114:ARG:HE	1.83	0.43
47:q:29:ILE:HG23	47:q:86:VAL:HG13	2.01	0.43
47:q:123:VAL:HG13	47:q:180:ILE:HD12	1.99	0.43
48:z:410:SER:HA	51:4:194:G:N9	2.33	0.43
51:4:14:G:C2	51:4:15:C:C2	3.06	0.43
51:4:180:G:C6	51:4:181:U:C4	3.07	0.43
54:S2:37:C:C2	54:S2:38:A:C8	3.07	0.43
54:S2:37:C:C5	54:S2:38:A:N7	2.87	0.43
54:S2:127:C:H5''	54:S2:312:G:C2	2.54	0.43
54:S2:311:C:C2	54:S2:312:G:C1'	3.00	0.43
54:S2:468:A:H2'	54:S2:468:A:N3	2.32	0.43
54:S2:525:A:N6	54:S2:588:G:N2	2.66	0.43
54:S2:575:A:C2'	54:S2:576:A:O4'	2.58	0.43
54:S2:672:A:N3	54:S2:672:A:O4'	2.50	0.43
54:S2:675:U:C2	54:S2:676:C:C6	3.07	0.43
54:S2:688:U:H1'	54:S2:689:U:C6	2.54	0.43
54:S2:737:G:C6	54:S2:738:C:C6	3.06	0.43
54:S2:1287:A:C2	54:S2:1313:A:C5	3.07	0.43
54:S2:1289:U:O4'	54:S2:1314:U:C5	2.72	0.43
54:S2:1292:C:N3	86:Sf:150:PHE:CG	2.87	0.43
54:S2:1343:U:C2	54:S2:1344:A:C8	3.07	0.43
54:S2:1431:G:C6	54:S2:1432:U:C4	3.07	0.43
54:S2:1596:U:O4	54:S2:1597:C:C4	2.72	0.43
54:S2:1641:A:C4	54:S2:1642:U:C6	3.06	0.43
54:S2:1658:G:C5	54:S2:1659:U:C6	3.06	0.43
55:SA:39:TYR:C	55:SA:39:TYR:CD1	2.97	0.43
56:SB:29:ASP:CG	56:SB:51:ARG:HG3	2.44	0.43
56:SB:134:LEU:HB3	56:SB:218:LEU:HD12	2.00	0.43
60:SH:145:ARG:NH2	67:SW:49:GLU:HG3	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:SI:112:TRP:C	61:SI:112:TRP:CE3	2.96	0.43
61:SI:113:TYR:CE2	61:SI:121:LEU:HD11	2.52	0.43
62:SJ:32:ILE:HA	62:SJ:37:LEU:HB2	1.99	0.43
65:SO:44:VAL:HG23	65:SO:81:VAL:HG11	2.01	0.43
69:SY:22:GLN:CB	69:SY:74:MET:HE3	2.48	0.43
78:SQ:22:VAL:O	78:SQ:71:ARG:NH1	2.52	0.43
80:SS:10:GLN:CB	80:SS:57:GLY:C	2.92	0.43
83:SZ:73:VAL:HG12	83:SZ:79:ILE:HG21	2.00	0.43
87:Sg:291:TRP:CZ2	87:Sg:298:LEU:HD22	2.53	0.43
87:Sg:302:TYR:N	87:Sg:302:TYR:CD1	2.87	0.43
1:A:18:ALA:HB3	32:5:3677:U:OP1	2.19	0.43
1:A:53:GLY:HA2	1:A:192:LYS:HD3	2.01	0.43
2:D:125:VAL:O	2:D:196:ARG:NH2	2.52	0.43
6:L:176:PHE:CE2	27:i:5:TYR:HD2	2.37	0.43
8:N:143:ARG:HD3	26:h:95:LEU:CD2	2.47	0.43
9:O:108:ILE:HD11	9:O:117:ARG:HE	1.83	0.43
11:R:166:THR:HG23	54:S2:872:A:O2'	2.19	0.43
12:S:84:TYR:C	12:S:84:TYR:CD1	2.97	0.43
12:S:154:LEU:HD13	12:S:157:ARG:NH2	2.34	0.43
13:T:132:PRO:HG2	38:F:128:ASN:ND2	2.32	0.43
14:U:27:HIS:N	14:U:28:PRO:HD2	2.34	0.43
15:V:57:VAL:HG21	15:V:88:TYR:HE2	1.83	0.43
19:a:105:ARG:NH1	32:5:509:A:N3	2.67	0.43
25:g:78:TYR:CE1	32:5:2752:G:H4'	2.53	0.43
27:i:58:MET:HE3	27:i:94:LEU:HD13	2.00	0.43
32:5:2:G:N3	32:5:3:C:C6	2.87	0.43
32:5:113:A:N3	32:5:113:A:H2'	2.32	0.43
32:5:193:G:C4	32:5:194:C:C6	3.07	0.43
32:5:219:G:C5'	32:5:219:G:C4	3.02	0.43
32:5:322:C:C2	32:5:4356:G:N1	2.87	0.43
32:5:479:G:C2	32:5:480:C:C2	3.07	0.43
32:5:479:G:N3	32:5:480:C:C6	2.87	0.43
32:5:482:G:C2	32:5:483:G:C4	3.06	0.43
32:5:749:G:O6	32:5:913:U:O4	2.37	0.43
32:5:923:C:N3	32:5:924:C:C6	2.87	0.43
32:5:964:A:C2	32:5:2252:G:O6	2.71	0.43
32:5:1086:C:H1'	32:5:1212:G:N2	2.33	0.43
32:5:1216:C:C4	32:5:1217:G:C8	3.06	0.43
32:5:1273:G:N2	32:5:2123:C:OP1	2.37	0.43
32:5:1379:C:H4'	32:5:1380:G:N9	2.28	0.43
32:5:1384:C:H2'	32:5:1385:G:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1384:C:O2'	32:5:1505:C:OP1	2.36	0.43
32:5:1398:A:O2'	32:5:1399:G:OP2	2.16	0.43
32:5:1444:G:N3	32:5:1445:U:C5	2.87	0.43
32:5:1481:C:O2	32:5:1481:C:O4'	2.36	0.43
32:5:1482:G:H21	32:5:1484:G:H22	1.62	0.43
32:5:1522:G:H5''	32:5:1523:A:OP1	2.19	0.43
32:5:1632:A:H62	32:5:1634:A:C1'	2.31	0.43
32:5:1634:A:C5	32:5:1635:C:H5	2.32	0.43
32:5:1667:G:H1'	32:5:2283:G:H22	1.83	0.43
32:5:1887:G:N3	32:5:1887:G:H2'	2.34	0.43
32:5:1964:A:C6	32:5:1965:G:N7	2.86	0.43
32:5:2104:G:N1	32:5:2105:A:C4	2.87	0.43
32:5:2362:U:O4	32:5:3859:G:N3	2.52	0.43
32:5:2576:G:N3	32:5:2576:G:H2'	2.32	0.43
32:5:2703:G:C2	32:5:2704:C:C2	3.07	0.43
32:5:2756:G:C2	32:5:2757:A:C6	3.07	0.43
32:5:2852:U:O2	32:5:2852:U:C3'	2.67	0.43
32:5:2895:A:C6	32:5:2896:G:C8	3.06	0.43
32:5:3631:U:C4	32:5:3632:C:C5	3.07	0.43
32:5:3846:C:H2'	32:5:4632:U:O2'	2.18	0.43
32:5:3863:C:H2'	32:5:3864:C:H6	1.84	0.43
32:5:3945:A:N1	32:5:3946:G:C5	2.87	0.43
32:5:4091:G:C6	32:5:4092:G:C8	3.07	0.43
32:5:4173:G:C6	32:5:4174:U:C5	3.06	0.43
32:5:4269:G:N2	32:5:4270:C:H1'	2.34	0.43
32:5:4313:A:C6	32:5:4314:C:C6	3.07	0.43
32:5:4455:G:C2	32:5:4456:C:C5	3.07	0.43
32:5:4511:A:H2'	32:5:4512:U:C1'	2.49	0.43
32:5:4563:U:C2	32:5:4564:A:C5	3.06	0.43
32:5:4593:C:C2	32:5:4594:U:C6	3.07	0.43
32:5:4769:G:N2	32:5:4865:C:N3	2.67	0.43
32:5:4884:G:C6	32:5:4885:U:C5	3.06	0.43
32:5:4913:G:C2'	32:5:4914:C:O4'	2.66	0.43
32:5:4916:G:C4	32:5:4917:C:C6	3.07	0.43
32:5:4982:A:N1	32:5:4983:C:N1	2.64	0.43
35:B:14:LEU:O	35:B:16:PHE:N	2.52	0.43
43:n:9:ARG:NH1	54:S2:1851:A:OP1	2.51	0.43
48:z:105:MET:HE1	48:z:189:VAL:HG11	2.00	0.43
48:z:133:CYS:SG	48:z:184:PHE:CG	3.11	0.43
51:4:16:G:C2	51:4:33:G:C6	3.07	0.43
54:S2:5:U:O2	54:S2:6:G:C8	2.72	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:140:C:O2'	54:S2:141:A:O5'	2.33	0.43
54:S2:344:U:O2'	54:S2:345:U:H5'	2.19	0.43
54:S2:439:A:C2	54:S2:455:A:C6	3.04	0.43
54:S2:440:G:N1	54:S2:441:C:C2	2.87	0.43
54:S2:461:U:N3	54:S2:462:C:H5	2.12	0.43
54:S2:604:A:C6	54:S2:605:A:N6	2.87	0.43
54:S2:604:A:N1	54:S2:605:A:C6	2.87	0.43
54:S2:635:G:H2'	54:S2:636:C:H6	1.84	0.43
54:S2:636:C:O2	54:S2:636:C:H2'	2.18	0.43
54:S2:638:C:C2	54:S2:639:C:C5	3.07	0.43
54:S2:793:G:N1	54:S2:794:A:C8	2.86	0.43
54:S2:797:C:C4'	60:SH:109:ARG:NH1	2.82	0.43
54:S2:849:A:C2	54:S2:850:C:C4	3.07	0.43
54:S2:862:A:C8	67:SW:107:SER:N	2.87	0.43
54:S2:933:G:C5	54:S2:1001:A:N7	2.87	0.43
54:S2:992:A:N3	54:S2:992:A:H2'	2.33	0.43
54:S2:1004:U:C2	54:S2:1005:G:C8	3.06	0.43
54:S2:1151:G:N3	54:S2:1152:U:C6	2.86	0.43
54:S2:1395:C:C6	54:S2:1395:C:C5'	3.02	0.43
54:S2:1434:C:H2'	54:S2:1435:C:O4'	2.18	0.43
54:S2:1452:A:C5	54:S2:1475:G:C2	3.06	0.43
54:S2:1667:U:O2	54:S2:1667:U:C2'	2.67	0.43
68:SX:84:PHE:CE1	68:SX:86:PRO:HA	2.53	0.43
70:Sa:14:GLY:C	70:Sa:15:ARG:HG3	2.43	0.43
73:SD:52:ALA:O	73:SD:91:VAL:HG23	2.19	0.43
73:SD:71:ALA:O	73:SD:75:LYS:HG2	2.19	0.43
74:SF:123:GLU:HG2	84:Sc:59:LEU:HG	1.72	0.43
79:SR:20:TYR:HB3	79:SR:23:ARG:HB2	2.00	0.43
79:SR:85:VAL:HG12	79:SR:86:PRO:CD	2.48	0.43
82:SU:61:LEU:HA	85:Sd:34:TYR:OH	2.19	0.43
83:SZ:50:PHE:CE2	83:SZ:79:ILE:CG1	3.00	0.43
1:A:242:ARG:HH11	1:A:242:ARG:CB	2.31	0.42
2:D:15:ARG:NH2	32:5:1743:A:O2'	2.52	0.42
3:G:53:ARG:CB	3:G:54:PHE:CE2	3.02	0.42
3:G:54:PHE:HB3	32:5:4086:G:H4'	2.01	0.42
4:H:60:TRP:CZ2	12:S:153:PRO:HD3	2.53	0.42
4:H:66:GLU:N	4:H:66:GLU:OE1	2.52	0.42
11:R:58:HIS:HA	32:5:4646:U:OP1	2.18	0.42
11:R:165:LYS:CD	54:S2:907:G:OP2	2.67	0.42
18:Z:114:ALA:HB1	18:Z:118:PHE:HE2	1.84	0.42
30:m:88:LYS:HA	30:m:92:ASP:OD1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:o:5:PRO:HD3	32:5:4232:U:C2	2.53	0.42
32:5:85:G:C4	32:5:97:G:O6	2.72	0.42
32:5:208:A:C6	32:5:233:U:C2	3.07	0.42
32:5:228:C:C2'	32:5:229:G:H5'	2.49	0.42
32:5:244:G:N1	32:5:246:G:C5	2.87	0.42
32:5:307:A:H2'	32:5:308:G:N3	2.34	0.42
32:5:369:G:C6	32:5:371:A:OP2	2.72	0.42
32:5:397:G:C6	32:5:398:A:H1'	2.54	0.42
32:5:423:G:H3'	32:5:424:U:H6	1.84	0.42
32:5:518:G:C2	32:5:519:C:C2	3.07	0.42
32:5:994:G:C4	32:5:995:C:C6	3.07	0.42
32:5:1289:C:OP1	37:E:130:SER:HB3	2.19	0.42
32:5:1351:G:C6	32:5:1352:C:C4	3.07	0.42
32:5:1397:A:C2	32:5:1499:C:O4'	2.72	0.42
32:5:1404:G:C2	32:5:1414:C:C4	3.06	0.42
32:5:1438:U:O2	32:5:2099:G:N7	2.52	0.42
32:5:1475:G:H2'	32:5:1476:C:H6	1.84	0.42
32:5:1563:A:H61	54:S2:1028:A:H61	1.64	0.42
32:5:1656:U:C4	32:5:1657:G:N7	2.87	0.42
32:5:1676:C:N4	32:5:4374:U:C2	2.87	0.42
32:5:1776:A:C4	32:5:1777:C:C5	3.07	0.42
32:5:1777:C:C2	32:5:1778:C:C5	3.07	0.42
32:5:1965:G:C2	32:5:1966:C:C6	3.07	0.42
32:5:2325:C:C2	32:5:2325:C:H3'	2.54	0.42
32:5:2435:G:N2	32:5:2783:A:H1'	2.32	0.42
32:5:2639:U:H2'	32:5:2694:G:N1	2.34	0.42
32:5:2736:G:C5	32:5:2737:C:C5	3.07	0.42
32:5:2744:A:O2'	32:5:2745:A:C8	2.72	0.42
32:5:3802:U:O2	32:5:3802:U:C2'	2.67	0.42
32:5:3819:G:N2	32:5:3820:G:C4	2.87	0.42
32:5:3845:A:C6	32:5:3846:C:C6	3.07	0.42
32:5:3860:A:C6	32:5:3861:A:C8	3.07	0.42
32:5:4097:G:C6	32:5:4098:A:N7	2.87	0.42
32:5:4126:C:H3'	32:5:4127:A:C5'	2.49	0.42
32:5:4137:C:N3	32:5:4138:C:C5	2.87	0.42
32:5:4422:A:C5	32:5:4423:U:C5	3.07	0.42
32:5:4439:U:C2	32:5:4440:G:C8	3.07	0.42
32:5:4504:C:C2	32:5:4505:C:C6	3.06	0.42
32:5:4563:U:N3	32:5:4564:A:C6	2.87	0.42
32:5:4593:C:N3	32:5:4594:U:C5	2.87	0.42
32:5:4690:G:O2'	32:5:4691:A:O4'	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4734:A:C5	32:5:4735:G:N7	2.86	0.42
32:5:4919:G:N2	32:5:4920:C:C2	2.87	0.42
32:5:4981:G:C4	32:5:4982:A:C8	3.06	0.42
32:5:5012:G:N2	32:5:5014:A:N7	2.62	0.42
37:E:219:ARG:HA	37:E:219:ARG:HD2	1.91	0.42
40:P:62:ARG:HG2	40:P:63:TYR:CE1	2.54	0.42
41:W:22:ALA:HB2	41:W:28:VAL:HG13	2.01	0.42
41:W:33:ASN:OD1	41:W:33:ASN:N	2.51	0.42
46:K:162:CYS:N	46:K:163:PRO:CD	2.82	0.42
47:q:29:ILE:HG23	47:q:86:VAL:CG1	2.49	0.42
47:q:108:PRO:CA	47:q:109:ALA:C	2.90	0.42
51:4:59:A:N6	51:4:60:U:C4	2.87	0.42
54:S2:66:G:N7	54:S2:68:A:N7	2.67	0.42
54:S2:78:C:H2'	54:S2:79:A:H4'	2.01	0.42
54:S2:333:G:N1	54:S2:334:C:C2	2.87	0.42
54:S2:333:G:C5	54:S2:334:C:C5	3.07	0.42
54:S2:445:A:C6	54:S2:446:G:C2	3.07	0.42
54:S2:665:G:N2	54:S2:671:A:C5	2.87	0.42
54:S2:867:G:H3'	54:S2:868:G:H8	1.83	0.42
54:S2:885:U:H2'	54:S2:886:A:H8	1.84	0.42
54:S2:976:G:N2	54:S2:977:C:C2	2.87	0.42
54:S2:1099:G:C2	54:S2:1100:A:N9	2.86	0.42
54:S2:1223:A:O2'	54:S2:1651:A:H4'	2.19	0.42
54:S2:1266:C:O2	54:S2:1267:C:C6	2.72	0.42
54:S2:1275:G:H5'	54:S2:1276:A:H5''	2.01	0.42
54:S2:1287:A:N6	54:S2:1314:U:C5	2.87	0.42
54:S2:1296:U:C4	54:S2:1297:U:C4	3.07	0.42
54:S2:1359:U:C2	54:S2:1360:U:C5	3.07	0.42
54:S2:1409:A:C8	54:S2:1409:A:O5'	2.72	0.42
54:S2:1731:A:C2	54:S2:1732:G:C4	3.07	0.42
54:S2:1807:C:H2'	54:S2:1808:U:O4'	2.19	0.42
62:SJ:159:PHE:CE1	62:SJ:165:TYR:HD2	2.37	0.42
63:SL:12:LYS:O	63:SL:14:PRO:HD3	2.19	0.42
65:SO:41:PHE:N	65:SO:41:PHE:HD1	2.17	0.42
80:SS:82:TRP:CD1	80:SS:82:TRP:H	2.37	0.42
83:SZ:99:LEU:HD23	83:SZ:109:TYR:CD1	2.53	0.42
88:S1:28:VAL:HG12	89:S4:29:THR:HG22	2.00	0.42
5:J:114:ASP:OD1	80:SS:14:ARG:NE	2.51	0.42
6:L:14:PHE:CD1	6:L:18:TRP:CD1	3.05	0.42
7:M:3:PHE:HB2	7:M:6:PHE:CE2	2.53	0.42
8:N:178:HIS:HA	8:N:181:HIS:NE2	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:O:81:TRP:NE1	9:O:99:LEU:HD22	2.34	0.42
13:T:59:GLY:HA3	32:5:1732:C:O2'	2.19	0.42
21:c:89:TYR:CZ	32:5:2673:G:C2	3.07	0.42
23:e:16:ARG:NH1	23:e:18:LYS:HB2	2.34	0.42
32:5:29:G:C2	32:5:30:C:C4	3.07	0.42
32:5:324:A:C2'	32:5:325:U:H5'	2.49	0.42
32:5:383:A:O2'	32:5:384:A:C5'	2.67	0.42
32:5:472:C:C4	32:5:473:C:C4	3.07	0.42
32:5:663:G:H3'	32:5:664:G:C5'	2.49	0.42
32:5:742:G:C2	32:5:743:G:C8	3.07	0.42
32:5:742:G:N2	32:5:743:G:C4	2.87	0.42
32:5:919:C:C2'	32:5:920:C:O4'	2.67	0.42
32:5:963:G:N3	32:5:963:G:C2'	2.81	0.42
32:5:1070:G:C2	32:5:1071:C:C2	3.06	0.42
32:5:1096:C:N3	32:5:1097:C:C5	2.87	0.42
32:5:1268:G:N1	32:5:2111:G:N2	2.67	0.42
32:5:1360:G:C2	32:5:1361:G:H1'	2.55	0.42
32:5:1380:G:N3	32:5:1382:G:C5	2.87	0.42
32:5:1400:G:C2	32:5:1418:C:O2	2.72	0.42
32:5:1544:G:N2	32:5:1545:G:C4	2.86	0.42
32:5:1567:U:C4	32:5:1568:C:C5	3.07	0.42
32:5:1627:G:C4	32:5:1628:C:C6	3.06	0.42
32:5:1858:A:N3	32:5:1859:C:C5	2.85	0.42
32:5:1878:G:C5	32:5:1879:C:C5	3.07	0.42
32:5:1942:A:C2	32:5:4433:G:H1'	2.54	0.42
32:5:2103:G:C5	32:5:2104:G:C8	3.08	0.42
32:5:2294:G:C2	32:5:2295:C:C2	3.07	0.42
32:5:2326:G:C2	32:5:2327:G:C4	3.07	0.42
32:5:2713:C:O2	32:5:2714:G:H8	1.96	0.42
32:5:2794:C:N4	40:P:134:GLY:O	2.52	0.42
32:5:3635:A:N6	32:5:3636:C:N1	2.67	0.42
32:5:3638:G:C6	32:5:3651:A:C2	3.07	0.42
32:5:3694:U:N3	32:5:3695:U:C4	2.87	0.42
32:5:3694:U:C4	32:5:3695:U:C4	3.07	0.42
32:5:3821:A:C6	32:5:3822:U:C6	3.08	0.42
32:5:4091:G:N2	32:5:4159:C:N3	2.63	0.42
32:5:4147:G:C5	32:5:4148:C:C5	3.07	0.42
32:5:4193:C:H3'	32:5:4194:U:O2	2.18	0.42
32:5:4208:U:C2	32:5:4209:G:C8	3.07	0.42
32:5:4266:G:O6	32:5:4279:A:C8	2.72	0.42
32:5:4292:A:O4'	32:5:4330:G:C1'	2.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4598:C:H2'	32:5:4611:A:H61	1.84	0.42
32:5:4600:G:C2	32:5:4609:G:C5	3.08	0.42
32:5:5017:G:C4	32:5:5018:C:C6	3.08	0.42
32:5:5047:C:C6	32:5:5050:C:H6	2.37	0.42
32:5:5066:U:C2'	32:5:5067:U:C6	2.98	0.42
33:7:114:U:C2	33:7:115:A:C8	3.07	0.42
34:8:2:G:H2'	34:8:2:G:N3	2.35	0.42
34:8:57:C:H4'	34:8:63:U:C5	2.54	0.42
35:B:100:ARG:HB3	35:B:100:ARG:NH1	2.33	0.42
35:B:337:VAL:HG21	35:B:345:LEU:HD21	2.01	0.42
46:K:147:HIS:HB2	46:K:149:HIS:HB2	2.00	0.42
47:q:106:LYS:HA	47:q:106:LYS:HD3	1.78	0.42
48:z:273:ILE:O	48:z:282:PHE:HA	2.19	0.42
48:z:405:ARG:NE	51:4:207:C:H4'	2.33	0.42
50:3:61:C:N3	50:3:62:C:C5	2.86	0.42
54:S2:201:C:C6	54:S2:202:G:C8	3.07	0.42
54:S2:445:A:H2'	54:S2:446:G:C4'	2.48	0.42
54:S2:445:A:C5	54:S2:446:G:C4	3.07	0.42
54:S2:478:G:N3	54:S2:479:C:C6	2.87	0.42
54:S2:497:C:O2'	54:S2:498:C:H5'	2.19	0.42
54:S2:1032:C:C4	54:S2:1033:G:C5	3.08	0.42
54:S2:1173:A:H2'	54:S2:1174:U:O4'	2.18	0.42
54:S2:1293:A:C2	86:Sf:151:ASN:CA	2.96	0.42
54:S2:1319:U:H2'	54:S2:1320:G:H8	1.84	0.42
54:S2:1559:C:C2	54:S2:1577:G:C2	3.07	0.42
54:S2:1574:C:O2	54:S2:1575:G:H8	2.01	0.42
54:S2:1596:U:O2	54:S2:1596:U:C2'	2.63	0.42
54:S2:1605:G:H2'	54:S2:1606:G:C1'	2.45	0.42
54:S2:1633:A:C2	54:S2:1634:A:C5	3.07	0.42
54:S2:1771:G:C2	54:S2:1772:C:C2	3.07	0.42
55:SA:176:TRP:HE1	55:SA:195:TRP:HE3	1.66	0.42
57:SC:127:PHE:CZ	57:SC:234:GLY:CA	3.02	0.42
58:SE:28:ALA:HB1	58:SE:29:PRO:CD	2.49	0.42
58:SE:121:TYR:CD2	58:SE:122:LYS:N	2.87	0.42
60:SH:158:LEU:HB2	60:SH:189:PHE:CZ	2.54	0.42
70:Sa:73:TYR:CD2	70:Sa:83:VAL:HG21	2.54	0.42
79:SR:88:VAL:HB	79:SR:91:LEU:CG	2.47	0.42
79:SR:88:VAL:CG2	79:SR:91:LEU:HD23	2.49	0.42
80:SS:123:LEU:O	80:SS:127:TRP:CD1	2.72	0.42
1:A:34:PHE:CZ	32:5:4087:G:C4	3.07	0.42
1:A:178:PRO:HD2	44:p:26:VAL:HG22	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:20:PHE:CE1	33:7:10:C:C2	3.07	0.42
2:D:30:TYR:CB	2:D:33:ARG:HB2	2.49	0.42
2:D:66:TYR:C	2:D:66:TYR:HD1	2.27	0.42
2:D:223:PHE:N	2:D:223:PHE:HD1	2.18	0.42
3:G:32:PHE:CD2	18:Z:55:ALA:HB2	2.53	0.42
6:L:76:PHE:CE2	6:L:117:LEU:HG	2.55	0.42
7:M:39:ASP:OD2	7:M:70:GLN:NE2	2.52	0.42
8:N:65:ARG:HD2	8:N:127:TYR:CD2	2.54	0.42
10:Q:30:LYS:HE2	32:5:2268:A:O3'	2.19	0.42
10:Q:65:ARG:NE	32:5:1459:A:OP1	2.45	0.42
11:R:95:TRP:HZ3	11:R:98:ARG:HH21	1.67	0.42
14:U:23:LEU:HA	14:U:110:TYR:O	2.19	0.42
21:c:37:MET:HB3	21:c:43:ALA:HB2	2.00	0.42
21:c:52:CYS:CB	21:c:92:CYS:SG	3.07	0.42
24:f:54:LYS:HG2	32:5:443:G:H5''	2.01	0.42
28:k:11:PHE:C	28:k:11:PHE:CD1	2.97	0.42
32:5:2:G:N1	32:5:3:C:C4	2.87	0.42
32:5:15:A:H2'	32:5:16:G:O4'	2.19	0.42
32:5:25:A:O2'	32:5:26:C:H5'	2.19	0.42
32:5:93:G:C4	32:5:94:A:C6	3.07	0.42
32:5:128:C:C2	32:5:129:C:C6	3.07	0.42
32:5:199:G:H2'	32:5:237:G:O2'	2.19	0.42
32:5:212:A:C2'	32:5:213:G:H8	2.26	0.42
32:5:229:G:H2'	32:5:230:G:O4'	2.19	0.42
32:5:450:G:C6	32:5:1295:C:C4	3.07	0.42
32:5:744:G:C2	32:5:921:C:C2	3.07	0.42
32:5:919:C:C2	32:5:920:C:C6	3.08	0.42
32:5:1077:C:O2	32:5:1077:C:H2'	2.19	0.42
32:5:1257:A:C5	32:5:1258:G:C8	3.07	0.42
32:5:1281:G:H1'	36:C:322:LEU:N	2.34	0.42
32:5:1390:G:N3	32:5:1394:G:N1	2.68	0.42
32:5:1449:C:N3	32:5:1450:C:C5	2.87	0.42
32:5:1828:C:N3	32:5:1829:G:N7	2.67	0.42
32:5:1857:C:C1'	32:5:1892:A:N3	2.81	0.42
32:5:1888:A:N6	32:5:3873:G:O2'	2.50	0.42
32:5:1927:U:H4'	32:5:2035:C:H2'	2.01	0.42
32:5:1934:A:N7	32:5:2048:U:H1'	2.34	0.42
32:5:1988:G:N1	32:5:1989:G:C5	2.87	0.42
32:5:1996:C:C4	32:5:1997:U:H1'	2.53	0.42
32:5:2090:U:O2	32:5:2090:U:OP2	2.37	0.42
32:5:2100:A:C8	32:5:2101:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2301:G:C4	32:5:2302:C:C5	3.07	0.42
32:5:2318:G:N1	32:5:2322:G:C2	2.87	0.42
32:5:2438:A:N6	32:5:2441:C:C6	2.88	0.42
32:5:2457:G:C2	32:5:2465:C:C4	3.08	0.42
32:5:2461:G:N2	32:5:2462:C:C4	2.88	0.42
32:5:2481:G:N3	32:5:2482:C:C6	2.87	0.42
32:5:2738:C:H1'	32:5:2740:U:C5	2.54	0.42
32:5:2908:U:C2	32:5:2909:C:C6	3.07	0.42
32:5:3698:G:C2	32:5:3699:C:C6	3.07	0.42
32:5:3742:G:N2	32:5:3743:G:C4	2.87	0.42
32:5:3778:U:O2	32:5:3778:U:H2'	2.18	0.42
32:5:3814:U:H6	32:5:3814:U:O5'	2.02	0.42
32:5:4152:G:C2	32:5:4153:C:C2	3.08	0.42
32:5:4273:A:N6	32:5:4335:C:N4	2.67	0.42
32:5:4276:G:C4	32:5:4277:G:C8	3.06	0.42
32:5:4426:C:O2	32:5:4426:C:H2'	2.19	0.42
32:5:4435:U:H2'	32:5:4436:U:N1	2.35	0.42
32:5:4509:U:O2	32:5:4510:A:O2'	2.36	0.42
32:5:4600:G:O2'	32:5:4601:U:OP2	2.37	0.42
32:5:4651:A:C2	32:5:4652:G:N9	2.87	0.42
32:5:4652:G:C2	32:5:4653:C:C2	3.07	0.42
32:5:4723:A:C2	32:5:4724:A:N7	2.87	0.42
32:5:4982:A:N6	32:5:4983:C:C4	2.87	0.42
34:8:78:G:C4	34:8:79:G:C8	3.07	0.42
34:8:135:C:O2	34:8:136:U:C6	2.73	0.42
35:B:10:ARG:HD2	35:B:12:GLY:O	2.18	0.42
35:B:46:PHE:CE2	35:B:207:VAL:HG13	2.54	0.42
37:E:280:HIS:HE1	37:E:281:LYS:HD3	1.84	0.42
38:F:168:ARG:CD	38:F:211:TRP:CD1	3.01	0.42
39:I:101:LYS:HG3	39:I:121:LYS:HG3	2.01	0.42
46:K:47:ALA:HB2	46:K:72:GLU:HG2	2.00	0.42
46:K:147:HIS:HB2	46:K:149:HIS:CD2	2.54	0.42
47:q:178:LEU:O	47:q:179:ASN:HB2	2.19	0.42
48:z:364:ASN:O	48:z:367:GLU:CA	2.64	0.42
51:4:53:U:C2	51:4:54:G:C8	3.07	0.42
51:4:136:G:O2'	51:4:214:A:N1	2.49	0.42
51:4:166:U:C5	53:6:142:ARG:NH2	2.87	0.42
54:S2:56:G:OP1	69:SY:111:LYS:NZ	2.46	0.42
54:S2:70:G:N1	54:S2:71:G:C4	2.87	0.42
54:S2:100:U:H2'	54:S2:101:U:O5'	2.19	0.42
54:S2:123:G:N3	54:S2:123:G:C2'	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:367:U:C4'	54:S2:371:A:C8	3.02	0.42
54:S2:431:G:N2	54:S2:432:G:C4	2.88	0.42
54:S2:663:C:C2	54:S2:664:A:C8	3.07	0.42
54:S2:818:A:C2	54:S2:819:G:H1'	2.54	0.42
54:S2:929:G:C2	54:S2:930:C:C2	3.08	0.42
54:S2:947:G:H2'	54:S2:948:C:O4'	2.19	0.42
54:S2:950:C:C4	54:S2:951:C:C5	3.07	0.42
54:S2:993:G:C2	54:S2:994:C:C2	3.07	0.42
54:S2:1145:A:C6	54:S2:1146:C:H1'	2.55	0.42
54:S2:1307:U:H2'	54:S2:1308:U:C1'	2.49	0.42
54:S2:1314:U:O2'	75:SK:3:MET:N	2.51	0.42
54:S2:1325:G:C2	54:S2:1327:G:C5	3.07	0.42
54:S2:1410:C:O2	54:S2:1411:G:C8	2.71	0.42
54:S2:1450:G:C4	54:S2:1451:G:C8	3.07	0.42
54:S2:1466:G:C6	54:S2:1467:C:C4	3.07	0.42
54:S2:1531:A:H2'	54:S2:1532:C:C6	2.55	0.42
54:S2:1559:C:N3	54:S2:1560:U:H1'	2.34	0.42
54:S2:1573:G:C2	54:S2:1574:C:N1	2.87	0.42
54:S2:1606:G:C4	54:S2:1632:G:N2	2.88	0.42
54:S2:1630:A:N1	54:S2:1631:U:C4	2.87	0.42
54:S2:1669:G:C6	54:S2:1670:C:N4	2.87	0.42
56:SB:48:LEU:HD12	65:SO:51:GLU:HG2	2.00	0.42
60:SH:43:LEU:HD21	60:SH:71:SER:HB3	2.01	0.42
61:SI:76:THR:HG21	61:SI:105:ASP:O	2.18	0.42
66:SV:65:SER:O	66:SV:69:ILE:N	2.53	0.42
67:SW:85:ASP:OD1	67:SW:85:ASP:N	2.52	0.42
73:SD:37:VAL:HG12	73:SD:50:ILE:HD13	2.00	0.42
76:SM:101:ARG:HA	76:SM:101:ARG:NH1	2.34	0.42
77:SP:30:TYR:CD1	77:SP:31:GLU:N	2.88	0.42
83:SZ:50:PHE:CE1	83:SZ:79:ILE:HG12	2.53	0.42
84:Sc:31:ARG:NH1	84:Sc:31:ARG:CG	2.73	0.42
89:S4:30:LEU:HD13	89:S4:58:LEU:HD13	2.00	0.42
3:G:58:PRO:CG	16:X:46:PHE:HD2	2.33	0.42
5:J:31:ASP:O	5:J:32:ARG:HB2	2.19	0.42
5:J:146:ARG:HG2	5:J:147:ARG:N	2.34	0.42
7:M:86:TRP:O	7:M:87:ALA:CB	2.67	0.42
10:Q:24:TYR:HE1	45:r:5:LEU:HD11	1.85	0.42
10:Q:29:VAL:HG13	10:Q:33:ARG:NH2	2.31	0.42
19:a:80:THR:O	19:a:81:LEU:C	2.63	0.42
20:b:15:LYS:C	20:b:17:HIS:H	2.27	0.42
21:c:79:ILE:O	21:c:81:LEU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:e:26:ASP:OD2	32:5:436:C:H4'	2.20	0.42
32:5:219:G:H8	32:5:220:C:C5	2.37	0.42
32:5:698:G:N1	32:5:699:C:C5	2.88	0.42
32:5:718:C:N3	32:5:719:C:C6	2.88	0.42
32:5:989:U:H2'	32:5:989:U:O2	2.18	0.42
32:5:1091:C:C4	32:5:1092:G:N7	2.87	0.42
32:5:1273:G:C8	37:E:69:TYR:C	2.97	0.42
32:5:1341:U:H2'	32:5:1342:A:H8	1.85	0.42
32:5:1401:C:H2'	32:5:1402:C:C6	2.55	0.42
32:5:1459:A:H2'	32:5:1460:C:O4'	2.20	0.42
32:5:1490:G:C4	32:5:1491:A:C8	3.08	0.42
32:5:1627:G:C6	32:5:1628:C:C2	3.07	0.42
32:5:1685:G:C2	32:5:1686:C:N3	2.87	0.42
32:5:1742:A:H2	32:5:1743:A:N7	2.15	0.42
32:5:1760:G:C6	32:5:1761:G:C5	3.07	0.42
32:5:1964:A:C5	32:5:1965:G:N7	2.86	0.42
32:5:1964:A:C4	32:5:1965:G:C8	3.08	0.42
32:5:1973:G:H4'	46:K:121:LEU:HD23	2.01	0.42
32:5:2294:G:C6	32:5:2295:C:C5	3.08	0.42
32:5:2312:U:O2	32:5:2312:U:C2'	2.65	0.42
32:5:2364:G:N3	32:5:2365:C:C5	2.87	0.42
32:5:2385:U:C2	32:5:2386:U:C5	3.06	0.42
32:5:2509:C:O2	32:5:2510:G:C8	2.73	0.42
32:5:2561:C:H2'	32:5:2561:C:O2	2.18	0.42
32:5:2743:A:H2	32:5:2744:A:C4	2.37	0.42
32:5:2793:G:O6	32:5:2797:C:C5	2.72	0.42
32:5:2841:G:C2	32:5:2842:G:N9	2.87	0.42
32:5:3641:U:O4	32:5:3645:U:H2'	2.18	0.42
32:5:3654:G:N3	32:5:3654:G:H2'	2.34	0.42
32:5:3733:A:C4	32:5:3734:U:C5	3.08	0.42
32:5:3779:A:C2	32:5:3816:A:C6	3.07	0.42
32:5:3800:A:C2	32:5:4496:A:H1'	2.54	0.42
32:5:3806:G:C2	32:5:3807:A:C8	3.07	0.42
32:5:3896:C:O2'	35:B:268:ARG:NH2	2.51	0.42
32:5:3907:G:H5''	32:5:4448:G:H5''	2.02	0.42
32:5:3911:C:O2	32:5:3912:U:C6	2.73	0.42
32:5:4085:A:C6	32:5:4164:C:C6	3.07	0.42
32:5:4150:G:C6	32:5:4151:G:C5	3.07	0.42
32:5:4333:C:O2'	32:5:4334:U:C5'	2.67	0.42
32:5:4489:G:C4	32:5:4490:C:C5	3.08	0.42
32:5:4495:G:C2	32:5:4506:C:N3	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4504:C:O2	32:5:4505:C:C6	2.73	0.42
32:5:4583:C:N4	32:5:4718:G:N1	2.66	0.42
32:5:4597:U:H2'	32:5:4598:C:O4'	2.19	0.42
32:5:4737:G:N1	32:5:4963:G:N3	2.67	0.42
32:5:4901:G:N1	32:5:4921:C:C4	2.87	0.42
33:7:7:G:N1	33:7:8:G:C5	2.87	0.42
33:7:34:C:C2	33:7:35:U:C5	3.07	0.42
34:8:144:U:N3	34:8:145:C:C5	2.87	0.42
39:I:21:ARG:HD3	39:I:22:PHE:CE2	2.55	0.42
39:I:171:TRP:HB2	39:I:181:PHE:CE2	2.52	0.42
40:P:52:THR:HG23	40:P:85:LYS:HG3	2.01	0.42
48:z:52:LEU:HD12	48:z:86:LEU:CD1	2.49	0.42
48:z:273:ILE:HB	48:z:285:PHE:CE1	2.54	0.42
51:4:289:A:H8	51:4:289:A:O5'	2.02	0.42
52:9:85:GLN:NE2	52:9:94:CYS:SG	2.92	0.42
54:S2:54:A:C2	54:S2:451:G:N3	2.87	0.42
54:S2:56:G:O2'	54:S2:57:U:O5'	2.38	0.42
54:S2:62:G:C1'	54:S2:172:U:O2	2.67	0.42
54:S2:358:C:N3	54:S2:359:U:C5	2.87	0.42
54:S2:396:U:O2'	54:S2:397:G:H5'	2.19	0.42
54:S2:418:A:H3'	54:S2:419:G:H8	1.84	0.42
54:S2:440:G:OP1	61:SI:24:LYS:HE3	2.20	0.42
54:S2:531:A:C2	54:S2:532:C:H1'	2.55	0.42
54:S2:534:G:N3	54:S2:535:G:C8	2.87	0.42
54:S2:599:A:H2'	54:S2:606:G:N2	2.34	0.42
54:S2:605:A:H8	54:S2:605:A:O5'	2.02	0.42
54:S2:617:G:C2	54:S2:618:C:H1'	2.55	0.42
54:S2:827:A:N7	54:S2:828:G:C8	2.86	0.42
54:S2:917:U:O5'	54:S2:917:U:H6	2.02	0.42
54:S2:925:G:C6	54:S2:926:A:N7	2.87	0.42
54:S2:993:G:N1	54:S2:994:C:C4	2.87	0.42
54:S2:1072:U:C5	54:S2:1073:U:C5	3.07	0.42
54:S2:1154:U:O4'	54:S2:1156:U:N3	2.53	0.42
54:S2:1167:G:O6	54:S2:1193:U:C2	2.73	0.42
54:S2:1391:C:C4	54:S2:1392:U:C6	3.07	0.42
54:S2:1466:G:C2	54:S2:1467:C:C2	3.07	0.42
54:S2:1595:U:N3	54:S2:1596:U:C6	2.77	0.42
54:S2:1647:A:H4'	54:S2:1648:G:O5'	2.19	0.42
54:S2:1852:C:O2	54:S2:1853:C:C6	2.73	0.42
55:SA:117:ARG:C	55:SA:119:PRO:HD3	2.45	0.42
55:SA:120:ARG:HH12	57:SC:267:GLN:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:SB:85:LYS:HG3	56:SB:102:GLY:HA3	2.01	0.42
58:SE:68:ARG:NH1	58:SE:76:VAL:HG11	2.35	0.42
58:SE:181:CYS:SG	58:SE:195:ILE:HG13	2.60	0.42
61:SI:34:ALA:HB2	61:SI:56:ARG:HD3	2.01	0.42
61:SI:72:CYS:HB3	61:SI:112:TRP:CZ2	2.55	0.42
64:SN:101:HIS:C	64:SN:101:HIS:HD2	2.26	0.42
64:SN:105:ASN:OD1	64:SN:105:ASN:N	2.52	0.42
72:Se:45:VAL:O	72:Se:46:VAL:C	2.62	0.42
74:SF:152:TRP:O	74:SF:153:LEU:C	2.63	0.42
76:SM:19:GLN:HG2	76:SM:88:TRP:HB2	2.00	0.42
78:SQ:81:ILE:HA	78:SQ:84:ILE:HG12	2.00	0.42
82:SU:48:LEU:CD1	82:SU:91:LEU:HD22	2.49	0.42
83:SZ:56:ASP:O	83:SZ:60:LYS:CB	2.68	0.42
83:SZ:79:ILE:HG23	83:SZ:84:ALA:HB2	2.01	0.42
87:Sg:245:ARG:CD	87:Sg:247:TRP:CZ3	2.95	0.42
88:S1:74:VAL:HG21	89:S4:76:VAL:CG1	2.48	0.42
1:A:19:HIS:HB2	1:A:193:ARG:HA	2.01	0.42
1:A:120:PRO:HA	1:A:162:ASN:HB3	2.02	0.42
1:A:174:ARG:HA	44:p:69:TRP:HH2	1.75	0.42
6:L:176:PHE:HD1	6:L:177:LYS:N	2.18	0.42
8:N:44:ARG:HD2	8:N:119:TYR:HB2	2.01	0.42
8:N:93:LYS:HB3	32:5:300:A:O2'	2.19	0.42
12:S:38:VAL:HG22	38:F:239:GLU:HG2	2.00	0.42
12:S:47:PHE:CE1	12:S:125:GLN:HG2	2.52	0.42
21:c:27:TYR:N	21:c:27:TYR:CD1	2.87	0.42
23:e:118:LEU:CD1	23:e:120:ILE:HD12	2.49	0.42
26:h:89:ARG:CA	26:h:92:ARG:HH21	2.33	0.42
29:l:28:ARG:NH1	32:5:412:G:N2	2.67	0.42
32:5:17:A:C2	32:5:18:C:H1'	2.55	0.42
32:5:40:G:C2	32:5:4378:A:N7	2.87	0.42
32:5:91:G:C5	32:5:93:G:O6	2.72	0.42
32:5:123:C:C2	32:5:124:C:C6	3.07	0.42
32:5:210:C:H6	32:5:210:C:O5'	2.03	0.42
32:5:293:G:O4'	32:5:294:G:C8	2.73	0.42
32:5:341:G:H2'	32:5:342:G:H5'	2.00	0.42
32:5:457:G:N2	32:5:458:C:N1	2.67	0.42
32:5:460:C:H2'	32:5:461:G:H8	1.84	0.42
32:5:496:G:H2'	32:5:497:G:O4'	2.19	0.42
32:5:515:C:C2	32:5:647:G:N2	2.88	0.42
32:5:699:C:C4	32:5:700:G:C8	3.07	0.42
32:5:910:G:N2	32:5:911:U:H1'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:931:C:C6	32:5:932:A:N7	2.88	0.42
32:5:952:G:H5'	32:5:952:G:H8	1.83	0.42
32:5:985:C:C2	32:5:986:C:C5	3.07	0.42
32:5:1068:G:N1	32:5:1069:G:C5	2.88	0.42
32:5:1084:C:C2	32:5:1085:C:C6	3.07	0.42
32:5:1199:G:C4	32:5:1200:G:C8	3.08	0.42
32:5:1291:G:C6	32:5:1292:C:N4	2.88	0.42
32:5:1362:G:N2	32:5:1363:C:C2	2.88	0.42
32:5:1404:G:C2	32:5:1405:C:N1	2.87	0.42
32:5:1477:C:C4	32:5:1478:C:C6	3.06	0.42
32:5:1504:G:C2	32:5:1505:C:C2	3.08	0.42
32:5:1537:A:H2'	32:5:1538:U:O4'	2.19	0.42
32:5:1554:A:C6	32:5:1555:G:N9	2.88	0.42
32:5:1573:G:H3'	32:5:1574:G:C8	2.54	0.42
32:5:1598:C:O2'	32:5:2797:C:O3'	2.36	0.42
32:5:1749:A:C2	32:5:1750:G:C4	3.08	0.42
32:5:1756:U:H2'	32:5:1757:U:O4'	2.19	0.42
32:5:1761:G:N2	32:5:1762:C:C2	2.87	0.42
32:5:1779:U:H2'	32:5:1780:A:H8	1.84	0.42
32:5:1899:G:H2'	32:5:1900:C:H6	1.85	0.42
32:5:1960:A:N1	47:q:14:PHE:CE2	2.83	0.42
32:5:2069:A:C5	32:5:2071:A:C8	3.08	0.42
32:5:2091:C:C2	32:5:2257:C:O2'	2.67	0.42
32:5:2245:G:C4	32:5:2246:C:C6	3.07	0.42
32:5:2270:G:C2	32:5:2271:C:C6	3.07	0.42
32:5:2330:G:C2'	32:5:2331:G:O4'	2.68	0.42
32:5:2415:U:H2'	32:5:2416:G:C8	2.54	0.42
32:5:2457:G:N2	32:5:3672:G:N2	2.68	0.42
32:5:2569:G:C5	32:5:2570:U:C4	3.07	0.42
32:5:2576:G:N2	32:5:2577:C:C2	2.87	0.42
32:5:2628:U:N3	32:5:2629:C:C5	2.87	0.42
32:5:2823:G:N1	32:5:2824:C:C4	2.87	0.42
32:5:2867:C:O2	32:5:2867:C:H2'	2.18	0.42
32:5:3610:A:H2'	32:5:3611:A:H8	1.85	0.42
32:5:3694:U:O2	32:5:3695:U:C6	2.73	0.42
32:5:3724:A:N1	32:5:3725:G:C4	2.88	0.42
32:5:3729:U:C5	32:5:3730:U:C5	3.07	0.42
32:5:3739:C:C2	32:5:3740:G:C8	3.01	0.42
32:5:3861:A:C2	32:5:3862:A:C4	3.07	0.42
32:5:3870:C:H2'	32:5:3871:A:C8	2.53	0.42
32:5:3875:G:C6	32:5:3877:A:H4'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3889:G:H4'	32:5:3890:A:OP1	2.19	0.42
32:5:4201:G:C6	32:5:4202:U:O4	2.72	0.42
32:5:4243:C:O2	32:5:4243:C:C2'	2.63	0.42
32:5:4503:A:C2	32:5:4504:C:C2	3.08	0.42
32:5:4592:C:N3	32:5:4593:C:C5	2.87	0.42
32:5:4595:G:C4	32:5:4596:C:C6	3.08	0.42
32:5:4619:U:C4	32:5:4620:U:C5	3.08	0.42
32:5:4628:U:O4'	35:B:55:HIS:NE2	2.52	0.42
32:5:4913:G:HO2'	32:5:4914:C:C4'	2.31	0.42
32:5:4960:G:C2'	32:5:4961:G:H5'	2.49	0.42
32:5:5002:U:H4'	35:B:374:PHE:O	2.19	0.42
33:7:19:C:C4	33:7:60:G:N1	2.87	0.42
33:7:27:G:C5	33:7:28:C:C5	3.07	0.42
34:8:2:G:C6	34:8:3:A:C5	3.08	0.42
34:8:79:G:C2	34:8:80:A:C2	3.07	0.42
34:8:149:G:C2	34:8:151:G:C5	3.08	0.42
35:B:90:VAL:HB	35:B:104:THR:HG23	2.01	0.42
36:C:337:ARG:HD3	37:E:51:GLY:O	2.19	0.42
39:I:35:ASP:HB2	39:I:86:HIS:HE1	1.85	0.42
41:W:9:SER:OG	41:W:11:TYR:HB2	2.19	0.42
48:z:91:VAL:O	48:z:92:LYS:C	2.62	0.42
48:z:133:CYS:SG	48:z:184:PHE:CD2	3.11	0.42
51:4:51:G:C2	51:4:296:C:N3	2.87	0.42
51:4:172:A:C6	51:4:173:A:N6	2.87	0.42
53:6:190:ARG:HD3	53:6:198:ALA:HB1	2.01	0.42
54:S2:86:C:C4	54:S2:87:U:C4	3.07	0.42
54:S2:173:A:C6	54:S2:174:C:C4	3.08	0.42
54:S2:212:C:C2	54:S2:213:G:C8	3.08	0.42
54:S2:340:C:H2'	54:S2:341:C:O4'	2.19	0.42
54:S2:352:U:H2'	54:S2:353:C:C6	2.55	0.42
54:S2:378:U:C4	54:S2:379:C:N4	2.84	0.42
54:S2:499:G:N2	54:S2:504:G:C6	2.88	0.42
54:S2:803:C:N3	54:S2:804:U:C6	2.88	0.42
54:S2:1031:A:H2'	54:S2:1032:C:O4'	2.19	0.42
54:S2:1033:G:N1	54:S2:1080:A:O2'	2.33	0.42
54:S2:1394:G:N3	54:S2:1394:G:C2'	2.81	0.42
54:S2:1398:G:N2	54:S2:1399:C:N1	2.67	0.42
54:S2:1447:G:C6	54:S2:1448:A:C5	3.07	0.42
54:S2:1679:A:O5'	54:S2:1679:A:H8	2.03	0.42
54:S2:1710:C:O2	54:S2:1710:C:H2'	2.18	0.42
56:SB:27:LYS:C	56:SB:51:ARG:NH1	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SG:70:HIS:N	59:SG:70:HIS:ND1	2.67	0.42
68:SX:102:VAL:CG1	68:SX:120:PHE:HB3	2.49	0.42
79:SR:79:GLU:OE1	79:SR:80:ARG:N	2.53	0.42
80:SS:135:HIS:CD2	80:SS:135:HIS:N	2.87	0.42
81:ST:31:PRO:HD3	81:ST:53:PHE:HE2	1.84	0.42
81:ST:78:ILE:HG23	81:ST:79:TYR:CD1	2.54	0.42
87:Sg:20:GLN:HA	87:Sg:288:SER:CB	2.49	0.42
87:Sg:60:ARG:HA	87:Sg:60:ARG:NE	2.34	0.42
1:A:40:TYR:CE2	32:5:4118:U:N3	2.88	0.42
1:A:233:ARG:O	1:A:235:VAL:N	2.53	0.42
2:D:54:ARG:HH21	33:7:6:C:H5''	1.85	0.42
2:D:64:ILE:HG22	2:D:75:VAL:HG12	2.02	0.42
2:D:107:ARG:NH2	2:D:116:ASP:OD1	2.53	0.42
6:L:120:TYR:O	6:L:121:ARG:C	2.62	0.42
9:O:48:TYR:O	9:O:49:ARG:C	2.63	0.42
10:Q:166:TYR:CD1	10:Q:166:TYR:N	2.87	0.42
13:T:105:PHE:CD2	32:5:1802:A:H5'	2.55	0.42
18:Z:76:ASN:HB2	18:Z:79:HIS:CD2	2.54	0.42
24:f:51:TYR:N	24:f:51:TYR:CD1	2.87	0.42
26:h:85:PRO:HA	32:5:134:G:N2	2.35	0.42
32:5:98:A:C5	32:5:99:A:N9	2.88	0.42
32:5:102:G:N3	32:5:103:G:C8	2.87	0.42
32:5:182:G:H2'	32:5:182:G:N3	2.34	0.42
32:5:262:G:C2	32:5:263:G:N9	2.88	0.42
32:5:268:G:C4	32:5:269:G:C8	3.08	0.42
32:5:469:C:C4	32:5:470:A:C5	3.08	0.42
32:5:512:U:C2'	32:5:513:U:H5''	2.50	0.42
32:5:671:G:C4	32:5:672:C:C5	3.07	0.42
32:5:707:C:C2'	32:5:4944:C:N4	2.82	0.42
32:5:975:C:H2'	32:5:976:G:O4'	2.19	0.42
32:5:1093:C:O2	32:5:1093:C:H2'	2.19	0.42
32:5:1211:G:N1	32:5:1212:G:C5	2.87	0.42
32:5:1235:G:N1	32:5:1236:C:C4	2.88	0.42
32:5:1279:A:N3	32:5:1280:C:N3	2.67	0.42
32:5:1349:G:N2	32:5:1350:C:C2	2.87	0.42
32:5:1394:G:C4	32:5:1395:U:C4	3.08	0.42
32:5:1404:G:C5	32:5:1405:C:C5	3.07	0.42
32:5:1584:G:C2	32:5:1585:C:N1	2.87	0.42
32:5:1588:U:O2'	32:5:1589:C:H5'	2.19	0.42
32:5:1966:C:O2	32:5:1966:C:C2'	2.67	0.42
32:5:2008:U:N3	32:5:2010:A:OP2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2276:A:H3'	32:5:2277:C:H6	1.85	0.42
32:5:2426:U:O2'	32:5:2427:G:H5'	2.18	0.42
32:5:2509:C:O2'	32:5:2510:G:P	2.77	0.42
32:5:2545:U:C5	32:5:2546:G:H4'	2.54	0.42
32:5:2744:A:O2'	32:5:2745:A:O5'	2.37	0.42
32:5:2793:G:C2	32:5:2797:C:C2	3.08	0.42
32:5:3584:C:H2'	32:5:3584:C:O2	2.20	0.42
32:5:3596:A:O3'	32:5:3597:G:C4'	2.68	0.42
32:5:3668:C:N4	32:5:3669:G:C6	2.87	0.42
32:5:3694:U:O2	32:5:3694:U:H2'	2.20	0.42
32:5:3700:C:O2'	32:5:3774:A:N3	2.44	0.42
32:5:3724:A:C5	32:5:3725:G:N7	2.88	0.42
32:5:3751:G:C5	32:5:3752:C:C5	3.08	0.42
32:5:3795:A:C4	32:5:3796:U:C5	3.08	0.42
32:5:3871:A:C2'	32:5:3872:A:O5'	2.67	0.42
32:5:3887:C:O2	32:5:3887:C:H2'	2.19	0.42
32:5:3942:A:C6	32:5:3943:A:C5	3.07	0.42
32:5:4101:C:N3	32:5:4102:C:C6	2.87	0.42
32:5:4293:U:N3	32:5:4294:C:C5	2.88	0.42
32:5:4349:C:H3'	32:5:4350:C:H5''	2.02	0.42
32:5:4360:U:C4	32:5:4361:U:C5	3.07	0.42
32:5:4973:U:H1'	32:5:4986:G:N1	2.34	0.42
32:5:4997:G:N3	32:5:4997:G:H2'	2.35	0.42
33:7:33:U:O2	33:7:33:U:H2'	2.18	0.42
34:8:100:U:O2	34:8:100:U:H2'	2.19	0.42
34:8:106:G:C2'	34:8:107:C:O5'	2.67	0.42
34:8:137:A:N3	34:8:137:A:H2'	2.35	0.42
35:B:167:GLN:HE22	35:B:204:GLN:HE22	1.68	0.42
35:B:321:VAL:O	35:B:322:HIS:HB3	2.20	0.42
36:C:78:ARG:HG2	36:C:78:ARG:NH1	2.31	0.42
36:C:253:THR:O	36:C:254:GLU:C	2.63	0.42
38:F:107:VAL:HG11	38:F:141:TYR:HE1	1.75	0.42
39:I:12:CYS:SG	39:I:57:TYR:CE2	3.13	0.42
39:I:99:ILE:HG13	39:I:100:ASN:O	2.20	0.42
45:r:30:ASN:OD1	45:r:77:TYR:OH	2.37	0.42
46:K:65:GLN:O	46:K:66:ASN:OD1	2.38	0.42
48:z:223:ALA:HB2	48:z:250:LEU:HD23	2.02	0.42
50:3:15:G:N1	50:3:59:A:C2	2.88	0.42
51:4:45:G:C2	51:4:46:C:C2	3.07	0.42
54:S2:19:A:C6	54:S2:20:G:N7	2.88	0.42
54:S2:29:G:C5	54:S2:646:G:N3	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:74:G:O6	59:SG:171:THR:N	2.53	0.42
54:S2:122:G:H2'	54:S2:123:G:H1'	2.01	0.42
54:S2:196:C:C2	54:S2:204:G:N2	2.88	0.42
54:S2:381:C:N4	61:SI:49:ARG:HD3	2.31	0.42
54:S2:384:U:C6	54:S2:386:C:H5	2.38	0.42
54:S2:678:U:C4	54:S2:679:A:N7	2.87	0.42
54:S2:1093:A:N6	54:S2:1094:C:C5	2.87	0.42
54:S2:1102:G:H22	54:S2:1130:G:N2	2.15	0.42
54:S2:1112:U:C5	54:S2:1113:A:C5	3.08	0.42
54:S2:1120:U:C6	54:S2:1121:G:C8	3.07	0.42
54:S2:1149:A:N3	54:S2:1151:G:N7	2.66	0.42
54:S2:1255:G:OP1	54:S2:1256:G:H1'	2.20	0.42
54:S2:1292:C:H3'	86:Sf:150:PHE:CA	2.42	0.42
54:S2:1292:C:C5	86:Sf:141:CYS:HB3	2.55	0.42
54:S2:1293:A:H62	86:Sf:139:HIS:CA	2.32	0.42
54:S2:1293:A:N6	86:Sf:140:TYR:N	2.67	0.42
54:S2:1404:U:H5''	54:S2:1581:C:O2	2.19	0.42
54:S2:1439:A:O2'	54:S2:1440:C:H5'	2.19	0.42
54:S2:1526:G:N2	54:S2:1527:C:N1	2.67	0.42
54:S2:1605:G:O5'	54:S2:1606:G:OP2	2.37	0.42
54:S2:1607:A:H1'	54:S2:1633:A:C6	2.54	0.42
54:S2:1668:U:O2'	54:S2:1669:G:O5'	2.28	0.42
54:S2:1749:G:O6	54:S2:1784:G:O6	2.38	0.42
54:S2:1759:G:C6	54:S2:1760:G:N7	2.88	0.42
54:S2:1773:C:C2	54:S2:1774:C:C6	3.08	0.42
54:S2:1847:G:N2	54:S2:1853:C:C2	2.87	0.42
54:S2:1869:A:N1	56:SB:115:LYS:NZ	2.34	0.42
56:SB:29:ASP:OD2	56:SB:51:ARG:HG3	2.19	0.42
60:SH:184:ASP:OD1	60:SH:184:ASP:N	2.53	0.42
73:SD:162:ASP:O	73:SD:163:PRO:C	2.63	0.42
73:SD:193:ASP:HB3	73:SD:194:PRO:CD	2.49	0.42
74:SF:97:PHE:CZ	74:SF:112:LEU:HD12	2.53	0.42
79:SR:92:ASP:O	79:SR:93:GLN:HG2	2.18	0.42
80:SS:25:LYS:HB3	80:SS:28:PHE:HD1	1.84	0.42
82:SU:61:LEU:HB3	85:Sd:34:TYR:CE2	2.54	0.42
84:Sc:11:LEU:CB	84:Sc:55:VAL:HG11	2.46	0.42
84:Sc:44:ARG:HA	84:Sc:65:ALA:HB3	2.02	0.42
88:S1:6:THR:O	88:S1:51:TYR:HE1	1.99	0.42
2:D:56:THR:HG21	33:7:26:C:H5''	2.01	0.42
4:H:180:TYR:N	4:H:180:TYR:HD2	2.18	0.42
5:J:99:PHE:CD2	5:J:105:PHE:HB2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:N:181:HIS:ND1	32:5:99:A:H4'	2.34	0.42
9:O:109:PRO:N	32:5:4910:G:H22	2.16	0.42
9:O:125:LYS:HD3	9:O:126:VAL:N	2.35	0.42
11:R:95:TRP:HZ2	32:5:1572:U:H5'	1.84	0.42
11:R:134:ASN:O	11:R:135:LYS:C	2.62	0.42
13:T:19:PHE:C	13:T:21:LYS:N	2.75	0.42
13:T:142:ARG:HA	38:F:82:ASN:HD21	1.85	0.42
14:U:90:TYR:O	14:U:93:LYS:N	2.53	0.42
16:X:155:ILE:O	16:X:156:ILE:CB	2.66	0.42
24:f:18:LEU:HG	24:f:19:ARG:HH22	1.85	0.42
25:g:95:PHE:HB3	25:g:96:LEU:HD23	2.01	0.42
26:h:35:LYS:HA	26:h:44:LEU:HD21	2.02	0.42
26:h:62:ASN:HD22	34:8:97:A:H5'	1.83	0.42
32:5:158:A:N6	32:5:277:G:C4	2.87	0.42
32:5:243:A:N6	32:5:244:G:C6	2.88	0.42
32:5:423:G:H1'	40:P:120:ASN:OD1	2.20	0.42
32:5:739:G:C6	32:5:740:G:C5	3.07	0.42
32:5:952:G:C5	32:5:953:C:C5	3.08	0.42
32:5:966:A:N6	32:5:2252:G:C8	2.86	0.42
32:5:1205:G:C4	32:5:1206:C:C5	3.08	0.42
32:5:1243:C:N3	32:5:1269:G:N2	2.54	0.42
32:5:1261:G:C2	32:5:1262:G:C4	3.08	0.42
32:5:1370:G:O3'	32:5:1371:A:C4'	2.68	0.42
32:5:1383:G:C6	32:5:1384:C:C4	3.08	0.42
32:5:1421:G:C5	32:5:1465:G:C2	3.08	0.42
32:5:1603:C:H2'	32:5:1604:G:C8	2.55	0.42
32:5:1775:A:C2	32:5:1776:A:C4	3.08	0.42
32:5:1783:C:H2'	32:5:1784:U:O4'	2.20	0.42
32:5:1836:G:N2	32:5:1837:A:C8	2.87	0.42
32:5:1948:G:C2	32:5:1949:U:C6	3.08	0.42
32:5:2327:G:C2	32:5:2328:G:C4	3.08	0.42
32:5:2341:A:N3	32:5:2341:A:H2'	2.34	0.42
32:5:2436:U:H4'	32:5:2437:C:OP2	2.20	0.42
32:5:2590:G:C2	32:5:2756:G:O6	2.73	0.42
32:5:2598:A:N1	32:5:2748:C:N3	2.68	0.42
32:5:2673:G:H4'	32:5:2675:G:H1'	1.97	0.42
32:5:2787:A:N3	32:5:2787:A:H2'	2.34	0.42
32:5:3587:C:H2'	32:5:3588:C:C6	2.54	0.42
32:5:3770:U:O2	32:5:3770:U:H2'	2.20	0.42
32:5:3811:G:O2'	32:5:3814:U:OP2	2.32	0.42
32:5:4099:G:C4	32:5:4100:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4136:G:C4	32:5:4137:C:C5	3.07	0.42
32:5:4240:G:C2	32:5:4241:C:C6	3.07	0.42
32:5:4269:G:H2'	32:5:4270:C:O4'	2.19	0.42
32:5:4563:U:O2	32:5:4563:U:H2'	2.20	0.42
32:5:4608:G:C4	32:5:4609:G:C8	3.08	0.42
32:5:4895:C:H1'	32:5:4896:G:C8	2.54	0.42
33:7:37:G:C2	33:7:38:U:C6	3.07	0.42
33:7:93:G:C2	33:7:94:C:C5	3.07	0.42
34:8:99:U:O2	34:8:99:U:H2'	2.19	0.42
34:8:154:G:C2	34:8:155:C:C2	3.08	0.42
39:I:47:PRO:CB	39:I:171:TRP:NE1	2.77	0.42
42:j:74:PHE:O	42:j:75:ARG:C	2.62	0.42
47:q:99:ARG:NE	47:q:103:ARG:CZ	2.83	0.42
51:4:32:A:O2'	51:4:33:G:H8	2.01	0.42
54:S2:12:U:C4	54:S2:13:C:N4	2.87	0.42
54:S2:23:G:O2'	54:S2:416:U:OP1	2.29	0.42
54:S2:453:C:C2	54:S2:454:U:C5	3.08	0.42
54:S2:636:C:N4	54:S2:637:U:C4	2.88	0.42
54:S2:862:A:C8	67:SW:107:SER:HA	2.54	0.42
54:S2:875:A:H2'	54:S2:876:C:H5''	2.00	0.42
54:S2:949:G:C2	54:S2:950:C:N1	2.87	0.42
54:S2:1193:U:C5	68:SX:110:HIS:CE1	3.07	0.42
54:S2:1291:A:H8	86:Sf:146:LEU:HB2	1.85	0.42
54:S2:1332:A:C6	54:S2:1333:U:C6	3.08	0.42
54:S2:1353:A:C6	54:S2:1354:G:C5	3.08	0.42
54:S2:1368:U:H1'	54:S2:1372:U:O4	2.20	0.42
54:S2:1378:A:H61	55:SA:105:PRO:HA	1.81	0.42
54:S2:1442:U:O2	54:S2:1442:U:C2'	2.66	0.42
54:S2:1520:G:OP1	80:SS:135:HIS:HB3	2.20	0.42
54:S2:1561:A:C6	54:S2:1562:C:N1	2.87	0.42
54:S2:1578:U:H6	73:SD:6:SER:CB	2.32	0.42
54:S2:1591:C:C5	54:S2:1592:C:C5	3.08	0.42
54:S2:1809:A:H2'	54:S2:1810:U:O4'	2.19	0.42
55:SA:63:ARG:NH2	66:SV:39:VAL:HG13	2.34	0.42
57:SC:66:LEU:O	57:SC:70:VAL:HG23	2.19	0.42
57:SC:180:VAL:HG12	57:SC:181:PRO:HD2	2.02	0.42
57:SC:203:GLY:O	57:SC:221:ASP:HA	2.19	0.42
57:SC:255:LEU:O	57:SC:257:LYS:N	2.53	0.42
62:SJ:94:LEU:HD12	62:SJ:97:ILE:CD1	2.48	0.42
62:SJ:119:LEU:HG	62:SJ:159:PHE:CE2	2.55	0.42
69:SY:37:LYS:HA	69:SY:40:ILE:HG22	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
84:Sc:46:VAL:HG22	84:Sc:56:LEU:HD21	2.02	0.42
86:Sf:147:THR:C	86:Sf:148:TYR:HD1	2.28	0.42
87:Sg:162:ASN:OD1	87:Sg:178:ASN:ND2	2.52	0.42
2:D:103:LEU:O	2:D:107:ARG:HG2	2.20	0.42
2:D:267:ASN:HD21	33:7:59:G:H4'	1.84	0.42
5:J:146:ARG:O	5:J:147:ARG:C	2.63	0.42
6:L:9:ILE:O	6:L:10:LEU:HB2	2.20	0.42
7:M:52:PHE:O	12:S:157:ARG:NH2	2.53	0.42
9:O:109:PRO:HA	32:5:4910:G:N2	2.34	0.42
10:Q:57:ASN:HD21	32:5:1692:C:H4'	1.85	0.42
12:S:43:ARG:HA	12:S:43:ARG:HD2	1.89	0.42
12:S:81:TRP:HE3	12:S:128:LYS:CD	2.33	0.42
17:Y:100:HIS:NE2	32:5:231:U:H4'	2.34	0.42
18:Z:11:VAL:HG11	18:Z:80:LEU:HD22	2.01	0.42
19:a:29:PRO:O	32:5:39:A:N7	2.53	0.42
27:i:63:VAL:O	27:i:63:VAL:HG12	2.19	0.42
32:5:89:C:N3	32:5:96:U:O2	2.52	0.42
32:5:93:G:C2	32:5:94:A:N1	2.88	0.42
32:5:158:A:C5	32:5:277:G:N1	2.88	0.42
32:5:167:C:C2	32:5:168:C:C6	3.07	0.42
32:5:396:A:C2	32:5:397:G:C8	3.07	0.42
32:5:673:C:N3	32:5:674:G:C5	2.88	0.42
32:5:674:G:C4	32:5:675:C:C5	3.08	0.42
32:5:1076:C:N4	32:5:1077:C:C5	2.88	0.42
32:5:1085:C:N3	32:5:1213:G:C6	2.88	0.42
32:5:1290:G:C2'	32:5:1291:G:H5'	2.49	0.42
32:5:1343:A:C5	32:5:1344:C:C5	3.07	0.42
32:5:1463:C:C4	32:5:1464:C:C5	3.08	0.42
32:5:1581:G:C5	32:5:1610:C:N4	2.87	0.42
32:5:1619:G:C2	32:5:1620:U:C2	3.07	0.42
32:5:1667:G:C4	32:5:2280:G:N2	2.87	0.42
32:5:1786:A:H2'	32:5:1789:C:C5	2.55	0.42
32:5:2299:G:C6	32:5:2301:G:N7	2.87	0.42
32:5:2339:G:C2	32:5:2340:C:C2	3.07	0.42
32:5:2606:G:H2'	32:5:2607:C:C6	2.55	0.42
32:5:2632:U:N3	32:5:2633:U:C4	2.88	0.42
32:5:2840:A:N1	32:5:2841:G:C8	2.88	0.42
32:5:3692:A:H5''	32:5:3693:U:OP2	2.20	0.42
32:5:3814:U:H2'	32:5:3815:G:O5'	2.19	0.42
32:5:3907:G:N7	32:5:4447:C:H1'	2.34	0.42
32:5:4234:A:H2	32:5:4271:A:C8	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4475:G:H8	32:5:4475:G:O5'	2.03	0.42
32:5:4481:U:H2'	32:5:4482:U:O4'	2.20	0.42
32:5:4501:U:C4	32:5:4502:C:C1'	3.03	0.42
32:5:4637:G:C6	32:5:4663:G:C2	3.08	0.42
32:5:4683:U:C2'	32:5:4684:A:O5'	2.68	0.42
32:5:4691:A:C2	32:5:4692:A:C1'	3.03	0.42
32:5:4731:G:C8	32:5:4732:G:N1	2.88	0.42
32:5:4872:G:O2'	32:5:4873:G:P	2.78	0.42
32:5:4986:G:H2'	32:5:4987:C:O5'	2.19	0.42
32:5:5062:G:N2	32:5:5063:G:N7	2.68	0.42
34:8:133:G:C4	34:8:134:G:C8	3.07	0.42
34:8:134:G:C4	34:8:135:C:C5	3.06	0.42
34:8:137:A:N1	34:8:138:C:C4	2.87	0.42
43:n:12:ARG:NH2	54:S2:1846:G:N7	2.67	0.42
48:z:44:VAL:HG22	48:z:261:SER:OG	2.19	0.42
50:3:26:G:C4	50:3:27:U:C6	3.08	0.42
51:4:49:A:C6	51:4:50:G:C5	3.07	0.42
51:4:58:G:C4	51:4:289:A:C2	3.07	0.42
54:S2:54:A:H3'	54:S2:451:G:H22	1.84	0.42
54:S2:101:U:H3	54:S2:409:C:HO2'	1.66	0.42
54:S2:122:G:C2	54:S2:123:G:N9	2.88	0.42
54:S2:294:U:O4	63:SL:14:PRO:HB2	2.19	0.42
54:S2:431:G:C2	54:S2:432:G:C5	3.08	0.42
54:S2:507:G:P	69:SY:104:ARG:HH22	2.43	0.42
54:S2:511:U:O2'	54:S2:576:A:N6	2.52	0.42
54:S2:537:C:C2	54:S2:538:U:C6	3.08	0.42
54:S2:595:U:O4	54:S2:642:U:O2	2.37	0.42
54:S2:600:G:C6	54:S2:631:U:C4	3.05	0.42
54:S2:974:C:O2	54:S2:974:C:H2'	2.18	0.42
54:S2:1141:G:C2	54:S2:1142:G:H1'	2.55	0.42
54:S2:1175:G:C5	54:S2:1176:G:N7	2.88	0.42
54:S2:1188:A:C6	54:S2:1189:A:C5	3.08	0.42
54:S2:1250:A:N3	54:S2:1339:U:O3'	2.52	0.42
54:S2:1256:G:N7	85:Sd:40:ARG:HD2	2.34	0.42
54:S2:1259:A:O2'	54:S2:1263:U:O2	2.37	0.42
54:S2:1268:C:H2'	54:S2:1269:G:C5'	2.49	0.42
54:S2:1308:U:C4	54:S2:1309:C:C4	3.07	0.42
54:S2:1309:C:OP1	86:Sf:116:ARG:NH2	2.42	0.42
54:S2:1407:U:C2'	54:S2:1408:U:H6	2.32	0.42
54:S2:1562:C:C2	54:S2:1563:G:N7	2.84	0.42
54:S2:1696:C:O2	54:S2:1696:C:C2'	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1751:C:H2'	54:S2:1751:C:O2	2.19	0.42
54:S2:1777:G:H2'	54:S2:1778:C:O4'	2.20	0.42
55:SA:80:ARG:NH1	55:SA:82:THR:OG1	2.28	0.42
58:SE:52:LEU:HD11	58:SE:99:PHE:HE2	1.85	0.42
60:SH:126:HIS:HB3	60:SH:181:THR:HG21	2.02	0.42
62:SJ:13:TYR:C	62:SJ:13:TYR:HD1	2.26	0.42
63:SL:11:GLN:C	63:SL:56:ILE:HD13	2.44	0.42
64:SN:99:ARG:HH21	64:SN:115:LEU:HD21	1.84	0.42
69:SY:58:PHE:CE2	69:SY:90:ARG:NH1	2.88	0.42
70:Sa:26:CYS:SG	70:Sa:28:ARG:HB3	2.59	0.42
70:Sa:36:ILE:HG21	70:Sa:83:VAL:HG11	2.02	0.42
74:SF:20:PHE:HB3	74:SF:23:TRP:CB	2.50	0.42
77:SP:81:ARG:HH11	77:SP:81:ARG:CG	2.31	0.42
79:SR:71:ILE:CG2	79:SR:72:LYS:N	2.82	0.42
87:Sg:125:ARG:CZ	87:Sg:150:TRP:CZ3	3.03	0.42
1:A:22:HIS:CD2	32:5:2742:G:H4'	2.54	0.42
1:A:29:LEU:HA	1:A:76:PHE:HE2	1.85	0.42
1:A:40:TYR:HD1	32:5:4117:U:H3	1.57	0.42
2:D:60:ILE:HD13	2:D:98:ALA:HB2	2.01	0.42
3:G:46:GLN:HG2	32:5:4087:G:H1	1.85	0.42
10:Q:4:ASP:OD1	38:F:117:ARG:O	2.37	0.42
15:V:99:GLU:CG	41:W:21:TYR:OH	2.67	0.42
18:Z:36:ARG:C	18:Z:38:TYR:H	2.27	0.42
20:b:12:GLN:CA	20:b:16:TRP:HE1	2.32	0.42
20:b:17:HIS:CD2	20:b:21:ILE:HD12	2.55	0.42
21:c:27:TYR:N	21:c:27:TYR:HD1	2.18	0.42
26:h:72:PHE:HB3	26:h:73:TYR:HD1	1.85	0.42
32:5:31:U:C2	32:5:52:G:N2	2.88	0.42
32:5:102:G:O2'	32:5:1381:U:O2'	2.04	0.42
32:5:314:G:N2	32:5:4355:G:C8	2.88	0.42
32:5:385:A:C2	32:5:386:A:N7	2.88	0.42
32:5:465:G:N2	32:5:466:A:H1'	2.34	0.42
32:5:497:G:C2	32:5:657:C:C4	3.07	0.42
32:5:506:C:H2'	32:5:507:G:H8	1.85	0.42
32:5:652:G:C2	32:5:653:U:H1'	2.54	0.42
32:5:732:A:N6	32:5:733:A:C4	2.88	0.42
32:5:933:G:C2	32:5:939:G:C2	3.08	0.42
32:5:993:G:N3	32:5:994:G:C8	2.88	0.42
32:5:1065:G:C2	32:5:1066:G:C5	3.08	0.42
32:5:1234:G:C6	32:5:1235:G:C6	3.08	0.42
32:5:1264:C:O2'	32:5:2114:G:P	2.78	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1388:A:N6	32:5:1396:G:C2	2.81	0.42
32:5:1490:G:N2	32:5:1491:A:N9	2.68	0.42
32:5:1543:G:N3	32:5:1543:G:H2'	2.35	0.42
32:5:1554:A:N6	32:5:1573:G:H1'	2.35	0.42
32:5:1775:A:C4	32:5:1776:A:C8	3.07	0.42
32:5:1895:G:C4	32:5:1896:A:H1'	2.54	0.42
32:5:1899:G:H22	32:5:2076:G:H22	1.68	0.42
32:5:1902:G:C5	32:5:2075:G:N2	2.88	0.42
32:5:1945:G:O6	32:5:1946:G:C5	2.73	0.42
32:5:1983:A:N3	32:5:2010:A:H5''	2.33	0.42
32:5:2250:C:C4	32:5:2252:G:C4	3.08	0.42
32:5:2275:G:H5''	32:5:2275:G:H8	1.85	0.42
32:5:2320:G:O2'	32:5:2321:G:P	2.77	0.42
32:5:2364:G:C2	32:5:2365:C:C6	3.08	0.42
32:5:2369:U:C5	32:5:4656:A:C2	3.08	0.42
32:5:2399:G:C4	32:5:2400:G:C8	3.08	0.42
32:5:2410:C:O2	32:5:2411:C:C6	2.73	0.42
32:5:2448:G:C2	32:5:2511:A:N1	2.88	0.42
32:5:2480:G:N3	32:5:2481:G:C8	2.88	0.42
32:5:2507:A:N1	32:5:2508:U:C1'	2.70	0.42
32:5:2532:C:C4	32:5:2533:C:N4	2.88	0.42
32:5:2666:U:O4	32:5:2668:G:O5'	2.38	0.42
32:5:2734:U:O2	32:5:2735:G:H8	1.91	0.42
32:5:2831:G:C2	32:5:2832:A:C8	3.07	0.42
32:5:2833:A:O2'	32:5:2834:C:O5'	2.37	0.42
32:5:3625:G:H2'	32:5:3625:G:N3	2.35	0.42
32:5:3714:G:O5'	32:5:3715:U:OP2	2.37	0.42
32:5:3730:U:H2'	32:5:3730:U:O2	2.18	0.42
32:5:3755:G:C4	32:5:3770:U:N3	2.87	0.42
32:5:3936:A:C2	32:5:3937:C:C6	3.07	0.42
32:5:4099:G:C6	32:5:4100:C:C5	3.07	0.42
32:5:4371:G:O2'	32:5:4372:U:OP2	2.32	0.42
32:5:4536:C:N4	32:5:4537:C:N4	2.67	0.42
32:5:4592:C:C2'	32:5:4592:C:O2	2.62	0.42
32:5:4956:A:C2	32:5:4957:C:C6	3.08	0.42
33:7:94:C:N3	33:7:95:C:C4	2.85	0.42
34:8:101:C:O2	34:8:101:C:C2'	2.63	0.42
34:8:102:G:H3'	34:8:104:A:C2'	2.49	0.42
35:B:77:THR:HG21	35:B:337:VAL:HG22	2.02	0.42
35:B:145:ALA:C	35:B:146:LEU:HD13	2.45	0.42
36:C:195:LYS:HA	36:C:200:ARG:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:r:7:TRP:CD1	45:r:38:PHE:HD1	2.37	0.42
45:r:16:PHE:HE2	45:r:43:LEU:HD11	1.85	0.42
46:K:118:HIS:O	46:K:118:HIS:ND1	2.53	0.42
50:3:5:C:H2'	50:3:6:C:H6	1.84	0.42
50:3:54:U:H2'	50:3:55:U:O4'	2.20	0.42
50:3:75:C:C3'	50:3:75:C:H6	2.32	0.42
54:S2:12:U:N3	54:S2:13:C:C4	2.87	0.42
54:S2:47:G:C5	54:S2:48:C:C5	3.07	0.42
54:S2:337:C:C4	54:S2:338:G:N7	2.86	0.42
54:S2:507:G:H3'	54:S2:508:A:H5''	2.01	0.42
54:S2:550:C:O2	54:S2:551:U:C6	2.73	0.42
54:S2:663:C:C4	54:S2:664:A:N7	2.88	0.42
54:S2:875:A:N1	54:S2:876:C:N3	2.68	0.42
54:S2:925:G:O2'	64:SN:87:ASP:HA	2.20	0.42
54:S2:940:U:H2'	54:S2:941:C:H6	1.85	0.42
54:S2:1267:C:HO2'	54:S2:1268:C:P	2.38	0.42
54:S2:1292:C:OP2	86:Sf:149:CYS:SG	2.74	0.42
54:S2:1338:G:C4	54:S2:1339:U:C6	3.08	0.42
54:S2:1351:G:H2'	54:S2:1378:A:H2	1.84	0.42
54:S2:1354:G:C6	54:S2:1356:G:OP2	2.73	0.42
54:S2:1409:A:H2'	54:S2:1410:C:C4'	2.50	0.42
54:S2:1478:U:N3	54:S2:1479:G:N7	2.67	0.42
54:S2:1500:G:H3'	54:S2:1501:C:H6	1.85	0.42
54:S2:1712:A:H2'	54:S2:1713:C:H6	1.85	0.42
54:S2:1731:A:C4	54:S2:1732:G:C8	3.07	0.42
54:S2:1757:G:C2	54:S2:1758:G:N7	2.87	0.42
54:S2:1791:A:O2'	59:SG:67:VAL:HA	2.20	0.42
54:S2:1840:U:C4	54:S2:1841:C:H5	2.37	0.42
55:SA:200:ASP:OD1	79:SR:89:SER:CA	2.65	0.42
56:SB:100:PHE:CE1	56:SB:102:GLY:N	2.88	0.42
56:SB:123:ALA:HB2	56:SB:165:ARG:HG3	2.02	0.42
59:SG:145:PHE:N	59:SG:145:PHE:HD1	2.18	0.42
63:SL:17:PHE:HZ	63:SL:19:ASN:HB2	1.84	0.42
64:SN:125:LEU:HD22	64:SN:129:TYR:HE2	1.81	0.42
65:SO:72:TYR:CE1	74:SF:204:ARG:HA	2.55	0.42
76:SM:123:VAL:O	76:SM:127:TYR:HB3	2.20	0.42
81:ST:97:LYS:O	81:ST:98:SER:C	2.62	0.42
82:SU:78:ASP:OD2	85:Sd:44:ARG:NH1	2.53	0.42
87:Sg:226:HIS:ND1	87:Sg:226:HIS:C	2.78	0.42
2:D:223:PHE:N	2:D:223:PHE:CD1	2.87	0.42
3:G:108:GLN:CG	32:5:143:C:O2	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:G:164:ILE:O	3:G:168:VAL:HG23	2.20	0.42
3:G:247:VAL:HA	3:G:250:ILE:HG22	2.01	0.42
6:L:83:VAL:HG11	6:L:114:VAL:HG21	2.01	0.42
11:R:95:TRP:CZ2	32:5:1572:U:H5'	2.55	0.42
12:S:81:TRP:CZ2	12:S:94:TYR:CD1	3.07	0.42
12:S:118:ARG:HD3	32:5:2034:G:O3'	2.20	0.42
17:Y:95:VAL:HG12	17:Y:96:HIS:O	2.20	0.42
22:d:22:THR:OG1	22:d:122:VAL:HB	2.20	0.42
23:e:58:ILE:C	23:e:60:TYR:N	2.78	0.42
24:f:6:TRP:CE3	24:f:102:ARG:HG2	2.54	0.42
31:o:11:PHE:CD2	32:5:4294:C:H1'	2.55	0.42
32:5:38:A:N1	32:5:41:C:C4	2.87	0.42
32:5:42:A:C8	32:5:4379:A:N6	2.88	0.42
32:5:190:G:N2	32:5:252:C:H1'	2.34	0.42
32:5:262:G:N1	32:5:263:G:C5	2.88	0.42
32:5:351:C:C2	34:8:25:G:C2	3.08	0.42
32:5:370:U:C4	32:5:371:A:N6	2.88	0.42
32:5:447:C:O2	32:5:448:G:C8	2.73	0.42
32:5:980:U:H2'	32:5:981:C:C6	2.54	0.42
32:5:1075:G:N1	32:5:1076:C:C4	2.88	0.42
32:5:1249:C:C2	32:5:1262:G:N2	2.88	0.42
32:5:1253:G:N2	32:5:1256:G:C8	2.88	0.42
32:5:1258:G:C2	32:5:1259:G:N9	2.87	0.42
32:5:1279:A:C2'	32:5:1280:C:H5''	2.50	0.42
32:5:1397:A:O2'	32:5:1398:A:O5'	2.38	0.42
32:5:1445:U:C2	32:5:1446:C:C6	3.07	0.42
32:5:1498:G:C6	32:5:1499:C:C4	3.08	0.42
32:5:1789:C:H2'	32:5:1790:U:O5'	2.20	0.42
32:5:1987:C:C2	32:5:1988:G:C8	3.08	0.42
32:5:1992:U:O2	32:5:1992:U:C2'	2.68	0.42
32:5:2058:G:C6	32:5:2059:C:H5	2.25	0.42
32:5:2328:G:N1	32:5:2329:U:N3	2.68	0.42
32:5:2453:A:C8	32:5:2507:A:N7	2.87	0.42
32:5:2688:G:C2	32:5:2689:C:C4	3.08	0.42
32:5:2784:C:N3	32:5:2785:C:N4	2.68	0.42
32:5:3656:A:C6	32:5:3657:U:C5	3.07	0.42
32:5:3667:C:N3	32:5:3668:C:C6	2.88	0.42
32:5:3721:U:O2	32:5:3721:U:C2'	2.63	0.42
32:5:3910:C:N3	32:5:3911:C:N4	2.67	0.42
32:5:3923:A:C4	32:5:4381:A:C8	3.07	0.42
32:5:3942:A:N1	32:5:3943:A:C5	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4283:G:H21	32:5:4284:C:H1'	1.84	0.42
32:5:4326:G:C2	32:5:4327:C:C2	3.07	0.42
32:5:4602:A:H3'	32:5:4603:C:C6	2.54	0.42
32:5:4661:G:C2	32:5:4662:C:C2	3.08	0.42
32:5:4741:C:N3	32:5:4742:G:C8	2.88	0.42
32:5:4767:C:C2	32:5:4868:G:C2	3.08	0.42
32:5:4986:G:OP1	35:B:176:LYS:HB2	2.20	0.42
32:5:5042:A:C4	32:5:5043:A:N7	2.87	0.42
33:7:113:G:C2	33:7:114:U:C4	3.08	0.42
48:z:36:CYS:HB2	48:z:49:VAL:HG13	2.02	0.42
50:3:9:A:H62	50:3:23:C:H5	1.67	0.42
50:3:11:U:H2'	50:3:12:G:H8	1.85	0.42
51:4:35:U:H1'	51:4:37:C:H41	1.85	0.42
51:4:198:G:OP2	52:9:66:LYS:NZ	2.32	0.42
54:S2:10:G:C2	54:S2:11:A:N9	2.87	0.42
54:S2:30:C:O2'	54:S2:31:U:O5'	2.38	0.42
54:S2:217:A:N1	54:S2:218:U:C6	2.88	0.42
54:S2:219:U:C2	54:S2:220:U:C5	3.08	0.42
54:S2:289:G:N2	54:S2:295:C:O2	2.52	0.42
54:S2:357:C:O2	54:S2:358:C:C6	2.73	0.42
54:S2:631:U:H2'	54:S2:631:U:OP2	2.19	0.42
54:S2:798:A:O5'	54:S2:800:U:P	2.78	0.42
54:S2:833:C:H2'	54:S2:834:C:O4'	2.19	0.42
54:S2:841:G:C5	54:S2:842:C:C5	3.06	0.42
54:S2:847:A:H2'	54:S2:847:A:N3	2.35	0.42
54:S2:863:U:O2	54:S2:864:A:H8	1.89	0.42
54:S2:923:G:N1	54:S2:924:G:C8	2.87	0.42
54:S2:924:G:C6	54:S2:925:G:C4	3.08	0.42
54:S2:1106:C:O2	54:S2:1106:C:H2'	2.20	0.42
54:S2:1132:C:N3	54:S2:1133:A:N9	2.67	0.42
54:S2:1174:U:N3	54:S2:1175:G:C8	2.87	0.42
54:S2:1182:A:C8	54:S2:1183:A:C1'	3.03	0.42
54:S2:1190:A:H2'	54:S2:1191:C:C5'	2.50	0.42
54:S2:1239:U:O2	54:S2:1242:U:O2	2.38	0.42
54:S2:1339:U:O2	54:S2:1340:U:C5	2.72	0.42
54:S2:1518:C:P	54:S2:1519:U:H2'	2.60	0.42
54:S2:1570:G:H2'	54:S2:1571:G:O4'	2.20	0.42
54:S2:1599:U:OP2	83:SZ:80:ARG:NE	2.53	0.42
54:S2:1710:C:N3	54:S2:1711:U:H5	2.11	0.42
54:S2:1843:G:C2	54:S2:1857:G:C2	3.08	0.42
57:SC:198:ALA:HA	57:SC:223:TYR:OH	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:SE:136:ILE:HG22	58:SE:138:HIS:CE1	2.55	0.42
63:SL:97:ARG:O	63:SL:98:LYS:C	2.63	0.42
64:SN:69:ASN:HD22	64:SN:69:ASN:N	2.11	0.42
64:SN:113:PHE:O	64:SN:115:LEU:N	2.52	0.42
68:SX:5:ARG:HA	68:SX:5:ARG:HD3	1.95	0.42
74:SF:28:VAL:CG2	74:SF:107:ASN:HD22	2.33	0.42
87:Sg:292:SER:HB2	87:Sg:299:PHE:CZ	2.55	0.42
1:A:209:HIS:CE1	1:A:211:PHE:N	2.88	0.41
1:A:241:ARG:HG2	32:5:3707:U:O2'	2.20	0.41
2:D:282:GLN:C	2:D:283:LYS:O	2.61	0.41
4:H:42:ASN:HB3	32:5:4763:U:H5	1.85	0.41
10:Q:176:ARG:NH2	32:5:1497:A:H62	2.14	0.41
15:V:30:ASP:OD1	15:V:104:VAL:HG12	2.20	0.41
15:V:95:PHE:CE2	32:5:4629:U:H1'	2.55	0.41
19:a:32:ARG:HD2	32:5:37:U:H5''	2.01	0.41
21:c:99:PRO:HG3	21:c:105:ILE:HD12	2.00	0.41
24:f:16:ARG:HD3	32:5:1916:G:C8	2.54	0.41
26:h:21:LEU:HB2	26:h:57:VAL:HG11	2.02	0.41
26:h:94:ARG:NH2	32:5:135:G:C2	2.88	0.41
31:o:11:PHE:HA	31:o:18:HIS:HA	2.02	0.41
32:5:43:U:N3	32:5:93:G:O6	2.53	0.41
32:5:60:G:C4	32:5:61:A:N7	2.87	0.41
32:5:410:A:H2'	32:5:410:A:N3	2.35	0.41
32:5:677:G:H2'	32:5:678:C:H6	1.85	0.41
32:5:739:G:H2'	32:5:740:G:O4'	2.20	0.41
32:5:949:G:N2	32:5:950:G:C4	2.88	0.41
32:5:1276:C:O2	32:5:1276:C:C2'	2.66	0.41
32:5:1280:C:O2'	32:5:1282:G:OP2	2.38	0.41
32:5:1446:C:N3	32:5:1447:C:C6	2.88	0.41
32:5:1601:A:N7	32:5:3643:A:N9	2.68	0.41
32:5:1661:C:C5	32:5:2345:G:C6	3.09	0.41
32:5:1691:G:N2	32:5:1692:C:H1'	2.35	0.41
32:5:1729:A:H2'	32:5:1730:U:O4'	2.20	0.41
32:5:1750:G:N2	32:5:1751:A:N9	2.67	0.41
32:5:1775:A:H3'	32:5:1776:A:H8	1.85	0.41
32:5:1806:G:C4	32:5:1807:C:C6	3.08	0.41
32:5:1827:C:N3	32:5:1828:C:C5	2.88	0.41
32:5:1879:C:C2	32:5:1880:G:C8	3.08	0.41
32:5:1921:C:O2'	32:5:1922:G:OP1	2.31	0.41
32:5:1980:U:O3'	32:5:1981:G:H2'	2.20	0.41
32:5:2518:G:H4'	32:5:2538:U:O2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2551:A:C6	32:5:2552:G:C5	3.07	0.41
32:5:2567:G:H2'	32:5:2568:C:O4'	2.20	0.41
32:5:2634:C:N3	32:5:2635:U:C4	2.88	0.41
32:5:2670:C:O2'	32:5:2671:C:C5'	2.68	0.41
32:5:2782:U:H4'	32:5:2783:A:OP2	2.20	0.41
32:5:3659:G:H2'	32:5:3660:C:O4'	2.20	0.41
32:5:3684:G:C2	32:5:3685:C:C2	3.08	0.41
32:5:3721:U:N3	32:5:3722:G:C8	2.88	0.41
32:5:3744:G:H2'	32:5:3745:U:O4'	2.20	0.41
32:5:3833:C:O2	32:5:3833:C:H2'	2.19	0.41
32:5:3868:G:H22	32:5:3899:G:H21	1.66	0.41
32:5:4151:G:C2	32:5:4152:G:N7	2.86	0.41
32:5:4224:A:N6	32:5:4225:G:C8	2.87	0.41
32:5:4433:G:C2	32:5:4434:C:C4	3.07	0.41
32:5:4602:A:H5''	32:5:4603:C:OP2	2.19	0.41
32:5:4913:G:HO2'	32:5:4914:C:C1'	2.31	0.41
32:5:4998:G:N2	32:5:4999:G:C1'	2.82	0.41
34:8:64:U:N3	34:8:65:A:C6	2.85	0.41
35:B:231:VAL:CG2	35:B:267:ALA:HB1	2.50	0.41
39:I:35:ASP:HB2	39:I:86:HIS:CE1	2.55	0.41
44:p:56:HIS:NE2	44:p:61:MET:SD	2.90	0.41
48:z:107:VAL:HB	48:z:219:TYR:CD1	2.55	0.41
50:3:34:A:C4	54:S2:1701:C:H5	2.30	0.41
54:S2:19:A:C2	54:S2:20:G:C8	3.08	0.41
54:S2:84:A:C5	54:S2:85:A:N7	2.88	0.41
54:S2:211:G:C4	54:S2:212:C:C5	3.08	0.41
54:S2:316:G:N2	54:S2:317:C:N3	2.66	0.41
54:S2:316:G:C2	54:S2:317:C:N3	2.88	0.41
54:S2:401:A:N7	54:S2:402:C:C5	2.88	0.41
54:S2:589:G:O3'	54:S2:590:A:H2'	2.20	0.41
54:S2:663:C:C4	54:S2:664:A:C8	3.08	0.41
54:S2:676:C:O2	54:S2:676:C:H2'	2.19	0.41
54:S2:878:G:C2	54:S2:909:G:C2	3.08	0.41
54:S2:931:C:H2'	54:S2:932:G:C8	2.55	0.41
54:S2:1049:A:C2	54:S2:1070:A:N3	2.88	0.41
54:S2:1233:G:C2	54:S2:1234:C:C6	3.08	0.41
54:S2:1289:U:C5	54:S2:1290:G:N7	2.88	0.41
54:S2:1292:C:C2	86:Sf:150:PHE:CG	3.08	0.41
54:S2:1352:G:C6	54:S2:1353:A:C5	3.08	0.41
54:S2:1654:G:C2	54:S2:1671:G:C2	3.08	0.41
57:SC:108:LYS:CB	57:SC:233:LEU:HD23	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SG:220:ALA:O	59:SG:224:ARG:N	2.53	0.41
64:SN:16:LEU:HB3	64:SN:17:PRO:HD2	2.02	0.41
75:SK:16:PHE:CD2	75:SK:79:LEU:HB2	2.55	0.41
80:SS:14:ARG:CZ	80:SS:17:ASN:C	2.93	0.41
82:SU:53:PRO:HB2	82:SU:55:ARG:NH2	2.35	0.41
87:Sg:17:TRP:CB	87:Sg:303:THR:HA	2.41	0.41
1:A:223:SER:OG	32:5:3748:A:O2'	2.33	0.41
2:D:18:VAL:HG13	33:7:11:A:N7	2.36	0.41
4:H:12:ILE:HD11	4:H:16:VAL:HB	2.01	0.41
9:O:108:ILE:HG23	9:O:160:ARG:CD	2.50	0.41
10:Q:79:THR:HG22	10:Q:99:LYS:HD2	2.02	0.41
10:Q:101:CYS:SG	10:Q:121:LEU:HB2	2.60	0.41
13:T:46:GLY:O	13:T:47:THR:C	2.63	0.41
15:V:77:HIS:CE1	15:V:105:ILE:HG23	2.55	0.41
15:V:96:LEU:HD12	41:W:20:ARG:O	2.19	0.41
17:Y:62:TYR:N	17:Y:62:TYR:HD1	2.15	0.41
24:f:28:LEU:HG	24:f:101:ILE:HD11	2.01	0.41
32:5:20:U:C4	34:8:37:A:C5	3.08	0.41
32:5:45:U:H2'	32:5:46:U:O5'	2.19	0.41
32:5:65:A:C8	32:5:67:C:N1	2.88	0.41
32:5:426:A:N1	32:5:427:A:C6	2.87	0.41
32:5:437:G:C4	32:5:438:G:C8	3.08	0.41
32:5:468:U:O2'	32:5:469:C:H4'	2.20	0.41
32:5:481:G:N1	32:5:482:G:C5	2.88	0.41
32:5:715:G:N2	32:5:954:C:C2	2.88	0.41
32:5:743:G:N2	32:5:744:G:C4	2.88	0.41
32:5:743:G:N3	32:5:744:G:N7	2.69	0.41
32:5:933:G:C5	32:5:940:C:N4	2.87	0.41
32:5:993:G:C4	32:5:994:G:C8	3.08	0.41
32:5:1215:C:O2	32:5:1215:C:C2'	2.68	0.41
32:5:1233:G:C2	32:5:1234:G:C5	3.08	0.41
32:5:1243:C:O2'	32:5:1244:G:C8	2.71	0.41
32:5:1260:G:C2	32:5:1261:G:C5	3.07	0.41
32:5:1727:U:H2'	32:5:1727:U:O2	2.19	0.41
32:5:1819:G:C6	32:5:1820:C:N4	2.88	0.41
32:5:1830:G:C6	32:5:1831:G:N7	2.88	0.41
32:5:1870:C:O2'	32:5:4442:U:H4'	2.20	0.41
32:5:1877:G:N3	32:5:1877:G:H2'	2.33	0.41
32:5:1925:G:C4	32:5:1926:C:C5	3.07	0.41
32:5:2007:G:C3'	32:5:2008:U:H5''	2.50	0.41
32:5:2071:A:C6	32:5:2072:C:N4	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2124:G:H22	38:F:32:ILE:HG13	1.85	0.41
32:5:2329:U:O2'	32:5:2330:G:H8	1.99	0.41
32:5:2453:A:H1'	32:5:2507:A:C6	2.55	0.41
32:5:2477:A:C2	32:5:2501:C:C2	3.09	0.41
32:5:2712:G:C2	32:5:2713:C:C5	3.08	0.41
32:5:2794:C:O2	40:P:136:ILE:HD12	2.20	0.41
32:5:3614:G:C6	32:5:3617:G:C2	3.08	0.41
32:5:3623:C:H5	32:5:3624:A:C6	2.38	0.41
32:5:3697:U:O2'	32:5:3698:G:OP2	2.27	0.41
32:5:4084:G:O3'	32:5:4085:A:H4'	2.20	0.41
32:5:4142:C:C6	32:5:4143:G:C4	3.08	0.41
32:5:4203:A:C5	32:5:4221:C:O4'	2.74	0.41
32:5:4229:U:C5	32:5:4230:C:H5	2.31	0.41
32:5:4283:G:N3	32:5:4283:G:H2'	2.35	0.41
32:5:4455:G:N2	32:5:4456:C:N1	2.68	0.41
32:5:4456:C:N4	32:5:4521:U:H3	2.17	0.41
32:5:4489:G:N2	32:5:4490:C:C2	2.88	0.41
32:5:4538:G:C4	32:5:4539:U:C5	3.08	0.41
32:5:4892:A:C2	32:5:4927:G:O6	2.63	0.41
38:F:77:ALA:HB1	38:F:83:PHE:N	2.35	0.41
39:I:95:HIS:CE1	39:I:97:ILE:HD12	2.55	0.41
46:K:53:TRP:O	46:K:54:LYS:HB2	2.20	0.41
47:q:77:LYS:HG3	47:q:198:ILE:CD1	2.50	0.41
48:z:406:VAL:CG1	48:z:417:VAL:CG2	2.98	0.41
51:4:9:C:N3	51:4:10:G:C8	2.89	0.41
51:4:119[B]:A:O2'	51:4:120:G:P	2.78	0.41
54:S2:105:U:O2	54:S2:410:G:H1'	2.20	0.41
54:S2:114:G:N2	54:S2:383:G:N2	2.68	0.41
54:S2:218:U:H2'	54:S2:219:U:O4'	2.20	0.41
54:S2:221:A:C6	54:S2:222:U:C4	3.09	0.41
54:S2:496:C:HO2'	54:S2:497:C:C5'	2.33	0.41
54:S2:578:C:C4	54:S2:579:C:C5	3.08	0.41
54:S2:617:G:C5	54:S2:618:C:C6	3.08	0.41
54:S2:693:A:N1	54:S2:694:G:C5	2.88	0.41
54:S2:818:A:O2'	62:SJ:72:PHE:CZ	2.72	0.41
54:S2:848:U:O2	54:S2:848:U:H2'	2.19	0.41
54:S2:924:G:C2	54:S2:925:G:H1'	2.55	0.41
54:S2:976:G:C2	54:S2:977:C:N1	2.88	0.41
54:S2:993:G:H21	54:S2:994:C:H1'	1.83	0.41
54:S2:1028:A:C8	54:S2:1029:G:C8	3.08	0.41
54:S2:1142:G:N2	54:S2:1144:A:H3'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1277:C:H2'	54:S2:1278:A:O4'	2.19	0.41
54:S2:1338:G:H2'	54:S2:1339:U:O4'	2.19	0.41
54:S2:1393:G:C2	54:S2:1394:G:C4	3.08	0.41
54:S2:1489:A:N1	73:SD:146:ARG:NH2	2.68	0.41
54:S2:1587:G:N3	54:S2:1587:G:C2'	2.82	0.41
54:S2:1664:A:C6	54:S2:1666:C:C6	3.09	0.41
54:S2:1732:G:C6	54:S2:1733:U:C4	3.08	0.41
54:S2:1791:A:N7	54:S2:1792:G:C8	2.89	0.41
54:S2:1813:A:C5	54:S2:1814:G:N7	2.88	0.41
55:SA:15:VAL:HG12	55:SA:19:LEU:HD12	2.02	0.41
56:SB:54:GLY:C	56:SB:55:THR:HG23	2.44	0.41
58:SE:36:HIS:HD2	58:SE:84:ALA:C	2.28	0.41
58:SE:47:PHE:HE1	58:SE:101:LEU:HD21	1.85	0.41
58:SE:120:LYS:O	58:SE:121:TYR:C	2.63	0.41
59:SG:190:ARG:O	59:SG:193:ALA:HB3	2.19	0.41
65:SO:121:ARG:HG3	84:Sc:62:GLU:HG3	2.02	0.41
68:SX:61:GLN:O	68:SX:62:PRO:C	2.61	0.41
69:SY:124:ASN:OD1	69:SY:124:ASN:N	2.53	0.41
70:Sa:18:VAL:O	70:Sa:19:GLN:C	2.64	0.41
80:SS:63:GLU:O	80:SS:66:ARG:HB2	2.20	0.41
82:SU:94:PRO:HD2	82:SU:97:ILE:HD12	2.02	0.41
1:A:85:GLY:N	32:5:4121:G:H22	2.17	0.41
4:H:156:ASN:CG	4:H:157:SER:N	2.75	0.41
5:J:127:GLY:C	32:5:4251:A:N6	2.78	0.41
6:L:46:ILE:O	6:L:47:ALA:C	2.63	0.41
8:N:21:PHE:CD2	8:N:21:PHE:C	2.98	0.41
8:N:119:TYR:HE1	8:N:131:GLU:CG	2.31	0.41
19:a:89:ASN:O	19:a:90:ALA:HB3	2.19	0.41
22:d:32:ARG:NH2	32:5:4996:C:OP1	2.53	0.41
32:5:55:G:N2	32:5:56:A:C4	2.88	0.41
32:5:68:U:O2	32:5:68:U:H2'	2.20	0.41
32:5:96:U:C5	32:5:97:G:N7	2.88	0.41
32:5:117:C:C4	32:5:118:C:C5	3.08	0.41
32:5:165:A:C4	32:5:166:C:C6	3.08	0.41
32:5:228:C:O2'	32:5:229:G:H5'	2.20	0.41
32:5:438:G:C2	32:5:439:G:C4	3.08	0.41
32:5:440:U:O2	32:5:440:U:H2'	2.20	0.41
32:5:449:C:O2	32:5:449:C:H2'	2.20	0.41
32:5:709:C:H2'	32:5:710:G:O4'	2.20	0.41
32:5:934:C:C6	32:5:934:C:H5''	2.55	0.41
32:5:972:C:C6	32:5:1283:G:O6	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1073:G:N2	32:5:1239:C:N3	2.67	0.41
32:5:1211:G:N2	32:5:1212:G:C5	2.89	0.41
32:5:1235:G:N1	32:5:1236:C:C5	2.88	0.41
32:5:1259:G:N1	32:5:1260:G:C5	2.88	0.41
32:5:1313:C:N4	32:5:3882:C:H1'	2.34	0.41
32:5:1663:C:H2'	32:5:1664:U:C6	2.54	0.41
32:5:1728:U:C2	32:5:1729:A:C8	3.08	0.41
32:5:1844:G:C4	32:5:1845:U:C5	3.08	0.41
32:5:1879:C:H2'	32:5:1880:G:O5'	2.20	0.41
32:5:2023:C:H2'	32:5:2023:C:O2	2.21	0.41
32:5:2079:G:N3	32:5:2079:G:H2'	2.36	0.41
32:5:2260:C:O2'	32:5:2261:G:OP1	2.38	0.41
32:5:2264:C:O2'	32:5:2265:G:O5'	2.27	0.41
32:5:2367:A:N6	32:5:2788:U:N3	2.39	0.41
32:5:2385:U:H2'	32:5:2386:U:H6	1.85	0.41
32:5:2395:A:C5	32:5:2807:A:C8	3.08	0.41
32:5:2581:A:O2'	32:5:2582:A:O5'	2.39	0.41
32:5:2590:G:O6	32:5:2754:G:C6	2.74	0.41
32:5:2715:G:C6	32:5:2716:C:N4	2.88	0.41
32:5:2723:U:O2	32:5:2724:G:N7	2.52	0.41
32:5:2770:C:C4	32:5:2771:G:C8	3.08	0.41
32:5:2857:A:C4	32:5:2858:A:C5	3.08	0.41
32:5:3692:A:C6	32:5:3693:U:C1'	3.04	0.41
32:5:3734:U:O2'	32:5:3735:G:H5'	2.20	0.41
32:5:3792:G:H2'	32:5:3792:G:N3	2.35	0.41
32:5:3899:G:C2	32:5:3900:G:C8	3.08	0.41
32:5:3943:A:N6	32:5:3944:G:C6	2.88	0.41
32:5:4139:G:N2	32:5:4140:C:C2	2.88	0.41
32:5:4232:U:C1'	32:5:4233:A:OP2	2.69	0.41
32:5:4316:G:C5	32:5:4317:A:C8	3.08	0.41
32:5:4368:G:C6	32:5:4369:A:C5	3.08	0.41
32:5:4586:G:C8	32:5:4586:G:H5''	2.55	0.41
32:5:4586:G:H5''	32:5:4586:G:H8	1.84	0.41
32:5:4645:C:O2	32:5:4645:C:H2'	2.20	0.41
32:5:4712:C:C2	32:5:4713:G:C8	3.08	0.41
32:5:4874:A:N3	32:5:4874:A:H2'	2.36	0.41
32:5:5020:G:O6	32:5:5028:G:O6	2.38	0.41
33:7:25:G:C2	33:7:26:C:C2	3.08	0.41
33:7:35:U:H2'	33:7:36:C:O4'	2.20	0.41
33:7:66:G:C4	33:7:67:C:C5	3.08	0.41
34:8:56:G:H2'	34:8:57:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:8:96:C:O2	34:8:96:C:C2'	2.62	0.41
34:8:106:G:C2	34:8:107:C:C5	3.08	0.41
34:8:118:C:C4	34:8:119:C:C5	3.04	0.41
35:B:10:ARG:NH2	35:B:10:ARG:HB2	2.35	0.41
35:B:108:GLU:C	35:B:109:HIS:O	2.63	0.41
40:P:19:GLY:C	40:P:22:LEU:HD21	2.45	0.41
47:q:133:GLU:O	47:q:152:ILE:HD11	2.20	0.41
48:z:218:VAL:HG11	48:z:246:ILE:HD12	2.01	0.41
50:3:65:G:C2	50:3:66:C:C2	3.09	0.41
51:4:6:G:C6	51:4:7:C:N4	2.88	0.41
51:4:16:G:O6	51:4:17:C:H1'	2.20	0.41
54:S2:14:C:OP2	57:SC:232:THR:HG21	2.19	0.41
54:S2:64:A:N1	54:S2:82:G:N2	2.68	0.41
54:S2:76:U:O2'	54:S2:77:A:O5'	2.35	0.41
54:S2:103:A:N6	54:S2:355:G:C5	2.88	0.41
54:S2:119:U:O2	54:S2:120:U:H6	2.00	0.41
54:S2:338:G:H2'	54:S2:339:A:C1'	2.50	0.41
54:S2:364:A:H2'	54:S2:365:C:O4'	2.20	0.41
54:S2:417:C:O2	54:S2:421:G:O6	2.38	0.41
54:S2:478:G:C5	54:S2:479:C:C5	3.07	0.41
54:S2:616:A:N7	54:S2:617:G:H1'	2.34	0.41
54:S2:850:C:O2'	54:S2:851:C:H5'	2.20	0.41
54:S2:952:G:H2'	54:S2:953:C:C6	2.55	0.41
54:S2:999:G:H21	54:S2:1000:C:H1'	1.86	0.41
54:S2:1022:U:C6	64:SN:128:TYR:HE2	2.37	0.41
54:S2:1040:G:C2	54:S2:1041:G:C4	3.08	0.41
54:S2:1094:C:N3	54:S2:1095:U:C6	2.88	0.41
54:S2:1135:C:C4	54:S2:1136:U:C4	3.08	0.41
54:S2:1166:G:C2	54:S2:1167:G:C8	3.08	0.41
54:S2:1226:G:N3	54:S2:1226:G:H2'	2.34	0.41
54:S2:1247:C:O4'	54:S2:1251:A:C8	2.74	0.41
54:S2:1251:A:C2	54:S2:1252:C:C5	3.08	0.41
54:S2:1291:A:O5'	86:Sf:146:LEU:HD12	2.20	0.41
54:S2:1394:G:O6	54:S2:1395:C:C5	2.73	0.41
54:S2:1456:G:N3	54:S2:1457:U:C6	2.88	0.41
54:S2:1486:A:H2'	54:S2:1487:A:O4'	2.21	0.41
54:S2:1495:G:N3	85:Sd:41:GLN:CB	2.84	0.41
54:S2:1537:A:N1	54:S2:1596:U:C4	2.89	0.41
54:S2:1610:G:C2	54:S2:1611:G:N9	2.87	0.41
54:S2:1864:U:O4	70:Sa:9:GLY:HA3	2.21	0.41
55:SA:169:HIS:CD2	55:SA:203:PHE:CD2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:SA:200:ASP:CB	79:SR:86:PRO:HD2	2.36	0.41
57:SC:274:VAL:O	57:SC:274:VAL:HG13	2.20	0.41
58:SE:120:LYS:C	58:SE:121:TYR:O	2.63	0.41
60:SH:36:LEU:CD1	60:SH:40:LEU:HD12	2.50	0.41
65:SO:49:GLY:O	65:SO:50:LYS:C	2.64	0.41
69:SY:70:THR:HG22	69:SY:71:GLY:N	2.36	0.41
74:SF:91:ARG:HD2	74:SF:91:ARG:HA	1.72	0.41
80:SS:30:ILE:CD1	80:SS:45:LEU:HD11	2.50	0.41
84:Sc:50:VAL:CG1	84:Sc:51:ARG:N	2.83	0.41
87:Sg:19:THR:OG1	87:Sg:66:VAL:O	2.31	0.41
87:Sg:48:ASP:CG	87:Sg:49:GLU:N	2.78	0.41
2:D:267:ASN:CG	33:7:59:G:HO2'	2.19	0.41
4:H:113:GLU:CD	4:H:125:ARG:HB3	2.44	0.41
5:J:62:ILE:C	5:J:63:ARG:HG2	2.45	0.41
7:M:75:LYS:O	7:M:76:ALA:HB3	2.20	0.41
8:N:41:ARG:C	8:N:61:ILE:HD11	2.45	0.41
8:N:85:VAL:HA	31:o:49:GLY:HA2	2.02	0.41
12:S:176:PHE:CE2	32:5:4871:C:C6	3.08	0.41
16:X:83:THR:HG21	32:5:2434:G:O3'	2.21	0.41
32:5:39:A:C6	32:5:1654:G:C2	3.09	0.41
32:5:238:C:C2'	32:5:239:C:H5'	2.49	0.41
32:5:254:G:C2	32:5:255:C:N1	2.88	0.41
32:5:272:U:N3	32:5:273:U:O4	2.53	0.41
32:5:299:C:N4	32:5:300:A:N7	2.69	0.41
32:5:446:C:O2'	32:5:2314:G:H4'	2.20	0.41
32:5:497:G:H4'	32:5:498:C:OP2	2.20	0.41
32:5:505:G:C5	32:5:506:C:C5	3.08	0.41
32:5:656:C:O2	32:5:657:C:C6	2.74	0.41
32:5:671:G:N2	32:5:672:C:N1	2.67	0.41
32:5:691:C:O2	32:5:692:A:C8	2.73	0.41
32:5:739:G:C2	32:5:740:G:C4	3.08	0.41
32:5:752:G:C2	32:5:753:C:C1'	3.04	0.41
32:5:950:G:N1	32:5:951:G:N7	2.68	0.41
32:5:987:C:C2	32:5:1067:G:C2	3.09	0.41
32:5:1072:C:H1'	32:5:1073:G:C8	2.55	0.41
32:5:1185:G:C2	32:5:1186:U:H1'	2.55	0.41
32:5:1214:C:N4	38:F:58:HIS:ND1	2.69	0.41
32:5:1266:G:H21	32:5:2111:G:H1'	1.85	0.41
32:5:1316:G:H1'	32:5:2348:G:H21	1.83	0.41
32:5:1412:G:N3	32:5:1413:C:C5	2.89	0.41
32:5:1428:U:H3'	32:5:1429:C:C5	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1473:U:H2'	32:5:1474:C:O4'	2.19	0.41
32:5:1543:G:C2	32:5:1544:G:N9	2.88	0.41
32:5:1665:C:N3	32:5:2285:A:C2	2.88	0.41
32:5:1759:G:N2	32:5:1760:G:H1'	2.35	0.41
32:5:1938:C:C5	32:5:1939:A:C5	3.07	0.41
32:5:1992:U:O2'	32:5:1993:C:P	2.77	0.41
32:5:2246:C:H2'	32:5:2247:C:O4'	2.21	0.41
32:5:2296:G:C6	32:5:2339:G:C2	3.08	0.41
32:5:2498:C:N3	32:5:2499:C:C6	2.87	0.41
32:5:2557:G:N2	32:5:2571:C:C2	2.89	0.41
32:5:2602:G:H22	32:5:2736:G:H22	1.68	0.41
32:5:2644:G:N2	32:5:2690:C:C2	2.88	0.41
32:5:2669:C:C6	32:5:2669:C:O5'	2.74	0.41
32:5:2673:G:H4'	32:5:2675:G:C1'	2.50	0.41
32:5:2690:C:C2	32:5:2691:U:C5	3.06	0.41
32:5:2712:G:C2	32:5:2713:C:C2	3.08	0.41
32:5:2771:G:C5	32:5:2772:C:C6	3.08	0.41
32:5:3636:C:C6	32:5:3636:C:O5'	2.74	0.41
32:5:3643:A:C2	42:j:3:LYS:CE	3.03	0.41
32:5:3846:C:C2	32:5:3847:C:H6	2.34	0.41
32:5:4278:C:H1'	32:5:4282:A:C2	2.55	0.41
32:5:4373:G:H1'	32:5:4375:C:N4	2.35	0.41
32:5:4397:A:C2	49:2:127:MET:HE3	2.55	0.41
32:5:4565:C:O2'	32:5:4566:U:H5'	2.20	0.41
32:5:4658:G:C4	32:5:4659:G:C8	3.09	0.41
32:5:5004:C:C6	32:5:5005:G:H1'	2.55	0.41
33:7:42:A:N1	33:7:43:U:C4	2.87	0.41
35:B:19:ARG:HB2	35:B:234:ARG:NH1	2.36	0.41
35:B:46:PHE:CD1	35:B:47:LEU:N	2.88	0.41
35:B:378:ARG:HD2	41:W:11:TYR:CE2	2.55	0.41
37:E:43:ASN:ND2	37:E:44:PRO:O	2.54	0.41
38:F:32:ILE:N	38:F:32:ILE:CD1	2.83	0.41
45:r:107:ARG:HH11	45:r:107:ARG:CG	2.33	0.41
47:q:33:ASP:OD1	47:q:33:ASP:N	2.52	0.41
47:q:107:VAL:O	47:q:109:ALA:CB	2.68	0.41
48:z:160:TYR:HD2	48:z:179:PHE:CZ	2.28	0.41
48:z:270:ILE:CG2	48:z:285:PHE:CZ	3.02	0.41
48:z:293:LYS:HG2	48:z:351:MET:HA	1.96	0.41
50:3:67:G:C2	50:3:68:G:C5	3.09	0.41
51:4:61:C:C2	51:4:62:G:C8	3.08	0.41
51:4:183:A:C8	51:4:186:C:OP1	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:29:G:H2'	54:S2:30:C:H6	1.81	0.41
54:S2:120:U:O4	54:S2:121:U:C4	2.74	0.41
54:S2:336:A:C2	54:S2:337:C:C2	3.08	0.41
54:S2:350:C:N3	54:S2:351:G:N7	2.69	0.41
54:S2:387:C:O2	54:S2:387:C:C2'	2.68	0.41
54:S2:439:A:H2'	54:S2:440:G:O4'	2.21	0.41
54:S2:447:A:C5	54:S2:449:A:C4	3.03	0.41
54:S2:501:C:C3'	54:S2:501:C:C2	3.02	0.41
54:S2:538:U:C4	54:S2:539:C:C5	3.08	0.41
54:S2:610:G:N2	54:S2:611:G:H1'	2.35	0.41
54:S2:616:A:H5''	54:S2:617:G:OP2	2.20	0.41
54:S2:648:A:C4	54:S2:649:U:C6	3.08	0.41
54:S2:673:G:C5	54:S2:674:C:C5	3.08	0.41
54:S2:864:A:C4	54:S2:865:A:C8	3.07	0.41
54:S2:964:A:C4	54:S2:965:U:C4	3.08	0.41
54:S2:978:G:N1	54:S2:979:C:C4	2.89	0.41
54:S2:979:C:N3	54:S2:980:A:N7	2.68	0.41
54:S2:989:C:H6	54:S2:989:C:O5'	2.03	0.41
54:S2:990:A:C6	54:S2:992:A:C4	3.09	0.41
54:S2:1067:C:C2	54:S2:1068:G:C8	3.07	0.41
54:S2:1102:G:C6	54:S2:1103:C:C4	3.08	0.41
54:S2:1294:G:N2	54:S2:1295:A:C4	2.89	0.41
54:S2:1415:C:H2'	54:S2:1416:C:C5'	2.51	0.41
54:S2:1589:A:C5	54:S2:1590:C:C4	3.08	0.41
54:S2:1659:U:H5''	54:S2:1660:C:OP2	2.20	0.41
54:S2:1792:G:N1	54:S2:1793:A:C5	2.88	0.41
55:SA:39:TYR:CD1	55:SA:40:LYS:HG2	2.56	0.41
56:SB:56:LYS:C	56:SB:57:ILE:HG12	2.45	0.41
56:SB:100:PHE:CZ	56:SB:102:GLY:HA2	2.56	0.41
57:SC:153:GLY:O	57:SC:156:ILE:HG22	2.20	0.41
58:SE:23:LEU:O	58:SE:24:THR:OG1	2.33	0.41
64:SN:113:PHE:O	64:SN:115:LEU:C	2.63	0.41
80:SS:14:ARG:NH1	80:SS:17:ASN:C	2.78	0.41
84:Sc:14:VAL:CG1	84:Sc:31:ARG:HB3	2.46	0.41
2:D:39:GLN:HA	2:D:39:GLN:OE1	2.20	0.41
2:D:103:LEU:CD2	2:D:244:HIS:HB3	2.50	0.41
3:G:53:ARG:NH2	32:5:4088:C:N3	2.69	0.41
4:H:151:ILE:HG23	4:H:152:GLU:N	2.35	0.41
5:J:107:PHE:CZ	5:J:130:PHE:CB	3.03	0.41
6:L:3:PRO:HG2	19:a:44:ASN:HD22	1.86	0.41
7:M:41:PRO:CB	7:M:74:ARG:HH21	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:V:77:HIS:ND1	15:V:77:HIS:C	2.78	0.41
17:Y:5:PRO:O	17:Y:6:PHE:CB	2.68	0.41
18:Z:71:PHE:HA	18:Z:111:ARG:HG2	2.03	0.41
18:Z:74:VAL:C	18:Z:75:TYR:HD2	2.28	0.41
21:c:73:HIS:CD2	21:c:73:HIS:N	2.89	0.41
21:c:74:TYR:CD1	21:c:74:TYR:C	2.99	0.41
23:e:126:ASN:C	23:e:126:ASN:ND2	2.78	0.41
31:o:48:TYR:OH	32:5:3927:U:H5'	2.20	0.41
32:5:61:A:C6	32:5:62:A:C6	3.08	0.41
32:5:91:G:C5	32:5:93:G:N1	2.89	0.41
32:5:120:A:C6	32:5:149:A:C5	3.09	0.41
32:5:491:G:N2	32:5:663:G:C2	2.87	0.41
32:5:734:G:N3	32:5:735:G:C8	2.88	0.41
32:5:911:U:O2	32:5:911:U:H2'	2.21	0.41
32:5:930:G:C4	32:5:931:C:C5	3.08	0.41
32:5:1081:C:H1'	32:5:1220:G:N2	2.35	0.41
32:5:1187:G:O2'	32:5:1188:C:O4'	2.35	0.41
32:5:1251:C:O2	32:5:1252:C:C6	2.74	0.41
32:5:1412:G:C4	32:5:1413:C:C6	3.08	0.41
32:5:1492:G:N3	32:5:1493:G:C8	2.88	0.41
32:5:1540:C:C4	32:5:1541:C:C5	3.08	0.41
32:5:1544:G:C2	32:5:1545:G:C5	3.09	0.41
32:5:1596:U:O2'	32:5:1597:G:P	2.78	0.41
32:5:1735:U:C2	32:5:1736:A:C8	3.09	0.41
32:5:1740:C:C4	32:5:1785:C:C4	3.08	0.41
32:5:2263:A:H5'	45:r:39:ARG:HH22	1.86	0.41
32:5:2314:G:C6	32:5:2326:G:N7	2.88	0.41
32:5:2314:G:N7	32:5:2326:G:C2	2.89	0.41
32:5:2480:G:C6	32:5:2481:G:C5	3.09	0.41
32:5:2570:U:C2	32:5:2571:C:C6	3.08	0.41
32:5:2669:C:O5'	32:5:2669:C:H6	2.04	0.41
32:5:2842:G:C4	32:5:2843:U:C6	3.09	0.41
32:5:3597:G:C4	32:5:3598:C:C5	3.09	0.41
32:5:3608:A:C2	32:5:3609:G:C4	3.08	0.41
32:5:3628:G:C2	32:5:3629:A:C8	3.08	0.41
32:5:3693:U:O4	32:5:3694:U:O4	2.38	0.41
32:5:3730:U:C4	32:5:3731:C:H5	2.35	0.41
32:5:3877:A:N1	32:5:4444:C:H1'	2.36	0.41
32:5:4090:G:N1	32:5:4091:G:C4	2.89	0.41
32:5:4132:C:N3	32:5:4133:C:C5	2.88	0.41
32:5:4202:U:C2	32:5:4204:C:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4316:G:C5	32:5:4317:A:N7	2.88	0.41
32:5:4360:U:C5	32:5:4361:U:C5	3.08	0.41
32:5:4422:A:N7	32:5:4423:U:C4	2.88	0.41
32:5:4480:A:N1	32:5:4481:U:C1'	2.84	0.41
32:5:4652:G:N3	32:5:4653:C:C5	2.87	0.41
32:5:4742:G:H2'	32:5:4742:G:N3	2.36	0.41
32:5:4922:C:N3	32:5:4923:C:C5	2.88	0.41
32:5:4957:C:O2	32:5:4958:C:C6	2.73	0.41
32:5:5042:A:C2	32:5:5043:A:N7	2.89	0.41
33:7:8:G:N2	33:7:9:C:H1'	2.35	0.41
33:7:50:A:N1	33:7:51:G:N7	2.69	0.41
34:8:41:A:C8	34:8:42:G:C8	3.09	0.41
35:B:116:ARG:C	35:B:118:PHE:H	2.28	0.41
37:E:280:HIS:ND1	37:E:280:HIS:C	2.77	0.41
39:I:101:LYS:CE	39:I:120:GLY:C	2.89	0.41
45:r:65:LYS:N	45:r:102:TYR:OH	2.54	0.41
45:r:107:ARG:C	45:r:107:ARG:CD	2.88	0.41
48:z:344:PRO:HB2	48:z:345:PHE:H	1.69	0.41
50:3:65:G:C5	50:3:66:C:C5	3.08	0.41
51:4:16:G:O2'	51:4:40:G:N7	2.54	0.41
51:4:54:G:C2	51:4:55:G:C8	3.07	0.41
51:4:59:A:C2	51:4:60:U:C1'	3.03	0.41
51:4:62:G:C5	51:4:63:C:C5	3.07	0.41
51:4:197:G:H2'	51:4:198:G:O4'	2.19	0.41
52:9:24:ASN:ND2	52:9:43:ASN:HA	2.35	0.41
54:S2:36:U:C4	54:S2:37:C:C5	3.08	0.41
54:S2:66:G:N3	54:S2:66:G:H2'	2.35	0.41
54:S2:83:A:C2	54:S2:84:A:H1'	2.55	0.41
54:S2:341:C:C2	54:S2:342:C:C1'	3.04	0.41
54:S2:409:C:C2	54:S2:432:G:C2	3.08	0.41
54:S2:589:G:O2'	54:S2:590:A:O2'	2.38	0.41
54:S2:618:C:OP1	68:SY:87:ASN:HA	2.21	0.41
54:S2:633:C:N4	54:S2:634:A:N7	2.69	0.41
54:S2:646:G:N7	54:S2:647:U:C5	2.89	0.41
54:S2:828:G:N1	54:S2:829:C:C5	2.88	0.41
54:S2:837:A:N6	69:SY:47:MET:HB3	2.36	0.41
54:S2:899:U:C5	54:S2:900:C:C5	3.09	0.41
54:S2:936:G:C2	54:S2:1007:C:C2	3.08	0.41
54:S2:940:U:H2'	54:S2:941:C:C6	2.55	0.41
54:S2:961:G:N1	54:S2:962:A:N7	2.69	0.41
54:S2:1049:A:N1	54:S2:1070:A:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1097:G:C5	54:S2:1098:C:C6	3.08	0.41
54:S2:1107:G:C2	54:S2:1108:G:N9	2.89	0.41
54:S2:1121:G:N1	54:S2:1122:A:C4	2.88	0.41
54:S2:1134:G:C6	54:S2:1135:C:N4	2.88	0.41
54:S2:1224:G:H3'	54:S2:1224:G:C8	2.55	0.41
54:S2:1236:G:C6	54:S2:1237:C:C4	3.09	0.41
54:S2:1283:C:H5'	54:S2:1283:C:C2	2.56	0.41
54:S2:1306:U:H2'	54:S2:1307:U:C5'	2.51	0.41
54:S2:1422:G:C2	54:S2:1424:G:C8	3.08	0.41
54:S2:1551:U:C4'	54:S2:1558:C:H1'	2.49	0.41
54:S2:1588:A:O2'	54:S2:1589:A:OP2	2.38	0.41
54:S2:1627:C:N3	54:S2:1628:C:C5	2.89	0.41
54:S2:1666:C:N3	54:S2:1667:U:C4	2.88	0.41
54:S2:1683:C:O2	54:S2:1684:C:C5	2.73	0.41
55:SA:83:GLY:O	55:SA:84:GLN:C	2.63	0.41
58:SE:21:ASP:OD1	58:SE:21:ASP:C	2.63	0.41
59:SG:145:PHE:O	59:SG:146:ASN:HB2	2.19	0.41
60:SH:122:LEU:HD11	60:SH:126:HIS:NE2	2.35	0.41
60:SH:189:PHE:HA	60:SH:190:PRO:HD3	1.93	0.41
63:SL:76:VAL:O	63:SL:88:ILE:HA	2.20	0.41
65:SO:146:ARG:O	65:SO:148:GLY:N	2.53	0.41
67:SW:51:GLU:OE1	71:Sb:8:LEU:HD13	2.20	0.41
70:Sa:74:CYS:SG	70:Sa:77:CYS:SG	3.19	0.41
74:SF:34:SER:HB3	84:Sc:55:VAL:HB	2.03	0.41
74:SF:115:ALA:HA	74:SF:181:ALA:HA	2.03	0.41
74:SF:179:ASN:HD22	74:SF:186:ASN:HB3	1.85	0.41
76:SM:85:LEU:CA	76:SM:88:TRP:CH2	2.96	0.41
83:SZ:49:LEU:CA	83:SZ:83:LEU:CD1	2.98	0.41
1:A:33:ASP:C	1:A:37:ARG:HH21	2.28	0.41
1:A:219:ILE:HG22	1:A:220:GLY:N	2.34	0.41
3:G:53:ARG:HB3	3:G:53:ARG:CZ	2.51	0.41
3:G:58:PRO:HD2	3:G:61:ILE:HD12	2.03	0.41
3:G:73:ARG:HH11	3:G:73:ARG:CB	2.32	0.41
15:V:20:LEU:HD23	15:V:20:LEU:HA	1.93	0.41
19:a:112:LEU:CD2	32:5:1396:G:N7	2.81	0.41
21:c:78:ASN:HD21	21:c:79:ILE:HA	1.86	0.41
23:e:20:PHE:HZ	23:e:60:TYR:CE2	2.38	0.41
23:e:44:ARG:NH2	32:5:1312:A:O2'	2.53	0.41
32:5:53:C:C6	32:5:53:C:H3'	2.55	0.41
32:5:99:A:C6	32:5:100:C:C4	3.09	0.41
32:5:172:C:N3	32:5:173:C:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:428:G:N2	34:8:7:U:C2	2.89	0.41
32:5:455:C:C2	32:5:456:C:C6	3.08	0.41
32:5:481:G:N3	32:5:482:G:C8	2.88	0.41
32:5:660:A:C2	32:5:661:C:N1	2.89	0.41
32:5:718:C:C2	32:5:719:C:C6	3.09	0.41
32:5:906:C:C2	32:5:907:C:C6	3.08	0.41
32:5:993:G:C6	32:5:994:G:N7	2.88	0.41
32:5:1379:C:H4'	32:5:1380:G:H8	1.70	0.41
32:5:1464:C:N3	32:5:1465:G:C8	2.89	0.41
32:5:1477:C:O2	32:5:1477:C:H2'	2.21	0.41
32:5:1487:G:C2	32:5:1488:G:N9	2.89	0.41
32:5:1631:A:H5'	32:5:1632:A:C5	2.55	0.41
32:5:1650:A:H3'	32:5:1651:G:H5''	2.02	0.41
32:5:1775:A:H2'	32:5:1776:A:O4'	2.21	0.41
32:5:1797:G:N2	32:5:1798:G:C5	2.88	0.41
32:5:1825:A:C6	32:5:1826:G:C5	3.08	0.41
32:5:1826:G:C2	32:5:1827:C:C6	3.08	0.41
32:5:1912:G:C4	32:5:2057:A:C6	3.08	0.41
32:5:2047:A:H8	32:5:2047:A:O5'	2.04	0.41
32:5:2271:C:C2	32:5:2272:C:C5	3.09	0.41
32:5:2316:G:C2	32:5:2317:C:C2	3.08	0.41
32:5:2336:G:C2	32:5:2337:C:C2	3.08	0.41
32:5:2419:C:C2'	32:5:2420:A:O5'	2.69	0.41
32:5:2529:A:C8	32:5:2532:C:C5	3.08	0.41
32:5:2584:G:C2	32:5:2585:C:C6	3.09	0.41
32:5:2677:G:O6	32:5:2678:A:C4	2.73	0.41
32:5:2695:A:C5	32:5:2697:A:C5	3.09	0.41
32:5:2703:G:C2	32:5:2704:C:C6	3.09	0.41
32:5:2712:G:C4	32:5:2713:C:C5	3.08	0.41
32:5:2726:G:H2'	32:5:2727:C:C6	2.56	0.41
32:5:2764:A:H5''	32:5:2765:A:OP2	2.21	0.41
32:5:3600:G:C4	32:5:3601:C:C5	3.09	0.41
32:5:3621:A:H3'	32:5:3622:C:H6	1.85	0.41
32:5:3630:A:N1	32:5:3631:U:C4	2.88	0.41
32:5:3658:C:H2'	32:5:3659:G:H8	1.85	0.41
32:5:3683:C:H4'	32:5:3684:G:OP2	2.21	0.41
32:5:3742:G:C2	32:5:3743:G:C5	3.08	0.41
32:5:3754:G:C2'	32:5:3755:G:O5'	2.69	0.41
32:5:3771:C:C4	32:5:3772:U:O4	2.74	0.41
32:5:3806:G:N1	32:5:3807:A:C5	2.88	0.41
32:5:3858:C:O3'	40:P:139:TYR:OH	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3861:A:H4'	40:P:137:ASN:ND2	2.36	0.41
32:5:4073:A:C6	32:5:4074:C:C4	3.08	0.41
32:5:4120:U:O2	32:5:4120:U:O4'	2.38	0.41
32:5:4132:C:N3	32:5:4133:C:C6	2.88	0.41
32:5:4139:G:C5	32:5:4140:C:C5	3.08	0.41
32:5:4158:C:O2	32:5:4159:C:C6	2.74	0.41
32:5:4269:G:N1	32:5:4270:C:N1	2.68	0.41
32:5:4404:U:C5	32:5:4436:U:C4	3.08	0.41
32:5:4405:G:C4	32:5:4406:U:C6	3.09	0.41
32:5:4594:U:H2'	32:5:4595:G:H8	1.86	0.41
32:5:4697:U:C5'	32:5:4698:C:OP2	2.68	0.41
32:5:5008:C:H2'	32:5:5009:G:O4'	2.21	0.41
32:5:5046:U:C5'	32:5:5047:C:P	3.08	0.41
32:5:5061:A:O4'	32:5:5062:G:H5''	2.21	0.41
33:7:21:G:C2	33:7:58:A:N3	2.88	0.41
33:7:60:G:N1	33:7:61:G:N7	2.68	0.41
34:8:78:G:H2'	34:8:79:G:C1'	2.50	0.41
35:B:213:GLN:NE2	35:B:214:ASP:N	2.69	0.41
35:B:371:THR:HG21	41:W:17:HIS:CE1	2.54	0.41
39:I:46:PHE:CD2	39:I:139:ARG:HD2	2.56	0.41
39:I:105:CYS:HB2	39:I:109:ASP:HB2	2.02	0.41
48:z:108:GLY:O	48:z:197:GLN:NE2	2.53	0.41
50:3:4:U:N3	50:3:5:C:C5	2.89	0.41
50:3:51:C:N3	50:3:63:G:O6	2.53	0.41
52:9:33:ARG:CZ	52:9:37:ILE:HG13	2.51	0.41
52:9:34:ARG:HH11	52:9:34:ARG:HG2	1.86	0.41
54:S2:68:A:H2'	54:S2:69:C:H6	1.85	0.41
54:S2:73:C:HO2'	54:S2:74:G:C5'	2.32	0.41
54:S2:122:G:N1	54:S2:123:G:C4	2.89	0.41
54:S2:173:A:N6	54:S2:174:C:C4	2.89	0.41
54:S2:302:A:C2'	61:SI:64:ASN:HD21	2.34	0.41
54:S2:305:U:C2'	54:S2:306:C:OP1	2.68	0.41
54:S2:311:C:N4	54:S2:312:G:C8	2.89	0.41
54:S2:411:G:C6	54:S2:412:G:N7	2.89	0.41
54:S2:436:G:N7	54:S2:471:G:N2	2.68	0.41
54:S2:518:G:N3	54:S2:519:A:C8	2.88	0.41
54:S2:633:C:O2	54:S2:633:C:H2'	2.20	0.41
54:S2:875:A:N6	54:S2:876:C:C5	2.80	0.41
54:S2:961:G:C2	54:S2:962:A:N9	2.88	0.41
54:S2:961:G:O6	54:S2:962:A:C6	2.74	0.41
54:S2:973:C:N4	54:S2:974:C:C5	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:975:G:N1	54:S2:976:G:C5	2.89	0.41
54:S2:1177:U:N3	54:S2:1178:U:C5	2.88	0.41
54:S2:1184:G:C4	54:S2:1185:C:C6	3.08	0.41
54:S2:1284:A:H4'	54:S2:1286:G:H4'	2.01	0.41
54:S2:1292:C:H2'	86:Sf:150:PHE:HD1	1.84	0.41
54:S2:1292:C:C4'	86:Sf:148:TYR:HA	2.51	0.41
54:S2:1314:U:C2	54:S2:1315:U:H1'	2.52	0.41
54:S2:1404:U:C5'	54:S2:1581:C:O2	2.69	0.41
54:S2:1406:G:H2'	54:S2:1407:U:C4'	2.51	0.41
54:S2:1419:C:H5''	81:ST:128:GLN:HB3	2.03	0.41
54:S2:1432:U:N3	54:S2:1433:C:H5	2.13	0.41
54:S2:1510:G:C4	54:S2:1511:U:C5	3.08	0.41
54:S2:1520:G:N3	54:S2:1520:G:C2'	2.84	0.41
54:S2:1548:G:H8	54:S2:1656:G:O2'	2.03	0.41
54:S2:1551:U:O4'	54:S2:1551:U:O2	2.38	0.41
54:S2:1575:G:N3	54:S2:1576:G:C8	2.88	0.41
54:S2:1588:A:O2'	54:S2:1589:A:H8	2.03	0.41
54:S2:1594:A:N1	54:S2:1595:U:C6	2.73	0.41
54:S2:1846:G:C6	54:S2:1847:G:N7	2.89	0.41
55:SA:141:ASN:ND2	55:SA:141:ASN:N	2.67	0.41
55:SA:198:MET:HE1	79:SR:87:GLU:HA	1.66	0.41
56:SB:133:TYR:HB3	56:SB:220:LYS:HA	2.03	0.41
57:SC:146:GLU:HG2	57:SC:149:THR:H	1.86	0.41
57:SC:209:VAL:N	57:SC:210:PRO:HD2	2.36	0.41
59:SG:153:VAL:O	59:SG:154:ARG:C	2.63	0.41
59:SG:209:TYR:CD2	59:SG:213:LEU:HG	2.55	0.41
63:SL:117:PHE:HD1	63:SL:117:PHE:HA	1.74	0.41
64:SN:55:ARG:NH1	64:SN:55:ARG:HG3	2.34	0.41
65:SO:99:ALA:N	65:SO:133:THR:HG22	2.36	0.41
70:Sa:18:VAL:O	70:Sa:18:VAL:HG23	2.21	0.41
79:SR:17:ILE:HD11	79:SR:54:VAL:HA	2.02	0.41
80:SS:40:TYR:CE2	80:SS:97:GLN:CD	2.99	0.41
87:Sg:63:SER:HB2	87:Sg:84:ASP:HB3	2.02	0.41
88:S1:47:VAL:O	88:S1:48:CYS:SG	2.79	0.41
1:A:69:PHE:CD2	32:5:4125:C:C5	3.09	0.41
2:D:21:ARG:NH2	33:7:7:G:O6	2.54	0.41
4:H:36:ARG:HD3	4:H:38:PHE:CE1	2.56	0.41
8:N:158:HIS:HB3	8:N:161:MET:HG2	2.03	0.41
11:R:124:TYR:C	11:R:124:TYR:HD1	2.27	0.41
18:Z:136:PHE:CD1	18:Z:136:PHE:N	2.88	0.41
22:d:93:ASN:C	22:d:93:ASN:HD22	2.29	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:f:106:TYR:HB2	37:E:189:PHE:HD2	1.85	0.41
25:g:10:ARG:O	32:5:2402:G:O2'	2.39	0.41
30:m:87:GLN:HE21	30:m:87:GLN:HB3	1.71	0.41
32:5:83:C:O5'	32:5:84:A:C2'	2.68	0.41
32:5:199:G:C2	32:5:201:C:N3	2.89	0.41
32:5:286:U:H2'	32:5:287:U:C6	2.55	0.41
32:5:330:G:C2	32:5:331:G:N9	2.88	0.41
32:5:341:G:C6	32:5:342:G:C8	3.08	0.41
32:5:362:A:C2	34:8:53:G:H1'	2.56	0.41
32:5:497:G:C2	32:5:499:G:C8	3.09	0.41
32:5:668:C:C4	32:5:669:C:C5	3.09	0.41
32:5:678:C:C2	32:5:679:C:C5	3.08	0.41
32:5:1241:C:C2'	32:5:1242:G:OP1	2.69	0.41
32:5:1250:C:N3	32:5:1251:C:C5	2.89	0.41
32:5:1272:C:O2'	32:5:1273:G:O4'	2.36	0.41
32:5:1365:C:C4'	32:5:1366:G:OP1	2.68	0.41
32:5:1382:G:C2	32:5:1383:G:C5	3.09	0.41
32:5:1565:A:H2'	32:5:1566:C:C4'	2.50	0.41
32:5:1631:A:H8	32:5:1631:A:O5'	2.03	0.41
32:5:1663:C:O2'	32:5:2319:C:N4	2.54	0.41
32:5:1687:U:C2'	32:5:1688:G:O5'	2.69	0.41
32:5:1732:C:C2	32:5:1798:G:C2	3.09	0.41
32:5:1734:G:C2	32:5:1793:A:C6	3.08	0.41
32:5:1819:G:N2	32:5:1820:C:N1	2.68	0.41
32:5:1826:G:C2	32:5:1827:C:H1'	2.56	0.41
32:5:1846:G:C6	32:5:1847:C:C4	3.09	0.41
32:5:1866:U:O4	32:5:4405:G:O4'	2.27	0.41
32:5:1943:A:C8	32:5:1944:A:H1'	2.54	0.41
32:5:2056:G:N2	32:5:2058:G:O6	2.54	0.41
32:5:2361:G:C2'	32:5:2362:U:OP2	2.69	0.41
32:5:2757:A:O2'	32:5:2758:G:C5'	2.68	0.41
32:5:2798:A:O2'	32:5:2799:G:H5'	2.21	0.41
32:5:2851:G:N2	32:5:2856:C:C5	2.86	0.41
32:5:2874:U:C6	32:5:2874:U:C5'	3.00	0.41
32:5:3625:G:N2	32:5:3627:G:H5'	2.35	0.41
32:5:3656:A:C4	32:5:3657:U:C6	3.09	0.41
32:5:3662:A:C6	32:5:3680:U:C4	3.05	0.41
32:5:3720:G:C6	32:5:3721:U:C4	3.09	0.41
32:5:4142:C:H2'	32:5:4143:G:H1'	2.02	0.41
32:5:4156:G:OP2	32:5:4157:A:O2'	2.30	0.41
32:5:4376:A:O5'	32:5:4376:A:H8	2.04	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4382:G:C5	32:5:4383:U:C5	3.08	0.41
32:5:4400:G:C2	32:5:4401:G:C8	3.09	0.41
32:5:4408:G:C2	32:5:4409:C:C2	3.08	0.41
34:8:31:G:C5	34:8:32:C:C5	3.09	0.41
34:8:120:G:N1	34:8:121:G:N7	2.69	0.41
34:8:133:G:C6	34:8:134:G:C5	3.05	0.41
40:P:30:ARG:NE	40:P:34:GLN:OE1	2.53	0.41
40:P:95:LEU:HD13	40:P:148:MET:HE1	2.02	0.41
42:j:8:PHE:HA	42:j:11:ARG:HD2	2.02	0.41
46:K:119:ARG:O	46:K:121:LEU:N	2.54	0.41
48:z:71:LYS:O	48:z:72:ARG:C	2.63	0.41
48:z:82:GLU:OE1	48:z:82:GLU:HA	2.21	0.41
48:z:101:GLN:NE2	48:z:179:PHE:O	2.48	0.41
49:2:128:VAL:O	50:3:76:A:C4'	2.68	0.41
51:4:192:A:N6	51:4:207:C:O2	2.53	0.41
52:9:19:TYR:CE2	52:9:68:TYR:HA	2.55	0.41
53:6:217:PHE:HB3	53:6:221:GLN:HB2	2.02	0.41
54:S2:77:A:O3'	59:SG:173:ALA:HB3	2.19	0.41
54:S2:84:A:C6	54:S2:85:A:N7	2.89	0.41
54:S2:86:C:C2	54:S2:87:U:C6	3.09	0.41
54:S2:102:A:H5''	54:S2:104:A:H1'	2.03	0.41
54:S2:347:G:C6	54:S2:348:A:C5	3.09	0.41
54:S2:351:G:H2'	54:S2:351:G:N3	2.36	0.41
54:S2:357:C:C4	54:S2:358:C:C5	3.08	0.41
54:S2:404:G:C5	54:S2:405:G:N7	2.88	0.41
54:S2:548:C:C5	54:S2:549:C:O4'	2.73	0.41
54:S2:561:A:H2'	54:S2:562:U:O4'	2.21	0.41
54:S2:679:A:N3	54:S2:679:A:H2'	2.36	0.41
54:S2:832:G:H5''	54:S2:833:C:OP2	2.21	0.41
54:S2:924:G:C6	54:S2:925:G:C5	3.09	0.41
54:S2:1063:C:C5	54:S2:1064:C:C6	3.09	0.41
54:S2:1093:A:N3	54:S2:1093:A:H2'	2.36	0.41
54:S2:1109:C:O2	54:S2:1110:G:C8	2.74	0.41
54:S2:1136:U:O2'	54:S2:1137:U:H5'	2.20	0.41
54:S2:1224:G:OP1	74:SF:80:GLY:HA3	2.20	0.41
54:S2:1225:U:C6	54:S2:1225:U:H3'	2.55	0.41
54:S2:1368:U:O2	54:S2:1370:A:O5'	2.39	0.41
54:S2:1512:C:N3	54:S2:1513:C:N4	2.68	0.41
54:S2:1591:C:C2	54:S2:1592:C:C6	3.09	0.41
54:S2:1709:G:N1	54:S2:1710:C:C5	2.89	0.41
54:S2:1720:U:N3	54:S2:1722:G:O4'	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1738:C:O2	54:S2:1738:C:H2'	2.20	0.41
54:S2:1806:A:C2	54:S2:1807:C:C6	3.09	0.41
54:S2:1865:C:H3'	54:S2:1866:A:H5'	2.03	0.41
56:SB:100:PHE:CE1	56:SB:102:GLY:CA	3.04	0.41
57:SC:170:TRP:HH2	67:SW:97:ARG:CD	2.32	0.41
57:SC:183:LYS:HA	57:SC:195:LEU:O	2.21	0.41
62:SJ:29:LEU:O	62:SJ:30:LYS:C	2.62	0.41
73:SD:66:ILE:O	73:SD:70:THR:HG23	2.21	0.41
76:SM:19:GLN:HG2	76:SM:88:TRP:CG	2.56	0.41
78:SQ:71:ARG:HG3	78:SQ:73:LYS:HE2	2.03	0.41
2:D:265:ARG:HH11	2:D:265:ARG:HG3	1.86	0.41
2:D:278:ASP:O	2:D:279:ARG:C	2.63	0.41
3:G:108:GLN:NE2	3:G:108:GLN:N	2.69	0.41
5:J:107:PHE:CZ	5:J:130:PHE:HB2	2.56	0.41
5:J:109:ILE:HD13	5:J:115:LEU:HD21	2.03	0.41
6:L:186:ARG:NH1	32:5:1394:G:H5''	2.35	0.41
11:R:173:ARG:CZ	54:S2:910:G:OP2	2.69	0.41
13:T:80:VAL:O	13:T:81:LYS:C	2.63	0.41
18:Z:136:PHE:N	18:Z:136:PHE:HD1	2.19	0.41
21:c:101:ASP:HB3	64:SN:43:LYS:HG3	2.02	0.41
22:d:68:LEU:HA	22:d:108:TYR:CE2	2.56	0.41
24:f:30:ILE:HB	24:f:33:VAL:HG11	2.01	0.41
24:f:50:VAL:HG22	24:f:69:VAL:HG12	2.03	0.41
32:5:12:A:C6	32:5:14:C:N4	2.89	0.41
32:5:21:G:C5	32:5:22:G:C8	3.09	0.41
32:5:167:C:N3	32:5:269:G:C2	2.89	0.41
32:5:169:G:N1	32:5:170:C:C4	2.89	0.41
32:5:184:U:O2	32:5:254:G:C2	2.73	0.41
32:5:267:G:C6	32:5:268:G:C5	3.08	0.41
32:5:318:A:H2'	32:5:319:A:C8	2.56	0.41
32:5:353:A:C2	32:5:379:G:C8	3.09	0.41
32:5:677:G:C6	32:5:678:C:C4	3.08	0.41
32:5:917:A:C2	32:5:918:G:N1	2.89	0.41
32:5:952:G:C4	32:5:953:C:C5	3.09	0.41
32:5:1172:C:N3	32:5:1173:G:C8	2.89	0.41
32:5:1220:G:C2	32:5:1221:G:C8	3.09	0.41
32:5:1316:G:H2'	32:5:1317:U:O4'	2.21	0.41
32:5:1571:G:C4	32:5:1572:U:C6	3.08	0.41
32:5:1594:C:C4	32:5:1595:G:C8	3.09	0.41
32:5:1885:G:C5	32:5:1895:G:N2	2.88	0.41
32:5:1917:A:C2'	32:5:1918:U:H5''	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2274:C:H5'	32:5:2275:G:OP2	2.20	0.41
32:5:2320:G:N3	32:5:2321:G:C6	2.89	0.41
32:5:2364:G:C2	32:5:2365:C:C4	3.08	0.41
32:5:2368:A:O2'	32:5:2369:U:P	2.79	0.41
32:5:2419:C:H2'	32:5:2420:A:O5'	2.20	0.41
32:5:2438:A:N6	32:5:2441:C:C2	2.89	0.41
32:5:2445:C:O2	32:5:2446:C:C6	2.74	0.41
32:5:2663:G:N2	32:5:2672:C:C2	2.89	0.41
32:5:2666:U:O4	32:5:2668:G:P	2.79	0.41
32:5:2682:G:C2	32:5:2683:C:C2	3.09	0.41
32:5:2898:G:C5	32:5:2899:C:C5	3.08	0.41
32:5:3710:G:N2	32:5:3711:A:C4	2.89	0.41
32:5:3711:A:H3'	32:5:3712:A:H5''	2.03	0.41
32:5:3734:U:C2'	32:5:3735:G:O5'	2.68	0.41
32:5:4077:A:C5	32:5:4078:C:N1	2.88	0.41
32:5:4085:A:C3'	32:5:4086:G:H5'	2.35	0.41
32:5:4152:G:C2	32:5:4153:C:C4	3.08	0.41
32:5:4166:G:N3	32:5:4166:G:H2'	2.35	0.41
32:5:4199:C:C2	32:5:4199:C:H3'	2.55	0.41
32:5:4489:G:O5'	32:5:4490:C:OP2	2.38	0.41
32:5:4868:G:C3'	32:5:4869:U:H5''	2.50	0.41
32:5:4975:G:N7	32:5:4977:A:N6	2.69	0.41
32:5:4979:A:O2'	32:5:4980:C:O5'	2.36	0.41
32:5:4998:G:C6	32:5:4999:G:C8	3.04	0.41
32:5:5028:G:N1	32:5:5029:C:C4	2.89	0.41
33:7:103:A:C5	33:7:104:C:C6	3.09	0.41
34:8:76:C:H2'	34:8:77:A:O4'	2.20	0.41
36:C:91:ALA:O	36:C:92:PHE:C	2.63	0.41
38:F:120:PHE:CD1	38:F:120:PHE:O	2.74	0.41
50:3:20:U:H3'	50:3:21:A:H5'	2.03	0.41
51:4:53:U:O2	51:4:53:U:H2'	2.20	0.41
51:4:172:A:O2'	51:4:173:A:O5'	2.34	0.41
51:4:188:G:H1	51:4:211:U:H3	1.68	0.41
54:S2:70:G:C4	54:S2:71:G:N7	2.88	0.41
54:S2:70:G:C6	54:S2:80:G:N1	2.89	0.41
54:S2:195:C:C2	54:S2:205:G:N2	2.89	0.41
54:S2:461:U:O2	54:S2:461:U:H2'	2.19	0.41
54:S2:469:A:H2	54:S2:470:G:C8	2.25	0.41
54:S2:569:A:C2	54:S2:570:C:N1	2.89	0.41
54:S2:600:G:N3	54:S2:601:G:N7	2.68	0.41
54:S2:604:A:C2	54:S2:605:A:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:623:G:C2	54:S2:624:C:C4	3.04	0.41
54:S2:878:G:N2	54:S2:879:C:H1'	2.36	0.41
54:S2:1107:G:H2'	54:S2:1108:G:O4'	2.20	0.41
54:S2:1202:U:C2	54:S2:1203:G:H8	2.37	0.41
54:S2:1275:G:N1	54:S2:1506:A:H2'	2.36	0.41
54:S2:1314:U:C2	54:S2:1315:U:C1'	3.04	0.41
54:S2:1411:G:N7	54:S2:1412:C:C1'	2.83	0.41
54:S2:1415:C:C2'	54:S2:1416:C:H5'	2.51	0.41
54:S2:1488:C:O2	54:S2:1490:G:N7	2.54	0.41
54:S2:1684:C:O2	54:S2:1684:C:H2'	2.21	0.41
54:S2:1684:C:C2	54:S2:1685:U:C6	3.08	0.41
54:S2:1722:G:C2	54:S2:1723:G:N9	2.89	0.41
54:S2:1746:U:H4'	59:SG:65:GLN:NE2	2.24	0.41
54:S2:1777:G:C4	54:S2:1778:C:C5	3.08	0.41
54:S2:1839:U:C2'	54:S2:1840:U:H6	2.34	0.41
55:SA:173:LEU:O	55:SA:176:TRP:HB3	2.21	0.41
58:SE:47:PHE:CZ	58:SE:90:ILE:HD12	2.56	0.41
58:SE:48:LEU:HD22	58:SE:61:VAL:HG13	2.02	0.41
58:SE:67:GLN:HG2	58:SE:69:PHE:CE2	2.56	0.41
58:SE:100:ARG:HG2	58:SE:102:ILE:HG13	2.03	0.41
58:SE:208:VAL:HB	58:SE:225:ILE:HD12	2.02	0.41
59:SG:197:GLN:O	59:SG:201:LYS:HG2	2.21	0.41
63:SL:18:GLN:O	63:SL:19:ASN:OD1	2.39	0.41
63:SL:40:ILE:HB	63:SL:62:PHE:CZ	2.56	0.41
66:SV:46:PHE:CD1	66:SV:46:PHE:C	2.97	0.41
68:SX:71:ARG:HA	68:SX:81:ILE:O	2.21	0.41
68:SX:76:LYS:HG3	68:SX:77:ASN:OD1	2.20	0.41
82:SU:25:THR:HG22	82:SU:86:LYS:HD2	2.02	0.41
83:SZ:50:PHE:CE1	83:SZ:79:ILE:HD13	2.56	0.41
83:SZ:51:ASP:CG	83:SZ:54:THR:HG23	2.45	0.41
83:SZ:51:ASP:O	83:SZ:54:THR:OG1	2.27	0.41
86:Sf:118:ARG:N	86:Sf:131:PHE:HZ	2.19	0.41
87:Sg:302:TYR:OH	87:Sg:308:ARG:HD2	2.21	0.41
1:A:54:ARG:NH1	32:5:3680:U:H5'	2.36	0.41
2:D:12:TYR:CE2	2:D:16:TYR:HB2	2.56	0.41
2:D:191:ASN:CB	2:D:194:VAL:HG23	2.51	0.41
3:G:60:TYR:CD1	3:G:61:ILE:HG13	2.56	0.41
3:G:61:ILE:HA	3:G:64:GLN:HG2	2.03	0.41
4:H:1:MET:HE3	12:S:144:GLN:HE21	1.85	0.41
5:J:104:ASN:OD1	5:J:133:VAL:HA	2.20	0.41
6:L:28:GLN:CG	8:N:202:ARG:HH11	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:76:PHE:HD2	6:L:80:GLU:OE1	2.03	0.41
7:M:17:PHE:CD1	32:5:1921:C:C6	3.08	0.41
7:M:107:PHE:CD1	37:E:266:TYR:HD2	2.39	0.41
7:M:110:TYR:OH	7:M:114:LYS:HE2	2.20	0.41
8:N:114:ARG:HD3	8:N:157:LYS:HA	2.03	0.41
8:N:139:HIS:O	8:N:142:ILE:N	2.45	0.41
8:N:192:TRP:C	8:N:192:TRP:CE3	2.99	0.41
10:Q:166:TYR:N	10:Q:166:TYR:HD1	2.19	0.41
10:Q:186:TYR:CD2	32:5:4307:A:H4'	2.56	0.41
12:S:8:ARG:HB2	12:S:10:TYR:CE2	2.56	0.41
12:S:100:LEU:HD23	12:S:101:THR:HG22	2.03	0.41
12:S:161:ARG:HG2	32:5:1921:C:C6	2.55	0.41
13:T:30:TYR:N	13:T:30:TYR:CD1	2.88	0.41
13:T:57:TYR:CD2	13:T:57:TYR:N	2.88	0.41
17:Y:49:ILE:HG21	17:Y:80:ILE:HG21	2.02	0.41
18:Z:29:ILE:O	18:Z:31:ASP:N	2.46	0.41
23:e:57:ASN:OD1	32:5:1899:G:O2'	2.39	0.41
24:f:27:LEU:HD22	24:f:78:HIS:CD2	2.56	0.41
32:5:45:U:C2	32:5:46:U:C4	3.09	0.41
32:5:80:C:C2	32:5:104:G:C2	3.08	0.41
32:5:153:G:H2'	32:5:154:G:H8	1.85	0.41
32:5:167:C:N1	32:5:269:G:N2	2.69	0.41
32:5:218:A:N6	36:C:185:ALA:HB2	2.36	0.41
32:5:235:A:C5	32:5:238:C:C4	2.99	0.41
32:5:341:G:N1	32:5:342:G:N7	2.67	0.41
32:5:342:G:N1	32:5:343:C:C4	2.89	0.41
32:5:358:C:N3	32:5:359:A:N7	2.68	0.41
32:5:408:A:C6	32:5:411:G:C5	3.08	0.41
32:5:482:G:H2'	32:5:483:G:C8	2.56	0.41
32:5:483:G:C4	32:5:484:U:C5	3.09	0.41
32:5:488:G:C2	32:5:489:C:C2	3.09	0.41
32:5:642:G:C2	32:5:643:C:C2	3.08	0.41
32:5:688:U:O4	32:5:689:U:C5	2.72	0.41
32:5:700:G:C5	32:5:701:G:C8	3.08	0.41
32:5:949:G:N1	32:5:950:G:C5	2.89	0.41
32:5:976:G:H2'	32:5:977:C:O4'	2.21	0.41
32:5:981:C:C5	37:E:69:TYR:CZ	3.09	0.41
32:5:986:C:C2	32:5:987:C:C6	3.09	0.41
32:5:1072:C:O2	32:5:1072:C:H2'	2.21	0.41
32:5:1092:G:N1	32:5:1093:C:C4	2.89	0.41
32:5:1191:C:C2	32:5:1192:C:C6	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1213:G:N1	32:5:1215:C:O2	2.52	0.41
32:5:1215:C:N3	32:5:1216:C:H6	2.18	0.41
32:5:1217:G:H2'	32:5:1218:G:C8	2.56	0.41
32:5:1259:G:C2	32:5:1260:G:C4	3.08	0.41
32:5:1261:G:N1	32:5:1262:G:C8	2.88	0.41
32:5:1272:C:H2'	32:5:1272:C:OP2	2.20	0.41
32:5:1273:G:N7	37:E:68:LYS:C	2.78	0.41
32:5:1274:A:H5''	32:5:2123:C:C6	2.55	0.41
32:5:1302:U:O4	32:5:1303:A:N7	2.51	0.41
32:5:1333:A:C4	32:5:1334:A:C8	3.09	0.41
32:5:1349:G:C4	32:5:1350:C:C6	3.09	0.41
32:5:1355:G:N1	32:5:1385:G:N3	2.69	0.41
32:5:1404:G:N1	32:5:1405:C:C2	2.89	0.41
32:5:1447:C:H2'	32:5:1448:G:C8	2.55	0.41
32:5:1452:A:N1	32:5:1453:G:H1'	2.36	0.41
32:5:1488:G:H2'	32:5:1489:G:O4'	2.21	0.41
32:5:1498:G:N2	32:5:1499:C:N1	2.69	0.41
32:5:1498:G:N3	32:5:1499:C:C6	2.89	0.41
32:5:1570:G:C4	32:5:1571:G:C8	3.08	0.41
32:5:1614:C:C6	32:5:1614:C:C3'	3.03	0.41
32:5:1633:G:N2	32:5:1642:A:C8	2.89	0.41
32:5:1697:G:H4'	32:5:1697:G:OP2	2.21	0.41
32:5:1751:A:H2'	32:5:1752:G:H5'	2.03	0.41
32:5:1769:G:C2	32:5:1770:A:N7	2.89	0.41
32:5:1769:G:N2	32:5:1770:A:C4	2.89	0.41
32:5:1808:C:O2	32:5:1808:C:H2'	2.20	0.41
32:5:1830:G:N3	32:5:1830:G:H2'	2.36	0.41
32:5:1854:G:N7	32:5:4394:A:N6	2.69	0.41
32:5:1883:G:C2	32:5:1884:C:C2	3.09	0.41
32:5:1910:G:C6	32:5:1911:C:N4	2.88	0.41
32:5:1966:C:N3	32:5:1967:A:C8	2.89	0.41
32:5:1971:C:C4	32:5:1972:G:N7	2.89	0.41
32:5:1988:G:H2'	32:5:1988:G:N3	2.36	0.41
32:5:1995:G:C6	32:5:1996:C:N4	2.89	0.41
32:5:2058:G:C4	32:5:2059:C:C5	3.09	0.41
32:5:2108:G:H2'	32:5:2109:G:C4'	2.51	0.41
32:5:2243:C:O2	32:5:2244:C:C6	2.74	0.41
32:5:2266:C:O2'	32:5:2267:U:OP2	2.35	0.41
32:5:2276:A:C2	32:5:2277:C:H1'	2.56	0.41
32:5:2327:G:N2	32:5:2328:G:C5	2.85	0.41
32:5:2353:U:N3	32:5:2354:G:N7	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2453:A:N9	32:5:2507:A:C5	2.89	0.41
32:5:2463:G:C2	32:5:2464:C:C2	3.09	0.41
32:5:2481:G:C4	32:5:2482:C:C5	3.09	0.41
32:5:2552:G:OP2	32:5:2553:A:H2'	2.21	0.41
32:5:2553:A:C6	32:5:2763:U:C5	3.08	0.41
32:5:2560:C:O2	32:5:2560:C:H2'	2.21	0.41
32:5:2606:G:C2	32:5:2607:C:N3	2.89	0.41
32:5:2628:U:C4	32:5:2629:C:C5	3.09	0.41
32:5:2702:C:C2	32:5:2715:G:N1	2.89	0.41
32:5:2786:C:H5''	32:5:2787:A:P	2.61	0.41
32:5:3605:C:C4	32:5:3606:U:C5	3.08	0.41
32:5:3628:G:C6	32:5:3629:A:N7	2.88	0.41
32:5:3694:U:O4	32:5:3695:U:O4	2.38	0.41
32:5:3709:U:O2	32:5:3709:U:C2'	2.69	0.41
32:5:3717:A:O2'	32:5:3718:A:O4'	2.38	0.41
32:5:3719:A:C8	32:5:3720:G:C8	3.08	0.41
32:5:3720:G:C6	32:5:3721:U:C5	3.09	0.41
32:5:3732:A:C6	32:5:3733:A:N7	2.89	0.41
32:5:3742:G:N1	32:5:3743:G:N7	2.69	0.41
32:5:3767:C:O2'	54:S2:1828:C:H4'	2.21	0.41
32:5:3813:A:H2	32:5:4538:G:N3	2.18	0.41
32:5:3832:U:O2	32:5:3833:C:C6	2.74	0.41
32:5:3862:A:H2'	32:5:3862:A:N3	2.36	0.41
32:5:3874:G:N7	32:5:3875:G:C8	2.89	0.41
32:5:3909:C:C2	32:5:3910:C:H6	2.26	0.41
32:5:4098:A:C2	32:5:4099:G:N9	2.88	0.41
32:5:4175:G:C2	32:5:4176:C:C2	3.08	0.41
32:5:4240:G:C2	32:5:4241:C:H1'	2.56	0.41
32:5:4268:A:C8	32:5:4269:G:C8	3.09	0.41
32:5:4277:G:N2	32:5:4278:C:H1'	2.35	0.41
32:5:4324:A:H2'	32:5:4325:A:C8	2.56	0.41
32:5:4343:U:N3	32:5:4344:U:C6	2.65	0.41
32:5:4395:U:O2	32:5:4395:U:C2'	2.68	0.41
32:5:4479:A:N6	32:5:4480:A:N3	2.69	0.41
32:5:4479:A:C6	32:5:4480:A:N9	2.89	0.41
32:5:4480:A:C5	32:5:4481:U:C6	3.09	0.41
32:5:4531:U:H5	49:2:127:MET:HB2	1.84	0.41
32:5:4551:U:H2'	32:5:4552:U:C6	2.55	0.41
32:5:4630:G:H5'	41:W:19:ARG:NH2	2.36	0.41
32:5:4664:A:OP1	35:B:376:HIS:HE1	2.03	0.41
32:5:4682:U:O2	32:5:4682:U:C2'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4886:C:O2	32:5:4886:C:C2'	2.61	0.41
32:5:4898:G:N2	32:5:4923:C:C2	2.89	0.41
32:5:5000:G:N3	32:5:5001:U:C6	2.89	0.41
32:5:5004:C:H2'	32:5:5005:G:O4'	2.21	0.41
32:5:5019:A:C2	32:5:5020:G:C8	3.09	0.41
33:7:21:G:H5''	33:7:21:G:C8	2.53	0.41
33:7:42:A:C5	33:7:43:U:H5	2.29	0.41
33:7:43:U:O2	33:7:43:U:C2'	2.69	0.41
33:7:94:C:H2'	33:7:95:C:H6	1.85	0.41
34:8:3:A:C2	34:8:4:C:C6	3.09	0.41
34:8:31:G:C4	34:8:32:C:C6	3.09	0.41
34:8:43:A:N3	34:8:43:A:H2'	2.35	0.41
34:8:54:C:C2	34:8:55:U:C6	3.09	0.41
34:8:63:U:H3'	34:8:63:U:C2	2.56	0.41
34:8:66:A:C2	34:8:67:U:C4	3.08	0.41
34:8:151:G:OP1	34:8:151:G:H8	2.03	0.41
35:B:29:VAL:HB	35:B:32:PHE:CE1	2.55	0.41
35:B:59:GLU:HG2	35:B:366:LYS:HE2	2.02	0.41
35:B:106:PHE:CD2	35:B:130:PHE:CZ	3.08	0.41
35:B:136:LYS:HB3	35:B:146:LEU:HD11	2.03	0.41
36:C:113:ARG:C	36:C:114:ARG:HG2	2.45	0.41
38:F:69:THR:O	38:F:73:MET:HG3	2.21	0.41
39:I:36:LEU:N	39:I:36:LEU:HD12	2.36	0.41
39:I:46:PHE:CE1	39:I:140:THR:HA	2.56	0.41
39:I:171:TRP:CZ3	39:I:178:ALA:O	2.73	0.41
46:K:104:ILE:HD11	46:K:139:VAL:HG12	2.02	0.41
46:K:143:VAL:O	46:K:145:GLY:N	2.53	0.41
47:q:14:PHE:O	47:q:62:ARG:NH1	2.54	0.41
47:q:15:LEU:HA	47:q:18:ILE:HG22	2.03	0.41
47:q:51:ALA:HB1	47:q:89:VAL:HG12	2.02	0.41
47:q:109:ALA:O	47:q:184:SER:HB3	2.21	0.41
48:z:145:PHE:HA	48:z:148:LEU:HD12	2.03	0.41
49:2:79:LEU:O	49:2:83:LEU:CG	2.64	0.41
51:4:157:A:H2'	51:4:158:C:O4'	2.20	0.41
51:4:179:G:C2	51:4:219:C:C2	3.09	0.41
51:4:183:A:H8	51:4:186:C:OP1	2.04	0.41
54:S2:41:G:H1'	54:S2:485:A:C6	2.56	0.41
54:S2:54:A:C2	54:S2:451:G:C4	3.09	0.41
54:S2:103:A:C6	54:S2:355:G:C6	3.09	0.41
54:S2:125:C:OP2	59:SG:198:ARG:HD3	2.21	0.41
54:S2:185:G:C2	54:S2:186:C:C2	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:223:C:C2	54:S2:224:A:N7	2.89	0.41
54:S2:358:C:C2	54:S2:405:G:C2	3.09	0.41
54:S2:376:A:N6	54:S2:377:G:C5	2.89	0.41
54:S2:410:G:C2	54:S2:411:G:N9	2.89	0.41
54:S2:452:G:O2'	54:S2:453:C:C5'	2.69	0.41
54:S2:494:C:N4	54:S2:510:G:C1'	2.84	0.41
54:S2:498:C:C2	54:S2:505:G:N2	2.89	0.41
54:S2:609:U:C2	54:S2:610:G:H8	2.35	0.41
54:S2:673:G:C4	54:S2:674:C:C6	3.09	0.41
54:S2:751:G:O6	54:S2:792:C:C4	2.74	0.41
54:S2:815:U:C2	54:S2:816:A:C8	3.09	0.41
54:S2:816:A:C6	54:S2:817:G:C4	3.09	0.41
54:S2:862:A:C8	67:SW:107:SER:CA	3.04	0.41
54:S2:868:G:H4'	54:S2:869:A:OP2	2.20	0.41
54:S2:875:A:C2'	54:S2:876:C:O5'	2.69	0.41
54:S2:875:A:O2'	54:S2:876:C:P	2.78	0.41
54:S2:885:U:O2	54:S2:886:A:C8	2.74	0.41
54:S2:924:G:C2	54:S2:1019:C:C2	3.09	0.41
54:S2:926:A:N3	54:S2:927:C:C6	2.89	0.41
54:S2:956:G:N2	54:S2:957:A:C6	2.88	0.41
54:S2:1041:G:N3	54:S2:1041:G:H2'	2.36	0.41
54:S2:1050:A:C5	54:S2:1069:U:C4	3.08	0.41
54:S2:1078:C:H2'	54:S2:1078:C:O2	2.21	0.41
54:S2:1099:G:C5	54:S2:1100:A:C8	3.09	0.41
54:S2:1105:G:C2	54:S2:1106:C:C2	3.09	0.41
54:S2:1130:G:N1	54:S2:1131:G:C8	2.87	0.41
54:S2:1181:A:C4	54:S2:1182:A:C6	3.09	0.41
54:S2:1210:G:C6	54:S2:1211:G:C5	3.09	0.41
54:S2:1221:G:O2'	54:S2:1222:G:O5'	2.38	0.41
54:S2:1250:A:N1	54:S2:1340:U:H5'	2.36	0.41
54:S2:1258:A:HO2'	54:S2:1259:A:P	2.44	0.41
54:S2:1274:G:N3	54:S2:1274:G:H2'	2.35	0.41
54:S2:1291:A:C5'	86:Sf:146:LEU:CD1	2.87	0.41
54:S2:1292:C:O2	54:S2:1292:C:C2'	2.66	0.41
54:S2:1292:C:C2'	86:Sf:150:PHE:HD1	2.34	0.41
54:S2:1310:U:O5'	86:Sf:143:LYS:HG2	2.21	0.41
54:S2:1395:C:C6	54:S2:1395:C:C4'	3.04	0.41
54:S2:1408:U:C3'	54:S2:1409:A:H8	2.28	0.41
54:S2:1500:G:H2'	54:S2:1501:C:C6	2.56	0.41
54:S2:1639:G:N3	54:S2:1639:G:H2'	2.35	0.41
54:S2:1669:G:C6	54:S2:1670:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1739:C:C4	54:S2:1740:C:C5	3.08	0.41
54:S2:1774:C:C2	54:S2:1775:U:C6	3.09	0.41
54:S2:1824:A:H2	54:S2:1825:A:N7	2.18	0.41
54:S2:1826:G:C2	54:S2:1827:U:C4	3.09	0.41
54:S2:1838:U:O5'	54:S2:1838:U:H6	2.04	0.41
55:SA:28:THR:HA	55:SA:45:GLY:O	2.21	0.41
55:SA:176:TRP:CZ3	55:SA:199:PRO:HB3	2.56	0.41
55:SA:198:MET:HG3	55:SA:199:PRO:HD2	2.03	0.41
56:SB:52:THR:HG22	56:SB:57:ILE:HA	1.99	0.41
56:SB:133:TYR:CD1	56:SB:221:PRO:HD3	2.55	0.41
58:SE:11:ARG:HD2	58:SE:20:LEU:HB3	2.02	0.41
58:SE:102:ILE:CG2	58:SE:182:MET:HE1	2.51	0.41
62:SJ:41:ARG:O	62:SJ:44:TRP:N	2.54	0.41
63:SL:42:LEU:N	63:SL:42:LEU:HD22	2.35	0.41
63:SL:44:PHE:N	63:SL:44:PHE:CD1	2.89	0.41
67:SW:28:ARG:N	67:SW:29:PRO:CD	2.83	0.41
67:SW:41:MET:CG	67:SW:129:PHE:CD2	3.04	0.41
67:SW:41:MET:HG3	67:SW:129:PHE:CD2	2.55	0.41
68:SX:67:ARG:NH2	68:SX:114:ASP:OD2	2.54	0.41
69:SY:60:PHE:HD1	69:SY:71:GLY:HA3	1.85	0.41
70:Sa:16:GLY:O	70:Sa:17:HIS:C	2.63	0.41
73:SD:175:VAL:CG1	73:SD:182:LEU:HB2	2.51	0.41
79:SR:93:GLN:HG2	79:SR:94:GLU:N	2.36	0.41
80:SS:31:THR:O	80:SS:36:VAL:HG13	2.21	0.41
81:ST:63:HIS:CE1	81:ST:78:ILE:HG12	2.56	0.41
83:SZ:63:PRO:O	83:SZ:111:ARG:NH1	2.54	0.41
87:Sg:296:GLN:O	87:Sg:312:VAL:HG23	2.21	0.41
88:S1:32:ARG:HB3	88:S1:37:ASN:OD1	2.21	0.41
2:D:284:LYS:CD	39:I:209:TRP:HZ3	2.34	0.41
7:M:109:ARG:NH1	37:E:282:LEU:HD12	2.36	0.41
10:Q:22:ASP:CB	36:C:33:ARG:HH21	2.34	0.41
10:Q:42:THR:O	10:Q:45:GLN:HB2	2.21	0.41
12:S:13:VAL:HG23	12:S:62:VAL:HB	2.02	0.41
12:S:28:TYR:HD1	12:S:28:TYR:N	2.19	0.41
17:Y:14:ASN:OD1	17:Y:14:ASN:N	2.53	0.41
21:c:62:TYR:CD1	21:c:62:TYR:C	2.99	0.41
22:d:24:GLU:HG2	22:d:120:VAL:HB	2.03	0.41
23:e:85:LEU:HD11	23:e:115:ALA:HB2	2.03	0.41
26:h:95:LEU:HD22	26:h:99:GLU:O	2.21	0.41
30:m:111:ARG:HG2	32:5:4698:C:O2	2.21	0.41
32:5:91:G:C6	32:5:93:G:N1	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:126:C:O2	32:5:126:C:C2'	2.69	0.41
32:5:167:C:C2	32:5:168:C:C5	3.09	0.41
32:5:279:A:H5'	32:5:329:A:N3	2.36	0.41
32:5:677:G:C2	32:5:678:C:C4	3.09	0.41
32:5:689:U:O2	32:5:689:U:H2'	2.21	0.41
32:5:693:C:H2'	32:5:694:C:H6	1.85	0.41
32:5:700:G:C4	32:5:701:G:C8	3.09	0.41
32:5:716:C:H5''	32:5:716:C:H6	1.85	0.41
32:5:732:A:N1	32:5:733:A:N9	2.69	0.41
32:5:920:C:C2	32:5:921:C:C6	3.09	0.41
32:5:965:G:O2'	37:E:84:VAL:HG11	2.21	0.41
32:5:1270:A:C5	32:5:1271:G:C1'	3.03	0.41
32:5:1275:G:C2	32:5:1276:C:C2	3.09	0.41
32:5:1286:C:C4	32:5:1287:G:N7	2.89	0.41
32:5:1358:G:O2'	32:5:1359:G:C4'	2.67	0.41
32:5:1362:G:C2	32:5:1363:C:N1	2.89	0.41
32:5:1364:U:C6	32:5:1364:U:H3'	2.55	0.41
32:5:1384:C:O2	32:5:1505:C:H4'	2.20	0.41
32:5:1399:G:C2	32:5:1400:G:C8	3.09	0.41
32:5:1471:U:C4	32:5:1472:C:C5	3.09	0.41
32:5:1666:C:N3	32:5:2284:G:C2	2.89	0.41
32:5:1724:G:C2	38:F:105:PRO:HB3	2.56	0.41
32:5:1727:U:C2	32:5:1728:U:C6	3.09	0.41
32:5:1806:G:C5	32:5:1807:C:C5	3.09	0.41
32:5:1843:A:N3	32:5:1844:G:C8	2.87	0.41
32:5:1878:G:C2	32:5:1879:C:N3	2.89	0.41
32:5:1896:A:H3'	32:5:1896:A:C8	2.56	0.41
32:5:1912:G:C6	32:5:1913:C:C4	3.08	0.41
32:5:2005:G:C2	32:5:2006:U:C6	3.09	0.41
32:5:2058:G:N2	32:5:2059:C:H1'	2.35	0.41
32:5:2418:A:C2	32:5:2419:C:C6	3.09	0.41
32:5:2422:C:O2	32:5:2422:C:C2'	2.64	0.41
32:5:2455:G:O2'	32:5:2456:G:H5'	2.20	0.41
32:5:2470:C:H3'	32:5:2470:C:C6	2.56	0.41
32:5:2481:G:C2	32:5:2482:C:N1	2.89	0.41
32:5:2484:A:C2	32:5:2485:U:C2	3.09	0.41
32:5:2555:G:C4	32:5:2573:A:C2	3.09	0.41
32:5:2732:G:C5	32:5:2733:C:C5	3.09	0.41
32:5:2842:G:N3	32:5:2843:U:C6	2.89	0.41
32:5:2889:G:H21	32:5:5034:A:H8	1.69	0.41
32:5:2895:A:N1	32:5:2896:G:C8	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3589:G:H2'	32:5:3590:G:O4'	2.21	0.41
32:5:3591:C:C4	32:5:3592:G:N7	2.87	0.41
32:5:3659:G:C2	32:5:3660:C:C2	3.08	0.41
32:5:3829:G:N1	32:5:3830:A:N7	2.69	0.41
32:5:3894:A:C4'	32:5:4979:A:N1	2.84	0.41
32:5:3944:G:C2	32:5:3945:A:C5	3.09	0.41
32:5:4308:C:C2	32:5:4309:G:C8	3.09	0.41
32:5:4389:C:O2'	32:5:4390:A:H5'	2.21	0.41
32:5:4403:U:H2'	32:5:4404:U:O4'	2.20	0.41
32:5:4504:C:N3	32:5:4505:C:C4	2.89	0.41
32:5:4538:G:C4	32:5:4539:U:C6	3.09	0.41
32:5:4540:C:C2	32:5:4541:G:C8	3.09	0.41
32:5:4629:U:N3	32:5:4630:G:C8	2.89	0.41
32:5:4717:A:O4'	35:B:18:PRO:HG2	2.20	0.41
32:5:4934:A:C2	32:5:4935:C:N1	2.88	0.41
32:5:4979:A:O5'	32:5:4979:A:H8	2.04	0.41
33:7:9:C:C5	33:7:10:C:C6	3.08	0.41
34:8:64:U:N3	34:8:65:A:C5	2.89	0.41
34:8:118:C:O2	34:8:118:C:C2'	2.65	0.41
34:8:133:G:C5	34:8:134:G:N7	2.89	0.41
38:F:124:PHE:HE2	38:F:152:VAL:HG22	1.86	0.41
41:W:21:TYR:N	41:W:29:PHE:O	2.54	0.41
46:K:123:ARG:HB2	46:K:129:ILE:HD11	1.98	0.41
47:q:60:MET:C	47:q:62:ARG:H	2.29	0.41
47:q:108:PRO:C	47:q:184:SER:CB	2.92	0.41
48:z:405:ARG:NH1	51:4:185:C:P	2.94	0.41
50:3:20:U:C3'	50:3:21:A:H5'	2.51	0.41
51:4:17:C:O2	51:4:17:C:H2'	2.21	0.41
54:S2:50:A:C4	89:S4:81:MET:HE2	2.56	0.41
54:S2:104:A:H5'	54:S2:105:U:OP2	2.21	0.41
54:S2:155:G:N1	54:S2:156:G:C4	2.89	0.41
54:S2:187:G:C4	54:S2:188:C:C5	3.09	0.41
54:S2:458:A:C2	54:S2:459:C:N1	2.86	0.41
54:S2:532:C:O2	54:S2:532:C:H2'	2.20	0.41
54:S2:569:A:C4	54:S2:570:C:C6	3.09	0.41
54:S2:675:U:O2'	64:SN:113:PHE:CZ	2.73	0.41
54:S2:973:C:C5	54:S2:974:C:C5	3.09	0.41
54:S2:993:G:N2	54:S2:994:C:C2	2.89	0.41
54:S2:1110:G:H2'	54:S2:1110:G:N3	2.36	0.41
54:S2:1200:A:H2'	54:S2:1200:A:N3	2.36	0.41
54:S2:1281:G:C2	54:S2:1315:U:O4	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1372:U:O2'	54:S2:1373:C:O4'	2.38	0.41
54:S2:1377:U:O2	54:S2:1379:A:O3'	2.39	0.41
54:S2:1542:C:O2'	54:S2:1543:U:C5'	2.68	0.41
54:S2:1545:A:C4	54:S2:1546:G:C6	3.09	0.41
54:S2:1567:G:C5	54:S2:1568:C:C4	3.09	0.41
54:S2:1570:G:C4	54:S2:1571:G:C8	3.09	0.41
54:S2:1590:C:H2'	54:S2:1591:C:H5'	2.02	0.41
54:S2:1606:G:C6	54:S2:1632:G:C2	3.09	0.41
54:S2:1648:G:O6	78:SQ:16:LYS:HE3	2.21	0.41
54:S2:1758:G:C6	54:S2:1759:G:N7	2.88	0.41
55:SA:15:VAL:HG12	55:SA:19:LEU:CD1	2.50	0.41
60:SH:66:VAL:CG2	60:SH:96:ALA:HB1	2.50	0.41
62:SJ:14:VAL:HG12	62:SJ:15:THR:O	2.21	0.41
68:SX:67:ARG:CG	68:SX:115:ILE:HD13	2.51	0.41
69:SY:58:PHE:CD2	69:SY:58:PHE:N	2.89	0.41
71:Sb:64:CYS:SG	71:Sb:73:LEU:HD23	2.61	0.41
77:SP:41:GLN:O	77:SP:42:ARG:C	2.64	0.41
79:SR:53:TYR:O	79:SR:54:VAL:C	2.63	0.41
84:Sc:14:VAL:HG21	84:Sc:30:VAL:CA	2.47	0.41
1:A:104:VAL:HA	1:A:107:MET:HE3	2.03	0.40
1:A:205:ASN:O	1:A:207:VAL:N	2.54	0.40
2:D:145:TYR:HB3	32:5:4325:A:H5'	2.04	0.40
4:H:113:GLU:OE2	4:H:125:ARG:HA	2.21	0.40
10:Q:33:ARG:NH1	10:Q:33:ARG:HG2	2.36	0.40
10:Q:43:PHE:CD1	10:Q:43:PHE:C	2.99	0.40
13:T:144:ASN:OD1	13:T:144:ASN:N	2.54	0.40
19:a:43:ILE:HG23	32:5:4304:A:H2	1.86	0.40
22:d:33:ILE:HD11	22:d:45:ALA:CB	2.51	0.40
22:d:46:LEU:HD23	22:d:64:ILE:HD13	2.03	0.40
23:e:43:ASN:HD22	23:e:44:ARG:N	2.17	0.40
23:e:60:TYR:HB2	32:5:1900:C:C4'	2.50	0.40
25:g:64:LEU:HB3	32:5:2749:C:H4'	2.03	0.40
26:h:84:ARG:HB2	34:8:38:U:H5	1.85	0.40
30:m:111:ARG:HD2	32:5:4699:U:OP2	2.22	0.40
31:o:93:LEU:O	31:o:94:GLY:C	2.63	0.40
32:5:57:G:C2	32:5:58:G:C2	3.09	0.40
32:5:144:G:C2	32:5:145:G:C5	3.09	0.40
32:5:214:G:O2'	32:5:215:C:H5'	2.21	0.40
32:5:288:G:C2	32:5:289:C:C2	3.10	0.40
32:5:323:C:O2	32:5:323:C:C2'	2.69	0.40
32:5:450:G:N2	32:5:1294:A:O2'	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:483:G:N2	32:5:484:U:C5	2.85	0.40
32:5:488:G:C6	32:5:489:C:C5	3.09	0.40
32:5:1212:G:C4	32:5:1213:G:C8	3.10	0.40
32:5:1265:G:H5''	32:5:2115:G:C2	2.55	0.40
32:5:1266:G:H22	32:5:2111:G:H21	1.67	0.40
32:5:1299:G:N1	32:5:1300:G:N7	2.69	0.40
32:5:1345:A:H2'	32:5:1346:C:C6	2.56	0.40
32:5:1361:G:C6	32:5:1362:G:C5	3.09	0.40
32:5:1374:G:C2	32:5:1375:C:N1	2.89	0.40
32:5:1422:G:C2	32:5:1423:U:C5	3.09	0.40
32:5:1434:G:H2'	32:5:1435:G:O4'	2.21	0.40
32:5:1583:A:C2	32:5:1584:G:H1'	2.54	0.40
32:5:1691:G:N1	32:5:1692:C:C2	2.90	0.40
32:5:1756:U:O4	32:5:1775:A:C2	2.56	0.40
32:5:1901:C:O2	32:5:1902:G:C8	2.74	0.40
32:5:1909:G:C6	32:5:1910:G:N7	2.89	0.40
32:5:1964:A:C2	32:5:1965:G:C1'	3.01	0.40
32:5:1972:G:N2	32:5:1973:G:C4	2.89	0.40
32:5:2089:G:C6	32:5:2262:G:C2'	3.03	0.40
32:5:2100:A:C6	32:5:2101:C:H1'	2.56	0.40
32:5:2367:A:N6	32:5:2798:A:O4'	2.39	0.40
32:5:2448:G:N1	32:5:2511:A:C6	2.89	0.40
32:5:2484:A:C6	32:5:2485:U:C4	3.09	0.40
32:5:2721:G:C6	32:5:2722:G:N7	2.90	0.40
32:5:2867:C:C2	32:5:2884:G:C2	3.10	0.40
32:5:3598:C:C2	32:5:3599:A:C8	3.09	0.40
32:5:3630:A:N3	32:5:3631:U:C6	2.89	0.40
32:5:3659:G:C6	32:5:3660:C:C4	3.09	0.40
32:5:3668:C:O2	32:5:3668:C:C2'	2.64	0.40
32:5:3698:G:N3	32:5:3699:C:C6	2.90	0.40
32:5:3731:C:C4	32:5:3732:A:N7	2.86	0.40
32:5:3754:G:N1	32:5:3755:G:C5	2.89	0.40
32:5:3758:U:C4	32:5:3765:G:C5	3.10	0.40
32:5:3859:G:C8	32:5:3859:G:H5''	2.56	0.40
32:5:3914:U:O4	32:5:4378:A:C2	2.69	0.40
32:5:4094:G:C4	32:5:4095:G:C8	3.09	0.40
32:5:4238:G:C6	32:5:4239:A:C4	3.09	0.40
32:5:4254:G:N3	32:5:4254:G:H2'	2.36	0.40
32:5:4332:C:N3	32:5:4333:C:C5	2.78	0.40
32:5:4660:G:C2	32:5:4661:G:C5	3.09	0.40
32:5:4685:U:H2'	32:5:4686:G:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4730:C:C2	32:5:4734:A:N7	2.89	0.40
32:5:4734:A:N6	32:5:4735:G:C6	2.89	0.40
32:5:5015:G:C2	32:5:5033:G:C2	3.09	0.40
32:5:5062:G:N2	32:5:5063:G:N9	2.68	0.40
32:5:5067:U:C2'	32:5:5068:G:O5'	2.69	0.40
33:7:12:U:C4'	33:7:108:G:H21	2.34	0.40
33:7:113:G:N2	33:7:114:U:C2	2.90	0.40
34:8:111:U:C2'	34:8:112:G:OP2	2.69	0.40
34:8:139:G:C4	34:8:140:C:C5	3.09	0.40
34:8:144:U:O2	34:8:145:C:C6	2.74	0.40
35:B:317:LEU:HD22	35:B:382:VAL:CG2	2.51	0.40
36:C:36:ILE:O	36:C:37:VAL:C	2.64	0.40
37:E:124:HIS:CG	37:E:125:GLY:H	2.39	0.40
37:E:129:PHE:O	37:E:130:SER:C	2.63	0.40
46:K:28:LEU:HG	46:K:44:ASP:HB2	2.03	0.40
48:z:106:PHE:CB	48:z:118:CYS:SG	3.09	0.40
48:z:381:SER:HB3	51:4:207:C:C1'	2.50	0.40
51:4:5:G:C2	51:4:23:U:O2	2.74	0.40
51:4:51:G:C2	51:4:52:C:C2	3.09	0.40
51:4:183:A:O3'	51:4:184:A:C5'	2.69	0.40
51:4:218:U:H2'	51:4:219:C:C6	2.56	0.40
54:S2:4:C:O2	54:S2:5:U:C6	2.74	0.40
54:S2:155:G:C6	54:S2:156:G:C5	3.09	0.40
54:S2:182:C:H5'	54:S2:183:G:P	2.61	0.40
54:S2:221:A:C4	54:S2:222:U:C6	3.08	0.40
54:S2:452:G:C6	54:S2:453:C:C5	3.09	0.40
54:S2:476:A:N6	54:S2:477:G:C5	2.88	0.40
54:S2:598:G:N1	54:S2:639:C:C4	2.90	0.40
54:S2:600:G:N3	54:S2:601:G:C8	2.89	0.40
54:S2:1029:G:C2	54:S2:1030:A:N9	2.88	0.40
54:S2:1088:U:H4'	54:S2:1089:G:OP2	2.21	0.40
54:S2:1144:A:N1	54:S2:1145:A:C6	2.89	0.40
54:S2:1251:A:N1	54:S2:1252:C:C4	2.89	0.40
54:S2:1280:G:C2	54:S2:1318:G:C5	3.09	0.40
54:S2:1290:G:C2	86:Sf:146:LEU:CB	2.92	0.40
54:S2:1392:U:O2	54:S2:1392:U:H2'	2.20	0.40
54:S2:1393:G:N3	54:S2:1394:G:C8	2.88	0.40
54:S2:1442:U:C2	54:S2:1443:C:C5	3.09	0.40
54:S2:1474:A:O2'	54:S2:1475:G:P	2.79	0.40
54:S2:1837:G:H5''	54:S2:1838:U:C2'	2.51	0.40
57:SC:110:MET:HE3	57:SC:125:LYS:HD3	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:SG:121:ILE:HG13	59:SG:122:PRO:HD2	2.02	0.40
60:SH:158:LEU:HD12	60:SH:189:PHE:CE1	2.57	0.40
60:SH:162:GLN:HA	60:SH:162:GLN:OE1	2.21	0.40
63:SL:91:ASP:C	63:SL:92:TYR:HD1	2.29	0.40
67:SW:42:MET:HE2	67:SW:49:GLU:HA	2.02	0.40
79:SR:51:ALA:HA	79:SR:54:VAL:HB	2.02	0.40
80:SS:123:LEU:O	80:SS:127:TRP:HD1	2.05	0.40
87:Sg:208:ALA:HB2	87:Sg:241:PHE:HZ	1.84	0.40
88:S1:73:MET:HE1	89:S4:30:LEU:HG	2.03	0.40
1:A:209:HIS:CE1	1:A:211:PHE:HB2	2.56	0.40
2:D:158:LYS:HE2	33:7:47:G:OP2	2.21	0.40
2:D:178:LYS:HB3	2:D:179:ARG:HD2	2.03	0.40
3:G:108:GLN:N	3:G:108:GLN:HE21	2.18	0.40
4:H:42:ASN:HD22	32:5:4763:U:H6	1.69	0.40
4:H:61:TRP:CZ2	7:M:33:GLN:HG2	2.57	0.40
5:J:89:VAL:HG21	5:J:115:LEU:HD23	2.03	0.40
6:L:58:VAL:HG13	6:L:70:VAL:CG1	2.51	0.40
7:M:6:PHE:O	7:M:7:VAL:C	2.64	0.40
7:M:81:ASP:OD1	7:M:81:ASP:C	2.64	0.40
9:O:64:THR:HG21	35:B:261:ARG:NH1	2.37	0.40
13:T:158:PHE:HE1	13:T:160:ALA:HB2	1.85	0.40
22:d:67:ARG:HE	22:d:67:ARG:HB3	1.57	0.40
23:e:36:ARG:HD2	32:5:1661:C:OP1	2.21	0.40
24:f:4:ARG:O	24:f:5:LEU:HB2	2.21	0.40
25:g:60:ARG:HH22	32:5:2599:G:H5'	1.86	0.40
32:5:47:A:C8	32:5:49:U:C5	3.09	0.40
32:5:199:G:C2	32:5:220:C:C2	3.09	0.40
32:5:284:G:C2	32:5:304:C:C2	3.09	0.40
32:5:286:U:C2	32:5:287:U:C5	3.08	0.40
32:5:303:C:H2'	32:5:304:C:O4'	2.21	0.40
32:5:324:A:C2	32:5:325:U:C2	3.09	0.40
32:5:364:G:O6	42:j:52:LYS:HE3	2.21	0.40
32:5:470:A:N6	32:5:471:A:N9	2.69	0.40
32:5:686:A:H3'	32:5:687:U:H5'	2.03	0.40
32:5:1070:G:C5	32:5:1071:C:C6	3.08	0.40
32:5:1083:U:N3	32:5:1084:C:C5	2.89	0.40
32:5:1200:G:C2	32:5:1201:U:C6	3.08	0.40
32:5:1205:G:N1	32:5:1206:C:C4	2.89	0.40
32:5:1275:G:C5	32:5:1276:C:C5	3.09	0.40
32:5:1486:C:O5'	32:5:1486:C:H6	2.05	0.40
32:5:1545:G:C2'	32:5:1546:C:O5'	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:1609:U:O2	32:5:1609:U:H2'	2.20	0.40
32:5:1804:A:C4'	32:5:1805:A:O5'	2.69	0.40
32:5:1810:G:C4	32:5:1811:G:C8	3.09	0.40
32:5:1844:G:C4	32:5:1845:U:C6	3.09	0.40
32:5:2353:U:C2	32:5:2354:G:N7	2.89	0.40
32:5:2367:A:N6	32:5:2798:A:C1'	2.84	0.40
32:5:2470:C:C6	32:5:2470:C:C3'	3.03	0.40
32:5:2497:C:H42	32:5:2498:C:N4	2.19	0.40
32:5:2497:C:N4	32:5:2498:C:H41	2.19	0.40
32:5:2503:G:H3'	32:5:2504:C:H4'	2.03	0.40
32:5:2556:G:H2'	32:5:2557:G:O4'	2.21	0.40
32:5:2612:G:C5	32:5:2613:C:C4	3.10	0.40
32:5:2852:U:O2	32:5:2853:C:H3'	2.21	0.40
32:5:3635:A:C8	32:5:3692:A:C1'	3.00	0.40
32:5:3643:A:C2	42:j:3:LYS:HE3	2.56	0.40
32:5:3667:C:N3	32:5:3668:C:C5	2.89	0.40
32:5:3902:A:O5'	32:5:3902:A:H8	2.05	0.40
32:5:4103:C:C4	32:5:4105:A:N6	2.89	0.40
32:5:4108:G:N3	32:5:4109:G:C8	2.90	0.40
32:5:4283:G:C4	32:5:4284:C:C6	2.97	0.40
32:5:4499:G:N3	32:5:4529:G:H1'	2.36	0.40
32:5:4502:C:N4	32:5:4503:A:C5	2.89	0.40
32:5:4587:G:C2	32:5:4716:C:C2	3.10	0.40
32:5:4999:G:N2	32:5:5000:G:N9	2.69	0.40
32:5:5051:C:C4	32:5:5052:C:C5	3.10	0.40
32:5:5063:G:N2	32:5:5064:G:C4	2.89	0.40
33:7:28:C:H1'	33:7:55:A:N6	2.35	0.40
33:7:70:G:C6	33:7:71:G:N7	2.90	0.40
34:8:4:C:C2	34:8:5:U:C5	3.09	0.40
34:8:15:G:C2'	34:8:16:G:O4'	2.68	0.40
34:8:75:G:C2	34:8:76:C:C2	3.09	0.40
34:8:115:G:C2	34:8:116:C:C2	3.09	0.40
35:B:52:GLY:O	35:B:53:MET:HG2	2.21	0.40
35:B:190:VAL:O	35:B:191:ALA:CB	2.69	0.40
36:C:315:LYS:CD	38:F:161:TYR:HE1	2.34	0.40
36:C:334:THR:HG21	38:F:53:TYR:OH	2.21	0.40
38:F:165:ASN:O	38:F:165:ASN:CG	2.63	0.40
38:F:244:ARG:HH11	38:F:244:ARG:HG2	1.87	0.40
39:I:148:VAL:O	39:I:149:ILE:C	2.64	0.40
41:W:17:HIS:CD2	41:W:17:HIS:N	2.89	0.40
42:j:7:SER:C	42:j:9:GLY:N	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:j:48:ASN:HD22	42:j:48:ASN:HA	1.69	0.40
44:p:14:TYR:N	44:p:14:TYR:CD1	2.89	0.40
48:z:414:THR:N	52:9:74:ARG:CG	2.67	0.40
50:3:75:C:C6	50:3:75:C:C5'	3.02	0.40
51:4:173:A:O2'	51:4:174:G:O5'	2.38	0.40
51:4:178:G:H2'	51:4:179:G:O4'	2.21	0.40
54:S2:19:A:H2'	54:S2:20:G:O4'	2.20	0.40
54:S2:75:G:C5	59:SG:171:THR:OG1	2.74	0.40
54:S2:118:C:H1'	54:S2:445:A:C6	2.56	0.40
54:S2:155:G:C2	54:S2:156:G:C1'	3.04	0.40
54:S2:180:G:H3'	54:S2:181:A:H3'	2.03	0.40
54:S2:407:G:N3	54:S2:407:G:H2'	2.36	0.40
54:S2:410:G:N1	54:S2:411:G:C4	2.88	0.40
54:S2:418:A:N1	54:S2:419:G:C4	2.89	0.40
54:S2:468:A:C2	54:S2:469:A:N9	2.89	0.40
54:S2:536:A:N6	54:S2:537:C:C5	2.89	0.40
54:S2:563:G:N2	54:S2:564:A:N9	2.69	0.40
54:S2:585:C:N4	54:S2:586:G:C5	2.88	0.40
54:S2:613:G:H2'	54:S2:627:U:C5	2.56	0.40
54:S2:789:G:H2'	54:S2:790:C:C6	2.56	0.40
54:S2:1123:C:C2'	56:SB:148:ASN:ND2	2.85	0.40
54:S2:1175:G:N2	54:S2:1176:G:H1'	2.35	0.40
54:S2:1336:C:C4	54:S2:1337:C:C5	3.10	0.40
54:S2:1434:C:C2'	54:S2:1435:C:O4'	2.69	0.40
54:S2:1531:A:H2'	54:S2:1532:C:C1'	2.51	0.40
54:S2:1679:A:H3'	74:SF:60:ARG:HD2	2.04	0.40
54:S2:1745:A:N6	54:S2:1789:G:O2'	2.53	0.40
55:SA:117:ARG:HG2	55:SA:117:ARG:NH1	2.33	0.40
56:SB:29:ASP:CB	56:SB:51:ARG:HD2	2.50	0.40
58:SE:30:ARG:HH11	58:SE:30:ARG:CG	2.34	0.40
61:SI:162:LEU:HD11	61:SI:191:GLU:HG2	2.03	0.40
74:SF:72:LEU:O	74:SF:72:LEU:HD23	2.21	0.40
81:ST:76:THR:HG21	81:ST:97:LYS:HG3	2.02	0.40
84:Sc:44:ARG:CB	84:Sc:58:LEU:HD11	2.52	0.40
87:Sg:132:TRP:CD1	87:Sg:132:TRP:N	2.89	0.40
1:A:19:HIS:CE1	32:5:1540:C:OP1	2.74	0.40
1:A:142:GLU:C	1:A:144:LYS:H	2.30	0.40
2:D:20:PHE:HD2	2:D:30:TYR:CZ	2.40	0.40
2:D:99:TYR:HD2	2:D:199:ILE:HG23	1.85	0.40
3:G:140:VAL:HG23	32:5:150:U:H5'	2.02	0.40
3:G:165:GLU:OE1	8:N:22:LEU:HD13	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:H:120:GLU:HG2	32:5:4611:A:H2	1.86	0.40
9:O:36:VAL:HG12	9:O:37:ARG:HB2	2.04	0.40
11:R:6:LEU:HB3	11:R:7:GLN:OE1	2.21	0.40
12:S:29:ARG:NH1	12:S:29:ARG:CG	2.83	0.40
12:S:84:TYR:C	12:S:84:TYR:HD1	2.28	0.40
13:T:14:MET:HE3	13:T:58:HIS:CG	2.56	0.40
16:X:142:PRO:C	16:X:144:TYR:H	2.29	0.40
22:d:29:ILE:HD12	22:d:84:ILE:HD12	2.02	0.40
32:5:39:A:C5	32:5:1654:G:C6	3.09	0.40
32:5:164:G:N2	32:5:165:A:H1'	2.36	0.40
32:5:306:A:C2	32:5:307:A:C5	3.09	0.40
32:5:394:G:C2	32:5:398:A:N6	2.89	0.40
32:5:483:G:N2	32:5:484:U:C6	2.89	0.40
32:5:659:G:N1	32:5:660:A:N7	2.69	0.40
32:5:971:U:O2	32:5:971:U:H2'	2.21	0.40
32:5:1048:G:H2'	32:5:1049:C:O4'	2.22	0.40
32:5:1192:C:C4	32:5:1193:C:C5	3.09	0.40
32:5:1265:G:O5'	32:5:2115:G:N2	2.54	0.40
32:5:1337:A:H2	32:5:1658:G:N3	2.19	0.40
32:5:1348:U:O2	32:5:1348:U:H2'	2.21	0.40
32:5:1349:G:N3	32:5:1350:C:C6	2.90	0.40
32:5:1398:A:C6	32:5:1399:G:C4	3.10	0.40
32:5:1421:G:C6	32:5:1422:G:N7	2.89	0.40
32:5:1426:G:C2'	32:5:1459:A:N6	2.84	0.40
32:5:1443:A:C6	32:5:1444:G:C5	3.10	0.40
32:5:1489:G:C6	32:5:1490:G:N7	2.89	0.40
32:5:1667:G:N3	32:5:2283:G:N1	2.69	0.40
32:5:1671:U:N3	32:5:1672:U:C5	2.60	0.40
32:5:1676:C:C4	32:5:4374:U:O2	2.75	0.40
32:5:1726:U:O2	32:5:1727:U:C6	2.74	0.40
32:5:1786:A:H2'	32:5:1789:C:H5	1.86	0.40
32:5:1982:G:O2'	32:5:2010:A:C4'	2.70	0.40
32:5:2020:U:N3	32:5:2021:G:C8	2.89	0.40
32:5:2534:C:H2'	32:5:2535:G:O5'	2.21	0.40
32:5:2643:G:C5	32:5:2644:G:C8	3.10	0.40
32:5:2664:G:C6	32:5:2665:U:C2	3.09	0.40
32:5:2666:U:C4	32:5:2668:G:OP2	2.74	0.40
32:5:2831:G:N1	32:5:2832:A:C5	2.89	0.40
32:5:2905:C:C4	32:5:3590:G:N1	2.89	0.40
32:5:3608:A:C2	32:5:3609:G:C8	3.09	0.40
32:5:3689:G:C2	32:5:3690:U:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:3714:G:C5	32:5:3715:U:C2	3.09	0.40
32:5:3715:U:O2	32:5:3715:U:O4'	2.36	0.40
32:5:3751:G:C2	32:5:3752:C:C2	3.09	0.40
32:5:3773:U:H1'	32:5:3776:G:C6	2.56	0.40
32:5:3883:U:C2'	32:5:3884:U:O5'	2.69	0.40
32:5:3902:A:C6	32:5:4523:A:C5	3.10	0.40
32:5:3912:U:HO2'	32:5:3913:G:C5'	2.13	0.40
32:5:4154:G:C2	32:5:4155:C:C2	3.09	0.40
32:5:4177:C:N3	32:5:4178:A:N7	2.69	0.40
32:5:4236:G:C2'	32:5:4237:C:O5'	2.70	0.40
32:5:4287:G:O2'	32:5:4288:C:C6	2.68	0.40
32:5:4350:C:O2	32:5:4350:C:H2'	2.20	0.40
32:5:4468:U:O2	32:5:4708:A:N7	2.53	0.40
32:5:4574:U:N3	32:5:4576:U:OP2	2.54	0.40
32:5:4627:U:O4'	35:B:53:MET:CB	2.69	0.40
32:5:4890:G:C2	32:5:4930:C:O2	2.75	0.40
32:5:4946:U:O2	32:5:4946:U:C2'	2.69	0.40
32:5:4997:G:N1	32:5:4998:G:C8	2.90	0.40
32:5:5043:A:O2'	32:5:5044:A:O4'	2.31	0.40
34:8:13:G:C6	34:8:14:U:C4	3.09	0.40
34:8:121:G:C2'	34:8:122:G:O5'	2.69	0.40
34:8:149:G:N2	34:8:151:G:C5	2.89	0.40
35:B:10:ARG:HB2	35:B:10:ARG:HH21	1.86	0.40
35:B:25:HIS:ND1	35:B:25:HIS:C	2.80	0.40
36:C:59:GLY:HA3	36:C:99:GLY:O	2.22	0.40
36:C:178:ASN:HA	36:C:181:LYS:HB3	2.04	0.40
36:C:325:MET:CE	38:F:157:TYR:CE2	3.00	0.40
37:E:108:MET:O	45:r:87:ARG:HD3	2.20	0.40
38:F:71:ILE:HG22	38:F:75:ARG:HD2	2.02	0.40
43:n:8:LYS:HE2	54:S2:1845:A:H62	1.85	0.40
48:z:195:HIS:HB2	48:z:197:GLN:HA	2.02	0.40
48:z:364:ASN:O	48:z:368:SER:N	2.53	0.40
50:3:9:A:C4'	50:3:46:G:N3	2.85	0.40
50:3:16:U:N3	50:3:60:A:N3	2.69	0.40
54:S2:378:U:C2	54:S2:379:C:H6	2.26	0.40
54:S2:435:A:OP2	54:S2:435:A:H8	2.05	0.40
54:S2:554:A:C6	54:S2:555:A:N6	2.89	0.40
54:S2:645:C:C6	54:S2:645:C:H3'	2.56	0.40
54:S2:751:G:C6	54:S2:792:C:C2	3.09	0.40
54:S2:859:G:C2	54:S2:860:G:N9	2.89	0.40
54:S2:903:A:C5	54:S2:904:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:964:A:O2'	54:S2:965:U:C6	2.69	0.40
54:S2:976:G:N3	54:S2:977:C:C6	2.89	0.40
54:S2:978:G:C2	54:S2:979:C:N1	2.89	0.40
54:S2:1046:U:C4	54:S2:1047:C:N4	2.89	0.40
54:S2:1126:G:C2	54:S2:1127:C:C4	3.09	0.40
54:S2:1224:G:N1	54:S2:1643:U:C4	2.89	0.40
54:S2:1269:G:C2	54:S2:1514:G:N1	2.89	0.40
54:S2:1291:A:C3'	86:Sf:149:CYS:HB3	2.52	0.40
54:S2:1299:A:H2'	54:S2:1301:A:H5'	2.01	0.40
54:S2:1366:G:C6	54:S2:1374:C:N4	2.89	0.40
54:S2:1449:G:C6	54:S2:1450:G:C5	3.09	0.40
54:S2:1567:G:N9	54:S2:1568:C:C5	2.90	0.40
54:S2:1585:U:H4'	54:S2:1586:U:OP2	2.22	0.40
54:S2:1722:G:N1	54:S2:1723:G:C8	2.89	0.40
54:S2:1805:G:N1	54:S2:1806:A:C5	2.89	0.40
55:SA:145:ILE:HD12	55:SA:159:ILE:HG22	2.04	0.40
56:SB:49:VAL:HG21	56:SB:62:LEU:HD22	2.02	0.40
56:SB:79:VAL:HB	56:SB:81:PHE:CE2	2.56	0.40
61:SI:51:GLY:O	61:SI:52:ASN:O	2.38	0.40
65:SO:41:PHE:CG	65:SO:57:THR:HG22	2.56	0.40
73:SD:162:ASP:N	73:SD:163:PRO:CD	2.85	0.40
80:SS:16:LEU:HD23	80:SS:71:MET:CE	2.50	0.40
1:A:29:LEU:HA	1:A:76:PHE:CE2	2.56	0.40
2:D:208:MET:HA	2:D:223:PHE:HZ	1.86	0.40
2:D:222:GLN:O	33:7:48:G:O2'	2.26	0.40
3:G:128:VAL:N	3:G:129:PRO:CD	2.84	0.40
3:G:227:ASN:HD22	3:G:227:ASN:H	1.68	0.40
9:O:118:MET:C	9:O:119:VAL:HG23	2.47	0.40
10:Q:30:LYS:HB3	32:5:2088:A:N6	2.37	0.40
13:T:54:HIS:CD2	32:5:4301:U:C5'	3.04	0.40
15:V:82:ILE:HG23	15:V:121:VAL:HA	2.02	0.40
18:Z:21:ARG:HG3	18:Z:21:ARG:HH11	1.87	0.40
18:Z:32:GLY:O	18:Z:33:THR:CB	2.70	0.40
20:b:28:ARG:CB	32:5:1805:A:N7	2.81	0.40
27:i:36:HIS:CD2	27:i:36:HIS:C	3.00	0.40
28:k:30:ASP:OD1	28:k:31:ASN:N	2.55	0.40
31:o:41:TYR:CD2	31:o:41:TYR:O	2.75	0.40
32:5:44:A:C2	32:5:45:U:C5	3.08	0.40
32:5:86:U:O2	32:5:87:A:H8	1.94	0.40
32:5:259:C:N3	32:5:260:C:C6	2.89	0.40
32:5:268:G:N1	32:5:269:G:C5	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:277:G:O2'	32:5:278:G:OP2	2.36	0.40
32:5:423:G:OP1	40:P:63:TYR:OH	2.38	0.40
32:5:465:G:C2	32:5:466:A:N9	2.90	0.40
32:5:708:G:N1	32:5:709:C:C6	2.89	0.40
32:5:932:A:N3	32:5:932:A:C2'	2.84	0.40
32:5:933:G:N1	32:5:940:C:C5	2.89	0.40
32:5:947:C:H2'	32:5:948:C:C6	2.56	0.40
32:5:986:C:H2'	32:5:987:C:H6	1.86	0.40
32:5:1246:G:C5	32:5:1247:U:C6	3.10	0.40
32:5:1287:G:N2	32:5:1289:C:N1	2.70	0.40
32:5:1321:G:H1'	32:5:1891:A:H62	1.83	0.40
32:5:1358:G:O5'	36:C:114:ARG:NH2	2.53	0.40
32:5:1374:G:N3	32:5:1375:C:C6	2.90	0.40
32:5:1571:G:C6	32:5:1572:U:C5	3.10	0.40
32:5:1761:G:C4	32:5:1762:C:C6	3.09	0.40
32:5:1795:A:N3	33:7:79:U:O2'	2.52	0.40
32:5:1846:G:N3	32:5:1847:C:C6	2.89	0.40
32:5:1881:C:O4'	32:5:2281:U:C5	2.73	0.40
32:5:1942:A:C2	32:5:4433:G:C1'	3.05	0.40
32:5:2302:C:C2	32:5:2303:C:C5	3.09	0.40
32:5:2335:C:O2	32:5:2335:C:C2'	2.65	0.40
32:5:2390:G:C2	32:5:2391:G:C1'	3.05	0.40
32:5:2465:C:H2'	32:5:2466:G:O4'	2.21	0.40
32:5:2508:U:O2	32:5:2508:U:C2'	2.64	0.40
32:5:2566:G:C2	32:5:2567:G:C5	3.09	0.40
32:5:2623:A:C2	32:5:2624:G:C8	3.09	0.40
32:5:2645:G:C2	32:5:2646:C:C5	3.09	0.40
32:5:2836:A:C2	32:5:3895:G:H4'	2.56	0.40
32:5:2858:A:C5	32:5:2859:G:O6	2.75	0.40
32:5:2904:U:P	32:5:2905:C:H41	2.44	0.40
32:5:3703:G:C2	32:5:3704:U:C6	3.09	0.40
32:5:3772:U:H2'	32:5:3773:U:C6	2.57	0.40
32:5:3832:U:H2'	32:5:3833:C:H6	1.86	0.40
32:5:3857:G:C2	32:5:3858:C:C2	3.10	0.40
32:5:3863:C:N3	32:5:3864:C:C5	2.90	0.40
32:5:3937:C:O2	32:5:3937:C:C2'	2.67	0.40
32:5:3943:A:N1	32:5:3944:G:C4	2.89	0.40
32:5:4107:G:N3	32:5:4108:G:C8	2.89	0.40
32:5:4173:G:C2	32:5:4174:U:C6	3.09	0.40
32:5:4250:G:C2	32:5:4259:C:C2	3.09	0.40
32:5:4723:A:C4	32:5:4724:A:N7	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:4919:G:C6	32:5:4920:C:N4	2.89	0.40
32:5:4953:G:H2'	32:5:4954:G:O4'	2.22	0.40
32:5:5042:A:N3	32:5:5043:A:N7	2.70	0.40
33:7:1:G:H2'	33:7:2:U:O4'	2.21	0.40
33:7:12:U:H4'	33:7:108:G:N2	2.37	0.40
33:7:62:U:C2	33:7:64:G:N7	2.89	0.40
34:8:53:G:N2	34:8:54:C:C2	2.89	0.40
34:8:129:C:C2	34:8:130:C:C6	3.09	0.40
34:8:144:U:H2'	34:8:145:C:H6	1.87	0.40
34:8:147:G:C2	34:8:148:A:C5	3.10	0.40
35:B:218:ASP:OD1	35:B:350:SER:HA	2.22	0.40
36:C:140:LYS:NZ	36:C:242:PRO:HG2	2.37	0.40
46:K:141:CYS:HA	46:K:148:PRO:HD3	2.02	0.40
48:z:123:TYR:CE1	48:z:155:ALA:CB	3.05	0.40
48:z:124:TYR:CZ	48:z:282:PHE:HB2	2.57	0.40
48:z:344:PRO:C	48:z:346:SER:HB2	2.46	0.40
50:3:37:A:C5	50:3:38:C:C6	3.09	0.40
51:4:49:A:C2	51:4:50:G:C4	3.08	0.40
51:4:141:C:C2	51:4:157:A:C2	3.09	0.40
54:S2:17:C:N3	54:S2:18:C:C5	2.89	0.40
54:S2:26:U:C2	54:S2:26:U:C3'	3.03	0.40
54:S2:52:G:C2	54:S2:53:C:C2	3.09	0.40
54:S2:70:G:N3	54:S2:71:G:C8	2.89	0.40
54:S2:72:C:C4'	54:S2:73:C:OP1	2.69	0.40
54:S2:77:A:O2'	59:SG:175:LYS:N	2.55	0.40
54:S2:99:A:C2	54:S2:100:U:H1'	2.56	0.40
54:S2:171:A:C5	54:S2:173:A:C5	3.09	0.40
54:S2:462:C:C2	54:S2:463:C:C6	3.10	0.40
54:S2:474:G:C5	54:S2:475:C:C5	3.09	0.40
54:S2:502:C:O2	54:S2:502:C:C2'	2.68	0.40
54:S2:584:G:C5	54:S2:585:C:C5	3.09	0.40
54:S2:635:G:C6	54:S2:636:C:N4	2.88	0.40
54:S2:641:A:OP2	72:Se:34:ARG:NH2	2.55	0.40
54:S2:658:U:O2	68:SX:17:ARG:NH2	2.55	0.40
54:S2:850:C:H2'	54:S2:851:C:O4'	2.20	0.40
54:S2:904:A:C6	54:S2:905:C:C5	3.09	0.40
54:S2:1131:G:C2	54:S2:1132:C:C2	3.09	0.40
54:S2:1167:G:C6	54:S2:1193:U:C2	3.10	0.40
54:S2:1258:A:N3	54:S2:1663:A:C6	2.90	0.40
54:S2:1271:C:N4	54:S2:1272:C:C4	2.90	0.40
54:S2:1343:U:O2	54:S2:1343:U:C2'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:1382:A:N3	54:S2:1383:A:C8	2.89	0.40
54:S2:1393:G:C5	54:S2:1394:G:C8	3.09	0.40
54:S2:1421:A:C2	54:S2:1422:G:H1'	2.55	0.40
54:S2:1510:G:N1	54:S2:1511:U:N1	2.70	0.40
54:S2:1563:G:C2	54:S2:1564:C:C4	3.09	0.40
54:S2:1588:A:C2	54:S2:1589:A:N1	2.89	0.40
54:S2:1604:G:C2'	54:S2:1605:G:H5'	2.52	0.40
54:S2:1739:C:C2	54:S2:1740:C:C5	3.09	0.40
54:S2:1843:G:H2'	54:S2:1844:U:O4'	2.20	0.40
54:S2:1869:A:C5	56:SB:115:LYS:HG2	2.50	0.40
55:SA:106:GLY:O	55:SA:109:THR:O	2.39	0.40
56:SB:54:GLY:O	56:SB:55:THR:CB	2.70	0.40
56:SB:56:LYS:HD2	56:SB:57:ILE:CA	2.51	0.40
57:SC:78:LEU:N	57:SC:97:PHE:CE2	2.90	0.40
59:SG:74:ARG:NH1	59:SG:96:SER:OG	2.55	0.40
62:SJ:44:TRP:HA	62:SJ:47:LYS:CB	2.51	0.40
62:SJ:54:ARG:HB3	62:SJ:54:ARG:CZ	2.51	0.40
65:SO:72:TYR:CZ	74:SF:204:ARG:HA	2.57	0.40
67:SW:31:SER:OG	67:SW:32:LYS:N	2.55	0.40
67:SW:43:LYS:HB2	67:SW:44:HIS:NE2	2.36	0.40
68:SX:105:PHE:HB3	68:SX:112:VAL:CG2	2.52	0.40
73:SD:84:VAL:O	73:SD:84:VAL:HG13	2.22	0.40
73:SD:195:THR:HA	73:SD:202:LYS:HE2	2.04	0.40
74:SF:61:PHE:HB3	84:Sc:51:ARG:CZ	2.51	0.40
82:SU:82:MET:HB2	85:Sd:52:PHE:CD1	2.56	0.40
83:SZ:57:LYS:HB3	83:SZ:61:GLU:CD	2.45	0.40
87:Sg:23:THR:HG22	87:Sg:31:ILE:HD13	2.02	0.40
87:Sg:230:LEU:HD22	87:Sg:259:TRP:CE3	2.56	0.40
87:Sg:249:CYS:HB2	87:Sg:291:TRP:HE1	1.87	0.40
88:S1:18:TYR:OH	88:S1:73:MET:CG	2.70	0.40
1:A:163:ARG:HB2	1:A:163:ARG:HH11	1.82	0.40
1:A:174:ARG:HB3	1:A:174:ARG:CZ	2.51	0.40
2:D:20:PHE:CD2	2:D:30:TYR:OH	2.66	0.40
2:D:99:TYR:CE1	2:D:165:GLY:HA2	2.57	0.40
2:D:147:ASP:OD1	2:D:147:ASP:C	2.65	0.40
3:G:169:PHE:N	3:G:169:PHE:CD1	2.89	0.40
4:H:92:MET:SD	4:H:161:ILE:HD11	2.61	0.40
4:H:94:SER:OG	4:H:142:ASP:HB3	2.21	0.40
5:J:166:PHE:CZ	5:J:172:GLY:HA3	2.56	0.40
10:Q:26:ARG:NH1	32:5:2269:C:O2	2.54	0.40
12:S:128:LYS:HB3	13:T:152:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Y:27:ARG:CG	17:Y:27:ARG:HH21	2.35	0.40
17:Y:34:LEU:HD11	17:Y:47:MET:HB2	2.03	0.40
19:a:122:VAL:HG12	19:a:123:ILE:N	2.36	0.40
19:a:132:ARG:HG2	19:a:132:ARG:NH1	2.20	0.40
20:b:11:ASN:O	20:b:12:GLN:C	2.64	0.40
20:b:12:GLN:HB3	20:b:16:TRP:HE1	1.85	0.40
22:d:87:ARG:CB	22:d:87:ARG:HH11	2.34	0.40
26:h:27:GLU:OE2	48:z:21:THR:C	2.64	0.40
31:o:45:GLN:HE21	31:o:45:GLN:CA	2.26	0.40
32:5:8:U:H2'	32:5:9:C:O4'	2.22	0.40
32:5:123:C:O2	32:5:123:C:C2'	2.65	0.40
32:5:158:A:C4	32:5:277:G:O6	2.75	0.40
32:5:199:G:C6	32:5:220:C:N3	2.89	0.40
32:5:272:U:N3	32:5:273:U:C5	2.87	0.40
32:5:347:A:N3	32:5:348:G:C8	2.90	0.40
32:5:454:U:H4'	32:5:455:C:C5'	2.51	0.40
32:5:645:G:H2'	32:5:646:G:O4'	2.20	0.40
32:5:655:C:C2'	32:5:656:C:O5'	2.69	0.40
32:5:686:A:H8	37:E:95:ASP:HA	1.87	0.40
32:5:947:C:N3	32:5:948:C:C5	2.90	0.40
32:5:961:G:C2	37:E:119:ARG:CZ	3.04	0.40
32:5:971:U:C6	37:E:122:LEU:HD13	2.56	0.40
32:5:1219:G:N2	32:5:1220:G:C4	2.90	0.40
32:5:1235:G:C2	32:5:1236:C:C4	3.10	0.40
32:5:1258:G:C4	32:5:1259:G:C8	3.09	0.40
32:5:1286:C:N3	32:5:1287:G:N7	2.69	0.40
32:5:1367:C:H5''	32:5:1367:C:C6	2.55	0.40
32:5:1396:G:C8	32:5:1396:G:C3'	3.05	0.40
32:5:1491:A:C6	32:5:1492:G:C6	3.09	0.40
32:5:1545:G:N1	32:5:1546:C:C4	2.89	0.40
32:5:1591:U:N3	32:5:4555:U:OP1	2.54	0.40
32:5:1617:G:C5	32:5:1618:G:C8	3.10	0.40
32:5:1617:G:O6	32:5:1618:G:C6	2.75	0.40
32:5:1755:C:O2'	32:5:1756:U:O4'	2.39	0.40
32:5:1912:G:H2'	32:5:1913:C:H6	1.87	0.40
32:5:1942:A:H1'	32:5:4432:C:O2'	2.20	0.40
32:5:2050:G:C2	32:5:2051:C:C2	3.09	0.40
32:5:2058:G:C6	32:5:2059:C:C4	2.99	0.40
32:5:2086:G:C2	32:5:2272:C:C2	3.06	0.40
32:5:2103:G:C2	32:5:2104:G:N9	2.89	0.40
32:5:2261:G:O2'	32:5:2262:G:C8	2.71	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:5:2434:G:O2'	32:5:2527:A:N1	2.48	0.40
32:5:2498:C:C2	32:5:2499:C:C5	3.08	0.40
32:5:2559:G:C4	32:5:2560:C:C6	3.09	0.40
32:5:2576:G:C4	32:5:2577:C:C6	3.10	0.40
32:5:2726:G:C2	32:5:2727:C:C2	3.10	0.40
32:5:2835:A:N3	35:B:228:TYR:HD2	2.20	0.40
32:5:2852:U:O2	32:5:2853:C:O5'	2.39	0.40
32:5:2869:U:O2	32:5:2869:U:H2'	2.21	0.40
32:5:2871:A:H2'	32:5:2872:C:O4'	2.21	0.40
32:5:2871:A:N6	32:5:2878:G:O2'	2.55	0.40
32:5:3797:C:O2	32:5:3801:U:O4	2.39	0.40
32:5:4111:U:N3	32:5:4112:C:C6	2.89	0.40
32:5:4111:U:N3	32:5:4112:C:C5	2.90	0.40
32:5:4127:A:C8	32:5:4156:G:N2	2.90	0.40
32:5:4201:G:C4	32:5:4202:U:C5	3.10	0.40
32:5:4275:G:C6	32:5:4276:G:C4	3.09	0.40
32:5:4313:A:N1	32:5:4314:C:C6	2.90	0.40
32:5:4415:A:C6	32:5:4416:G:H1'	2.57	0.40
32:5:4499:G:H5''	32:5:4500:U:OP2	2.21	0.40
32:5:4564:A:C4	32:5:4565:C:C5	3.09	0.40
32:5:4589:A:H4'	32:5:4590:A:H4'	2.03	0.40
32:5:4661:G:H8	32:5:4661:G:C5'	2.35	0.40
32:5:4753:U:N3	32:5:4881:U:C5	2.90	0.40
33:7:90:A:C5	33:7:91:C:H1'	2.56	0.40
33:7:105:C:O2	33:7:105:C:H2'	2.20	0.40
34:8:58:G:O6	42:j:63:ARG:NH1	2.55	0.40
34:8:60:G:C4'	34:8:61:A:OP2	2.70	0.40
34:8:70:G:C6	34:8:87:G:C6	3.10	0.40
34:8:75:G:C2	34:8:76:C:C4	3.10	0.40
36:C:65:GLU:O	36:C:66:SER:CB	2.69	0.40
39:I:153:ARG:HA	39:I:165:ILE:HD11	2.04	0.40
39:I:181:PHE:CE1	39:I:190:LEU:HD13	2.57	0.40
39:I:200:VAL:HA	39:I:201:PRO:HD3	1.97	0.40
48:z:44:VAL:HG13	48:z:48:LEU:HD23	2.03	0.40
48:z:342:MET:O	48:z:345:PHE:HB2	2.22	0.40
48:z:365:GLU:CD	48:z:365:GLU:C	2.89	0.40
54:S2:64:A:C5'	54:S2:65:C:OP2	2.69	0.40
54:S2:118:C:N3	54:S2:119:U:C6	2.86	0.40
54:S2:309:G:C6	54:S2:310:C:C4	3.09	0.40
54:S2:357:C:C2	54:S2:358:C:C5	3.09	0.40
54:S2:419:G:C6	54:S2:420:G:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:S2:532:C:N3	54:S2:552:G:O6	2.55	0.40
54:S2:673:G:C1'	54:S2:1084:A:C2	3.04	0.40
54:S2:828:G:H2'	54:S2:829:C:O4'	2.21	0.40
54:S2:832:G:C6	54:S2:843:C:N4	2.90	0.40
54:S2:868:G:N1	60:SH:115:LYS:CE	2.84	0.40
54:S2:916:A:C2	64:SN:73:ARG:HD3	2.56	0.40
54:S2:964:A:C4	54:S2:965:U:C5	3.10	0.40
54:S2:1066:U:O2	54:S2:1066:U:H2'	2.21	0.40
54:S2:1082:A:C8	54:S2:1084:A:N9	2.90	0.40
54:S2:1190:A:C2'	54:S2:1191:C:O5'	2.69	0.40
54:S2:1302:G:C8	86:Sf:140:TYR:CE2	3.10	0.40
54:S2:1666:C:H2'	54:S2:1667:U:H6	1.87	0.40
57:SC:74:LYS:HG3	57:SC:269:PHE:CE2	2.57	0.40
59:SG:162:LEU:HD11	59:SG:165:GLU:OE2	2.22	0.40
59:SG:207:ALA:HA	59:SG:210:ALA:HB3	2.02	0.40
65:SO:61:LYS:HD2	65:SO:76:LEU:HB3	2.02	0.40
65:SO:65:ASP:OD1	65:SO:65:ASP:N	2.55	0.40
73:SD:177:LEU:HD23	73:SD:182:LEU:HD23	2.03	0.40
73:SD:224:SER:HB3	87:Sg:226:HIS:HB2	2.03	0.40
75:SK:64:TRP:O	75:SK:65:ARG:C	2.63	0.40
83:SZ:84:ALA:O	83:SZ:88:LEU:HG	2.20	0.40
84:Sc:14:VAL:N	84:Sc:32:VAL:HG12	2.37	0.40
87:Sg:32:LEU:HD13	87:Sg:92:LEU:CD1	2.52	0.40
87:Sg:64:HIS:HB3	87:Sg:83:TRP:HB2	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	242/244 (99%)	194 (80%)	38 (16%)	10 (4%)	2 19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	D	290/292 (99%)	228 (79%)	41 (14%)	21 (7%)	1	12
3	G	236/238 (99%)	188 (80%)	41 (17%)	7 (3%)	3	25
4	H	188/190 (99%)	162 (86%)	20 (11%)	6 (3%)	3	24
5	J	168/170 (99%)	126 (75%)	33 (20%)	9 (5%)	1	16
6	L	208/210 (99%)	166 (80%)	29 (14%)	13 (6%)	1	13
7	M	136/138 (99%)	111 (82%)	21 (15%)	4 (3%)	3	25
8	N	201/203 (99%)	159 (79%)	31 (15%)	11 (6%)	1	15
9	O	199/201 (99%)	177 (89%)	19 (10%)	3 (2%)	8	35
10	Q	185/187 (99%)	154 (83%)	24 (13%)	7 (4%)	2	20
11	R	178/180 (99%)	148 (83%)	23 (13%)	7 (4%)	2	20
12	S	173/175 (99%)	139 (80%)	27 (16%)	7 (4%)	2	20
13	T	157/159 (99%)	132 (84%)	20 (13%)	5 (3%)	3	24
14	U	97/99 (98%)	80 (82%)	14 (14%)	3 (3%)	3	24
15	V	129/131 (98%)	110 (85%)	14 (11%)	5 (4%)	2	20
16	X	117/119 (98%)	102 (87%)	12 (10%)	3 (3%)	4	27
17	Y	132/134 (98%)	105 (80%)	21 (16%)	6 (4%)	2	18
18	Z	133/135 (98%)	111 (84%)	15 (11%)	7 (5%)	1	16
19	a	145/147 (99%)	114 (79%)	24 (17%)	7 (5%)	2	17
20	b	73/75 (97%)	60 (82%)	10 (14%)	3 (4%)	2	19
21	c	92/94 (98%)	78 (85%)	10 (11%)	4 (4%)	2	19
22	d	105/107 (98%)	85 (81%)	16 (15%)	4 (4%)	2	20
23	e	126/128 (98%)	110 (87%)	14 (11%)	2 (2%)	7	34
24	f	107/109 (98%)	89 (83%)	11 (10%)	7 (6%)	1	13
25	g	112/114 (98%)	100 (89%)	10 (9%)	2 (2%)	6	32
26	h	120/122 (98%)	97 (81%)	21 (18%)	2 (2%)	7	33
27	i	100/102 (98%)	85 (85%)	13 (13%)	2 (2%)	6	31
28	k	67/69 (97%)	53 (79%)	11 (16%)	3 (4%)	2	18
29	l	48/50 (96%)	42 (88%)	5 (10%)	1 (2%)	5	30
30	m	50/52 (96%)	44 (88%)	6 (12%)	0	100	100
31	o	102/104 (98%)	79 (78%)	17 (17%)	6 (6%)	1	14
35	B	392/394 (100%)	309 (79%)	54 (14%)	29 (7%)	1	11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	C	365/367 (100%)	292 (80%)	55 (15%)	18 (5%)	1	17
37	E	232/236 (98%)	144 (62%)	55 (24%)	33 (14%)	0	3
38	F	223/225 (99%)	180 (81%)	35 (16%)	8 (4%)	2	21
39	I	211/213 (99%)	170 (81%)	28 (13%)	13 (6%)	1	14
40	P	151/153 (99%)	134 (89%)	15 (10%)	2 (1%)	9	37
41	W	61/63 (97%)	57 (93%)	4 (7%)	0	100	100
42	j	84/86 (98%)	64 (76%)	18 (21%)	2 (2%)	4	28
43	n	21/23 (91%)	20 (95%)	1 (5%)	0	100	100
44	p	89/91 (98%)	75 (84%)	14 (16%)	0	100	100
45	r	123/125 (98%)	96 (78%)	20 (16%)	7 (6%)	1	14
46	K	159/163 (98%)	91 (57%)	34 (21%)	34 (21%)	0	1
47	q	200/202 (99%)	141 (70%)	31 (16%)	28 (14%)	0	3
48	z	399/426 (94%)	350 (88%)	31 (8%)	18 (4%)	2	18
49	2	27/31 (87%)	15 (56%)	9 (33%)	3 (11%)	0	5
52	9	103/105 (98%)	96 (93%)	7 (7%)	0	100	100
53	6	175/179 (98%)	168 (96%)	7 (4%)	0	100	100
55	SA	206/208 (99%)	163 (79%)	30 (15%)	13 (6%)	1	13
56	SB	211/213 (99%)	154 (73%)	36 (17%)	21 (10%)	0	7
57	SC	216/218 (99%)	182 (84%)	27 (12%)	7 (3%)	3	24
58	SE	260/262 (99%)	198 (76%)	44 (17%)	18 (7%)	1	12
59	SG	235/237 (99%)	195 (83%)	32 (14%)	8 (3%)	3	23
60	SH	187/189 (99%)	141 (75%)	29 (16%)	17 (9%)	0	8
61	SI	204/206 (99%)	165 (81%)	30 (15%)	9 (4%)	2	19
62	SJ	183/185 (99%)	133 (73%)	35 (19%)	15 (8%)	0	9
63	SL	150/152 (99%)	122 (81%)	22 (15%)	6 (4%)	2	20
64	SN	147/149 (99%)	115 (78%)	28 (19%)	4 (3%)	4	26
65	SO	134/136 (98%)	99 (74%)	21 (16%)	14 (10%)	0	6
66	SV	80/82 (98%)	58 (72%)	15 (19%)	7 (9%)	0	8
67	SW	127/129 (98%)	108 (85%)	16 (13%)	3 (2%)	4	28
68	SX	139/141 (99%)	109 (78%)	26 (19%)	4 (3%)	3	25
69	SY	124/126 (98%)	101 (82%)	16 (13%)	7 (6%)	1	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
70	Sa	96/98 (98%)	69 (72%)	18 (19%)	9 (9%)	0	8
71	Sb	81/83 (98%)	61 (75%)	16 (20%)	4 (5%)	1	17
72	Se	55/57 (96%)	41 (74%)	12 (22%)	2 (4%)	2	21
73	SD	225/227 (99%)	174 (77%)	41 (18%)	10 (4%)	2	19
74	SF	189/191 (99%)	145 (77%)	34 (18%)	10 (5%)	1	16
75	SK	96/98 (98%)	58 (60%)	26 (27%)	12 (12%)	0	4
76	SM	122/124 (98%)	78 (64%)	24 (20%)	20 (16%)	0	2
77	SP	94/96 (98%)	67 (71%)	17 (18%)	10 (11%)	0	6
78	SQ	139/141 (99%)	111 (80%)	20 (14%)	8 (6%)	1	14
79	SR	127/129 (98%)	111 (87%)	11 (9%)	5 (4%)	2	20
80	SS	135/137 (98%)	114 (84%)	12 (9%)	9 (7%)	1	13
81	ST	139/141 (99%)	115 (83%)	18 (13%)	6 (4%)	2	19
82	SU	102/104 (98%)	83 (81%)	13 (13%)	6 (6%)	1	14
83	SZ	73/75 (97%)	59 (81%)	9 (12%)	5 (7%)	1	12
84	Sc	60/64 (94%)	47 (78%)	12 (20%)	1 (2%)	7	33
85	Sd	50/52 (96%)	36 (72%)	11 (22%)	3 (6%)	1	14
86	Sf	69/71 (97%)	42 (61%)	15 (22%)	12 (17%)	0	2
87	Sg	311/313 (99%)	240 (77%)	56 (18%)	15 (5%)	2	17
88	S1	72/74 (97%)	61 (85%)	6 (8%)	5 (7%)	1	12
89	S4	72/76 (95%)	68 (94%)	4 (6%)	0	100	100
All	All	12341/12544 (98%)	9853 (80%)	1811 (15%)	677 (6%)	2	15

All (677) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	19	HIS
1	A	196	TRP
1	A	197	PRO
2	D	9	ASN
2	D	19	LYS
2	D	57	ASN
2	D	212	ILE
2	D	262	LYS
4	H	60	TRP
5	J	88	LYS

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Mol	Chain	Res	Type
5	J	91	GLU
6	L	64	VAL
6	L	67	HIS
6	L	83	VAL
6	L	100	PRO
7	M	7	VAL
8	N	30	TYR
8	N	79	ALA
8	N	89	VAL
9	O	5	GLN
9	O	111	PRO
10	Q	52	PHE
10	Q	55	ARG
10	Q	178	ARG
11	R	36	ASN
12	S	146	HIS
12	S	165	PRO
13	T	44	GLY
13	T	106	LEU
15	V	14	PHE
15	V	99	GLU
16	X	86	ALA
16	X	118	ASP
16	X	131	ASP
17	Y	63	LYS
19	a	62	HIS
19	a	76	ASP
19	a	92	LYS
19	a	110	LYS
20	b	7	HIS
20	b	12	GLN
24	f	4	ARG
25	g	7	TYR
27	i	64	SER
28	k	23	VAL
29	l	22	PRO
31	o	90	HIS
35	B	16	PHE
35	B	47	LEU
35	B	108	GLU
35	B	109	HIS
35	B	111	SER

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Mol	Chain	Res	Type
35	B	138	GLN
35	B	143	ALA
35	B	147	ALA
35	B	191	ALA
35	B	196	TRP
35	B	388	PHE
35	B	389	MET
36	C	49	ARG
36	C	69	THR
36	C	273	LEU
36	C	309	ILE
36	C	318	PRO
36	C	319	LEU
37	E	43	ASN
37	E	55	ARG
37	E	59	TYR
37	E	96	LYS
37	E	104	LYS
37	E	131	LYS
37	E	153	HIS
37	E	175	LEU
37	E	183	ARG
37	E	221	PRO
37	E	230	ASP
37	E	232	GLU
37	E	280	HIS
38	F	72	ARG
38	F	128	ASN
39	I	79	SER
39	I	187	LYS
40	P	41	ILE
45	r	34	ALA
45	r	44	ILE
45	r	45	HIS
45	r	107	ARG
46	K	2	PRO
46	K	7	PRO
46	K	8	ASN
46	K	9	GLU
46	K	30	PRO
46	K	31	LYS
46	K	38	SER

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Mol	Chain	Res	Type
46	K	39	PRO
46	K	54	LYS
46	K	58	ILE
46	K	67	ARG
46	K	87	GLU
46	K	95	GLN
46	K	96	LYS
46	K	120	SER
46	K	139	VAL
46	K	141	CYS
46	K	144	ASP
46	K	149	HIS
46	K	159	ALA
47	q	6	ARG
47	q	69	LEU
47	q	73	PRO
47	q	85	ASN
47	q	95	LEU
47	q	96	THR
47	q	107	VAL
47	q	117	ALA
47	q	125	ALA
47	q	133	GLU
47	q	134	LYS
47	q	182	PRO
47	q	185	PHE
47	q	187	LEU
47	q	188	VAL
48	z	44	VAL
48	z	70	ASN
48	z	71	LYS
48	z	101	GLN
48	z	344	PRO
48	z	345	PHE
49	2	113	PRO
49	2	120	SER
55	SA	44	ASP
55	SA	200	ASP
56	SB	53	GLN
56	SB	56	LYS
56	SB	59	SER
56	SB	147	ASN

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Mol	Chain	Res	Type
56	SB	152	LYS
56	SB	179	ASN
56	SB	191	ASP
56	SB	223	PHE
57	SC	264	SER
58	SE	95	THR
58	SE	98	ASN
58	SE	101	LEU
58	SE	109	PHE
58	SE	196	THR
59	SG	99	GLY
59	SG	105	ASN
59	SG	146	ASN
60	SH	16	PRO
60	SH	17	ASP
60	SH	18	GLU
60	SH	66	VAL
60	SH	115	LYS
60	SH	116	ARG
60	SH	170	VAL
61	SI	52	ASN
61	SI	138	ASN
61	SI	155	ASN
62	SJ	3	VAL
62	SJ	22	LYS
62	SJ	119	LEU
62	SJ	121	LYS
63	SL	100	ASN
63	SL	147	LYS
64	SN	108	ASP
64	SN	143	SER
65	SO	56	VAL
65	SO	65	ASP
65	SO	105	THR
65	SO	140	THR
66	SV	41	LYS
66	SV	65	SER
67	SW	107	SER
68	SX	34	THR
69	SY	60	PHE
69	SY	95	GLY
70	Sa	72	HIS

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Mol	Chain	Res	Type
71	Sb	4	ALA
73	SD	5	ILE
73	SD	202	LYS
73	SD	223	ILE
74	SF	34	SER
74	SF	68	ILE
75	SK	30	PRO
76	SM	15	ASN
76	SM	77	ILE
76	SM	91	LEU
76	SM	102	LYS
76	SM	103	VAL
76	SM	114	TYR
77	SP	27	ASP
77	SP	38	SER
77	SP	73	PRO
78	SQ	35	ASN
78	SQ	48	GLN
78	SQ	116	ASP
80	SS	12	ILE
80	SS	90	VAL
80	SS	118	ARG
80	SS	133	GLY
81	ST	29	LYS
81	ST	31	PRO
81	ST	34	VAL
82	SU	50	VAL
82	SU	107	GLU
83	SZ	42	ASP
83	SZ	113	THR
86	Sf	98	VAL
87	Sg	37	ASP
87	Sg	61	GLY
87	Sg	96	THR
87	Sg	161	SER
87	Sg	182	CYS
87	Sg	282	GLU
88	S1	6	THR
88	S1	47	VAL
88	S1	53	THR
88	S1	56	ALA
1	A	35	ALA

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Mol	Chain	Res	Type
1	A	67	TYR
1	A	180	LEU
1	A	210	PRO
2	D	129	GLU
2	D	159	VAL
2	D	188	LYS
2	D	260	GLU
2	D	281	ALA
2	D	285	ALA
2	D	293	ARG
3	G	42	GLY
3	G	108	GLN
3	G	128	VAL
4	H	51	LYS
5	J	26	VAL
5	J	124	GLY
5	J	169	LYS
6	L	62	PRO
6	L	134	PRO
6	L	143	GLU
6	L	172	GLU
7	M	87	ALA
8	N	96	ARG
8	N	158	HIS
10	Q	155	ALA
11	R	96	MET
11	R	116	ASP
11	R	131	VAL
12	S	10	TYR
12	S	101	THR
12	S	153	PRO
13	T	18	PRO
13	T	55	LYS
14	U	38	ASN
17	Y	6	PHE
17	Y	11	ARG
18	Z	33	THR
18	Z	91	LEU
18	Z	124	THR
21	c	32	LYS
21	c	80	GLU
21	c	81	LEU

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Mol	Chain	Res	Type
22	d	38	PHE
23	e	4	LEU
24	f	80	ASN
24	f	107	PRO
28	k	59	SER
31	o	94	GLY
35	B	120	LYS
35	B	264	PHE
35	B	295	ASP
35	B	314	ILE
35	B	394	LYS
36	C	66	SER
36	C	99	GLY
36	C	320	LYS
36	C	322	LEU
37	E	42	ARG
37	E	91	PRO
37	E	118	PRO
37	E	181	PRO
37	E	255	ARG
38	F	236	GLY
39	I	78	LYS
39	I	94	PHE
39	I	178	ALA
39	I	210	ARG
42	j	9	GLY
45	r	33	LYS
45	r	101	LYS
46	K	5	PHE
46	K	88	PRO
46	K	98	ILE
46	K	105	THR
46	K	127	GLY
47	q	118	PRO
48	z	43	ASP
48	z	267	LYS
48	z	346	SER
55	SA	3	GLY
55	SA	187	GLY
56	SB	54	GLY
56	SB	57	ILE
56	SB	83	LYS

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Mol	Chain	Res	Type
56	SB	93	GLY
56	SB	151	ARG
57	SC	189	GLY
57	SC	255	LEU
58	SE	12	VAL
58	SE	76	VAL
58	SE	163	ASP
58	SE	164	LEU
58	SE	171	ASP
58	SE	195	ILE
59	SG	124	LEU
60	SH	160	LYS
61	SI	27	TYR
61	SI	126	GLY
61	SI	137	LEU
62	SJ	39	ASN
62	SJ	89	GLU
62	SJ	92	MET
62	SJ	118	GLY
65	SO	32	HIS
67	SW	77	PRO
68	SX	113	GLY
68	SX	129	SER
70	Sa	8	ASN
70	Sa	97	PRO
71	Sb	58	GLY
73	SD	178	ARG
73	SD	196	GLY
73	SD	219	PRO
74	SF	43	GLU
74	SF	121	PRO
74	SF	132	GLY
74	SF	166	ILE
75	SK	3	MET
75	SK	58	VAL
75	SK	63	ALA
75	SK	65	ARG
75	SK	92	ALA
76	SM	30	GLY
76	SM	35	ILE
76	SM	79	VAL
77	SP	12	PHE

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Mol	Chain	Res	Type
77	SP	14	LYS
78	SQ	32	ILE
78	SQ	77	HIS
79	SR	95	ILE
79	SR	115	SER
81	ST	28	LEU
81	ST	39	LEU
82	SU	52	GLY
83	SZ	104	ARG
83	SZ	112	ASN
85	Sd	10	HIS
86	Sf	89	LYS
86	Sf	100	LEU
86	Sf	137	ASP
86	Sf	148	TYR
87	Sg	65	PHE
87	Sg	142	VAL
87	Sg	144	ASP
2	D	44	TYR
2	D	114	GLY
2	D	125	VAL
3	G	43	GLN
4	H	52	LYS
5	J	11	PRO
8	N	28	TRP
9	O	110	PRO
10	Q	177	ALA
11	R	39	GLN
11	R	130	ASN
15	V	50	ASN
15	V	110	GLY
18	Z	17	ARG
22	d	93	ASN
23	e	34	ASN
24	f	5	LEU
24	f	6	TRP
25	g	84	ALA
28	k	61	PRO
31	o	33	LEU
35	B	257	TRP
35	B	308	ASP
36	C	23	THR

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Mol	Chain	Res	Type
36	C	310	HIS
37	E	40	CYS
37	E	92	VAL
37	E	95	ASP
37	E	115	GLU
37	E	206	LYS
37	E	220	LYS
37	E	245	ASP
37	E	254	LEU
38	F	31	LYS
39	I	143	GLN
40	P	21	ASN
46	K	28	LEU
46	K	86	LYS
46	K	126	SER
47	q	70	GLU
47	q	74	ALA
47	q	94	ASP
47	q	110	ALA
47	q	149	ARG
47	q	183	PHE
48	z	72	ARG
48	z	92	LYS
48	z	152	ALA
55	SA	105	PRO
55	SA	191	ARG
56	SB	24	PRO
56	SB	67	PHE
58	SE	38	LEU
58	SE	68	ARG
59	SG	20	ASP
59	SG	122	PRO
60	SH	112	ASN
60	SH	113	LYS
60	SH	190	PRO
61	SI	143	LYS
62	SJ	4	ALA
63	SL	8	ARG
63	SL	19	ASN
63	SL	28	THR
65	SO	117	ARG
65	SO	128	ARG

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Mol	Chain	Res	Type
65	SO	129	ILE
65	SO	147	ARG
66	SV	3	ASN
68	SX	99	GLU
69	SY	30	PRO
69	SY	84	LYS
69	SY	118	ARG
70	Sa	10	ARG
70	Sa	62	TYR
71	Sb	59	CYS
74	SF	21	GLY
74	SF	143	PRO
75	SK	84	HIS
76	SM	85	LEU
76	SM	96	ARG
76	SM	116	LYS
77	SP	18	ARG
80	SS	7	GLU
82	SU	51	LYS
82	SU	118	ASP
85	Sd	7	TYR
85	Sd	8	TRP
86	Sf	150	PHE
1	A	31	ALA
1	A	217	GLN
2	D	21	ARG
2	D	32	ALA
2	D	187	SER
2	D	234	ASP
2	D	267	ASN
4	H	110	SER
6	L	82	ARG
8	N	3	ALA
8	N	40	PRO
10	Q	34	PHE
10	Q	146	ARG
12	S	80	ILE
14	U	98	ASP
17	Y	18	HIS
18	Z	30	ASP
19	a	17	HIS
19	a	98	ALA

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Mol	Chain	Res	Type
21	c	77	ASN
22	d	102	LEU
24	f	106	TYR
26	h	119	PHE
26	h	122	LYS
27	i	25	ARG
31	o	58	LYS
31	o	98	LYS
35	B	189	THR
35	B	258	HIS
36	C	73	VAL
36	C	104	PRO
37	E	61	ARG
37	E	208	LEU
37	E	218	LEU
37	E	229	PHE
39	I	47	PRO
39	I	77	VAL
39	I	172	GLY
45	r	123	PRO
46	K	10	ILE
46	K	34	PRO
46	K	138	SER
47	q	61	MET
47	q	186	GLY
48	z	19	ASN
48	z	23	ILE
49	2	127	MET
55	SA	43	SER
55	SA	110	ASN
55	SA	186	ARG
55	SA	207	PRO
56	SB	190	PRO
56	SB	204	ILE
57	SC	171	GLY
57	SC	190	SER
59	SG	152	ASP
60	SH	107	LYS
60	SH	159	ASP
61	SI	20	PRO
62	SJ	18	ARG
62	SJ	96	TYR

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Mol	Chain	Res	Type
62	SJ	120	ALA
63	SL	69	ARG
65	SO	146	ARG
69	SY	103	SER
70	Sa	15	ARG
70	Sa	61	ALA
73	SD	48	ILE
73	SD	218	LEU
74	SF	163	PHE
75	SK	31	LYS
76	SM	117	GLU
76	SM	119	GLN
77	SP	75	VAL
78	SQ	80	GLN
79	SR	127	ASN
80	SS	88	LYS
82	SU	106	ILE
86	Sf	83	LYS
86	Sf	87	THR
86	Sf	110	GLU
87	Sg	49	GLU
87	Sg	97	THR
87	Sg	163	PRO
87	Sg	172	LYS
87	Sg	283	PRO
1	A	234	LYS
3	G	28	VAL
3	G	125	LYS
3	G	165	GLU
6	L	28	GLN
6	L	47	ALA
7	M	44	GLN
7	M	60	PHE
8	N	55	ALA
8	N	77	LYS
15	V	96	LEU
17	Y	79	VAL
19	a	93	ASN
24	f	33	VAL
31	o	77	CYS
35	B	38	SER
35	B	110	ILE

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Mol	Chain	Res	Type
35	B	112	ASP
35	B	310	SER
35	B	329	ASP
36	C	58	ALA
36	C	305	PRO
36	C	342	ARG
37	E	85	LEU
37	E	174	PRO
37	E	251	SER
38	F	56	ALA
38	F	101	ASN
39	I	7	ARG
39	I	109	ASP
42	j	59	THR
46	K	94	LYS
46	K	104	ILE
46	K	119	ARG
47	q	60	MET
48	z	197	GLN
56	SB	86	LEU
56	SB	108	ASP
56	SB	207	LEU
57	SC	134	ASN
57	SC	256	TRP
58	SE	15	PRO
58	SE	30	ARG
60	SH	6	ALA
60	SH	100	ILE
61	SI	21	TYR
62	SJ	103	GLU
64	SN	28	LEU
65	SO	24	GLY
65	SO	33	ILE
66	SV	10	ASP
66	SV	42	VAL
66	SV	45	ARG
66	SV	53	TYR
67	SW	29	PRO
70	Sa	46	GLU
71	Sb	48	SER
73	SD	130	GLY
75	SK	34	GLU

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Mol	Chain	Res	Type
76	SM	94	ILE
77	SP	87	PRO
78	SQ	47	LEU
80	SS	92	ASP
81	ST	128	GLN
83	SZ	108	ILE
88	S1	45	ASP
2	D	263	LYS
4	H	40	HIS
6	L	10	LEU
6	L	169	ILE
11	R	19	LYS
13	T	53	PRO
17	Y	85	VAL
18	Z	4	PHE
20	b	21	ILE
22	d	58	GLY
35	B	301	ASN
36	C	72	ALA
38	F	168	ARG
47	q	111	ALA
60	SH	10	LYS
62	SJ	169	ARG
65	SO	54	CYS
65	SO	64	ALA
69	SY	6	THR
72	Se	26	LYS
75	SK	43	LEU
76	SM	78	LYS
76	SM	81	ASP
77	SP	37	TYR
77	SP	54	HIS
79	SR	52	GLY
86	Sf	99	LYS
86	Sf	122	PRO
86	Sf	145	CYS
87	Sg	190	GLY
5	J	27	GLY
18	Z	95	VAL
48	z	158	PRO
48	z	213	GLN
55	SA	45	GLY

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Mol	Chain	Res	Type
56	SB	22	VAL
58	SE	90	ILE
58	SE	131	VAL
60	SH	176	VAL
75	SK	41	PRO
75	SK	90	VAL
78	SQ	43	GLU
79	SR	121	GLN
80	SS	117	ILE
12	S	5	GLY
35	B	259	PRO
59	SG	182	PRO
64	SN	52	VAL
73	SD	222	PRO
76	SM	65	VAL
76	SM	89	VAL
4	H	104	VAL
5	J	127	GLY
14	U	27	HIS
35	B	17	LEU
38	F	105	PRO
39	I	149	ILE
47	q	142	GLY
48	z	161	GLY
70	Sa	98	PRO
72	Se	54	GLY
76	SM	104	VAL
84	Sc	7	GLN
5	J	174	ILE
8	N	52	GLY
47	q	84	GLY
55	SA	106	GLY
55	SA	199	PRO
58	SE	64	ILE
62	SJ	36	GLY
74	SF	92	ILE
80	SS	36	VAL

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM

entries.

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	
1	A	187/187 (100%)	136 (73%)	51 (27%)	0	3
2	D	246/247 (100%)	183 (74%)	63 (26%)	0	4
3	G	204/206 (99%)	151 (74%)	53 (26%)	0	4
4	H	169/169 (100%)	129 (76%)	40 (24%)	1	5
5	J	143/143 (100%)	108 (76%)	35 (24%)	1	4
6	L	176/176 (100%)	138 (78%)	38 (22%)	1	6
7	M	116/116 (100%)	90 (78%)	26 (22%)	1	6
8	N	171/171 (100%)	131 (77%)	40 (23%)	1	5
9	O	172/172 (100%)	143 (83%)	29 (17%)	2	13
10	Q	163/163 (100%)	126 (77%)	37 (23%)	1	5
11	R	159/159 (100%)	117 (74%)	42 (26%)	0	3
12	S	156/156 (100%)	126 (81%)	30 (19%)	1	9
13	T	139/139 (100%)	110 (79%)	29 (21%)	1	7
14	U	89/89 (100%)	69 (78%)	20 (22%)	1	6
15	V	101/101 (100%)	77 (76%)	24 (24%)	1	5
16	X	107/107 (100%)	89 (83%)	18 (17%)	2	13
17	Y	124/124 (100%)	94 (76%)	30 (24%)	1	5
18	Z	117/117 (100%)	92 (79%)	25 (21%)	1	6
19	a	119/119 (100%)	97 (82%)	22 (18%)	1	11
20	b	63/63 (100%)	48 (76%)	15 (24%)	1	5
21	c	79/79 (100%)	61 (77%)	18 (23%)	1	5
22	d	98/98 (100%)	66 (67%)	32 (33%)	0	1
23	e	114/114 (100%)	88 (77%)	26 (23%)	1	5
24	f	88/88 (100%)	72 (82%)	16 (18%)	2	12
25	g	98/98 (100%)	78 (80%)	20 (20%)	1	8
26	h	109/109 (100%)	89 (82%)	20 (18%)	2	11
27	i	86/86 (100%)	69 (80%)	17 (20%)	1	8
28	k	64/64 (100%)	53 (83%)	11 (17%)	2	12
29	l	47/47 (100%)	38 (81%)	9 (19%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
30	m	48/48 (100%)	33 (69%)	15 (31%)	0	1
31	o	92/92 (100%)	70 (76%)	22 (24%)	1	5
35	B	335/335 (100%)	256 (76%)	79 (24%)	1	5
36	C	305/305 (100%)	233 (76%)	72 (24%)	1	5
37	E	209/209 (100%)	159 (76%)	50 (24%)	1	5
38	F	194/194 (100%)	147 (76%)	47 (24%)	1	5
39	I	180/180 (100%)	132 (73%)	48 (27%)	0	3
40	P	134/134 (100%)	109 (81%)	25 (19%)	1	10
41	W	55/55 (100%)	40 (73%)	15 (27%)	0	3
42	j	73/73 (100%)	62 (85%)	11 (15%)	3	16
43	n	22/22 (100%)	17 (77%)	5 (23%)	1	5
44	p	74/74 (100%)	64 (86%)	10 (14%)	4	18
45	r	109/109 (100%)	90 (83%)	19 (17%)	2	12
46	K	136/136 (100%)	115 (85%)	21 (15%)	2	15
47	q	170/170 (100%)	134 (79%)	36 (21%)	1	7
48	z	340/340 (100%)	322 (95%)	18 (5%)	20	45
49	2	29/29 (100%)	26 (90%)	3 (10%)	7	27
52	9	92/94 (98%)	87 (95%)	5 (5%)	20	45
53	6	157/157 (100%)	151 (96%)	6 (4%)	29	52
55	SA	174/174 (100%)	130 (75%)	44 (25%)	0	4
56	SB	194/194 (100%)	155 (80%)	39 (20%)	1	8
57	SC	184/184 (100%)	147 (80%)	37 (20%)	1	8
58	SE	224/224 (100%)	173 (77%)	51 (23%)	1	5
59	SG	207/207 (100%)	158 (76%)	49 (24%)	1	5
60	SH	169/169 (100%)	145 (86%)	24 (14%)	3	17
61	SI	178/178 (100%)	148 (83%)	30 (17%)	2	13
62	SJ	161/161 (100%)	116 (72%)	45 (28%)	0	2
63	SL	136/136 (100%)	100 (74%)	36 (26%)	0	3
64	SN	130/130 (100%)	100 (77%)	30 (23%)	1	5
65	SO	106/106 (100%)	74 (70%)	32 (30%)	0	2
66	SV	66/66 (100%)	52 (79%)	14 (21%)	1	7

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
67	SW	112/112 (100%)	89 (80%)	23 (20%)	1	8
68	SX	113/113 (100%)	99 (88%)	14 (12%)	4	21
69	SY	108/108 (100%)	83 (77%)	25 (23%)	1	5
70	Sa	85/85 (100%)	73 (86%)	12 (14%)	3	18
71	Sb	75/75 (100%)	62 (83%)	13 (17%)	2	12
72	Se	46/46 (100%)	34 (74%)	12 (26%)	0	4
73	SD	190/190 (100%)	145 (76%)	45 (24%)	1	5
74	SF	161/161 (100%)	120 (74%)	41 (26%)	0	4
75	SK	89/89 (100%)	68 (76%)	21 (24%)	1	5
76	SM	104/104 (100%)	75 (72%)	29 (28%)	0	2
77	SP	88/88 (100%)	71 (81%)	17 (19%)	1	9
78	SQ	117/117 (100%)	91 (78%)	26 (22%)	1	6
79	SR	117/117 (100%)	102 (87%)	15 (13%)	4	20
80	SS	119/119 (100%)	101 (85%)	18 (15%)	3	16
81	ST	112/112 (100%)	82 (73%)	30 (27%)	0	3
82	SU	94/94 (100%)	79 (84%)	15 (16%)	2	14
83	SZ	66/66 (100%)	56 (85%)	10 (15%)	3	16
84	Sc	57/57 (100%)	45 (79%)	12 (21%)	1	7
85	Sd	45/45 (100%)	31 (69%)	14 (31%)	0	1
86	Sf	64/64 (100%)	44 (69%)	20 (31%)	0	1
87	Sg	272/272 (100%)	236 (87%)	36 (13%)	4	19
88	S1	67/67 (100%)	54 (81%)	13 (19%)	1	9
89	S4	69/69 (100%)	59 (86%)	10 (14%)	3	17
All	All	10757/10762 (100%)	8512 (79%)	2245 (21%)	3	7

All (2245) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	3	ARG
1	A	5	ILE
1	A	16	PHE
1	A	19	HIS
1	A	22	HIS
1	A	30	ARG

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Mol	Chain	Res	Type
1	A	37	ARG
1	A	40	TYR
1	A	41	ILE
1	A	52	PRO
1	A	54	ARG
1	A	63	PHE
1	A	74	GLU
1	A	83	HIS
1	A	84	THR
1	A	87	PHE
1	A	95	GLN
1	A	97	ASN
1	A	100	ASN
1	A	109	GLU
1	A	122	ASP
1	A	128	ARG
1	A	130	SER
1	A	139	HIS
1	A	142	GLU
1	A	144	LYS
1	A	147	ARG
1	A	162	ASN
1	A	163	ARG
1	A	165	VAL
1	A	174	ARG
1	A	175	ILE
1	A	181	LYS
1	A	186	TYR
1	A	187	HIS
1	A	189	TYR
1	A	190	LYS
1	A	193	ARG
1	A	194	ASN
1	A	200	ARG
1	A	205	ASN
1	A	215	ASN
1	A	216	HIS
1	A	218	HIS
1	A	219	ILE
1	A	221	LYS
1	A	226	ARG
1	A	227	ARG

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Mol	Chain	Res	Type
1	A	233	ARG
1	A	242	ARG
1	A	243	THR
2	D	25	GLU
2	D	33	ARG
2	D	35	ARG
2	D	39	GLN
2	D	42	ASN
2	D	44	TYR
2	D	45	ASN
2	D	50	ARG
2	D	51	MET
2	D	59	ASP
2	D	63	GLN
2	D	66	TYR
2	D	79	TYR
2	D	94	ASN
2	D	104	LEU
2	D	107	ARG
2	D	111	ASN
2	D	113	PHE
2	D	116	ASP
2	D	118	ILE
2	D	119	TYR
2	D	124	GLU
2	D	129	GLU
2	D	131	ASN
2	D	136	ASP
2	D	138	GLN
2	D	157	ASN
2	D	168	ASP
2	D	177	THR
2	D	179	ARG
2	D	186	GLU
2	D	189	GLU
2	D	191	ASN
2	D	193	GLU
2	D	195	HIS
2	D	196	ARG
2	D	199	ILE
2	D	202	GLN
2	D	203	ASN

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Mol	Chain	Res	Type
2	D	213	GLU
2	D	219	TYR
2	D	221	LYS
2	D	223	PHE
2	D	225	GLN
2	D	229	ASN
2	D	232	THR
2	D	234	ASP
2	D	244	HIS
2	D	249	GLU
2	D	254	GLU
2	D	255	LYS
2	D	256	LYS
2	D	259	LYS
2	D	260	GLU
2	D	262	LYS
2	D	264	LYS
2	D	265	ARG
2	D	266	TRP
2	D	279	ARG
2	D	287	PHE
2	D	291	GLN
2	D	292	GLU
2	D	293	ARG
3	G	28	VAL
3	G	31	LEU
3	G	32	PHE
3	G	38	ASN
3	G	39	PHE
3	G	44	ASP
3	G	46	GLN
3	G	49	ARG
3	G	50	ASP
3	G	53	ARG
3	G	56	LYS
3	G	59	ARG
3	G	60	TYR
3	G	62	ARG
3	G	67	ARG
3	G	71	TYR
3	G	73	ARG
3	G	75	LYS

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Mol	Chain	Res	Type
3	G	85	GLN
3	G	88	ASP
3	G	89	ARG
3	G	90	GLN
3	G	100	HIS
3	G	101	LYS
3	G	102	TYR
3	G	103	ARG
3	G	106	THR
3	G	108	GLN
3	G	112	GLN
3	G	131	LYS
3	G	141	ASN
3	G	150	LYS
3	G	154	LEU
3	G	162	ASP
3	G	167	VAL
3	G	169	PHE
3	G	170	LEU
3	G	175	ARG
3	G	176	LYS
3	G	177	MET
3	G	189	ARG
3	G	202	VAL
3	G	217	LYS
3	G	220	GLU
3	G	223	ARG
3	G	227	ASN
3	G	230	TYR
3	G	231	ASN
3	G	234	ARG
3	G	235	ARG
3	G	249	ARG
3	G	254	GLU
3	G	259	LYS
4	H	11	ASP
4	H	12	ILE
4	H	18	ILE
4	H	26	ILE
4	H	40	HIS
4	H	42	ASN
4	H	51	LYS

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Mol	Chain	Res	Type
4	H	52	LYS
4	H	54	ARG
4	H	57	VAL
4	H	58	ASP
4	H	59	LYS
4	H	60	TRP
4	H	66	GLU
4	H	84	VAL
4	H	88	PHE
4	H	92	MET
4	H	94	SER
4	H	96	TYR
4	H	104	VAL
4	H	105	ILE
4	H	106	GLN
4	H	108	ASN
4	H	113	GLU
4	H	117	PHE
4	H	118	LEU
4	H	122	TYR
4	H	123	ILE
4	H	124	ARG
4	H	125	ARG
4	H	128	MET
4	H	140	GLN
4	H	141	LYS
4	H	161	ILE
4	H	168	LYS
4	H	171	ASP
4	H	173	ARG
4	H	177	ASP
4	H	180	TYR
4	H	183	GLU
5	J	15	LEU
5	J	18	ARG
5	J	19	LYS
5	J	21	CYS
5	J	23	ASN
5	J	26	VAL
5	J	35	ARG
5	J	46	GLN
5	J	54	ARG

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Mol	Chain	Res	Type
5	J	63	ARG
5	J	71	HIS
5	J	72	CYS
5	J	73	THR
5	J	75	ARG
5	J	81	GLU
5	J	83	LEU
5	J	85	LYS
5	J	87	LEU
5	J	90	ARG
5	J	96	LYS
5	J	97	ASN
5	J	98	ASN
5	J	112	HIS
5	J	113	ILE
5	J	119	TYR
5	J	126	TYR
5	J	128	LEU
5	J	143	ASP
5	J	146	ARG
5	J	154	LYS
5	J	155	HIS
5	J	164	ARG
5	J	165	TRP
5	J	168	GLN
5	J	171	ASP
6	L	5	ARG
6	L	10	LEU
6	L	13	HIS
6	L	19	GLN
6	L	31	ARG
6	L	34	ARG
6	L	36	ARG
6	L	39	ARG
6	L	45	ARG
6	L	49	ARG
6	L	56	ARG
6	L	59	VAL
6	L	65	ARG
6	L	66	TYR
6	L	67	HIS
6	L	74	ARG

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Mol	Chain	Res	Type
6	L	80	GLU
6	L	82	ARG
6	L	83	VAL
6	L	92	ARG
6	L	99	ASP
6	L	101	ARG
6	L	103	ARG
6	L	111	GLN
6	L	115	GLN
6	L	123	LYS
6	L	127	PHE
6	L	129	ARG
6	L	130	LYS
6	L	146	LEU
6	L	151	THR
6	L	158	ARG
6	L	162	LYS
6	L	163	ARG
6	L	165	LYS
6	L	172	GLU
6	L	186	ARG
6	L	201	GLU
7	M	8	GLU
7	M	11	ARG
7	M	17	PHE
7	M	29	ASP
7	M	32	ASP
7	M	33	GLN
7	M	34	ASN
7	M	37	LEU
7	M	38	VAL
7	M	42	CYS
7	M	56	GLN
7	M	59	ASP
7	M	61	ILE
7	M	62	LEU
7	M	67	SER
7	M	70	GLN
7	M	78	GLU
7	M	79	LYS
7	M	81	ASP
7	M	83	ASN

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Mol	Chain	Res	Type
7	M	89	THR
7	M	90	ARG
7	M	91	TRP
7	M	99	GLU
7	M	109	ARG
7	M	119	ARG
8	N	4	TYR
8	N	9	GLU
8	N	11	TRP
8	N	26	ARG
8	N	29	GLN
8	N	31	ARG
8	N	43	THR
8	N	53	TYR
8	N	59	TYR
8	N	63	ARG
8	N	64	ILE
8	N	72	LYS
8	N	86	HIS
8	N	89	VAL
8	N	91	GLN
8	N	104	GLU
8	N	108	ARG
8	N	110	CYS
8	N	114	ARG
8	N	119	TYR
8	N	123	GLU
8	N	127	TYR
8	N	131	GLU
8	N	136	ASP
8	N	138	PHE
8	N	139	HIS
8	N	150	TRP
8	N	151	ILE
8	N	158	HIS
8	N	166	SER
8	N	169	ARG
8	N	174	LEU
8	N	178	HIS
8	N	182	HIS
8	N	189	ARG
8	N	192	TRP

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Mol	Chain	Res	Type
8	N	193	ARG
8	N	195	ARG
8	N	196	ASN
8	N	199	GLN
9	O	5	GLN
9	O	16	LEU
9	O	38	CYS
9	O	41	ILE
9	O	42	ASN
9	O	46	ASN
9	O	50	ASN
9	O	60	LYS
9	O	61	ARG
9	O	62	MET
9	O	72	HIS
9	O	78	ARG
9	O	82	ARG
9	O	110	PRO
9	O	113	ASP
9	O	125	LYS
9	O	140	ARG
9	O	160	ARG
9	O	167	HIS
9	O	176	ARG
9	O	178	ARG
9	O	179	LYS
9	O	187	LYS
9	O	188	LYS
9	O	192	PHE
9	O	195	VAL
9	O	198	THR
9	O	199	HIS
9	O	202	LEU
10	Q	3	VAL
10	Q	4	ASP
10	Q	5	ILE
10	Q	8	ASN
10	Q	9	LYS
10	Q	14	ARG
10	Q	15	ARG
10	Q	16	LYS
10	Q	26	ARG

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Mol	Chain	Res	Type
10	Q	32	TYR
10	Q	37	ARG
10	Q	44	ASN
10	Q	52	PHE
10	Q	58	ARG
10	Q	61	LEU
10	Q	63	LEU
10	Q	65	ARG
10	Q	68	ARG
10	Q	72	LEU
10	Q	75	ARG
10	Q	78	LYS
10	Q	79	THR
10	Q	85	THR
10	Q	89	ASP
10	Q	91	ARG
10	Q	92	VAL
10	Q	93	GLN
10	Q	97	LYS
10	Q	108	ARG
10	Q	110	ARG
10	Q	112	ARG
10	Q	126	LEU
10	Q	146	ARG
10	Q	166	TYR
10	Q	173	LYS
10	Q	178	ARG
10	Q	181	ARG
11	R	2	SER
11	R	6	LEU
11	R	7	GLN
11	R	9	ARG
11	R	23	TRP
11	R	30	ASN
11	R	39	GLN
11	R	40	GLN
11	R	42	ARG
11	R	43	LYS
11	R	50	ILE
11	R	58	HIS
11	R	66	ASN
11	R	71	ARG

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Mol	Chain	Res	Type
11	R	74	ARG
11	R	80	LYS
11	R	81	ARG
11	R	89	MET
11	R	94	THR
11	R	99	MET
11	R	103	ARG
11	R	104	ARG
11	R	105	LEU
11	R	106	LEU
11	R	107	ARG
11	R	108	ARG
11	R	113	LYS
11	R	114	LYS
11	R	117	ARG
11	R	118	HIS
11	R	120	TYR
11	R	124	TYR
11	R	131	VAL
11	R	136	ARG
11	R	138	LEU
11	R	141	HIS
11	R	168	GLU
11	R	170	ARG
11	R	172	ARG
11	R	175	GLU
11	R	177	LEU
11	R	178	GLN
12	S	2	LYS
12	S	12	VAL
12	S	17	LEU
12	S	28	TYR
12	S	29	ARG
12	S	39	VAL
12	S	44	PHE
12	S	47	PHE
12	S	48	VAL
12	S	53	LYS
12	S	68	PHE
12	S	70	LYS
12	S	82	LEU
12	S	83	ARG

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Mol	Chain	Res	Type
12	S	84	TYR
12	S	99	ASP
12	S	100	LEU
12	S	101	THR
12	S	111	ARG
12	S	127	MET
12	S	128	LYS
12	S	138	ARG
12	S	146	HIS
12	S	150	ILE
12	S	156	HIS
12	S	159	LEU
12	S	162	GLN
12	S	167	PHE
12	S	168	THR
12	S	171	ARG
13	T	5	LYS
13	T	7	LYS
13	T	19	PHE
13	T	30	TYR
13	T	32	ARG
13	T	33	ILE
13	T	41	ASP
13	T	54	HIS
13	T	57	TYR
13	T	61	THR
13	T	67	VAL
13	T	70	HIS
13	T	76	VAL
13	T	88	ARG
13	T	96	ILE
13	T	102	ARG
13	T	103	ASP
13	T	105	PHE
13	T	107	LYS
13	T	117	LYS
13	T	118	GLU
13	T	121	GLU
13	T	127	GLN
13	T	137	GLU
13	T	144	ASN
13	T	150	LEU

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Mol	Chain	Res	Type
13	T	152	GLU
13	T	158	PHE
13	T	159	MET
14	U	23	LEU
14	U	27	HIS
14	U	33	ILE
14	U	39	PHE
14	U	40	GLU
14	U	46	ARG
14	U	47	ILE
14	U	52	LYS
14	U	62	THR
14	U	64	GLU
14	U	65	ARG
14	U	67	LYS
14	U	69	LYS
14	U	79	SER
14	U	82	TYR
14	U	89	LYS
14	U	97	ARG
14	U	98	ASP
14	U	100	LEU
14	U	113	ARG
15	V	13	LYS
15	V	14	PHE
15	V	15	ARG
15	V	18	LEU
15	V	30	ASP
15	V	36	ASN
15	V	40	ILE
15	V	48	ARG
15	V	50	ASN
15	V	51	ARG
15	V	60	MET
15	V	69	LYS
15	V	73	ARG
15	V	77	HIS
15	V	84	GLN
15	V	90	ARG
15	V	91	LYS
15	V	92	ASP
15	V	96	LEU

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Mol	Chain	Res	Type
15	V	100	ASP
15	V	107	ASN
15	V	109	LYS
15	V	111	GLU
15	V	123	LYS
16	X	39	LYS
16	X	41	ARG
16	X	45	THR
16	X	48	ARG
16	X	53	ARG
16	X	62	ARG
16	X	63	LYS
16	X	72	ASP
16	X	79	PHE
16	X	84	GLU
16	X	94	ASN
16	X	111	GLN
16	X	120	ASP
16	X	129	ARG
16	X	137	TYR
16	X	139	ARG
16	X	144	TYR
16	X	151	ASN
17	Y	2	LYS
17	Y	4	ASN
17	Y	17	ARG
17	Y	18	HIS
17	Y	19	PHE
17	Y	27	ARG
17	Y	36	LYS
17	Y	42	TYR
17	Y	49	ILE
17	Y	50	ARG
17	Y	53	ASP
17	Y	55	VAL
17	Y	56	GLN
17	Y	59	ARG
17	Y	62	TYR
17	Y	65	GLN
17	Y	72	GLN
17	Y	81	TYR
17	Y	82	ILE

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Mol	Chain	Res	Type
17	Y	87	ARG
17	Y	91	ASN
17	Y	96	HIS
17	Y	104	VAL
17	Y	108	ARG
17	Y	112	ASP
17	Y	114	ASP
17	Y	115	ARG
17	Y	121	ARG
17	Y	126	ARG
17	Y	127	GLN
18	Z	3	LYS
18	Z	4	PHE
18	Z	5	MET
18	Z	17	ARG
18	Z	19	SER
18	Z	21	ARG
18	Z	27	LYS
18	Z	29	ILE
18	Z	36	ARG
18	Z	38	TYR
18	Z	57	MET
18	Z	60	LYS
18	Z	65	ARG
18	Z	68	ILE
18	Z	75	TYR
18	Z	78	ASN
18	Z	79	HIS
18	Z	88	ASP
18	Z	91	LEU
18	Z	92	ASP
18	Z	93	LYS
18	Z	98	LYS
18	Z	121	ARG
18	Z	127	ASN
18	Z	136	PHE
19	a	7	LYS
19	a	14	HIS
19	a	19	HIS
19	a	21	ARG
19	a	40	HIS
19	a	41	HIS

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Mol	Chain	Res	Type
19	a	46	ASP
19	a	47	LYS
19	a	49	HIS
19	a	52	TYR
19	a	59	ARG
19	a	61	TYR
19	a	63	LEU
19	a	67	GLN
19	a	77	LYS
19	a	83	SER
19	a	84	GLU
19	a	85	GLN
19	a	95	THR
19	a	105	ARG
19	a	127	LYS
19	a	132	ARG
20	b	12	GLN
20	b	16	TRP
20	b	22	LYS
20	b	23	LYS
20	b	25	ARG
20	b	27	GLN
20	b	28	ARG
20	b	30	GLU
20	b	36	ASP
20	b	41	ARG
20	b	43	MET
20	b	44	ARG
20	b	51	LYS
20	b	55	LYS
20	b	65	MET
21	c	18	LEU
21	c	19	GLN
21	c	27	TYR
21	c	37	MET
21	c	42	LYS
21	c	44	LYS
21	c	55	LEU
21	c	56	ARG
21	c	59	GLU
21	c	65	MET
21	c	66	LEU

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Mol	Chain	Res	Type
21	c	73	HIS
21	c	74	TYR
21	c	77	ASN
21	c	78	ASN
21	c	81	LEU
21	c	88	TYR
21	c	94	LEU
22	d	18	ASN
22	d	19	GLU
22	d	23	ARG
22	d	26	THR
22	d	28	ASN
22	d	31	LYS
22	d	32	ARG
22	d	36	VAL
22	d	38	PHE
22	d	39	LYS
22	d	44	ARG
22	d	67	ARG
22	d	73	TRP
22	d	78	ARG
22	d	79	ASN
22	d	83	ARG
22	d	85	ARG
22	d	86	VAL
22	d	87	ARG
22	d	91	LYS
22	d	94	GLU
22	d	95	ASP
22	d	101	LYS
22	d	103	TYR
22	d	107	THR
22	d	109	VAL
22	d	116	ASN
22	d	117	LEU
22	d	118	GLN
22	d	119	THR
22	d	121	ASN
22	d	123	ASP
23	e	9	LYS
23	e	11	LYS
23	e	16	ARG

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Mol	Chain	Res	Type
23	e	21	ILE
23	e	22	ARG
23	e	26	ASP
23	e	36	ARG
23	e	39	ARG
23	e	42	ASP
23	e	43	ASN
23	e	46	ARG
23	e	49	PHE
23	e	57	ASN
23	e	64	LYS
23	e	68	HIS
23	e	78	LEU
23	e	85	LEU
23	e	92	ASN
23	e	95	TYR
23	e	106	LYS
23	e	107	ASN
23	e	113	GLU
23	e	117	GLN
23	e	124	ASN
23	e	126	ASN
23	e	128	ARG
24	f	14	TYR
24	f	16	ARG
24	f	19	ARG
24	f	24	HIS
24	f	25	THR
24	f	28	LEU
24	f	34	TYR
24	f	36	ARG
24	f	49	TYR
24	f	51	TYR
24	f	52	LYS
24	f	69	VAL
24	f	100	ARG
24	f	101	ILE
24	f	103	VAL
24	f	109	ARG
25	g	4	ARG
25	g	7	TYR
25	g	11	LEU

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Mol	Chain	Res	Type
25	g	12	SER
25	g	14	ASN
25	g	29	ARG
25	g	32	TYR
25	g	43	LYS
25	g	52	ARG
25	g	57	ARG
25	g	60	ARG
25	g	64	LEU
25	g	66	ARG
25	g	74	VAL
25	g	75	SER
25	g	81	SER
25	g	93	ARG
25	g	95	PHE
25	g	114	GLN
25	g	115	LYS
26	h	7	ARG
26	h	15	GLU
26	h	23	ASP
26	h	28	LEU
26	h	30	GLN
26	h	48	ARG
26	h	51	ARG
26	h	67	GLU
26	h	68	ASN
26	h	69	LEU
26	h	73	TYR
26	h	77	LYS
26	h	89	ARG
26	h	93	ARG
26	h	97	LYS
26	h	102	LEU
26	h	107	GLN
26	h	117	ARG
26	h	119	PHE
26	h	122	LYS
27	i	4	ARG
27	i	12	ASN
27	i	20	ASN
27	i	27	SER
27	i	30	ARG

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Mol	Chain	Res	Type
27	i	33	LEU
27	i	36	HIS
27	i	42	ASP
27	i	45	ARG
27	i	46	GLU
27	i	50	PHE
27	i	54	GLU
27	i	68	ARG
27	i	85	ARG
27	i	87	ARG
27	i	89	GLU
27	i	103	LYS
28	k	14	THR
28	k	19	ASP
28	k	35	LYS
28	k	37	ARG
28	k	40	ARG
28	k	43	TYR
28	k	44	THR
28	k	54	GLU
28	k	56	LEU
28	k	60	LEU
28	k	70	LYS
29	l	12	PHE
29	l	16	LYS
29	l	17	GLN
29	l	21	ARG
29	l	36	ARG
29	l	39	SER
29	l	45	ARG
29	l	46	ARG
29	l	49	LEU
30	m	79	GLU
30	m	84	GLN
30	m	87	GLN
30	m	89	TYR
30	m	90	ASN
30	m	97	ARG
30	m	98	LYS
30	m	102	ARG
30	m	104	HIS
30	m	106	ARG

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Mol	Chain	Res	Type
30	m	109	ASN
30	m	111	ARG
30	m	117	HIS
30	m	118	THR
30	m	119	ASN
31	o	17	LYS
31	o	26	TYR
31	o	28	LYS
31	o	31	ASP
31	o	33	LEU
31	o	36	GLN
31	o	40	ARG
31	o	45	GLN
31	o	48	TYR
31	o	57	ARG
31	o	59	LYS
31	o	61	LYS
31	o	64	LYS
31	o	69	ARG
31	o	76	ASN
31	o	77	CYS
31	o	78	ARG
31	o	79	SER
31	o	82	MET
31	o	99	ARG
31	o	102	GLN
31	o	104	ILE
35	B	4	ARG
35	B	5	LYS
35	B	10	ARG
35	B	16	PHE
35	B	17	LEU
35	B	25	HIS
35	B	26	ARG
35	B	36	ASP
35	B	39	LYS
35	B	49	TYR
35	B	54	THR
35	B	56	ILE
35	B	58	ARG
35	B	59	GLU
35	B	61	ASP

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Mol	Chain	Res	Type
35	B	62	ARG
35	B	71	GLU
35	B	74	GLU
35	B	78	ILE
35	B	94	GLU
35	B	95	THR
35	B	99	LEU
35	B	100	ARG
35	B	101	THR
35	B	103	LYS
35	B	104	THR
35	B	106	PHE
35	B	113	GLU
35	B	116	ARG
35	B	117	ARG
35	B	119	TYR
35	B	122	TRP
35	B	123	HIS
35	B	146	LEU
35	B	149	ASP
35	B	152	SER
35	B	154	LYS
35	B	165	HIS
35	B	167	GLN
35	B	169	ARG
35	B	174	ARG
35	B	189	THR
35	B	198	ARG
35	B	203	GLN
35	B	207	VAL
35	B	208	ASN
35	B	228	TYR
35	B	234	ARG
35	B	235	TRP
35	B	236	HIS
35	B	237	THR
35	B	249	ARG
35	B	261	ARG
35	B	291	TYR
35	B	299	ILE
35	B	307	TYR
35	B	308	ASP

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Mol	Chain	Res	Type
35	B	309	LEU
35	B	311	ASP
35	B	314	ILE
35	B	315	ASN
35	B	323	TYR
35	B	326	VAL
35	B	328	ASN
35	B	333	LEU
35	B	336	CYS
35	B	347	LEU
35	B	348	ARG
35	B	352	LEU
35	B	355	THR
35	B	356	LYS
35	B	357	ARG
35	B	362	LYS
35	B	364	ASP
35	B	366	LYS
35	B	369	ASP
35	B	378	ARG
35	B	381	THR
35	B	384	GLU
36	C	7	LEU
36	C	14	LYS
36	C	35	ASP
36	C	36	ILE
36	C	41	HIS
36	C	42	THR
36	C	47	ASN
36	C	49	ARG
36	C	65	GLU
36	C	69	THR
36	C	71	ARG
36	C	78	ARG
36	C	80	ARG
36	C	85	HIS
36	C	86	ARG
36	C	87	SER
36	C	92	PHE
36	C	94	ASN
36	C	95	MET
36	C	96	CYS

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Mol	Chain	Res	Type
36	C	97	ARG
36	C	107	THR
36	C	112	HIS
36	C	113	ARG
36	C	114	ARG
36	C	115	VAL
36	C	117	THR
36	C	122	TYR
36	C	126	SER
36	C	133	LEU
36	C	142	HIS
36	C	146	GLU
36	C	149	GLU
36	C	150	LEU
36	C	155	GLU
36	C	156	ASP
36	C	173	LYS
36	C	175	LYS
36	C	178	ASN
36	C	182	LYS
36	C	184	TYR
36	C	188	ARG
36	C	193	LYS
36	C	195	LYS
36	C	196	MET
36	C	198	ASN
36	C	201	ARG
36	C	202	ILE
36	C	203	GLN
36	C	204	ARG
36	C	212	ASN
36	C	219	LYS
36	C	222	ARG
36	C	232	VAL
36	C	262	GLU
36	C	263	LEU
36	C	276	ASN
36	C	281	MET
36	C	288	ASP
36	C	303	ARG
36	C	307	LYS
36	C	309	ILE

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Mol	Chain	Res	Type
36	C	310	HIS
36	C	311	ARG
36	C	312	ARG
36	C	322	LEU
36	C	333	LYS
36	C	334	THR
36	C	337	ARG
36	C	343	GLN
36	C	345	ARG
36	C	350	ARG
37	E	39	HIS
37	E	43	ASN
37	E	46	LEU
37	E	52	ARG
37	E	61	ARG
37	E	64	MET
37	E	66	LYS
37	E	67	ARG
37	E	68	LYS
37	E	101	ARG
37	E	104	LYS
37	E	106	ARG
37	E	111	TYR
37	E	112	TYR
37	E	114	THR
37	E	115	GLU
37	E	126	LYS
37	E	129	PHE
37	E	134	ARG
37	E	139	SER
37	E	153	HIS
37	E	157	ARG
37	E	166	SER
37	E	171	VAL
37	E	175	LEU
37	E	179	ARG
37	E	186	HIS
37	E	187	GLN
37	E	190	VAL
37	E	197	ILE
37	E	203	LYS
37	E	206	LYS

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Mol	Chain	Res	Type
37	E	212	TYR
37	E	219	ARG
37	E	222	ARG
37	E	230	ASP
37	E	233	LYS
37	E	237	GLU
37	E	241	GLN
37	E	242	ARG
37	E	246	GLN
37	E	250	ASP
37	E	252	GLN
37	E	256	ARG
37	E	268	ARG
37	E	275	ASN
37	E	277	ILE
37	E	280	HIS
37	E	281	LYS
37	E	284	PHE
38	F	32	ILE
38	F	34	ARG
38	F	38	LYS
38	F	41	GLN
38	F	43	MET
38	F	44	LEU
38	F	49	ARG
38	F	50	LYS
38	F	68	ARG
38	F	69	THR
38	F	72	ARG
38	F	82	ASN
38	F	83	PHE
38	F	85	VAL
38	F	90	LYS
38	F	93	PHE
38	F	100	ILE
38	F	101	ASN
38	F	104	SER
38	F	109	LYS
38	F	118	GLN
38	F	119	ILE
38	F	120	PHE
38	F	121	ASN

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Mol	Chain	Res	Type
38	F	137	ILE
38	F	139	GLU
38	F	149	LEU
38	F	151	SER
38	F	154	GLU
38	F	192	LEU
38	F	195	GLU
38	F	201	LYS
38	F	202	ARG
38	F	204	LYS
38	F	207	ASN
38	F	209	PHE
38	F	213	PHE
38	F	214	LYS
38	F	216	SER
38	F	219	ARG
38	F	224	LYS
38	F	226	THR
38	F	227	THR
38	F	234	ASP
38	F	239	GLU
38	F	245	LEU
38	F	248	ARG
39	I	3	ARG
39	I	4	ARG
39	I	8	CYS
39	I	9	TYR
39	I	13	LYS
39	I	14	ASN
39	I	17	TYR
39	I	28	ASP
39	I	34	PHE
39	I	36	LEU
39	I	39	LYS
39	I	40	LYS
39	I	43	VAL
39	I	46	PHE
39	I	48	LEU
39	I	52	MET
39	I	58	GLU
39	I	78	LYS
39	I	80	CYS

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Mol	Chain	Res	Type
39	I	85	PHE
39	I	92	HIS
39	I	95	HIS
39	I	99	ILE
39	I	100	ASN
39	I	102	MET
39	I	125	THR
39	I	126	VAL
39	I	128	ARG
39	I	130	HIS
39	I	139	ARG
39	I	142	LEU
39	I	143	GLN
39	I	146	GLU
39	I	150	GLU
39	I	153	ARG
39	I	159	PHE
39	I	164	LYS
39	I	171	TRP
39	I	177	ASN
39	I	179	ASP
39	I	181	PHE
39	I	182	GLU
39	I	187	LYS
39	I	189	CYS
39	I	203	HIS
39	I	207	ASP
39	I	208	LYS
39	I	212	LEU
40	P	3	ARG
40	P	5	SER
40	P	9	GLU
40	P	10	ASN
40	P	13	LYS
40	P	18	ARG
40	P	22	LEU
40	P	23	ARG
40	P	24	VAL
40	P	26	PHE
40	P	28	ASN
40	P	40	HIS
40	P	42	ARG

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Mol	Chain	Res	Type
40	P	54	GLN
40	P	69	ARG
40	P	78	TRP
40	P	90	PHE
40	P	110	ASP
40	P	115	GLU
40	P	126	ARG
40	P	128	ARG
40	P	133	HIS
40	P	135	ARG
40	P	136	ILE
40	P	154	GLU
41	W	3	VAL
41	W	8	PHE
41	W	11	TYR
41	W	12	LYS
41	W	14	TYR
41	W	17	HIS
41	W	31	PHE
41	W	33	ASN
41	W	44	ARG
41	W	50	ASN
41	W	51	TRP
41	W	55	TYR
41	W	56	ARG
41	W	57	ARG
41	W	59	HIS
42	j	25	LYS
42	j	27	TYR
42	j	28	HIS
42	j	47	TYR
42	j	48	ASN
42	j	55	ARG
42	j	56	ARG
42	j	57	ASN
42	j	71	TYR
42	j	79	ARG
42	j	80	GLU
43	n	2	ARG
43	n	8	LYS
43	n	9	ARG
43	n	18	ARG

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Mol	Chain	Res	Type
43	n	21	ARG
44	p	3	LYS
44	p	4	ARG
44	p	16	THR
44	p	18	TYR
44	p	34	HIS
44	p	48	LYS
44	p	69	TRP
44	p	84	ARG
44	p	85	ARG
44	p	87	LYS
45	r	7	TRP
45	r	11	ARG
45	r	13	CYS
45	r	16	PHE
45	r	18	ILE
45	r	19	LYS
45	r	26	SER
45	r	28	GLU
45	r	31	ASN
45	r	35	ARG
45	r	45	HIS
45	r	64	ILE
45	r	67	ARG
45	r	83	ASN
45	r	101	LYS
45	r	105	ASP
45	r	106	LEU
45	r	107	ARG
45	r	115	SER
46	K	1	MET
46	K	14	TYR
46	K	16	ARG
46	K	22	VAL
46	K	40	LYS
46	K	45	ASP
46	K	61	LYS
46	K	90	ARG
46	K	96	LYS
46	K	104	ILE
46	K	107	ASP
46	K	108	GLU

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Mol	Chain	Res	Type
46	K	111	ASN
46	K	116	MET
46	K	117	ARG
46	K	119	ARG
46	K	121	LEU
46	K	124	GLU
46	K	125	LEU
46	K	130	LYS
46	K	147	HIS
47	q	5	ASP
47	q	12	ASN
47	q	14	PHE
47	q	16	LYS
47	q	33	ASP
47	q	45	MET
47	q	48	ARG
47	q	50	LYS
47	q	57	LYS
47	q	59	THR
47	q	61	MET
47	q	62	ARG
47	q	69	LEU
47	q	70	GLU
47	q	77	LYS
47	q	83	ARG
47	q	91	THR
47	q	94	ASP
47	q	95	LEU
47	q	99	ARG
47	q	105	ASN
47	q	116	ILE
47	q	127	ASN
47	q	143	ILE
47	q	148	SER
47	q	149	ARG
47	q	155	LEU
47	q	158	VAL
47	q	176	ASN
47	q	183	PHE
47	q	187	LEU
47	q	191	GLN
47	q	194	ASP

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Mol	Chain	Res	Type
47	q	202	GLU
47	q	203	VAL
47	q	206	ILE
48	z	8	ARG
48	z	15	ARG
48	z	24	ASN
48	z	28	LEU
48	z	33	LYS
48	z	43	ASP
48	z	61	ASP
48	z	76	GLN
48	z	109	LEU
48	z	147	GLN
48	z	162	SER
48	z	200	SER
48	z	241	ASP
48	z	273	ILE
48	z	283	GLU
48	z	349	LEU
48	z	383	ASN
48	z	394	LYS
49	2	109	LEU
49	2	123	PHE
49	2	127	MET
52	9	16	ILE
52	9	72	TRP
52	9	77	GLN
52	9	79	ARG
52	9	89	GLU
53	6	84	ARG
53	6	91	ASN
53	6	108	ASP
53	6	118	LEU
53	6	122	ASP
53	6	142	ARG
55	SA	6	ASP
55	SA	8	LEU
55	SA	9	GLN
55	SA	10	MET
55	SA	11	LYS
55	SA	32	PHE
55	SA	36	GLN

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Mol	Chain	Res	Type
55	SA	39	TYR
55	SA	44	ASP
55	SA	53	ARG
55	SA	56	GLU
55	SA	58	LEU
55	SA	60	LEU
55	SA	70	ASN
55	SA	73	ASP
55	SA	75	SER
55	SA	81	ASN
55	SA	84	GLN
55	SA	90	PHE
55	SA	97	THR
55	SA	99	ILE
55	SA	102	ARG
55	SA	105	PRO
55	SA	111	GLN
55	SA	116	PHE
55	SA	117	ARG
55	SA	120	ARG
55	SA	130	ASP
55	SA	131	HIS
55	SA	135	THR
55	SA	140	VAL
55	SA	141	ASN
55	SA	142	LEU
55	SA	151	ASP
55	SA	158	ASP
55	SA	169	HIS
55	SA	181	GLU
55	SA	185	MET
55	SA	186	ARG
55	SA	195	TRP
55	SA	203	PHE
55	SA	204	TYR
55	SA	206	ASP
55	SA	208	GLU
56	SB	27	LYS
56	SB	28	ARG
56	SB	30	TRP
56	SB	31	TYR
56	SB	34	LYS

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Mol	Chain	Res	Type
56	SB	43	ASN
56	SB	49	VAL
56	SB	51	ARG
56	SB	52	THR
56	SB	53	GLN
56	SB	56	LYS
56	SB	65	ARG
56	SB	68	GLU
56	SB	81	PHE
56	SB	88	THR
56	SB	104	ASP
56	SB	105	LEU
56	SB	107	ARG
56	SB	111	CYS
56	SB	119	THR
56	SB	122	GLU
56	SB	129	THR
56	SB	133	TYR
56	SB	136	ARG
56	SB	138	PHE
56	SB	146	ARG
56	SB	148	ASN
56	SB	150	ILE
56	SB	155	TYR
56	SB	157	GLN
56	SB	158	HIS
56	SB	163	GLN
56	SB	165	ARG
56	SB	181	LEU
56	SB	191	ASP
56	SB	196	ASP
56	SB	205	TYR
56	SB	208	HIS
56	SB	224	GLU
57	SC	60	TRP
57	SC	61	MET
57	SC	65	LYS
57	SC	68	ARG
57	SC	71	LYS
57	SC	72	ASP
57	SC	78	LEU
57	SC	79	GLU

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Mol	Chain	Res	Type
57	SC	97	PHE
57	SC	101	SER
57	SC	104	ASP
57	SC	110	MET
57	SC	115	GLN
57	SC	120	GLN
57	SC	121	ARG
57	SC	123	ARG
57	SC	137	VAL
57	SC	142	LYS
57	SC	143	CYS
57	SC	146	GLU
57	SC	152	ARG
57	SC	156	ILE
57	SC	167	ARG
57	SC	169	TYR
57	SC	183	LYS
57	SC	192	LEU
57	SC	200	ARG
57	SC	206	SER
57	SC	215	MET
57	SC	221	ASP
57	SC	223	TYR
57	SC	227	ARG
57	SC	242	ASP
57	SC	248	TYR
57	SC	255	LEU
57	SC	262	THR
57	SC	272	HIS
58	SE	3	ARG
58	SE	8	HIS
58	SE	9	LEU
58	SE	11	ARG
58	SE	18	TRP
58	SE	21	ASP
58	SE	30	ARG
58	SE	39	ARG
58	SE	42	LEU
58	SE	49	ARG
58	SE	51	ARG
58	SE	54	TYR
58	SE	67	GLN

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Mol	Chain	Res	Type
58	SE	73	ASP
58	SE	87	MET
58	SE	93	ASP
58	SE	95	THR
58	SE	98	ASN
58	SE	99	PHE
58	SE	100	ARG
58	SE	103	TYR
58	SE	106	LYS
58	SE	108	ARG
58	SE	112	HIS
58	SE	115	THR
58	SE	117	GLU
58	SE	118	GLU
58	SE	122	LYS
58	SE	148	ARG
58	SE	158	ASP
58	SE	162	ILE
58	SE	164	LEU
58	SE	165	GLU
58	SE	174	LYS
58	SE	179	ASN
58	SE	180	LEU
58	SE	188	ASN
58	SE	191	ARG
58	SE	198	ARG
58	SE	205	PHE
58	SE	220	THR
58	SE	221	ARG
58	SE	224	ASN
58	SE	226	PHE
58	SE	235	TRP
58	SE	240	ARG
58	SE	242	LYS
58	SE	245	ARG
58	SE	253	ASP
58	SE	259	LYS
58	SE	260	GLN
59	SG	16	ILE
59	SG	20	ASP
59	SG	21	GLU
59	SG	27	PHE

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Mol	Chain	Res	Type
59	SG	29	GLU
59	SG	30	LYS
59	SG	31	ARG
59	SG	32	MET
59	SG	56	ASN
59	SG	58	LYS
59	SG	59	GLN
59	SG	64	LYS
59	SG	65	GLN
59	SG	70	HIS
59	SG	76	LEU
59	SG	79	LYS
59	SG	85	ARG
59	SG	87	ARG
59	SG	88	ARG
59	SG	98	ARG
59	SG	109	LEU
59	SG	110	ASN
59	SG	120	ASP
59	SG	121	ILE
59	SG	124	LEU
59	SG	126	ASP
59	SG	133	LEU
59	SG	136	LYS
59	SG	140	ARG
59	SG	143	LYS
59	SG	145	PHE
59	SG	152	ASP
59	SG	155	GLN
59	SG	159	ARG
59	SG	162	LEU
59	SG	164	LYS
59	SG	165	GLU
59	SG	170	ARG
59	SG	172	LYS
59	SG	175	LYS
59	SG	190	ARG
59	SG	191	ARG
59	SG	196	LYS
59	SG	198	ARG
59	SG	213	LEU
59	SG	224	ARG

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Mol	Chain	Res	Type
59	SG	225	GLN
59	SG	227	GLN
59	SG	236	SER
60	SH	16	PRO
60	SH	23	ILE
60	SH	35	ASP
60	SH	36	LEU
60	SH	40	LEU
60	SH	46	THR
60	SH	57	ARG
60	SH	66	VAL
60	SH	81	ARG
60	SH	83	LEU
60	SH	126	HIS
60	SH	129	ILE
60	SH	135	PHE
60	SH	138	GLU
60	SH	148	LEU
60	SH	159	ASP
60	SH	160	LYS
60	SH	162	GLN
60	SH	166	VAL
60	SH	177	TYR
60	SH	184	ASP
60	SH	186	ASN
60	SH	190	PRO
60	SH	191	GLU
61	SI	5	ARG
61	SI	6	ASP
61	SI	8	TRP
61	SI	22	HIS
61	SI	25	ARG
61	SI	52	ASN
61	SI	58	LEU
61	SI	67	TRP
61	SI	73	THR
61	SI	74	ARG
61	SI	83	TYR
61	SI	86	SER
61	SI	87	ASN
61	SI	110	ARG
61	SI	111	GLN

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Mol	Chain	Res	Type
61	SI	112	TRP
61	SI	113	TYR
61	SI	116	HIS
61	SI	123	ARG
61	SI	128	LYS
61	SI	140	LYS
61	SI	143	LYS
61	SI	145	ILE
61	SI	149	TYR
61	SI	155	ASN
61	SI	174	CYS
61	SI	178	ARG
61	SI	191	GLU
61	SI	196	GLU
61	SI	203	LYS
62	SJ	5	ARG
62	SJ	9	CYS
62	SJ	10	ARG
62	SJ	13	TYR
62	SJ	18	ARG
62	SJ	20	PHE
62	SJ	26	ASP
62	SJ	29	LEU
62	SJ	35	TYR
62	SJ	37	LEU
62	SJ	39	ASN
62	SJ	42	GLU
62	SJ	44	TRP
62	SJ	54	ARG
62	SJ	67	ASP
62	SJ	69	ARG
62	SJ	70	ARG
62	SJ	83	ARG
62	SJ	88	ASP
62	SJ	91	LYS
62	SJ	95	ASP
62	SJ	96	TYR
62	SJ	101	LYS
62	SJ	108	ARG
62	SJ	109	ARG
62	SJ	110	LEU
62	SJ	115	PHE

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Mol	Chain	Res	Type
62	SJ	116	LYS
62	SJ	119	LEU
62	SJ	123	ILE
62	SJ	124	HIS
62	SJ	125	HIS
62	SJ	127	ARG
62	SJ	131	ARG
62	SJ	136	ARG
62	SJ	138	ARG
62	SJ	139	LYS
62	SJ	147	PHE
62	SJ	150	ARG
62	SJ	158	ASP
62	SJ	162	ARG
62	SJ	165	TYR
62	SJ	169	ARG
62	SJ	172	ARG
62	SJ	174	LYS
63	SL	4	ILE
63	SL	7	GLU
63	SL	8	ARG
63	SL	13	GLN
63	SL	16	ILE
63	SL	20	LYS
63	SL	22	ARG
63	SL	25	LEU
63	SL	27	GLU
63	SL	31	GLU
63	SL	35	ARG
63	SL	39	ASN
63	SL	40	ILE
63	SL	42	LEU
63	SL	44	PHE
63	SL	57	ASP
63	SL	65	ASN
63	SL	66	VAL
63	SL	69	ARG
63	SL	74	SER
63	SL	76	VAL
63	SL	85	THR
63	SL	89	ARG
63	SL	90	ARG

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Mol	Chain	Res	Type
63	SL	91	ASP
63	SL	92	TYR
63	SL	97	ARG
63	SL	103	GLU
63	SL	108	ASN
63	SL	113	LEU
63	SL	117	PHE
63	SL	121	GLN
63	SL	124	ASP
63	SL	131	CYS
63	SL	132	ARG
63	SL	143	LEU
64	SN	3	ARG
64	SN	5	HIS
64	SN	13	GLN
64	SN	14	SER
64	SN	20	ARG
64	SN	27	LYS
64	SN	31	ASP
64	SN	38	TYR
64	SN	55	ARG
64	SN	56	ASP
64	SN	58	HIS
64	SN	62	GLN
64	SN	64	ARG
64	SN	69	ASN
64	SN	78	LYS
64	SN	84	LEU
64	SN	86	GLU
64	SN	87	ASP
64	SN	89	TYR
64	SN	99	ARG
64	SN	101	HIS
64	SN	105	ASN
64	SN	113	PHE
64	SN	125	LEU
64	SN	127	ARG
64	SN	128	TYR
64	SN	132	LYS
64	SN	134	VAL
64	SN	139	TRP
64	SN	141	TYR

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Mol	Chain	Res	Type
65	SO	17	LEU
65	SO	20	GLN
65	SO	21	VAL
65	SO	26	ASN
65	SO	32	HIS
65	SO	34	PHE
65	SO	37	PHE
65	SO	41	PHE
65	SO	43	HIS
65	SO	46	ASP
65	SO	50	LYS
65	SO	51	GLU
65	SO	53	ILE
65	SO	60	MET
65	SO	62	VAL
65	SO	63	LYS
65	SO	65	ASP
65	SO	66	ARG
65	SO	80	ASP
65	SO	84	ARG
65	SO	86	LYS
65	SO	94	HIS
65	SO	103	ASN
65	SO	106	LYS
65	SO	116	LEU
65	SO	121	ARG
65	SO	128	ARG
65	SO	130	GLU
65	SO	146	ARG
65	SO	147	ARG
65	SO	149	ARG
65	SO	150	ARG
66	SV	1	MET
66	SV	2	GLN
66	SV	4	ASP
66	SV	11	LEU
66	SV	18	SER
66	SV	21	ASN
66	SV	39	VAL
66	SV	46	PHE
66	SV	49	GLN
66	SV	50	PHE

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Mol	Chain	Res	Type
66	SV	53	TYR
66	SV	67	ASP
66	SV	81	LYS
66	SV	82	ASN
67	SW	12	LYS
67	SW	15	ASN
67	SW	18	GLU
67	SW	24	GLN
67	SW	28	ARG
67	SW	36	ARG
67	SW	37	PHE
67	SW	52	ILE
67	SW	56	HIS
67	SW	57	ARG
67	SW	70	ASN
67	SW	74	VAL
67	SW	80	ASP
67	SW	83	LEU
67	SW	84	LYS
67	SW	85	ASP
67	SW	98	GLN
67	SW	105	THR
67	SW	111	MET
67	SW	113	HIS
67	SW	114	GLU
67	SW	117	ARG
67	SW	120	HIS
68	SX	5	ARG
68	SX	9	THR
68	SX	17	ARG
68	SX	19	ASP
68	SX	32	LEU
68	SX	46	HIS
68	SX	67	ARG
68	SX	81	ILE
68	SX	84	PHE
68	SX	88	ASP
68	SX	105	PHE
68	SX	114	ASP
68	SX	115	ILE
68	SX	131	LEU
69	SY	16	ARG

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Mol	Chain	Res	Type
69	SY	17	LEU
69	SY	19	GLN
69	SY	20	ARG
69	SY	22	GLN
69	SY	23	MET
69	SY	34	THR
69	SY	39	GLU
69	SY	47	MET
69	SY	54	VAL
69	SY	61	ARG
69	SY	63	HIS
69	SY	69	THR
69	SY	72	PHE
69	SY	74	MET
69	SY	77	ASP
69	SY	81	TYR
69	SY	96	LEU
69	SY	98	GLU
69	SY	99	LYS
69	SY	102	THR
69	SY	107	ARG
69	SY	111	LYS
69	SY	122	LYS
69	SY	124	ASN
70	Sa	8	ASN
70	Sa	22	ARG
70	Sa	28	ARG
70	Sa	30	VAL
70	Sa	41	ILE
70	Sa	51	ARG
70	Sa	52	ASP
70	Sa	86	ASN
70	Sa	87	ARG
70	Sa	88	SER
70	Sa	94	ASP
70	Sa	95	ARG
71	Sb	14	GLU
71	Sb	20	LYS
71	Sb	23	ARG
71	Sb	32	PHE
71	Sb	33	MET
71	Sb	34	ASP

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Mol	Chain	Res	Type
71	Sb	37	CYS
71	Sb	62	VAL
71	Sb	72	ARG
71	Sb	75	GLU
71	Sb	78	SER
71	Sb	83	GLN
71	Sb	84	HIS
72	Se	13	ARG
72	Se	15	GLN
72	Se	18	LYS
72	Se	23	GLU
72	Se	25	LYS
72	Se	26	LYS
72	Se	28	LYS
72	Se	31	ARG
72	Se	37	GLN
72	Se	40	ARG
72	Se	41	ARG
72	Se	52	LYS
73	SD	4	GLN
73	SD	5	ILE
73	SD	6	SER
73	SD	8	LYS
73	SD	9	ARG
73	SD	17	PHE
73	SD	20	GLU
73	SD	22	ASN
73	SD	24	PHE
73	SD	28	GLU
73	SD	32	ASP
73	SD	40	ARG
73	SD	42	THR
73	SD	53	THR
73	SD	56	GLN
73	SD	67	ARG
73	SD	87	TYR
73	SD	94	ARG
73	SD	103	GLU
73	SD	106	ARG
73	SD	107	TYR
73	SD	113	LEU
73	SD	135	GLU

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Mol	Chain	Res	Type
73	SD	141	LYS
73	SD	148	LYS
73	SD	152	PHE
73	SD	156	LEU
73	SD	158	ILE
73	SD	159	HIS
73	SD	162	ASP
73	SD	163	PRO
73	SD	165	ASN
73	SD	167	TYR
73	SD	169	ASP
73	SD	177	LEU
73	SD	178	ARG
73	SD	182	LEU
73	SD	187	LYS
73	SD	206	ASP
73	SD	207	HIS
73	SD	212	GLU
73	SD	214	LYS
73	SD	216	GLU
73	SD	218	LEU
73	SD	225	GLU
74	SF	23	TRP
74	SF	27	ASP
74	SF	29	GLN
74	SF	37	ASP
74	SF	42	LYS
74	SF	43	GLU
74	SF	49	LEU
74	SF	55	ARG
74	SF	63	LYS
74	SF	68	ILE
74	SF	79	HIS
74	SF	82	ASN
74	SF	83	ASN
74	SF	88	MET
74	SF	94	LYS
74	SF	101	HIS
74	SF	106	GLU
74	SF	109	LEU
74	SF	110	GLN
74	SF	114	ASN

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Mol	Chain	Res	Type
74	SF	118	ASN
74	SF	122	ARG
74	SF	123	GLU
74	SF	130	ARG
74	SF	136	ARG
74	SF	137	GLN
74	SF	140	ASP
74	SF	144	LEU
74	SF	145	ARG
74	SF	152	TRP
74	SF	164	ARG
74	SF	168	THR
74	SF	171	GLU
74	SF	172	CYS
74	SF	176	GLU
74	SF	184	SER
74	SF	186	ASN
74	SF	187	SER
74	SF	190	ILE
74	SF	194	ASP
74	SF	195	GLU
75	SK	1	MET
75	SK	2	LEU
75	SK	5	LYS
75	SK	8	ARG
75	SK	16	PHE
75	SK	32	HIS
75	SK	37	ASP
75	SK	39	ASN
75	SK	43	LEU
75	SK	46	MET
75	SK	54	SER
75	SK	61	GLN
75	SK	65	ARG
75	SK	66	HIS
75	SK	70	TYR
75	SK	74	GLU
75	SK	80	ARG
75	SK	81	ASP
75	SK	89	ILE
75	SK	95	ARG
75	SK	96	ARG

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Mol	Chain	Res	Type
76	SM	12	MET
76	SM	18	LEU
76	SM	20	GLU
76	SM	26	LEU
76	SM	29	ASP
76	SM	31	LEU
76	SM	33	ARG
76	SM	43	ASP
76	SM	45	ARG
76	SM	48	HIS
76	SM	49	LEU
76	SM	52	GLN
76	SM	72	HIS
76	SM	77	ILE
76	SM	83	LYS
76	SM	85	LEU
76	SM	88	TRP
76	SM	89	VAL
76	SM	91	LEU
76	SM	92	CYS
76	SM	95	ASP
76	SM	96	ARG
76	SM	99	ASN
76	SM	101	ARG
76	SM	102	LYS
76	SM	109	VAL
76	SM	113	ASP
76	SM	114	TYR
76	SM	127	TYR
77	SP	7	LYS
77	SP	10	ARG
77	SP	18	ARG
77	SP	27	ASP
77	SP	30	TYR
77	SP	40	ARG
77	SP	41	GLN
77	SP	42	ARG
77	SP	43	ARG
77	SP	44	ARG
77	SP	50	ARG
77	SP	51	ARG
77	SP	52	LYS

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Mol	Chain	Res	Type
77	SP	79	HIS
77	SP	81	ARG
77	SP	82	ASP
77	SP	86	LEU
78	SQ	8	GLN
78	SQ	15	ARG
78	SQ	26	LYS
78	SQ	27	ARG
78	SQ	35	ASN
78	SQ	40	GLU
78	SQ	41	MET
78	SQ	45	ARG
78	SQ	50	LYS
78	SQ	63	PHE
78	SQ	69	ARG
78	SQ	71	ARG
78	SQ	72	VAL
78	SQ	73	LYS
78	SQ	77	HIS
78	SQ	84	ILE
78	SQ	99	TYR
78	SQ	107	GLU
78	SQ	114	GLN
78	SQ	116	ASP
78	SQ	117	ARG
78	SQ	119	LEU
78	SQ	128	GLU
78	SQ	138	ARG
78	SQ	140	ARG
78	SQ	145	TYR
79	SR	1	MET
79	SR	3	ARG
79	SR	6	THR
79	SR	31	ASN
79	SR	33	ARG
79	SR	37	GLU
79	SR	49	LYS
79	SR	50	ILE
79	SR	56	HIS
79	SR	58	MET
79	SR	99	ASP
79	SR	102	THR

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Mol	Chain	Res	Type
79	SR	105	MET
79	SR	116	ASN
79	SR	127	ASN
80	SS	7	GLU
80	SS	8	LYS
80	SS	10	GLN
80	SS	42	HIS
80	SS	63	GLU
80	SS	78	LYS
80	SS	81	ASP
80	SS	82	TRP
80	SS	85	ASN
80	SS	86	ARG
80	SS	87	GLN
80	SS	95	TYR
80	SS	108	ARG
80	SS	113	ARG
80	SS	118	ARG
80	SS	124	ARG
80	SS	134	GLN
80	SS	135	HIS
81	ST	8	ASP
81	ST	11	GLN
81	ST	13	GLU
81	ST	16	ARG
81	ST	23	LYS
81	ST	28	LEU
81	ST	35	ASP
81	ST	37	VAL
81	ST	42	HIS
81	ST	52	TRP
81	ST	53	PHE
81	ST	56	ARG
81	ST	62	ARG
81	ST	63	HIS
81	ST	67	ARG
81	ST	74	SER
81	ST	79	TYR
81	ST	82	ARG
81	ST	83	GLN
81	ST	84	ARG
81	ST	90	SER

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Mol	Chain	Res	Type
81	ST	92	PHE
81	ST	94	ARG
81	ST	97	LYS
81	ST	102	ARG
81	ST	108	GLU
81	ST	118	ASP
81	ST	121	ARG
81	ST	128	GLN
81	ST	129	ARG
82	SU	19	ARG
82	SU	47	ASN
82	SU	48	LEU
82	SU	49	LYS
82	SU	55	ARG
82	SU	56	MET
82	SU	61	LEU
82	SU	62	ARG
82	SU	64	THR
82	SU	74	SER
82	SU	79	ARG
82	SU	84	ILE
82	SU	87	ARG
82	SU	93	SER
82	SU	111	GLU
83	SZ	44	LEU
83	SZ	45	ASN
83	SZ	51	ASP
83	SZ	64	ASN
83	SZ	69	THR
83	SZ	90	GLU
83	SZ	94	LYS
83	SZ	97	ILE
83	SZ	110	THR
83	SZ	114	LYS
84	Sc	5	ARG
84	Sc	7	GLN
84	Sc	13	ARG
84	Sc	21	THR
84	Sc	24	GLN
84	Sc	26	GLN
84	Sc	31	ARG
84	Sc	42	ILE

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Mol	Chain	Res	Type
84	Sc	54	ASP
84	Sc	60	GLU
84	Sc	62	GLU
84	Sc	67	ARG
85	Sd	6	PHE
85	Sd	8	TRP
85	Sd	9	SER
85	Sd	12	ARG
85	Sd	16	GLN
85	Sd	23	VAL
85	Sd	26	ASN
85	Sd	30	LEU
85	Sd	34	TYR
85	Sd	36	LEU
85	Sd	43	PHE
85	Sd	53	ILE
85	Sd	54	LYS
85	Sd	56	ASP
86	Sf	87	THR
86	Sf	89	LYS
86	Sf	95	ARG
86	Sf	98	VAL
86	Sf	104	LYS
86	Sf	106	TYR
86	Sf	119	ARG
86	Sf	121	CYS
86	Sf	126	CYS
86	Sf	131	PHE
86	Sf	138	ARG
86	Sf	139	HIS
86	Sf	140	TYR
86	Sf	141	CYS
86	Sf	143	LYS
86	Sf	146	LEU
86	Sf	147	THR
86	Sf	148	TYR
86	Sf	149	CYS
86	Sf	150	PHE
87	Sg	8	ARG
87	Sg	15	ASN
87	Sg	17	TRP
87	Sg	20	GLN

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Mol	Chain	Res	Type
87	Sg	24	THR
87	Sg	36	ARG
87	Sg	44	LYS
87	Sg	47	ARG
87	Sg	48	ASP
87	Sg	49	GLU
87	Sg	59	LEU
87	Sg	65	PHE
87	Sg	84	ASP
87	Sg	100	ARG
87	Sg	118	ARG
87	Sg	143	GLN
87	Sg	186	THR
87	Sg	187	ASN
87	Sg	194	TYR
87	Sg	213	ASP
87	Sg	215	GLN
87	Sg	226	HIS
87	Sg	229	THR
87	Sg	234	ASP
87	Sg	237	ASN
87	Sg	240	CYS
87	Sg	258	ILE
87	Sg	268	ASP
87	Sg	269	GLU
87	Sg	273	GLU
87	Sg	294	ASP
87	Sg	297	THR
87	Sg	298	LEU
87	Sg	299	PHE
87	Sg	302	TYR
87	Sg	306	LEU
88	S1	2	PRO
88	S1	7	TRP
88	S1	11	SER
88	S1	27	VAL
88	S1	28	VAL
88	S1	38	LEU
88	S1	46	LEU
88	S1	50	VAL
88	S1	59	VAL
88	S1	62	ILE

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Mol	Chain	Res	Type
88	S1	67	SER
88	S1	68	GLN
88	S1	71	ARG
89	S4	4	LEU
89	S4	7	GLU
89	S4	8	GLN
89	S4	32	LYS
89	S4	34	ASP
89	S4	77	ASN
89	S4	85	ASN
89	S4	92	ASP
89	S4	94	LEU
89	S4	95	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (302) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	19	HIS
1	A	50	HIS
1	A	86	GLN
1	A	100	ASN
1	A	187	HIS
1	A	194	ASN
1	A	209	HIS
1	A	215	ASN
1	A	217	GLN
2	D	9	ASN
2	D	45	ASN
2	D	94	ASN
2	D	191	ASN
2	D	195	HIS
2	D	198	HIS
2	D	202	GLN
2	D	244	HIS
2	D	250	ASN
3	G	43	GLN
3	G	64	GLN
3	G	66	GLN
3	G	81	ASN
3	G	108	GLN
3	G	112	GLN
3	G	231	ASN

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Mol	Chain	Res	Type
4	H	40	HIS
4	H	42	ASN
4	H	63	ASN
4	H	106	GLN
4	H	108	ASN
5	J	155	HIS
6	L	19	GLN
6	L	28	GLN
6	L	87	HIS
6	L	113	ASN
6	L	159	ASN
6	L	175	ASN
7	M	33	GLN
7	M	34	ASN
8	N	8	GLN
8	N	90	ASN
8	N	158	HIS
8	N	178	HIS
8	N	181	HIS
8	N	182	HIS
8	N	196	ASN
9	O	65	ASN
9	O	72	HIS
9	O	96	GLN
9	O	173	GLN
9	O	184	ASN
10	Q	7	HIS
10	Q	40	ASN
11	R	66	ASN
11	R	75	HIS
11	R	118	HIS
11	R	143	HIS
12	S	91	HIS
12	S	122	HIS
12	S	125	GLN
12	S	163	HIS
13	T	70	HIS
13	T	79	GLN
13	T	98	HIS
14	U	38	ASN
14	U	55	ASN
16	X	69	ASN

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Mol	Chain	Res	Type
16	X	93	ASN
16	X	125	ASN
17	Y	24	HIS
17	Y	72	GLN
17	Y	86	GLN
17	Y	100	HIS
18	Z	28	ASN
18	Z	79	HIS
18	Z	127	ASN
19	a	19	HIS
19	a	34	ASN
19	a	93	ASN
20	b	6	ASN
20	b	12	GLN
20	b	19	ASN
20	b	27	GLN
20	b	42	ASN
21	c	77	ASN
22	d	93	ASN
22	d	116	ASN
23	e	24	GLN
23	e	43	ASN
23	e	57	ASN
23	e	126	ASN
24	f	20	ASN
24	f	21	GLN
24	f	55	ASN
24	f	65	ASN
24	f	80	ASN
25	g	18	ASN
25	g	110	GLN
25	g	112	GLN
26	h	30	GLN
26	h	62	ASN
26	h	63	GLN
26	h	68	ASN
26	h	98	HIS
26	h	108	GLN
27	i	12	ASN
27	i	26	HIS
30	m	84	GLN
30	m	87	GLN

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Mol	Chain	Res	Type
31	o	21	HIS
31	o	25	GLN
31	o	45	GLN
31	o	76	ASN
35	B	167	GLN
35	B	179	HIS
35	B	203	GLN
35	B	204	GLN
35	B	258	HIS
35	B	289	GLN
35	B	376	HIS
35	B	380	GLN
36	C	50	GLN
36	C	60	HIS
36	C	85	HIS
36	C	94	ASN
36	C	112	HIS
36	C	142	HIS
36	C	178	ASN
36	C	198	ASN
36	C	203	GLN
36	C	215	ASN
36	C	223	ASN
36	C	282	HIS
36	C	286	ASN
36	C	338	ASN
36	C	343	GLN
37	E	97	ASN
37	E	124	HIS
37	E	178	ASN
37	E	186	HIS
37	E	246	GLN
37	E	252	GLN
37	E	262	GLN
38	F	41	GLN
38	F	65	GLN
38	F	82	ASN
38	F	128	ASN
38	F	174	ASN
38	F	194	HIS
38	F	250	ASN
39	I	51	HIS

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Mol	Chain	Res	Type
39	I	86	HIS
39	I	100	ASN
39	I	163	GLN
40	P	28	ASN
40	P	64	ASN
40	P	72	GLN
40	P	80	GLN
40	P	145	HIS
41	W	17	HIS
42	j	16	HIS
42	j	48	ASN
44	p	92	GLN
45	r	6	GLN
45	r	12	ASN
45	r	21	ASN
45	r	36	ASN
45	r	83	ASN
46	K	66	ASN
46	K	147	HIS
46	K	149	HIS
47	q	68	HIS
47	q	105	ASN
47	q	191	GLN
47	q	200	ASN
48	z	70	ASN
48	z	76	GLN
48	z	126	GLN
48	z	151	ASN
48	z	197	GLN
48	z	227	GLN
48	z	347	GLN
48	z	364	ASN
48	z	383	ASN
48	z	429	GLN
52	9	24	ASN
55	SA	29	ASN
55	SA	33	GLN
55	SA	36	GLN
55	SA	84	GLN
55	SA	132	GLN
55	SA	169	HIS
56	SB	53	GLN

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Mol	Chain	Res	Type
56	SB	75	GLN
56	SB	124	HIS
56	SB	148	ASN
56	SB	158	HIS
56	SB	232	HIS
57	SC	115	GLN
57	SC	134	ASN
58	SE	36	HIS
58	SE	112	HIS
58	SE	138	HIS
58	SE	142	HIS
58	SE	188	ASN
59	SG	59	GLN
59	SG	65	GLN
59	SG	110	ASN
59	SG	163	ASN
60	SH	112	ASN
60	SH	114	GLN
61	SI	44	HIS
61	SI	64	ASN
61	SI	155	ASN
61	SI	168	GLN
62	SJ	111	GLN
63	SL	65	ASN
63	SL	106	HIS
64	SN	5	HIS
64	SN	13	GLN
64	SN	62	GLN
64	SN	69	ASN
65	SO	26	ASN
65	SO	43	HIS
65	SO	79	GLN
65	SO	94	HIS
66	SV	33	GLN
66	SV	47	ASN
67	SW	44	HIS
67	SW	64	ASN
67	SW	82	GLN
67	SW	90	GLN
67	SW	91	ASN
67	SW	98	GLN
67	SW	113	HIS

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Mol	Chain	Res	Type
68	SX	20	HIS
68	SX	23	HIS
68	SX	61	GLN
69	SY	94	HIS
69	SY	112	ASN
70	Sa	72	HIS
71	Sb	9	HIS
71	Sb	49	HIS
72	Se	37	GLN
72	Se	58	ASN
73	SD	4	GLN
73	SD	22	ASN
73	SD	56	GLN
74	SF	29	GLN
74	SF	65	GLN
74	SF	82	ASN
74	SF	83	ASN
74	SF	101	HIS
74	SF	137	GLN
74	SF	186	ASN
74	SF	203	ASN
75	SK	28	HIS
75	SK	39	ASN
75	SK	44	HIS
75	SK	66	HIS
76	SM	48	HIS
76	SM	52	GLN
76	SM	99	ASN
77	SP	35	GLN
77	SP	46	ASN
78	SQ	24	HIS
78	SQ	80	GLN
78	SQ	97	GLN
78	SQ	142	GLN
79	SR	29	HIS
79	SR	48	ASN
79	SR	74	GLN
79	SR	83	ASN
79	SR	118	GLN
79	SR	121	GLN
80	SS	10	GLN
80	SS	17	ASN

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Mol	Chain	Res	Type
80	SS	19	ASN
80	SS	120	HIS
80	SS	125	HIS
80	SS	135	HIS
81	ST	11	GLN
81	ST	63	HIS
82	SU	47	ASN
82	SU	81	GLN
82	SU	92	HIS
83	SZ	46	ASN
83	SZ	64	ASN
83	SZ	89	GLN
83	SZ	103	HIS
84	Sc	7	GLN
84	Sc	26	GLN
84	Sc	45	ASN
85	Sd	26	ASN
87	Sg	64	HIS
87	Sg	133	ASN
87	Sg	187	ASN
87	Sg	215	GLN
88	S1	3	GLN
88	S1	5	GLN
89	S4	54	ASN
89	S4	85	ASN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
32	5	3646/3658 (99%)	1724 (47%)	666 (18%)
33	7	119/120 (99%)	39 (32%)	15 (12%)
34	8	155/156 (99%)	66 (42%)	30 (19%)
50	3	74/76 (97%)	30 (40%)	5 (6%)
51	4	197/206 (95%)	45 (22%)	10 (5%)
54	S2	1715/1742 (98%)	860 (50%)	303 (17%)
All	All	5906/5958 (99%)	2764 (46%)	1029 (17%)

All (2764) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
32	5	2	G

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Mol	Chain	Res	Type
32	5	8	U
32	5	12	A
32	5	13	U
32	5	20	U
32	5	21	G
32	5	25	A
32	5	33	A
32	5	34	A
32	5	39	A
32	5	42	A
32	5	43	U
32	5	44	A
32	5	47	A
32	5	48	G
32	5	49	U
32	5	50	C
32	5	53	C
32	5	54	G
32	5	55	G
32	5	56	A
32	5	58	G
32	5	59	A
32	5	62	A
32	5	63	G
32	5	65	A
32	5	66	A
32	5	67	C
32	5	69	A
32	5	70	A
32	5	71	C
32	5	72	C
32	5	74	G
32	5	81	C
32	5	83	C
32	5	84	A
32	5	85	G
32	5	88	A
32	5	89	C
32	5	91	G
32	5	92	C
32	5	93	G
32	5	94	A

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Mol	Chain	Res	Type
32	5	95	G
32	5	96	U
32	5	98	A
32	5	99	A
32	5	100	C
32	5	101	A
32	5	107	G
32	5	108	A
32	5	109	G
32	5	110	C
32	5	111	C
32	5	112	C
32	5	115	C
32	5	116	G
32	5	118	C
32	5	119	G
32	5	120	A
32	5	121	A
32	5	126	C
32	5	128	C
32	5	129	C
32	5	134	G
32	5	135	G
32	5	136	C
32	5	138	G
32	5	139	G
32	5	143	C
32	5	144	G
32	5	145	G
32	5	150	U
32	5	151	G
32	5	152	U
32	5	157	U
32	5	158	A
32	5	159	C
32	5	164	G
32	5	166	C
32	5	167	C
32	5	170	C
32	5	171	U
32	5	172	C
32	5	173	C

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Mol	Chain	Res	Type
32	5	178	C
32	5	182	G
32	5	183	C
32	5	184	U
32	5	185	C
32	5	186	G
32	5	187	U
32	5	188	G
32	5	189	G
32	5	194	C
32	5	195	C
32	5	196	C
32	5	197	A
32	5	198	A
32	5	200	U
32	5	201	C
32	5	202	C
32	5	203	U
32	5	205	C
32	5	206	U
32	5	208	A
32	5	209	U
32	5	211	G
32	5	212	A
32	5	213	G
32	5	216	C
32	5	217	C
32	5	218	A
32	5	219	G
32	5	220	C
32	5	221	C
32	5	224	U
32	5	225	G
32	5	226	G
32	5	227	A
32	5	231	U
32	5	232	G
32	5	233	U
32	5	234	G
32	5	235	A
32	5	237	G
32	5	238	C

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Mol	Chain	Res	Type
32	5	239	C
32	5	245	C
32	5	246	G
32	5	255	C
32	5	257	C
32	5	262	G
32	5	264	C
32	5	265	C
32	5	266	C
32	5	267	G
32	5	269	G
32	5	270	U
32	5	272	U
32	5	273	U
32	5	274	C
32	5	275	C
32	5	276	C
32	5	277	G
32	5	278	G
32	5	279	A
32	5	280	G
32	5	281	U
32	5	287	U
32	5	291	U
32	5	292	G
32	5	293	G
32	5	294	G
32	5	295	A
32	5	296	A
32	5	297	U
32	5	300	A
32	5	305	A
32	5	306	A
32	5	309	C
32	5	310	G
32	5	315	G
32	5	322	C
32	5	323	C
32	5	324	A
32	5	325	U
32	5	328	A
32	5	329	A

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Mol	Chain	Res	Type
32	5	330	G
32	5	334	A
32	5	336	A
32	5	339	C
32	5	340	C
32	5	342	G
32	5	345	C
32	5	347	A
32	5	349	A
32	5	352	G
32	5	353	A
32	5	354	U
32	5	355	A
32	5	357	U
32	5	358	C
32	5	360	A
32	5	361	C
32	5	362	A
32	5	363	A
32	5	370	U
32	5	371	A
32	5	372	A
32	5	381	U
32	5	383	A
32	5	384	A
32	5	385	A
32	5	386	A
32	5	387	G
32	5	388	A
32	5	394	G
32	5	395	A
32	5	396	A
32	5	399	G
32	5	406	C
32	5	407	A
32	5	408	A
32	5	409	G
32	5	410	A
32	5	411	G
32	5	412	G
32	5	413	G
32	5	414	C

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Mol	Chain	Res	Type
32	5	415	G
32	5	417	G
32	5	418	A
32	5	424	U
32	5	431	G
32	5	432	U
32	5	433	A
32	5	436	C
32	5	440	U
32	5	446	C
32	5	449	C
32	5	450	G
32	5	451	C
32	5	452	A
32	5	453	G
32	5	454	U
32	5	455	C
32	5	456	C
32	5	458	C
32	5	467	U
32	5	468	U
32	5	469	C
32	5	470	A
32	5	473	C
32	5	480	C
32	5	481	G
32	5	485	C
32	5	486	C
32	5	487	G
32	5	491	G
32	5	498	C
32	5	500	G
32	5	502	C
32	5	503	C
32	5	504	G
32	5	506	C
32	5	509	A
32	5	510	U
32	5	511	C
32	5	514	U
32	5	515	C
32	5	519	C

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Mol	Chain	Res	Type
32	5	647	G
32	5	648	G
32	5	649	A
32	5	650	C
32	5	653	U
32	5	654	C
32	5	656	C
32	5	658	C
32	5	659	G
32	5	663	G
32	5	664	G
32	5	665	C
32	5	666	G
32	5	667	A
32	5	668	C
32	5	669	C
32	5	671	G
32	5	673	C
32	5	682	G
32	5	683	C
32	5	684	G
32	5	685	C
32	5	686	A
32	5	687	U
32	5	689	U
32	5	690	C
32	5	694	C
32	5	695	G
32	5	696	C
32	5	697	G
32	5	700	G
32	5	702	U
32	5	703	G
32	5	704	C
32	5	707	C
32	5	716	C
32	5	721	G
32	5	724	C
32	5	727	C
32	5	728	U
32	5	729	G
32	5	730	G

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Mol	Chain	Res	Type
32	5	731	G
32	5	732	A
32	5	737	C
32	5	742	G
32	5	743	G
32	5	745	G
32	5	746	A
32	5	747	A
32	5	748	G
32	5	749	G
32	5	756	G
32	5	912	G
32	5	913	U
32	5	915	A
32	5	917	A
32	5	918	G
32	5	920	C
32	5	921	C
32	5	925	C
32	5	926	G
32	5	927	G
32	5	928	C
32	5	929	A
32	5	930	G
32	5	931	C
32	5	932	A
32	5	933	G
32	5	934	C
32	5	935	A
32	5	936	C
32	5	937	U
32	5	938	C
32	5	939	G
32	5	940	C
32	5	943	A
32	5	944	A
32	5	945	U
32	5	946	C
32	5	950	G
32	5	952	G
32	5	956	A
32	5	957	G

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Mol	Chain	Res	Type
32	5	958	G
32	5	959	G
32	5	960	A
32	5	961	G
32	5	962	C
32	5	963	G
32	5	964	A
32	5	965	G
32	5	966	A
32	5	967	C
32	5	968	C
32	5	969	C
32	5	970	G
32	5	971	U
32	5	972	C
32	5	974	C
32	5	975	C
32	5	976	G
32	5	977	C
32	5	978	G
32	5	979	C
32	5	980	U
32	5	982	U
32	5	983	C
32	5	990	C
32	5	1051	G
32	5	1067	G
32	5	1068	G
32	5	1070	G
32	5	1072	C
32	5	1075	G
32	5	1076	C
32	5	1078	A
32	5	1081	C
32	5	1083	U
32	5	1084	C
32	5	1086	C
32	5	1167	C
32	5	1168	G
32	5	1177	U
32	5	1181	C
32	5	1193	C

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Mol	Chain	Res	Type
32	5	1210	C
32	5	1211	G
32	5	1212	G
32	5	1214	C
32	5	1215	C
32	5	1216	C
32	5	1217	G
32	5	1219	G
32	5	1220	G
32	5	1221	G
32	5	1222	A
32	5	1233	G
32	5	1235	G
32	5	1236	C
32	5	1237	C
32	5	1238	A
32	5	1239	C
32	5	1240	G
32	5	1242	G
32	5	1243	C
32	5	1244	G
32	5	1245	C
32	5	1255	A
32	5	1264	C
32	5	1265	G
32	5	1266	G
32	5	1267	C
32	5	1268	G
32	5	1269	G
32	5	1270	A
32	5	1271	G
32	5	1272	C
32	5	1273	G
32	5	1274	A
32	5	1275	G
32	5	1277	G
32	5	1279	A
32	5	1280	C
32	5	1283	G
32	5	1284	G
32	5	1285	U
32	5	1288	G

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Mol	Chain	Res	Type
32	5	1289	C
32	5	1290	G
32	5	1291	G
32	5	1293	G
32	5	1294	A
32	5	1295	C
32	5	1296	G
32	5	1297	U
32	5	1298	C
32	5	1299	G
32	5	1300	G
32	5	1301	C
32	5	1302	U
32	5	1303	A
32	5	1304	C
32	5	1313	C
32	5	1314	C
32	5	1318	C
32	5	1319	U
32	5	1320	U
32	5	1324	A
32	5	1325	C
32	5	1326	A
32	5	1328	G
32	5	1329	G
32	5	1330	A
32	5	1333	A
32	5	1338	G
32	5	1344	C
32	5	1354	A
32	5	1355	G
32	5	1357	C
32	5	1358	G
32	5	1359	G
32	5	1360	G
32	5	1362	G
32	5	1364	U
32	5	1365	C
32	5	1366	G
32	5	1367	C
32	5	1368	A
32	5	1369	C

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Mol	Chain	Res	Type
32	5	1370	G
32	5	1371	A
32	5	1372	A
32	5	1377	G
32	5	1378	C
32	5	1379	C
32	5	1380	G
32	5	1381	U
32	5	1386	C
32	5	1387	A
32	5	1388	A
32	5	1389	U
32	5	1390	G
32	5	1394	G
32	5	1397	A
32	5	1398	A
32	5	1399	G
32	5	1402	C
32	5	1405	C
32	5	1406	G
32	5	1407	C
32	5	1408	G
32	5	1409	C
32	5	1410	U
32	5	1411	C
32	5	1415	G
32	5	1420	A
32	5	1421	G
32	5	1426	G
32	5	1427	A
32	5	1428	U
32	5	1429	C
32	5	1431	C
32	5	1432	G
32	5	1435	G
32	5	1436	C
32	5	1439	C
32	5	1440	U
32	5	1441	C
32	5	1445	U
32	5	1446	C
32	5	1448	G

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Mol	Chain	Res	Type
32	5	1454	G
32	5	1455	G
32	5	1456	C
32	5	1457	G
32	5	1463	C
32	5	1465	G
32	5	1466	G
32	5	1474	C
32	5	1475	G
32	5	1478	C
32	5	1479	G
32	5	1480	C
32	5	1481	C
32	5	1482	G
32	5	1483	C
32	5	1484	G
32	5	1485	C
32	5	1486	C
32	5	1488	G
32	5	1489	G
32	5	1490	G
32	5	1493	G
32	5	1497	A
32	5	1498	G
32	5	1501	C
32	5	1503	A
32	5	1504	G
32	5	1508	A
32	5	1514	U
32	5	1516	G
32	5	1518	A
32	5	1519	C
32	5	1520	C
32	5	1521	C
32	5	1522	G
32	5	1523	A
32	5	1525	A
32	5	1530	G
32	5	1534	A
32	5	1535	C
32	5	1538	U
32	5	1543	G

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Mol	Chain	Res	Type
32	5	1547	A
32	5	1562	G
32	5	1563	A
32	5	1564	A
32	5	1566	C
32	5	1571	G
32	5	1572	U
32	5	1577	G
32	5	1578	U
32	5	1583	A
32	5	1590	C
32	5	1591	U
32	5	1596	U
32	5	1597	G
32	5	1604	G
32	5	1611	C
32	5	1612	G
32	5	1613	A
32	5	1614	C
32	5	1615	C
32	5	1624	G
32	5	1625	G
32	5	1626	G
32	5	1631	A
32	5	1632	A
32	5	1633	G
32	5	1634	A
32	5	1636	U
32	5	1637	A
32	5	1638	A
32	5	1640	C
32	5	1641	G
32	5	1642	A
32	5	1643	A
32	5	1649	U
32	5	1650	A
32	5	1654	G
32	5	1655	C
32	5	1656	U
32	5	1661	C
32	5	1662	C
32	5	1670	G

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Mol	Chain	Res	Type
32	5	1671	U
32	5	1673	U
32	5	1676	C
32	5	1678	C
32	5	1679	A
32	5	1680	G
32	5	1681	G
32	5	1684	A
32	5	1685	G
32	5	1686	C
32	5	1687	U
32	5	1691	G
32	5	1692	C
32	5	1694	C
32	5	1696	C
32	5	1697	G
32	5	1698	C
32	5	1699	A
32	5	1719	A
32	5	1720	C
32	5	1721	G
32	5	1722	C
32	5	1723	A
32	5	1724	G
32	5	1725	U
32	5	1731	C
32	5	1734	G
32	5	1735	U
32	5	1736	A
32	5	1741	G
32	5	1742	A
32	5	1746	A
32	5	1750	G
32	5	1751	A
32	5	1753	G
32	5	1754	U
32	5	1755	C
32	5	1756	U
32	5	1757	U
32	5	1758	G
32	5	1759	G
32	5	1760	G

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Mol	Chain	Res	Type
32	5	1761	G
32	5	1762	C
32	5	1764	G
32	5	1766	A
32	5	1767	A
32	5	1768	C
32	5	1769	G
32	5	1770	A
32	5	1772	C
32	5	1776	A
32	5	1777	C
32	5	1778	C
32	5	1779	U
32	5	1781	U
32	5	1787	A
32	5	1788	A
32	5	1789	C
32	5	1790	U
32	5	1791	U
32	5	1797	G
32	5	1799	G
32	5	1800	U
32	5	1803	G
32	5	1804	A
32	5	1805	A
32	5	1815	G
32	5	1816	C
32	5	1817	U
32	5	1818	G
32	5	1819	G
32	5	1820	C
32	5	1821	G
32	5	1822	U
32	5	1827	C
32	5	1828	C
32	5	1830	G
32	5	1832	C
32	5	1833	G
32	5	1834	U
32	5	1835	G
32	5	1836	G
32	5	1842	G

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Mol	Chain	Res	Type
32	5	1843	A
32	5	1847	C
32	5	1848	C
32	5	1849	U
32	5	1850	A
32	5	1851	G
32	5	1855	G
32	5	1864	G
32	5	1866	U
32	5	1867	A
32	5	1869	G
32	5	1876	U
32	5	1878	G
32	5	1881	C
32	5	1882	U
32	5	1884	C
32	5	1885	G
32	5	1887	G
32	5	1888	A
32	5	1889	U
32	5	1890	G
32	5	1891	A
32	5	1897	A
32	5	1899	G
32	5	1900	C
32	5	1903	G
32	5	1907	A
32	5	1910	G
32	5	1912	G
32	5	1913	C
32	5	1916	G
32	5	1917	A
32	5	1918	U
32	5	1920	C
32	5	1921	C
32	5	1922	G
32	5	1923	A
32	5	1925	G
32	5	1928	C
32	5	1929	A
32	5	1930	U
32	5	1931	C

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Mol	Chain	Res	Type
32	5	1932	A
32	5	1935	C
32	5	1936	C
32	5	1938	C
32	5	1939	A
32	5	1941	A
32	5	1945	G
32	5	1946	G
32	5	1947	U
32	5	1948	G
32	5	1949	U
32	5	1951	G
32	5	1952	G
32	5	1956	A
32	5	1959	U
32	5	1960	A
32	5	1961	G
32	5	1962	A
32	5	1967	A
32	5	1971	C
32	5	1974	U
32	5	1975	G
32	5	1976	G
32	5	1977	C
32	5	1979	A
32	5	1980	U
32	5	1981	G
32	5	1983	A
32	5	1984	A
32	5	1985	G
32	5	1986	U
32	5	1987	C
32	5	1988	G
32	5	1991	A
32	5	1992	U
32	5	1993	C
32	5	1995	G
32	5	1997	U
32	5	1998	A
32	5	1999	A
32	5	2001	G
32	5	2002	A

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Mol	Chain	Res	Type
32	5	2003	G
32	5	2004	U
32	5	2005	G
32	5	2007	G
32	5	2008	U
32	5	2009	A
32	5	2010	A
32	5	2011	C
32	5	2015	U
32	5	2018	C
32	5	2024	G
32	5	2025	A
32	5	2026	A
32	5	2027	U
32	5	2033	A
32	5	2034	G
32	5	2036	C
32	5	2040	A
32	5	2044	U
32	5	2045	G
32	5	2046	G
32	5	2047	A
32	5	2048	U
32	5	2052	G
32	5	2054	U
32	5	2055	G
32	5	2056	G
32	5	2057	A
32	5	2058	G
32	5	2059	C
32	5	2062	C
32	5	2063	G
32	5	2064	G
32	5	2069	A
32	5	2070	U
32	5	2075	G
32	5	2076	G
32	5	2077	C
32	5	2078	C
32	5	2082	G
32	5	2084	C
32	5	2085	G

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Mol	Chain	Res	Type
32	5	2088	A
32	5	2089	G
32	5	2090	U
32	5	2091	C
32	5	2092	G
32	5	2093	A
32	5	2094	G
32	5	2095	A
32	5	2096	G
32	5	2097	U
32	5	2100	A
32	5	2102	G
32	5	2105	A
32	5	2107	C
32	5	2108	G
32	5	2109	G
32	5	2110	C
32	5	2111	G
32	5	2112	G
32	5	2113	G
32	5	2114	G
32	5	2115	G
32	5	2116	C
32	5	2117	G
32	5	2118	G
32	5	2119	C
32	5	2120	G
32	5	2122	G
32	5	2123	C
32	5	2124	G
32	5	2125	C
32	5	2126	G
32	5	2127	C
32	5	2247	C
32	5	2248	C
32	5	2250	C
32	5	2251	G
32	5	2252	G
32	5	2253	A
32	5	2254	G
32	5	2255	C
32	5	2256	C

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Mol	Chain	Res	Type
32	5	2257	C
32	5	2258	C
32	5	2259	G
32	5	2260	C
32	5	2261	G
32	5	2262	G
32	5	2263	A
32	5	2264	C
32	5	2265	G
32	5	2266	C
32	5	2267	U
32	5	2268	A
32	5	2269	C
32	5	2270	G
32	5	2273	G
32	5	2275	G
32	5	2277	C
32	5	2279	A
32	5	2280	G
32	5	2283	G
32	5	2288	G
32	5	2289	C
32	5	2299	G
32	5	2300	A
32	5	2301	G
32	5	2305	U
32	5	2309	G
32	5	2311	C
32	5	2312	U
32	5	2313	A
32	5	2314	G
32	5	2315	G
32	5	2316	G
32	5	2319	C
32	5	2321	G
32	5	2322	G
32	5	2324	C
32	5	2325	C
32	5	2328	G
32	5	2329	U
32	5	2330	G
32	5	2331	G

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Mol	Chain	Res	Type
32	5	2332	A
32	5	2333	G
32	5	2334	C
32	5	2335	C
32	5	2337	C
32	5	2339	G
32	5	2342	G
32	5	2343	G
32	5	2347	A
32	5	2348	G
32	5	2349	A
32	5	2350	U
32	5	2351	C
32	5	2357	G
32	5	2360	A
32	5	2361	G
32	5	2362	U
32	5	2364	G
32	5	2366	A
32	5	2367	A
32	5	2369	U
32	5	2370	A
32	5	2372	U
32	5	2378	G
32	5	2382	A
32	5	2383	C
32	5	2384	U
32	5	2389	A
32	5	2390	G
32	5	2391	G
32	5	2394	G
32	5	2395	A
32	5	2396	A
32	5	2397	G
32	5	2398	U
32	5	2399	G
32	5	2407	G
32	5	2408	U
32	5	2417	A
32	5	2422	C
32	5	2425	U
32	5	2426	U

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Mol	Chain	Res	Type
32	5	2428	A
32	5	2429	A
32	5	2432	U
32	5	2433	G
32	5	2434	G
32	5	2437	C
32	5	2438	A
32	5	2439	G
32	5	2440	U
32	5	2441	C
32	5	2442	G
32	5	2443	G
32	5	2448	G
32	5	2449	A
32	5	2450	G
32	5	2454	U
32	5	2456	G
32	5	2460	A
32	5	2463	G
32	5	2465	C
32	5	2467	U
32	5	2468	U
32	5	2469	C
32	5	2470	C
32	5	2471	G
32	5	2472	A
32	5	2474	G
32	5	2475	G
32	5	2476	G
32	5	2488	C
32	5	2489	C
32	5	2490	U
32	5	2491	C
32	5	2499	C
32	5	2503	G
32	5	2504	C
32	5	2505	C
32	5	2507	A
32	5	2508	U
32	5	2510	G
32	5	2511	A
32	5	2512	A

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Mol	Chain	Res	Type
32	5	2513	A
32	5	2514	G
32	5	2517	A
32	5	2518	G
32	5	2526	C
32	5	2527	A
32	5	2529	A
32	5	2530	U
32	5	2531	C
32	5	2532	C
32	5	2533	C
32	5	2534	C
32	5	2537	A
32	5	2544	G
32	5	2545	U
32	5	2546	G
32	5	2547	G
32	5	2549	G
32	5	2551	A
32	5	2552	G
32	5	2553	A
32	5	2554	U
32	5	2555	G
32	5	2560	C
32	5	2563	C
32	5	2566	G
32	5	2571	C
32	5	2572	C
32	5	2577	C
32	5	2580	U
32	5	2581	A
32	5	2583	C
32	5	2586	G
32	5	2587	A
32	5	2588	C
32	5	2589	C
32	5	2590	G
32	5	2600	A
32	5	2601	A
32	5	2602	G
32	5	2615	C
32	5	2620	G

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Mol	Chain	Res	Type
32	5	2623	A
32	5	2627	C
32	5	2630	U
32	5	2631	U
32	5	2632	U
32	5	2638	G
32	5	2639	U
32	5	2640	G
32	5	2643	G
32	5	2648	G
32	5	2649	G
32	5	2658	G
32	5	2659	A
32	5	2660	A
32	5	2661	U
32	5	2662	G
32	5	2664	G
32	5	2665	U
32	5	2666	U
32	5	2667	C
32	5	2670	C
32	5	2673	G
32	5	2674	A
32	5	2675	G
32	5	2676	A
32	5	2678	A
32	5	2684	C
32	5	2686	G
32	5	2687	U
32	5	2688	G
32	5	2689	C
32	5	2694	G
32	5	2696	A
32	5	2703	G
32	5	2704	C
32	5	2707	U
32	5	2710	C
32	5	2711	G
32	5	2712	G
32	5	2713	C
32	5	2716	C
32	5	2721	G

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Mol	Chain	Res	Type
32	5	2722	G
32	5	2725	A
32	5	2726	G
32	5	2737	C
32	5	2739	C
32	5	2740	U
32	5	2743	A
32	5	2744	A
32	5	2745	A
32	5	2746	A
32	5	2747	U
32	5	2751	G
32	5	2752	G
32	5	2754	G
32	5	2756	G
32	5	2757	A
32	5	2758	G
32	5	2760	G
32	5	2761	U
32	5	2762	G
32	5	2764	A
32	5	2765	A
32	5	2766	A
32	5	2767	U
32	5	2768	C
32	5	2769	U
32	5	2770	C
32	5	2782	U
32	5	2783	A
32	5	2786	C
32	5	2787	A
32	5	2788	U
32	5	2789	A
32	5	2790	U
32	5	2794	C
32	5	2796	G
32	5	2797	C
32	5	2798	A
32	5	2799	G
32	5	2806	A
32	5	2807	A
32	5	2812	A

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Mol	Chain	Res	Type
32	5	2813	A
32	5	2814	C
32	5	2815	A
32	5	2818	C
32	5	2820	C
32	5	2823	G
32	5	2824	C
32	5	2826	U
32	5	2827	G
32	5	2828	U
32	5	2829	U
32	5	2833	A
32	5	2834	C
32	5	2835	A
32	5	2838	G
32	5	2841	G
32	5	2842	G
32	5	2845	A
32	5	2848	G
32	5	2849	A
32	5	2850	A
32	5	2852	U
32	5	2854	G
32	5	2855	G
32	5	2857	A
32	5	2858	A
32	5	2859	G
32	5	2860	C
32	5	2864	A
32	5	2867	C
32	5	2873	U
32	5	2874	U
32	5	2875	C
32	5	2879	A
32	5	2880	U
32	5	2897	G
32	5	2898	G
32	5	2900	U
32	5	2904	U
32	5	2905	C
32	5	2910	G
32	5	3591	C

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Mol	Chain	Res	Type
32	5	3592	G
32	5	3594	C
32	5	3595	U
32	5	3596	A
32	5	3597	G
32	5	3598	C
32	5	3603	G
32	5	3605	C
32	5	3606	U
32	5	3615	G
32	5	3616	U
32	5	3617	G
32	5	3620	G
32	5	3621	A
32	5	3622	C
32	5	3623	C
32	5	3625	G
32	5	3626	G
32	5	3627	G
32	5	3630	A
32	5	3635	A
32	5	3636	C
32	5	3638	G
32	5	3644	U
32	5	3645	U
32	5	3648	A
32	5	3649	A
32	5	3650	C
32	5	3657	U
32	5	3658	C
32	5	3661	G
32	5	3662	A
32	5	3663	A
32	5	3666	C
32	5	3667	C
32	5	3668	C
32	5	3671	G
32	5	3672	G
32	5	3673	C
32	5	3674	G
32	5	3675	G
32	5	3676	G

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Mol	Chain	Res	Type
32	5	3677	U
32	5	3678	G
32	5	3679	U
32	5	3680	U
32	5	3681	G
32	5	3682	A
32	5	3688	U
32	5	3696	C
32	5	3698	G
32	5	3699	C
32	5	3701	C
32	5	3709	U
32	5	3710	G
32	5	3711	A
32	5	3712	A
32	5	3713	U
32	5	3714	G
32	5	3715	U
32	5	3716	C
32	5	3717	A
32	5	3718	A
32	5	3719	A
32	5	3727	A
32	5	3728	A
32	5	3729	U
32	5	3735	G
32	5	3736	A
32	5	3737	A
32	5	3738	G
32	5	3739	C
32	5	3743	G
32	5	3744	G
32	5	3747	A
32	5	3748	A
32	5	3750	G
32	5	3754	G
32	5	3755	G
32	5	3756	A
32	5	3759	A
32	5	3760	A
32	5	3763	A
32	5	3765	G

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Mol	Chain	Res	Type
32	5	3766	A
32	5	3770	U
32	5	3771	C
32	5	3773	U
32	5	3774	A
32	5	3775	A
32	5	3776	G
32	5	3777	G
32	5	3784	A
32	5	3785	A
32	5	3786	U
32	5	3791	C
32	5	3799	A
32	5	3802	U
32	5	3803	A
32	5	3807	A
32	5	3809	G
32	5	3810	C
32	5	3811	G
32	5	3812	C
32	5	3813	A
32	5	3814	U
32	5	3817	A
32	5	3818	U
32	5	3819	G
32	5	3822	U
32	5	3827	G
32	5	3828	A
32	5	3831	U
32	5	3838	U
32	5	3839	G
32	5	3840	U
32	5	3841	C
32	5	3843	C
32	5	3851	U
32	5	3859	G
32	5	3860	A
32	5	3861	A
32	5	3865	A
32	5	3867	A
32	5	3876	A
32	5	3877	A

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Mol	Chain	Res	Type
32	5	3878	C
32	5	3879	G
32	5	3880	G
32	5	3881	G
32	5	3882	C
32	5	3887	C
32	5	3889	G
32	5	3892	U
32	5	3895	G
32	5	3897	G
32	5	3898	G
32	5	3899	G
32	5	3900	G
32	5	3901	A
32	5	3902	A
32	5	3905	A
32	5	3906	A
32	5	3907	G
32	5	3908	A
32	5	3909	C
32	5	3910	C
32	5	3912	U
32	5	3913	G
32	5	3914	U
32	5	3915	U
32	5	3916	G
32	5	3917	A
32	5	3922	G
32	5	3923	A
32	5	3926	C
32	5	3936	A
32	5	3937	C
32	5	3938	G
32	5	3939	G
32	5	3943	A
32	5	4069	U
32	5	4070	U
32	5	4073	A
32	5	4074	C
32	5	4075	U
32	5	4076	G
32	5	4079	C

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Mol	Chain	Res	Type
32	5	4083	U
32	5	4084	G
32	5	4085	A
32	5	4086	G
32	5	4088	C
32	5	4089	G
32	5	4091	G
32	5	4092	G
32	5	4093	G
32	5	4094	G
32	5	4095	G
32	5	4097	G
32	5	4104	G
32	5	4105	A
32	5	4107	G
32	5	4114	C
32	5	4115	G
32	5	4116	C
32	5	4117	U
32	5	4118	U
32	5	4119	C
32	5	4120	U
32	5	4121	G
32	5	4122	G
32	5	4123	C
32	5	4125	C
32	5	4126	C
32	5	4127	A
32	5	4128	A
32	5	4132	C
32	5	4140	C
32	5	4143	G
32	5	4144	C
32	5	4145	C
32	5	4158	C
32	5	4162	C
32	5	4164	C
32	5	4165	C
32	5	4166	G
32	5	4169	G
32	5	4171	C
32	5	4172	A

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Mol	Chain	Res	Type
32	5	4173	G
32	5	4180	G
32	5	4183	G
32	5	4184	G
32	5	4191	G
32	5	4195	G
32	5	4196	G
32	5	4197	G
32	5	4199	C
32	5	4203	A
32	5	4205	A
32	5	4206	C
32	5	4212	A
32	5	4213	A
32	5	4214	A
32	5	4215	C
32	5	4216	G
32	5	4217	G
32	5	4218	U
32	5	4219	A
32	5	4220	A
32	5	4221	C
32	5	4222	G
32	5	4223	C
32	5	4225	G
32	5	4226	G
32	5	4227	U
32	5	4228	G
32	5	4229	U
32	5	4230	C
32	5	4232	U
32	5	4233	A
32	5	4234	A
32	5	4235	G
32	5	4236	G
32	5	4238	G
32	5	4239	A
32	5	4241	C
32	5	4243	C
32	5	4249	G
32	5	4251	A
32	5	4252	C

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Mol	Chain	Res	Type
32	5	4254	G
32	5	4255	A
32	5	4257	A
32	5	4258	C
32	5	4265	U
32	5	4268	A
32	5	4270	C
32	5	4271	A
32	5	4273	A
32	5	4274	A
32	5	4279	A
32	5	4280	A
32	5	4281	A
32	5	4282	A
32	5	4283	G
32	5	4286	C
32	5	4288	C
32	5	4290	U
32	5	4291	G
32	5	4295	U
32	5	4296	U
32	5	4297	G
32	5	4305	G
32	5	4306	U
32	5	4311	A
32	5	4314	C
32	5	4316	G
32	5	4317	A
32	5	4318	C
32	5	4322	G
32	5	4323	A
32	5	4329	G
32	5	4330	G
32	5	4331	G
32	5	4332	C
32	5	4334	U
32	5	4335	C
32	5	4336	A
32	5	4337	C
32	5	4339	A
32	5	4344	U
32	5	4348	A

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Mol	Chain	Res	Type
32	5	4349	C
32	5	4350	C
32	5	4354	U
32	5	4356	G
32	5	4364	G
32	5	4368	G
32	5	4369	A
32	5	4373	G
32	5	4374	U
32	5	4375	C
32	5	4376	A
32	5	4377	G
32	5	4378	A
32	5	4380	A
32	5	4385	A
32	5	4386	C
32	5	4387	C
32	5	4391	G
32	5	4393	G
32	5	4394	A
32	5	4395	U
32	5	4396	A
32	5	4401	G
32	5	4414	A
32	5	4419	U
32	5	4420	U
32	5	4422	A
32	5	4425	G
32	5	4426	C
32	5	4434	C
32	5	4436	U
32	5	4437	U
32	5	4438	U
32	5	4440	G
32	5	4441	A
32	5	4444	C
32	5	4448	G
32	5	4449	A
32	5	4450	U
32	5	4451	G
32	5	4452	U
32	5	4454	G

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Mol	Chain	Res	Type
32	5	4459	U
32	5	4463	U
32	5	4464	A
32	5	4465	U
32	5	4466	C
32	5	4473	A
32	5	4475	G
32	5	4476	C
32	5	4477	A
32	5	4482	U
32	5	4483	C
32	5	4484	A
32	5	4488	A
32	5	4489	G
32	5	4491	G
32	5	4495	G
32	5	4497	U
32	5	4498	U
32	5	4500	U
32	5	4503	A
32	5	4510	A
32	5	4511	A
32	5	4512	U
32	5	4513	A
32	5	4518	A
32	5	4519	C
32	5	4520	G
32	5	4522	G
32	5	4523	A
32	5	4524	G
32	5	4527	G
32	5	4528	G
32	5	4529	G
32	5	4530	U
32	5	4531	U
32	5	4532	U
32	5	4534	G
32	5	4536	C
32	5	4537	C
32	5	4543	G
32	5	4544	A
32	5	4548	A

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Mol	Chain	Res	Type
32	5	4549	G
32	5	4550	G
32	5	4552	U
32	5	4556	U
32	5	4557	U
32	5	4558	U
32	5	4560	C
32	5	4561	C
32	5	4564	A
32	5	4569	U
32	5	4570	G
32	5	4574	U
32	5	4575	G
32	5	4581	G
32	5	4582	C
32	5	4583	C
32	5	4584	A
32	5	4586	G
32	5	4589	A
32	5	4590	A
32	5	4592	C
32	5	4599	A
32	5	4600	G
32	5	4601	U
32	5	4605	A
32	5	4606	G
32	5	4608	G
32	5	4616	A
32	5	4617	G
32	5	4623	G
32	5	4624	A
32	5	4627	U
32	5	4636	U
32	5	4637	G
32	5	4641	U
32	5	4646	U
32	5	4647	G
32	5	4648	A
32	5	4652	G
32	5	4656	A
32	5	4657	U
32	5	4661	G

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Mol	Chain	Res	Type
32	5	4664	A
32	5	4669	A
32	5	4670	C
32	5	4671	C
32	5	4672	A
32	5	4676	G
32	5	4677	U
32	5	4687	A
32	5	4693	C
32	5	4694	G
32	5	4695	C
32	5	4698	C
32	5	4699	U
32	5	4700	A
32	5	4701	A
32	5	4703	U
32	5	4709	U
32	5	4714	C
32	5	4715	C
32	5	4717	A
32	5	4718	G
32	5	4719	G
32	5	4720	C
32	5	4722	G
32	5	4728	U
32	5	4729	A
32	5	4730	C
32	5	4731	G
32	5	4732	G
32	5	4733	C
32	5	4734	A
32	5	4736	C
32	5	4737	G
32	5	4738	C
32	5	4739	C
32	5	4740	G
32	5	4741	C
32	5	4743	G
32	5	4745	G
32	5	4746	C
32	5	4748	U
32	5	4749	C

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Mol	Chain	Res	Type
32	5	4750	G
32	5	4751	G
32	5	4752	U
32	5	4753	U
32	5	4756	C
32	5	4757	C
32	5	4758	U
32	5	4759	C
32	5	4760	G
32	5	4763	U
32	5	4764	A
32	5	4770	U
32	5	4771	C
32	5	4860	G
32	5	4865	C
32	5	4869	U
32	5	4870	G
32	5	4871	C
32	5	4872	G
32	5	4873	G
32	5	4874	A
32	5	4875	G
32	5	4876	U
32	5	4877	G
32	5	4878	C
32	5	4879	C
32	5	4881	U
32	5	4882	U
32	5	4883	C
32	5	4884	G
32	5	4885	U
32	5	4886	C
32	5	4888	U
32	5	4889	G
32	5	4890	G
32	5	4891	G
32	5	4893	A
32	5	4895	C
32	5	4896	G
32	5	4898	G
32	5	4900	C
32	5	4901	G

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Mol	Chain	Res	Type
32	5	4903	G
32	5	4906	C
32	5	4910	G
32	5	4911	A
32	5	4912	G
32	5	4913	G
32	5	4926	C
32	5	4927	G
32	5	4930	C
32	5	4932	U
32	5	4934	A
32	5	4935	C
32	5	4936	G
32	5	4937	C
32	5	4938	A
32	5	4939	C
32	5	4941	G
32	5	4944	C
32	5	4945	G
32	5	4946	U
32	5	4947	U
32	5	4948	C
32	5	4949	G
32	5	4950	U
32	5	4951	G
32	5	4952	G
32	5	4956	A
32	5	4957	C
32	5	4959	U
32	5	4960	G
32	5	4961	G
32	5	4962	C
32	5	4964	C
32	5	4965	U
32	5	4966	A
32	5	4967	A
32	5	4975	G
32	5	4976	U
32	5	4977	A
32	5	4979	A
32	5	4980	C
32	5	4981	G

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Mol	Chain	Res	Type
32	5	4982	A
32	5	4985	U
32	5	4988	U
32	5	4989	U
32	5	4990	C
32	5	4991	U
32	5	4992	G
32	5	4993	G
32	5	4999	G
32	5	5002	U
32	5	5003	U
32	5	5005	G
32	5	5006	U
32	5	5013	C
32	5	5014	A
32	5	5016	A
32	5	5017	G
32	5	5018	C
32	5	5019	A
32	5	5023	C
32	5	5035	U
32	5	5039	U
32	5	5040	U
32	5	5041	G
32	5	5042	A
32	5	5043	A
32	5	5044	A
32	5	5045	G
32	5	5046	U
32	5	5047	C
32	5	5048	A
32	5	5049	G
32	5	5050	C
32	5	5052	C
32	5	5053	U
32	5	5054	C
32	5	5056	A
32	5	5057	C
32	5	5058	A
32	5	5061	A
32	5	5062	G
32	5	5063	G

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Mol	Chain	Res	Type
32	5	5066	U
33	7	7	G
33	7	11	A
33	7	17	C
33	7	21	G
33	7	22	A
33	7	23	A
33	7	24	C
33	7	25	G
33	7	30	C
33	7	31	G
33	7	38	U
33	7	39	C
33	7	40	U
33	7	41	G
33	7	42	A
33	7	49	A
33	7	50	A
33	7	53	U
33	7	54	A
33	7	57	C
33	7	60	G
33	7	63	C
33	7	64	G
33	7	65	G
33	7	70	G
33	7	73	U
33	7	74	A
33	7	80	U
33	7	84	U
33	7	90	A
33	7	91	C
33	7	100	A
33	7	102	U
33	7	105	C
33	7	106	G
33	7	110	G
33	7	112	U
33	7	115	A
33	7	120	U
34	8	2	G
34	8	3	A

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Mol	Chain	Res	Type
34	8	9	A
34	8	11	C
34	8	14	U
34	8	16	G
34	8	23	C
34	8	32	C
34	8	33	G
34	8	34	U
34	8	35	C
34	8	36	G
34	8	37	A
34	8	38	U
34	8	39	G
34	8	40	A
34	8	43	A
34	8	46	G
34	8	48	A
34	8	50	C
34	8	51	U
34	8	52	A
34	8	59	A
34	8	60	G
34	8	61	A
34	8	62	A
34	8	63	U
34	8	70	G
34	8	71	A
34	8	73	U
34	8	74	U
34	8	75	G
34	8	80	A
34	8	81	C
34	8	82	A
34	8	83	C
34	8	84	A
34	8	85	U
34	8	86	U
34	8	87	G
34	8	90	C
34	8	94	G
34	8	95	A
34	8	99	U

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Mol	Chain	Res	Type
34	8	103	A
34	8	104	A
34	8	105	C
34	8	107	C
34	8	109	C
34	8	110	U
34	8	111	U
34	8	112	G
34	8	114	G
34	8	116	C
34	8	117	C
34	8	118	C
34	8	122	G
34	8	125	C
34	8	126	C
34	8	127	U
34	8	131	G
34	8	132	G
34	8	147	G
34	8	151	G
34	8	153	C
34	8	156	U
50	3	2	U
50	3	6	C
50	3	8	U
50	3	9	A
50	3	10	G
50	3	17	G
50	3	18	G
50	3	19	U
50	3	20	U
50	3	21	A
50	3	22	U
50	3	33	U
50	3	37	A
50	3	39	G
50	3	40	C
50	3	42	A
50	3	46	G
50	3	48	C
50	3	51	C
50	3	52	G

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Mol	Chain	Res	Type
50	3	56	C
50	3	57	G
50	3	59	A
50	3	60	A
50	3	61	C
50	3	69	A
50	3	73	A
50	3	74	C
50	3	75	C
50	3	76	A
51	4	4	G
51	4	12	U
51	4	24	G
51	4	28	U
51	4	29	C
51	4	32	A
51	4	33	G
51	4	35	U
51	4	36	A
51	4	38	U
51	4	39	C
51	4	40	G
51	4	45	G
51	4	46	C
51	4	47	U
51	4	48	G
51	4	53	U
51	4	54	G
51	4	65	U
51	4	287	A
51	4	115	A
51	4	116	C
51	4	120	G
51	4	139	A
51	4	144	C
51	4	151	C
51	4	170	C
51	4	172	A
51	4	173	A
51	4	174	G
51	4	175	G
51	4	176	A

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Mol	Chain	Res	Type
51	4	177	G
51	4	178	G
51	4	183	A
51	4	186	C
51	4	190	C
51	4	191	C
51	4	206	G
51	4	212	C
51	4	215	A
51	4	227	G
51	4	234	A
51	4	235	G
51	4	236	U
54	S2	3	C
54	S2	4	C
54	S2	5	U
54	S2	9	U
54	S2	10	G
54	S2	17	C
54	S2	18	C
54	S2	20	G
54	S2	21	U
54	S2	26	U
54	S2	28	U
54	S2	33	G
54	S2	37	C
54	S2	42	A
54	S2	44	U
54	S2	46	A
54	S2	49	C
54	S2	51	U
54	S2	53	C
54	S2	54	A
54	S2	56	G
54	S2	57	U
54	S2	58	C
54	S2	59	U
54	S2	60	A
54	S2	61	A
54	S2	62	G
54	S2	63	U
54	S2	64	A

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Mol	Chain	Res	Type
54	S2	65	C
54	S2	66	G
54	S2	67	C
54	S2	68	A
54	S2	72	C
54	S2	73	C
54	S2	74	G
54	S2	75	G
54	S2	77	A
54	S2	78	C
54	S2	79	A
54	S2	80	G
54	S2	81	U
54	S2	84	A
54	S2	89	C
54	S2	92	A
54	S2	93	U
54	S2	98	C
54	S2	99	A
54	S2	101	U
54	S2	103	A
54	S2	104	A
54	S2	105	U
54	S2	111	A
54	S2	113	G
54	S2	114	G
54	S2	115	U
54	S2	116	U
54	S2	123	G
54	S2	124	U
54	S2	125	C
54	S2	126	G
54	S2	127	C
54	S2	140	C
54	S2	141	A
54	S2	142	C
54	S2	144	U
54	S2	146	G
54	S2	147	A
54	S2	148	U
54	S2	153	G
54	S2	154	U

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Mol	Chain	Res	Type
54	S2	155	G
54	S2	158	A
54	S2	159	A
54	S2	160	U
54	S2	161	U
54	S2	162	C
54	S2	163	U
54	S2	164	A
54	S2	165	G
54	S2	167	G
54	S2	168	C
54	S2	169	U
54	S2	170	A
54	S2	171	A
54	S2	172	U
54	S2	173	A
54	S2	180	G
54	S2	181	A
54	S2	182	C
54	S2	183	G
54	S2	184	G
54	S2	188	C
54	S2	189	U
54	S2	191	A
54	S2	192	C
54	S2	200	G
54	S2	202	G
54	S2	206	G
54	S2	208	G
54	S2	209	A
54	S2	213	G
54	S2	214	U
54	S2	215	G
54	S2	216	C
54	S2	217	A
54	S2	290	U
54	S2	291	G
54	S2	292	A
54	S2	293	C
54	S2	294	U
54	S2	295	C
54	S2	297	A

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Mol	Chain	Res	Type
54	S2	302	A
54	S2	305	U
54	S2	306	C
54	S2	307	G
54	S2	308	G
54	S2	309	G
54	S2	310	C
54	S2	311	C
54	S2	312	G
54	S2	313	A
54	S2	314	U
54	S2	315	C
54	S2	317	C
54	S2	319	C
54	S2	321	C
54	S2	323	C
54	S2	324	C
54	S2	325	C
54	S2	326	C
54	S2	327	G
54	S2	328	U
54	S2	334	C
54	S2	335	G
54	S2	338	G
54	S2	340	C
54	S2	341	C
54	S2	342	C
54	S2	343	A
54	S2	346	C
54	S2	347	G
54	S2	350	C
54	S2	355	G
54	S2	356	C
54	S2	357	C
54	S2	360	A
54	S2	361	U
54	S2	362	C
54	S2	364	A
54	S2	365	C
54	S2	366	U
54	S2	367	U
54	S2	368	U

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Mol	Chain	Res	Type
54	S2	369	C
54	S2	370	G
54	S2	372	U
54	S2	373	G
54	S2	380	G
54	S2	381	C
54	S2	382	C
54	S2	383	G
54	S2	384	U
54	S2	385	G
54	S2	386	C
54	S2	387	C
54	S2	393	U
54	S2	394	G
54	S2	395	G
54	S2	398	A
54	S2	399	C
54	S2	400	C
54	S2	401	A
54	S2	407	G
54	S2	408	A
54	S2	409	C
54	S2	411	G
54	S2	413	G
54	S2	414	A
54	S2	416	U
54	S2	417	C
54	S2	418	A
54	S2	419	G
54	S2	421	G
54	S2	422	U
54	S2	425	G
54	S2	426	A
54	S2	427	U
54	S2	428	U
54	S2	429	C
54	S2	435	A
54	S2	436	G
54	S2	437	G
54	S2	438	G
54	S2	441	C
54	S2	442	C

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Mol	Chain	Res	Type
54	S2	443	U
54	S2	444	G
54	S2	445	A
54	S2	446	G
54	S2	447	A
54	S2	448	A
54	S2	449	A
54	S2	450	C
54	S2	453	C
54	S2	454	U
54	S2	455	A
54	S2	457	C
54	S2	458	A
54	S2	459	C
54	S2	460	A
54	S2	464	A
54	S2	465	A
54	S2	466	G
54	S2	467	G
54	S2	469	A
54	S2	471	G
54	S2	472	C
54	S2	473	A
54	S2	474	G
54	S2	475	C
54	S2	476	A
54	S2	482	G
54	S2	485	A
54	S2	487	U
54	S2	489	A
54	S2	492	C
54	S2	493	A
54	S2	496	C
54	S2	504	G
54	S2	507	G
54	S2	508	A
54	S2	516	A
54	S2	518	G
54	S2	523	A
54	S2	525	A
54	S2	528	A
54	S2	530	U

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Mol	Chain	Res	Type
54	S2	532	C
54	S2	533	A
54	S2	534	G
54	S2	540	U
54	S2	542	U
54	S2	544	G
54	S2	548	C
54	S2	549	C
54	S2	550	C
54	S2	551	U
54	S2	552	G
54	S2	554	A
54	S2	556	U
54	S2	557	U
54	S2	559	G
54	S2	560	A
54	S2	563	G
54	S2	564	A
54	S2	568	C
54	S2	569	A
54	S2	575	A
54	S2	576	A
54	S2	578	C
54	S2	579	C
54	S2	580	U
54	S2	583	C
54	S2	588	G
54	S2	589	G
54	S2	590	A
54	S2	591	U
54	S2	592	C
54	S2	593	C
54	S2	595	U
54	S2	596	U
54	S2	597	G
54	S2	598	G
54	S2	600	G
54	S2	601	G
54	S2	602	G
54	S2	604	A
54	S2	605	A
54	S2	607	U

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Mol	Chain	Res	Type
54	S2	608	C
54	S2	612	U
54	S2	613	G
54	S2	614	C
54	S2	616	A
54	S2	617	G
54	S2	620	G
54	S2	621	C
54	S2	623	G
54	S2	624	C
54	S2	626	G
54	S2	627	U
54	S2	628	A
54	S2	629	A
54	S2	630	U
54	S2	631	U
54	S2	634	A
54	S2	639	C
54	S2	640	A
54	S2	642	U
54	S2	643	A
54	S2	644	G
54	S2	645	C
54	S2	646	G
54	S2	647	U
54	S2	649	U
54	S2	651	U
54	S2	655	A
54	S2	656	G
54	S2	657	U
54	S2	660	C
54	S2	664	A
54	S2	666	U
54	S2	668	A
54	S2	669	A
54	S2	671	A
54	S2	672	A
54	S2	673	G
54	S2	679	A
54	S2	682	U
54	S2	683	G
54	S2	684	G

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Mol	Chain	Res	Type
54	S2	687	C
54	S2	688	U
54	S2	689	U
54	S2	690	G
54	S2	693	A
54	S2	694	G
54	S2	698	G
54	S2	731	G
54	S2	733	C
54	S2	734	C
54	S2	735	C
54	S2	738	C
54	S2	739	C
54	S2	746	C
54	S2	747	U
54	S2	748	C
54	S2	749	U
54	S2	751	G
54	S2	752	G
54	S2	753	C
54	S2	788	G
54	S2	791	C
54	S2	793	G
54	S2	794	A
54	S2	797	C
54	S2	798	A
54	S2	799	U
54	S2	800	U
54	S2	807	G
54	S2	810	A
54	S2	811	A
54	S2	812	A
54	S2	820	U
54	S2	821	G
54	S2	822	U
54	S2	825	A
54	S2	827	A
54	S2	829	C
54	S2	830	A
54	S2	833	C
54	S2	834	C
54	S2	835	C

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Mol	Chain	Res	Type
54	S2	836	G
54	S2	837	A
54	S2	838	G
54	S2	839	C
54	S2	840	C
54	S2	841	G
54	S2	842	C
54	S2	843	C
54	S2	845	G
54	S2	846	G
54	S2	847	A
54	S2	848	U
54	S2	853	C
54	S2	859	G
54	S2	862	A
54	S2	864	A
54	S2	867	G
54	S2	868	G
54	S2	869	A
54	S2	870	A
54	S2	871	U
54	S2	872	A
54	S2	873	G
54	S2	875	A
54	S2	876	C
54	S2	877	C
54	S2	878	G
54	S2	879	C
54	S2	880	G
54	S2	881	G
54	S2	887	U
54	S2	888	U
54	S2	890	U
54	S2	891	G
54	S2	892	U
54	S2	893	U
54	S2	897	U
54	S2	898	U
54	S2	903	A
54	S2	913	A
54	S2	914	U
54	S2	918	U

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Mol	Chain	Res	Type
54	S2	919	A
54	S2	920	A
54	S2	921	G
54	S2	930	C
54	S2	933	G
54	S2	934	G
54	S2	938	A
54	S2	943	U
54	S2	946	U
54	S2	955	A
54	S2	956	G
54	S2	957	A
54	S2	958	G
54	S2	959	G
54	S2	960	U
54	S2	961	G
54	S2	962	A
54	S2	963	A
54	S2	964	A
54	S2	965	U
54	S2	968	U
54	S2	969	U
54	S2	971	G
54	S2	974	C
54	S2	975	G
54	S2	979	C
54	S2	980	A
54	S2	981	A
54	S2	989	C
54	S2	990	A
54	S2	991	G
54	S2	992	A
54	S2	994	C
54	S2	996	A
54	S2	997	A
54	S2	999	G
54	S2	1001	A
54	S2	1002	U
54	S2	1008	A
54	S2	1016	U
54	S2	1017	U
54	S2	1023	A

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Mol	Chain	Res	Type
54	S2	1024	A
54	S2	1030	A
54	S2	1033	G
54	S2	1034	A
54	S2	1035	A
54	S2	1039	C
54	S2	1040	G
54	S2	1041	G
54	S2	1042	A
54	S2	1044	G
54	S2	1045	U
54	S2	1049	A
54	S2	1050	A
54	S2	1060	A
54	S2	1062	A
54	S2	1070	A
54	S2	1072	U
54	S2	1073	U
54	S2	1077	A
54	S2	1078	C
54	S2	1083	A
54	S2	1084	A
54	S2	1085	C
54	S2	1087	A
54	S2	1088	U
54	S2	1089	G
54	S2	1093	A
54	S2	1096	G
54	S2	1099	G
54	S2	1100	A
54	S2	1108	G
54	S2	1109	C
54	S2	1110	G
54	S2	1111	U
54	S2	1113	A
54	S2	1114	U
54	S2	1115	U
54	S2	1116	C
54	S2	1118	C
54	S2	1120	U
54	S2	1121	G
54	S2	1122	A

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Mol	Chain	Res	Type
54	S2	1123	C
54	S2	1124	C
54	S2	1130	G
54	S2	1131	G
54	S2	1133	A
54	S2	1138	C
54	S2	1139	C
54	S2	1142	G
54	S2	1143	A
54	S2	1144	A
54	S2	1146	C
54	S2	1148	A
54	S2	1149	A
54	S2	1150	A
54	S2	1151	G
54	S2	1153	C
54	S2	1154	U
54	S2	1157	G
54	S2	1165	G
54	S2	1166	G
54	S2	1180	C
54	S2	1182	A
54	S2	1191	C
54	S2	1194	A
54	S2	1195	A
54	S2	1199	A
54	S2	1200	A
54	S2	1201	U
54	S2	1203	G
54	S2	1204	A
54	S2	1205	C
54	S2	1206	G
54	S2	1207	G
54	S2	1208	A
54	S2	1210	G
54	S2	1211	G
54	S2	1214	A
54	S2	1215	C
54	S2	1216	C
54	S2	1217	A
54	S2	1221	G
54	S2	1222	G

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Mol	Chain	Res	Type
54	S2	1224	G
54	S2	1234	C
54	S2	1240	A
54	S2	1242	U
54	S2	1243	U
54	S2	1245	G
54	S2	1247	C
54	S2	1248	U
54	S2	1249	C
54	S2	1250	A
54	S2	1251	A
54	S2	1252	C
54	S2	1253	A
54	S2	1254	C
54	S2	1256	G
54	S2	1257	G
54	S2	1258	A
54	S2	1259	A
54	S2	1264	C
54	S2	1265	A
54	S2	1266	C
54	S2	1267	C
54	S2	1268	C
54	S2	1269	G
54	S2	1271	C
54	S2	1273	C
54	S2	1274	G
54	S2	1275	G
54	S2	1276	A
54	S2	1280	G
54	S2	1282	A
54	S2	1283	C
54	S2	1284	A
54	S2	1285	G
54	S2	1286	G
54	S2	1288	U
54	S2	1289	U
54	S2	1292	C
54	S2	1293	A
54	S2	1296	U
54	S2	1298	G
54	S2	1299	A

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Mol	Chain	Res	Type
54	S2	1301	A
54	S2	1302	G
54	S2	1303	C
54	S2	1304	U
54	S2	1305	C
54	S2	1306	U
54	S2	1308	U
54	S2	1309	C
54	S2	1312	G
54	S2	1313	A
54	S2	1314	U
54	S2	1315	U
54	S2	1316	C
54	S2	1322	G
54	S2	1324	G
54	S2	1326	U
54	S2	1331	C
54	S2	1332	A
54	S2	1337	C
54	S2	1339	U
54	S2	1340	U
54	S2	1341	C
54	S2	1342	U
54	S2	1343	U
54	S2	1344	A
54	S2	1345	G
54	S2	1347	U
54	S2	1348	G
54	S2	1349	G
54	S2	1350	U
54	S2	1351	G
54	S2	1352	G
54	S2	1353	A
54	S2	1354	G
54	S2	1355	C
54	S2	1356	G
54	S2	1357	A
54	S2	1358	U
54	S2	1364	U
54	S2	1367	U
54	S2	1368	U
54	S2	1369	A

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Mol	Chain	Res	Type
54	S2	1370	A
54	S2	1371	U
54	S2	1372	U
54	S2	1373	C
54	S2	1374	C
54	S2	1378	A
54	S2	1379	A
54	S2	1380	C
54	S2	1385	G
54	S2	1394	G
54	S2	1395	C
54	S2	1396	A
54	S2	1397	U
54	S2	1398	G
54	S2	1401	A
54	S2	1402	A
54	S2	1403	C
54	S2	1404	U
54	S2	1405	A
54	S2	1407	U
54	S2	1408	U
54	S2	1410	C
54	S2	1411	G
54	S2	1412	C
54	S2	1413	G
54	S2	1414	A
54	S2	1417	C
54	S2	1418	C
54	S2	1419	C
54	S2	1420	G
54	S2	1423	C
54	S2	1424	G
54	S2	1425	G
54	S2	1426	U
54	S2	1429	G
54	S2	1430	C
54	S2	1432	U
54	S2	1433	C
54	S2	1434	C
54	S2	1435	C
54	S2	1437	C
54	S2	1438	A

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Mol	Chain	Res	Type
54	S2	1439	A
54	S2	1441	U
54	S2	1442	U
54	S2	1444	U
54	S2	1446	A
54	S2	1447	G
54	S2	1449	G
54	S2	1452	A
54	S2	1453	C
54	S2	1454	A
54	S2	1455	A
54	S2	1462	U
54	S2	1463	U
54	S2	1464	C
54	S2	1465	A
54	S2	1466	G
54	S2	1473	G
54	S2	1475	G
54	S2	1476	A
54	S2	1477	U
54	S2	1478	U
54	S2	1488	C
54	S2	1489	A
54	S2	1490	G
54	S2	1493	C
54	S2	1494	U
54	S2	1495	G
54	S2	1496	U
54	S2	1497	G
54	S2	1501	C
54	S2	1507	G
54	S2	1508	A
54	S2	1509	U
54	S2	1510	G
54	S2	1511	U
54	S2	1512	C
54	S2	1513	C
54	S2	1514	G
54	S2	1515	G
54	S2	1516	G
54	S2	1520	G
54	S2	1521	C

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Mol	Chain	Res	Type
54	S2	1522	A
54	S2	1523	C
54	S2	1525	C
54	S2	1527	C
54	S2	1531	A
54	S2	1533	A
54	S2	1534	C
54	S2	1535	U
54	S2	1537	A
54	S2	1540	G
54	S2	1541	G
54	S2	1543	U
54	S2	1544	C
54	S2	1545	A
54	S2	1546	G
54	S2	1547	C
54	S2	1548	G
54	S2	1550	G
54	S2	1551	U
54	S2	1552	G
54	S2	1553	C
54	S2	1555	U
54	S2	1556	A
54	S2	1557	C
54	S2	1558	C
54	S2	1560	U
54	S2	1563	G
54	S2	1567	G
54	S2	1568	C
54	S2	1569	A
54	S2	1570	G
54	S2	1574	C
54	S2	1578	U
54	S2	1579	A
54	S2	1580	A
54	S2	1581	C
54	S2	1582	C
54	S2	1585	U
54	S2	1586	U
54	S2	1587	G
54	S2	1588	A
54	S2	1589	A

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Mol	Chain	Res	Type
54	S2	1590	C
54	S2	1593	C
54	S2	1594	A
54	S2	1595	U
54	S2	1598	G
54	S2	1599	U
54	S2	1600	G
54	S2	1601	A
54	S2	1602	U
54	S2	1603	G
54	S2	1604	G
54	S2	1605	G
54	S2	1606	G
54	S2	1607	A
54	S2	1609	C
54	S2	1610	G
54	S2	1621	U
54	S2	1622	U
54	S2	1623	A
54	S2	1624	U
54	S2	1625	U
54	S2	1632	G
54	S2	1633	A
54	S2	1634	A
54	S2	1637	A
54	S2	1638	G
54	S2	1641	A
54	S2	1644	C
54	S2	1645	C
54	S2	1646	C
54	S2	1647	A
54	S2	1648	G
54	S2	1649	U
54	S2	1654	G
54	S2	1659	U
54	S2	1660	C
54	S2	1663	A
54	S2	1664	A
54	S2	1665	G
54	S2	1666	C
54	S2	1667	U
54	S2	1668	U

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Mol	Chain	Res	Type
54	S2	1669	G
54	S2	1674	G
54	S2	1678	A
54	S2	1679	A
54	S2	1680	G
54	S2	1682	C
54	S2	1683	C
54	S2	1684	C
54	S2	1688	C
54	S2	1689	C
54	S2	1695	A
54	S2	1698	C
54	S2	1700	C
54	S2	1701	C
54	S2	1702	G
54	S2	1714	U
54	S2	1720	U
54	S2	1721	U
54	S2	1722	G
54	S2	1724	A
54	S2	1725	U
54	S2	1726	G
54	S2	1727	G
54	S2	1729	U
54	S2	1730	U
54	S2	1734	G
54	S2	1737	G
54	S2	1745	A
54	S2	1746	U
54	S2	1751	C
54	S2	1753	C
54	S2	1757	G
54	S2	1760	G
54	S2	1761	U
54	S2	1779	G
54	S2	1783	C
54	S2	1784	G
54	S2	1785	C
54	S2	1786	U
54	S2	1792	G
54	S2	1795	G
54	S2	1797	U

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Mol	Chain	Res	Type
54	S2	1798	C
54	S2	1805	G
54	S2	1810	U
54	S2	1817	G
54	S2	1819	A
54	S2	1823	A
54	S2	1824	A
54	S2	1825	A
54	S2	1826	G
54	S2	1827	U
54	S2	1830	U
54	S2	1831	A
54	S2	1835	A
54	S2	1836	G
54	S2	1837	G
54	S2	1838	U
54	S2	1839	U
54	S2	1840	U
54	S2	1841	C
54	S2	1844	U
54	S2	1847	G
54	S2	1850	A
54	S2	1852	C
54	S2	1857	G
54	S2	1858	G
54	S2	1860	A
54	S2	1861	G
54	S2	1862	G
54	S2	1863	A
54	S2	1864	U
54	S2	1865	C
54	S2	1868	U
54	S2	1869	A

All (1029) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
32	5	1	C
32	5	20	U
32	5	33	A
32	5	36	U
32	5	37	U

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Mol	Chain	Res	Type
32	5	42	A
32	5	43	U
32	5	47	A
32	5	48	G
32	5	52	G
32	5	53	C
32	5	54	G
32	5	55	G
32	5	62	A
32	5	64	A
32	5	65	A
32	5	68	U
32	5	82	U
32	5	84	A
32	5	88	A
32	5	92	C
32	5	93	G
32	5	94	A
32	5	96	U
32	5	97	G
32	5	98	A
32	5	99	A
32	5	100	C
32	5	107	G
32	5	111	C
32	5	112	C
32	5	117	C
32	5	119	G
32	5	120	A
32	5	123	C
32	5	124	C
32	5	125	C
32	5	134	G
32	5	143	C
32	5	150	U
32	5	151	G
32	5	163	A
32	5	165	A
32	5	170	C
32	5	172	C
32	5	183	C
32	5	187	U

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Mol	Chain	Res	Type
32	5	194	C
32	5	197	A
32	5	207	G
32	5	209	U
32	5	212	A
32	5	216	C
32	5	218	A
32	5	219	G
32	5	226	G
32	5	237	G
32	5	245	C
32	5	252	C
32	5	253	G
32	5	265	C
32	5	266	C
32	5	268	G
32	5	274	C
32	5	275	C
32	5	276	C
32	5	278	G
32	5	280	G
32	5	292	G
32	5	293	G
32	5	296	A
32	5	297	U
32	5	308	G
32	5	315	G
32	5	333	U
32	5	340	C
32	5	349	A
32	5	353	A
32	5	360	A
32	5	361	C
32	5	362	A
32	5	364	G
32	5	371	A
32	5	385	A
32	5	394	G
32	5	406	C
32	5	407	A
32	5	411	G
32	5	414	C

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Mol	Chain	Res	Type
32	5	417	G
32	5	421	C
32	5	432	U
32	5	435	A
32	5	450	G
32	5	451	C
32	5	454	U
32	5	465	G
32	5	480	C
32	5	485	C
32	5	486	C
32	5	493	G
32	5	495	C
32	5	497	G
32	5	502	C
32	5	505	G
32	5	514	U
32	5	647	G
32	5	648	G
32	5	658	C
32	5	659	G
32	5	664	G
32	5	666	G
32	5	668	C
32	5	673	C
32	5	684	G
32	5	686	A
32	5	693	C
32	5	700	G
32	5	727	C
32	5	728	U
32	5	732	A
32	5	733	A
32	5	738	C
32	5	746	A
32	5	747	A
32	5	911	U
32	5	917	A
32	5	920	C
32	5	922	C
32	5	927	G
32	5	930	G

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Mol	Chain	Res	Type
32	5	931	C
32	5	932	A
32	5	936	C
32	5	943	A
32	5	956	A
32	5	957	G
32	5	958	G
32	5	961	G
32	5	965	G
32	5	968	C
32	5	970	G
32	5	974	C
32	5	977	C
32	5	978	G
32	5	979	C
32	5	981	C
32	5	989	U
32	5	1067	G
32	5	1068	G
32	5	1069	G
32	5	1074	G
32	5	1076	C
32	5	1172	C
32	5	1179	U
32	5	1186	U
32	5	1188	C
32	5	1210	C
32	5	1211	G
32	5	1214	C
32	5	1216	C
32	5	1217	G
32	5	1221	G
32	5	1232	G
32	5	1235	G
32	5	1236	C
32	5	1237	C
32	5	1238	A
32	5	1239	C
32	5	1241	C
32	5	1243	C
32	5	1254	A
32	5	1264	C

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Mol	Chain	Res	Type
32	5	1266	G
32	5	1268	G
32	5	1274	A
32	5	1279	A
32	5	1280	C
32	5	1281	G
32	5	1292	C
32	5	1293	G
32	5	1296	G
32	5	1301	C
32	5	1319	U
32	5	1322	A
32	5	1324	A
32	5	1325	C
32	5	1329	G
32	5	1338	G
32	5	1355	G
32	5	1356	U
32	5	1357	C
32	5	1359	G
32	5	1364	U
32	5	1365	C
32	5	1368	A
32	5	1370	G
32	5	1371	A
32	5	1377	G
32	5	1378	C
32	5	1379	C
32	5	1380	G
32	5	1385	G
32	5	1386	C
32	5	1397	A
32	5	1405	C
32	5	1406	G
32	5	1407	C
32	5	1409	C
32	5	1410	U
32	5	1419	G
32	5	1420	A
32	5	1435	G
32	5	1438	U
32	5	1439	C

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Mol	Chain	Res	Type
32	5	1440	U
32	5	1445	U
32	5	1455	G
32	5	1464	C
32	5	1474	C
32	5	1478	C
32	5	1479	G
32	5	1480	C
32	5	1481	C
32	5	1483	C
32	5	1484	G
32	5	1488	G
32	5	1489	G
32	5	1497	A
32	5	1500	A
32	5	1501	C
32	5	1509	C
32	5	1518	A
32	5	1520	C
32	5	1521	C
32	5	1522	G
32	5	1533	A
32	5	1534	A
32	5	1539	G
32	5	1554	A
32	5	1555	G
32	5	1596	U
32	5	1609	U
32	5	1611	C
32	5	1614	C
32	5	1615	C
32	5	1617	G
32	5	1627	G
32	5	1632	A
32	5	1633	G
32	5	1636	U
32	5	1637	A
32	5	1639	U
32	5	1654	G
32	5	1671	U
32	5	1681	G
32	5	1682	A

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Mol	Chain	Res	Type
32	5	1691	G
32	5	1696	C
32	5	1697	G
32	5	1724	G
32	5	1725	U
32	5	1733	G
32	5	1734	G
32	5	1742	A
32	5	1745	G
32	5	1763	C
32	5	1764	G
32	5	1788	A
32	5	1790	U
32	5	1793	A
32	5	1804	A
32	5	1808	C
32	5	1819	G
32	5	1820	C
32	5	1822	U
32	5	1835	G
32	5	1847	C
32	5	1864	G
32	5	1876	U
32	5	1881	C
32	5	1884	C
32	5	1886	G
32	5	1887	G
32	5	1890	G
32	5	1891	A
32	5	1919	G
32	5	1920	C
32	5	1921	C
32	5	1925	G
32	5	1928	C
32	5	1930	U
32	5	1934	A
32	5	1935	C
32	5	1938	C
32	5	1941	A
32	5	1945	G
32	5	1946	G
32	5	1947	U

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Mol	Chain	Res	Type
32	5	1959	U
32	5	1964	A
32	5	1975	G
32	5	1980	U
32	5	1986	U
32	5	1992	U
32	5	2007	G
32	5	2008	U
32	5	2009	A
32	5	2014	C
32	5	2034	G
32	5	2035	C
32	5	2046	G
32	5	2054	U
32	5	2057	A
32	5	2068	C
32	5	2075	G
32	5	2076	G
32	5	2077	C
32	5	2079	G
32	5	2083	C
32	5	2087	C
32	5	2088	A
32	5	2089	G
32	5	2093	A
32	5	2096	G
32	5	2107	C
32	5	2111	G
32	5	2114	G
32	5	2116	C
32	5	2118	G
32	5	2119	C
32	5	2122	G
32	5	2123	C
32	5	2124	G
32	5	2126	G
32	5	2246	C
32	5	2249	C
32	5	2251	G
32	5	2256	C
32	5	2257	C
32	5	2260	C

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Mol	Chain	Res	Type
32	5	2261	G
32	5	2262	G
32	5	2264	C
32	5	2265	G
32	5	2266	C
32	5	2268	A
32	5	2272	C
32	5	2276	A
32	5	2278	G
32	5	2311	C
32	5	2313	A
32	5	2315	G
32	5	2321	G
32	5	2323	C
32	5	2324	C
32	5	2328	G
32	5	2331	G
32	5	2332	A
32	5	2333	G
32	5	2347	A
32	5	2351	C
32	5	2361	G
32	5	2362	U
32	5	2369	U
32	5	2378	G
32	5	2389	A
32	5	2394	G
32	5	2396	A
32	5	2398	U
32	5	2436	U
32	5	2438	A
32	5	2442	G
32	5	2446	C
32	5	2448	G
32	5	2451	A
32	5	2459	G
32	5	2464	C
32	5	2468	U
32	5	2470	C
32	5	2474	G
32	5	2479	G
32	5	2487	G

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Mol	Chain	Res	Type
32	5	2490	U
32	5	2502	G
32	5	2507	A
32	5	2509	C
32	5	2512	A
32	5	2515	G
32	5	2517	A
32	5	2523	G
32	5	2533	C
32	5	2544	G
32	5	2545	U
32	5	2546	G
32	5	2553	A
32	5	2554	U
32	5	2576	G
32	5	2587	A
32	5	2588	C
32	5	2589	C
32	5	2600	A
32	5	2613	C
32	5	2614	C
32	5	2618	G
32	5	2631	U
32	5	2658	G
32	5	2661	U
32	5	2665	U
32	5	2666	U
32	5	2673	G
32	5	2674	A
32	5	2675	G
32	5	2686	G
32	5	2688	G
32	5	2695	A
32	5	2708	U
32	5	2711	G
32	5	2732	G
32	5	2733	C
32	5	2735	G
32	5	2739	C
32	5	2744	A
32	5	2745	A
32	5	2757	A

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Mol	Chain	Res	Type
32	5	2761	U
32	5	2768	C
32	5	2769	U
32	5	2782	U
32	5	2787	A
32	5	2796	G
32	5	2806	A
32	5	2811	G
32	5	2812	A
32	5	2817	C
32	5	2825	A
32	5	2827	G
32	5	2828	U
32	5	2837	U
32	5	2840	A
32	5	2841	G
32	5	2848	G
32	5	2851	G
32	5	2854	G
32	5	2857	A
32	5	2867	C
32	5	2879	A
32	5	2896	G
32	5	2902	G
32	5	3590	G
32	5	3593	C
32	5	3615	G
32	5	3620	G
32	5	3622	C
32	5	3625	G
32	5	3626	G
32	5	3636	C
32	5	3644	U
32	5	3648	A
32	5	3652	A
32	5	3653	A
32	5	3654	G
32	5	3663	A
32	5	3666	C
32	5	3667	C
32	5	3671	G
32	5	3676	G

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Mol	Chain	Res	Type
32	5	3679	U
32	5	3692	A
32	5	3697	U
32	5	3712	A
32	5	3719	A
32	5	3727	A
32	5	3729	U
32	5	3730	U
32	5	3734	U
32	5	3735	G
32	5	3754	G
32	5	3773	U
32	5	3774	A
32	5	3776	G
32	5	3784	A
32	5	3791	C
32	5	3802	U
32	5	3803	A
32	5	3809	G
32	5	3812	C
32	5	3817	A
32	5	3827	G
32	5	3829	G
32	5	3839	G
32	5	3854	C
32	5	3860	A
32	5	3875	G
32	5	3876	A
32	5	3877	A
32	5	3879	G
32	5	3888	G
32	5	3904	G
32	5	3905	A
32	5	3906	A
32	5	3908	A
32	5	3909	C
32	5	3911	C
32	5	3912	U
32	5	3914	U
32	5	3922	G
32	5	3941	G
32	5	3944	G

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Mol	Chain	Res	Type
32	5	4069	U
32	5	4074	C
32	5	4075	U
32	5	4078	C
32	5	4084	G
32	5	4091	G
32	5	4092	G
32	5	4095	G
32	5	4103	C
32	5	4104	G
32	5	4115	G
32	5	4117	U
32	5	4118	U
32	5	4119	C
32	5	4121	G
32	5	4122	G
32	5	4124	G
32	5	4127	A
32	5	4143	G
32	5	4144	C
32	5	4163	U
32	5	4165	C
32	5	4170	A
32	5	4173	G
32	5	4195	G
32	5	4217	G
32	5	4219	A
32	5	4221	C
32	5	4227	U
32	5	4228	G
32	5	4229	U
32	5	4232	U
32	5	4233	A
32	5	4238	G
32	5	4239	A
32	5	4251	A
32	5	4254	G
32	5	4257	A
32	5	4270	C
32	5	4275	G
32	5	4276	G
32	5	4279	A

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Mol	Chain	Res	Type
32	5	4280	A
32	5	4282	A
32	5	4283	G
32	5	4295	U
32	5	4297	G
32	5	4322	G
32	5	4336	A
32	5	4342	C
32	5	4348	A
32	5	4349	C
32	5	4368	G
32	5	4374	U
32	5	4375	C
32	5	4378	A
32	5	4379	A
32	5	4385	A
32	5	4395	U
32	5	4399	U
32	5	4419	U
32	5	4436	U
32	5	4440	G
32	5	4448	G
32	5	4449	A
32	5	4450	U
32	5	4451	G
32	5	4452	U
32	5	4454	G
32	5	4463	U
32	5	4464	A
32	5	4474	A
32	5	4475	G
32	5	4479	A
32	5	4488	A
32	5	4489	G
32	5	4497	U
32	5	4501	U
32	5	4507	A
32	5	4519	C
32	5	4522	G
32	5	4527	G
32	5	4528	G
32	5	4532	U

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Mol	Chain	Res	Type
32	5	4533	A
32	5	4535	A
32	5	4536	C
32	5	4543	G
32	5	4548	A
32	5	4574	U
32	5	4583	C
32	5	4600	G
32	5	4605	A
32	5	4610	A
32	5	4626	A
32	5	4634	U
32	5	4656	A
32	5	4670	C
32	5	4691	A
32	5	4693	C
32	5	4699	U
32	5	4700	A
32	5	4709	U
32	5	4718	G
32	5	4719	G
32	5	4730	C
32	5	4731	G
32	5	4733	C
32	5	4735	G
32	5	4736	C
32	5	4737	G
32	5	4739	C
32	5	4740	G
32	5	4741	C
32	5	4756	C
32	5	4757	C
32	5	4763	U
32	5	4770	U
32	5	4871	C
32	5	4872	G
32	5	4873	G
32	5	4874	A
32	5	4884	G
32	5	4885	U
32	5	4887	C
32	5	4888	U

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Mol	Chain	Res	Type
32	5	4889	G
32	5	4900	C
32	5	4911	A
32	5	4912	G
32	5	4926	C
32	5	4935	C
32	5	4938	A
32	5	4945	G
32	5	4948	C
32	5	4949	G
32	5	4950	U
32	5	4951	G
32	5	4981	G
32	5	4990	C
32	5	4991	U
32	5	4996	C
32	5	4997	G
32	5	5001	U
32	5	5002	U
32	5	5006	U
32	5	5022	U
32	5	5041	G
32	5	5043	A
32	5	5045	G
32	5	5046	U
32	5	5049	G
32	5	5050	C
32	5	5056	A
32	5	5060	A
32	5	5061	A
32	5	5062	G
33	7	7	G
33	7	21	G
33	7	26	C
33	7	39	C
33	7	41	G
33	7	42	A
33	7	49	A
33	7	56	G
33	7	57	C
33	7	58	A
33	7	59	G

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Mol	Chain	Res	Type
33	7	60	G
33	7	72	U
33	7	75	G
33	7	82	G
34	8	2	G
34	8	9	A
34	8	10	G
34	8	11	C
34	8	22	U
34	8	34	U
34	8	35	C
34	8	37	A
34	8	51	U
34	8	60	G
34	8	64	U
34	8	70	G
34	8	73	U
34	8	81	C
34	8	82	A
34	8	83	C
34	8	85	U
34	8	94	G
34	8	95	A
34	8	109	C
34	8	110	U
34	8	111	U
34	8	113	C
34	8	115	G
34	8	116	C
34	8	124	U
34	8	125	C
34	8	126	C
34	8	130	C
34	8	131	G
50	3	9	A
50	3	17	G
50	3	19	U
50	3	60	A
50	3	75	C
51	4	10	G
51	4	35	U
51	4	37	C

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Mol	Chain	Res	Type
51	4	38	U
51	4	39	C
51	4	45	G
51	4	47	U
51	4	176	A
51	4	234	A
51	4	235	G
54	S2	2	A
54	S2	3	C
54	S2	9	U
54	S2	19	A
54	S2	25	A
54	S2	27	A
54	S2	37	C
54	S2	55	U
54	S2	61	A
54	S2	65	C
54	S2	67	C
54	S2	72	C
54	S2	73	C
54	S2	74	G
54	S2	91	A
54	S2	98	C
54	S2	102	A
54	S2	104	A
54	S2	105	U
54	S2	110	U
54	S2	113	G
54	S2	126	G
54	S2	127	C
54	S2	139	C
54	S2	140	C
54	S2	141	A
54	S2	158	A
54	S2	160	U
54	S2	163	U
54	S2	171	A
54	S2	180	G
54	S2	181	A
54	S2	182	C
54	S2	183	G
54	S2	190	G

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Mol	Chain	Res	Type
54	S2	215	G
54	S2	291	G
54	S2	294	U
54	S2	297	A
54	S2	305	U
54	S2	312	G
54	S2	313	A
54	S2	325	C
54	S2	327	G
54	S2	334	C
54	S2	340	C
54	S2	357	C
54	S2	360	A
54	S2	366	U
54	S2	367	U
54	S2	368	U
54	S2	369	C
54	S2	376	A
54	S2	377	G
54	S2	384	U
54	S2	393	U
54	S2	394	G
54	S2	398	A
54	S2	399	C
54	S2	402	C
54	S2	409	C
54	S2	413	G
54	S2	421	G
54	S2	426	A
54	S2	428	U
54	S2	437	G
54	S2	442	C
54	S2	443	U
54	S2	444	G
54	S2	446	G
54	S2	447	A
54	S2	448	A
54	S2	452	G
54	S2	453	C
54	S2	457	C
54	S2	465	A
54	S2	468	A

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Mol	Chain	Res	Type
54	S2	470	G
54	S2	473	A
54	S2	474	G
54	S2	499	G
54	S2	505	G
54	S2	515	G
54	S2	532	C
54	S2	550	C
54	S2	559	G
54	S2	577	U
54	S2	578	C
54	S2	579	C
54	S2	596	U
54	S2	604	A
54	S2	607	U
54	S2	608	C
54	S2	613	G
54	S2	617	G
54	S2	639	C
54	S2	641	A
54	S2	642	U
54	S2	643	A
54	S2	645	C
54	S2	649	U
54	S2	650	A
54	S2	656	G
54	S2	687	C
54	S2	688	U
54	S2	732	U
54	S2	734	C
54	S2	746	C
54	S2	747	U
54	S2	752	G
54	S2	797	C
54	S2	798	A
54	S2	799	U
54	S2	800	U
54	S2	802	A
54	S2	807	G
54	S2	810	A
54	S2	811	A
54	S2	815	U

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Mol	Chain	Res	Type
54	S2	818	A
54	S2	821	G
54	S2	822	U
54	S2	829	C
54	S2	833	C
54	S2	841	G
54	S2	842	C
54	S2	868	G
54	S2	870	A
54	S2	871	U
54	S2	875	A
54	S2	913	A
54	S2	914	U
54	S2	918	U
54	S2	919	A
54	S2	920	A
54	S2	924	G
54	S2	955	A
54	S2	959	G
54	S2	960	U
54	S2	962	A
54	S2	964	A
54	S2	967	C
54	S2	968	U
54	S2	975	G
54	S2	980	A
54	S2	991	G
54	S2	993	G
54	S2	999	G
54	S2	1001	A
54	S2	1016	U
54	S2	1036	A
54	S2	1037	G
54	S2	1050	A
54	S2	1063	C
54	S2	1087	A
54	S2	1088	U
54	S2	1092	G
54	S2	1093	A
54	S2	1096	G
54	S2	1098	C
54	S2	1099	G

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Mol	Chain	Res	Type
54	S2	1107	G
54	S2	1109	C
54	S2	1110	G
54	S2	1113	A
54	S2	1114	U
54	S2	1115	U
54	S2	1121	G
54	S2	1132	C
54	S2	1137	U
54	S2	1141	G
54	S2	1142	G
54	S2	1153	C
54	S2	1165	G
54	S2	1194	A
54	S2	1199	A
54	S2	1204	A
54	S2	1207	G
54	S2	1221	G
54	S2	1223	A
54	S2	1224	G
54	S2	1225	U
54	S2	1226	G
54	S2	1244	U
54	S2	1247	C
54	S2	1249	C
54	S2	1250	A
54	S2	1253	A
54	S2	1265	A
54	S2	1273	C
54	S2	1274	G
54	S2	1283	C
54	S2	1288	U
54	S2	1289	U
54	S2	1292	C
54	S2	1298	G
54	S2	1302	G
54	S2	1312	G
54	S2	1313	A
54	S2	1315	U
54	S2	1341	C
54	S2	1342	U
54	S2	1350	U

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Mol	Chain	Res	Type
54	S2	1352	G
54	S2	1355	C
54	S2	1362	U
54	S2	1363	C
54	S2	1367	U
54	S2	1368	U
54	S2	1370	A
54	S2	1372	U
54	S2	1373	C
54	S2	1378	A
54	S2	1379	A
54	S2	1386	A
54	S2	1391	C
54	S2	1395	C
54	S2	1396	A
54	S2	1401	A
54	S2	1418	C
54	S2	1419	C
54	S2	1421	A
54	S2	1423	C
54	S2	1429	G
54	S2	1430	C
54	S2	1433	C
54	S2	1438	A
54	S2	1440	C
54	S2	1441	U
54	S2	1442	U
54	S2	1446	A
54	S2	1452	A
54	S2	1454	A
54	S2	1462	U
54	S2	1463	U
54	S2	1474	A
54	S2	1475	G
54	S2	1477	U
54	S2	1480	A
54	S2	1488	C
54	S2	1489	A
54	S2	1495	G
54	S2	1512	C
54	S2	1515	G
54	S2	1521	C

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Mol	Chain	Res	Type
54	S2	1522	A
54	S2	1524	G
54	S2	1533	A
54	S2	1534	C
54	S2	1537	A
54	S2	1540	G
54	S2	1543	U
54	S2	1546	G
54	S2	1551	U
54	S2	1552	G
54	S2	1556	A
54	S2	1568	C
54	S2	1571	G
54	S2	1578	U
54	S2	1579	A
54	S2	1581	C
54	S2	1591	C
54	S2	1597	C
54	S2	1598	G
54	S2	1599	U
54	S2	1601	A
54	S2	1603	G
54	S2	1605	G
54	S2	1617	G
54	S2	1621	U
54	S2	1623	A
54	S2	1629	C
54	S2	1637	A
54	S2	1639	G
54	S2	1641	A
54	S2	1644	C
54	S2	1645	C
54	S2	1657	G
54	S2	1659	U
54	S2	1664	A
54	S2	1668	U
54	S2	1678	A
54	S2	1679	A
54	S2	1682	C
54	S2	1695	A
54	S2	1697	A
54	S2	1700	C

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Mol	Chain	Res	Type
54	S2	1726	G
54	S2	1804	U
54	S2	1821	U
54	S2	1823	A
54	S2	1824	A
54	S2	1825	A
54	S2	1826	G
54	S2	1830	U
54	S2	1837	G
54	S2	1838	U
54	S2	1843	G
54	S2	1849	G
54	S2	1857	G
54	S2	1858	G
54	S2	1863	A
54	S2	1868	U

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 170 ligands modelled in this entry, 170 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
32	5	16
54	S2	6
48	z	5
51	4	3
50	3	3
46	K	2
49	2	1
37	E	1
89	S4	1
53	6	1
84	Sc	1
11	R	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	4	298:C	O3'	114:G	P	140.85
1	2	85:LEU	C	109:LEU	N	48.29
1	z	297:MET	C	326:GLN	N	33.03
1	E	72:ALA	C	84:VAL	N	24.28
1	S2	753:C	O3'	785:C	P	22.70
1	z	434:MET	C	455:UNK	N	20.61
1	S2	698:G	O3'	730:C	P	20.30
1	5	4776:G	O3'	4859:C	P	17.65
1	5	757:G	O3'	906:C	P	17.08
1	5	519:C	O3'	642:G	P	16.81
1	5	2910:G	O3'	3583:U	P	16.80
1	4	65:U	O3'	282:U	P	15.74
1	5	2131:C	O3'	2243:C	P	14.84
1	z	465:UNK	C	477:UNK	N	14.59
1	5	3950:U	O3'	4065:G	P	13.89
1	S4	35:GLY	C	54:ASN	N	13.11
1	5	997:C	O3'	1047:C	P	13.04
1	6	91:ASN	C	108:ASP	N	12.86
1	5	5023:C	O3'	5028:G	P	12.61

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	5	1051:G	O3'	1064:G	P	9.59
1	S2	739:C	O3'	744:G	P	7.80
1	S2	225:G	O3'	287:U	P	7.53
1	5	1699:A	O3'	1718:C	P	4.22
1	5	1222:A	O3'	1232:G	P	4.18
1	3	46:G	O3'	47:U	P	3.74
1	5	4939:C	O3'	4941:G	P	3.43
1	5	1100:U	O3'	1167:C	P	3.38
1	5	4942:C	O3'	4944:C	P	3.33
1	K	154:ASP	C	155:ILE	N	2.99
1	S2	1690:U	O3'	1691:U	P	2.73
1	5	1840:G	O3'	1842:G	P	2.69
1	3	56:C	O3'	57:G	P	2.58
1	S2	1686:G	O3'	1687:C	P	2.41
1	Sc	54:ASP	C	55:VAL	N	2.23
1	5	1823:G	O3'	1825:A	P	2.03
1	z	340:MET	C	341:LYS	N	1.86
1	R	149:LYS	C	150:ALA	N	1.67
1	K	9:GLU	C	10:ILE	N	1.11
1	4	183:A	O3'	184:A	P	1.08
1	z	345:PHE	C	346:SER	N	0.91
1	3	31:C	O3'	32:C	P	0.86

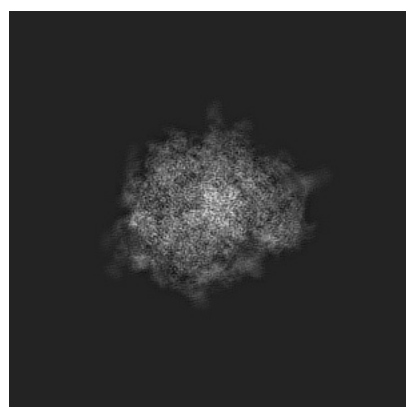
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-3037. These allow visual inspection of the internal detail of the map and identification of artifacts.

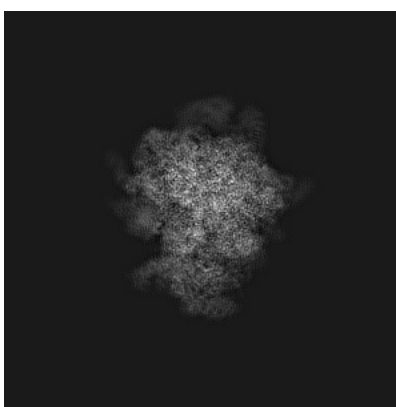
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

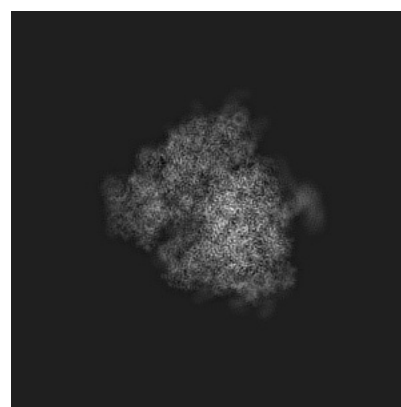
6.1.1 Primary map



X



Y

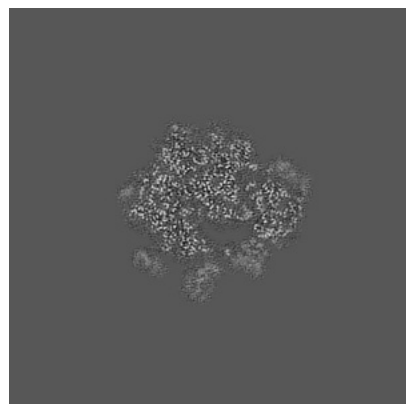


Z

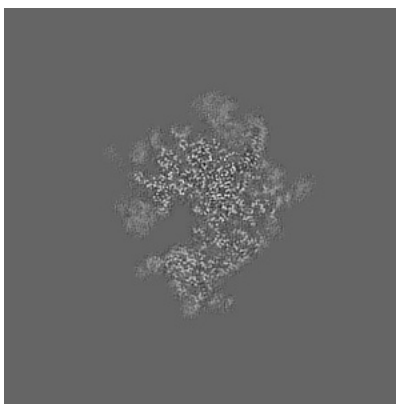
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

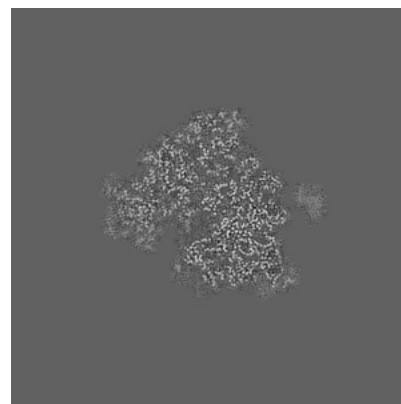
6.2.1 Primary map



X Index: 210



Y Index: 210

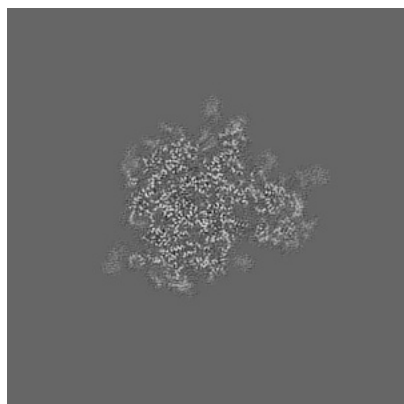


Z Index: 210

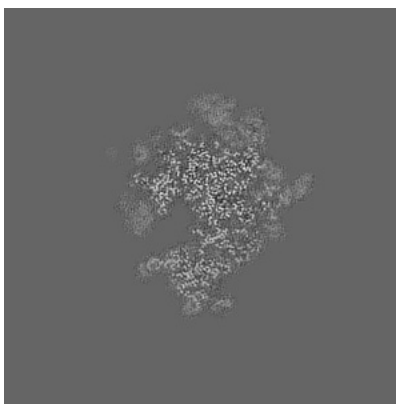
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

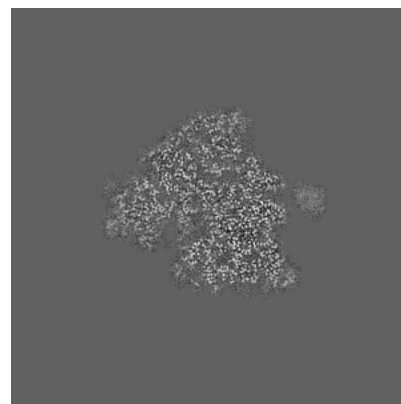
6.3.1 Primary map



X Index: 234



Y Index: 212

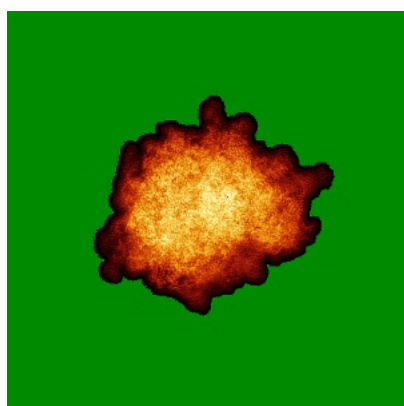


Z Index: 208

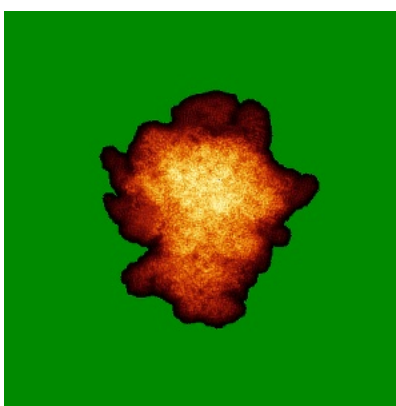
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

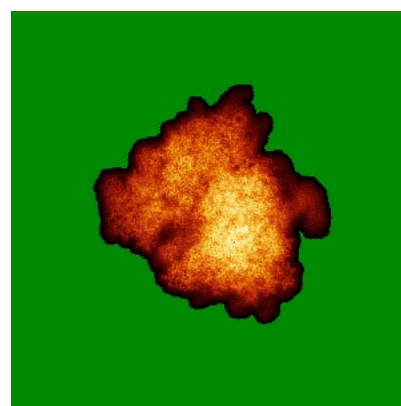
6.4.1 Primary map



X



Y

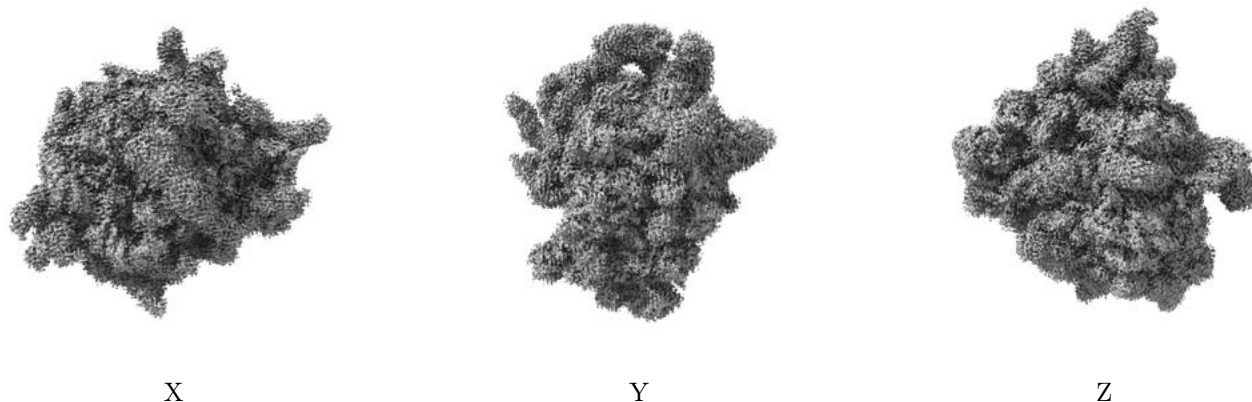


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.05. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

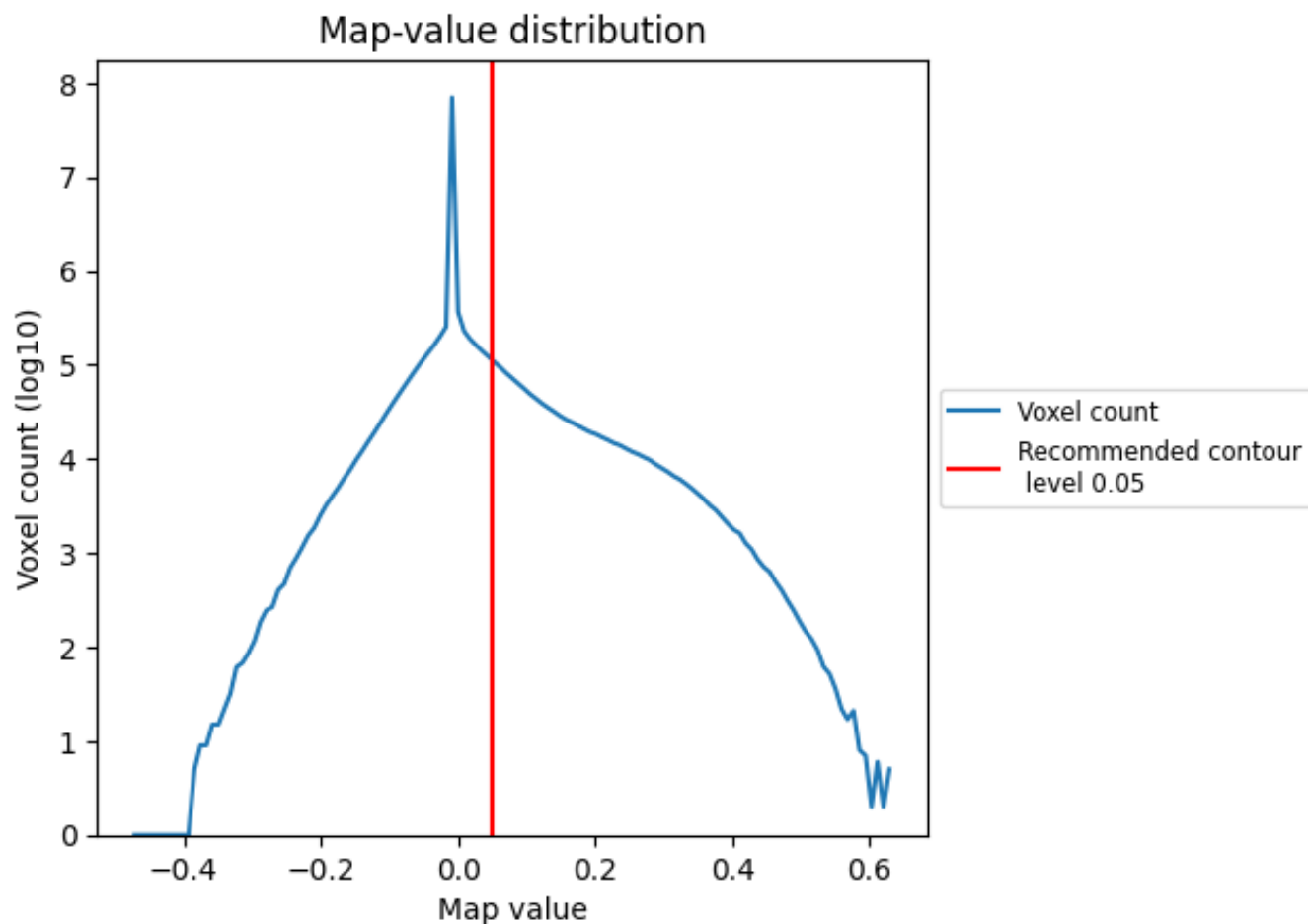
6.6 Mask visualisation [i](#)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis [i](#)

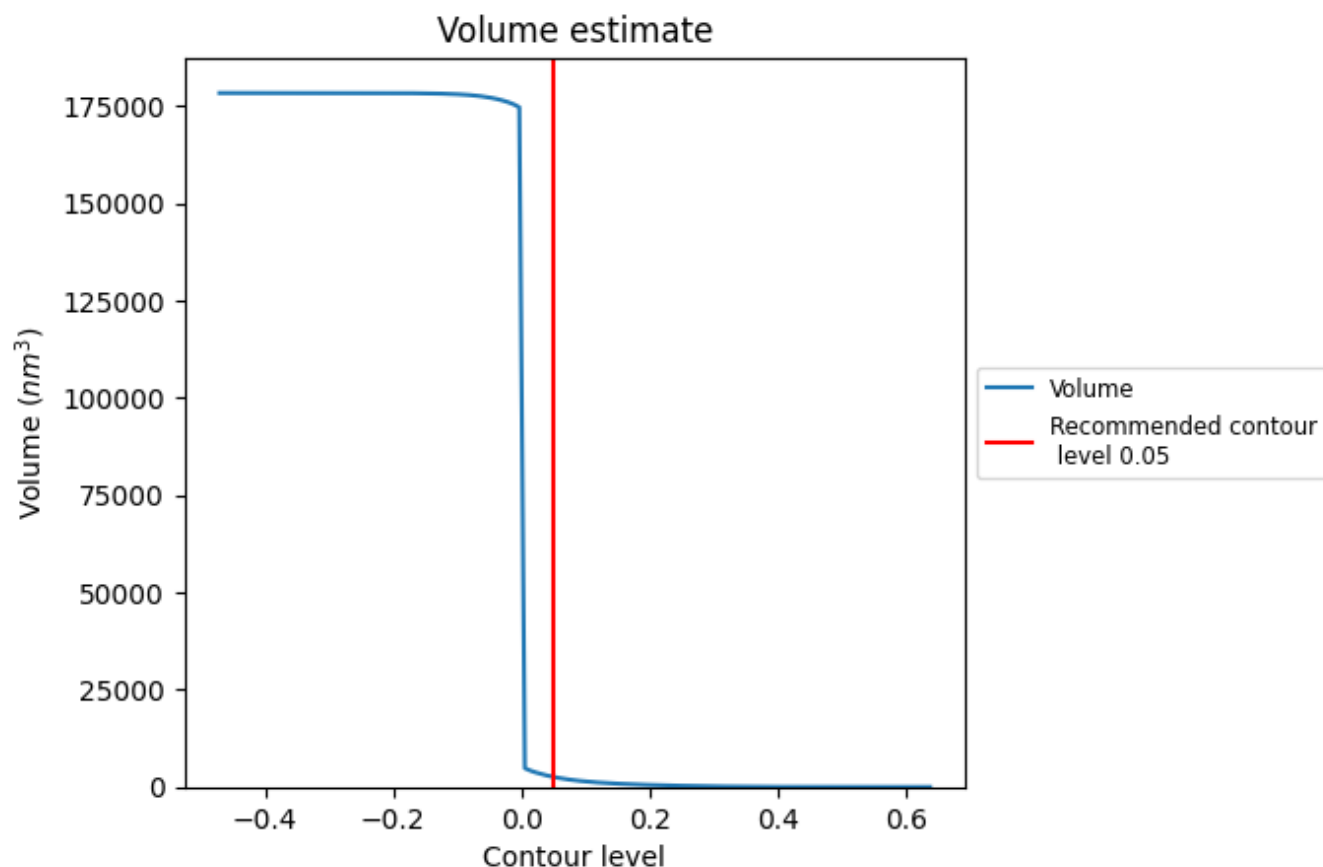
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

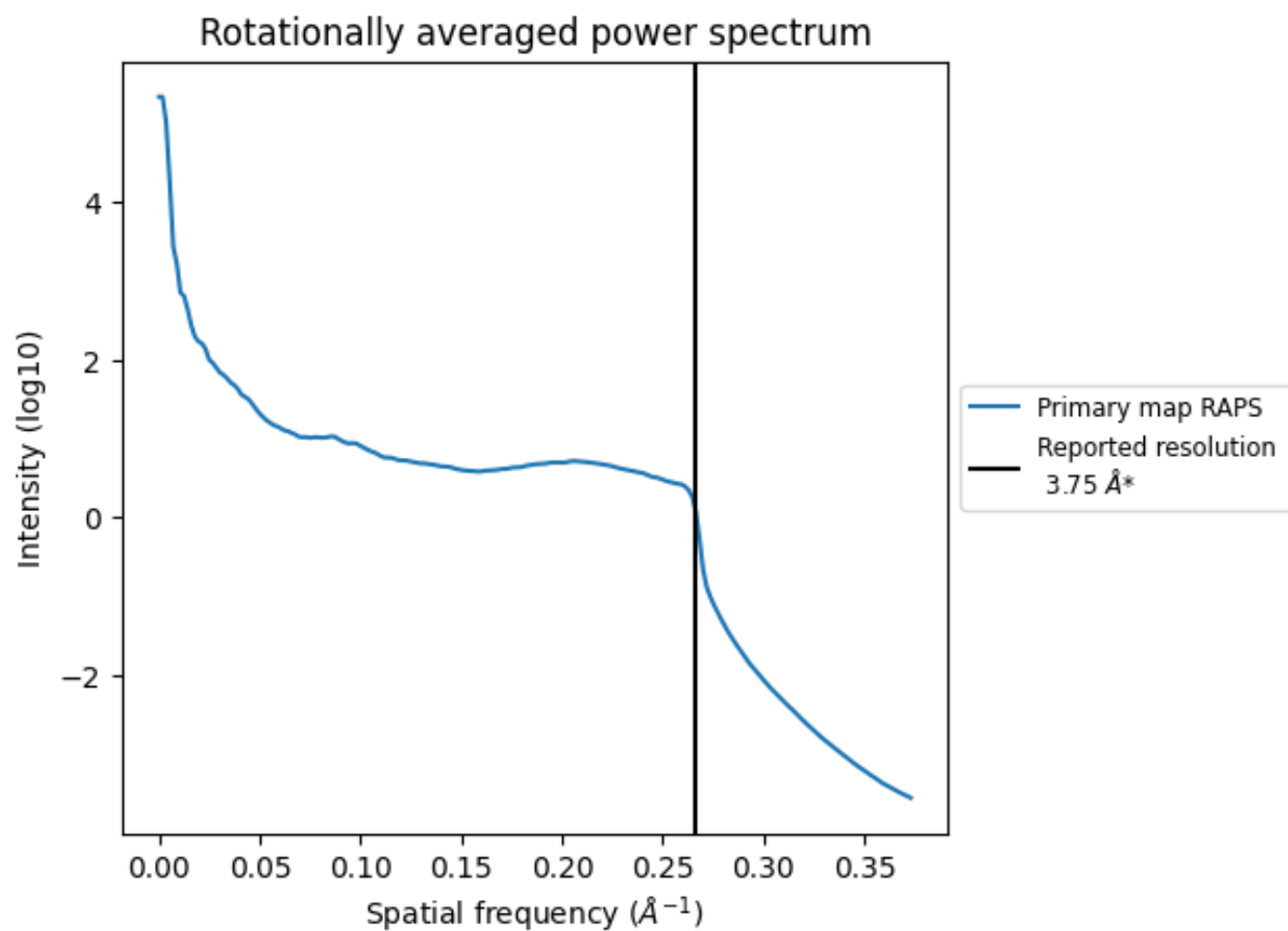
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2578 nm³; this corresponds to an approximate mass of 2329 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ



*Reported resolution corresponds to spatial frequency of 0.267 Å⁻¹

8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

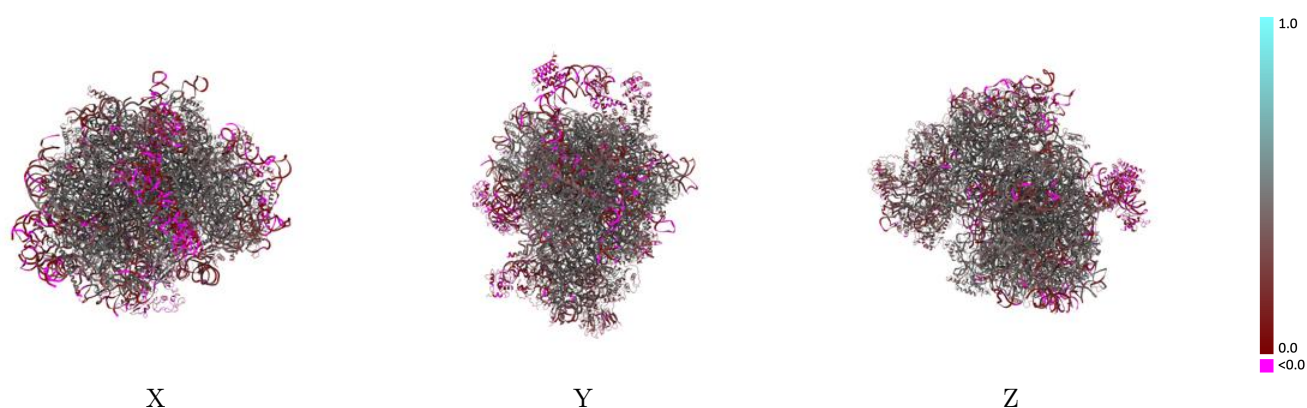
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-3037 and PDB model 3JAJ. Per-residue inclusion information can be found in section 3 on page 21.

9.1 Map-model overlay [i](#)

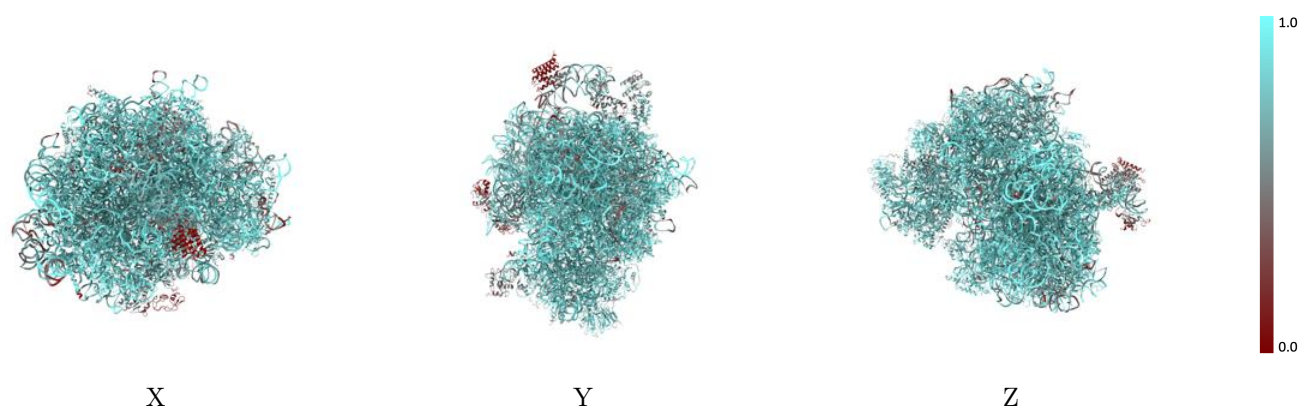
This section was not generated.

9.2 Q-score mapped to coordinate model [i](#)



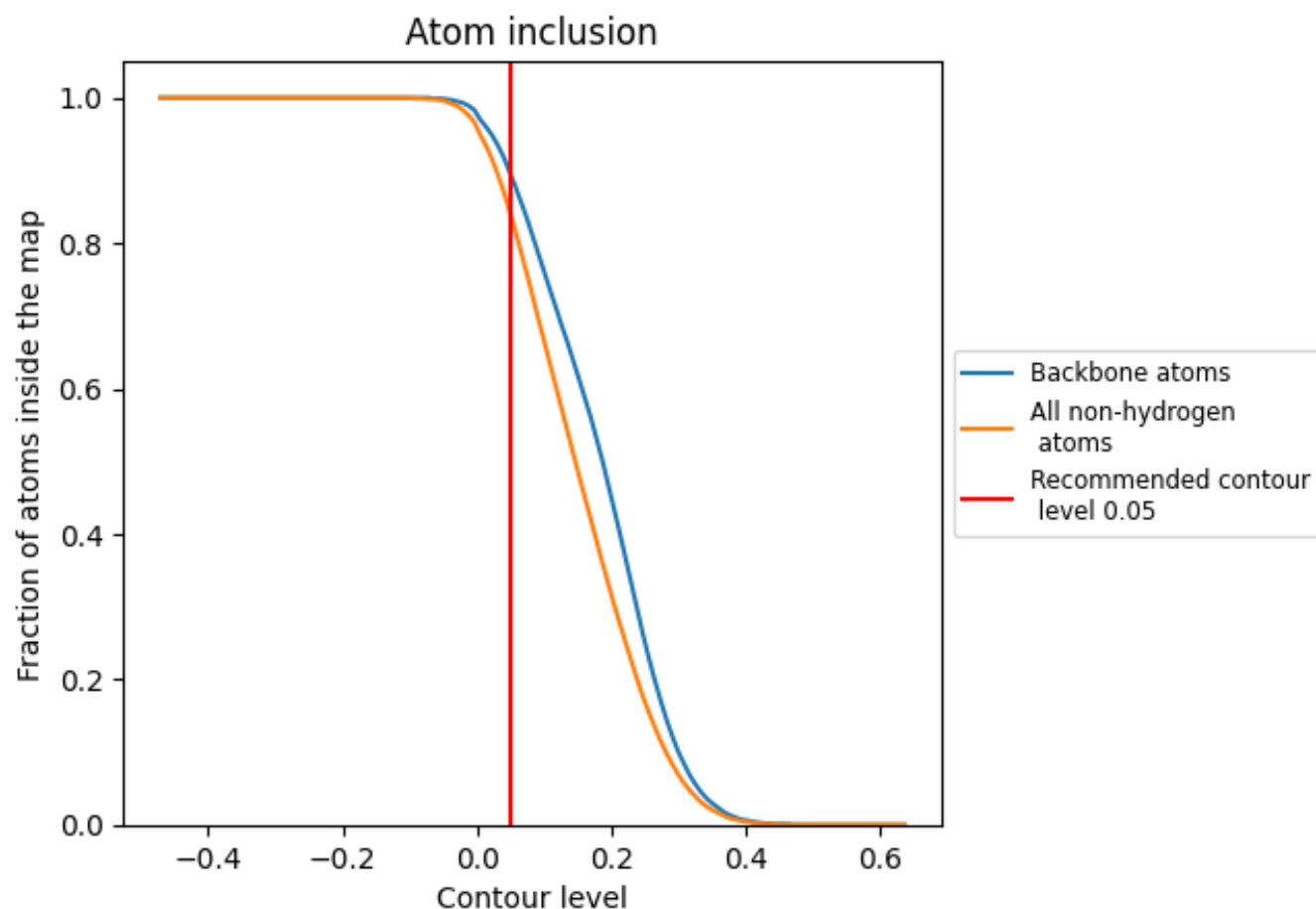
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.05).

9.4 Atom inclusion [i](#)



At the recommended contour level, 90% of all backbone atoms, 84% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.05) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8410	 0.3550
2	 0.6090	 0.2570
3	 0.8600	 0.3180
4	 0.6920	 0.0860
5	 0.8750	 0.3540
6	 0.1830	 0.0000
7	 0.9440	 0.4200
8	 0.9040	 0.3840
9	 0.4040	 0.0380
A	 0.8800	 0.4640
B	 0.8870	 0.4580
C	 0.8760	 0.4500
D	 0.8740	 0.4050
E	 0.8240	 0.3760
F	 0.8690	 0.4420
G	 0.8220	 0.3960
H	 0.8690	 0.4440
I	 0.8600	 0.4360
J	 0.8550	 0.4050
K	 0.3210	 0.0010
L	 0.8460	 0.4130
M	 0.8830	 0.4320
N	 0.8940	 0.4690
O	 0.8680	 0.4490
P	 0.8730	 0.4670
Q	 0.8840	 0.4620
R	 0.8490	 0.4020
S	 0.8950	 0.4590
S1	 0.7230	 0.2760
S2	 0.8780	 0.3390
S4	 0.7450	 0.3270
SA	 0.8470	 0.4070
SB	 0.8510	 0.4230
SC	 0.8660	 0.4430
SD	 0.7820	 0.3440



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Chain	Atom inclusion	Q-score
SE	 0.8720	 0.4350
SF	 0.7430	 0.2860
SG	 0.7920	 0.3240
SH	 0.7760	 0.3330
SI	 0.8370	 0.3970
SJ	 0.8700	 0.4090
SK	 0.7370	 0.2330
SL	 0.8270	 0.4230
SM	 0.3940	 0.0260
SN	 0.8650	 0.4240
SO	 0.8460	 0.4190
SP	 0.6990	 0.2310
SQ	 0.8310	 0.3800
SR	 0.7500	 0.3240
SS	 0.8240	 0.3380
ST	 0.8200	 0.3430
SU	 0.8050	 0.3520
SV	 0.8400	 0.4170
SW	 0.8920	 0.4550
SX	 0.8770	 0.4640
SY	 0.8290	 0.3870
SZ	 0.7530	 0.2770
Sa	 0.8800	 0.4460
Sb	 0.8360	 0.3870
Sc	 0.7570	 0.3270
Sd	 0.8390	 0.3930
Se	 0.7730	 0.3460
Sf	 0.4470	 0.0610
Sg	 0.7590	 0.2530
T	 0.8730	 0.4480
U	 0.8460	 0.3830
V	 0.8760	 0.4710
W	 0.8550	 0.4330
X	 0.8500	 0.4440
Y	 0.8580	 0.4280
Z	 0.8970	 0.4320
a	 0.9040	 0.4650
b	 0.8010	 0.3750
c	 0.8890	 0.4450
d	 0.8600	 0.4310
e	 0.8720	 0.4570
f	 0.9180	 0.4670

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Chain	Atom inclusion	Q-score
g	 0.8580	 0.4430
h	 0.8480	 0.4100
i	 0.8660	 0.4250
j	 0.9040	 0.4570
k	 0.7920	 0.3760
l	 0.8720	 0.4600
m	 0.8990	 0.4470
n	 0.8160	 0.3670
o	 0.8760	 0.4500
p	 0.8460	 0.4490
q	 0.3190	 0.0460
r	 0.9030	 0.4530
z	 0.6100	 0.1370